

## Executive Summary - Informational

**TO:** State Investment Board

**FROM:** Dave Hunter

**DATE:** November 13, 2020

**SUBJECT:** SIB Meeting Materials – November 20, 2020

**Our November SIB meeting will include Callan’s Quarterly Performance Review as of 9/30/2020 and focus on in-state investment programs, governance and education.**

**Asset and Performance Overview – Over 99% of our SIB clients generated net returns which exceeded their approved policy benchmarks for the 5 years ended 9/30/2020 including Legacy, PERS, TFFR, WSI and Budget Stabilization.** Legacy earned 8.27% and 7.91% for the 1 and 5 year periods ended 9/30/2020, respectively, exceeding policy benchmarks by 0.65% or more. The SIB Pension Pool, which includes PERS and TFFR, was ranked in the top 25% of Callan’s Public Fund Sponsor Database for the 10-years ended 9/30/2020, with a net return of 8% exceeding its policy benchmark of 7.5% and long-term actuarial return assumptions of 7% for PERS and 7.25% for TFFR.

SIB Five Largest Clients (AUM as of 9/30/2020)	Qtr. Ended 9/30/2020	1 Yr Ended 9/30/2020	3 Yrs Ended 9/30/2020	5 Yrs Ended 9/30/2020	10 Yrs Ended 9/30/2020
<b>Legacy Fund \$7.4 billion</b>					<i>9 Yrs. Ended</i>
Total Fund Return - Net	4.93%	8.27%	6.02%	7.91%	5.19%
Policy Benchmark Return	3.95%	7.45%	5.94%	7.26%	4.48%
Excess Return	0.98%	0.82%	0.08%	0.65%	0.71%
<b>PERS \$3.4 billion</b>					
Total Fund Return - Net	4.97%	8.15%	6.39%	8.35%	8.05%
Policy Benchmark Return	4.35%	7.05%	6.25%	7.83%	7.52%
Excess Return	0.62%	1.10%	0.14%	0.52%	0.53%
<b>TFFR \$2.7 billion</b>					
Total Fund Return - Net	4.89%	8.08%	6.38%	8.29%	8.07%
Policy Benchmark Return	4.41%	7.06%	6.24%	7.79%	7.42%
Excess Return	0.48%	1.02%	0.14%	0.50%	0.65%
<b>WSI \$2.2 billion</b>					
Total Fund Return - Net	3.10%	7.46%	6.29%	7.07%	7.00%
Policy Benchmark Return	2.25%	7.30%	5.88%	5.99%	5.60%
Excess Return	0.85%	0.16%	0.41%	1.08%	1.40%
<b>BSF \$738 million</b>					
Total Fund Return - Net	1.63%	3.06%	2.80%	2.22%	2.13%
Policy Benchmark Return	0.23%	3.70%	2.83%	2.06%	1.27%
Excess Return	1.40%	-0.64%	-0.03%	0.16%	0.86%

**TFFR Asset Liability Study – Assuming TFFR Board approval on 11/19/2020, RIO will likely recommend the SIB approve a new TFFR asset allocation policy** following the recent completion of a TFFR Asset Liability Study by Callan and Segal Actuarial Consulting.

**Legacy and Budget Stabilization Funds** – RIO will recommend the SIB approve investment policy statement changes recently approved by the Legacy and Budget Stabilization Fund Advisory Board. State of Wisconsin Investment Board (SWIB) Private Markets Portfolio Manager Chris Prestigiaco will share his experience in leading SWIB's private market in-state investment program. RIO and Callan will highlight recent Advisory Board presentations and discussions including Callan's In-State Investment Program Study proposal which was unanimously approved by the Advisory Board on 11/12/2020.

**Governance Education** – Amy McDuffee, CEO and Founder of Mosaic Governance Advisors, will offer board and staff education on best practices in public fund board governance including a focus on in-state investment program governance. Ms. McDuffee last provided governance education to the SIB in July of 2019.

**SIB Committee Reports** - RIO will request the Board to accept sub-committee reports provided by the SIB Audit Committee and SIB Securities Litigation Committee. Clifton Larson Allen LLP intends to provide a "clean" audit opinion for RIO's financial statements for the fiscal year ended June 30, 2020, without any material management recommendations.

**Investment Fee Study** – RIO will request the SIB to accept the results of a Callan Investment Fee Study for the fiscal year ended June 30, 2020. Callan's report supports RIO's belief that SIB client investment fees and expenses are reasonable.

**Annual Governance Manual Review** – The SIB and RIO are conducting our annual governance manual review over four months. A "first reading" was completed in October on sections: A) Executive Limitations; B) Governance Process; C) Board-Staff Relationship; and D) Ends. RIO intends to highlight certain pages within each section to raise awareness of our fiduciary responsibility to adhere to these critically important governing standards. RIO requests all SIB members and RIO investment, fiscal, audit and administrative professionals to review the SIB Governance Manual in advance of our next three Board meetings. At the conclusion of our monthly board discussions, the SIB may make a motion to accept recommended changes, if any, to our governance standards and policies. RIO notes that governance manual changes require a "first reading" in one month followed by a "second reading" in a subsequent month prior to being formally approved and accepted.

**Quarterly Monitoring Reports** – RIO will request the SIB to accept Quarterly Monitoring Reports on Executive Limitations/Staff Relations, Budget/Financial Conditions, our Investment and Retirement Program Ends (including the TFFR Pension Administration System enhancement project) and SIB Watch List. RIO is not recommending any Watch List revisions at this time.



# ND STATE INVESTMENT BOARD MEETING

Friday, November 20, 2020, 8:30 a.m.  
State Capitol, Pioneer Room (Virtual Host)  
Bismarck, ND

Teleconference 701-328-0950, Conference ID: 679 235 638#

## Agenda

**I. APPROVAL OF AGENDA**

**II. APPROVAL OF MINUTES (October 25, 2020)**

**III. INVESTMENTS (Enclosed)**

- A. Asset & Performance Overview - Mr. Hunter (5 minutes) *Informational*
- B. Callan Review - Mr. Paul Erlendson and Mr. Alex Browning (25 minutes) **Board Acceptance**
  - 1. Pension and Insurance Pools and Legacy Fund
  - 2. TFFR Asset Allocation / Investment Policy Statement Recommendation **Board Action**
- C. Legacy and Budget Stabilization Funds (30 minutes)
  - 1. Investment Policy Statement Recommendations – Mr. Hunter **Board Action**
  - 2. SWIB In-State Investment Program – Mr. Chris Prestigiaco *Informational*
  - 3. In-State Investments – Mr. Erlendson, Mr. Pete Keliuotis, Mr. Browning *Informational*

**IV. GOVERNANCE & EDUCATION (Enclosed)**

- A. Governance Education - Ms. Amy McDuffee (1 hour) *Informational*

===== Break from 10:30 to 10:45 a.m. =====

- B. SIB Audit Committee Update – Ms. Sara Sauter (15 minutes) **Board Acceptance**
- C. Callan Investment Fees Review - Mr. Erlendson and Mr. Browning (15 minutes) **Board Acceptance**
- D. SIB Governance Manual Review - Mr. Hunter (15 minutes) **Board Acceptance**
- E. SIB Securities Litigation Committee Update - Mr. Hunter (5 minutes) **Board Acceptance**

**V. QUARTERLY MONITORING – 9/30/20 (10 minutes) Board Acceptance**

- A. Executive Limitations/Staff Relations - Mr. Hunter
- B. Budget/Financial Conditions - Ms. Connie Flanagan
- C. Investment Ends / Watch List (including new Quarterly Monitoring Report) - Mr. Eric Chin
- D. Retirement Program (including TFFR PAS Update) - Ms. Janilyn Murtha
- E. Annual Compliance Update – Mr. Matthew Posch

**F. OTHER**

- A. Resolution for Treasurer Schmidt

Next Meetings: SIB Meeting – December 18, 2020, 8:30 a.m., State Capitol, **Fort Union Room Tentative**  
Securities Litigation Committee – February 4, 2020, 2:00 p.m. RIO Conference Room  
Audit Committee – February 25, 2020, 3:00 p.m. RIO Conference Room

**VII. ADJOURNMENT.**

**NORTH DAKOTA STATE INVESTMENT BOARD  
MINUTES OF THE  
OCTOBER 23, 2020, BOARD MEETING**

**MEMBERS PRESENT:** Brent Sanford, Lt. Governor, Chair  
 Rob Lech, TFFR Board, Vice Chair  
 Troy Seibel, PERS Board, Parliamentarian  
 Jon Godfread, Insurance Commissioner  
 Toni Gumeringer, TFFR Board  
 Keith Kempenich, Legacy/Budget Stab. Adv. Board  
 Bryan Klipfel, Director of WSI  
 Adam Miller, PERS Board  
 Mel Olson, TFFR Board  
 Kelly Schmidt, State Treasurer  
 Jodi Smith, Commissioner of Trust Lands  
 Yvonne Smith, PERS Board

**STAFF PRESENT:** Eric Chin, Chief Risk Officer/Senior CIO  
 Connie Flanagan, Chief Financial Officer  
 Ann Griffin, Investment Accountant  
 Bonnie Heit, Admin Svs Suprv  
 David Hunter, Exec Dir/CIO  
 Missy Kopp, Retirement Asst  
 Rich Nagel, Suprv of IT  
 Jan Murtha, Dep Exec Dir/CRO  
 Matt Posch, Investment/Compliance Officer  
 Sara Sauter, Suprv of Internal Audit  
 Darren Schulz, Dep CIO  
 Dottie Thorsen, Internal Auditor  
 Susan Walcker, Senior Financial Accountant

**GUESTS:** Nick Archuleta, ND United  
 Jace Beehler, Governor's Office  
 Renee Bloms, OMB  
 John Brecker, Hamilton Lane  
 Alex Browning, Callan LLC  
 Dean DePountis, Attorney General's Office  
 Paul Erlendson, Callan LLC  
 Andrew Feist, Governor's Office  
 Karlene Fine, Industrial Commission  
 Eric Hall, Grosvenor  
 Eric Hardmeyer, BND  
 Joan Heckaman, Legacy Fund Earnings Committee  
 Dave Helgerson, Hamilton Lane  
 Perry Hopper, Callan LLC  
 Pete Keliuotis, Callan LLC  
 Rachel Kriege, Ins. Dept.  
 James Leiman, Dept of Commerce  
 Greg Long, Barings  
 Adam Mathiak, Legislative Council  
 Katie Moore, Hamilton Lane  
 Jerry Klein, LBSFAB  
 Gary Kreidt, LBSFAB  
 Joe Morrissette, LBSFAB  
 Mina Pacheko, Barings  
 Ryan Rauschenberger, LBSFAB  
 Mike Rose, Grosvenor  
 Jeff Stammen, Barings  
 Rich Wardner, Legacy Fund Earnings Committee  
 Bernard Yancovich, Grosvenor



**CALL TO ORDER:**

Lt. Governor Sanford, called the State Investment Board (SIB) regular meeting to order at 8:38 a.m. on Friday, October 23, 2020. The meeting was held at the State Capitol, Pioneer Room (virtual host), 600 East Boulevard, Bismarck, ND.

**AGENDA:**

The Board considered the agenda for the October 23, 2020, meeting,

**IT WAS MOVED BY TREASURER SCHMIDT AND SECONDED BY DR. LECH AND CARRIED BY A VOICE VOTE TO ACCEPT THE AGENDA FOR THE OCTOBER 23, 2020, MEETING.**

**AYES: MR. KLIPFEL, MR. OLSON, COMMISSIONER GODFREAD, TREASURER SCHMIDT, COMMISSIONER SMITH, MR. SEIBEL, DR. LECH, MR. MILLER, MS. SMITH, MS. GUMERINGER, AND LT. GOVERNOR SANFORD**

**NAYS: NONE**

**MOTION CARRIED**

**MINUTES:**

**IT WAS MOVED BY TREASURER SCHMIDT AND SECONDED BY COMMISSIONER SMITH AND CARRIED BY A VOICE VOTE TO APPROVE THE SEPTEMBER 25, 2020, MINUTES AS DISTRIBUTED.**

**AYES: MR. KLIPFEL, COMMISSIONER GODFREAD, MR. OLSON, MR. MILLER, TREASURER SCHMIDT, MS. GUMERINGER, MS. SMITH, COMMISSIONER SMITH, DR. LECH, MR. SEIBEL, AND LT. GOVERNOR SANFORD**

**NAYS: NONE**

**MOTION CARRIED**

**INVESTMENTS:**

Asset/Performance Overview - Mr. Hunter provided an asset and performance update as of August 31, 2020. Teachers' Fund for Retirement (TFFR) and Public Employees Retirement System (PERS) benefited from a major recovery in the capital markets in mid-2020. Due to the impact of the global pandemic, TFFR's pension plan declined from \$2.6 billion in January 2020 down to \$2.4 billion in March 2020. Since March 2020, the TFFR pension plan has fully recovered and is valued at \$2.8 billion in August 2020. The PERS pension plan declined from \$3.3 billion in January 2020 down \$2.9 billion in March 2020 due to the global pandemic, prior to experiencing a full recovery and valued at over \$3.4 billion as of August 31, 2020.

All SIB client's results were affected by the global pandemic. TFFR and PERS earned net returns of over 3.4% for the one-year ended June 30, 2020, which exceeded most other U.S. public plans. SIB pension pool returns, which include PERS and TFFR, were in the top 25% of U.S. Public plans over the last 10-years by exceeding 8.4% per year. Over the last 30-years, TFFR and PERS have each earned over 7.5% per annum exceeding their respective long-term return assumptions of 7.25% for TFFR and 7% for PERS.

The Legacy Fund was valued at approximately \$7.5 billion as of August 31, 2020. The first Legacy Fund transfer was received by the SIB in September 2011. Inception to date net income, as of August 31, 2020, is at \$2,162,724,969. Earnings, as defined by N.D.C.C. 21-10-12, of \$455,263,216 were transferred to the General Fund for the 2017-19 biennium. Current biennium to date earnings through August 31, 2020, are at \$407,290,474.

<b>Fund Name</b>	<b>Market Values as of 8/31/2020</b>	<b>Market Values as of 6/30/2020</b>
<b>Pension Pool</b>		
Teachers' Fund for Retirement (TFFR)	\$ 2,773,832,001	\$ 2,612,716,499
Public Employees Retirement System (PERS)	3,424,539,928	3,212,113,496
City of Bismarck Employees Pension	112,612,259	106,946,867
City of Bismarck Police Pension	44,977,019	42,552,004
City of Grand Forks Employees Pension	71,027,641	67,458,579
Park District of the City of Grand Forks Pension	7,880,633	7,406,214
<b>Subtotal Pension Pool</b>	<b>6,434,869,480</b>	<b>6,049,193,658</b>
<b>Insurance Pool</b>		
<b>Workforce Safety &amp; Insurance (WSI)</b>	<b>2,199,874,706</b>	<b>2,125,881,220</b>
State Fire and Tornado Fund	19,600,488	22,825,556
State Bonding Fund	3,822,112	3,787,526
Petroleum Tank Release Compensation Fund	6,216,941	6,165,424
Insurance Regulatory Trust Fund	5,951,862	5,714,619
State Risk Management Fund	4,017,676	4,561,175
State Risk Management Workers Comp Fund	5,403,933	5,116,217
Cultural Endowment Fund	529,694	493,401
<b>Budget Stabilization Fund</b>	<b>737,062,186</b>	<b>727,275,063</b>
ND Association of Counties (NDACo) Fund	7,046,658	6,693,191
Bismarck Deferred Sick Leave Account	806,673	770,793
City of Fargo FargoDome Permanent Fund	46,494,368	43,550,868
State Board of Medicine Fund	2,576,509	2,470,787
PERS Group Insurance Account	31,789,534	31,495,987
Lewis & Clark Interpretive Center Endowment	835,289	793,808
Attorney General (AG) Settlement Fund	1,071,414	1,057,147
Veterans' Cemetery Trust Fund	334,192	312,782
<b>Subtotal Insurance Pool</b>	<b>3,073,434,234</b>	<b>2,988,965,565</b>
<b>Individual Investment Accounts</b>		
<b>Legacy Fund</b>	<b>7,501,671,928</b>	<b>6,999,783,262</b>
Job Service of North Dakota Pension	96,533,277	95,338,534
Tobacco Control and Prevention Fund	7,594,388	7,589,354
PERS Retiree Health Insurance Credit Fund	154,883,621	144,237,322
<b>Total Assets Under SIB Management</b>	<b>\$ 17,268,986,930</b>	<b>\$ 16,285,107,695</b>

*Market values are unaudited and subject to change.*

In-State Investing - Callan LLC representatives reviewed a proposal which provided a process to evaluate and implement an in-state investment program consistent with sound fiduciary practices.

Commissioner Godfread and Mr. James Leiman provided additional comments on the in-state investment program since they last reviewed the proposal at the September 25, 2020, SIB meeting.

Barings, GCM Grosvenor, and Hamilton Lane representatives, reviewed their firms' in-state investment program experience.

RIO's legal counsel, Mr. DePountis, provided comments on the SIB's authority to invest a portion of the Legacy Fund in economic development for the State of North Dakota. Mr. DePountis' interpretation of the statute is that the SIB may invest a portion of the Legacy Fund in economic development provided any such investment is accomplished in accordance with 1) recommendations from the Legacy and Budget Stabilization Fund Advisory Board (LBSFAB); and 2) the Prudent Investor Rule.

Discussion followed on the SIB's role implementing an in-state investment program and if it coincides within the governance structure that is followed by the board.

**IT WAS MOVED BY COMMISSIONER SMITH AND SECONDED BY TREASURER SCHMIDT AND CARRIED BY A ROLL CALL VOTE TO ENGAGE CALLAN LLC TO MOVE FORWARD WITH A COMPREHENSIVE RESEARCH PROJECT TO ADVANCE AN IN-STATE INVESTMENT PROGRAM AS PART OF THE LBSFAB ASSET ALLOCATION POLICY.**

**AYES: DR. LECH, TREASURER SCHMIDT, MR. OLSON, COMMISSIONER SMITH, MR. SEIBEL, MR. MILLER, COMMISSIONER GODFREAD, MS. GUMERINGER, MS. SMITH, MR. KLIPFEL, AND LT. GOVERNOR SANFORD**

**NAYS: NONE**

**MOTION CARRIED**

**GOVERNANCE:**

Evaluation of RIO versus Ends - Mr. Hunter reviewed the Ends report for the period ending June 30, 2020.

**IT WAS MOVED BY TREASURER SCHMIDT AND SECONDED BY MS. SMITH AND CARRIED BY A VOICE VOTE TO ACCEPT THE ANNUAL EVALUATION OF RIO VS ENDS.**

**AYES: COMMISSIONER GODFREAD, MR. KLIPFEL, COMMISSIONER SMITH, MS. GUMERINGER, MR. SMITH, MR. SEIBEL, MR. MILLER, DR. LECH, MR. OLSON, TREASURER SCHMIDT, AND LT. GOVERNOR SANFORD**

**NAYS: NONE**

**MOTION CARRIED**

The Board recessed at 11:35 a.m. and reconvened at 11:38 a.m.

Client Satisfaction Survey - Ms. Sauter reviewed the results of the SIB client satisfaction survey. Thirteen out of 18 clients responded for an overall rating of 3.4 on a scale of 4.0.

**IT WAS MOVED BY MS. SMITH AND SECONDED BY DR. LECH AND CARRIED BY A VOICE VOTE TO ACCEPT THE RESULTS OF THE SIB CLIENT SATISFACTION SURVEY.**

**AYES: MR. GUMERINGER, COMMISSIONER SMITH, MS. SMITH, TREASURER SCHMIDT, DR. LECH, COMMISSIONER GODFREAD, MR. OLSON, MR. SEIBEL, MR. MILLER, MR. KLIPFEL, AND LT. GOVERNOR SANFORD**

**NAYS: NONE**

**MOTION CARRIED**

Legacy Fund Investment Policy Statement (IPS) - The Board deferred action on the IPS until the LBSFAB has had an opportunity to review and accept it. The IPS was revised to reflect the additional commitment of \$100 million to the Bank of North Dakota (BND) Match Loan CD Program.

Governance Review - Mr. Hunter highlighted Section A, Executive Limitations, Section B, Governance Process, Section C, Board Staff Relationship, and Section D, Ends.

**IT WAS MOVED BY DR. LECH AND SECONDED BY TREASURER SCHMIDT AND CARRIED BY A VOICE VOTE TO ACCEPT THE FIRST READING OF SECTIONS A - D.**

**AYES: MR. OLSON, MS. GUMERINGER, MR. MILLER, MS. SMITH, MR. SEIBEL, MR. KLIPFEL, COMMISSIONER GODFREAD, COMMISSIONER SMITH, DR. LECH, TREASURER SCHMIDT, AND LT. GOVERNOR SANFORD**

**NAYS: NONE**

**MOTION CARRIED**

Governance Education - Mr. Hunter requested authorization to invite Ms. Amy McDuffee, Mosaic Governance Advisors, to the November 20, 2020, meeting to provide education on board governance and investment education. The Board normally partakes in this type of training at their July retreat but because of the pandemic, the Board elected to conduct regular business.

**IT WAS MOVED BY TREASURER SCHMIDT AND SECONDED BY DR. LECH TO ENGAGE MOSAIC GOVERNANCE ADVISORS TO PROVIDE EDUCATION AT THE SIB NOVEMBER 20, 2020, MEETING.**

**AYES: COMMISSIONER SMITH, TREASURER SCHMIDT, MR. MILLER, COMMISSIONER GODFREAD, MR. OLSON, MR. KLIPFEL, MS. GUMERINGER, MR. SEIBEL, DR. LECH, MS. SMITH, AND LT. GOVERNOR SANFORD**

**NAYS: NONE**

**MOTION CARRIED**

The next regular meeting of the SIB Securities Litigation Committee is scheduled for November 5, 2020, at 1:00 p.m. at RIO (virtual).

The next regular meeting of the SIB Audit Committee is scheduled for November 12, 2020, at 2:30 p.m. at RIO (virtual).

The next regular meeting of the SIB has been scheduled for November 20, 2020, at 8:30 a.m. at the State Capitol, Pioneer Room (virtual).

**ADJOURNMENT:**

With no further business to come before the SIB, Lt. Governor Sanford adjourned the meeting at 12:01 p.m.

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Lt. Governor Sanford, Chair  
State Investment Board

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Bonnie Heit  
Recorder

Informational

# Asset and Performance Overview

## Interim Update as of September 30, 2020

November 20, 2020

Dave Hunter, Executive Director / CIO

Darren Schulz, Deputy Chief Investment Officer

Jan Murtha, Deputy Executive Director / Chief Retirement Officer

Connie Flanagan, Chief Financial Officer

Eric Chin, Chief Risk Officer

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

# State Investment Board – Client Assets Under Management

- ▶ SIB client assets under management (AUM) totaled **\$17 billion** at September 30, 2020, including the Pension Trust at \$6.3 billion, Insurance Trust at \$3 billion and Legacy Fund at \$7.4 billion. **Aided by a continuing rebound in equities, SIB clients generated \$735 million of net investment income in the quarter ending 9/30/20 and the Legacy Fund benefitted from \$344 million of net investment income in the quarter.**
- ▶ **The Pension Trust posted a net return of +8.1% in the last year ending 9/30/20.** The Pension Trust generated a net annualized return of 8.3% during the last 5-years exceeding the policy benchmark of 7.8%.
- ▶ **The Insurance Trust generated a net investment return of +6.3% in the last year.** During the last 5-years, the Insurance Trust posted a net annualized return of 6.4%, exceeding the performance benchmark of 5.4%.
- ▶ **The Legacy Fund generated a net investment return of +8.3% last year.** During the last 5-years, Legacy Fund earned a net annualized return of 7.9%, exceeding the policy benchmark of 7.3%.
- ▶ The U.S. economy and global capital markets continued to rebound in the quarter ended September 30, 2020, although U.S. GDP remains 3.5% below its previous peak and employment remains 10 million jobs short of pre-pandemic levels. **Since March 31, 2020,** the S&P 500 Index has materially recovered in part due to an unprecedented level of government intervention, although there is a major disparity of returns between mega-cap growth stocks and the broader market.

<u>Fund Name</u>	<u>Market Values as of 9/30/20 <sup>(1)</sup></u>	<u>Market Values as of 6/30/20 <sup>(2)</sup></u>	<u>Market Values as of 9/30/19 <sup>(1)</sup></u>
<b>Pension Trust Fund</b>			
Public Employees Retirement System (PERS)	3,358,091,062	3,212,113,498	3,150,599,381
Teachers' Fund for Retirement (TFFR)	2,709,046,336	2,612,716,511	2,558,890,944
City of Bismarck Employees Pension	111,120,394	106,946,867	105,331,198
City of Grand Forks Employees Pension	69,035,635	67,458,580	67,161,633
City of Bismarck Police Pension	44,318,391	42,552,004	42,120,857
Grand Forks Park District	7,752,287	7,406,214	7,189,546
<b>Subtotal Pension Trust Fund</b>	<b>6,299,364,105</b>	<b>6,049,193,674</b>	<b>5,931,293,559</b>
<b>Insurance Trust Fund</b>			
Workforce Safety & Insurance (WSI)	2,178,309,610	2,125,881,223	2,080,687,083
Budget Stabilization Fund	738,693,553	727,275,064	669,122,565
City of Fargo FargoDome Permanent Fund	45,683,553	43,550,868	43,455,983
PERS Group Insurance Account	39,464,884	31,495,987	30,903,038
State Fire and Tornado Fund	22,606,786	22,825,556	23,414,508
ND Association of Counties (NDACo) Fund	6,958,499	6,693,192	6,444,175
Petroleum Tank Release Compensation Fund	6,221,851	6,165,425	6,085,251
State Risk Management Fund	3,969,257	4,561,174	4,146,083
State Bonding Fund	3,823,380	3,787,526	3,668,398
State Risk Management Workers Comp Fund	3,821,114	5,116,218	5,284,244
ND Board of Medicine	2,552,877	2,470,789	2,378,355
Attorney General Settlement Fund	1,074,070	1,057,148	1,130,484
Insurance Regulatory Trust Fund	1,058,258	5,714,620	1,174,507
Lewis & Clark Interpretive Center Endowment Fund	824,920	793,808	764,761
Bismarck Deferred Sick Leave Account	798,394	770,793	792,876
Cultural Endowment Fund	518,770	493,401	481,236
ND Veterans' Cemetary Trust Fund	328,509	312,782	
<b>Subtotal Insurance Trust Fund</b>	<b>3,056,708,286</b>	<b>2,988,965,574</b>	<b>2,879,933,548</b>
<b>Legacy Trust Fund</b>			
Legacy Fund	7,400,446,901	6,999,783,268	6,364,879,674
PERS Retiree Insurance Credit Fund	151,610,589	144,237,322	137,230,513
Job Service of North Dakota Pension	95,658,901	95,338,533	97,559,212
ND Tobacco Prevention and Control Trust Fund	7,593,193	7,589,354	9,349,107
<b>Total Assets Under SIB Management</b>	<b>17,011,381,976</b>	<b>16,285,107,725</b>	<b>15,420,245,614</b>

<sup>(1)</sup> Market values are unaudited and subject to change.

<sup>(2)</sup> 6/30/20 market values as stated in the Comprehensive Annual Financial Report.


### SIB Pension Clients:

PERS and TFFR earned a net investment return of over 8% for the 1 year end Sep. 30, 2020, which exceeded the Policy Benchmark by over 1%.

For the 5-years ended Sep. 30, 2020, PERS and TFFR earned a net investment return of 8.3% exceeding Policy Benchmarks by 0.50%.

Job Service, a de-risked pension plan with a funded ratio in excess of 130%, failed to exceed Policy Benchmark Returns for the 1, 3 and 5 year periods ended Sep. 30, 2020.

Over 98% of our SIB Pension clients earned net returns which exceeded their respective Policy Benchmarks for the 1, 3 and 5 years ended Sep. 30, 2020 (based on AUM).

	Quarter Ended 9/30/2020	1 Yr Ended 9/30/2020	3 Yrs Ended 9/30/2020	5 Yrs Ended 9/30/2020	Risk 5 Yrs Ended 9/30/2020	Risk Adj Excess Return 5 Yrs Ended 9/30/2020
						
<b>PERS \$3.4 billion</b>						
Total Fund Return - Net	4.97%	8.15%	6.39%	8.35%	9.73%	0.25%
Policy Benchmark Return	4.35%	7.03%	6.23%	7.82%	9.35%	
Total Relative Return	0.62%	1.12%	0.16%	0.53%	104%	
<b>TFFR \$2.7 billion</b>						
Total Fund Return - Net	4.89%	8.09%	6.38%	8.29%	9.68%	0.39%
Policy Benchmark Return	4.41%	7.07%	6.25%	7.79%	9.53%	
Total Relative Return	0.48%	1.02%	0.13%	0.50%	102%	
<b>Bismarck Employee \$111 million</b>						
Total Fund Return - Net	3.91%	6.97%	6.03%	7.67%	7.99%	0.48%
Policy Benchmark Return	3.70%	6.69%	5.87%	7.15%	7.95%	
Total Relative Return	0.21%	0.27%	0.16%	0.52%	101%	
<b>Bismarck Police \$44 million</b>						
Total Fund Return - Net	4.15%	7.03%	6.05%	7.85%	8.64%	0.49%
Policy Benchmark Return	3.95%	6.67%	5.87%	7.37%	8.65%	
Total Relative Return	0.20%	0.36%	0.18%	0.49%	100%	
<b>Grand Forks \$69 million</b>						
Total Fund Return - Net	5.05%	8.57%	6.99%	8.67%	10.18%	0.45%
Policy Benchmark Return	4.80%	7.90%	6.69%	8.24%	10.21%	
Total Relative Return	0.25%	0.66%	0.30%	0.43%	100%	
<b>Grand Forks Park \$8 million</b>						
Total Fund Return - Net	4.68%	8.15%	6.68%	8.42%	9.36%	0.04%
Policy Benchmark Return	4.27%	7.36%	6.45%	7.99%	8.85%	
Total Relative Return	0.41%	0.80%	0.22%	0.43%	106%	
<b>Job Service \$96 million</b>						
Total Fund Return - Net	1.51%	2.86%	4.28%	5.75%	4.28%	-0.97%
Policy Benchmark Return	2.07%	6.08%	5.42%	6.21%	3.79%	
Total Relative Return	-0.56%	-3.22%	-1.14%	-0.46%	113%	

Note: Amounts are unaudited and subject to change.



**SIB Non-Pension Clients:**

WSI and Legacy Fund earned a net investment return of 7.46% and 8.27%, respectively, for the 1 year end Sep.30, 2020, which exceeded their respective Policy Benchmarks.

For the 5-years ended Sep. 30, 2020, WSI and Legacy Fund earned a net investment return of 7.07% and 7.91%, respectively, exceeding their Policy Benchmarks by 1.08% for WSI and 0.65% for Legacy.

Budget Stabilization Fund returns failed to exceed Policy Benchmarks for 1 and 3 years ended Sep. 30, 2020, while 5-year returns exceed Policy Benchmark by 0.16%.


Over 98% of Non-Pension clients earned net returns which exceeded their Policy Benchmarks over the last 5-years.

	Qtr. Ended 9/30/2020	1 Yr Ended 9/30/2020	3 Yrs Ended 9/30/2020	5 Yrs Ended 9/30/2020	Risk 5 Yrs Ended 9/30/2020	Risk Adj Excess Return 9/30/2020
						
<b>WSI \$2.2 billion</b>						
Total Fund Return - Net	3.10%	7.46%	6.29%	7.07%	5.80%	-0.46%
Policy Benchmark Return	2.24%	7.29%	5.87%	5.99%	4.28%	
Total Relative Return	0.54%	0.17%	0.42%	1.08%		
<b>Legacy Fund \$7.4 billion</b>						
Total Fund Return - Net	4.93%	8.27%	6.02%	7.91%	10.2%	-0.14%
Policy Benchmark Return	3.95%	7.46%	5.93%	7.25%	9.0%	
Total Relative Return	0.98%	0.81%	0.09%	0.65%	113%	
<b>Budget Stabilization \$738 million</b>						
Total Fund Return - Net	1.63%	3.06%	2.80%	2.22%	2.83%	-0.44%
Policy Benchmark Return	0.23%	3.70%	2.83%	2.06%	1.16%	
Total Relative Return	1.40%	-0.65%	-0.03%	0.16%		
<b>Fire &amp; Tornado \$23 million</b>						
Total Fund Return - Net	3.81%	7.31%	5.89%	7.14%	8.12%	-0.47%
Policy Benchmark Return	2.95%	7.63%	5.93%	6.35%	6.41%	
Total Relative Return	0.86%	-0.31%	-0.04%	0.79%		
<b>State Bonding \$4 million</b>						
Total Fund Return - Net	0.91%	4.20%	3.92%	3.68%	2.20%	0.48%
Policy Benchmark Return	0.37%	4.32%	3.65%	2.85%	1.89%	
Total Relative Return	0.54%	-0.13%	0.27%	0.83%		
<b>Insur.Reg.Trust \$1 million</b>						
Total Fund Return - Net	3.07%	8.11%	5.48%	6.08%	5.77%	0.59%
Policy Benchmark Return	2.41%	5.83%	4.77%	5.14%	5.36%	
Total Relative Return	0.65%	2.29%	0.71%	0.93%		

**Elevated Risk:**

The global pandemic triggered an unprecedented rise in global market volatility and a period of fixed income illiquidity in March which prompted the Fed to initiate the largest and most wide spread government stimulus package in history.

Due to the sharp and severe impact of the COVID-19 outbreak on the capital markets including even high quality fixed income securities, many of our SIB clients posted record high levels of volatility including the Job Service, the PERS Group Insurance Fund and PERS Retiree Health Insurance Credit Fund each of which failed to generate net investment returns in excess of Policy Benchmarks for the 5-years ended Sep. 30, 2020.

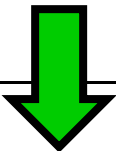


	Qtr. Ended 9/30/2020	1 Yr Ended 9/30/2020	3 Yrs Ended 9/30/2020	5 Yrs Ended 9/30/2020	Risk 5 Yrs Ended 9/30/2020	Risk Adj Excess Return 9/30/2020
<b>Petro.Tank Release \$6 million</b>						
Total Fund Return - Net	0.84%	3.85%	3.68%	3.43%	1.98%	0.46%
Policy Benchmark Return	0.34%	4.02%	3.47%	2.69%	1.73%	
Total Relative Return	0.50%	-0.17%	0.21%	0.74%		
<b>State Risk Mgmt. \$4 million</b>						
Total Fund Return - Net	3.50%	7.54%	6.56%	7.46%	7.54%	-0.77%
Policy Benchmark Return	2.93%	8.89%	6.80%	6.80%	5.83%	
Total Relative Return	0.57%	-1.35%	-0.24%	0.65%		
<b>State Risk Bonding Fund \$4 million</b>						
Total Fund Return - Net	3.96%	7.92%	6.85%	7.98%	8.72%	-0.81%
Policy Benchmark Return	3.48%	9.43%	7.23%	7.49%	7.05%	
Total Relative Return	0.47%	-1.51%	-0.39%	0.49%		
<b>NDACO \$7 million</b>						
Total Fund Return - Net	3.96%	7.96%	6.21%	7.01%	8.27%	-0.52%
Policy Benchmark Return	3.05%	8.22%	6.22%	6.21%	6.39%	
Total Relative Return	0.91%	-0.26%	-0.01%	0.80%		
<b>Bismarck Def.Sick Leave &lt; \$1 million</b>						
Total Fund Return - Net	3.57%	7.33%	5.94%	7.08%	7.48%	-0.45%
Policy Benchmark Return	2.59%	7.61%	5.85%	6.06%	5.61%	
Total Relative Return	0.98%	-0.28%	0.09%	1.02%		
<b>FargoDome \$46 million</b>						
Total Fund Return - Net	4.86%	7.53%	5.93%	7.94%	10.74%	-0.33%
Policy Benchmark Return	3.98%	7.89%	6.11%	7.33%	9.25%	
Total Relative Return	0.86%	-0.35%	-0.18%	0.61%		
<b>Cultural Endowment &lt; \$1 million</b>						
Total Fund Return - Net	5.10%	7.88%	6.57%	8.59%	11.37%	-0.67%
Policy Benchmark Return	4.54%	8.89%	7.13%	8.39%	10.03%	
Total Relative Return	0.55%	-1.01%	-0.55%	0.20%		

Note: Amounts are unaudited and subject to change.

## Key Takeaways:

- Over 99% of SIB clients earned net returns that exceeded Policy Benchmarks for the 5-year periods ended 9/30/2020, creating \$300 million of incremental client income (e.g. \$12 billion x 0.50% = \$60 million/year x 5 years) the last 5 years thereby supporting the prudent use of active management by the SIB and our clients.
- All SIB Pension Pool clients earned net returns which exceeded the Policy Benchmarks for 1, 3, and 5 years ended 9/30/2020.
- The vast majority of our SIB clients were able to generate net investment returns in excess of their Policy Benchmarks while adhering to recommended risk levels over the last 5 to 10 year periods.



	Qtr. Ended 9/30/2020	1 Yr Ended 9/30/2020	3 Yrs Ended 9/30/2020	5 Yrs Ended 9/30/2020	Risk 5 Yrs Ended 9/30/2020	Risk Adj Excess Return 9/30/2020
<b>Board of Medicine \$2.5 million</b>						
Total Fund Return - Net	3.31%	7.99%	5.11%	5.13%	6.17%	-0.55%
Policy Benchmark Return	2.37%	7.30%	4.87%	4.58%	4.44%	
Total Relative Return	0.95%	0.69%	0.24%	0.55%		
<b>PERS Group Insur. \$40 million</b>						
Total Fund Return - Net	1.51%	2.96%	2.69%	2.00%	2.61%	-0.54%
Policy Benchmark Return	0.22%	3.54%	2.71%	2.07%	1.08%	
Total Relative Return	1.29%	-0.58%	-0.02%	-0.08%		
<b>Lewis &amp; Clark &lt; \$1 million</b>						
Total Fund Return - Net	3.97%	7.99%	N/A	N/A		
Policy Benchmark Return	2.92%	7.86%	N/A	N/A		
Total Relative Return	0.54%	0.13%	N/A	N/A		
<b>AG Settelement Fund \$1 million</b>						
Total Fund Return - Net	1.64%	N/A	N/A	N/A		
Policy Benchmark Return	0.23%	N/A	N/A	N/A		
Total Relative Return	1.40%	N/A	N/A	N/A		
<b>Veterans Cemetery Trust &lt; \$1 million</b>						
Total Fund Return - Net	5.06%	N/A	N/A	N/A		
Policy Benchmark Return	4.07%	N/A	N/A	N/A		
Total Relative Return	1.00%	N/A	N/A	N/A		
<b>PERS Retiree Health \$152 million</b>						
Total Fund Return - Net	5.77%	10.35%	6.97%	8.62%	11.69%	-0.54%
Policy Benchmark Return	5.01%	9.38%	6.98%	8.43%	10.55%	
Total Relative Return	0.76%	0.96%	0.00%	0.19%		
<b>Tobacco Control \$7.6 million</b>						
Total Fund Return - Net	0.08%	3.20%	3.05%	N/A		
Policy Benchmark Return	0.09%	3.23%	3.05%	N/A		
Total Relative Return	-0.01%	-0.03%	0.00%			

Note: Amounts are unaudited and subject to change.

# Callan



November 2020

## **North Dakota State Investment Board**

Performance Evaluation  
as of September 30, 2020

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**Paul Erlendson**  
Senior Vice President

**Alex Browning**  
Senior Vice President

Callan

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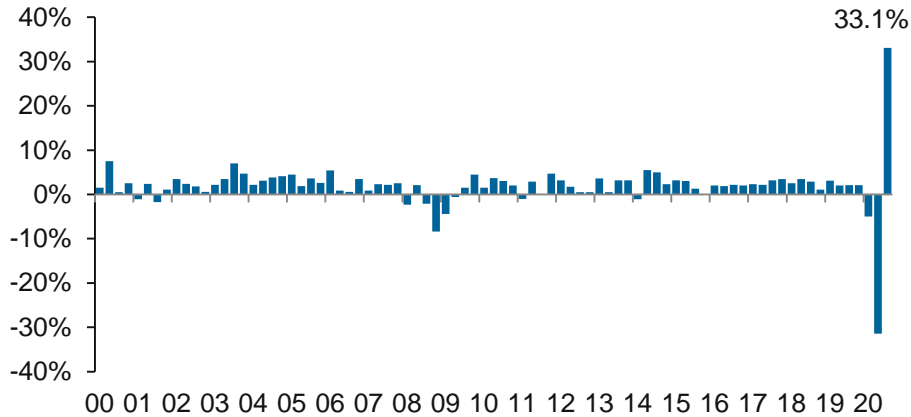
## Market Update

Third Quarter 2020

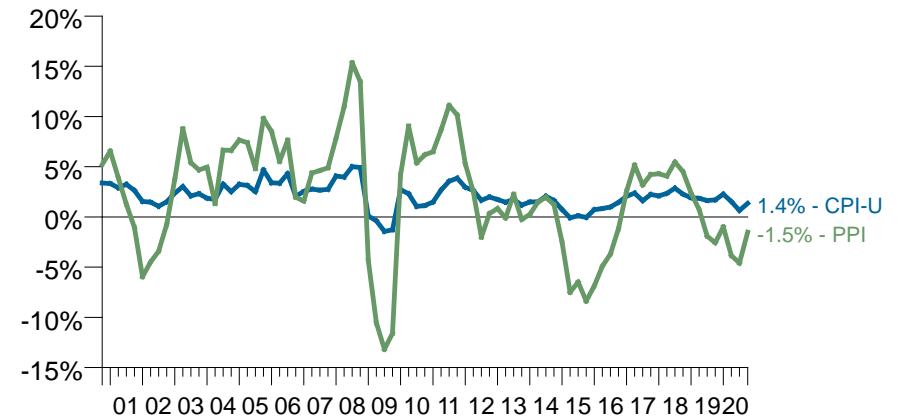
# U.S. Economy—Summary

For periods ended September 30, 2020

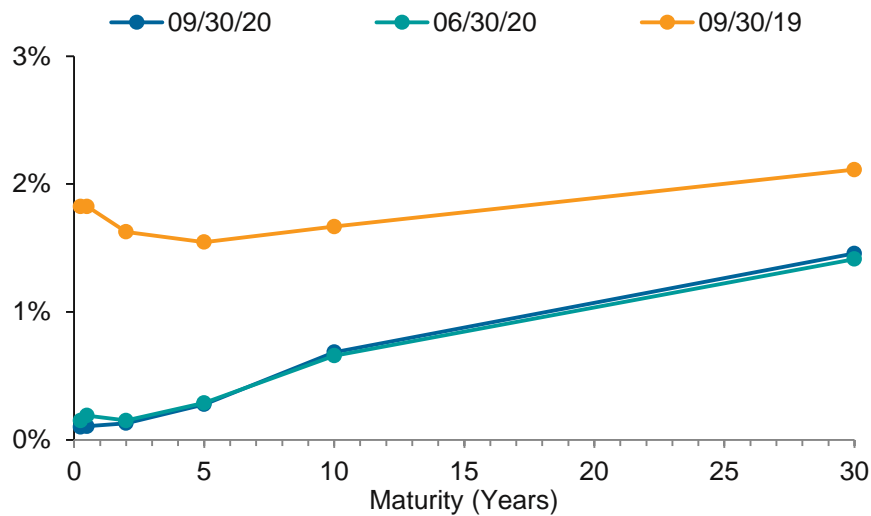
## Quarterly Real GDP Growth



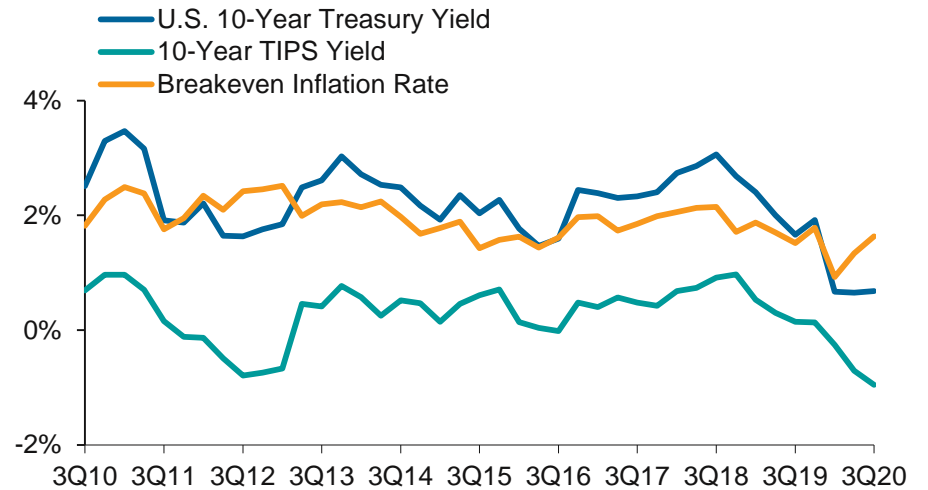
## Inflation Year-Over-Year



## U.S. Treasury Yield Curves

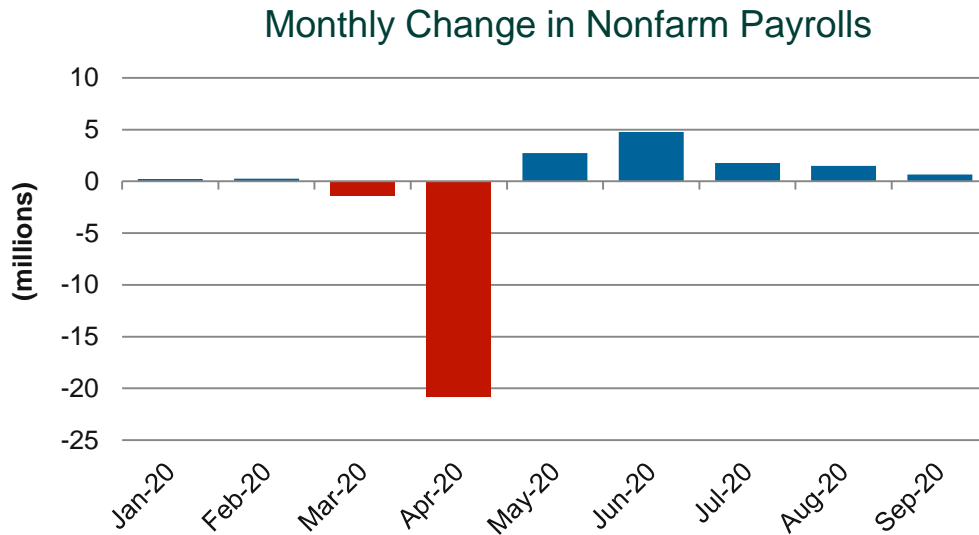


## Historical 10-Year Yields



# U.S. Employment Situation

While the recovery continues, the employment landscape remains depressed



Change in Payrolls by Sector from February to September 2020



- There are currently 10.7 million fewer jobs in the economy than there were in February of this year
  - This reflects a 7% drop in total employment
- Unemployment rate has dropped in five consecutive months. September's rate is 7.9%, down from April's high of 14.7%

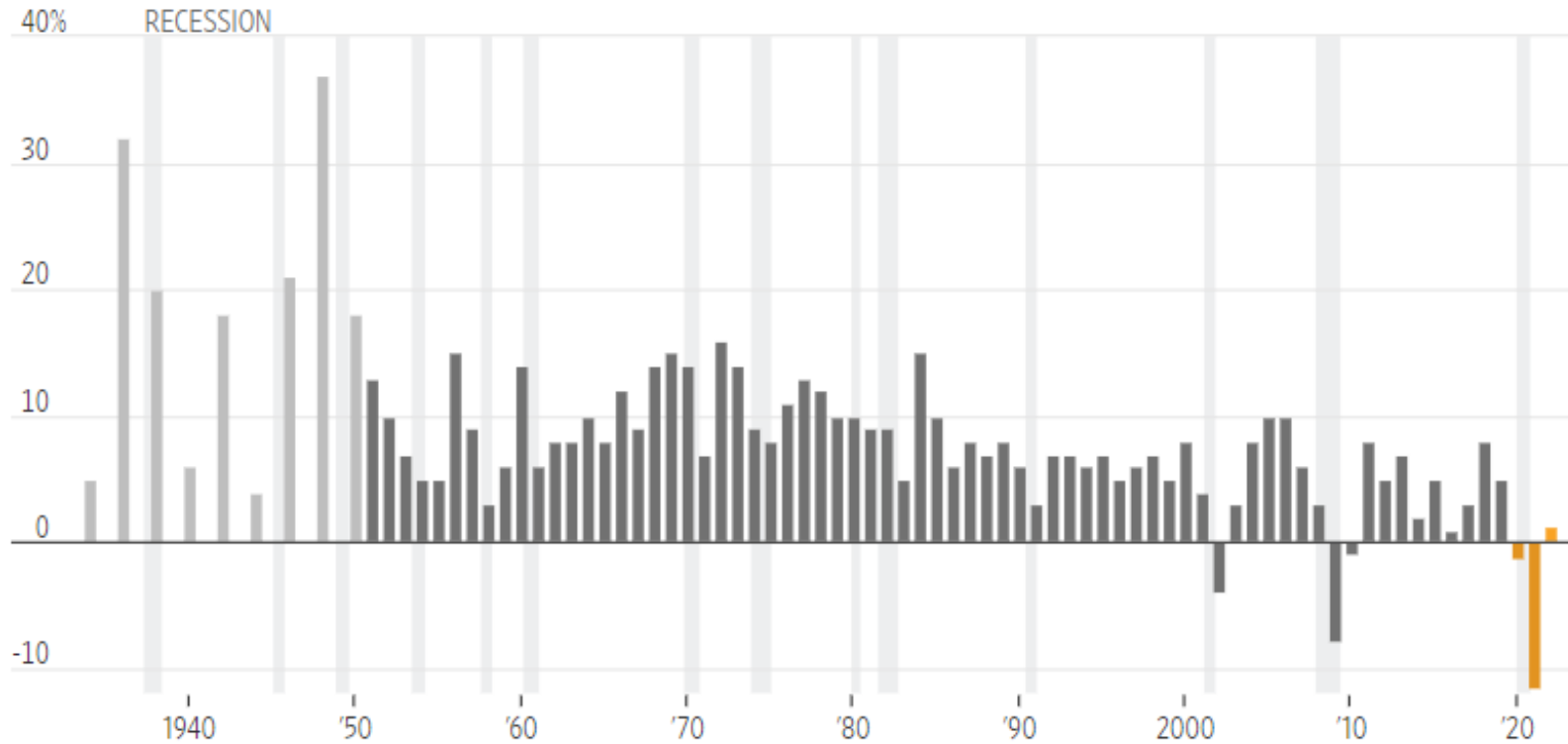
Source: Department of Labor



# Government Revenue Decline

Change in tax revenue, all states

■ 1934-50, two-year change ■ 1951-19, year-over-year ■ Projections



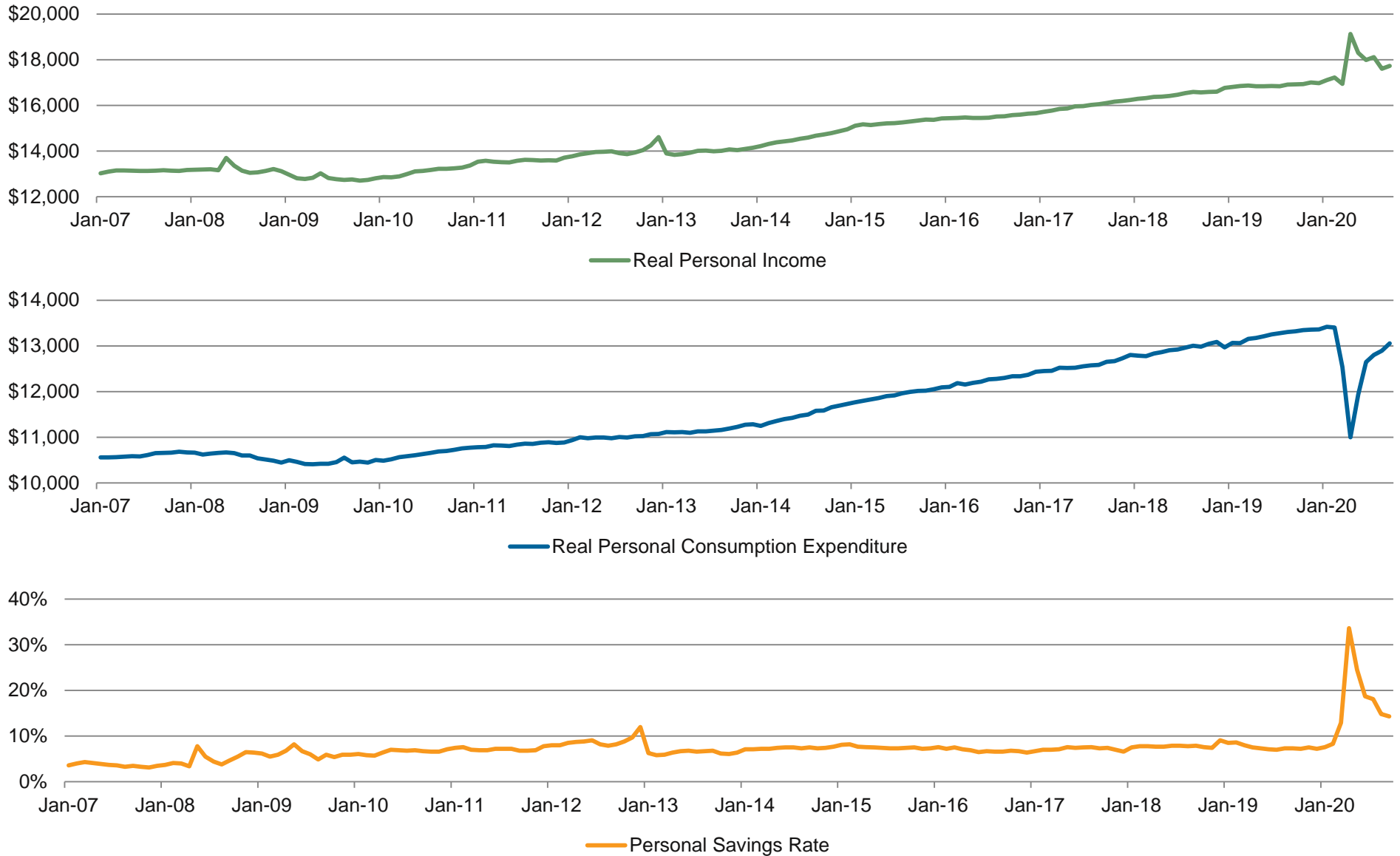
Total state revenue has declined after only two events in the past 90 years, 9/11 and the 2008 financial crisis.

Note: Projections assume no further federal stimulus and ongoing business and travel restrictions.

Sources: U.S. Census (1934-19); Moody's Analytics; The Wall Street Journal

# U.S. Personal Income, Consumption, and Savings

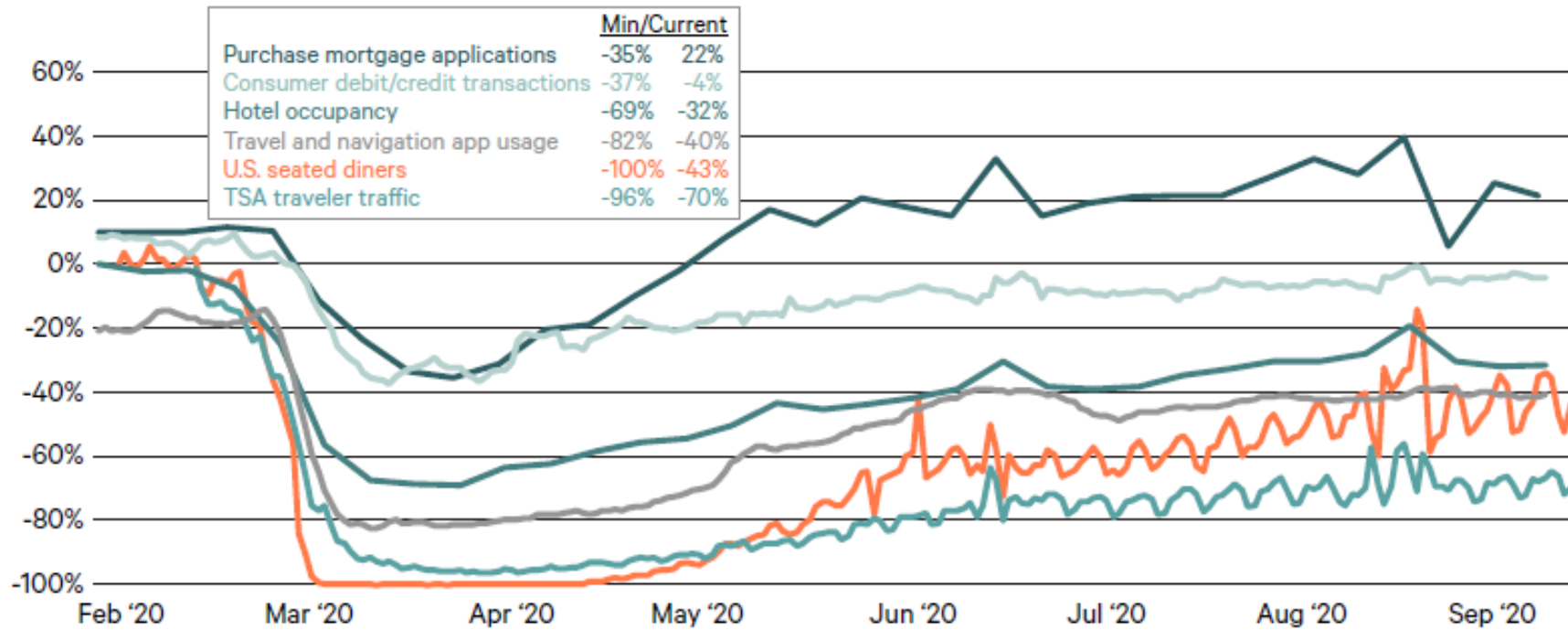
January 2007 through September 2020



Source: St. Louis FRED

# High Frequency Economic Data

Year-Over-Year % Change



Thus far, various industries, such as housing, have been able to recover faster than others.

Spending has shifted to online rather than in person, and more spending on goods rather than services.

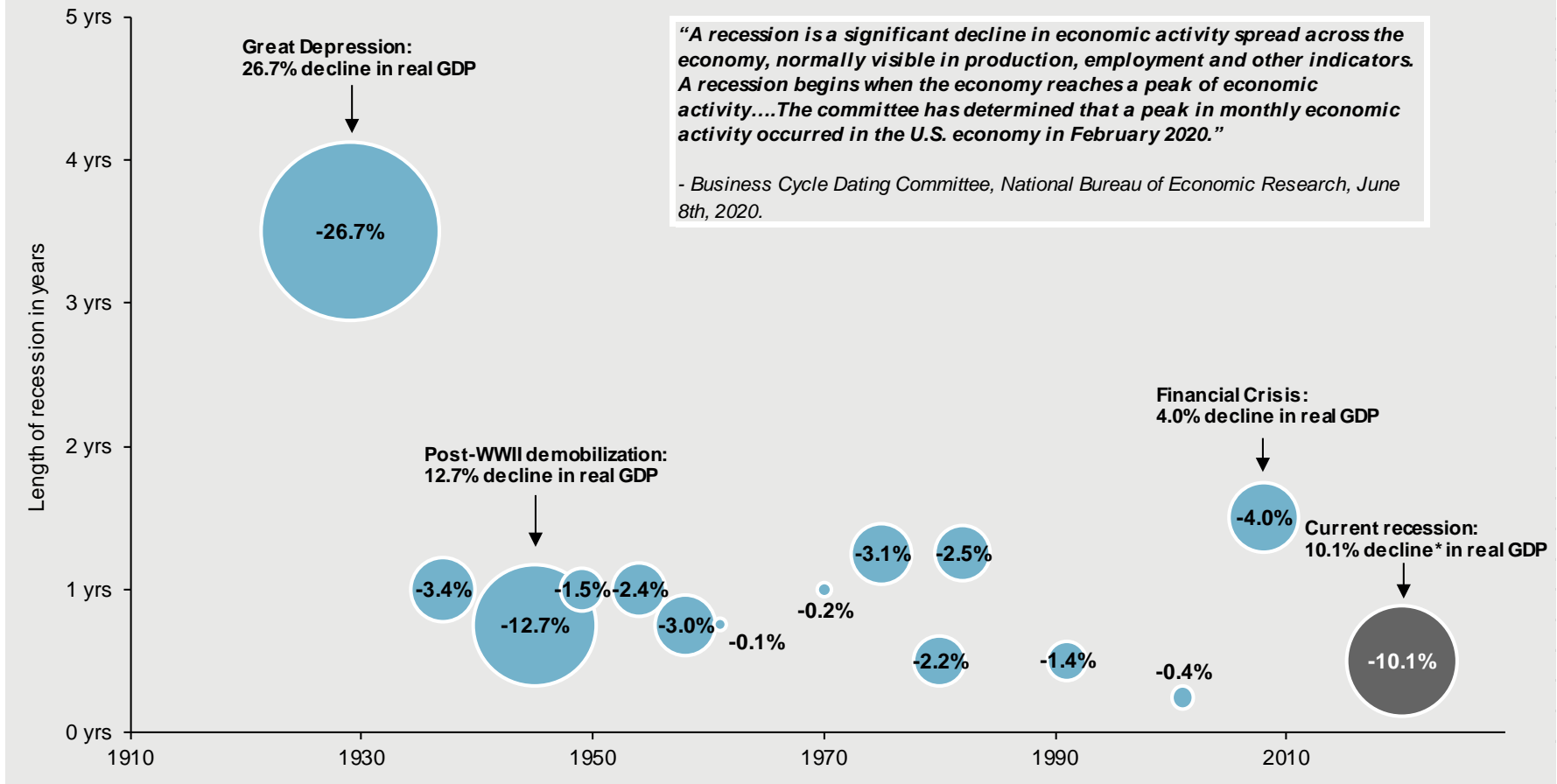
Source: App Annie, Chase, Mortgage Bankers Association, OpenTable, STR, Transportation Security Administration, and JP Morgan Asset Management via Kayne, Anderson, Rudnick. As of September 30, 2020.

# Size and Duration of U.S. Economic Recessions

Current recession rivals that of the post-WW II demobilization; worst in half a century

## The Great Depression and post-war recessions

Length and severity of recession



Sources: BEA, NBER, J.P. Morgan Asset Management Guide to the Markets – U.S. Data as of 9/30/20.

Bubble size reflects the severity of the recession, which is calculated as the decline in real GDP from the peak quarter to the trough quarter except in the case of the Great Depression, where it is calculated from the peak year (1929) to the trough year (1933), due to a lack of available quarterly data.

\*Current recession reflects peak (1Q20) to trough (2Q20) decline.

# Callan Periodic Table of Investment Returns

Annual Returns			Monthly Returns									
2017	2018	2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	YTD 2020
Emerging Market Equity	U.S. Fixed Income	Large Cap Equity	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	Small Cap Equity	Small Cap Equity	Emerging Market Equity	Emerging Market Equity	Large Cap Equity	U.S. Fixed Income	U.S. Fixed Income
37.28%	0.01%	31.49%	1.92%	1.80%	-0.59%	13.74%	6.51%	7.35%	8.94%	7.19%	-0.05%	6.79%
Dev ex-U.S. Equity	High Yield	Small Cap Equity	Real Estate	Global ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	Large Cap Equity	Large Cap Equity	Small Cap Equity	Large Cap Equity	Small Cap Equity	Global ex-U.S. Fixed Income	Large Cap Equity
24.21%	-2.08%	25.52%	0.84%	-0.20%	-3.22%	12.82%	4.76%	3.53%	5.64%	5.63%	-0.58%	5.57%
Large Cap Equity	Global ex-U.S. Fixed Income	Dev ex-U.S. Equity	Global ex-U.S. Fixed Income	High Yield	High Yield	Emerging Market Equity	High Yield	Dev ex-U.S. Equity	High Yield	Dev ex-U.S. Equity	High Yield	Global ex-U.S. Fixed Income
21.83%	-2.15%	22.49%	0.76%	-1.41%	-11.46%	9.16%	4.41%	3.42%	4.69%	5.16%	-1.03%	4.77%
Small Cap Equity	Large Cap Equity	Real Estate	High Yield	Emerging Market Equity	Large Cap Equity	Real Estate	Dev ex-U.S. Equity	Real Estate	Global ex-U.S. Fixed Income	Real Estate	Emerging Market Equity	High Yield
14.65%	-4.38%	21.91%	0.03%	-5.27%	-12.35%	7.06%	4.25%	2.57%	4.44%	2.52%	-1.60%	0.62%
Global ex-U.S. Fixed Income	Real Estate	Emerging Market Equity	Large Cap Equity	Large Cap Equity	Dev ex-U.S. Equity	Dev ex-U.S. Equity	Emerging Market Equity	Large Cap Equity	Real Estate	Emerging Market Equity	Dev ex-U.S. Equity	Emerging Market Equity
10.51%	-5.63%	18.44%	-0.04%	-8.23%	-14.12%	6.97%	0.77%	1.99%	2.78%	2.21%	-2.82%	-1.16%
Real Estate	Small Cap Equity	High Yield	Dev ex-U.S. Equity	Real Estate	Emerging Market Equity	High Yield	U.S. Fixed Income	Global ex-U.S. Fixed Income	Small Cap Equity	High Yield	Real Estate	Dev ex-U.S. Equity
10.36%	-11.01%	14.32%	-1.94%	-8.24%	-15.40%	4.51%	0.47%	1.01%	2.77%	0.95%	-3.11%	-7.13%
High Yield	Dev ex-U.S. Equity	U.S. Fixed Income	Small Cap Equity	Small Cap Equity	Small Cap Equity	Global ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	High Yield	Dev ex-U.S. Equity	Global ex-U.S. Fixed Income	Small Cap Equity	Small Cap Equity
7.50%	-14.09%	8.72%	-3.21%	-8.42%	-21.73%	2.04%	0.30%	0.98%	2.66%	0.29%	-3.34%	-8.69%
U.S. Fixed Income	Emerging Market Equity	Global ex-U.S. Fixed Income	Emerging Market Equity	Dev ex-U.S. Equity	Real Estate	U.S. Fixed Income	Real Estate	U.S. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	Large Cap Equity	Real Estate
3.54%	-14.57%	5.09%	-4.66%	-8.88%	-22.76%	1.78%	0.23%	0.63%	1.49%	-0.81%	-3.80%	-19.69%

Sources: ● Bloomberg Barclays Aggregate ● Bloomberg Barclays Corp High Yield ● Bloomberg Barclays Global Aggregate ex US  
 ● FTSE EPRA Nareit Developed ● MSCI World ex USA ● MSCI Emerging Markets ● Russell 2000 ● S&P 500

# U.S. Equity Continues to Shine Amid Pandemic

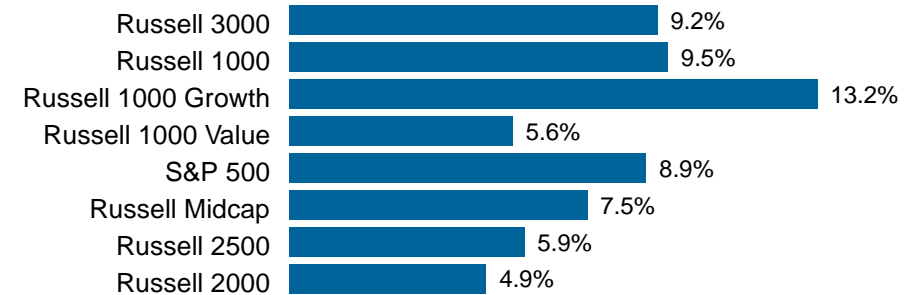
## Gains YTD

- S&P +8.9% for the quarter, bringing YTD to +5.6%
  - *Consumer Discretionary (+15%) and Industrials (+13%) dominated, with Industrials (+13%) and Tech (+12%) not far behind.*
  - *S&P 500 YTD would be negative if not for Facebook, Microsoft, Amazon, Alphabet, and Apple, representing 33% of the return.*
- YTD, pandemic punishing some sectors while rewarding others
  - *Tech +29% YTD; Cons. Disc. +23% (online retailers +60%).*
  - *Energy -48% amid declining crude and natural gas prices.*

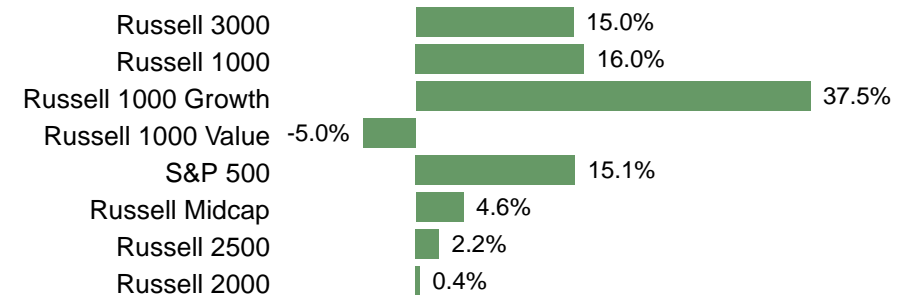
## Small cap reverses to trail large cap

- Following a stellar 2Q20 recovery, small cap trailed large.
  - *Remains behind large cap by a wide margin over last 12 months*
- Growth, value dispersion near all-time high driven by Tech
  - *YTD RUS1G +25% vs. RUS1V -12%*
- Growth stock P/E near 2x historical average across market caps

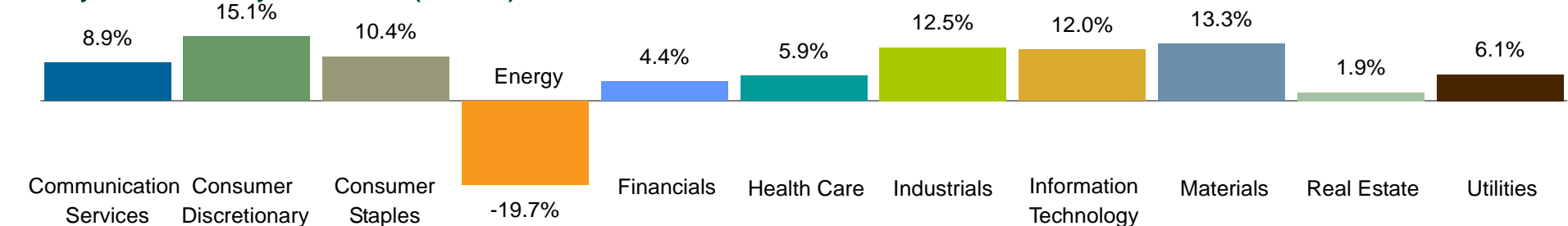
## U.S. Equity: Quarterly Returns



## U.S. Equity: One-Year Returns



## Industry Sector Quarterly Performance (S&P 500)

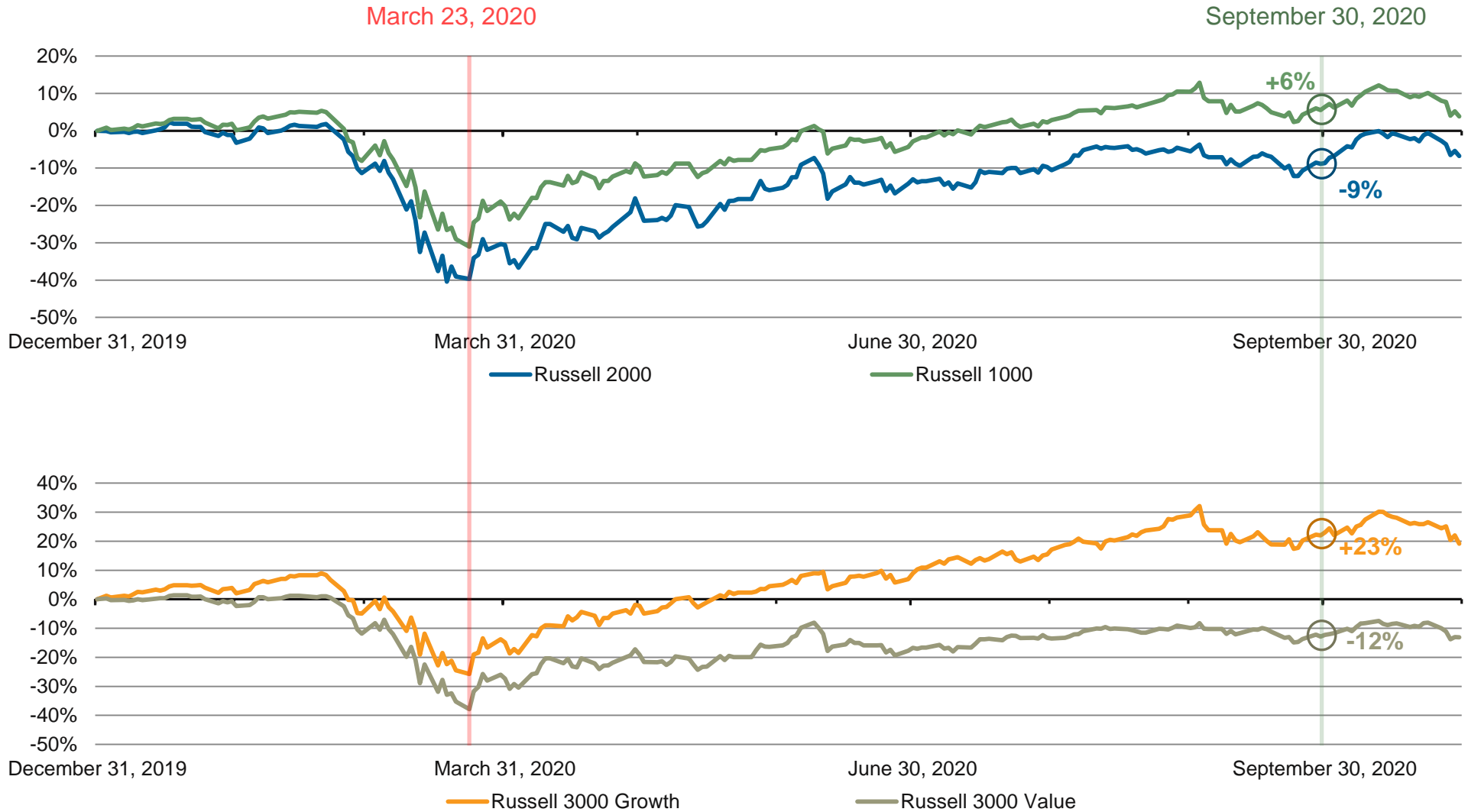


Sources: FTSE Russell, S&P Dow Jones Indices

# Dispersion Among Size and Style

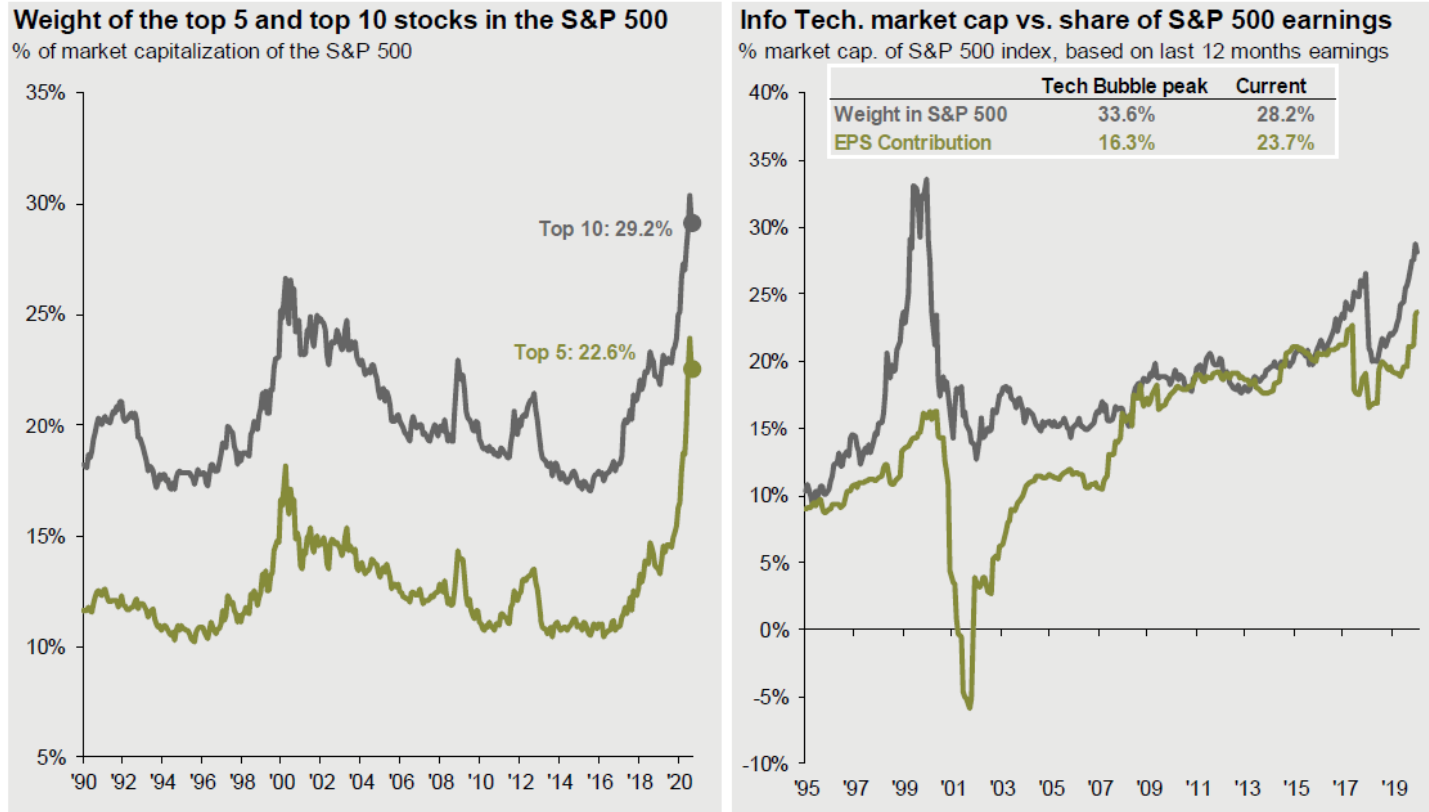
Data as of October 31, 2020

### Cumulative YTD Return For Size and Style Indices





# S&P 500 Index Concentration and Earnings



Unlike the Tech Bubble, the companies that comprise the top 5 and 10 names in the index are built on increasingly strong fundamentals. As seen in the chart on the right, EPS contribution is much more in line with index weight than was experienced during the Tech Bubble.

Source: FactSet, Standard & Poor's and JP Morgan Asset Management.

# Global ex-U.S. Equity Performance

## Continued recovery into 3Q20:

- Returns broadly positive across developed and emerging markets but muted YTD.
- Recent support from ultra-low interest rates and upward earnings revisions.
- EM recovery driven by global risk-on environment; key countries within EM (China and South Korea) have better managed the pandemic.
- Small cap continued to outperform large as lockdowns eased and business confidence improved.

## Rebound for cyclicals:

- Materials, Industrials, and Consumer Discretionary outperformed as consumption and production resumed.
- Factor performance led by momentum (rebound) and volatility (risk-on market mentality).

## U.S. dollar vs. other currencies:

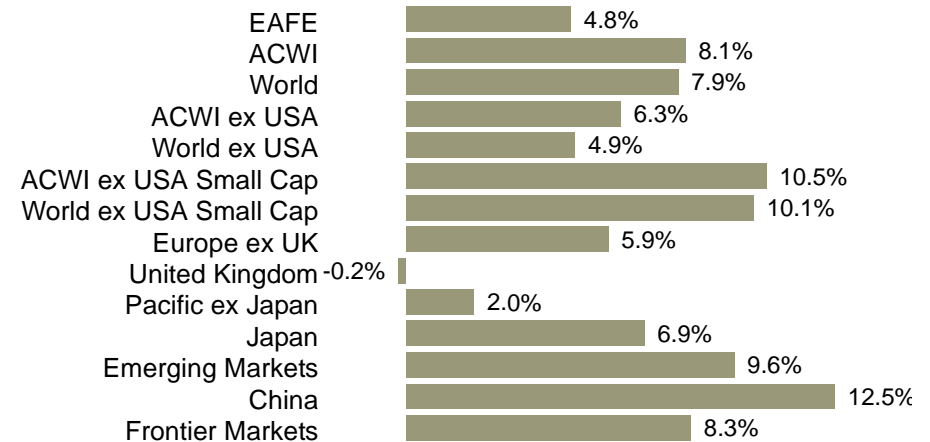
- U.S. dollar lost ground versus every developed market currency on expectation of lower-for-longer U.S. rates due to Fed's shift in approach toward inflation and employment.

## Growth vs. value

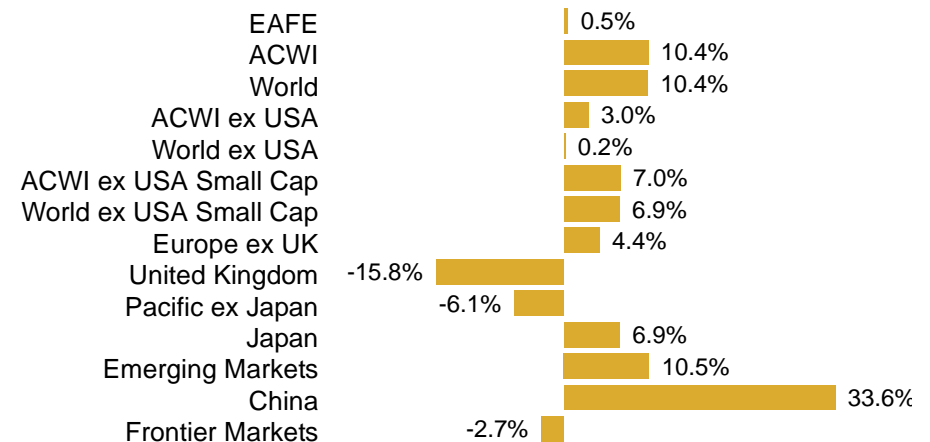
- Growth continued to outperform value.
- Extremely narrow market with performance dominated by Tech.

Source: MSCI

## Global Equity: Quarterly Returns



## Global Equity: Annual Returns



# U.S. Fixed Income Performance: 3Q20

## Treasury yields largely unchanged:

- 10-year UST yield at 0.69% in 3Q20, up 3 bps from 2Q20 but off sharply from year-end level of 1.92%.
- TIPS did well as inflation expectations rose from 1.34% to 1.63%.
- No rate hikes expected until at least 2023.

## Bloomberg Barclays Aggregate roughly flat:

- Corporate and CMBS the strongest investment grade sectors as investors hunted for yield.
- Corporate supply (\$1 trillion YTD) at a record as companies rushed to take advantage of ultra-low interest rates.

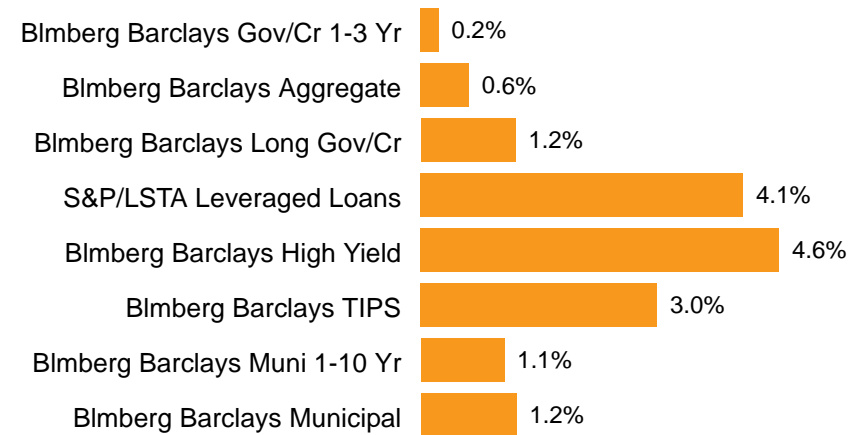
## Risk-on sentiment helped high yield and loans

- Non-investment grade sectors rallied, but remain roughly flat YTD.
- The high yield bond market also experienced high levels of net new issuance (over \$120 billion YTD).

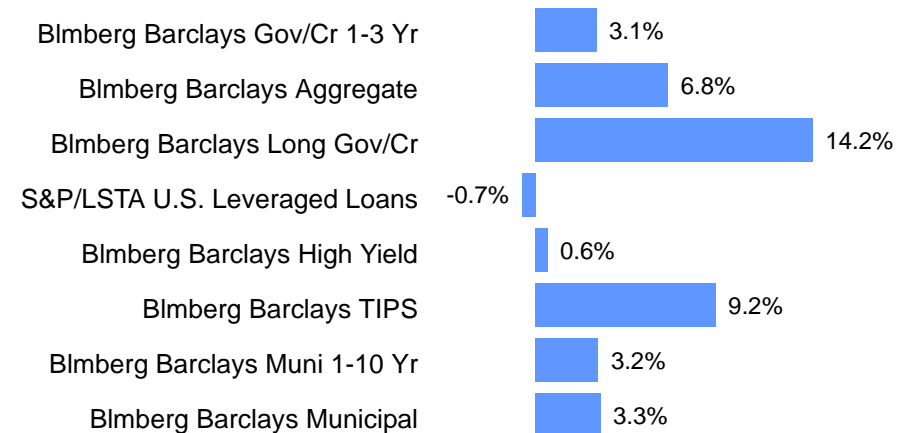
## Munis boosted by favorable supply/demand dynamics

- Robust demand and muted supply of tax-exempt municipals.
- Issuance in taxable municipals sharply higher.
- Tax revenues better than expected, but challenges remain and stimulus uncertain (but needed).

## U.S. Fixed Income: Quarterly Returns

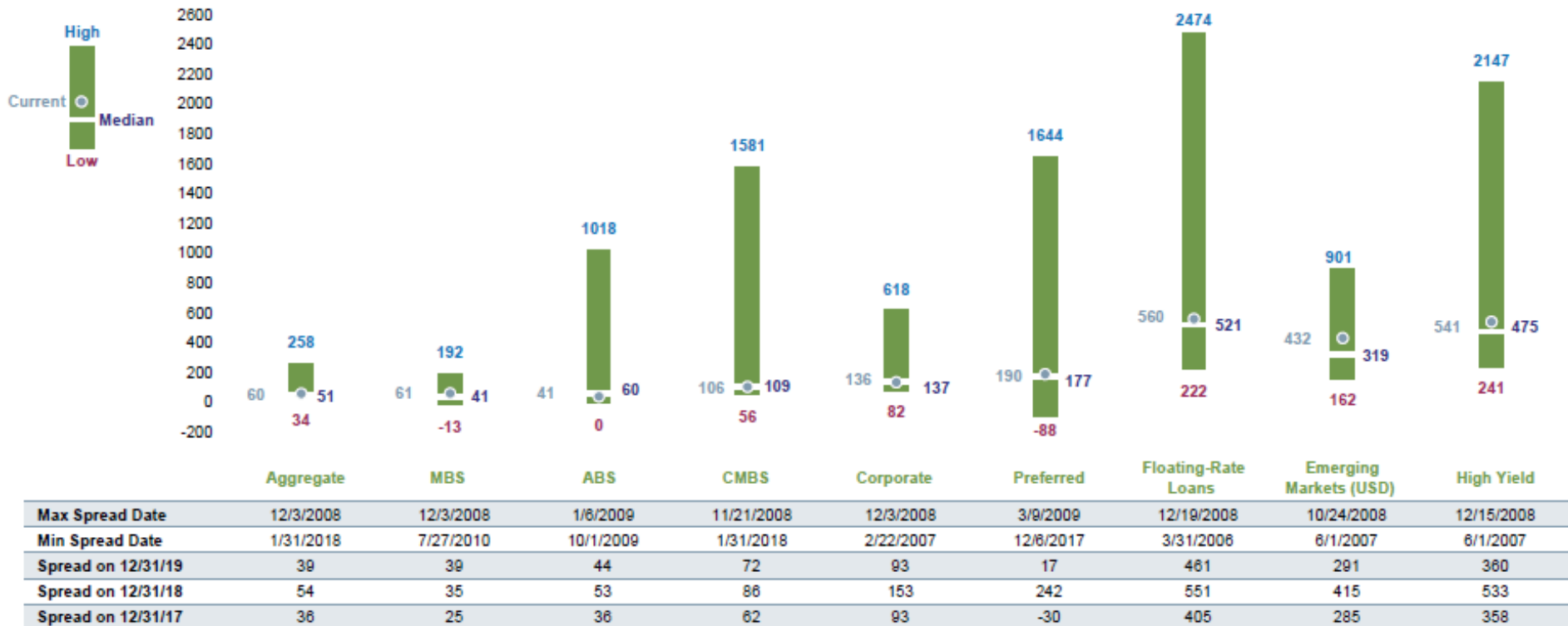


## U.S. Fixed Income: Nine Month Returns



# Fixed Income Valuations

## Spread Analysis (bps)



Source: Eaton Vance Monthly Market Monitor, FactSet as of 9/30/20. Spread history measures past 15 years. All fixed-income spreads are in basis points and measure option-adjusted yield spread relative to comparable maturity U.S. Treasuries using daily data. Loan Index spread represents the three-year discounted spread over LIBOR. Aggregate represented by Bloomberg Barclays US Aggregate Index. MBS represented by Bloomberg Barclays U.S. Mortgage Backed Securities (MBS) Index. ABS represented by Bloomberg Barclays U.S. Asset Backed Securities (ABS) Index. CMBS represented by Bloomberg Barclays U.S. CMBS Investment Grade Index. Corporate represented by Bloomberg Barclays U.S. Corporate Investment Grade Index. Preferred represented by ICE BofA Fixed Rate Preferred Securities Index. Floating-Rate Loans represented by S&P/LSTA Leveraged Loan Index. Emerging Markets(USD) represented by J.P. Morgan Emerging Markets Bond Index (EMBI) Global Diversified. High Yield represented by ICE BofAUS High Yield Index.

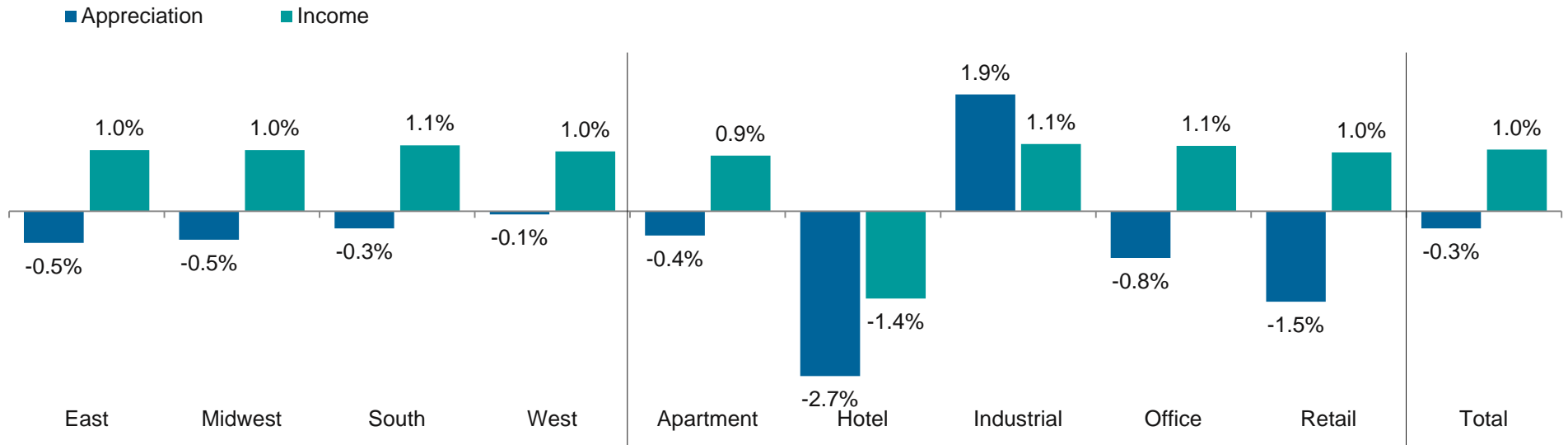
# U.S. Private Real Estate Market Trends

## Results

- Pandemic's impact reflected in 3Q20 results
- Income remains positive except in Hotel sector.
- All sectors experienced negative appreciation; Industrial remains the best performer.
- Dispersion of returns by manager within the ODCE Index due to both composition of underlying portfolios and valuation methodologies/approach.
- Negative appreciation returns expected for 4Q and beyond

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
NCREIF ODCE	0.5%	1.4%	5.2%	6.6%	10.3%
Appreciation	-0.5%	-2.5%	1.0%	2.3%	5.3%
Income	1.0%	4.0%	4.1%	4.3%	4.8%
NCREIF Property Index	0.7%	2.0%	5.1%	6.3%	9.4%
Appreciation	-0.3%	-2.2%	0.6%	1.6%	4.1%
Income	1.0%	4.3%	4.5%	4.6%	5.2%

## NCREIF Property Index Returns by Region and Property Type



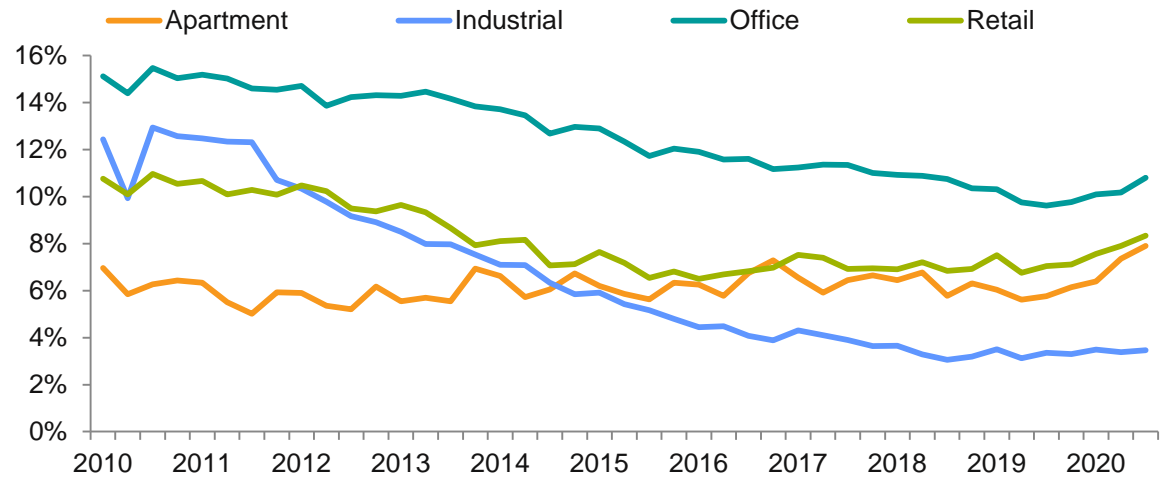
Source: NCREIF

# U.S. Private Real Estate Market Trends

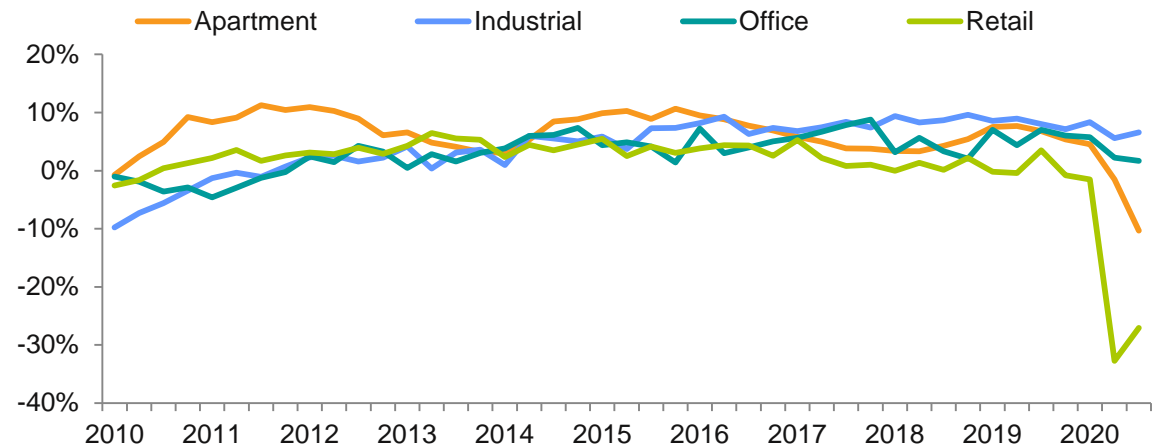
## U.S. real estate fundamentals

- Vacancy rates for all property types are or will be impacted.
- Net operating income has declined as retail continues to suffer.
- 3Q rent collections show relatively stable income throughout the quarter in the Industrial, Apartment, and Office sectors. The Retail sector remains challenged, with regional malls impacted most heavily.
- Class A/B urban apartments relatively strong, followed by certain types of Industrial and Office.
- Supply was in check before the pandemic.
- Construction is limited to finishing up existing projects but has been hampered by shelter in place and material shortages.
- New construction will be basically halted in future quarters except for pre-leased properties.

## Vacancy by Property Type



## Rolling 4-Quarter NOI Growth by Property Type

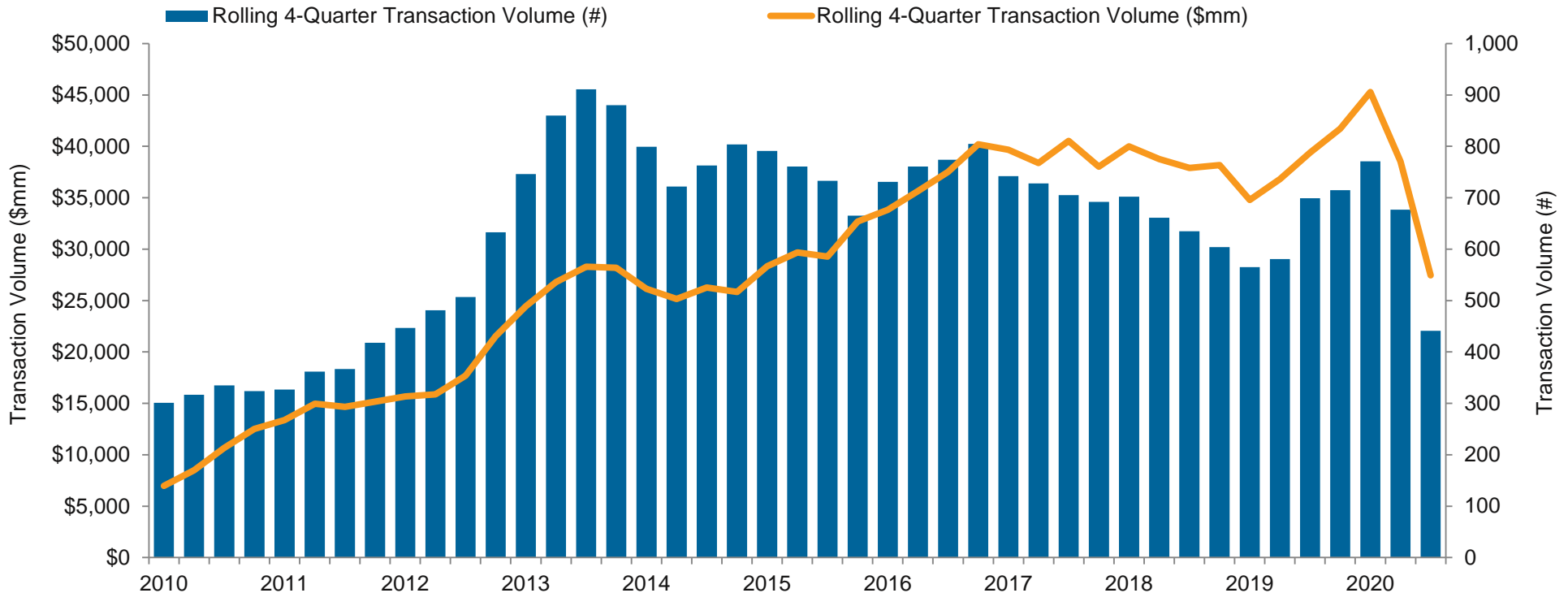


Source: NCREIF

# U.S. Private Real Estate Market Trends

Pricing and transaction volumes have essentially halted in 3Q20

## NCREIF Rolling 4-Quarter Transaction Totals



- Transaction volume has dropped off during the quarter with the exception of industrial assets with strong-credit tenants trading at pre-COVID-19 levels.
- Cap rates remained steady during the quarter. The spread between cap rates and 10-year Treasuries is relatively high, leading some market participants to speculate that cap rates will not adjust much. Price discovery is happening and there are limited transactions.
- Callan believes the pandemic may cause a permanent re-pricing of risk across property types. Property types with more reliable cash flows will experience less of a change in cap rates; however, those with less reliable cash flows will see greater adjustments.

Source: NCREIF



Callan

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**NDSIB Total Performance Summary**

# NDSIB Consolidated Gross Performance Summary

As of September 30, 2020

	Last Quarter	Last Year	Last 5 Years
<b>Consolidated Pension Trust</b>	4.99%	8.33%	8.57%
<i>Consolidated Pension Trust Target</i>	4.37%	7.07%	7.80%
Relative Performance vs. Target	0.62%	1.26%	0.77%
<b>PERS Total Fund</b>	5.05%	8.41%	8.61%
<i>NDSIB PERS Total Fund Target</i>	4.35%	7.05%	7.83%
Relative Performance vs. Target	0.70%	1.36%	0.78%
<b>TFFR Total Fund</b>	4.97%	8.33%	8.55%
<i>NDSIB TFFR Total Fund Target</i>	4.41%	7.06%	7.79%
Relative Performance vs. Target	0.56%	1.27%	0.76%
<b>WSI Total Fund</b>	3.14%	7.64%	7.27%
<i>NDSIB WSI Total Fund Target</i>	2.25%	7.30%	5.99%
Relative Performance vs. Target	0.89%	0.34%	1.28%
<b>Legacy - Total Fund</b>	4.98%	8.48%	8.13%
<i>NDSIB Legacy - Total Fund Target</i>	3.95%	7.45%	7.26%
Relative Performance vs. Target	1.03%	1.03%	0.87%
<b>Budget - Total Fund</b>	1.67%	3.17%	2.38%
<i>NDSIB Budget - Total Fund Target</i>	0.23%	3.70%	2.06%
Relative Performance vs. Target	1.44%	-0.53%	0.32%

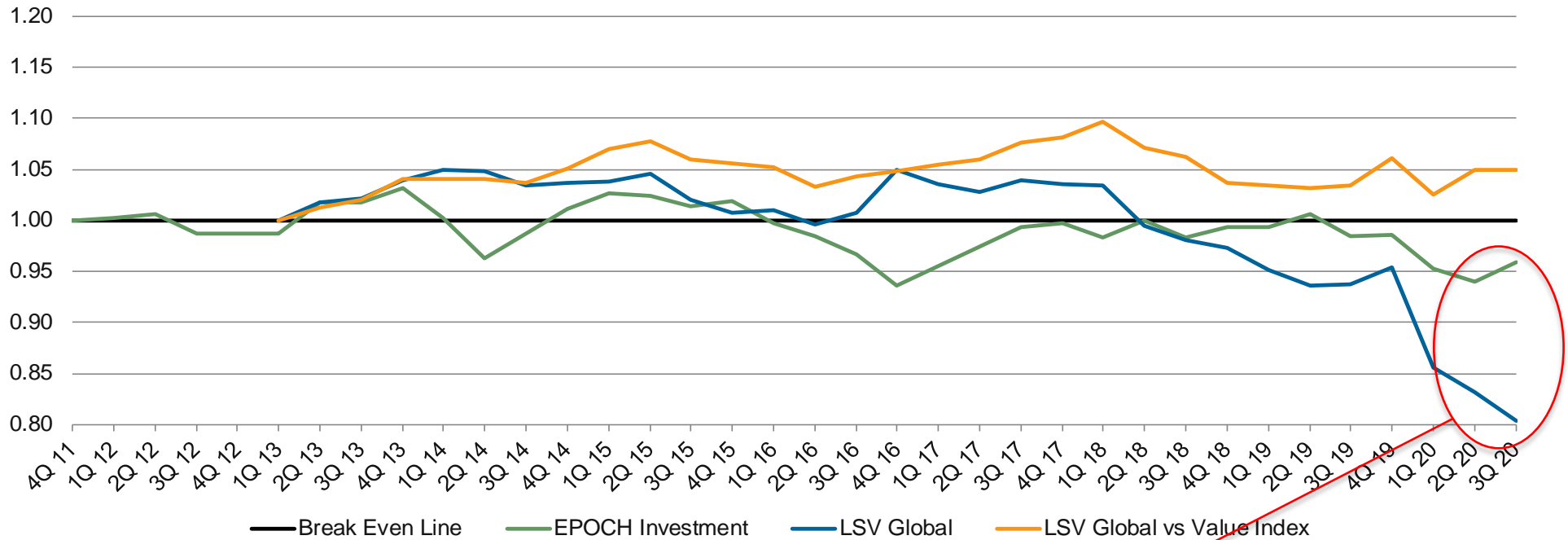
Callan

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**Manager Relative Performance**

# Word Equities

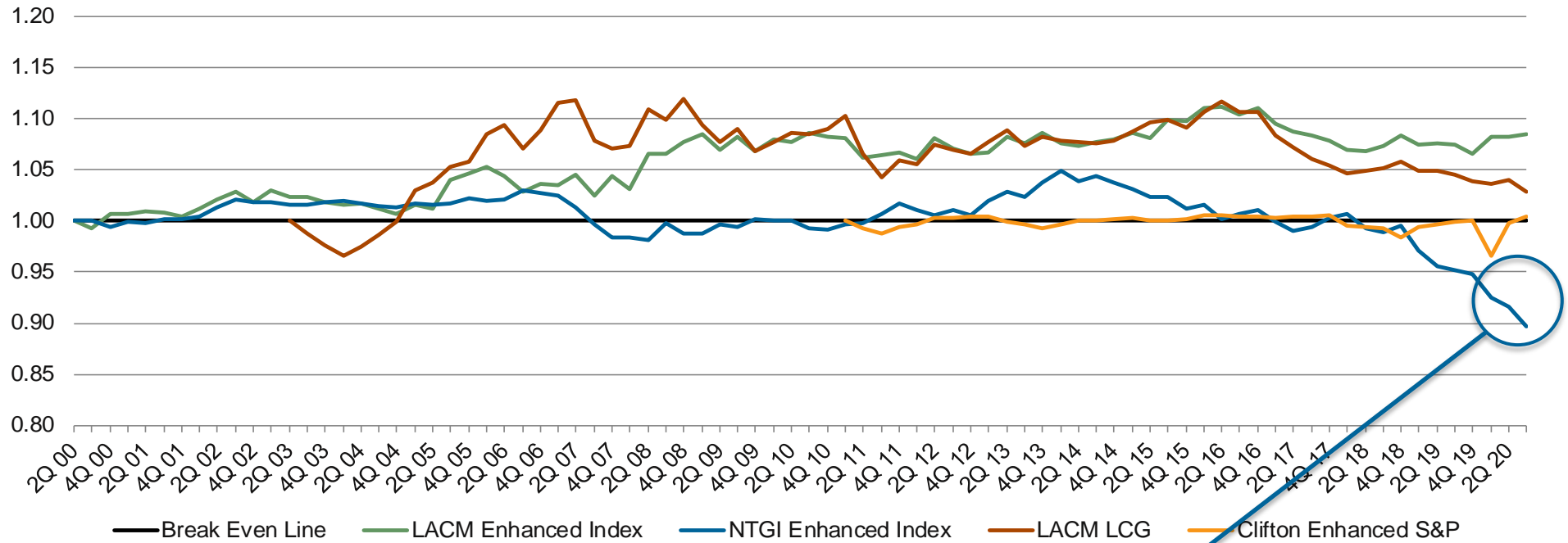
Cumulative Net Relative Return Since Inception, as of September 30, 2020



Fund Name	First Full Quarter of Returns	Cumulative Net Relative Return Since Inception	Benchmark
EPOCH Investment	Q1 2012	0.96	MSCI World
LSV Global	Q2 2013	0.80	Custom LSV Global Index
LSV Global vs Value Index	Q2 2013	1.05	MSCI ACWI IMI Value

# U.S. Large Cap Equities

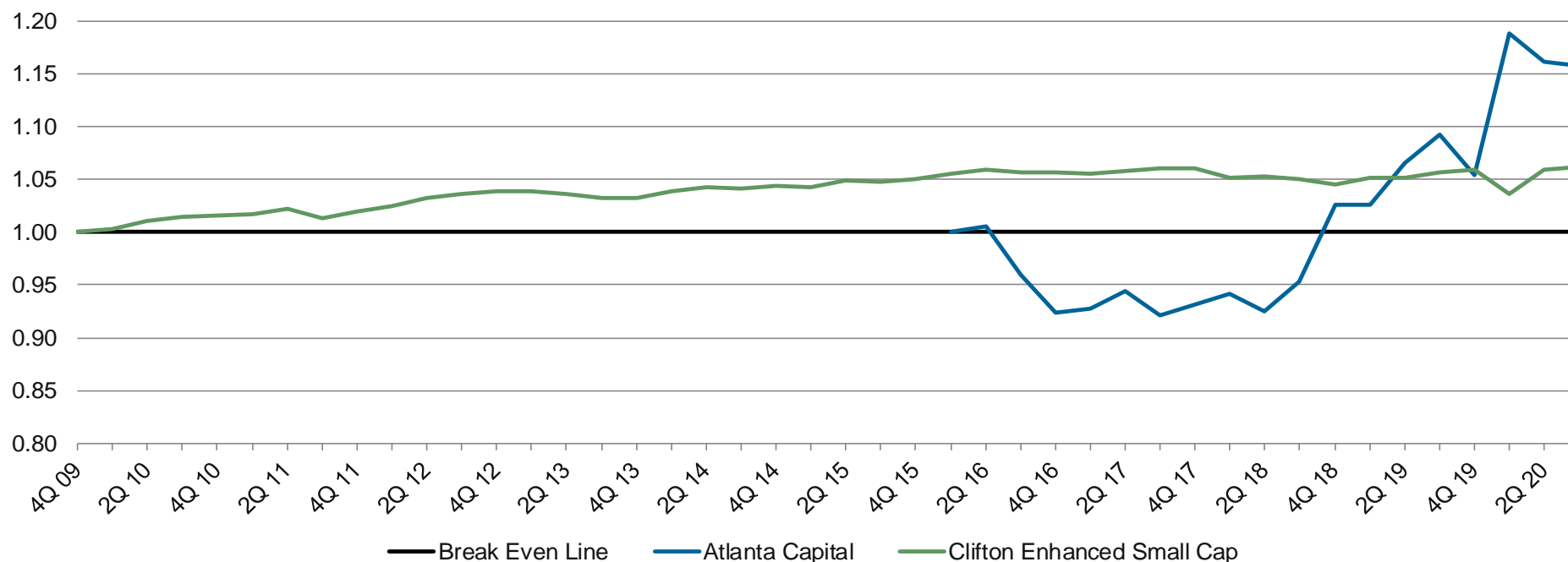
Cumulative Net Relative Return Since Inception, as of September 30, 2020



Fund Name	First Full Quarter of Returns	Cumulative Net Relative Return Since Inception	Benchmark
Clifton Enhanced S&P	Q2 2011	1.00	S&P 500
LACM LCG	Q3 2003	1.03	Russell 1000 Growth
LACM Enhanced Index	Q3 2000	1.08	Russell 1000
NTGI Enhanced Index	Q3 2000	0.90	S&P 500

# U.S. Small Cap Equities

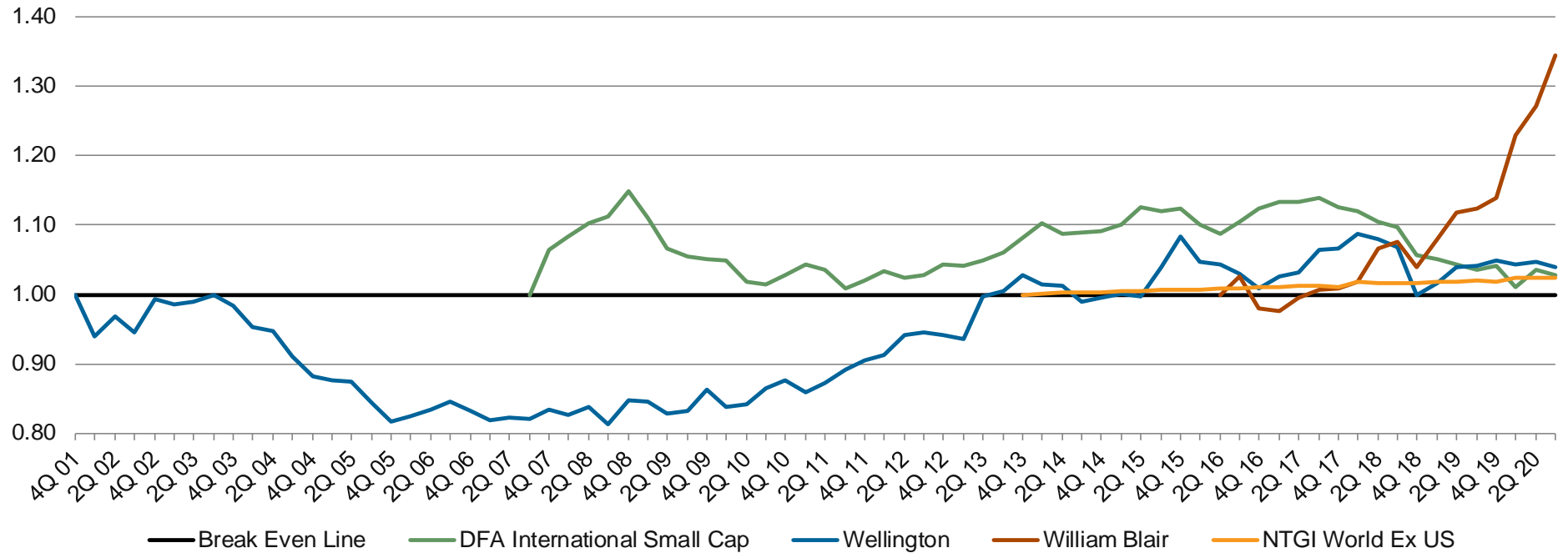
Cumulative Net Relative Return Since Inception, as of September 30, 2020



Fund Name	First Full Quarter of Returns	Cumulative Net Relative Return Since Inception	Benchmark
Atlanta Capital	Q2 2016	1.16	S&P 600 Small Cap
Clifton Enhanced Small Cap	Q1 2010	1.06	Russell 2000

# Developed International Equities

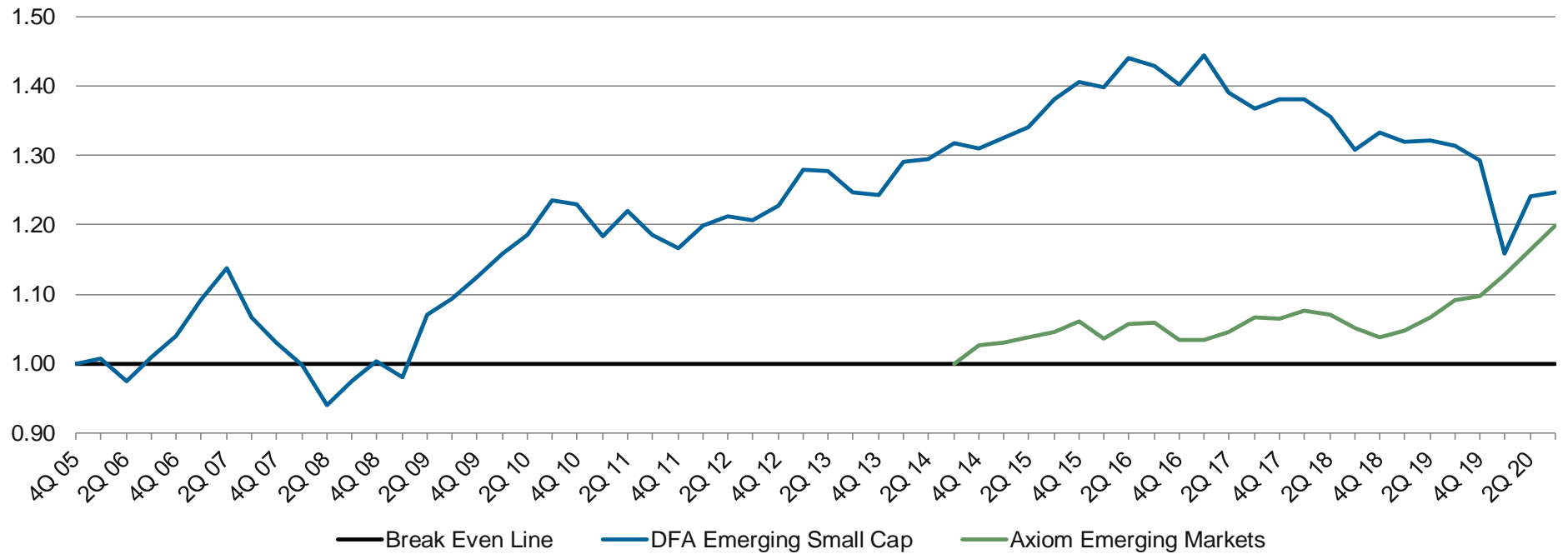
Cumulative Net Relative Return Since Inception, as of September 30, 2020



Fund Name	First Full Quarter of Returns	Cumulative Net Relative Return Since Inception	Benchmark
DFA International Small Cap	Q4 2007	1.03	MSCI World Ex US SC Value
NTGI World Ex US	Q1 2014	1.02	MSCI World Ex US
Wellington	Q1 2002	1.04	BMI, EPAC, <\$2 B
William Blair	Q3 2016	1.34	MSCI ACWI Ex US IMI

# Emerging Market Equities

Cumulative Net Relative Return Since Inception, as of September 30, 2020

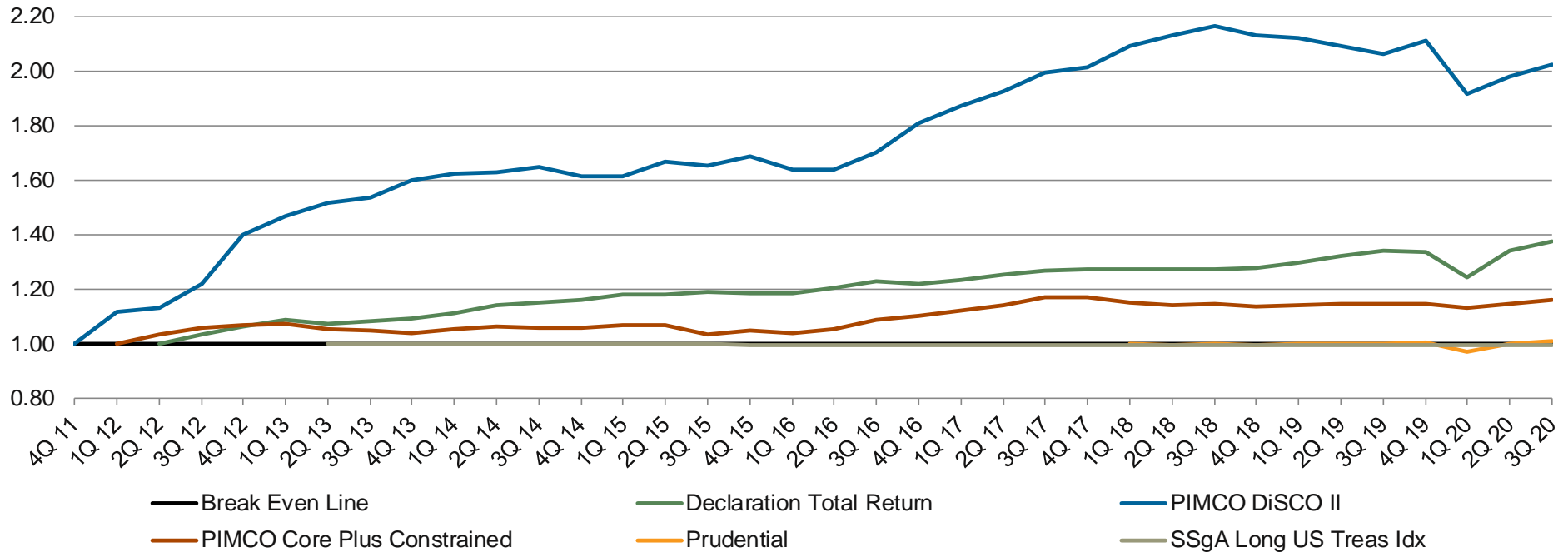


Fund Name	First Full Quarter of Returns	Cumulative Net Relative Return Since Inception	Benchmark
Axiom Emerging Markets	Q4 2014	1.20	MSCI Emerging Market
DFA Emerging Small Cap	Q1 2006	1.25	MSCI Emerging Market



# Investment Grade Fixed Income

Cumulative Net Relative Return Since Inception, as of September 30, 2020

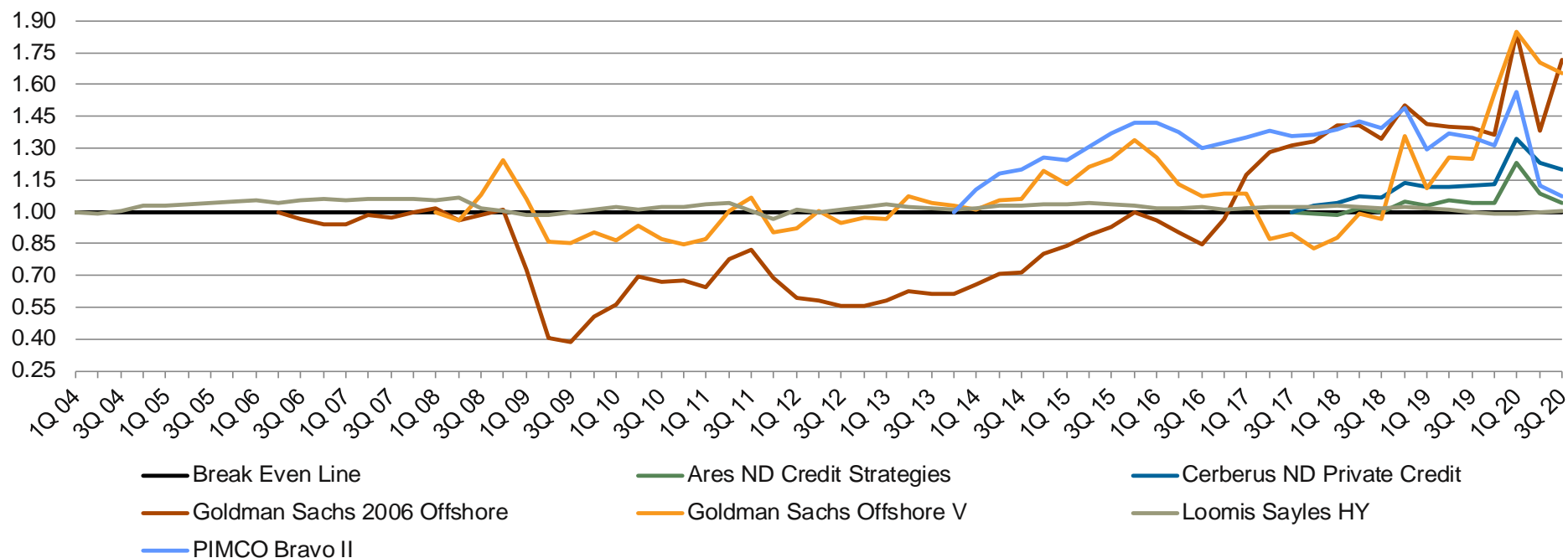


Fund Name	First Full Quarter of Returns	Cumulative Net Relative Return Since Inception	Benchmark
Declaration Total Return	Q3 2012	1.38	3-Month LIBOR
PIMCO DiSCO II	Q1 2012	2.03	Bloomberg Aggregate
PIMCO Core Plus Constrained	Q2 2014	1.16	PIMCO Custom Benchmark
Prudential	Q2 2018	1.01	Bloomberg Aggregate
SSgA Long US Treas Idx	Q3 2013	1.00	Bloomberg Long Treasury

The PIMCO Custom Benchmark reflects the returns of 3-month Libor through Feb. 28, 2014; The fund's performance through March 31, 2014; 3-month Libor through June 30, 2018; and the Blmbg Agg thereafter.

## Below Investment Grade Fixed Income

Cumulative Net Relative Return Since Inception, as of September 30, 2020



Fund Name	First Full Quarter of Returns	Cumulative Net Relative Return Since Inception	Benchmark
Ares ND Credit Strategies	Q4 2017	1.04	S&P:LSTA Leveraged Loan B
Cerberus ND Private Credit	Q4 2017	1.20	S&P:LSTA Leveraged Loan B
Goldman Sachs 2006 Offshore	Q3 2006	1.72	Bloomberg: HY Corp 2% Iss Cap
Goldman Sachs Offshore V	Q4 2007	1.65	Bloomberg: HY Corp 2% Iss Cap
Loomis Sayles HY	Q2 2004	1.00	Bloomberg: HY Corp 2% Iss Cap
PIMCO Bravo II	Q1 2014	1.07	Bloomberg: HY Corp 2% Iss Cap

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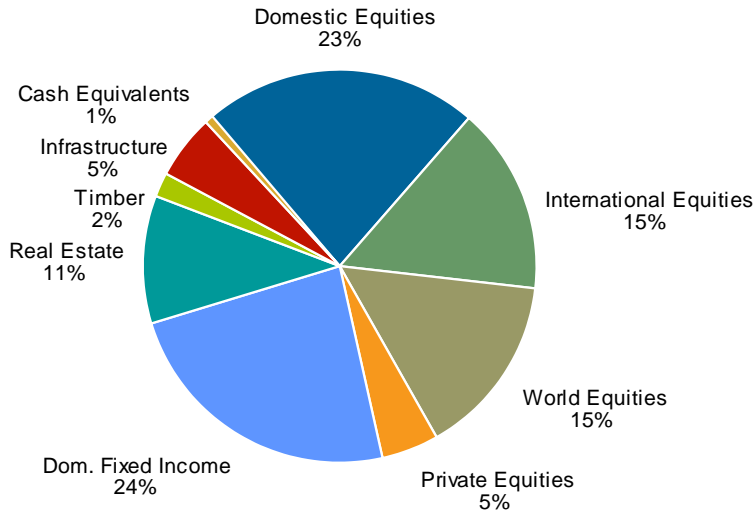
## **Consolidated Pension Trusts Quarterly Review**

- Public Employees Retirement System
- Teachers' Fund for Retirement

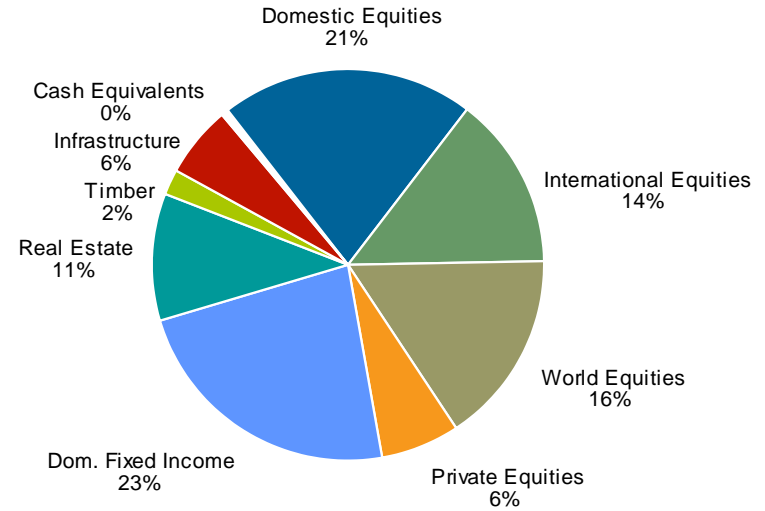
# Consolidated Pension Trust Allocation

As of September 30, 2020

**Actual Asset Allocation**



**Target Asset Allocation**

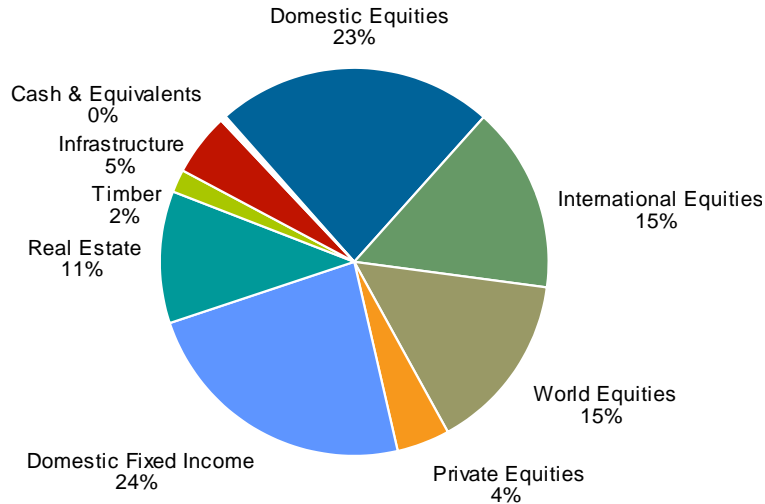


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	1,434,686	22.8%	20.9%	1.8%	115,948
International Equities	967,213	15.4%	14.3%	1.0%	63,849
World Equities	944,442	15.0%	16.0%	(1.0%)	(63,457)
Private Equities	292,938	4.7%	6.5%	(1.8%)	(115,365)
Dom. Fixed Income	1,498,527	23.8%	23.3%	0.5%	33,906
Real Estate	663,349	10.5%	10.5%	(0.0%)	(1,206)
Timber	122,914	2.0%	2.0%	0.0%	0
Infrastructure	331,597	5.3%	6.1%	(0.8%)	(49,594)
Cash Equivalents	43,698	0.7%	0.4%	0.3%	15,917
<b>Total</b>	<b>6,299,364</b>	<b>100.0%</b>	<b>100.0%</b>		

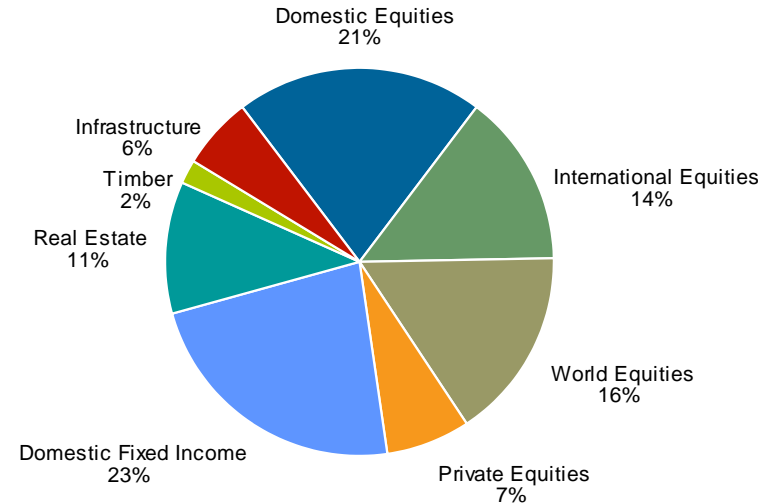
# PERS Allocation

As of September 30, 2020

**Actual Asset Allocation**



**Target Asset Allocation**

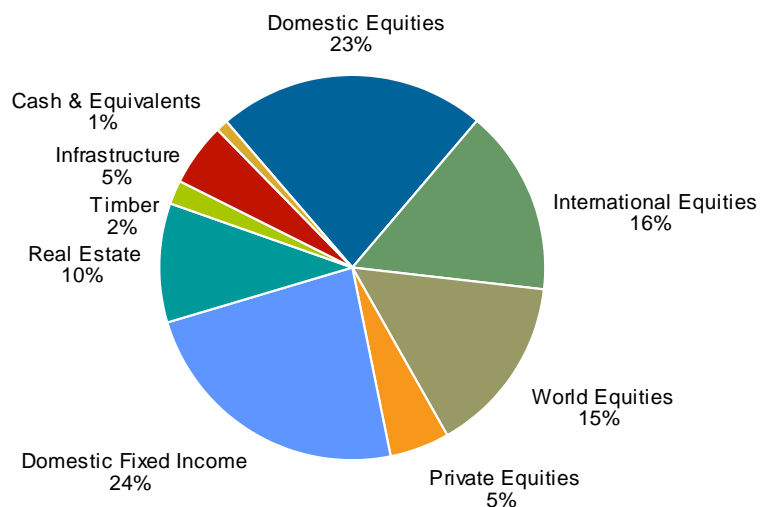


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	778,805	23.2%	20.6%	2.6%	87,433
International Equities	518,922	15.5%	14.4%	1.0%	34,962
World Equities	500,635	14.9%	16.0%	(1.1%)	(36,660)
Private Equities	146,672	4.4%	7.0%	(2.6%)	(88,394)
Domestic Fixed Income	790,155	23.5%	23.0%	0.5%	17,794
Real Estate	369,011	11.0%	11.0%	(0.0%)	(379)
Timber	62,156	1.9%	1.9%	(0.0%)	(0)
Infrastructure	175,030	5.2%	6.1%	(0.9%)	(31,461)
Cash & Equivalents	16,704	0.5%	0.0%	0.5%	16,704
<b>Total</b>	<b>3,358,091</b>	<b>100.0%</b>	<b>100.0%</b>		

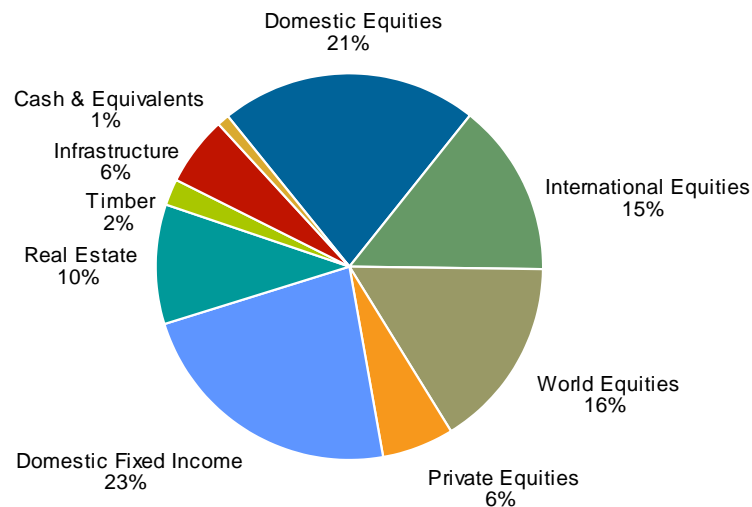
# TFFR Allocation

As of September 30, 2020

**Actual Asset Allocation**



**Target Asset Allocation**

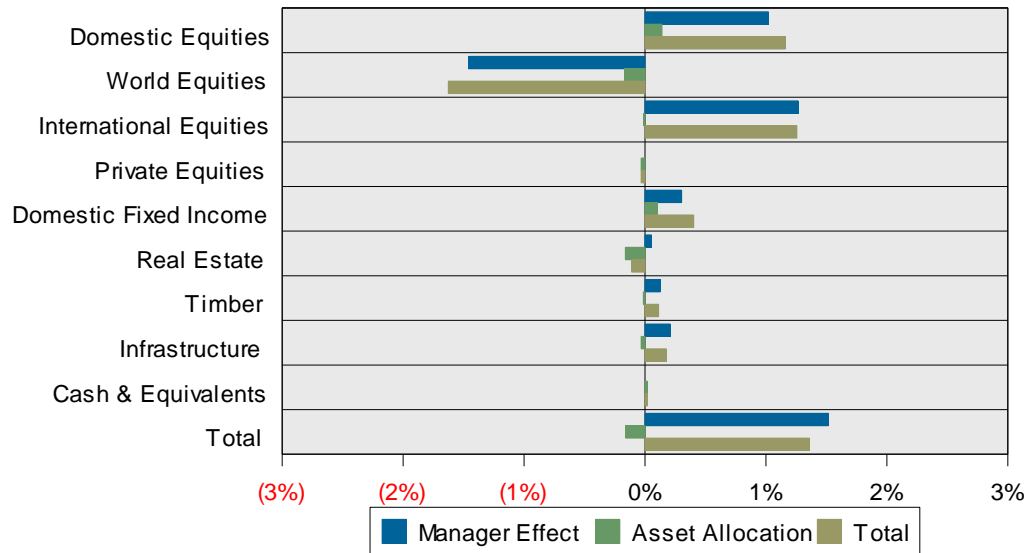


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	610,151	22.5%	21.5%	1.1%	28,748
International Equities	422,637	15.6%	14.5%	1.1%	28,783
World Equities	406,408	15.0%	16.0%	(1.0%)	(27,040)
Private Equities	135,701	5.0%	6.0%	(1.0%)	(26,842)
Domestic Fixed Income	639,095	23.6%	23.0%	0.6%	16,015
Real Estate	270,315	10.0%	10.0%	(0.0%)	(590)
Timber	55,483	2.0%	2.0%	(0.0%)	(0)
Infrastructure	143,425	5.3%	6.0%	(0.7%)	(17,816)
Cash & Equivalents	25,833	1.0%	1.0%	(0.0%)	(1,258)
<b>Total</b>	<b>2,709,046</b>	<b>100.0%</b>	<b>100.0%</b>		

# PERS Performance and Attribution

As of September 30, 2020

## One Year Relative Attribution Effects



## Returns for 1 Year Ended 09/30/2020

Return Type	Return (%)
Gross	8.41%
Net of fees	8.15%
Target	7.05%
Net added	1.10%

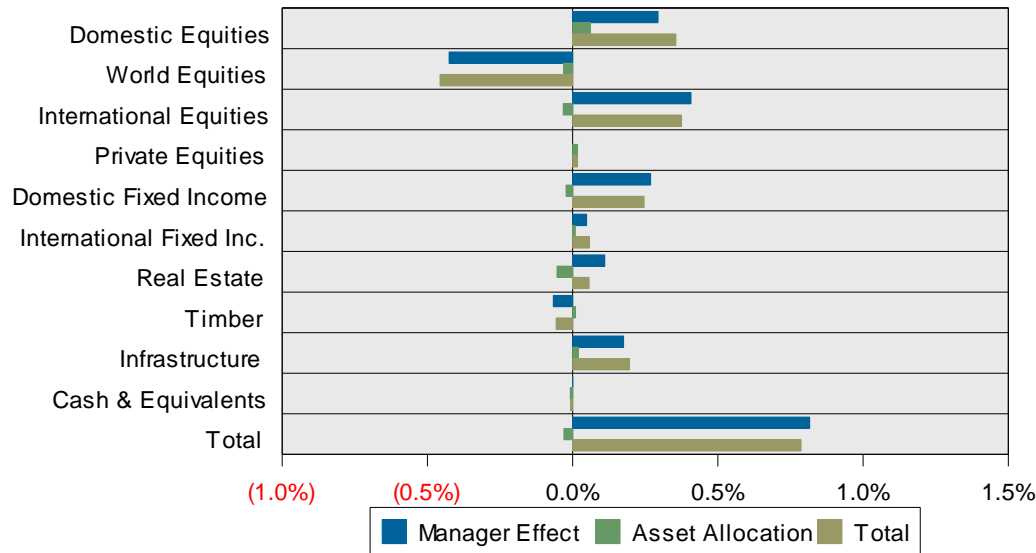
## One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	22%	21%	17.39%	12.29%	1.02%	0.14%	1.16%
World Equities	15%	16%	0.70%	10.41%	(1.46%)	(0.17%)	(1.63%)
International Equities	15%	14%	10.98%	2.65%	1.27%	(0.01%)	1.26%
Private Equities	4%	7%	2.73%	2.73%	0.00%	(0.03%)	(0.03%)
Domestic Fixed Income	23%	23%	7.21%	6.03%	0.30%	0.10%	0.40%
Real Estate	12%	11%	2.32%	2.00%	0.05%	(0.16%)	(0.11%)
Timber	2%	2%	6.28%	0.19%	0.13%	(0.01%)	0.11%
Infrastructure	5%	6%	4.57%	0.77%	0.21%	(0.03%)	0.18%
Cash & Equivalents	0%	0%	0.98%	0.98%	0.00%	0.02%	0.02%
<b>Total</b>			<b>8.41%</b>	<b>7.05%</b>	<b>+ 1.52%</b>	<b>+ (0.16%)</b>	<b>1.36%</b>

# PERS Performance and Attribution

As of September 30, 2020

## Five Year Annualized Relative Attribution Effects



## Returns for 5 Year Ended 09/30/2020

Return Type	Return (%)
Gross	8.61%
Net of fees	8.35%
Target	7.83%
Net added	0.52%

## Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	14.15%	12.72%	0.29%	0.06%	0.36%
World Equities	16%	16%	7.62%	10.48%	(0.43%)	(0.03%)	(0.46%)
International Equities	16%	14%	8.75%	6.14%	0.41%	(0.03%)	0.38%
Private Equities	3%	7%	3.79%	3.79%	0.00%	0.02%	0.02%
Domestic Fixed Income	21%	20%	6.25%	4.96%	0.27%	(0.02%)	0.25%
International Fixed Inc.	2%	2%	-	-	0.05%	0.01%	0.06%
Real Estate	11%	11%	7.24%	6.28%	0.11%	(0.05%)	0.06%
Timber	2%	3%	0.38%	2.56%	(0.07%)	0.01%	(0.06%)
Infrastructure	5%	6%	6.01%	2.27%	0.18%	0.02%	0.20%
Cash & Equivalents	1%	0%	1.26%	1.24%	0.00%	(0.01%)	(0.01%)

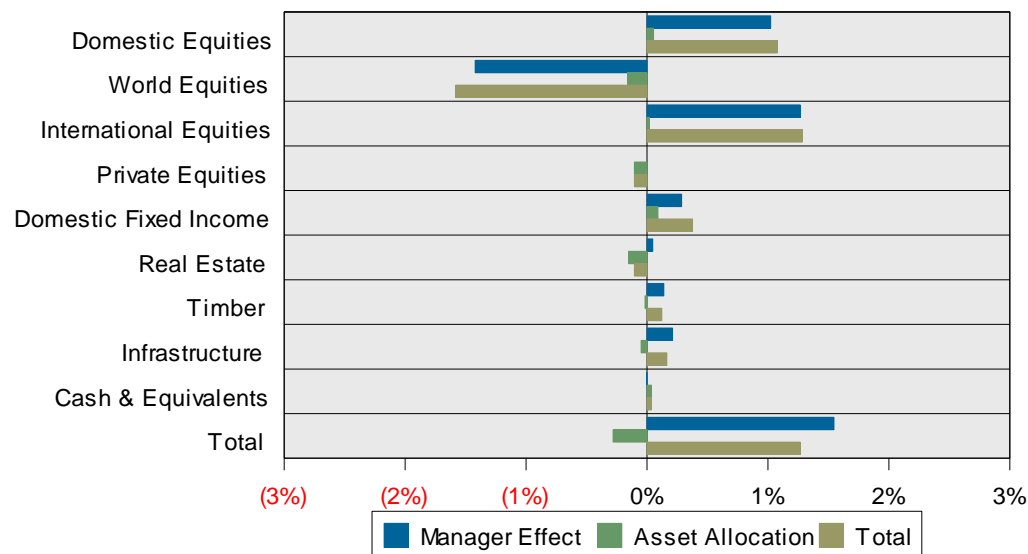
**Total** **8.61% = 7.83% + 0.82% + (0.03%)** **0.79%**



# TFFR Performance and Attribution

As of September 30, 2020

## One Year Relative Attribution Effects



## Returns for 1 Year Ended 09/30/2020

Return Type	Return (%)
Gross	8.33%
Net of fees	8.08%
Target	7.06%
Net added	1.02%

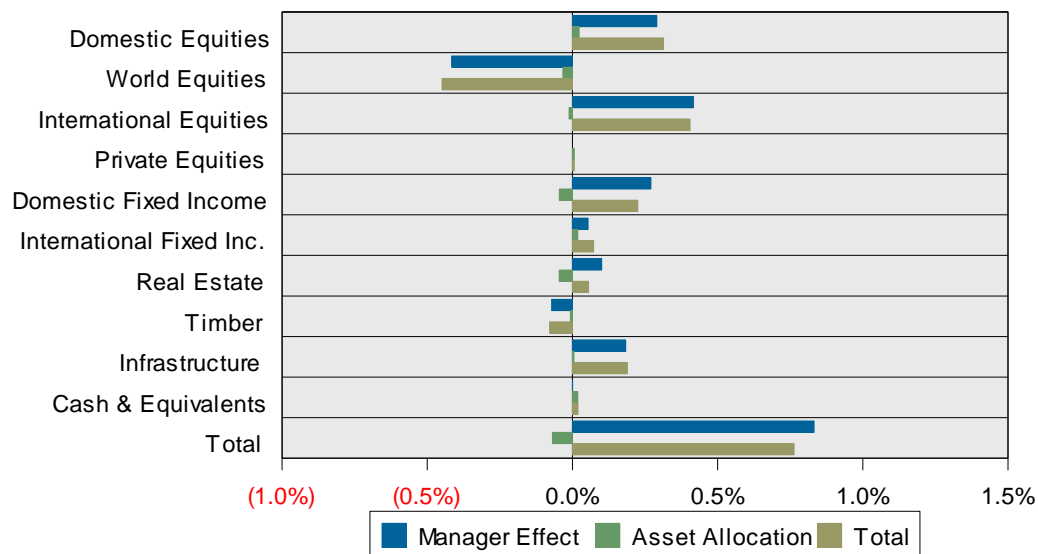
## One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	22%	21%	17.51%	12.41%	1.02%	0.05%	1.08%
World Equities	15%	16%	0.70%	10.41%	(1.42%)	(0.16%)	(1.58%)
International Equities	15%	15%	10.52%	2.16%	1.27%	0.02%	1.28%
Private Equities	5%	6%	2.73%	2.73%	0.00%	(0.10%)	(0.10%)
Domestic Fixed Income	24%	23%	7.15%	6.03%	0.29%	0.09%	0.38%
Real Estate	11%	10%	2.32%	2.00%	0.05%	(0.15%)	(0.10%)
Timber	2%	2%	6.28%	0.19%	0.14%	(0.02%)	0.12%
Infrastructure	6%	6%	4.57%	0.77%	0.21%	(0.05%)	0.16%
Cash & Equivalents	1%	1%	0.98%	1.10%	(0.00%)	0.04%	0.03%
<b>Total</b>			<b>8.33%</b>	<b>7.06%</b>	<b>+ 1.55%</b>	<b>+ (0.28%)</b>	<b>1.27%</b>

# TFFR Performance and Attribution

As of September 30, 2020

## Five Year Annualized Relative Attribution Effects



## Returns for 5 Year Ended 09/30/2020

Return Type	Return (%)
Gross	8.55%
Net of fees	8.29%
Target	7.79%
Net added	0.50%

## Five Year Annualized Relative Attribution Effects

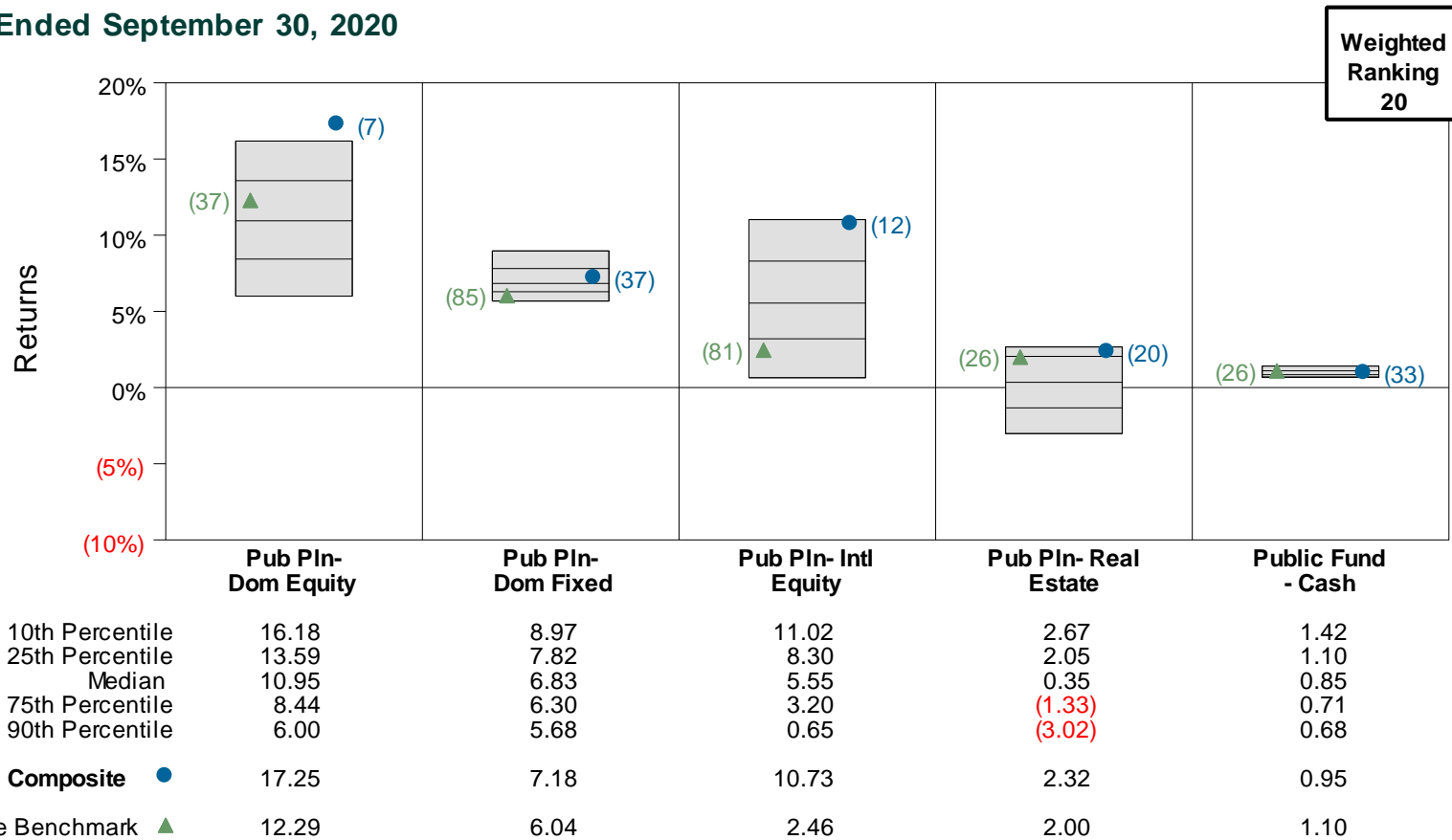
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	14.17%	12.77%	0.29%	0.02%	0.31%
World Equities	16%	16%	7.62%	10.48%	(0.42%)	(0.03%)	(0.45%)
International Equities	15%	15%	8.62%	5.95%	0.42%	(0.01%)	0.41%
Private Equities	4%	6%	3.78%	3.78%	0.00%	0.01%	0.01%
Domestic Fixed Income	21%	20%	6.16%	4.82%	0.27%	(0.04%)	0.23%
International Fixed Inc.	3%	3%	-	-	0.05%	0.02%	0.07%
Real Estate	10%	10%	7.24%	6.28%	0.10%	(0.05%)	0.06%
Timber	3%	3%	0.38%	2.56%	(0.07%)	(0.01%)	(0.08%)
Infrastructure	5%	5%	6.01%	2.27%	0.18%	0.01%	0.19%
Cash & Equivalents	1%	1%	1.26%	1.20%	0.00%	0.02%	0.02%

**Total** **8.55% = 7.79% + 0.83% + (0.07%)** **0.76%**

# Asset Class Composite Results

## Consolidated Pension Trust Asset Class Results vs. Other Public Pension Funds

### Total Asset Class Performance One Year Ended September 30, 2020

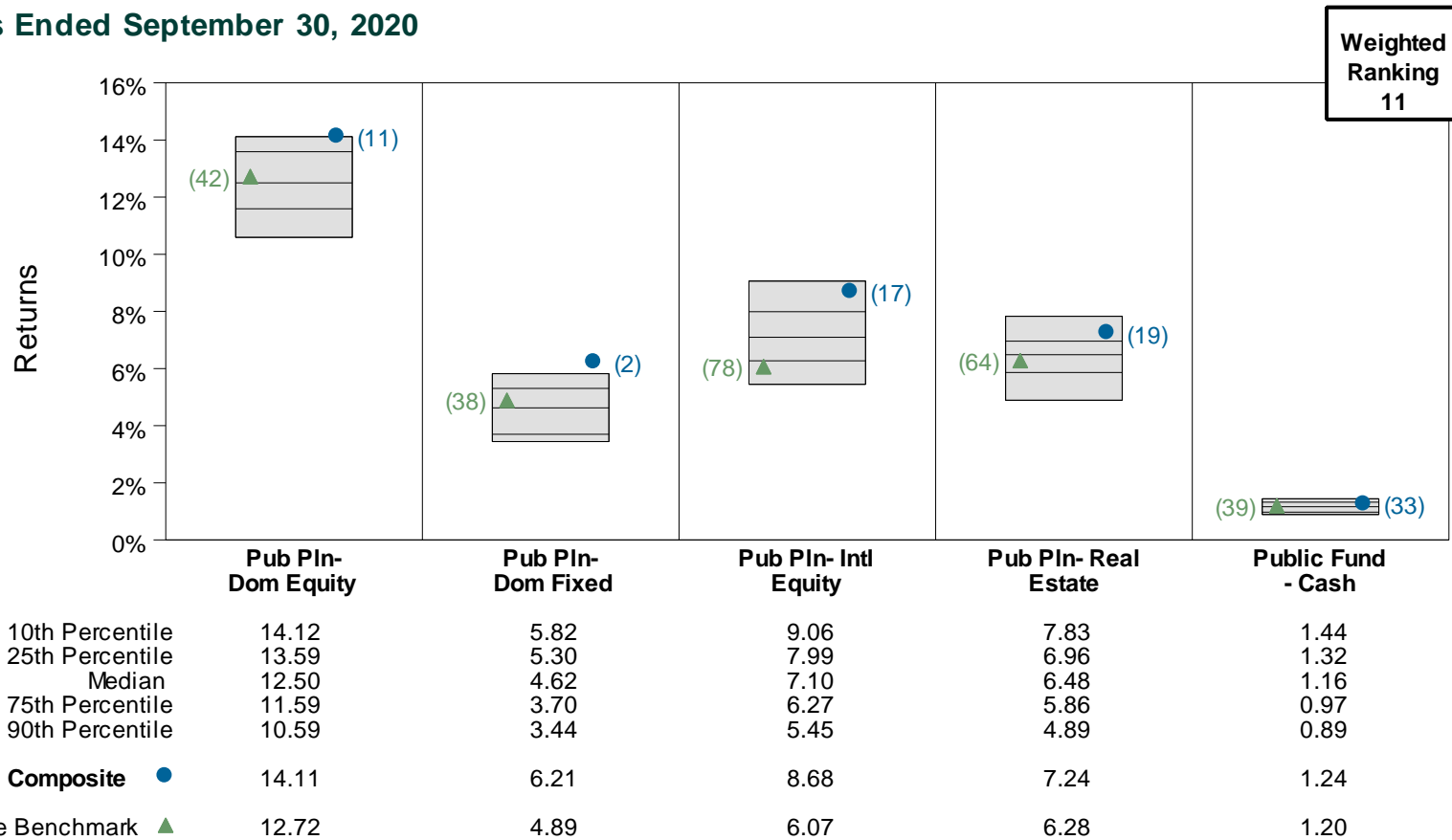


- Domestic and international equity allocations drove both absolute and relative returns over the trailing 12 months.
- With the exception of cash, all asset classes outperformed their respective peer group medians.

# Asset Class Composite Results

## Consolidated Pension Trust Asset Class Results vs. Other Public Pension Funds

### Total Asset Class Performance Five Years Ended September 30, 2020



- All asset classes outperformed their respective benchmarks over the trailing five years.
- With the exception of cash, all asset classes ranked in the top quartile over the trailing five years.

Callan

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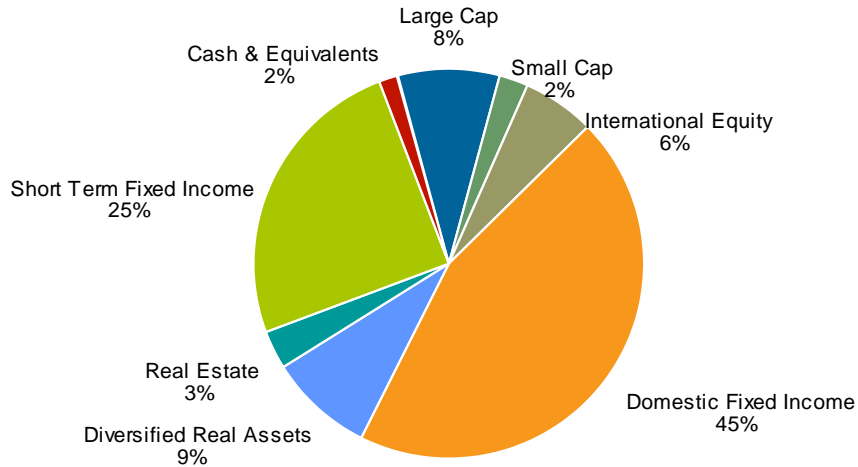
## **Consolidated Insurance Trust Quarterly Review**

- Workforce Safety and Insurance Legacy Fund
- Budget Stabilization Fund

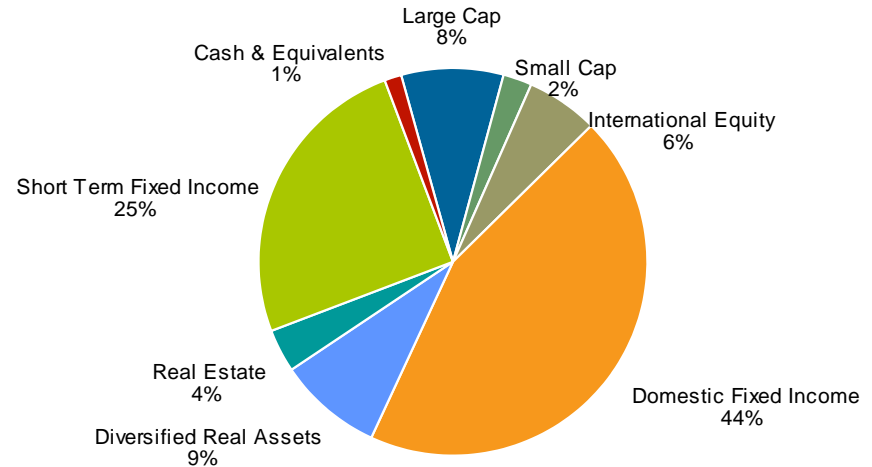
# Consolidated Insurance Trust Allocation

As of September 30, 2020

**Actual Asset Allocation**



**Target Asset Allocation**

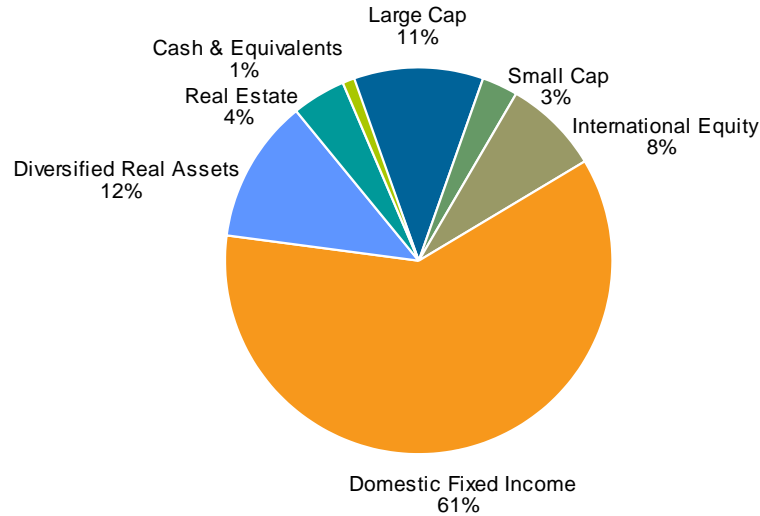


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	255,768	8.4%	8.5%	(0.1%)	(2,910)
Small Cap	74,502	2.4%	2.4%	0.0%	937
International Equity	184,725	6.0%	6.0%	(0.0%)	(40)
Domestic Fixed Income	1,369,611	44.8%	44.3%	0.5%	14,540
Diversified Real Assets	265,682	8.7%	8.7%	(0.0%)	(316)
Real Estate	97,836	3.2%	3.6%	(0.4%)	(11,275)
Short Term Fixed Income	761,462	24.9%	24.9%	0.0%	0
Cash & Equivalents	47,123	1.5%	1.6%	(0.0%)	(936)
<b>Total</b>	<b>3,056,708</b>	<b>100.0%</b>	<b>100.0%</b>		

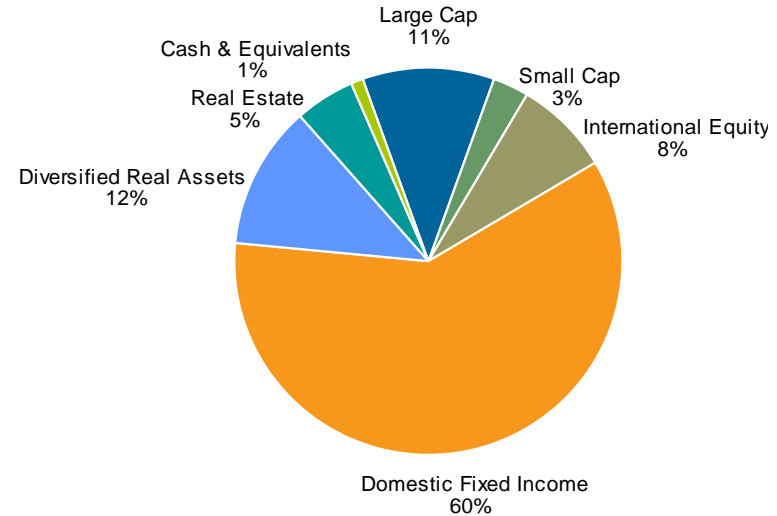
# WSI Allocation

As of September 30, 2020

**Actual Asset Allocation**



**Target Asset Allocation**

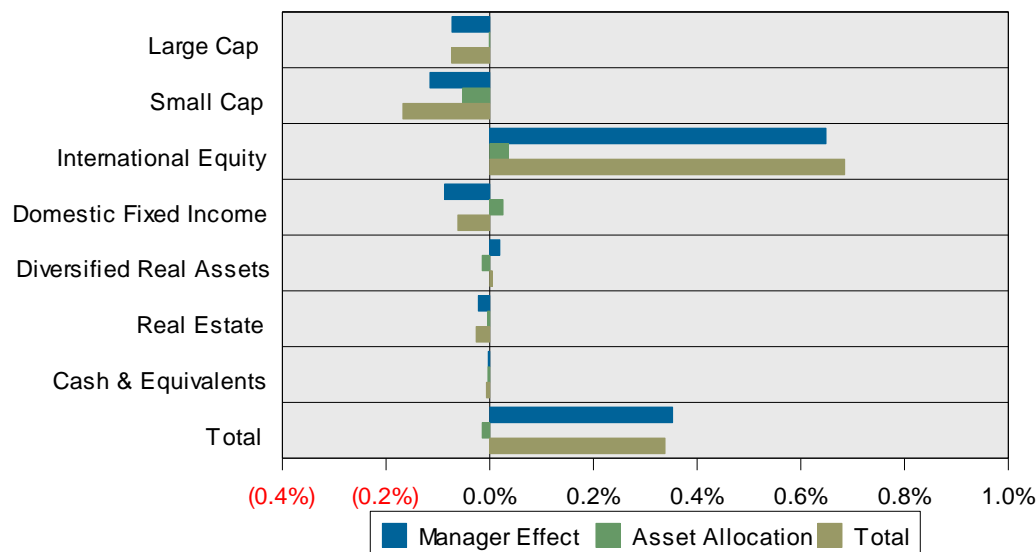


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	236,796	10.9%	11.0%	(0.1%)	(2,818)
Small Cap	66,288	3.0%	3.0%	0.0%	939
International Equity	174,214	8.0%	8.0%	(0.0%)	(51)
Domestic Fixed Income	1,321,497	60.7%	60.0%	0.7%	14,512
Diversified Real Assets	261,071	12.0%	12.0%	(0.0%)	(326)
Real Estate	97,640	4.5%	5.0%	(0.5%)	(11,275)
Cash & Equivalents	20,804	1.0%	1.0%	(0.0%)	(980)
<b>Total</b>	<b>2,178,310</b>	<b>100.0%</b>	<b>100.0%</b>		

# WSI Performance and Attribution

As of September 30, 2020

## One Year Relative Attribution Effects



## Returns for 1 Year Ended 09/30/2020

Return Type	Return (%)
Gross	7.64%
Net of fees	7.46%
Target	7.30%
Net added	0.16%

## One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	11%	11%	14.98%	16.01%	(0.07%)	(0.00%)	(0.07%)
Small Cap	3%	3%	(3.29%)	0.39%	(0.12%)	(0.05%)	(0.17%)
International Equity	8%	8%	7.69%	0.16%	0.65%	0.04%	0.68%
Domestic Fixed Income	61%	60%	7.07%	6.98%	(0.09%)	0.03%	(0.06%)
Diversified Real Assets	12%	12%	6.51%	6.30%	0.02%	(0.01%)	0.01%
Real Estate	5%	5%	1.41%	2.00%	(0.02%)	(0.00%)	(0.03%)
Cash & Equivalents	1%	1%	0.85%	1.10%	(0.00%)	(0.00%)	(0.01%)

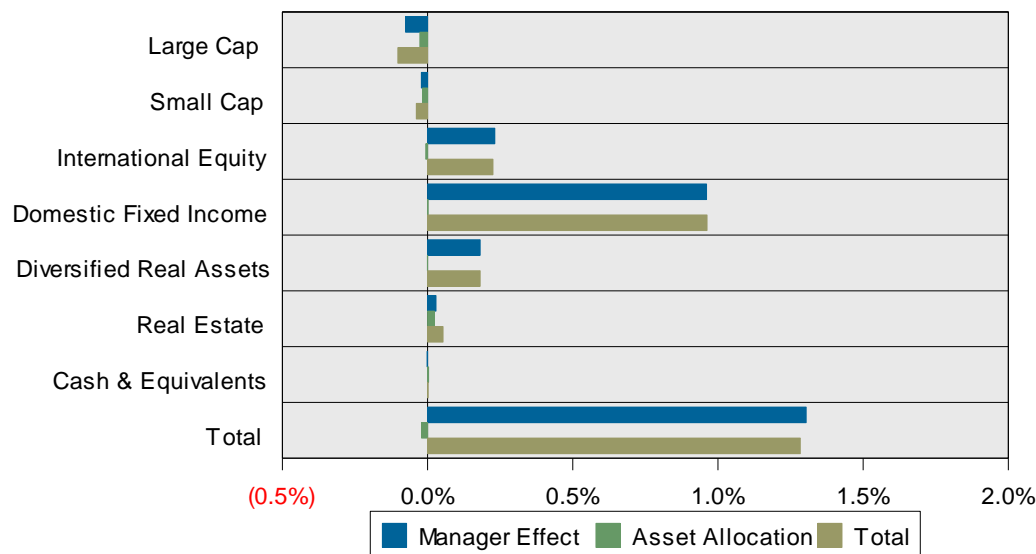
**Total** **7.64% = 7.30% + 0.35% + (0.01%)** **0.34%**



# WSI Performance and Attribution

As of September 30, 2020

## Five Year Annualized Relative Attribution Effects



## Returns for 5 Year Ended 09/30/2020

Return Type	Return (%)
Gross	7.27%
Net of fees	7.07%
Target	5.99%
Net added	1.08%

## Five Year Annualized Relative Attribution Effects

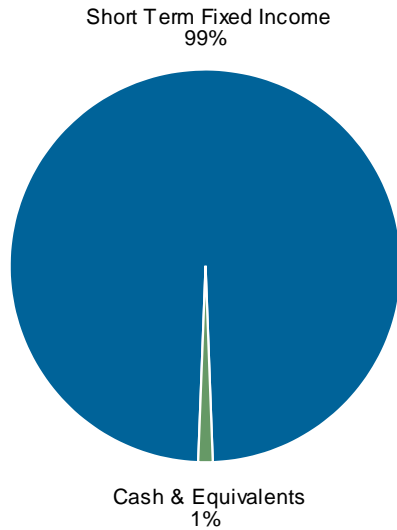
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	12%	12%	13.30%	14.09%	(0.08%)	(0.03%)	(0.10%)
Small Cap	4%	4%	7.24%	8.00%	(0.02%)	(0.02%)	(0.04%)
International Equity	8%	9%	7.68%	5.17%	0.23%	(0.01%)	0.23%
Domestic Fixed Income	56%	56%	6.01%	4.18%	0.96%	0.00%	0.96%
Diversified Real Assets	13%	14%	5.29%	3.98%	0.18%	(0.00%)	0.18%
Real Estate	6%	6%	6.50%	6.28%	0.03%	0.02%	0.05%
Cash & Equivalents	1%	1%	1.06%	1.20%	(0.00%)	0.00%	0.00%

**Total** **7.27% = 5.99% + 1.30% + (0.02%)** **1.28%**

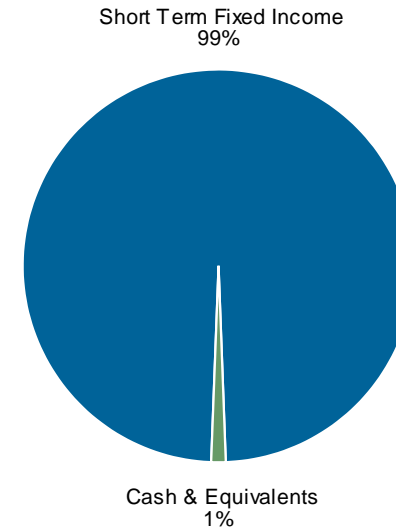
# Budget Stabilization Fund Allocation

As of September 30, 2020

**Actual Asset Allocation**



**Target Asset Allocation**

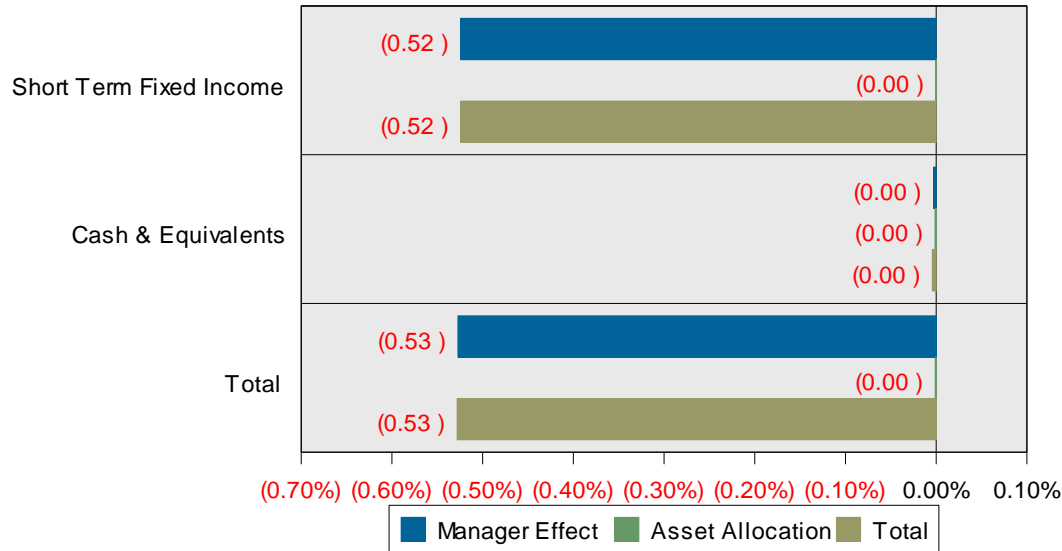


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Short Term Fixed Income	731,135	99.0%	98.9%	0.1%	420
Cash & Equivalents	7,558	1.0%	1.1%	(0.1%)	(420)
Total	738,694	100.0%	100.0%		

# Budget Stabilization Fund Performance and Attribution

As of September 30, 2020

## One Year Relative Attribution Effects



## Returns for 1 Year Ended 09/30/2020

Return Type	Return (%)
Gross	3.17%
Net of fees	3.06%
Target	3.70%
Net added	-0.64%

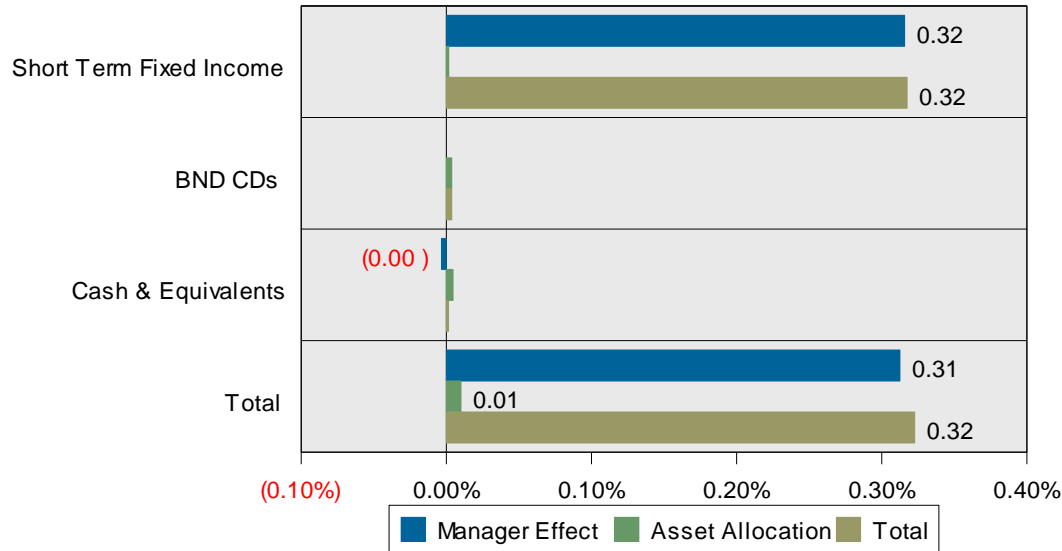
## One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Short Term Fixed Income	99%	99%	3.19%	3.73%	(0.52%)	(0.00%)	(0.52%)
Cash & Equivalents	1%	1%	0.85%	1.10%	(0.00%)	(0.00%)	(0.00%)
<b>Total</b>			<b>3.17%</b>	<b>3.70%</b>	<b>+ (0.53%)</b>	<b>+ (0.00%)</b>	<b>(0.53%)</b>

# Budget Stabilization Fund Performance and Attribution

As of September 30, 2020

## Five Year Annualized Relative Attribution Effects



## Returns for 5 Year Ended 09/30/2020

Return Type	Return (%)
Gross	2.38%
Net of fees	2.22%
Target	2.06%
Net added	0.16%

## Five Year Annualized Relative Attribution Effects

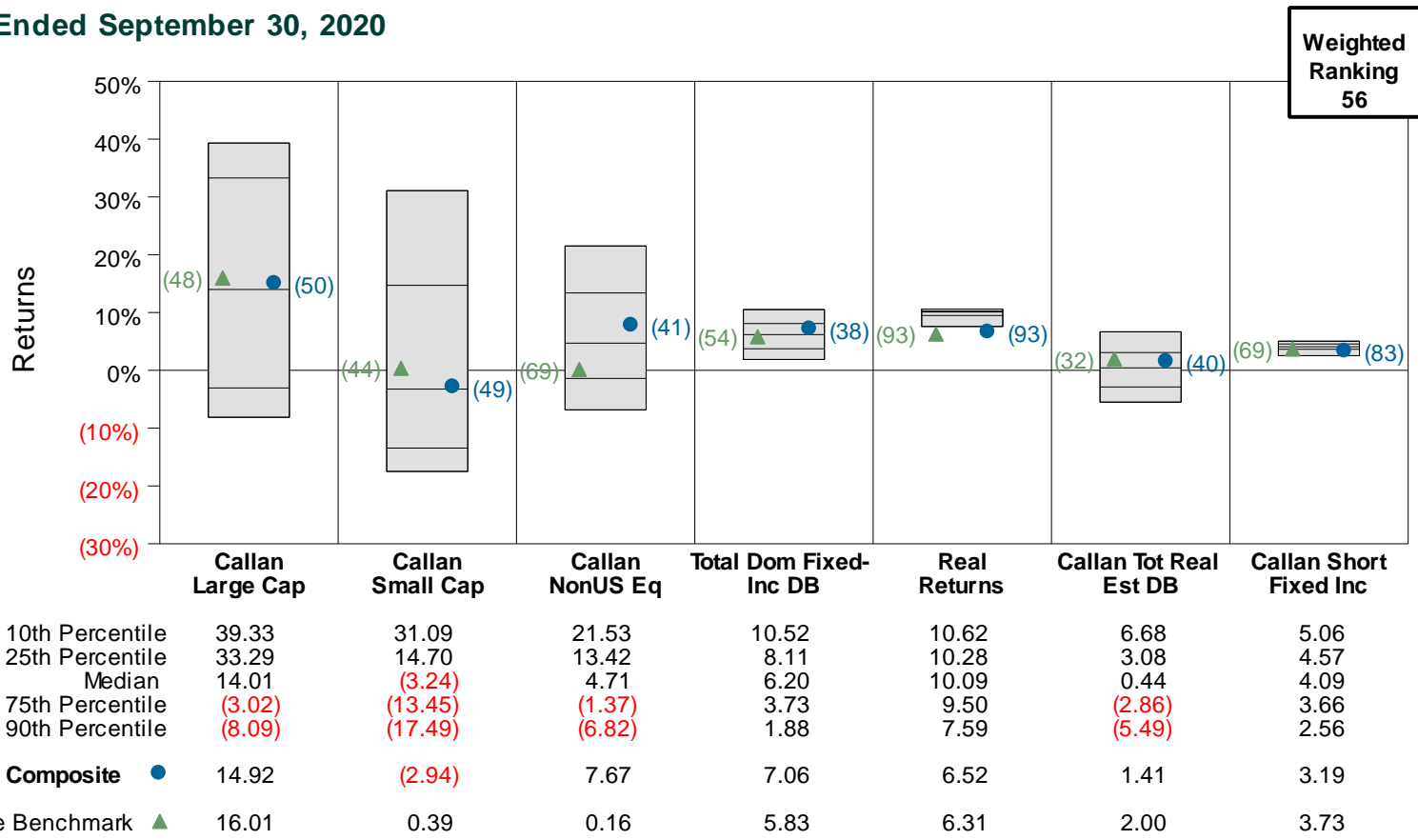
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Short Term Fixed Income	93%	93%	2.34%	1.97%	0.32%	0.00%	0.32%
BND CDs	5%	5%	-	-	0.00%	0.00%	0.00%
Cash & Equivalents	3%	3%	1.06%	1.20%	(0.00%)	0.00%	0.00%

**Total** **2.38% = 2.06% + 0.31% + 0.01%** **0.32%**

# Asset Class Composite Results

## Consolidated Insurance Trust Asset Class Results vs. Callan Style Groups

Total Asset Class Performance  
One Year Ended September 30, 2020

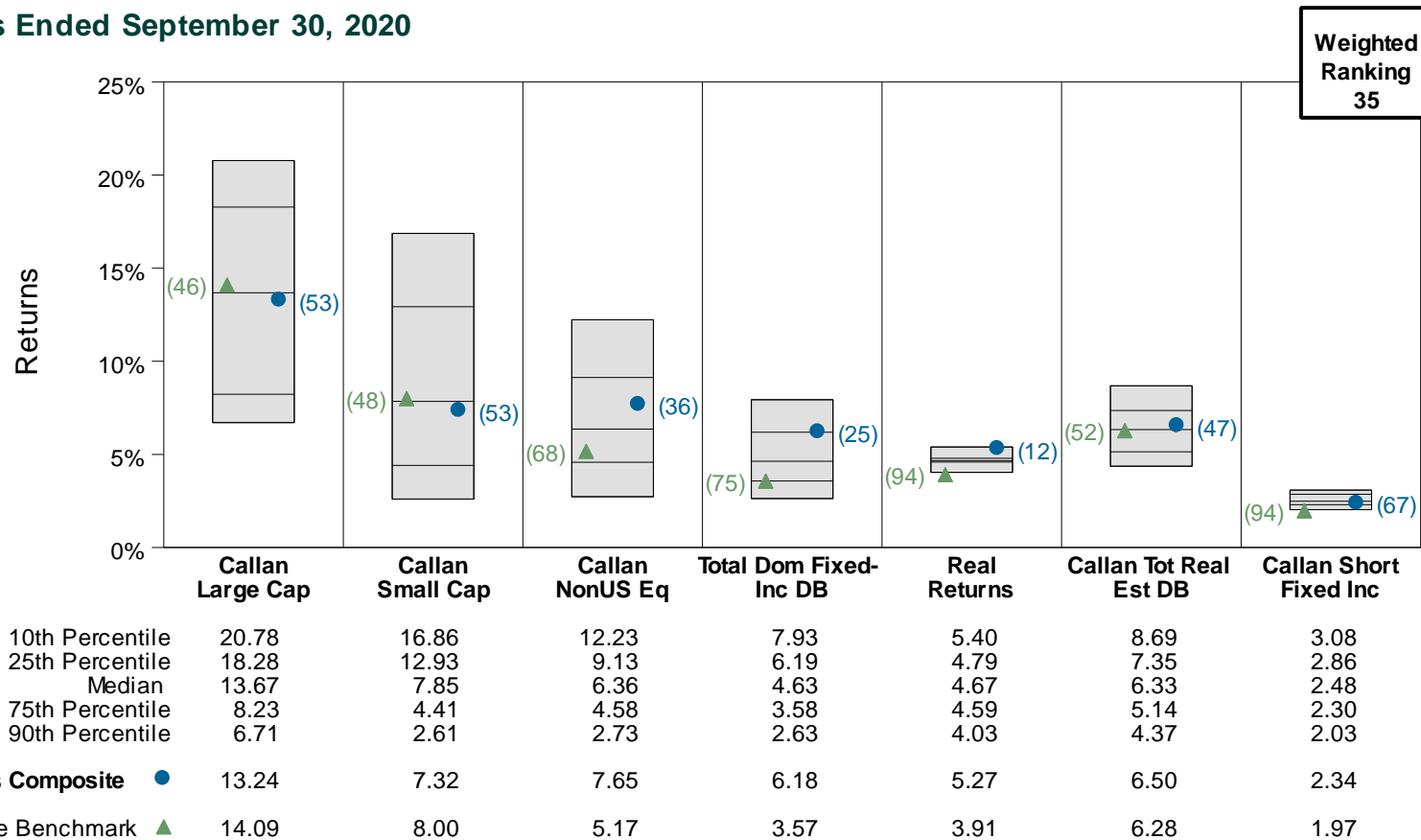


- International equity notably outperformed its benchmark over the trailing year. Real returns and fixed income also outpaced their benchmark during the period.
- Real returns and cash were the only asset classes to perform below median.

# Asset Class Composite Results

## Consolidated Insurance Trust Asset Class Results vs. Callan Style Groups

Total Asset Class Performance  
Five Years Ended September 30, 2020



- U.S. LC equity and U.S. SC equity were the only asset classes to underperform their benchmarks over the trailing 5-year period.
- Real returns and fixed income ranked in the top quartile, while international equity and real estate ranked above median.

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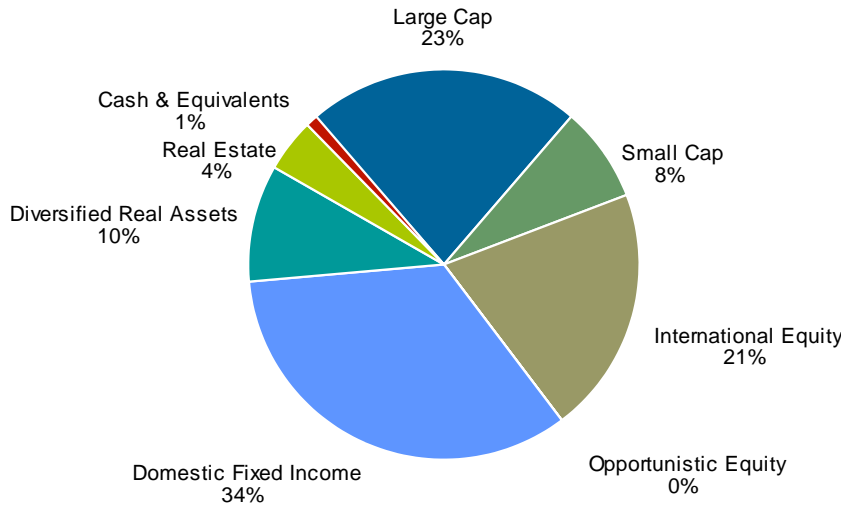
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**Legacy Fund Quarterly Review**

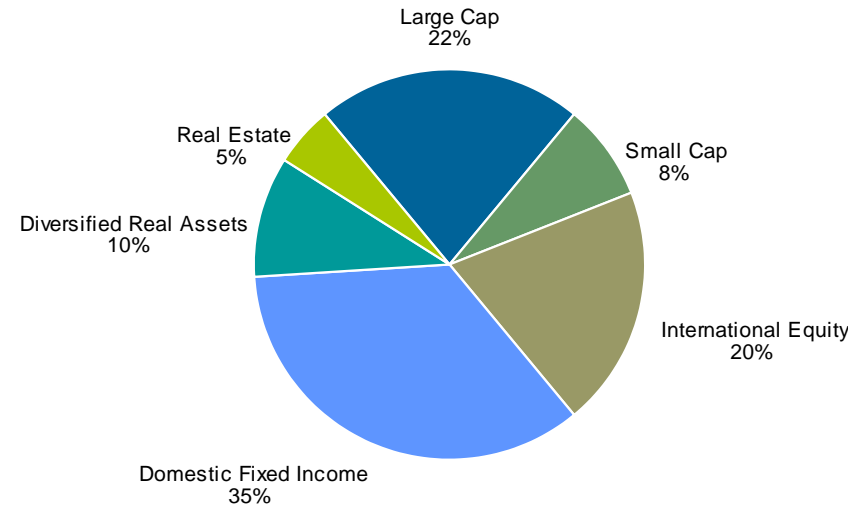
# Legacy Fund Allocation

As of September 30, 2020

**Actual Asset Allocation**



**Target Asset Allocation**



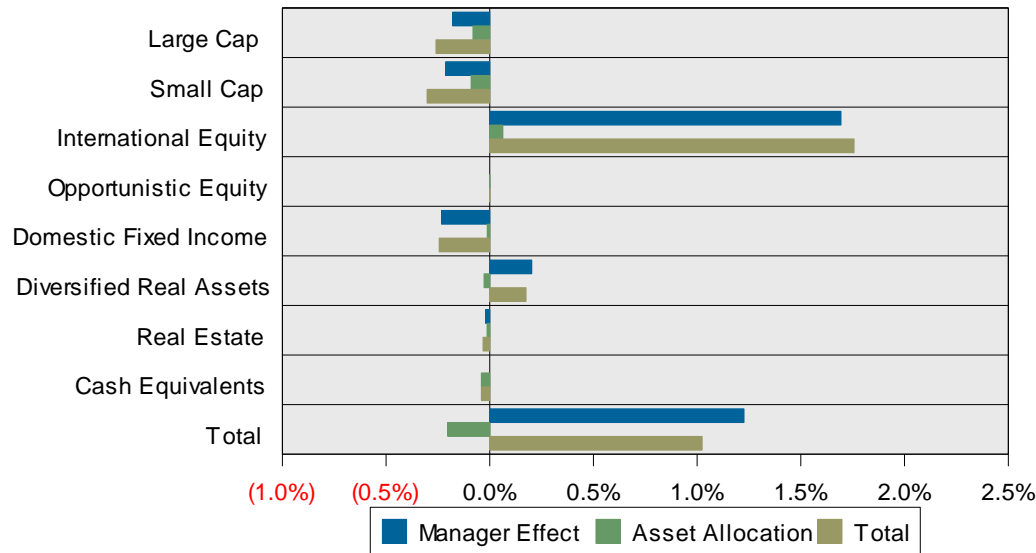
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	1,676,983	22.7%	22.0%	0.7%	48,885
Small Cap	583,651	7.9%	8.0%	(0.1%)	(8,384)
International Equity	1,517,289	20.5%	20.0%	0.5%	37,199
Opportunistic Equity	697	0.0%	0.0%	0.0%	697
Domestic Fixed Income	2,505,728	33.9%	35.0%	(1.1%)	(84,429)
Diversified Real Assets	719,173	9.7%	10.0%	(0.3%)	(20,872)
Real Estate	324,805	4.4%	5.0%	(0.6%)	(45,217)
Cash & Equivalents	72,121	1.0%	0.0%	1.0%	72,121
<b>Total</b>	<b>7,400,447</b>	<b>100.0%</b>	<b>100.0%</b>		



# Legacy Performance and Attribution

As of September 30, 2020

## One Year Relative Attribution Effects



## Returns for 1 Year Ended 09/30/2020

Return Type	Return (%)
Gross	8.48%
Net of fees	8.27%
Target	7.45%
Net added	0.82%

## One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	22%	22%	14.97%	16.01%	(0.18%)	(0.08%)	(0.26%)
Small Cap	8%	8%	(2.11%)	0.39%	(0.21%)	(0.09%)	(0.30%)
International Equity	20%	20%	8.17%	0.16%	1.69%	0.06%	1.76%
Opportunistic Equity	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Domestic Fixed Income	35%	35%	6.83%	6.98%	(0.23%)	(0.01%)	(0.24%)
Diversified Real Assets	10%	10%	8.75%	6.63%	0.20%	(0.03%)	0.17%
Real Estate	5%	5%	1.41%	2.00%	(0.02%)	(0.01%)	(0.03%)
Cash Equivalents	1%	0%	0.83%	0.83%	0.00%	(0.04%)	(0.04%)

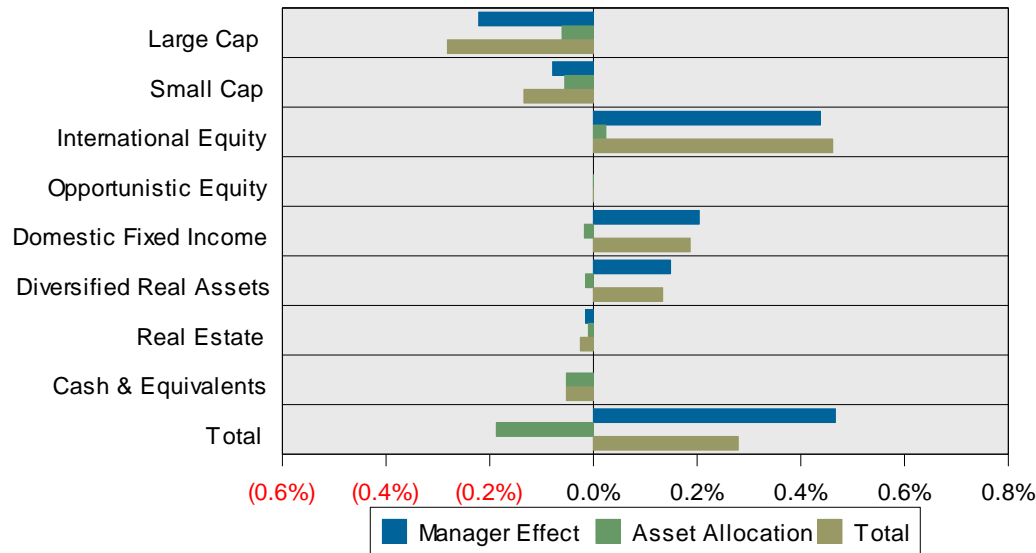
**Total** **8.48% = 7.45% + 1.23% + (0.20%)**

**1.02%**

# Legacy Performance and Attribution

As of September 30, 2020

## Three Year Annualized Relative Attribution Effects



## Returns for 3 Year Ended 09/30/2020

Return Type	Return (%)
Gross	6.22%
Net of fees	6.02%
Target	5.94%
Net added	0.08%

## Three Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	22%	22%	11.24%	12.38%	(0.22%)	(0.06%)	(0.28%)
Small Cap	8%	8%	0.83%	1.77%	(0.08%)	(0.06%)	(0.13%)
International Equity	20%	20%	2.57%	0.62%	0.44%	0.02%	0.46%
Opportunistic Equity	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Domestic Fixed Income	35%	35%	6.04%	5.24%	0.20%	(0.02%)	0.19%
Diversified Real Assets	10%	10%	6.10%	4.55%	0.15%	(0.02%)	0.13%
Real Estate	5%	5%	4.67%	5.11%	(0.02%)	(0.01%)	(0.03%)
Cash & Equivalents	1%	0%	1.49%	1.49%	0.00%	(0.05%)	(0.05%)

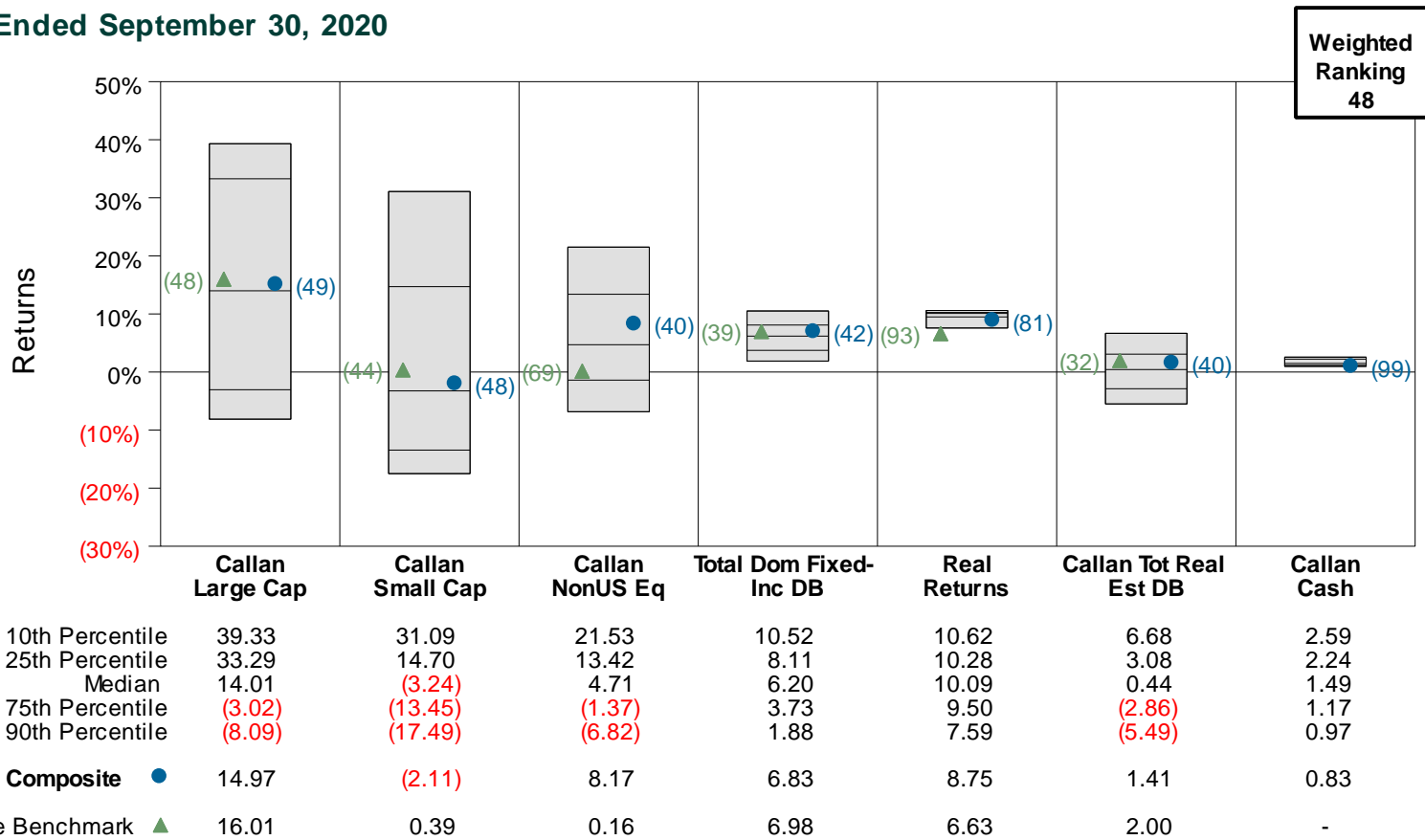
**Total** **6.22% = 5.94% + 0.47% + (0.19%)**

**0.28%**

# Asset Class Composite Results

## Legacy Fund Asset Class Results vs. Callan Style Groups

Total Asset Class Performance  
One Year Ended September 30, 2020

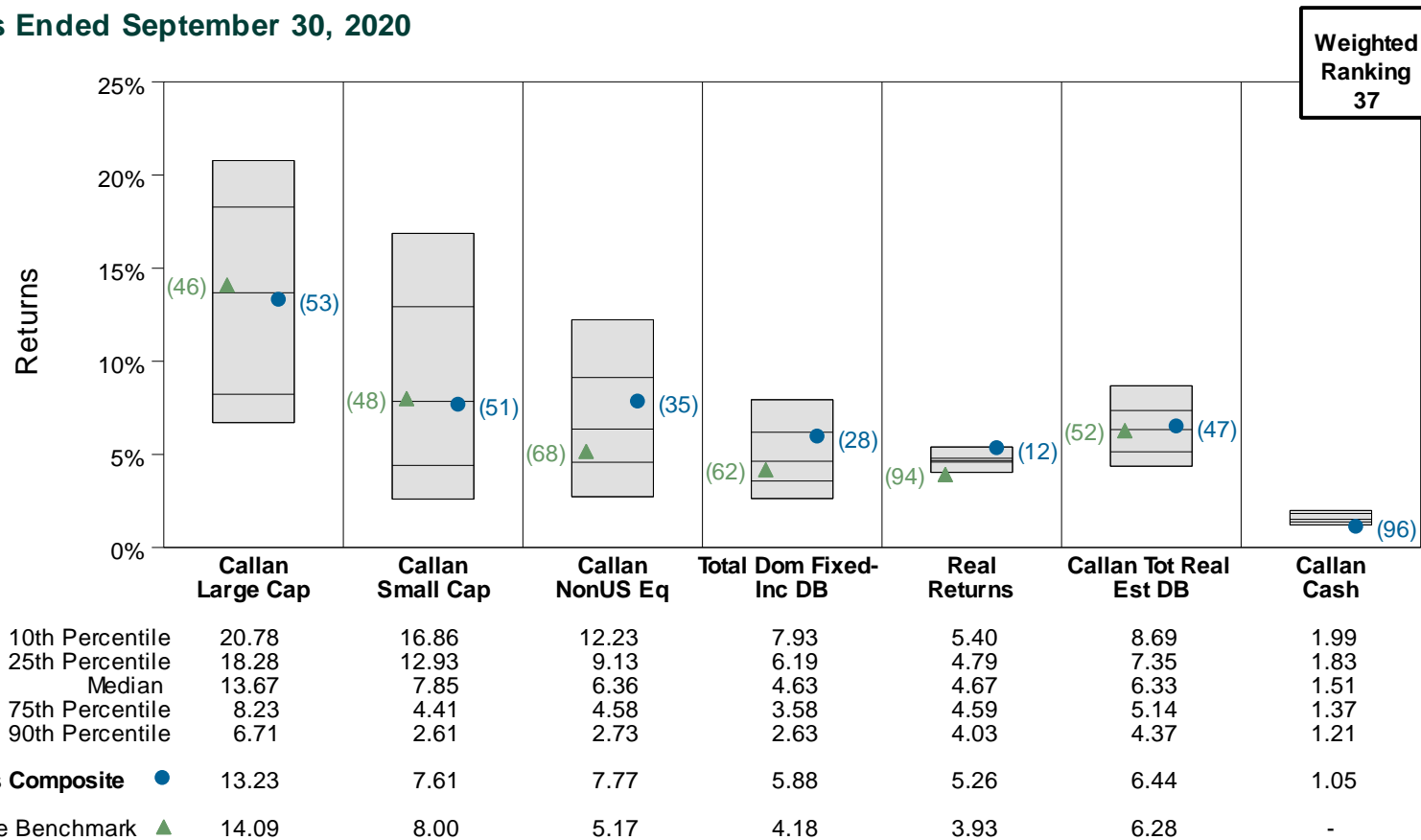


- Non-U.S. equity and real returns were the only two asset classes to outpace their respective benchmarks over the past year.
- Real returns and cash were the only asset classes to rank below median.

# Asset Class Composite Results

## Legacy Fund Asset Class Results vs. Callan Style Groups

Total Asset Class Performance  
Five Years Ended September 30, 2020



- Non-U.S. equities, domestic fixed income, real returns, and real estate all beat their respective benchmarks over the past five years.
- Real returns ranked in the top quartile, while fixed income, international equity and real estate ranked above median.

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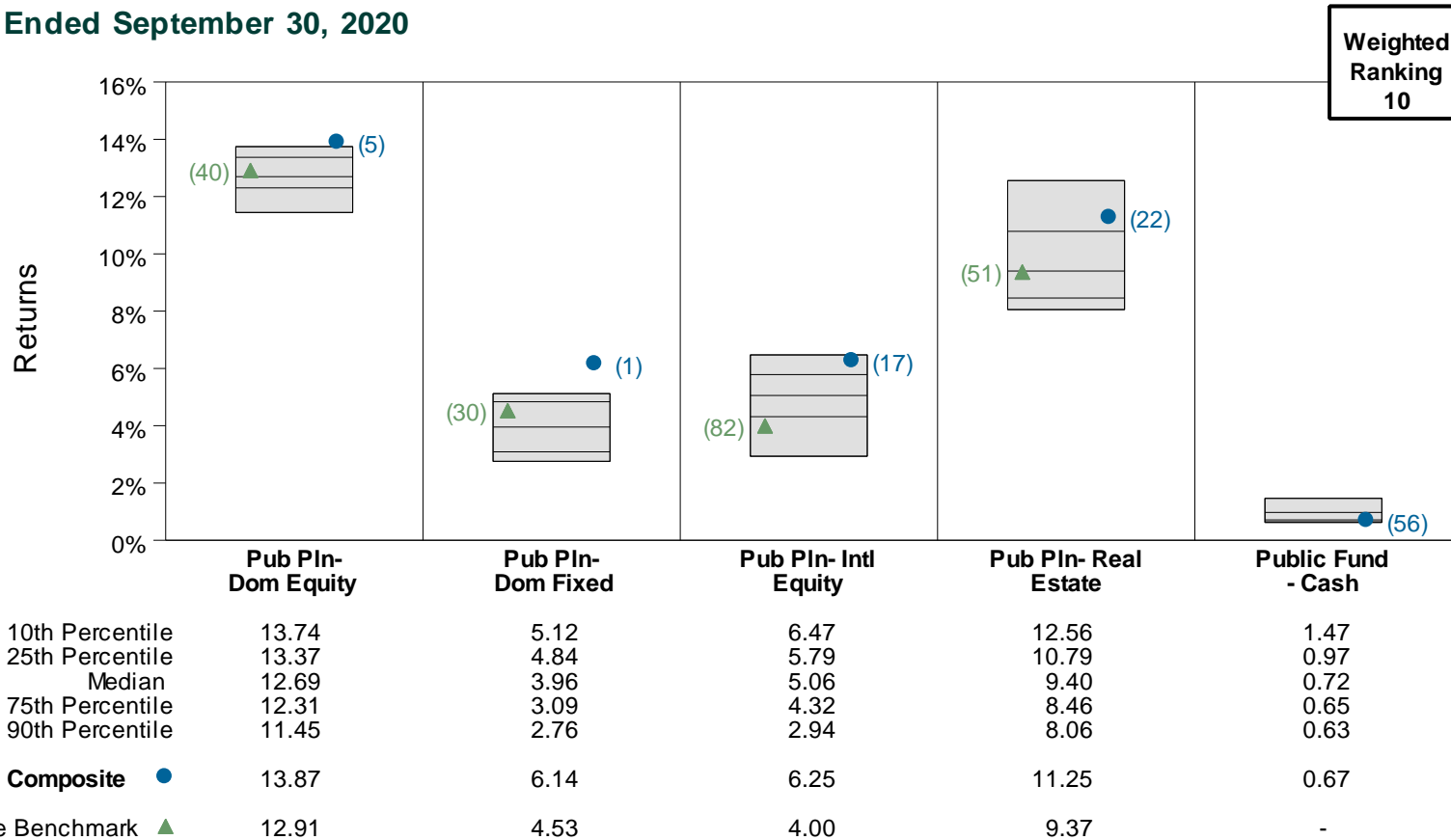
## **Appendix A**

Consolidated Asset Class Rankings

# Asset Class Composite Results

## PERS' Asset Class Results vs. Other Public Pension Funds

### Total Asset Class Performance Ten Years Ended September 30, 2020

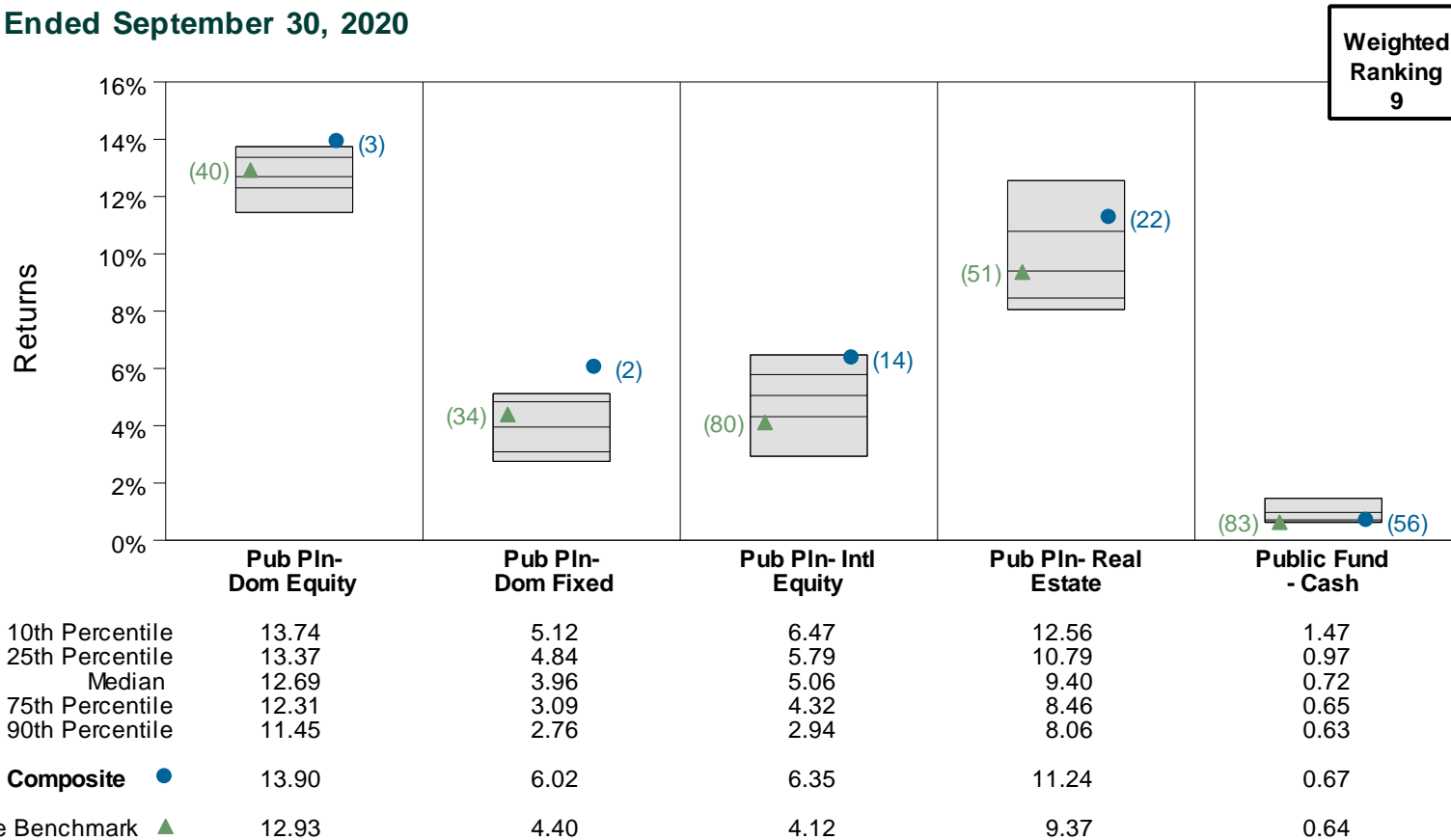


- All asset classes have outperformed their benchmarks and performed in the top quartile over the last 10 years (excluding cash).
- Domestic equity and fixed income ranked in the top decile over the period.

# Asset Class Composite Results

## TFFR's Asset Class Results vs. Other Public Pension Funds

### Total Asset Class Performance Ten Years Ended September 30, 2020

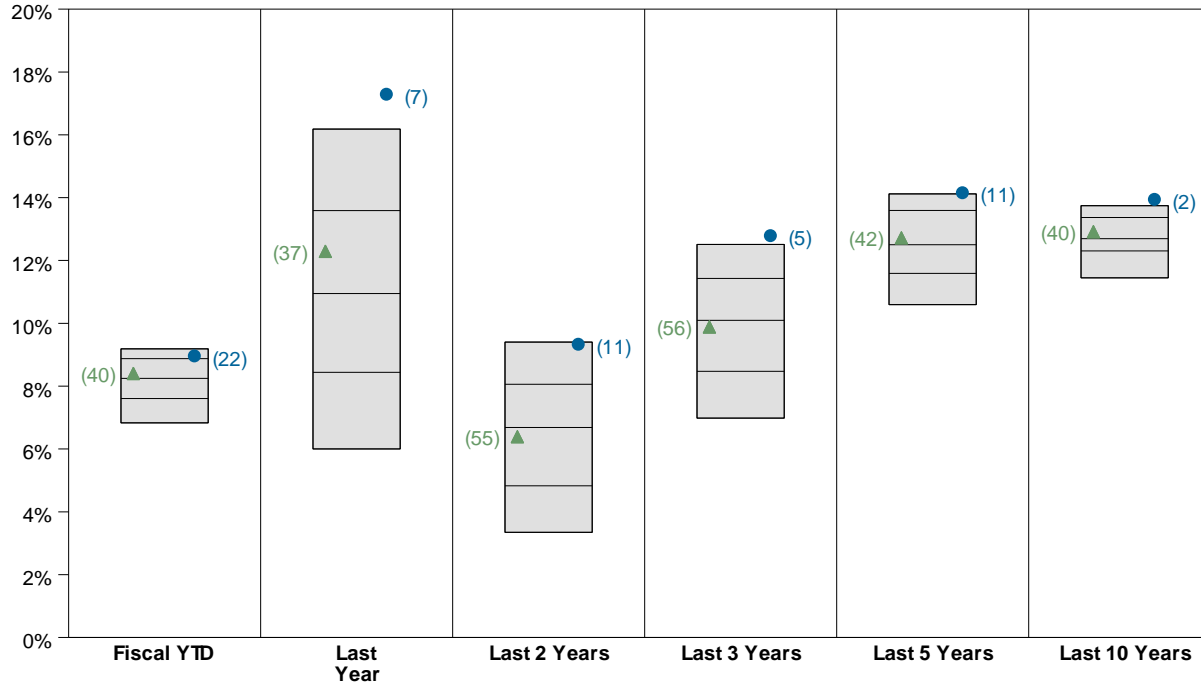


- All asset classes have outperformed their benchmarks over the last 10 years.
- With the exception of cash, all asset classes have ranked in the top quartile over the period.

# Consolidated Pension Trust: Domestic Equity

As of September 30, 2020

## Performance vs Public Fund - Domestic Equity (Gross)



10th Percentile	9.19	16.18	9.40	12.51	14.12	13.74
25th Percentile	8.87	13.59	8.06	11.43	13.59	13.37
Median	8.25	10.95	6.68	10.10	12.50	12.69
75th Percentile	7.60	8.44	4.83	8.47	11.59	12.31
90th Percentile	6.83	6.00	3.35	6.98	10.59	11.45
<b>Domestic Equities</b>	● 8.92	17.25	9.29	12.74	14.11	13.90
Domestic Equity Target	▲ 8.41	12.29	6.39	9.89	12.72	12.92

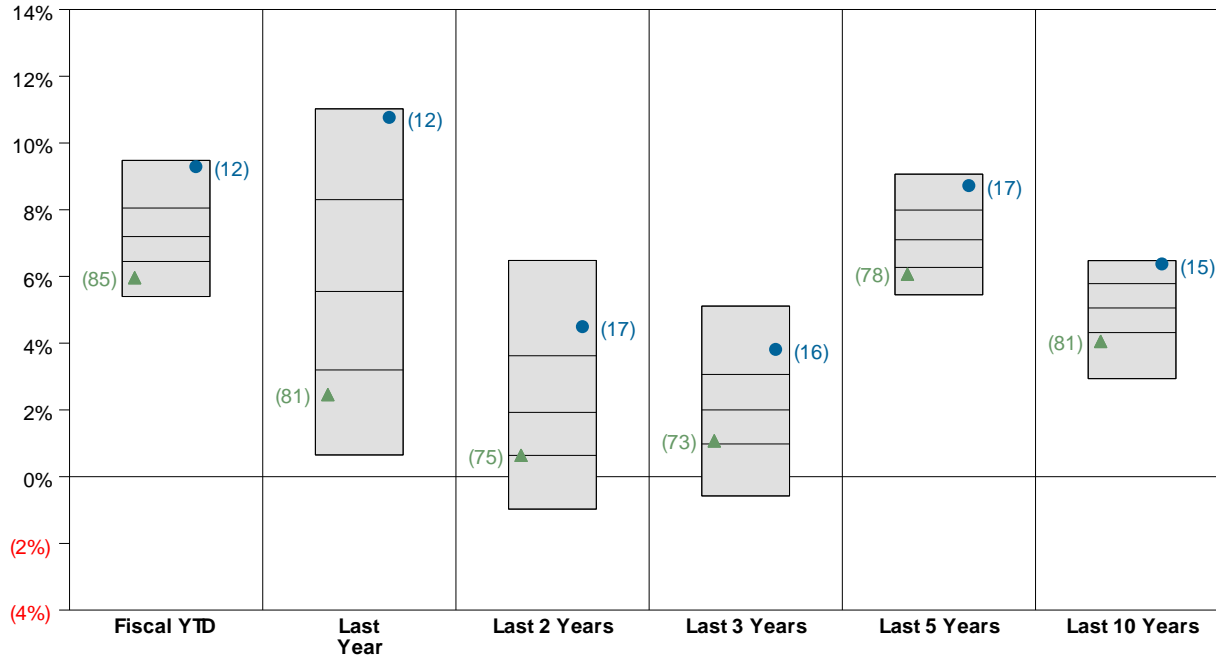
- The domestic equity composite outperformed the benchmark over all measured periods.
- Over the trailing 10-year period the composite ranks in the top decile.
- NDSIB's domestic equity portfolio has benefitted from a meaningful growth tilt versus other Public Pension Funds.



# Consolidated Pension Trust: International Equity

As of September 30, 2020

## Performance vs Public Fund - International Equity (Gross)

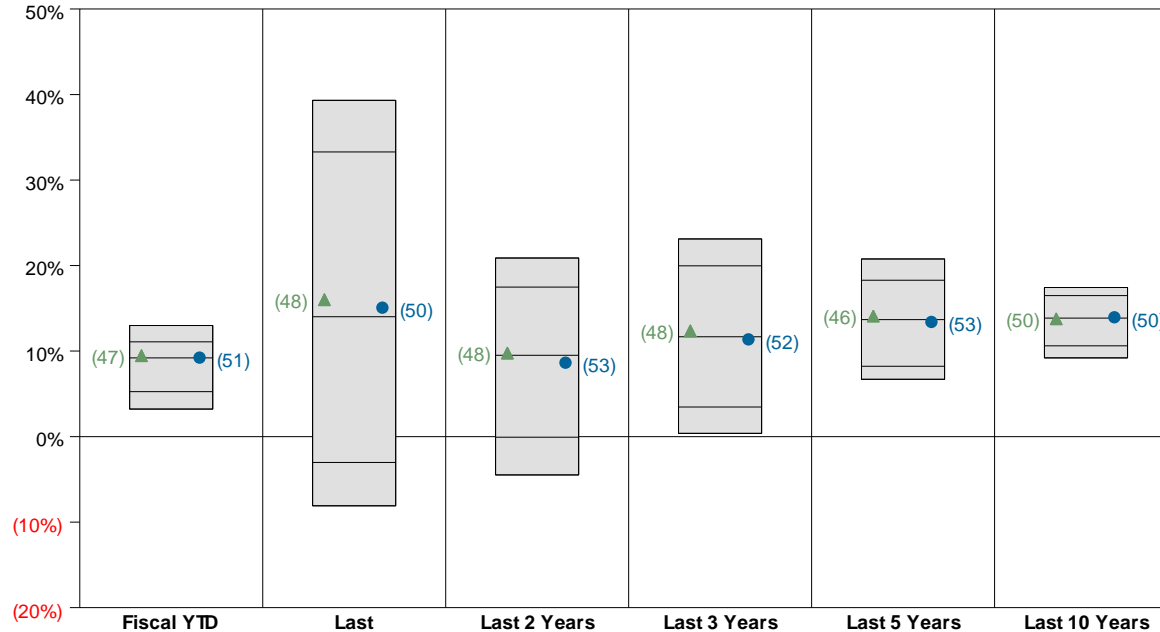


- NDSIB's international equity outperformed the benchmark over all measured periods.
- The portfolio has performed in the top quartile over all trailing periods.
- NDSIB's international equity portfolio also benefits from a growth tilt versus other Public Pension Funds.

# Consolidated Insurance Trust: Large Cap Equity

As of September 30, 2020

## Performance vs Callan Large Capitalization (Gross)



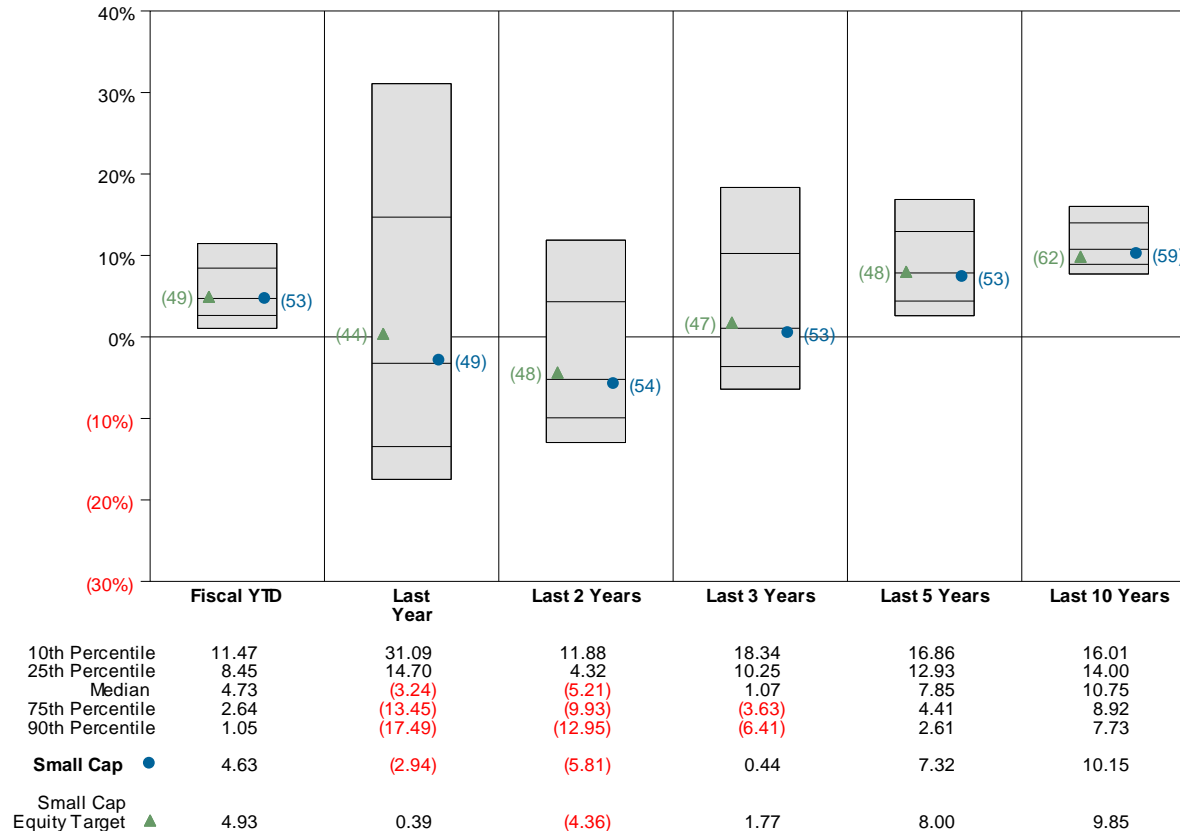
10th Percentile	13.00	39.33	20.88	23.11	20.78	17.44
25th Percentile	11.08	33.29	17.49	19.97	18.28	16.49
Median	9.20	14.01	9.51	11.68	13.67	13.86
75th Percentile	5.26	(3.02)	(0.06)	3.47	8.23	10.61
90th Percentile	3.22	(8.09)	(4.47)	0.39	6.71	9.21
<b>Large Cap</b> ●	9.07	14.92	8.48	11.21	13.24	13.79
Large Cap Equity Target ▲	9.47	16.01	9.78	12.38	14.09	13.78

- The portfolio has generally performed near the median among peer composites.

# Consolidated Insurance Trust: Small Cap Equity

As of September 30, 2020

## Performance vs Callan Small Capitalization (Gross)

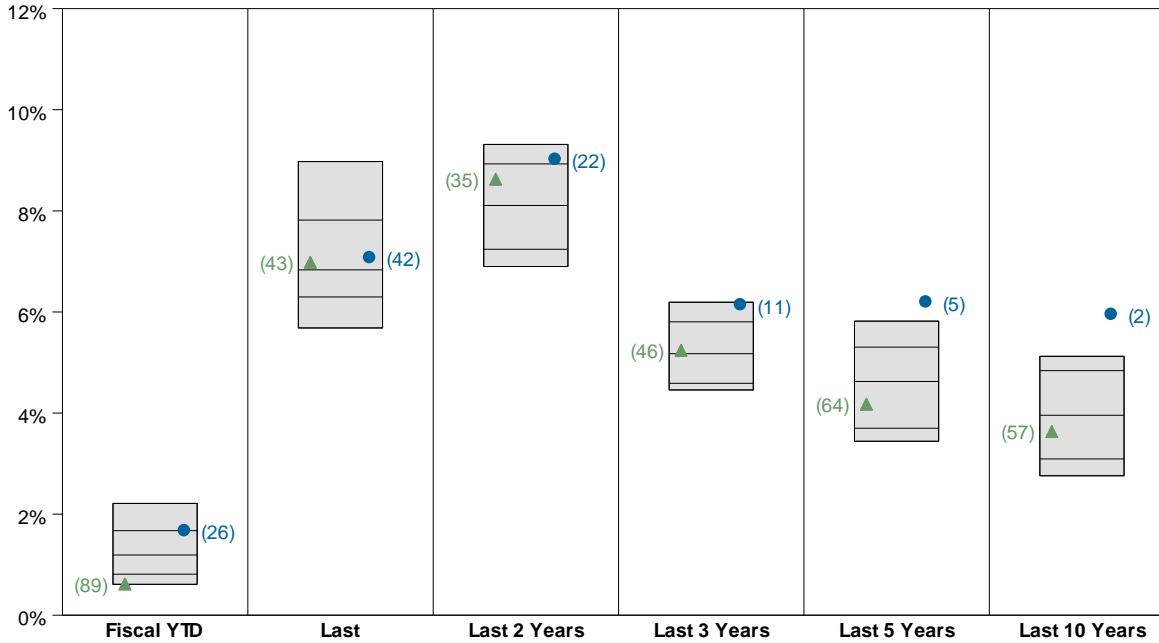


- The asset class underperformed the benchmark over shorter periods, but remains above the target over the trailing ten-year period.

# Consolidated Insurance Trust: Domestic Fixed Income

As of September 30, 2020

## Performance vs Public Fund - Domestic Fixed (Gross)



10th Percentile	2.21	8.97	9.31	6.19	5.82	5.12	
25th Percentile	1.67	7.82	8.93	5.80	5.30	4.84	
Median	1.19	6.83	8.11	5.18	4.62	3.96	
75th Percentile	0.81	6.30	7.24	4.59	3.70	3.09	
90th Percentile	0.61	5.68	6.90	4.46	3.44	2.76	
<b>Domestic Fixed Income</b>	<b>●</b>	<b>1.66</b>	<b>7.06</b>	<b>9.01</b>	<b>6.13</b>	<b>6.18</b>	<b>5.94</b>
<b>Blmbg Aggregate</b>	<b>▲</b>	<b>0.62</b>	<b>6.98</b>	<b>8.63</b>	<b>5.24</b>	<b>4.18</b>	<b>3.64</b>

- The asset class outperformed the target over all measured trailing periods.
- The domestic fixed income asset class ranked in the top decile for the five- and ten-year periods. Shorter term rankings have also been strong.

September 30, 2020



## North Dakota State Investment Board Pension Funds

Investment Measurement Service  
Quarterly Review

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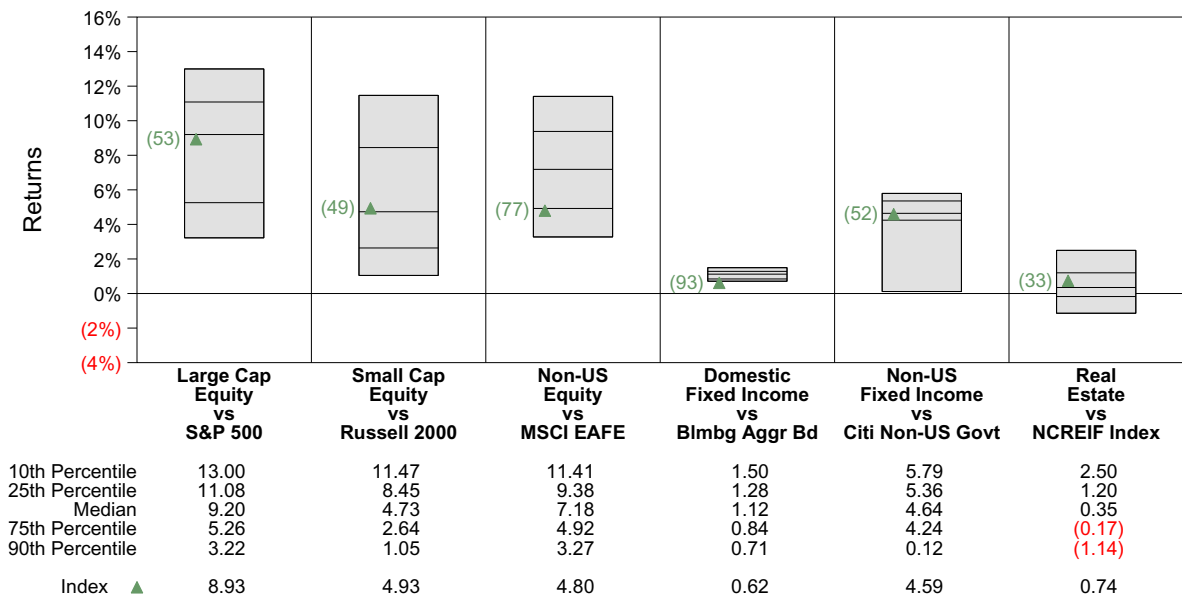
## Market Overview

### Active Management vs Index Returns

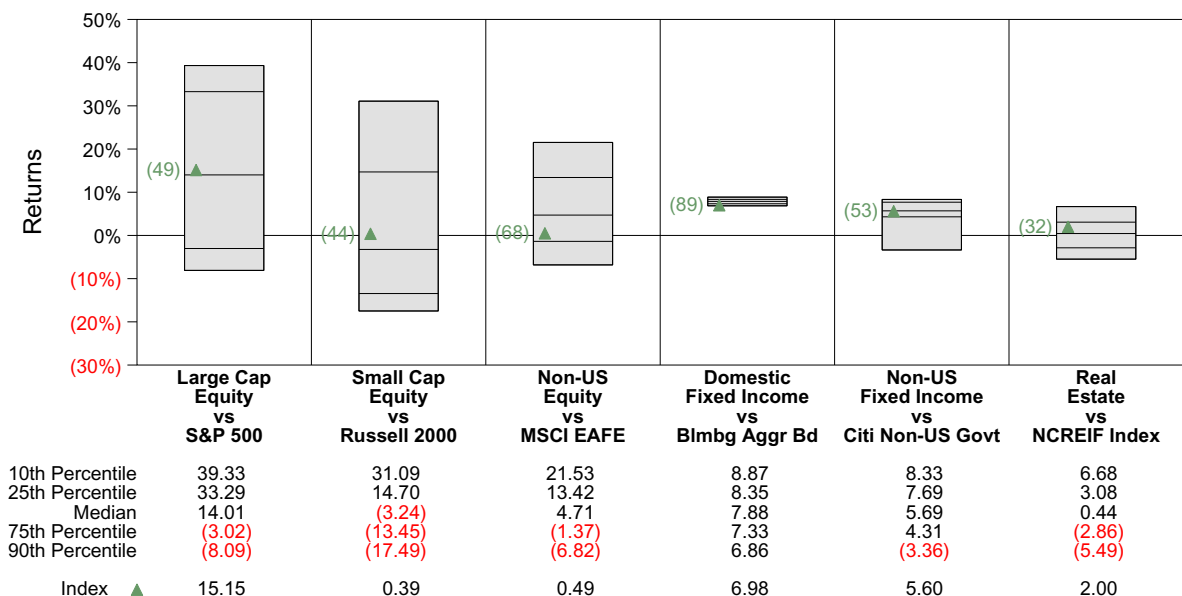
#### Market Overview

The charts below illustrate the range of returns across managers in Callan's Separate Account database over the most recent one quarter and one year time periods. The database is broken down by asset class to illustrate the difference in returns across those asset classes. An appropriate index is also shown for each asset class for comparison purposes. As an example, the first bar in the upper chart illustrates the range of returns for domestic equity managers over the last quarter. The triangle represents the S&P 500 return. The number next to the triangle represents the ranking of the S&P 500 in the Large Cap Equity manager database.

#### Range of Separate Account Manager Returns by Asset Class One Quarter Ended September 30, 2020



#### Range of Separate Account Manager Returns by Asset Class One Year Ended September 30, 2020



## Caution Needed— Hard Road Ahead!

### ECONOMY

**2** The huge jump in 3Q GDP still leaves it 3.5% below its previous peak (4Q19). Employment remains more than 10 million jobs short of the level reached in the U.S. in February of this year, and many other measures of economic activity remain below pre-pandemic levels.

## Equity Jump Provided Some Help to Returns

### INSTITUTIONAL INVESTORS

**4** Institutional investors saw more gains in 3Q20 as equities rebounded, but not enough to overcome lagging global ex-U.S. equity returns, which hindered performance against a 60% equities/40% bonds benchmark. But results over 20 years continue to match the benchmark.

## Continued Gains, but With a Big Asterisk

### EQUITY

**6** The S&P 500 rose in 3Q20 and has gained 5.6% year to date, but would be negative without the big jumps of the major technology firms. Supported by low rates, global equity returns were broadly positive across developed and emerging markets but have been muted YTD.

## Low Returns in U.S.; Muted Gain Globally

### FIXED INCOME

**8** U.S. Treasury yields were relatively unchanged, and the Aggregate was roughly flat. Corporate and CMBS were the strongest investment grade sectors as investors hunted for yield. Global fixed income rose amid rate cuts, but U.S. dollar weakness dampened hedged returns.

## Virus Hit All Sectors; REITs Lagged Equities

### REAL ESTATE/REAL ASSETS

**10** All sectors experienced negative appreciation in 3Q20, but income rose for every sector except for Hotels. Rent collection held up well for most sectors. All property types will see an impact on vacancy rates due to the pandemic. Most REITs trade at a discount to net asset value.

## Activity Muted by Impact of Pandemic

### PRIVATE EQUITY

**12** Most private equity activity measures were down in 3Q20 compared to the previous quarter, a pattern that also held for most year-to-date comparisons. A rough averaging across fundraising and private investments and exits indicates a 30% drop in year-over-year activity.

## Stimulus Hopes, Fed Boost Risky Trades

### HEDGE FUNDS/MACs

**13** Representing a portfolio of hedge fund interests without implementation costs, the Credit Suisse Hedge Fund Index rose 3.4% in 3Q20. As a live hedge fund portfolio, net of fees and expenses, the median manager in the Callan Hedge Fund-of-Funds Database Group advanced 3.7%.

## Index's 2Q20 Gain of 15% Largest Ever

### DEFINED CONTRIBUTION

**15** The Callan DC Index's rebound comes one quarter after the largest drop since 4Q08. The index also had its largest-ever increase in balances, driven primarily by robust investment returns. TDFs regained their position atop the inflows leaderboard.

## Broad Market Quarterly Returns

**U.S. Equity**  
Russell 3000



**9.2%**

**Global ex-U.S. Equity**  
MSCI ACWI ex USA



**6.3%**

**U.S. Fixed Income**  
Bloomberg Barclays Agg



**0.6%**

**Global ex-U.S. Fixed Income**  
Bloomberg Barclays GBI ex US



**4.1%**

Sources: Bloomberg Barclays, FTSE Russell, MSCI

# Caution—Hard Road Ahead!

ECONOMY | Jay Kloepfer

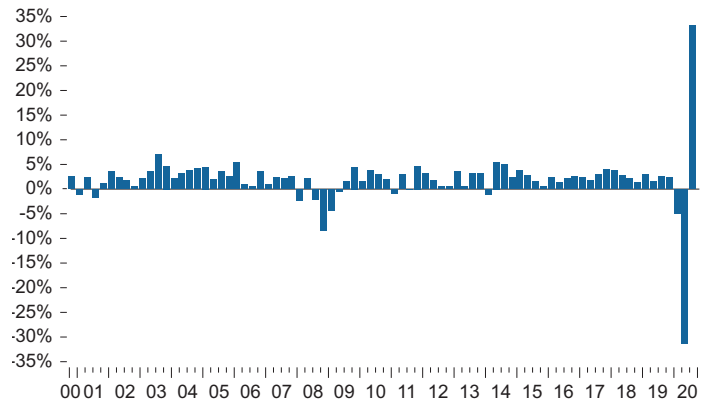
GDP growth came roaring back in 3Q20 as expected, notching a 33.1% gain, following the 31.4% decline in 2Q. The 3Q growth rate set a record by a wide margin (as did the decline), but the interpretation of quarterly GDP growth is problematic when trying to understand the true condition of the U.S. and global economies. GDP is customarily reported as quarterly growth, translated to an annual rate, which helps remove some of the seasonal noise that interferes with evaluating economic activity in normal times. The past nine months have been anything but normal, and annualized quarterly growth rates on either side of a global economic shutdown are perhaps less meaningful than analyzing the level of current and future economic activity relative to that seen before the onset of the pandemic. The huge jump in 3Q still leaves GDP 3.5% below its previous peak (4Q19). Employment remains more than 10 million jobs short of the level reached in the U.S. in February of this year, and many other measures of economic activity such as personal consumption remain below pre-pandemic levels.

The surge in 3Q GDP clearly reflects the gradual reopening of the U.S. and global economies that began back in May. The sharp increases in jobs, spending, and output were concentrated in May, June, and July. Growth in subsequent months has been much more modest. High-frequency tracking of the economy from the likes of GDPNow (from the Federal Reserve) and IHS Markit not only signaled slowing growth in August and September, but these forecasters are now expecting 4Q GDP growth to cycle back down to 5% annualized.

This would bring the level of GDP back close to where we started 2020, but the road forward into 2021 will be challenging. Growth across industry sectors, regions within the U.S., and occupations and income groups has been widely disparate. Technology illustrates the dichotomy. Defined as a combination of the Information Technology and Communication Services sectors, technology has seen lights-out performance in the stock market, up 22% collectively year-to-date through September, and accounts for 39% of the market cap of the S&P 500. Yet

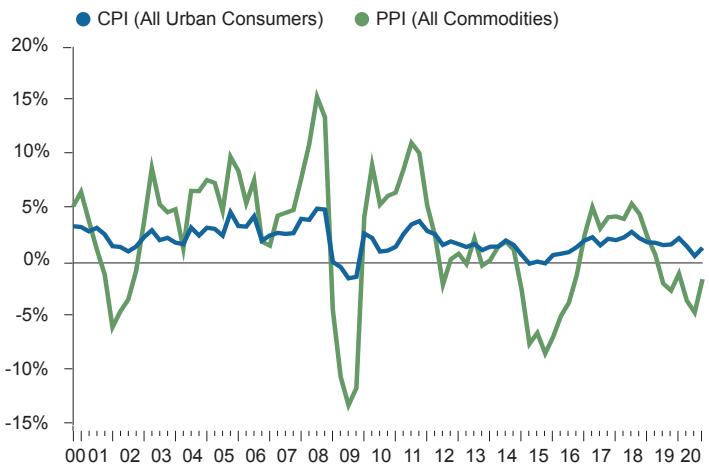
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

these two sectors account for just 6% of GDP, and only 2% of the U.S. job market as of August. The vast majority of jobs lost during the pandemic were in services (transportation, health care, financial business, and personal) as well as hospitality and retail. These sectors are underrepresented in the stock market, yet they employed a substantial portion of the U.S. workforce as the pandemic struck.

The slowdown in August, September, and into the fourth quarter came in part from a concern by both businesses and consumers

about the end to the stimulus payments and to extended unemployment benefits in September. Without another round of stimulus and further extension of jobless aid, growth will likely be restrained as the economy continues to operate under pandemic constraints and the effect from the stimulus earlier in the year wanes. The increase in COVID-19 infection rates both around the U.S. and the world, the so-called third wave, will further burden strained medical systems and increase pandemic-related deaths. The rising tide of infections may force the return of more stringent restrictions at the state level to control the virus, although a sudden stop to economic activity similar to what happened in the spring is unlikely.

Not all the economic news is dour as we head into the fourth quarter. Manufacturers' orders for durable goods have shown considerable strength, and consumer purchases of durable goods have been incredibly robust. Excluding capital goods like defense hardware and civilian aircraft, orders for durable goods have fully recovered to pre-pandemic levels. Trade has surprised on the upside with a narrowing of the trade deficit, even with demand for exports depressed by weakness in the global economy. Another surprising source of strength has been the housing market. Investment in new housing has already reached its pre-pandemic peak, driven by low mortgage rates and newly created demand for improved and larger housing by people leaving the urban cores of many large cities. Underlying demographics such as the aging baby boom and the maturation of families in the next generation suggest this trend is near-term in nature and will likely fade as we see some sort of resolution to the pandemic, perhaps in the second half of 2021.

Government assistance targeted to aid those affected by pandemic-related closures helped greatly to support household

### Recent Quarterly Economic Indicators

	3Q20	2Q20	1Q20	4Q19	3Q19	2Q19	1Q19	4Q18
Employment Cost–Total Compensation Growth	2.4%	2.7%	2.8%	2.7%	2.8%	2.7%	2.8%	2.9%
Nonfarm Business–Productivity Growth	4.9%*	10.1%	-0.3%	1.6%	0.3%	2.0%	3.7%	0.8%
GDP Growth	33.1%	-32.9%	-5.0%	2.4%	2.6%	1.5%	2.9%	1.3%
Manufacturing Capacity Utilization	70.3%	63.1%	73.9%	75.0%	75.4%	75.5%	76.4%	77.0%
Consumer Sentiment Index (1966=100)	75.6	74.0	96.4	97.2	93.8	98.4	94.5	98.2

\* Estimate

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan

### The Long-Term View

Index	3Q20	Periods Ended 9/30/20			
		Year	5 Yrs	10 Yrs	25 Yrs
<b>U.S. Equity</b>					
Russell 3000	9.2	15.0	13.7	13.5	9.3
S&P 500	8.9	15.1	14.1	13.7	9.3
Russell 2000	4.9	0.4	8.0	9.9	8.0
<b>Global ex-U.S. Equity</b>					
MSCI EAFE	4.8	0.5	5.3	4.6	4.6
MSCI ACWI ex USA	6.3	3.0	6.2	4.0	--
MSCI Emerging Markets	9.6	10.5	9.0	2.5	--
MSCI ACWI ex USA Small Cap	10.5	7.0	6.8	5.3	5.8
<b>Fixed Income</b>					
Bloomberg Barclays Agg	0.6	7.0	4.2	3.6	5.3
90-Day T-Bill	0.0	1.1	1.2	0.6	2.3
Bloomberg Barclays Long G/C	1.2	12.9	8.8	7.4	7.7
Bloomberg Barclays GI Agg ex US	4.1	5.5	3.6	1.3	3.9
<b>Real Estate</b>					
NCREIF Property	0.7	2.0	6.3	9.4	9.1
FTSE Nareit Equity	1.4	-18.2	3.9	7.9	9.3
<b>Alternatives</b>					
CS Hedge Fund	3.4	2.4	2.8	3.6	7.3
Cambridge PE*	9.9	7.7	11.4	13.4	14.9
Bloomberg Commodity	9.1	-8.2	-3.1	-6.0	0.9
Gold Spot Price	5.3	28.7	11.2	3.8	6.6
<b>Inflation – CPI-U</b>	1.0	1.4	1.8	1.8	2.1

\*Data for most recent period lags by a quarter. Data as of 6/30/20.

Sources: Bloomberg, Bloomberg Barclays, Bureau of Economic Analysis, Credit Suisse, FTSE Russell, MSCI, NCREIF, Refinitiv/Cambridge, S&P Dow Jones Indices

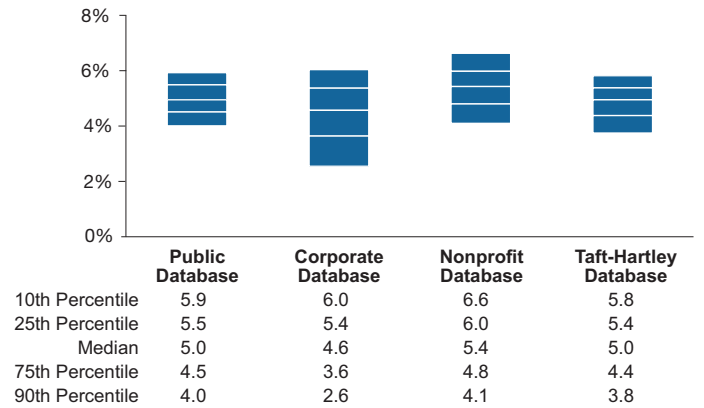
incomes, spending, and therefore production. While the job market has a long way to go to recover all the jobs lost, the unemployment rate has surprised to the positive, falling from 14.7% in April to 7.9% in September. The thorn in the job market's side has been the number of initial unemployment claims, which remains stubbornly high at 837,000 in September, still far above prior periods of stress. For reference, at the bottom of the GFC in March 2009, initial claims hit 665,000.

# Equity Gains Provided Some Help to 3Q Returns

## INSTITUTIONAL INVESTORS

- The continuing equity rebound helped boost institutional investors' returns over the 12 months ending Sept. 30, especially compared to the negative results at the end of 1Q20. Corporate plans performed the best, possibly driven by higher bond allocations given the performance of the Bloomberg Barclays US Aggregate Bond Index. Taft-Hartley plans trailed their peers.
- But the exceptionally strong gains in U.S. equity did not provide a big-enough short-term boost to investor returns to help them match a 60% S&P 500/40% Aggregate benchmark during 3Q20, held down by lagging results for global ex-U.S. equities.
- Over shorter time periods ranging up to 10 years, all investor types lagged the 60%/40% benchmark, but over a 20-year time period, all types posted returns roughly in line with that benchmark.
- Institutional investors continued to increase allocations to alternative asset classes, while interest in increasing exposure to equities or fixed income was minimal.

### Quarterly Returns, Callan Database Groups



Source: Callan

- Amid the pandemic, investors are shifting their focus from “What happened?” to “What should we do now?”
- Their liquidity needs have eased, but they are still top of mind.

### Callan Database Median and Index Returns\* for Periods Ended 9/30/20

Database Group	Quarter	Year-to-date	Year	3 Years	5 Years	10 Years
Public Database	5.0	2.2	7.5	6.2	8.1	7.7
Corporate Database	4.6	4.9	9.5	7.5	8.9	8.2
Nonprofit Database	5.4	1.5	7.3	5.9	8.0	7.5
Taft-Hartley Database	5.0	1.6	7.1	6.4	8.2	8.1
All Institutional Investors	5.0	2.4	7.8	6.4	8.2	7.9
Large (>\$1 billion)	4.9	2.8	8.0	6.8	8.3	8.1
Medium (\$100mm - \$1bn)	5.0	2.4	7.9	6.5	8.3	8.0
Small (<\$100 million)	5.2	2.1	7.6	6.1	8.0	7.6

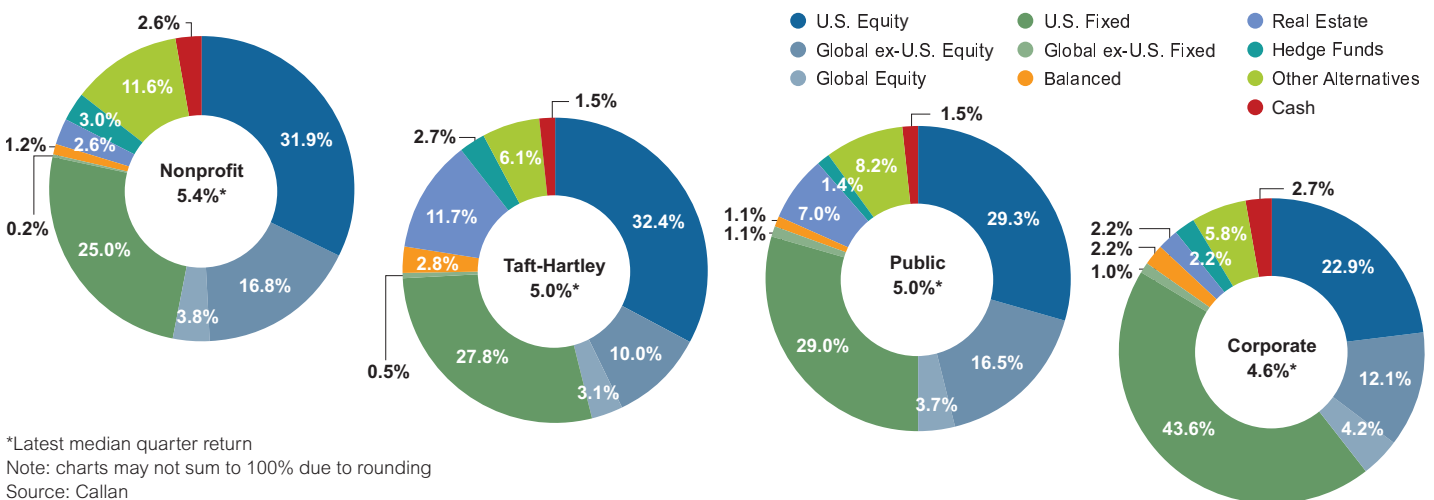
\*Returns less than one year are not annualized.

Source: Callan. Callan's database includes the following groups: public defined benefit (DB) plans, corporate DB plans, nonprofits, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan's clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.

- Investors across the board are reevaluating the purpose and the future of all asset classes:
  - Fixed income
  - Public equity
  - Hedge funds and liquid alternatives
  - Private equity, private credit, and the notion of private capital
- Asset class structures are the focus of many investors.
- It has been business as usual for many investors in the face of political, economic, and public health upheaval; this is a rational response when so much is uncertain.
- Many institutional investors are examining active vs. passive, value, and alternatives to cap-weighted passive allocations for their global equity structure.
- Opportunistic allocations are making a return as investors eye tactical investments.
- Both corporate and public defined benefit (DB) plans have prioritized funding status.
- DB plans also indicated they planned to reduce their passive exposure, a shift from previous quarters.
- More corporate DB plans are putting their liability-driven investing (LDI) plans on hold, and there was a reduction in LDI interest for corporate DB plans amid concerns about the impact of a continued low-rate environment.
- Public DB plans continued to focus beyond the traditional

- asset classes.
- They are also exploring alternatives to cap-weighted passive exposures to combat the concentration risk in U.S. equity.
- Some have also re-introduced opportunistic buckets—with a zero target, up to 5% allocation—to fund opportunities as they arise.
- Fees continue to be the top issue for DC plan sponsors. But they have expressed growing interest in investment structures and reducing the number of options in the plan.
- DC litigation has not slowed down during the pandemic.
- Recordkeeper consolidation activity picked up in 3Q20 with notable announcements from two key providers.
- Nonprofits showed growing interest in private real estate. But their appetite for ESG investing significantly declined, although there was a notable rise in the share of clients hiring staff specifically for ESG.
- More nonprofits expressed interest in private real estate.
- Callan’s strategic asset allocation work with endowments and community foundations is focused on evaluating investment portfolios that can support the desired distribution rate in order to balance intergenerational equity. Subdued expectations for capital markets returns are challenging both the risk tolerance of the organization and the sustainability of established spending rates.

Average Asset Allocation, Callan Database Groups



# Equity

## U.S. Equities

### Gains YTD

- S&P +8.9% for the quarter, bringing YTD to +5.6%
- Consumer Discretionary (+15%) and Industrials (+13%) dominated, with Tech (+12%) a close third in risk-on market.
- S&P 500 YTD would be negative if not for Facebook, Microsoft, Amazon, Alphabet, and Apple, representing 33% of the return.
- YTD, pandemic punished some sectors, rewarded others
- Tech +29% YTD; Cons. Disc. +23% (online retailers +60%)
- Energy -48% amid declining crude and natural gas prices
- Demand from hotels/cruise lines/airlines down as those industries have dropped 40%+

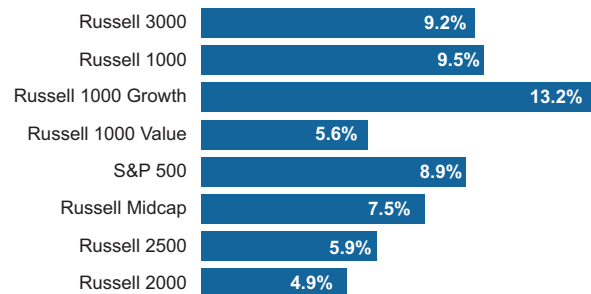
### Small cap reverses to trail large cap

- Following a stellar 2Q20 recovery, small cap trailed large.
- Behind large cap by a wide margin over last 12 months

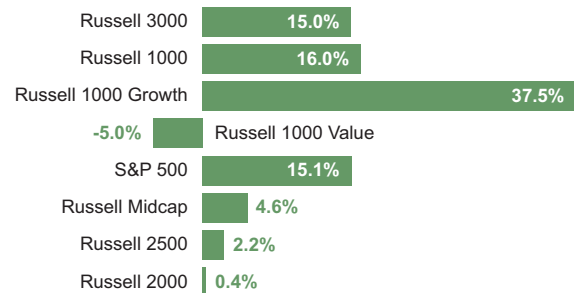
### Growth continues to outpace value across market caps

- Growth, value dispersion near all-time high driven by Tech
- YTD RUS1G +25% vs. RUS1V -12%
- Growth stock P/E near 2x historical average across market caps
- Today's index concentration surpasses levels seen in the late 90's Dot-Com boom.
- Index concentration of the top five names is at 5 standard deviations above the 30-year average of approximately 13%.
- Large and small value indices continue to underperform large and small growth in 3Q20 and YTD.

## U.S. Equity: Quarterly Returns



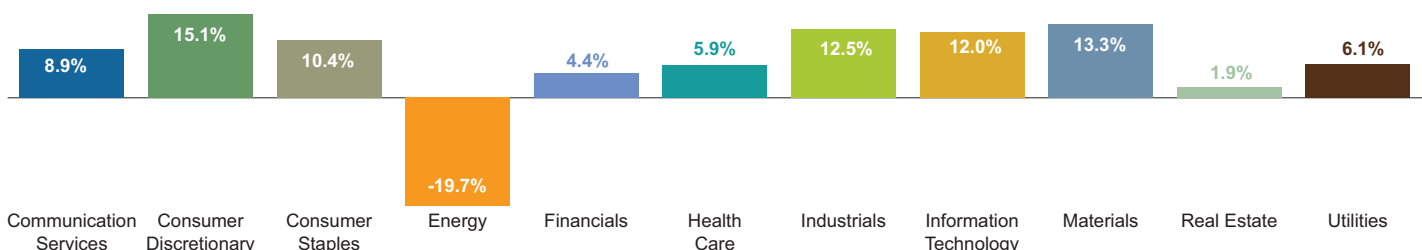
## U.S. Equity: One-Year Returns



Sources: FTSE Russell and S&P Dow Jones Indices

- Higher interest rates, a steeper yield curve, economic growth, and improving consumer confidence are among the catalysts that could result in value outperforming.
- S&P 500 Index currently delivers a dividend yield well above the 10-year Treasury, which can help support current valuation levels.

## Quarterly Performance of Industry Sectors



Source: S&P Dow Jones Indices



## Global/Global ex-U.S. Equity

### Continued recovery into 3Q20

- Returns broadly positive across developed and emerging markets but muted YTD
- Recent support from ultra-low interest rates and upward earnings revisions
- EM recovery driven by global risk-on environment; key countries within EM (China and South Korea) have better managed the pandemic
- Small cap continued to outperform large as lockdowns eased and business confidence improved.

### Rebound for cyclicals

- Materials, Industrials, and Consumer Discretionary outperformed as consumption and production resumed.
- Factor performance led by momentum (rebound) and volatility (risk-on market mentality)

### U.S. dollar vs. other currencies

- U.S. dollar lost ground versus every developed market currency on expectation of lower-for-longer U.S. rates due to Fed's shift in approach toward inflation and employment.

### COVID-19 exacerbated outperformance of growth vs. value

- Growth outpaced value by 34% year-to-date as of Sept. 30.
- Extremely narrow market with performance dominated by Tech
- Growth benefited from strong performance by Information Technology (27%), while Financials (-22%) and Energy (-46%) weighed on value.
- YTD performance gap between growth and value has not been seen over the past 45 years.

### What may stoke value rotation?

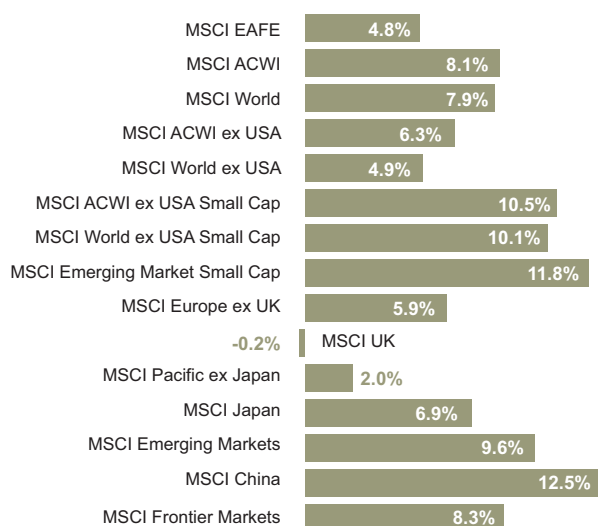
- Higher bond yields may be needed to drive value rebound.
- Bond yields correlated to value/growth since the GFC

### Key drivers: global recovery, U.S. elections

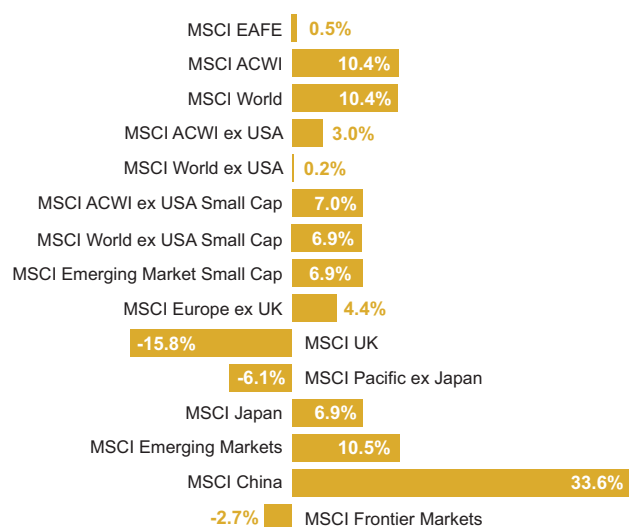
- Management of COVID-19 a key variable to recovery
- Advanced economies have struggled to contain the pandemic relative to emerging markets.

- Asian currencies have maintained resiliency relative to the U.S. dollar due to better COVID-19 management and economic outlook.

### Global ex-U.S. Equity: Quarterly Returns (U.S. Dollar)



### Global ex-U.S. Equity: One-Year Returns (U.S. Dollar)



Source: MSCI



# Fixed Income

## U.S. Fixed Income

### Treasury yields largely unchanged

- 10-year UST yield at 0.69% in 3Q20, up 3 bps from 2Q20 but off sharply from year-end level of 1.92%
- TIPS did well as inflation expectations rose from 1.34% to 1.63%.
- No rate hikes expected until at least 2023

### Bloomberg Barclays Aggregate roughly flat

- Corporate and CMBS the strongest investment grade sectors as investors hunted for yield
- Corporate supply (\$1 trillion YTD) at a record as companies rushed to take advantage of ultra-low interest rates

### Risk-on sentiment helped high yield and loans

- Non-investment grade sectors rallied, but remained roughly flat YTD.
- The high yield bond market also experienced high levels of net new issuance (over \$120 billion YTD).

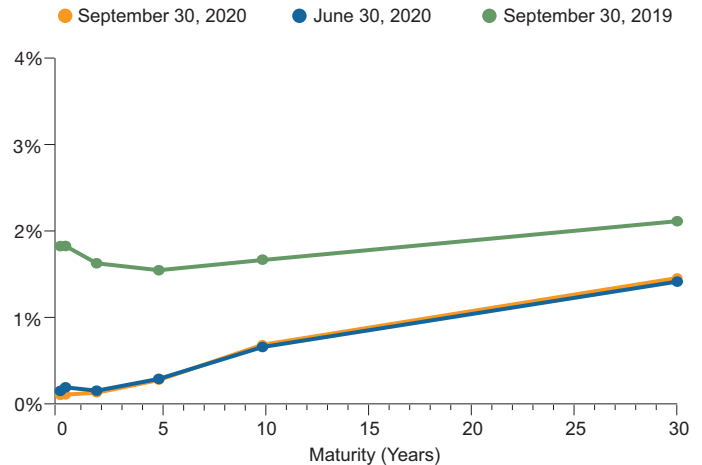
### Munis boosted by favorable supply/demand dynamics

- Robust demand and muted supply of tax-exempt municipals
- Issuance in taxable municipals sharply higher
- Tax revenues better than expected, but challenges remain and stimulus uncertain (but needed)

### High yield trended higher in quality

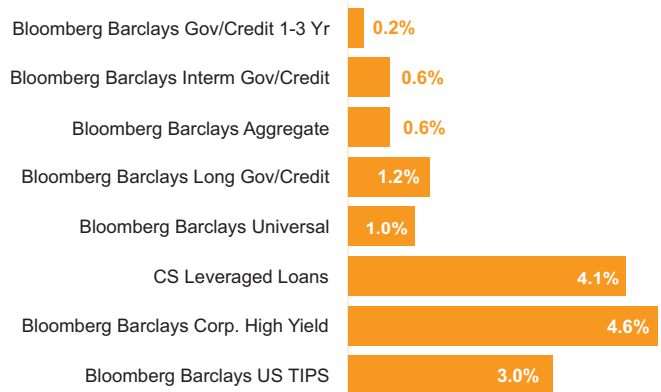
- BB/Ba-rated debt, the highest-quality category within high yield, experienced a surge of new issuance as 2020 remains a year of record new issuance across corporate debt.
- Reconstitution of downgraded investment grade debt into high yield has also added to the category.
- BBs now represent over half of the Bloomberg Barclays US High Yield Index.
- Historically, composition changes have generated market inefficiencies that managers can seek to exploit.

## U.S. Treasury Yield Curves



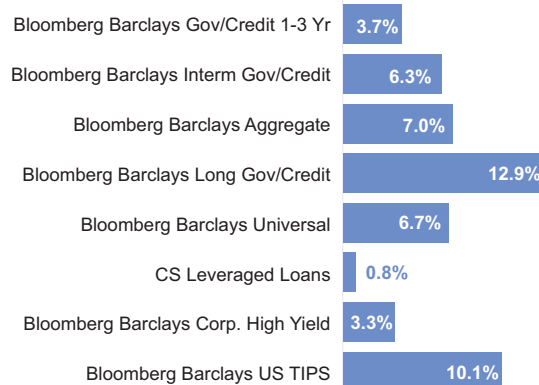
Source: Bloomberg

## U.S. Fixed Income: Quarterly Returns



Sources: Bloomberg Barclays and Credit Suisse

## U.S. Fixed Income: One-Year Returns



Sources: Bloomberg Barclays and Credit Suisse

**Default rate has trended higher, but below GFC levels**

- Additionally, spreads at the height of COVID-19 implied a 16.8% default rate, but thus far defaults have been well below market expectations at 5.8%.

**High yield spreads have rallied; managers are putting a greater focus on security selection**

- Recovery rates remain low relative to the 30-year average, concentrated within pandemic-sensitive sectors (particularly retail and energy) and subordinated debt.
- The ratio of downgrades to upgrades is higher than in 2008.

**Global Fixed Income**

**Rate cuts spur gains**

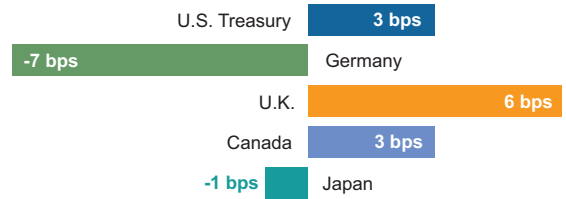
- Central banks continued to act aggressively to provide support via rate cuts, asset purchase programs, and other forms of stimulus.
- Broad-based U.S. dollar weakness dampened hedged returns as the USD lost 4% versus the euro and the British pound, and 2% versus the yen.
- Over 70% of global sovereign debt has negative real yields, a record high, according to JP Morgan.

**Emerging market debt made up ground**

- Emerging market debt indices gained in 3Q20 but remain down from year-end.
- U.S. dollar-denominated index (EMBI Global Diversified) outperformed local currency as U.S. rates fell; returns were mixed across the 70+ constituents, but most were positive.
- Local currency index (GBI-EM Global Diversified) was up slightly but returns varied widely among constituents (Russia: -8%; Brazil: -3%; Mexico and S. Africa: +6%).
- Staggered inclusion of China bonds continued with the weight rising to 7% in the JPM GBI-EM Global Diversified Index.

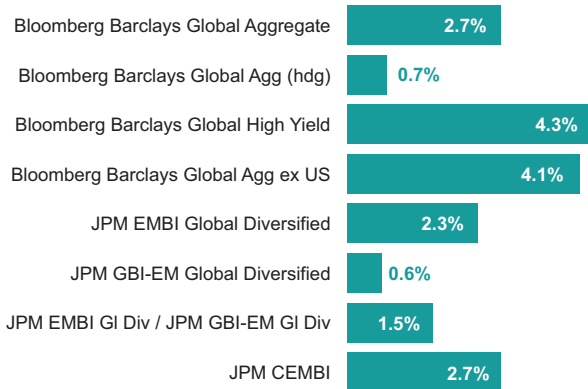
**Change in 10-Year Global Government Bond Yields**

2Q20 to 3Q20



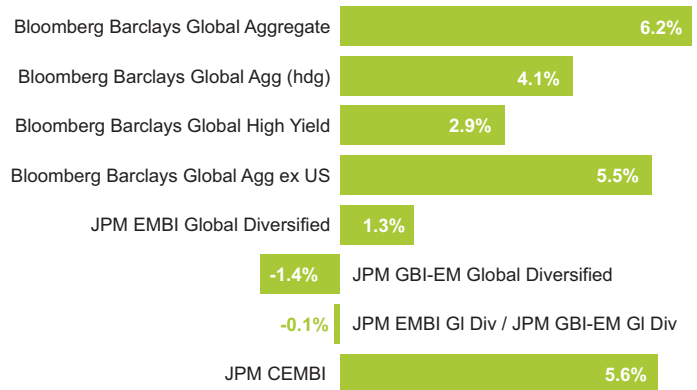
Source: Bloomberg Barclays

**Global Fixed Income: Quarterly Returns**



Sources: Bloomberg Barclays and JPMorgan Chase

**Global Fixed Income: One-Year Returns**



Sources: Bloomberg Barclays and JPMorgan Chase

# Pandemic Hit All Sectors; REITs Gained but Trailed Equities

REAL ESTATE/REAL ASSETS | Munir Iman

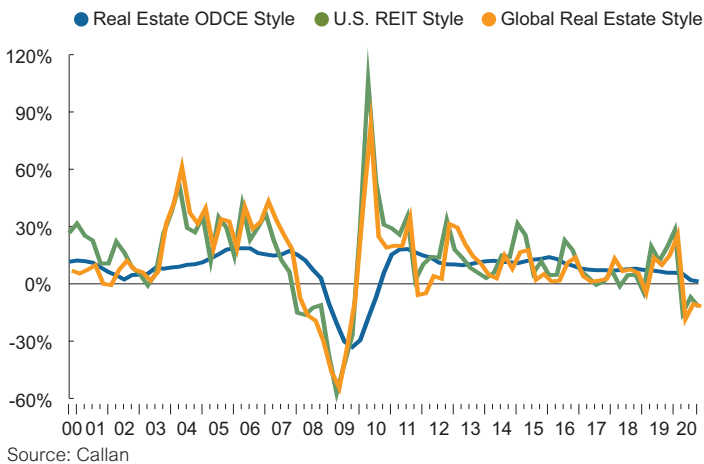
## All sectors saw negative appreciation

- Pandemic's impact reflected in 3Q20 results
- Income remained positive except in Hotel sector.
- All sectors experienced negative appreciation; Industrial remained the best performer.
- Dispersion of returns by manager within the ODCE Index due to both composition of underlying portfolios and valuation methodologies/approach
- Negative appreciation returns expected for 4Q and beyond

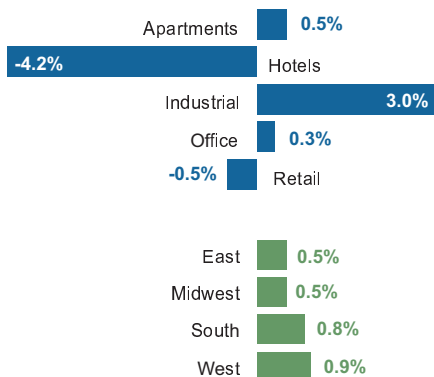
## U.S. real estate fundamentals

- Vacancy rates for all property types are or will be impacted.
- Net operating income has declined as retail continues to suffer.

## Rolling One-Year Returns



## Sector Quarterly Returns by Property Type and Region



Source: NCREIF

- 3Q rent collections showed relatively stable income throughout the quarter in the Industrial, Apartment, and Office sectors. The Retail sector remained challenged, with regional malls impacted most heavily.
- Class A/B urban apartments relatively strong, followed by certain types of Industrial and Office
- New construction will be basically halted in future quarters except for pre-leased properties.
- Transaction volume dropped off during the quarter with the exception of industrial assets with strong-credit tenants trading at pre-COVID-19 levels.
- Cap rates remained steady during the quarter. The spread between cap rates and 10-year Treasuries is relatively high, leading some market participants to speculate that cap rates will not adjust much. Price discovery is happening and there are limited transactions.

## Global REITs rose but lagged the equity market recovery

- Global REITs underperformed in 3Q20, gaining 2.1% compared to 7.9% for global equities (MSCI World).
- U.S. REITs rose 1.4% in 3Q20, lagging the S&P 500 Index, which jumped 8.9%.
- Globally, REITs except in the U.S. and Singapore are trading at a discount to net asset value. In some regions the discount is at a five-year high.
- Property sectors are mixed, between trading at a discount or premium.

## Real estate investment opportunities

- Primary opportunity: purchase of mispriced publicly traded real estate, both equity and debt
- Emerging opportunity: purchase of mezzanine loans from forced sellers
- Industrial development can be implemented by well-capitalized owners that do not need a construction loan.
- Low LTV loans on core properties
- Distress, take-privates, rescue capital, recapitalizations, value add re-leasing strategies, and lending strategies will move into the opportunity set for investment as the pandemic

## REAL ESTATE/REAL ASSETS (Continued)

- and social distancing continue and operating income is squeezed by tenants not paying rent.
- If core open end real estate funds are on the sidelines due to redemption queues, there may be more opportunities to buy core assets with less competition or to buy assets from the funds themselves.
- Industrial has been the one bright spot, as e-commerce take up has accelerated.

### Infrastructure opportunities

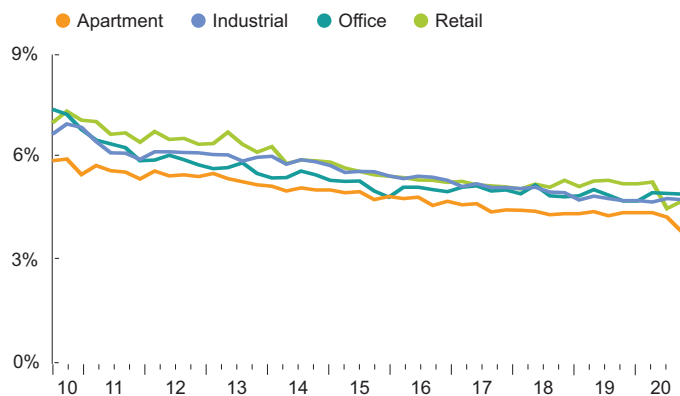
- Strong performance from communications assets has drawn interest from infrastructure investors across the sector, and in some cases real estate investors for data centers.
- Pandemic could accelerate the purchase of assets or formation of PPPs from cash-strapped governments/municipalities

- Potential purchase of mispriced publicly traded infrastructure
- Some sellers looking to secure strong pricing for stable assets with steady cash flows
- Opportunity for purchase of assets from over-leveraged buyers and/or with GDP-linked revenue

### Timberland and farmland opportunities

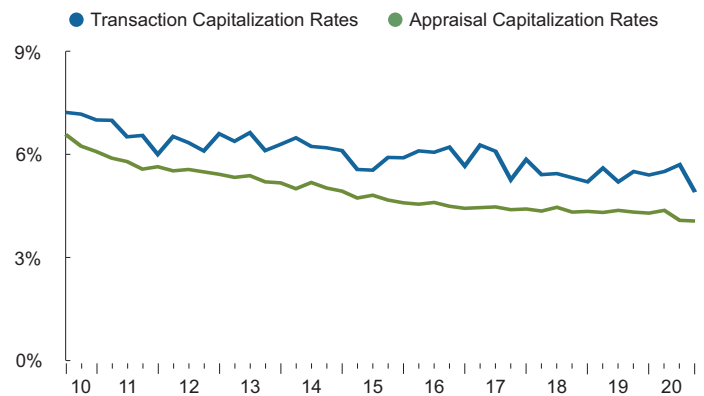
- Investment in farmland may increase if it proves to be a true diversifier in the pandemic.
- Volatility in commodity prices and changing supply chains may provide buying opportunities from overleveraged farmers and those who cannot shift crops away from restaurant/institutional use to grocery stores and suppliers to individual consumers.
- Institutional investment in timber has been waning for several years. The pandemic is unlikely to turn that tide.

### NCREIF Capitalization Rates by Property Type



Source: NCREIF. Capitalization rates (net operating income / current market value (or sale price)) are appraisal-based.

### NCREIF Transaction and Appraisal Capitalization Rates



Source: NCREIF  
Note: Transaction capitalization rate is equal weighted.

### Callan Database Median and Index Returns\* for Periods Ended 9/30/20

Private Real Assets	Quarter	Year to Date	Year	3 Years	5 Years	10 Years	15 Years
<b>Real Estate ODCE Style</b>	<b>0.3</b>	<b>-0.4</b>	<b>1.2</b>	<b>4.6</b>	<b>6.3</b>	<b>9.4</b>	<b>5.7</b>
NFI-ODCE (value wt net)	0.3	-0.7	0.5	4.2	5.7	9.3	5.7
NCREIF Property	0.7	0.4	2.0	5.1	6.3	9.4	7.4
NCREIF Farmland	0.6	1.1	2.1	4.7	5.8	10.7	12.7
NCREIF Timberland	0.0	0.2	0.2	2.1	2.6	4.4	6.1
<b>Public Real Estate</b>							
<b>Global Real Estate Style</b>	<b>3.1</b>	<b>-13.9</b>	<b>-11.8</b>	<b>2.6</b>	<b>4.4</b>	<b>6.9</b>	<b>5.3</b>
FTSE EPRA Nareit Developed	2.1	-19.7	-18.3	-1.5	2.0	4.7	--
<b>Global ex-U.S. Real Estate Style</b>	<b>5.5</b>	<b>-12.0</b>	<b>-6.7</b>	<b>3.6</b>	<b>4.8</b>	<b>6.6</b>	<b>5.5</b>
FTSE EPRA Nareit Dev ex US	3.9	-18.5	-13.9	-0.6	2.5	3.7	--
<b>U.S. REIT Style</b>	<b>1.8</b>	<b>-12.3</b>	<b>-12.0</b>	<b>3.4</b>	<b>5.8</b>	<b>9.2</b>	<b>7.0</b>
EPRA Nareit Equity REITs	1.4	-17.5	-18.2	0.2	3.9	7.9	5.9

\*Returns less than one year are not annualized.  
Sources: Callan, FTSE Russell, NCREIF

# Pandemic's Impact Muted

PRIVATE EQUITY | Gary Robertson

Private equity activity measures were generally down in 3Q20, although the IPO market for both venture capital and buyouts showed large increases. So far this year, venture capital has been less affected by the pandemic than buyouts. While capital markets seemed to stabilize in the quarter, pricing private transactions based on future earnings power remains challenging.

Private equity partnerships holding final closes totaled \$107 billion, with 224 new partnerships formed, according to PitchBook. The dollar volume fell 36% from 2Q20, and the number of funds holding final closes fell 12%. So far this year, 2020 is running 7% behind 2019. Energy and mezzanine have fallen out of favor with investors, but other strategies are in line with historical market share.

The number of new buyout transactions increased but transactions were smaller, according to PitchBook. Funds closed 1,500 company investments with \$65 billion in disclosed deal value, a 31% increase in count but a 32% drop in dollar value from 2Q20.

According to PitchBook, new financing rounds in venture capital companies totaled 6,234, with \$76 billion of announced value. The number of investments was down 13% from the prior quarter, and announced value rose 7%. The median pre-money valuations of Series A through D rounds continued to increase, with only seed stage remaining flat.

## Private Equity Performance (%) (Pooled Horizon IRRs through 6/30/20\*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
All Venture	11.51	14.97	17.99	12.08	15.98	11.88	5.95	27.61
Growth Equity	12.85	13.08	16.42	13.12	14.11	13.10	10.94	14.66
All Buyouts	9.25	5.77	11.38	11.79	14.17	12.29	11.36	12.95
Mezzanine	2.99	2.91	8.50	8.85	10.79	10.03	7.87	9.50
Credit Opportunities	5.61	-5.64	2.35	4.30	8.65	8.50	9.30	9.41
Control Distressed	9.49	-1.35	3.85	6.29	10.15	9.39	9.96	10.43
<b>All Private Equity</b>	<b>10.02</b>	<b>7.82</b>	<b>12.53</b>	<b>11.28</b>	<b>13.82</b>	<b>11.90</b>	<b>9.68</b>	<b>13.94</b>
S&P 500	20.54	7.51	10.73	10.73	13.99	8.83	5.91	9.27
Russell 3000	22.03	6.67	10.19	9.96	14.57	9.36	8.00	9.10

Note: Private equity returns are net of fees. Sources: Refinitiv/Cambridge and S&P Dow Jones Indices  
\*Most recent data available at time of publication

Note: Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of *Capital Markets Review* and other Callan publications.

## Funds Closed 1/1/20 to 9/30/20

Strategy	No. of Funds	Amt (\$mm)	Share
Venture Capital	409	81,381	19%
Growth Equity	69	42,029	10%
Buyouts	195	196,737	45%
Mezzanine Debt	9	7,501	2%
Distressed	18	22,924	5%
Energy	4	6,216	1%
Secondary and Other	57	59,609	14%
Fund-of-Funds	44	20,612	5%
<b>Totals</b>	<b>805</b>	<b>437,009</b>	<b>100%</b>

Source: PitchBook (Figures may not total due to rounding.)

There were 294 private M&A exits of private equity-backed companies (excluding venture capital), PitchBook reports, with disclosed values totaling \$37 billion. Exits were up 12% from the prior quarter but announced dollar volume plunged 70%. The year-to-date exit count declined 41%. There were 40 private-equity backed IPOs in 3Q raising \$6 billion, a steep jump from 17 totaling \$12 billion previously.

Venture-backed M&A exits totaled 336 transactions with disclosed value of \$15 billion. The number of sales increased 3% and announced dollar volume slid 35%. The year-to-date exit count declined 24%. There were 122 VC-backed IPOs with a combined float of \$15 billion. For comparison, 2Q had 326 IPOs and total issuance of \$23 billion.

# Stimulus Hopes Boosted Risky Bets

HEDGE FUNDS/MACs | Jim McKee

Hope may not be a strategy, but it elevated risk appetites in 3Q20. Active bets of hedge funds proved mostly positive amid the backdrop of rebounding equity and credit markets, continued low rates, and the potential for additional government stimulus payments.

Representing a paper portfolio of hedge fund interests without implementation costs, the Credit Suisse Hedge Fund Index (CS HFI) rose 3.4% in 3Q20. As a live hedge fund portfolio, net of fees and expenses, the median manager in the Callan Hedge Fund-of-Funds Peer Group advanced 3.7%.

Representing 50 large, broadly diversified hedge funds with low-beta exposure to equity markets, the average manager in the Callan Institutional Hedge Fund (CIHF) Peer Group added 3.1%. The average CIHF fund focused on Hedged Equity grew 4.1%, benefiting from continued stock and sector

## Hedge Fund Style Group Returns



Sources: Callan, Credit Suisse, Federal Reserve

## Callan Peer Group Median and Index Returns\* for Periods Ended 9/30/20

Hedge Fund Universe	Quarter	Year to Date	Year	3 Years	5 Years	10 Years
Callan Institutional Hedge Fund Peer Group	2.9	1.6	4.4	3.9	4.7	5.6
Callan Fund-of-Funds Peer Group	3.7	2.4	5.1	3.5	3.8	4.2
Callan Absolute Return FOF Style	3.3	1.1	2.0	3.1	2.8	3.6
Callan Core Diversified FOF Style	3.9	2.1	5.0	3.5	3.8	4.1
Callan Long/Short Equity FOF Style	6.3	6.6	10.1	5.0	5.0	5.5
BB GS Cross Asset Risk Premia 6% Vol Idx	-0.7	-5.5	-6.8	2.5	2.8	5.0
Credit Suisse Hedge Fund	3.4	0.0	2.4	2.7	2.8	3.6
CS Convertible Arbitrage	5.6	5.8	9.4	4.1	4.5	4.0
CS Distressed	0.9	-4.9	-3.7	-1.2	1.3	3.2
CS Emerging Markets	4.9	6.3	14.6	3.9	6.3	4.5
CS Equity Market Neutral	3.1	1.0	2.0	-0.4	0.2	1.6
CS Event-Driven Multi	6.1	-3.5	-0.9	1.2	1.3	2.1
CS Fixed Income Arb	3.6	0.3	2.6	3.2	3.6	4.5
CS Global Macro	4.6	0.5	1.3	4.1	3.4	3.9
CS Long/Short Equity	2.8	0.2	5.3	3.5	3.6	4.9
CS Managed Futures	-1.0	-3.8	-6.3	1.4	-1.4	0.5
CS Multi-Strategy	3.4	0.5	1.8	2.3	3.6	5.6
CS Risk Arbitrage	4.0	4.2	6.3	3.1	4.3	2.7
HFRI Asset Wtd Composite	2.5	-4.4	-2.2	1.4	2.4	3.4
90-Day T-Bill + 5%	1.3	4.4	6.1	6.7	6.2	5.6

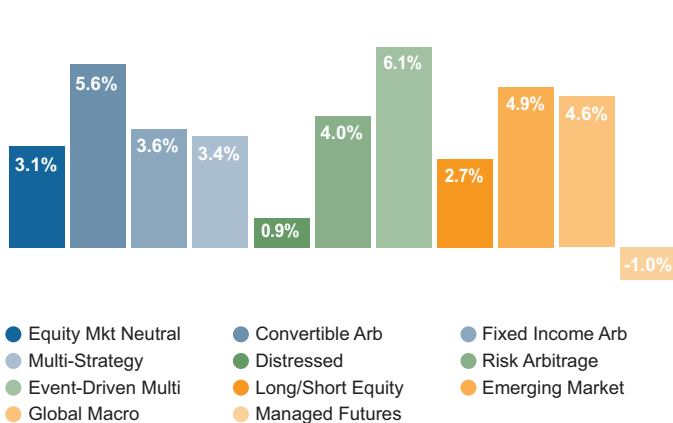
\*Net of fees. Sources: Bloomberg Barclays GSAM, Callan, Credit Suisse, Hedge Fund Research

dispersion. Those more exposed to Hedged Credit strategies advanced 3.1% on average but were still suffering a 2.4% year-to-date loss, as the recovery of illiquid credit lagged more liquid markets.

Within the Callan Hedge Fund-of-Funds Group, market exposures notably affected performance in 3Q. Benefiting from beta tailwinds, the median Callan Long/Short Equity FOF (+6.3%) easily beat the Callan Absolute Return FOF (+3.3%), which typically have exposures to less liquid risk premia like credit. With fuller exposure to both non-directional and directional styles, the Core Diversified FOF gained 3.9%.

Within CS HFI, the best-performing strategy last quarter was Event-Driven Multi-Strategy (+6.1%), which tends to benefit more in risk-on environments with soft equity catalysts. Another strong strategy was Convertible Arbitrage (+5.6%), as it benefited from unusually strong issuance with discounted pricing. Although the big interest in risk assets helped, Distressed clawed ahead only 0.9% with its deep value assets mired in COVID-stricken parts of the economy. Without any meaningful asset class trends to track, Managed Futures (-1.0%) was the only CS HFI strategy that lost value.

### Credit Suisse Hedge Fund Strategy Returns

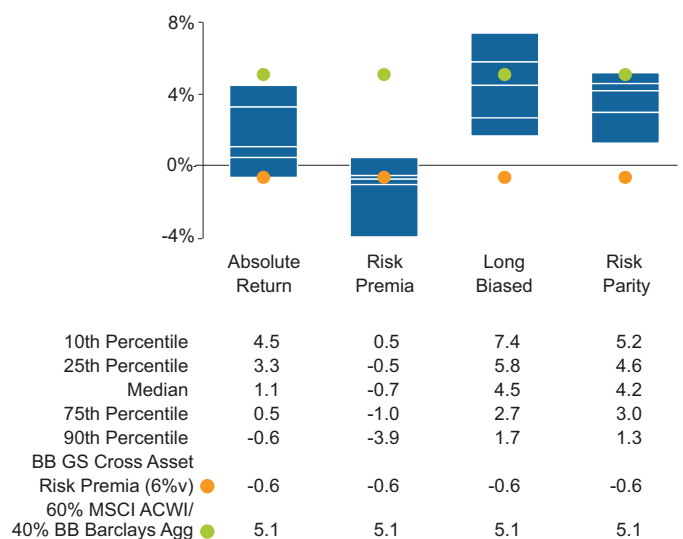


Source: Credit Suisse

Measuring the performance of systematic risk premia in 3Q, the Bloomberg GSAM Risk Premia Index (RPI) lost 0.6% based upon a 6% volatility target. Among the Index's unlevered components of risk premia, the biggest detractor was U.S. Equity Value L/S (-6.5%), which has now fallen 22.8% YTD. Another big detractor within the RPI was Currency Carry (-2.4%). As the risk premia that often complements the performance of value, U.S. Equity Momentum L/S gained 3.2%.

Within Callan's database of liquid alternative solutions, the median managers of Callan Multi-Asset Class (MAC) Style Groups generated mixed results, gross of fees, consistent with their underlying risk exposures. For example, the median Callan Risk Premia MAC fell 0.7% based on its exposures to alternative betas (such as those in the Bloomberg GSAM index noted above) targeting 5% to 15% portfolio volatility. Typically targeting equal risk-weighted allocations to major asset classes with leverage, the Callan Risk Parity MAC (+4.2%) trailed the traditional unlevered benchmark of 60% MSCI ACWI and 40% Bloomberg Barclays US Aggregate Bond Index (+5.1%) that was less impacted by a stalled bond market. Though usually long equity bias within its dynamic asset allocation mandate, the Callan Long-Biased MAC (+4.5%) similarly underperformed the 60%/40% index.

### MAC Style Group Returns



Sources: Bloomberg Barclays, Callan, Eurekahedge, S&P Dow Jones Indices



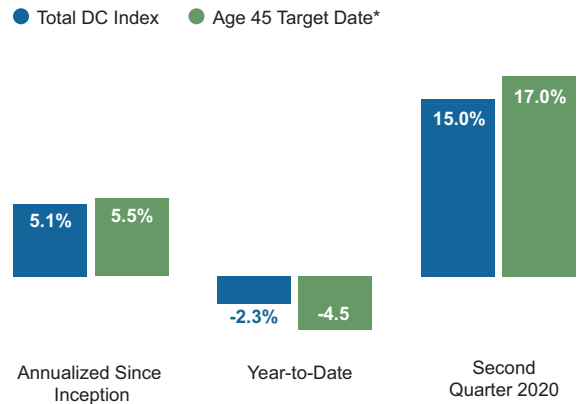
# Index's 2Q20 Gain of 15% Is Its Largest Ever

DEFINED CONTRIBUTION | Patrick Wisdom

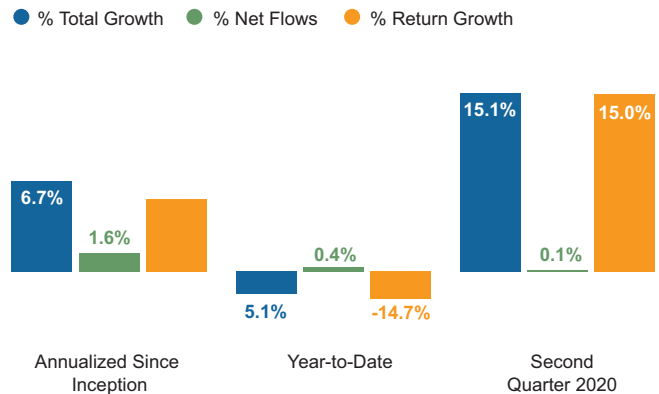
- The Callan DC Index™ jumped 15.0% in 2Q20, its largest gain since inception. It was also a sharp reversal from its 15.0% plunge in the first quarter, which was the largest drop since 4Q08. The Age 45 Target Date Fund (analogous to the 2040 vintage) posted a larger second-quarter gain (17.0%), attributable to its higher allocation to equity, which outperformed fixed income during the quarter.
- The Index also recorded its largest-ever increase in balances during 2Q (15.1%), a quarter after experiencing its biggest-ever quarterly drop. The quarter's robust investment returns were the primary driver.
- After an unusual first quarter in which target date funds (TDFs) received only 1.9% of net inflows, TDFs reclaimed their usual spot atop the inflow leaderboard with quarterly net flows of 41.4%.
- Brokerage windows (7.2%) saw their second consecutive quarter of inflows. On the other hand, U.S. small/mid cap equity (-28.3%) had the largest percentage of outflows.
- Second-quarter turnover (i.e., net transfer activity levels within DC plans) returned to a more typical level, decreasing to 0.37% from the previous quarter's measure of 0.96%.
- The Index's overall allocation to equity increased to 68.4% after dipping to 66.0% in the previous quarter, the smallest since 2012.
- The percentage of assets allocated to U.S. large cap increased by more than 1.6 percentage points, bringing the overall allocation to 25.4%. U.S. small/mid cap (7.7%) saw the next largest increase from the previous quarter.
- Stable value (10.2%) had the largest decrease in allocation after having the largest gain during the previous quarter.
- The prevalence of a money market offering (47.7%) increased by nearly 4 percentage points from the previous quarter and sits at its highest mark since 3Q17.

*The Callan DC Index is an equally weighted index tracking the cash flows and performance of over 100 plans, representing nearly \$300 billion in assets. The Index is updated quarterly and is available on Callan's website.*

## Investment Performance



## Growth Sources



## Net Cash Flow Analysis (2Q20)

(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	41.40%
U.S. Fixed Income	31.91%
U.S. Large Cap	-21.06%
U.S. Smid Cap	-28.29%
<b>Total Turnover**</b>	<b>0.37%</b>

Data provided here is the most recent available at time of publication.

Source: Callan DC Index

Note: DC Index inception date is January 2006.

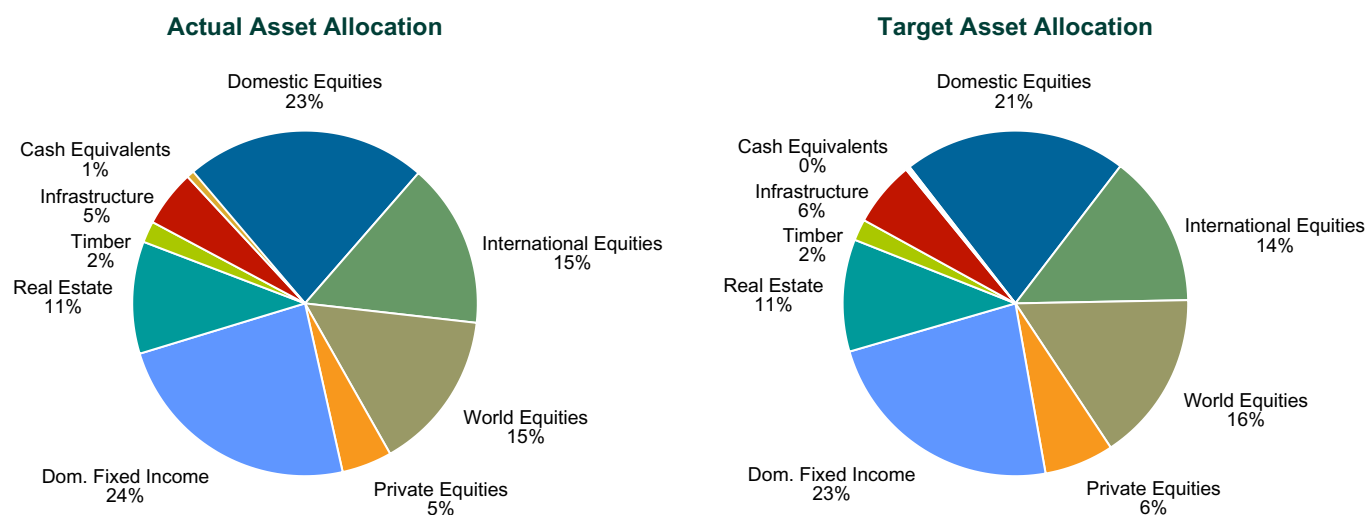
\* The Age 45 Fund transitioned from the average 2035 TDF to the 2040 TDF in June 2018.

\*\* Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.



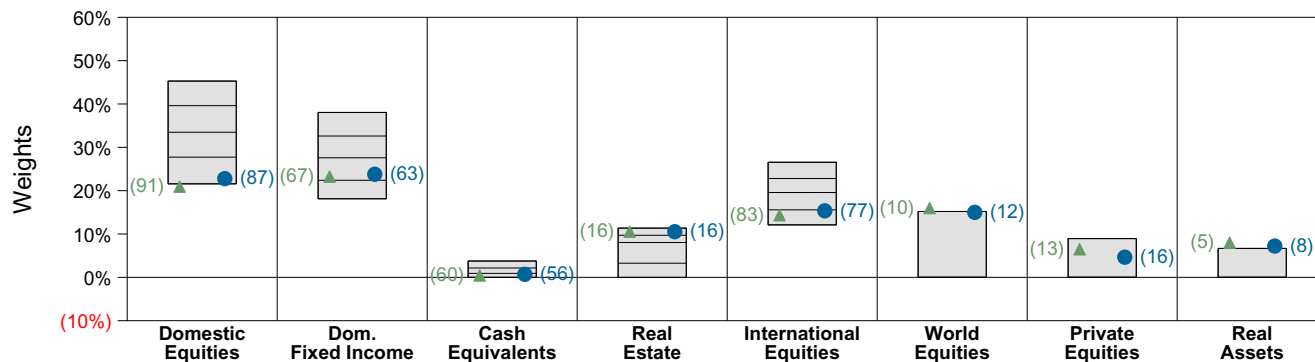
## Actual vs Target Asset Allocation As of September 30, 2020

The top left chart shows the Fund's asset allocation as of September 30, 2020. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Callan Public Fund Sponsor Database.



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	1,434,686	22.8%	20.9%	1.8%	115,948
International Equities	967,213	15.4%	14.3%	1.0%	63,849
World Equities	944,442	15.0%	16.0%	(1.0%)	(63,457)
Private Equities	292,938	4.7%	6.5%	(1.8%)	(115,365)
Dom. Fixed Income	1,498,527	23.8%	23.3%	0.5%	33,906
Real Estate	663,349	10.5%	10.5%	(0.0%)	(1,206)
Timber	122,914	2.0%	2.0%	0.0%	0
Infrastructure	331,597	5.3%	6.1%	(0.8%)	(49,594)
Cash Equivalents	43,698	0.7%	0.4%	0.3%	15,917
<b>Total</b>	<b>6,299,364</b>	<b>100.0%</b>	<b>100.0%</b>		

### Asset Class Weights vs Callan Public Fund Sponsor Database



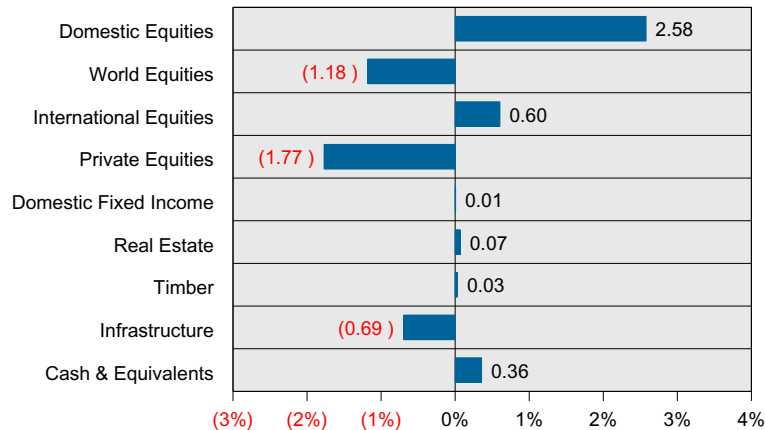
	Domestic Equities	Dom. Fixed Income	Cash Equivalents	Real Estate	International Equities	World Equities	Private Equities	Real Assets
10th Percentile	45.29	38.05	3.77	11.36	26.55	15.20	8.94	6.68
25th Percentile	39.62	32.61	2.16	9.71	22.81	0.00	0.00	0.00
Median	33.48	27.59	0.91	8.04	19.57	0.00	0.00	0.00
75th Percentile	27.74	22.40	0.00	3.26	15.57	0.00	0.00	0.00
90th Percentile	21.57	18.13	0.00	0.00	12.10	0.00	0.00	0.00
<b>Fund</b>	● 22.78	● 23.79	● 0.69	● 10.53	● 15.35	● 14.99	● 4.65	● 7.22
<b>Target</b>	▲ 20.93	▲ 23.25	▲ 0.44	▲ 10.55	▲ 14.34	▲ 16.00	▲ 6.48	▲ 8.00
% Group Invested	93.18%	98.48%	74.24%	79.55%	89.39%	18.18%	24.24%	19.70%

\* Current Quarter Target = 16.2% Blmbg Aggregate, 16.0% Russell 1000 Index, 16.0% MSCI World, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.5% NDSIB PEN - Private Equity, 4.9% Russell 2000 Index, 3.1% MSCI EM, 3.0% CPI All Urban Cons lagged 3 months, 3.0% NCREIF NFI-ODCE Eq Wt Net, 2.0% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

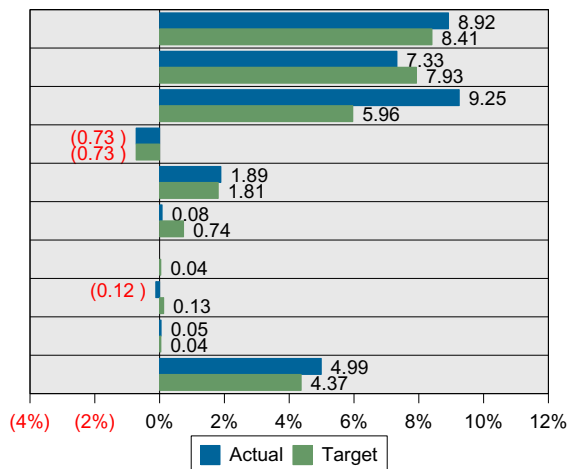
## Quarterly Total Fund Relative Attribution - September 30, 2020

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

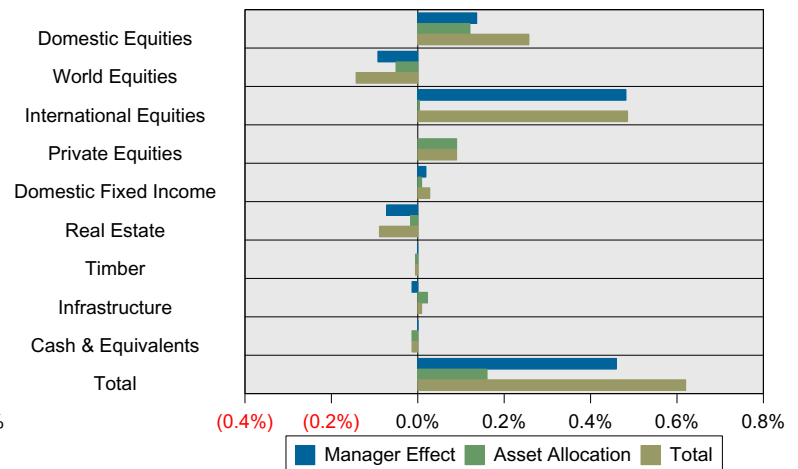
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended September 30, 2020

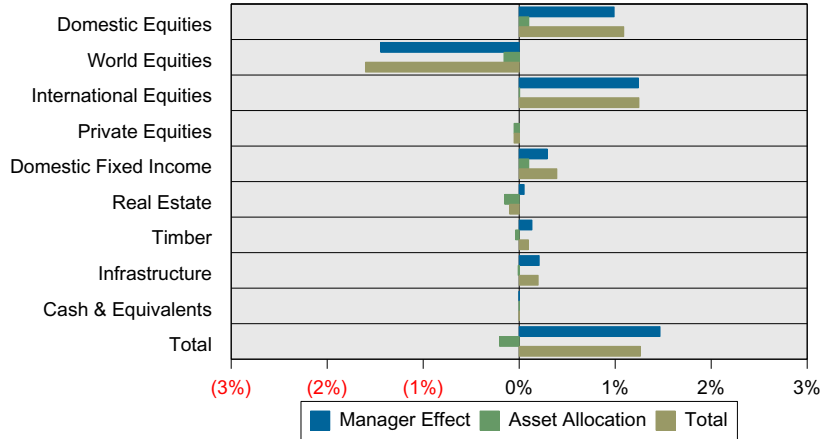
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	24%	21%	8.92%	8.41%	0.14%	0.12%	0.26%
World Equities	15%	16%	7.33%	7.93%	(0.09)%	(0.05)%	(0.14)%
International Equities	15%	14%	9.25%	5.96%	0.48%	0.00%	0.49%
Private Equities	5%	6%	(0.73)%	(0.73)%	0.00%	0.09%	0.09%
Domestic Fixed Income	23%	23%	1.89%	1.81%	0.02%	0.01%	0.03%
Real Estate	11%	11%	0.08%	0.74%	(0.07)%	(0.02)%	(0.09)%
Timber	2%	2%	0.00%	0.04%	(0.00)%	(0.00)%	(0.01)%
Infrastructure	5%	6%	(0.12)%	0.13%	(0.01)%	0.02%	0.01%
Cash & Equivalents	1%	0%	0.05%	0.04%	0.00%	(0.01)%	(0.01)%
<b>Total</b>			<b>4.99%</b>	<b>4.37%</b>	<b>+ 0.46%</b>	<b>+ 0.16%</b>	<b>0.62%</b>

\* Current Quarter Target = 16.2% Blmbg Aggregate, 16.0% Russell 1000 Index, 16.0% MSCI World, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.5% NDSIB PEN - Private Equity, 4.9% Russell 2000 Index, 3.1% MSCI EM, 3.0% CPI All Urban Cons lagged 3 months, 3.0% NCREIF NFI-ODCE Eq Wt Net, 2.0% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

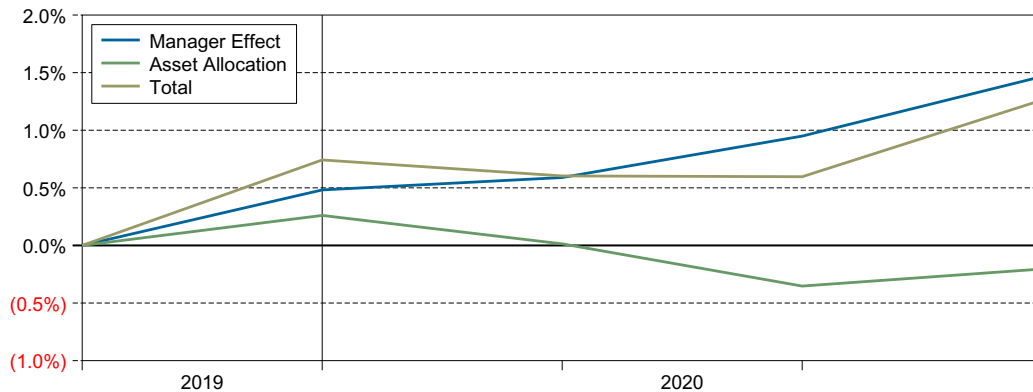
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### One Year Relative Attribution Effects



### Cumulative Relative Attribution Effects



### One Year Relative Attribution Effects

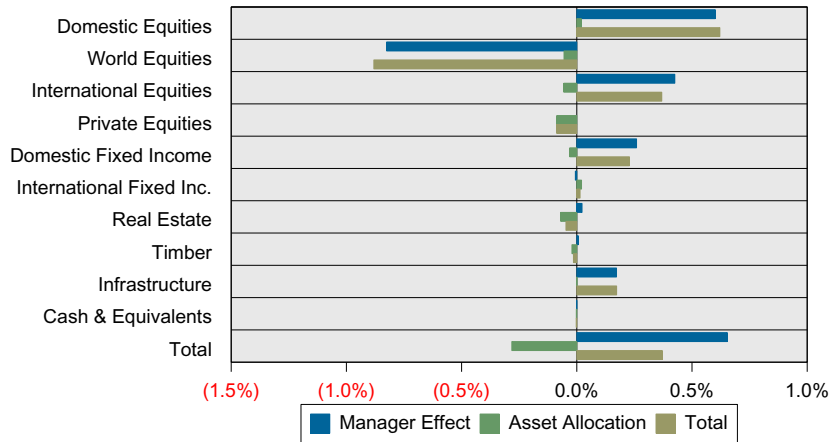
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	22%	21%	17.25%	12.29%	0.99%	0.10%	1.09%
World Equities	15%	16%	0.70%	10.41%	(1.44%)	(0.16%)	(1.60%)
International Equities	15%	14%	10.73%	2.46%	1.24%	0.01%	1.25%
Private Equities	4%	6%	2.73%	2.73%	0.00%	(0.05%)	(0.05%)
Domestic Fixed Income	24%	23%	7.18%	6.04%	0.29%	0.10%	0.39%
Real Estate	11%	11%	2.32%	2.00%	0.05%	(0.15%)	(0.10%)
Timber	2%	2%	6.29%	0.19%	0.13%	(0.04%)	0.10%
Infrastructure	5%	6%	4.57%	0.77%	0.21%	(0.01%)	0.20%
Cash & Equivalents	1%	0%	0.95%	1.10%	(0.00%)	0.00%	(0.00%)
<b>Total</b>			<b>8.33%</b>	<b>7.07%</b>	<b>+ 1.47%</b>	<b>+ (0.20%)</b>	<b>1.26%</b>

\* Current Quarter Target = 16.2% Blmbg Aggregate, 16.0% Russell 1000 Index, 16.0% MSCI World, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.5% NDSIB PEN - Private Equity, 4.9% Russell 2000 Index, 3.1% MSCI EM, 3.0% CPI All Urban Cons lagged 3 months, 3.0% NCREIF NFI-ODCE Eq Wt Net, 2.0% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

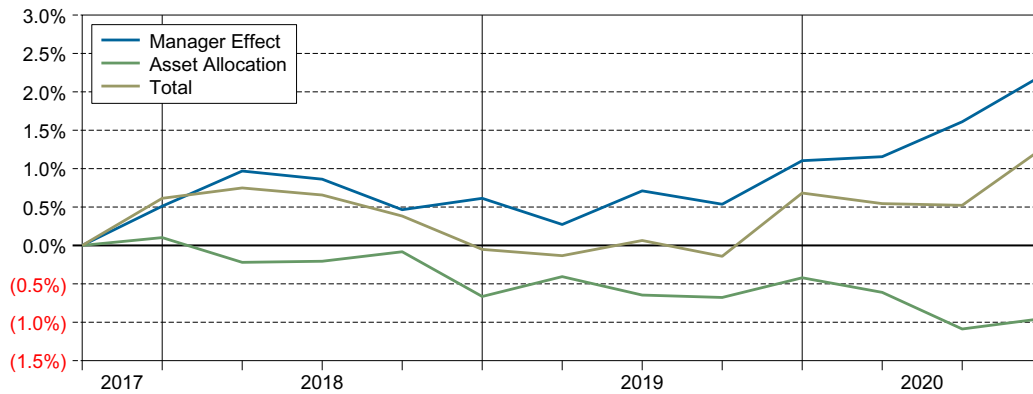
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Three Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Three Year Annualized Relative Attribution Effects

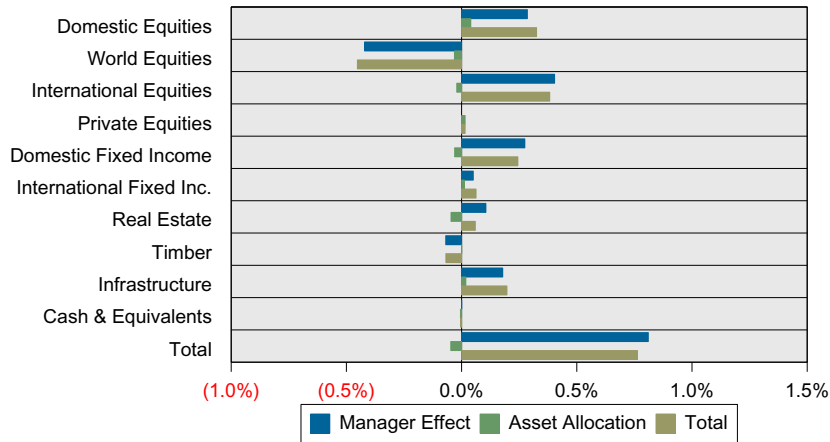
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	22%	21%	12.74%	9.89%	0.60%	0.02%	0.62%
World Equities	16%	16%	2.39%	7.74%	(0.83%)	(0.06%)	(0.88%)
International Equities	15%	14%	3.77%	1.07%	0.43%	(0.06%)	0.37%
Private Equities	4%	6%	6.25%	6.25%	0.00%	(0.09%)	(0.09%)
Domestic Fixed Income	23%	23%	6.11%	4.99%	0.26%	(0.03%)	0.23%
International Fixed Inc.	1%	1%	-	-	(0.01%)	0.02%	0.01%
Real Estate	11%	11%	5.30%	5.11%	0.02%	(0.07%)	(0.05%)
Timber	2%	2%	2.55%	2.09%	0.01%	(0.02%)	(0.01%)
Infrastructure	5%	6%	6.10%	2.61%	0.17%	0.00%	0.17%
Cash & Equivalents	1%	0%	1.64%	1.69%	(0.00%)	(0.00%)	(0.00%)
<b>Total</b>			<b>6.62%</b>	<b>6.25%</b>	<b>+ 0.65%</b>	<b>+ (0.28%)</b>	<b>0.37%</b>

\* Current Quarter Target = 16.2% Blmbg Aggregate, 16.0% Russell 1000 Index, 16.0% MSCI World, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.5% NDSIB PEN - Private Equity, 4.9% Russell 2000 Index, 3.1% MSCI EM, 3.0% CPI All Urban Cons lagged 3 months, 3.0% NCREIF NFI-ODCE Eq Wt Net, 2.0% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

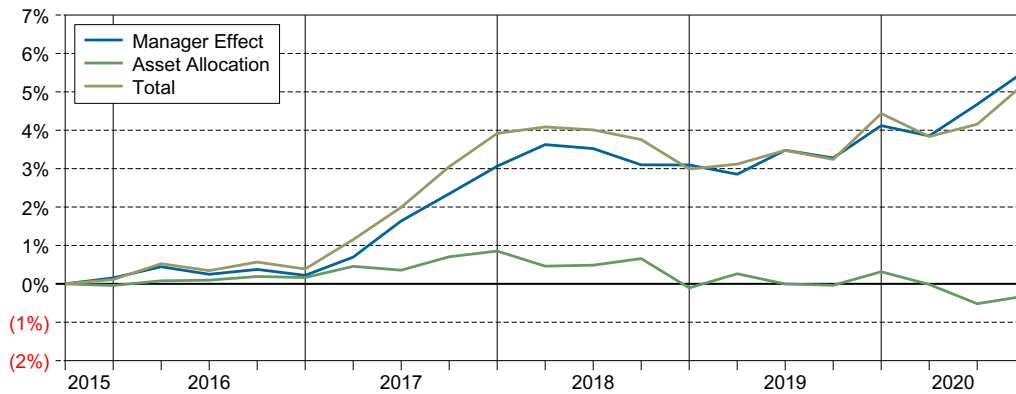
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Five Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Five Year Annualized Relative Attribution Effects

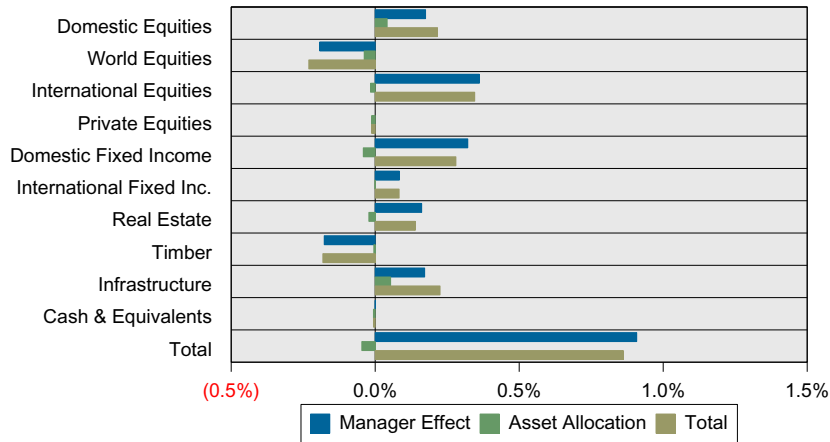
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	14.11%	12.72%	0.29%	0.04%	0.33%
World Equities	16%	16%	7.62%	10.48%	(0.42%)	(0.03%)	(0.45%)
International Equities	15%	14%	8.68%	6.07%	0.40%	(0.02%)	0.38%
Private Equities	4%	6%	3.78%	3.78%	0.00%	0.02%	0.02%
Domestic Fixed Income	21%	21%	6.21%	4.89%	0.27%	(0.03%)	0.24%
International Fixed Inc.	2%	2%	-	-	0.05%	0.01%	0.06%
Real Estate	11%	10%	7.24%	6.28%	0.11%	(0.05%)	0.06%
Timber	3%	3%	0.38%	2.56%	(0.07%)	0.00%	(0.07%)
Infrastructure	5%	6%	6.01%	2.27%	0.18%	0.02%	0.20%
Cash & Equivalents	1%	1%	1.24%	1.20%	0.00%	(0.00%)	(0.00%)
<b>Total</b>			<b>8.57%</b>	<b>7.80%</b>	<b>+ 0.81%</b>	<b>+ (0.05%)</b>	<b>0.76%</b>

\* Current Quarter Target = 16.2% Blmbg Aggregate, 16.0% Russell 1000 Index, 16.0% MSCI World, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.5% NDSIB PEN - Private Equity, 4.9% Russell 2000 Index, 3.1% MSCI EM, 3.0% CPI All Urban Cons lagged 3 months, 3.0% NCREIF NFI-ODCE Eq Wt Net, 2.0% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

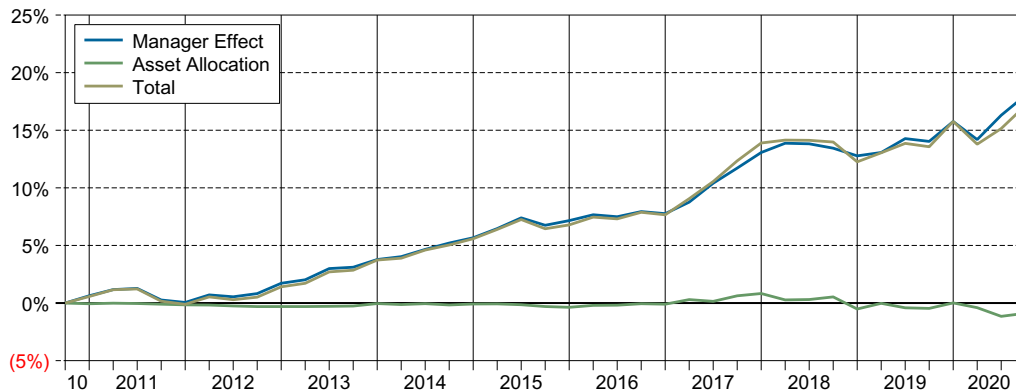
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Ten Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Ten Year Annualized Relative Attribution Effects

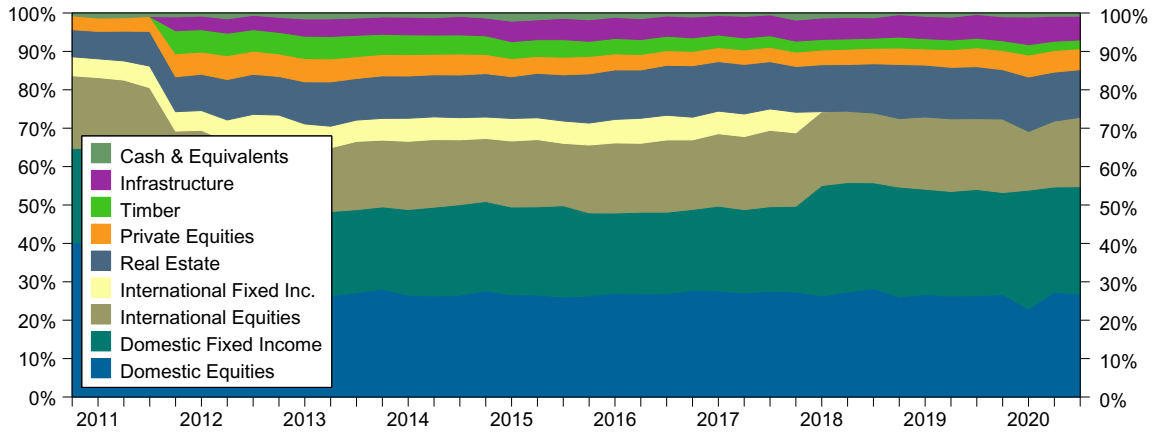
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	25%	24%	13.90%	12.92%	0.17%	0.04%	0.22%
World Equities	13%	13%	-	-	(0.19%)	(0.04%)	(0.23%)
International Equities	16%	15%	6.33%	4.06%	0.36%	(0.02%)	0.35%
Private Equities	4%	6%	4.14%	4.14%	0.00%	(0.01%)	(0.01%)
Domestic Fixed Income	20%	20%	6.10%	4.43%	0.32%	(0.04%)	0.28%
International Fixed Inc.	4%	4%	-	-	0.08%	(0.00%)	0.08%
Real Estate	10%	10%	11.17%	9.37%	0.16%	(0.02%)	0.14%
Timber	3%	3%	-	-	(0.18%)	(0.00%)	(0.18%)
Infrastructure	4%	5%	-	-	0.17%	0.05%	0.23%
Cash & Equivalents	1%	1%	0.66%	0.64%	0.00%	(0.01%)	(0.01%)
<b>Total</b>			<b>8.36%</b>	<b>7.50%</b>	<b>+ 0.91%</b>	<b>+ (0.05%)</b>	<b>0.86%</b>

\* Current Quarter Target = 16.2% Blmbg Aggregate, 16.0% Russell 1000 Index, 16.0% MSCI World, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.5% NDSIB PEN - Private Equity, 4.9% Russell 2000 Index, 3.1% MSCI EM, 3.0% CPI All Urban Cons lagged 3 months, 3.0% NCREIF NFI-ODCE Eq Wt Net, 2.0% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

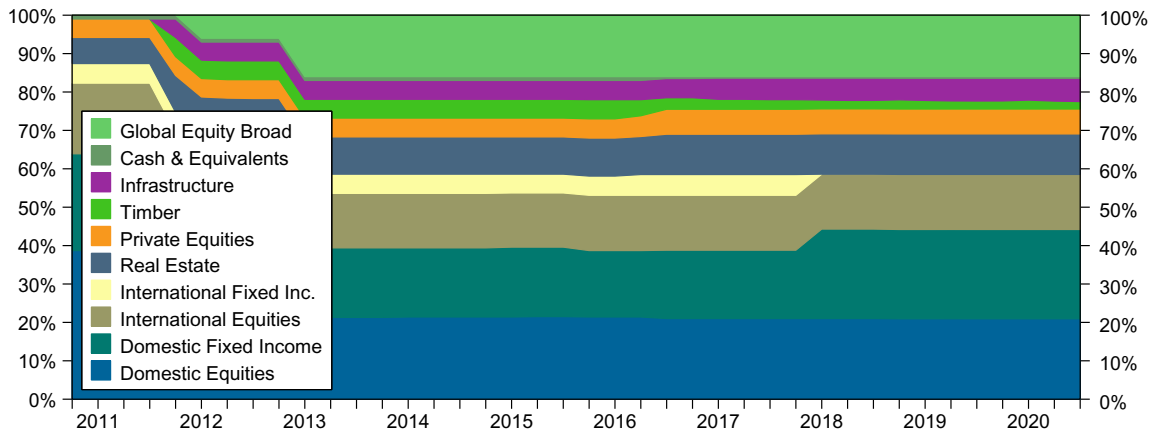
## Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Callan Public Fund Sponsor Database.

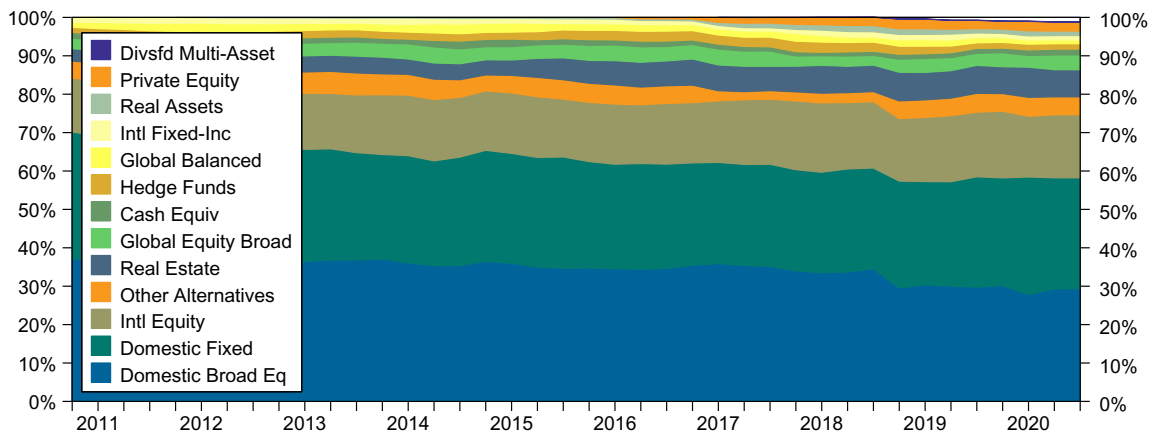
### Actual Historical Asset Allocation



### Target Historical Asset Allocation



### Average Callan Public Fund Sponsor Database Historical Asset Allocation

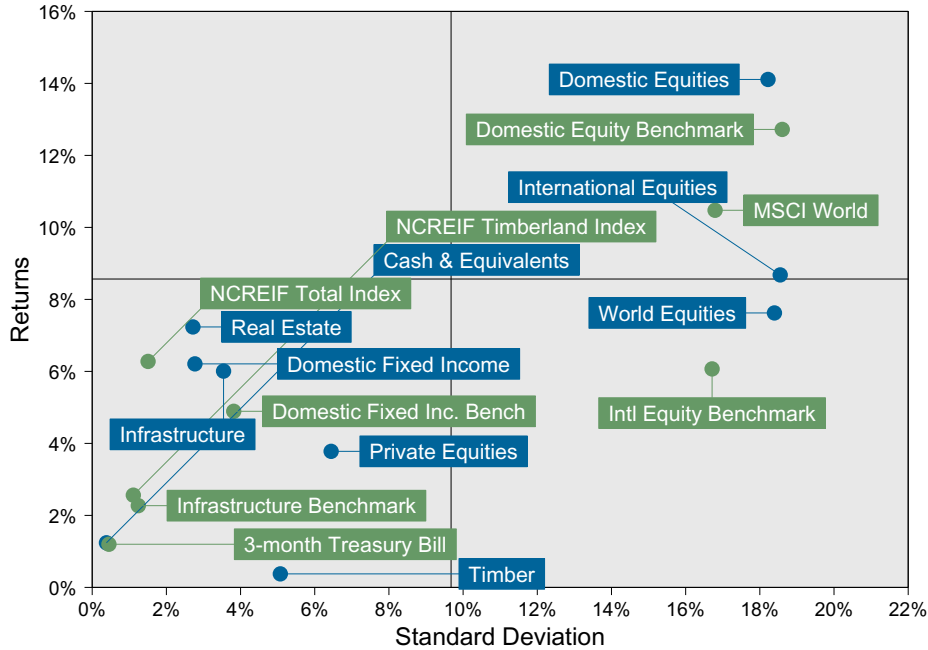


\* Current Quarter Target = 16.2% Blmbg Aggregate, 16.0% Russell 1000 Index, 16.0% MSCI World, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.5% NDSIB PEN - Private Equity, 4.9% Russell 2000 Index, 3.1% MSCI EM, 3.0% CPI All Urban Cons lagged 3 months, 3.0% NCREIF NFI-ODCE Eq Wt Net, 2.0% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

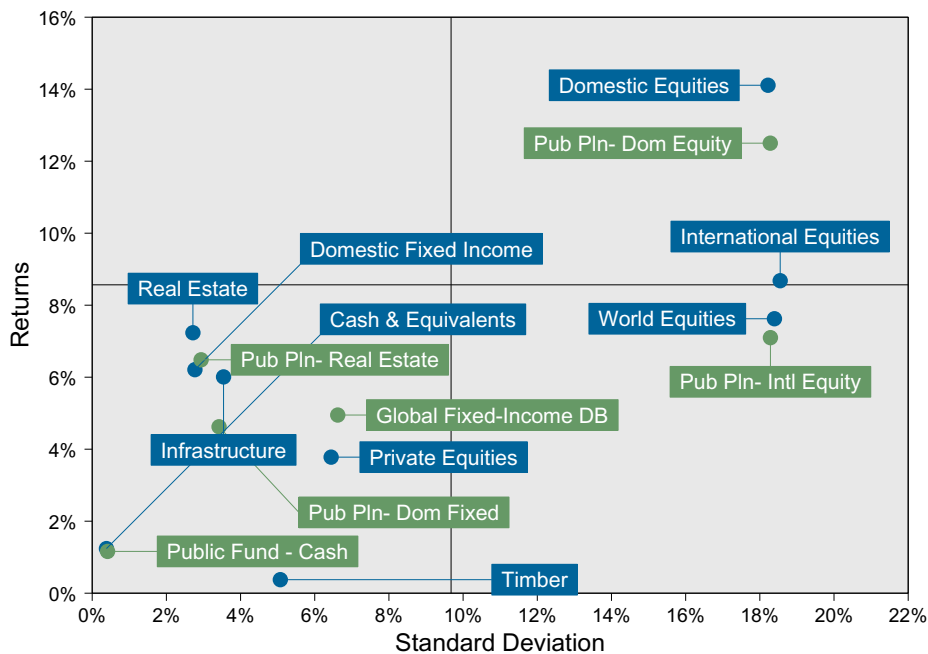
## Asset Class Risk and Return

The charts below show the five year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

### Five Year Annualized Risk vs Return Asset Classes vs Benchmark Indices



### Five Year Annualized Risk vs Return Asset Classes vs Asset Class Median

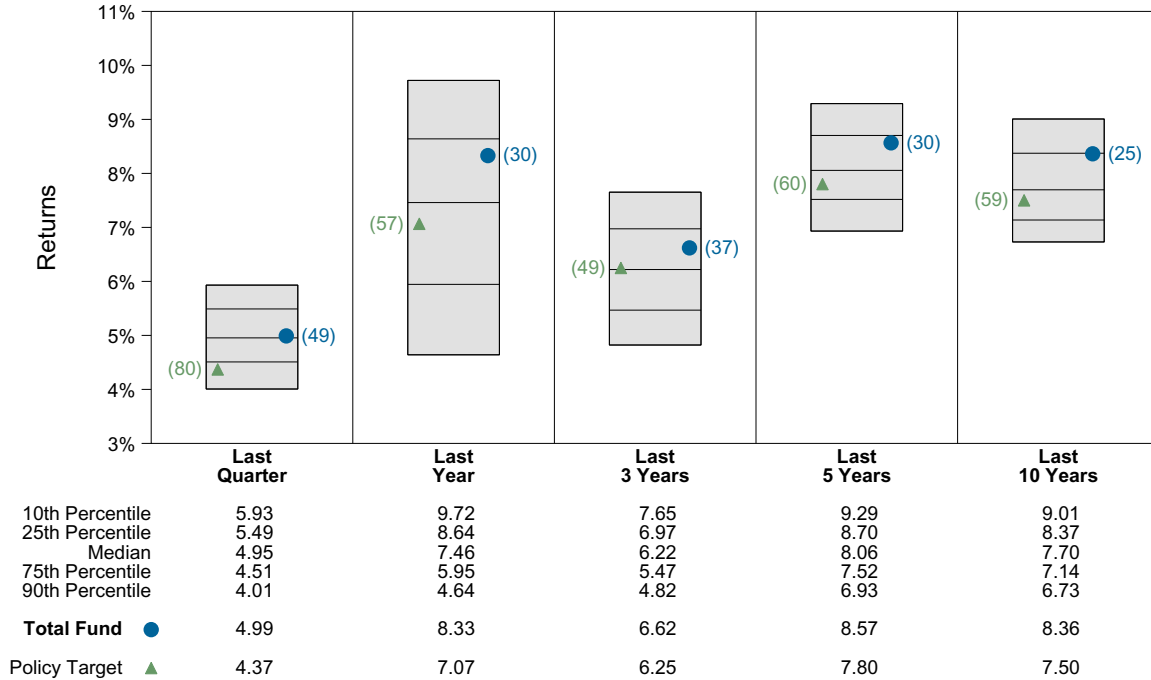




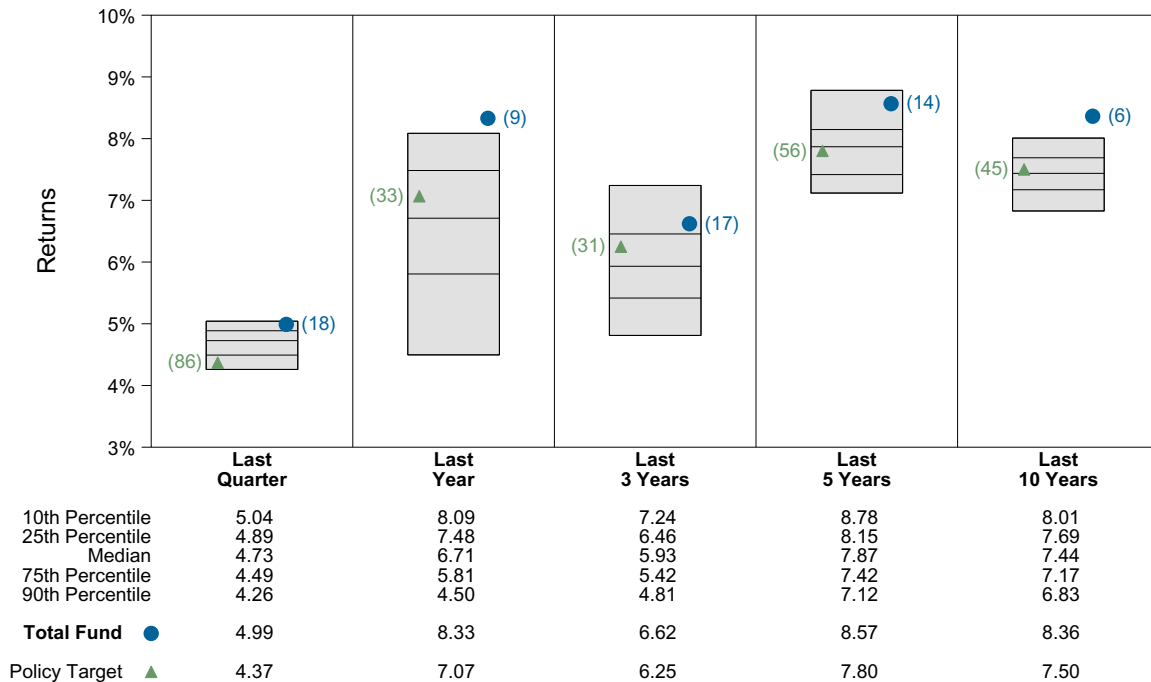
## Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the Callan Public Fund Sponsor Database for periods ended September 30, 2020. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

### Callan Public Fund Sponsor Database



### Asset Allocation Adjusted Ranking

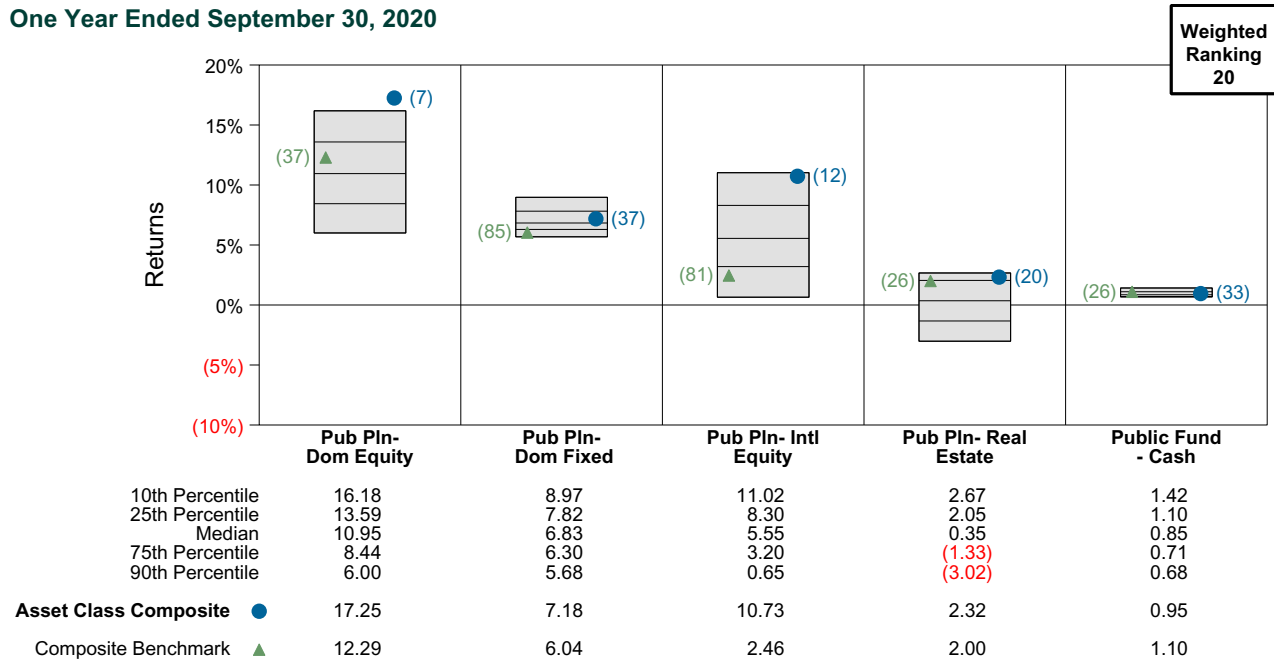


\* Current Quarter Target = 16.2% Bmbg Aggregate, 16.0% Russell 1000 Index, 16.0% MSCI World, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 7.0% Bmbg:HY Corp 2% Iss Cap, 6.5% NDSIB PEN - Private Equity, 4.9% Russell 2000 Index, 3.1% MSCI EM, 3.0% CPI All Urban Cons lagged 3 months, 3.0% NCREIF NFI-ODCE Eq Wt Net, 2.0% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

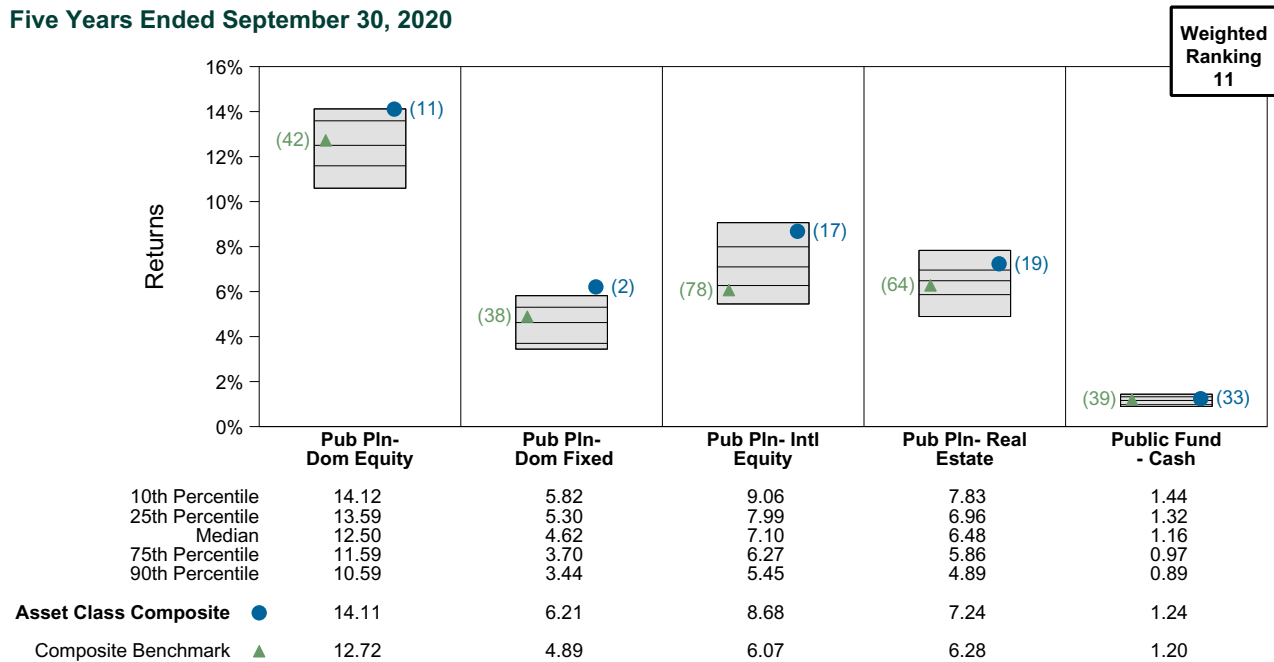
## Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

### Total Asset Class Performance One Year Ended September 30, 2020



### Total Asset Class Performance Five Years Ended September 30, 2020



\* Current Quarter Target = 16.2% BImbg Aggregate, 16.0% Russell 1000 Index, 16.0% MSCI World, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 7.0% BImbg:HY Corp 2% Iss Cap, 6.5% NDSIB PEN - Private Equity, 4.9% Russell 2000 Index, 3.1% MSCI EM, 3.0% CPI All Urban Cons lagged 3 months, 3.0% NCREIF NFI-ODCE Eq Wt Net, 2.0% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2020, with the distribution as of June 30, 2020. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Distribution Across Investment Managers

	September 30, 2020			Inv. Return	June 30, 2020	
	Market Value	Weight	Net New Inv.		Market Value	Weight
<b>Global Equities</b>	<b>\$3,639,279,552</b>	<b>57.77%</b>	<b>\$(103,113,805)</b>	<b>\$275,016,351</b>	<b>\$3,467,377,006</b>	<b>57.32%</b>
<b>Public Equities</b>	<b>\$3,346,341,407</b>	<b>53.12%</b>	<b>\$(107,845,946)</b>	<b>\$277,170,382</b>	<b>\$3,177,016,971</b>	<b>52.52%</b>
<b>World Equities</b>	<b>\$944,441,623</b>	<b>14.99%</b>	<b>\$(799,609)</b>	<b>\$64,500,223</b>	<b>\$880,741,008</b>	<b>14.56%</b>
EPOCH Investment Partners	480,101,539	7.62%	(689,710)	44,975,457	435,815,791	7.20%
LSV Asset Management	464,340,085	7.37%	(109,899)	19,524,767	444,925,217	7.36%
<b>Domestic Equities</b>	<b>\$1,434,686,293</b>	<b>22.78%</b>	<b>\$(105,612,905)</b>	<b>\$130,666,608</b>	<b>\$1,409,632,590</b>	<b>23.30%</b>
<b>Large Cap</b>	<b>\$1,128,647,548</b>	<b>17.92%</b>	<b>\$(104,645,405)</b>	<b>\$117,806,921</b>	<b>\$1,115,486,033</b>	<b>18.44%</b>
L.A. Capital	466,992,391	7.41%	(60,228,009)	59,672,728	467,547,672	7.73%
LACM Enhanced Index	227,538,464	3.61%	(53,694)	20,068,011	207,524,148	3.43%
Northern Trust AM Enh S&P 500	208,928,376	3.32%	0	13,084,819	195,843,557	3.24%
Parametric Enh S&P 500	225,188,317	3.57%	(44,361,166)	24,981,003	244,568,480	4.04%
Parametric Large Cap Overlay	0	0.00%	(2,536)	360	2,176	0.00%
<b>Small Cap</b>	<b>\$306,038,744</b>	<b>4.86%</b>	<b>\$(967,500)</b>	<b>\$12,859,687</b>	<b>\$294,146,557</b>	<b>4.86%</b>
Atlanta Capital	148,517,456	2.36%	(443,345)	4,577,294	144,383,507	2.39%
Parametric Enh Small Cap	157,521,288	2.50%	(524,155)	8,282,393	149,763,050	2.48%
<b>International Equities</b>	<b>\$967,213,491</b>	<b>15.35%</b>	<b>\$(1,433,432)</b>	<b>\$82,003,551</b>	<b>\$886,643,373</b>	<b>14.66%</b>
<b>Developed</b>	<b>\$744,990,469</b>	<b>11.83%</b>	<b>\$(349,814)</b>	<b>\$57,007,904</b>	<b>\$688,332,379</b>	<b>11.38%</b>
DFA Int'l Small Cap	66,961,412	1.06%	0	3,968,419	62,992,993	1.04%
Northern Trust AM World Ex US	354,119,016	5.62%	(21,894)	16,842,122	337,298,788	5.58%
Wellington Management Co.	78,076,803	1.24%	(147,563)	7,790,285	70,434,081	1.16%
William Blair	245,833,238	3.90%	(175,280)	28,406,296	217,602,222	3.60%
Parametric Intl Equity Overlay	0	0.00%	(5,076)	781	4,295	0.00%
<b>Emerging Markets</b>	<b>\$222,223,022</b>	<b>3.53%</b>	<b>\$(1,083,619)</b>	<b>\$24,995,647</b>	<b>\$198,310,994</b>	<b>3.28%</b>
Axiom	168,375,037	2.67%	(1,083,619)	20,081,886	149,376,770	2.47%
DFA	53,847,985	0.85%	0	4,913,761	48,934,224	0.81%

## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2020, with the distribution as of June 30, 2020. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Distribution Across Investment Managers

	September 30, 2020		Net New Inv.	Inv. Return	June 30, 2020	
	Market Value	Weight			Market Value	Weight
<b>Private Equities</b>	<b>\$292,938,145</b>	<b>4.65%</b>	<b>\$4,732,141</b>	<b>\$(2,154,031)</b>	<b>\$290,360,035</b>	<b>4.80%</b>
Adams Street Direct Co-Invest Fd	191,426	0.00%	0	(67,286)	258,712	0.00%
Adams Street Direct Fund 2010	708,894	0.01%	(41,262)	606	749,550	0.01%
Adams Street 1998 Partnership	13,380	0.00%	0	(400)	13,780	0.00%
Adams Street 1999 Partnership	131,435	0.00%	0	5,592	125,843	0.00%
Adams Street 2000 Partnership	320,659	0.01%	0	(20,685)	341,344	0.01%
Adams Street 2001 Partnership	529,697	0.01%	0	4,857	524,840	0.01%
Adams Street 2002 Partnership	136,420	0.00%	0	(3,780)	140,200	0.00%
Adams Street 2003 Partnership	144,344	0.00%	0	(9,627)	153,971	0.00%
Adams Street 2010 Partnership	5,257,484	0.08%	(289,648)	67,013	5,480,119	0.09%
Adams Street 2008 Fund	6,475,654	0.10%	0	207,708	6,267,946	0.10%
Adams Street 1999 Non-US	73,537	0.00%	0	491	73,046	0.00%
Adams Street 2000 Non-US	366,124	0.01%	0	(6,881)	373,005	0.01%
Adams Street 2001 Non-US	94,619	0.00%	0	(2,644)	97,263	0.00%
Adams Street 2002 Non-US	85,890	0.00%	0	(4,042)	89,932	0.00%
Adams Street 2003 Non-US	160,236	0.00%	0	(3,437)	163,673	0.00%
Adams Street 2004 Non-US	177,140	0.00%	0	(2,664)	179,804	0.00%
Adams Street 2010 Non-US	2,651,969	0.04%	0	97,674	2,554,295	0.04%
Adams Street 2010 Non-US Emg	1,683,957	0.03%	(68,279)	(58,570)	1,810,806	0.03%
Adams Street 2015 Global Fd	27,011,662	0.43%	(1,171,417)	(611,354)	28,794,433	0.48%
Adams Street 2016 Global Fd	20,677,079	0.33%	(590,010)	(397,539)	21,664,628	0.36%
Adams Street 2017 Global Fd	38,634,002	0.61%	0	(568,807)	39,202,809	0.65%
Adams Street 2018 Global Fd	21,811,278	0.35%	0	(1,149,266)	22,960,544	0.38%
Adams Street 2019 Global Fd	5,978,783	0.09%	0	(301,975)	6,280,758	0.10%
Adams Street BVCF IV Fund	4,365	0.00%	0	552	3,813	0.00%
BlackRock	105,952,566	1.68%	9,538,632	(426,407)	96,840,341	1.60%
Sixth Street TAO	1,045,108	0.02%	1,045,108	0	-	-
Remaining Misc. Funds*	52,620,437	0.84%	(3,690,983)	1,096,840	55,214,580	0.91%

\* Comprised of Matlin Patterson II, Matlin Patterson III, InvestAmerica Lewis & Clark, InvestAmerica L&C II, Corsair III, Capital Intl Fd V, Capital Intl Fd VI, EIG, Quantum Energy Partners, Hearthstone MSII, Hearthstone MSIII.

## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2020, with the distribution as of June 30, 2020. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Distribution Across Investment Managers

	September 30, 2020				June 30, 2020	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
<b>Global Fixed Income</b>	<b>\$1,498,526,730</b>	<b>23.79%</b>	<b>\$54,071,670</b>	<b>\$26,882,888</b>	<b>\$1,417,572,171</b>	<b>23.43%</b>
<b>Domestic Fixed Income</b>	<b>\$1,498,526,730</b>	<b>23.79%</b>	<b>\$54,071,670</b>	<b>\$26,882,888</b>	<b>\$1,417,572,171</b>	<b>23.43%</b>
<b>Investment Grade</b>	<b>\$1,069,570,241</b>	<b>16.98%</b>	<b>\$56,598,254</b>	<b>\$17,221,766</b>	<b>\$995,750,221</b>	<b>16.46%</b>
Declaration Total Return	126,490,042	2.01%	(71,587)	2,962,660	123,598,969	2.04%
PIMCO DiSCO II	110,298,882	1.75%	0	3,197,616	107,101,266	1.77%
PIMCO Core Plus Constrained	361,487,061	5.74%	23,780,759	5,304,448	332,401,854	5.49%
Prudential Core	363,351,758	5.77%	23,897,018	5,565,859	333,888,880	5.52%
SSgA Long US Treas Index	107,942,499	1.71%	8,996,277	191,033	98,755,189	1.63%
Parametric Fixed Inc Overlay	0	0.00%	(4,213)	151	4,063	0.00%
<b>Below Investment Grade</b>	<b>\$428,956,488</b>	<b>6.81%</b>	<b>\$(2,526,584)</b>	<b>\$9,661,122</b>	<b>\$421,821,950</b>	<b>6.97%</b>
Ares ND Credit Strategies Fd	117,100,737	1.86%	0	0	117,100,737	1.94%
Cerberus ND Private Credit Fd	123,155,292	1.96%	0	1,549,886	121,605,406	2.01%
Goldman Sachs 2006 Offshore	66,347	0.00%	0	963	65,384	0.00%
Goldman Sachs Offshore V	213,143	0.00%	0	49,366	163,777	0.00%
Loomis Sayles	172,825,108	2.74%	(206,213)	8,060,907	164,970,414	2.73%
PIMCO Bravo II Fund	15,595,861	0.25%	(2,320,371)	(0)	17,916,232	0.30%
<b>Global Real Assets</b>	<b>\$1,117,859,784</b>	<b>17.75%</b>	<b>\$(2,382,987)</b>	<b>\$109,386</b>	<b>\$1,120,133,385</b>	<b>18.52%</b>
<b>Real Estate</b>	<b>\$663,348,823</b>	<b>10.53%</b>	<b>\$3,388,710</b>	<b>\$513,027</b>	<b>\$659,447,086</b>	<b>10.90%</b>
Invesco Core Real Estate	326,681,457	5.19%	0	37	326,681,420	5.40%
Invesco Fund III	3,006,465	0.05%	0	0	3,006,465	0.05%
Invesco Asia RE Fund III	17,815,703	0.28%	(1,680,938)	(87,121)	19,583,762	0.32%
Invesco Value Added Fd IV	34,026,957	0.54%	0	0	34,026,957	0.56%
Invesco Value Added Fd V	34,833,865	0.55%	5,069,795	0	29,764,070	0.49%
JP Morgan	246,344,542	3.91%	0	572,955	245,771,587	4.06%
JP Morgan Greater European Opp Fd	639,834	0.01%	(147)	27,156	612,825	0.01%
<b>Other Real Assets</b>	<b>\$454,510,961</b>	<b>7.22%</b>	<b>\$(5,771,697)</b>	<b>\$(403,641)</b>	<b>\$460,686,299</b>	<b>7.62%</b>
<b>Infrastructure</b>	<b>\$331,596,983</b>	<b>5.26%</b>	<b>\$(3,555,697)</b>	<b>\$(403,642)</b>	<b>\$335,556,322</b>	<b>5.55%</b>
ISQ Global Infrastructure II	43,204,927	0.69%	0	0	43,204,927	0.71%
The Rohatyn Group	15,687,795	0.25%	0	267,795	15,420,000	0.25%
JP Morgan IIF	169,949,190	2.70%	(6,159,939)	2	176,109,128	2.91%
Grosvenor Cust. Infrastructure	20,559,066	0.33%	0	0	20,559,066	0.34%
Grosvenor Cust. Infrastructure II	17,991,162	0.29%	(284,824)	(63,856)	18,339,842	0.30%
Macquarie Infras. Partners IV	64,204,843	1.02%	2,889,066	(607,582)	61,923,359	1.02%
<b>Timber</b>	<b>\$122,913,978</b>	<b>1.95%</b>	<b>\$(2,216,000)</b>	<b>\$1</b>	<b>\$125,129,977</b>	<b>2.07%</b>
TIR Teredo	26,726,922	0.42%	(1,000,000)	0	27,726,922	0.46%
TIR Springbank	96,187,056	1.53%	(1,216,000)	1	97,403,055	1.61%
<b>Cash</b>	<b>\$43,698,035</b>	<b>0.69%</b>	<b>\$(431,670)</b>	<b>\$18,608</b>	<b>\$44,111,097</b>	<b>0.73%</b>
Northern Trust Cash Account	33,111,726	0.53%	(431,670)	15,580	33,527,815	0.55%
Bank of ND	10,586,309	0.17%	0	3,027	10,583,282	0.17%
<b>Total Fund</b>	<b>\$6,299,364,101</b>	<b>100.0%</b>	<b>\$(51,856,792)</b>	<b>\$302,027,233</b>	<b>\$6,049,193,660</b>	<b>100.0%</b>

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Equities</b>					
Gross	7.83%	9.60%	6.87%	10.13%	-
Net	7.75%	9.36%	6.65%	9.90%	-
Weighted Benchmark	6.64%	8.61%	6.90%	9.70%	-
<b>Public Equities</b>					
Gross	8.61%	10.34%	-	-	-
Net	8.52%	10.08%	-	-	-
Weighted Benchmark	7.58%	8.94%	-	-	-
<b>World Equities</b>					
Gross	7.33%	0.70%	2.39%	7.62%	-
Net	7.23%	0.34%	2.05%	7.24%	-
MSCI World	7.93%	10.41%	7.74%	10.48%	9.37%
EPOCH Investment - Gross(1)	10.32%	8.24%	7.13%	9.93%	-
EPOCH Investment - Net	10.16%	7.58%	6.46%	9.25%	-
MSCI World	7.93%	10.41%	7.74%	10.48%	9.37%
LSV Asset Management - Gross(2)	4.39%	(6.08%)	(1.62%)	5.53%	-
LSV Asset Management - Net	4.36%	(6.17%)	(1.72%)	5.39%	-
Benchmark(4)	8.11%	9.57%	7.12%	10.55%	-
<b>Domestic Equities</b>					
Gross	8.92%	17.25%	12.74%	14.11%	13.90%
Net	8.87%	17.08%	12.57%	13.92%	13.66%
Weighted Benchmark	8.41%	12.29%	9.89%	12.72%	12.92%
<b>Large Cap</b>					
Gross	10.13%	22.76%	15.05%	15.49%	14.70%
Net	10.16%	22.69%	14.95%	15.37%	14.54%
Large Cap Benchmark(3)	9.47%	16.01%	12.38%	14.09%	13.78%
L.A. Capital - Gross	12.09%	35.74%	20.71%	18.78%	16.88%
L.A. Capital - Net	12.04%	35.48%	20.46%	18.54%	16.64%
Russell 1000 Growth Index	13.22%	37.53%	21.67%	20.10%	17.25%
LACM Enhanced Index - Gross	9.67%	17.21%	12.54%	13.91%	13.89%
LACM Enhanced Index - Net	9.64%	17.08%	12.42%	13.79%	13.74%
Russell 1000 Index	9.47%	16.01%	12.38%	14.09%	13.76%
Northern Tr AM Enh S&P500 - Gross	6.68%	8.63%	8.52%	11.20%	12.78%
Northern Tr AM Enh S&P500 - Net	6.68%	8.63%	8.52%	11.20%	12.60%
S&P 500 Index	8.93%	15.15%	12.28%	14.15%	13.74%
Parametric Enh S&P500 - Gross	9.46%	15.46%	12.22%	14.25%	-
Parametric Enh S&P500 - Net	9.71%	15.73%	12.31%	14.25%	-
S&P 500 Index	8.93%	15.15%	12.28%	14.15%	13.74%
<b>Small Cap</b>					
Gross	4.36%	(0.47%)	5.13%	9.38%	11.04%
Net	4.04%	(0.94%)	4.73%	8.98%	10.58%
Russell 2000 Index	4.93%	0.39%	1.77%	8.00%	9.85%
Atlanta Capital - Gross	3.16%	(2.21%)	8.29%	-	-
Atlanta Capital - Net	2.86%	(2.83%)	7.57%	-	-
S&P 600 Small Cap Index	3.17%	(8.29%)	(0.33%)	7.20%	10.57%
Parametric Enh SmCap - Gross	5.52%	1.28%	1.94%	8.49%	10.70%
Parametric Enh SmCap - Net	5.18%	0.96%	1.83%	8.31%	10.36%
Russell 2000 Index	4.93%	0.39%	1.77%	8.00%	9.85%

(1) EPOCH Investment was removed from the Domestic Equities Composite to the World Equities Composite as of 1/1/2012.

(3) LSV Asset Management was removed from the Domestic Equities and Intl Equities Composites to the World Equities Composite as of February 1, 2013.

(3) S&P 500 Index through 12/31/2011 and Russell 1000 Index thereafter.

(4) MSCI ACWI Gross through 6/30/2019 and MSCI ACWI IMI thereafter.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>International Equities</b>					
Gross	9.25%	10.73%	3.77%	8.68%	6.33%
Net	9.09%	10.42%	3.56%	8.47%	6.04%
Weighted Benchmark	5.96%	2.46%	1.07%	6.07%	4.06%
<b>Developed</b>					
Gross	8.28%	8.82%	3.47%	8.02%	6.62%
Net	8.23%	8.59%	3.25%	7.78%	6.34%
Benchmark(1)	4.92%	0.16%	0.62%	5.17%	4.42%
DFA Int'l Small Cap Value - Net	6.30%	(5.91%)	(6.75%)	2.34%	4.83%
World ex US SC Value	7.24%	(5.19%)	(3.48%)	4.13%	4.70%
Northern Tr AM World ex US - Gross	4.99%	0.61%	1.02%	5.74%	-
Northern Tr AM World ex US - Net	4.99%	0.58%	0.99%	5.70%	-
MSCI World ex US	4.92%	0.16%	0.62%	5.32%	4.37%
Wellington Management - Gross	11.08%	9.03%	0.13%	7.06%	9.01%
Wellington Management - Net	10.85%	8.12%	(0.72%)	6.16%	8.09%
BMI, EPAC, <\$2 B	11.71%	8.27%	0.09%	6.15%	6.12%
William Blair - Gross	13.06%	24.22%	11.74%	-	-
William Blair - Net	12.97%	23.78%	11.34%	-	-
MSCI ACWI ex US IMI	6.80%	3.51%	1.13%	6.31%	4.17%
<b>Emerging Markets</b>					
Gross	12.60%	17.54%	4.78%	10.71%	4.96%
Net	12.06%	16.98%	4.61%	10.61%	4.67%
Emerging Mkts - Net	9.56%	10.54%	2.42%	8.97%	2.51%
Axiom - Gross(2)	13.44%	22.24%	6.73%	12.13%	-
Axiom - Net	12.72%	21.47%	6.51%	11.98%	-
Emerging Mkts - Net	9.56%	10.54%	2.42%	8.97%	2.51%
DFA - Net	10.04%	4.83%	(0.67%)	6.75%	2.61%
Emerging Mkts - Net	9.56%	10.54%	2.42%	8.97%	2.51%

(1) MSCI EAFE through 12/31/1996; 50% Hedged EAFE through 3/31/2011; MSCI EAFE again through 6/30/2016; MSCI World ex-US thereafter.

(2) Axiom's performance are reported net of fees through 6/30/2020.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Private Equities*</b>					
Net	(0.73%)	2.73%	6.24%	3.78%	4.10%
Adams Street Direct Co-Invest Fd	(26.01%)	(58.45%)	(38.53%)	(24.55%)	(6.75%)
Adams Street Direct Fund 2010	0.08%	(0.89%)	10.88%	9.51%	10.56%
Adams Street 1998 Partnership	(2.90%)	(0.40%)	2.57%	2.09%	2.22%
Adams Street 1999 Partnership	4.44%	10.64%	2.51%	3.01%	3.96%
Adams Street 2000 Partnership	(6.06%)	(3.78%)	4.58%	2.69%	4.05%
Adams Street 2001 Partnership	0.93%	(5.46%)	1.89%	0.68%	4.95%
Adams Street 2002 Partnership	(2.70%)	(0.84%)	(4.18%)	3.40%	5.48%
Adams Street 2003 Partnership	(6.25%)	(7.59%)	2.14%	3.04%	7.40%
Adams Street 2010 Partnership	1.29%	12.28%	15.70%	13.80%	13.58%
Adams Street 2008 Fund	3.31%	11.01%	14.08%	14.55%	12.17%
Adams Street 1999 Non-US	0.67%	1.75%	1.84%	4.01%	8.52%
Adams Street 2000 Non-US	(1.84%)	10.87%	6.92%	4.99%	4.56%
Adams Street 2001 Non-US	(2.72%)	0.96%	7.21%	(0.37%)	9.34%
Adams Street 2002 Non-US	(4.49%)	(5.26%)	0.29%	3.92%	4.78%
Adams Street 2003 Non-US	(2.10%)	(9.50%)	(8.33%)	3.81%	9.36%
Adams Street 2004 Non-US	(1.48%)	(1.70%)	3.83%	2.23%	6.03%
Adams Street 2010 Non-US	3.82%	15.75%	16.67%	17.14%	9.85%
Adams Street 2010 Non-US Emg	(3.36%)	4.40%	11.02%	11.34%	-
Adams Street 2015 Global Fd	(2.13%)	14.50%	16.58%	-	-
Adams Street 2016 Global Fd	(1.84%)	9.87%	11.59%	-	-
Adams Street 2017 Global Fd	(1.45%)	9.79%	-	-	-
Adams Street 2018 Global Fd	(5.01%)	12.98%	-	-	-
Adams Street 2019 Global Fd	(4.81%)	-	-	-	-
Adams Street BVCF IV Fund	14.45%	(99.87%)	(89.03%)	(73.31%)	(34.72%)
BlackRock	(0.40%)	2.22%	4.33%	-	-
Remaining Misc. Funds**	2.13%	(5.18%)	1.26%	(2.41%)	-

\* Corsair III was taken out from the Private Equity Composite on July 1, 2009. It was then added back into the Private Equity Composite on October 1, 2011. At this time Corsair IV, Capital Intl and EIG were also added to this composite.

\*\* Comprised of Matlin Patterson II, Matlin Patterson III, InvestAmerica Lewis & Clark, InvestAmerica L&C II, Corsair III, Capital Intl Fd V, Capital Intl Fd VI, EIG, Quantum Energy Partners, Hearthstone MSII, Hearthstone MSIII.



## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Fixed Income</b>					
Gross	1.89%	7.18%	6.33%	6.39%	-
Net	1.85%	7.04%	6.17%	6.19%	-
Weighted Benchmark	1.81%	6.04%	5.40%	5.15%	-
<b>Domestic Fixed Income</b>					
Gross	1.89%	7.18%	6.11%	6.21%	6.10%
Net	1.85%	7.04%	5.96%	6.03%	5.90%
Weighted Benchmark	1.81%	6.04%	4.99%	4.89%	4.43%
<b>Investment Grade</b>					
Gross	1.71%	8.51%	6.55%	5.84%	5.53%
Net	1.68%	8.39%	6.44%	5.72%	5.38%
Blmbg Aggregate	0.62%	6.98%	5.24%	4.18%	3.64%
Declaration Total Return - Net	2.40%	3.61%	4.63%	4.41%	-
Libor-3 Month	0.06%	1.07%	1.88%	1.47%	0.89%
PIMCO Core Plus Cons. - Gross(1)	1.59%	8.19%	5.89%	6.58%	-
PIMCO Core Plus Cons. - Net	1.53%	8.02%	5.75%	6.32%	-
Blended Benchmark(2)	0.62%	6.98%	6.17%	4.02%	-
PIMCO DiSCO II - Net	2.99%	5.14%	5.81%	8.50%	-
Blmbg Aggregate	0.62%	6.98%	5.24%	4.18%	3.64%
Prudential Core - Gross	1.66%	7.68%	-	-	-
Prudential Core - Net	1.63%	7.56%	-	-	-
Blmbg Aggregate	0.62%	6.98%	5.24%	4.18%	3.64%
SSgA Long US Treas Idx - Gross	0.17%	16.50%	11.93%	8.23%	-
SSgA Long US Treas Idx - Net	0.17%	16.48%	11.90%	8.20%	-
Blmbg Long Treas	0.12%	16.34%	11.87%	8.21%	7.21%
<b>Below Investment Grade</b>					
Gross	2.29%	3.35%	4.81%	7.00%	7.50%
Net	2.24%	3.14%	4.56%	6.68%	7.17%
Blmbg HY Corp 2% Issue	4.58%	3.20%	4.19%	6.78%	6.46%
Ares ND Credit Strategies Fd - Net	0.00%	1.72%	4.90%	-	-
Cerberus ND Private Credit Fd - Net	1.27%	8.85%	9.99%	-	-
S&P/LSTA Leveraged Loan B	4.33%	2.14%	3.59%	4.37%	4.74%
Goldman Sachs 2006 Offshore - Net	1.47%	6.53%	7.52%	16.60%	15.00%
Goldman Sachs Offshore V - Net	30.14%	62.50%	35.39%	16.93%	15.46%
PIMCO Bravo II Fund - Net	0.00%	(18.00%)	(3.59%)	1.69%	-
Blmbg HY Corp 2% Issue	4.58%	3.20%	4.19%	6.78%	6.46%
Loomis Sayles - Gross	4.89%	4.35%	4.02%	6.63%	6.71%
Loomis Sayles - Net	4.76%	3.83%	3.50%	6.09%	6.26%
Blmbg HY Corp 2% Issue	4.58%	3.20%	4.19%	6.78%	6.46%

(1) The product changed from Commingled Fund to Separate Account in March 2014.

(2) Libor-3 month through Feb. 28, 2014; Fund's performance through March 31, 2014; Libor-3 month through June 30, 2018; Blmbg Aggregate thereafter.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Real Assets</b>					
Gross	0.01%	3.45%	5.15%	5.86%	-
Net	(0.12%)	2.99%	4.71%	5.42%	-
Weighted Benchmark	0.47%	1.41%	3.98%	4.54%	-
<b>Real Estate</b>					
Gross	0.08%	2.32%	5.30%	7.24%	11.17%
Net	(0.10%)	1.78%	4.78%	6.71%	10.51%
NCREIF Total Index	0.74%	2.00%	5.11%	6.28%	9.37%
Invesco Core Real Estate - Gross	0.00%	1.32%	5.00%	6.55%	10.11%
Invesco Core Real Estate - Net	0.00%	0.98%	4.67%	6.21%	9.71%
Invesco Fund III - Net	0.00%	27.02%	1.59%	5.98%	-
Invesco Asia RE Fund III - Net	(0.48%)	16.60%	35.27%	-	-
Invesco Value Added Fd IV - Net	0.00%	5.79%	9.94%	8.47%	-
Invesco Value Added Fd V - Net	0.00%	2.95%	-	-	-
JP Morgan - Gross	0.23%	2.13%	5.35%	6.87%	11.09%
JP Morgan - Net	(0.24%)	1.14%	4.39%	5.90%	10.09%
JPM Greater European Opp Fd - Net	4.43%	(21.17%)	(25.24%)	(11.76%)	*****%)
NCREIF Total Index	0.74%	2.00%	5.11%	6.28%	9.37%
<b>Other Real Assets</b>					
Gross	(0.09%)	5.10%	-	-	-
Net	(0.14%)	4.76%	-	-	-
Weighted Benchmark	0.11%	0.62%	-	-	-
<b>Infrastructure</b>					
Gross	(0.12%)	4.57%	6.10%	6.01%	-
Net	(0.19%)	4.10%	5.62%	5.49%	-
ISQ Global Infrastructure II - Net	0.00%	7.71%	-	-	-
The Rohatyn Group - Net	1.74%	(18.27%)	(13.72%)	(4.62%)	(0.77%)
JP Morgan IIF - Gross	0.01%	4.89%	7.81%	6.64%	7.02%
JP Morgan IIF - Net	(0.13%)	4.03%	7.06%	5.85%	6.05%
Grosvenor Cust. Infrastructure - Net	0.00%	3.45%	4.93%	6.25%	-
Grosvenor Cust. Infrastructure II - Net	(0.35%)	5.25%	9.72%	8.27%	-
Benchmark(1)	0.13%	0.77%	2.61%	2.27%	1.96%
Macquarie Infrs. Partners IV - Net	(0.98%)	9.21%	-	-	-
Benchmark(2)	0.13%	0.77%	-	-	-
<b>Timber</b>					
Net	0.00%	6.29%	2.55%	0.38%	-
TIR Teredo - Net	0.00%	0.16%	1.13%	1.00%	3.56%
TIR Springbank - Net	0.00%	8.35%	3.00%	0.22%	(0.98%)
NCREIF Timberland Index	0.04%	0.19%	2.09%	2.56%	4.40%
<b>Cash &amp; Cash Equivalents - Net</b>					
	<b>0.05%</b>	<b>0.95%</b>	<b>1.64%</b>	<b>1.24%</b>	<b>0.66%</b>
Cash Account - Net	0.05%	0.95%	1.63%	1.24%	0.66%
Bank of ND - Net	0.03%	0.97%	1.64%	-	-
3-month Treasury Bill	0.04%	1.10%	1.69%	1.20%	0.64%
<b>Total Fund</b>					
Gross	4.99%	8.33%	6.62%	8.57%	8.36%
Net	4.91%	8.07%	6.37%	8.30%	8.01%
Target*	4.37%	7.07%	6.25%	7.80%	7.50%

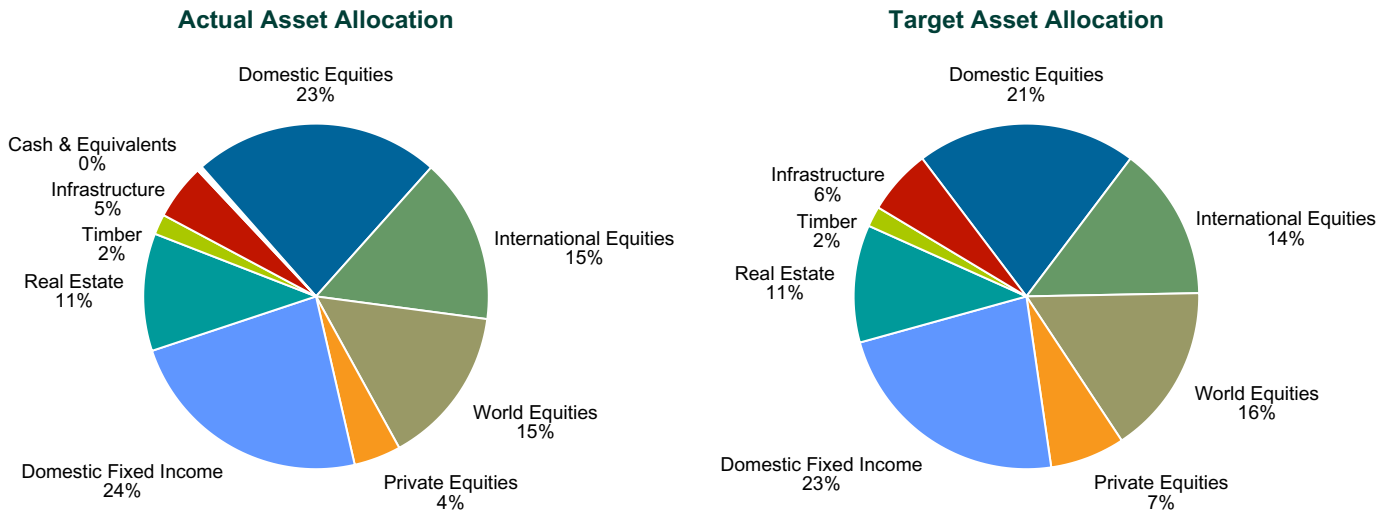
\* Current Quarter Target = 16.2% Blmbg Aggregate, 16.0% Russell 1000 Index, 16.0% MSCI World, 11.2% MSCI World ex US, 10.5% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.5% NDSIB PEN - Private Equity, 4.9% Russell 2000 Index, 3.1% MSCI EM, 3.0% CPI All Urban Cons lagged 3 months, 3.0% NCREIF NFI-ODCE Eq Wt Net, 2.0% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

(1) CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.

(2) 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net.

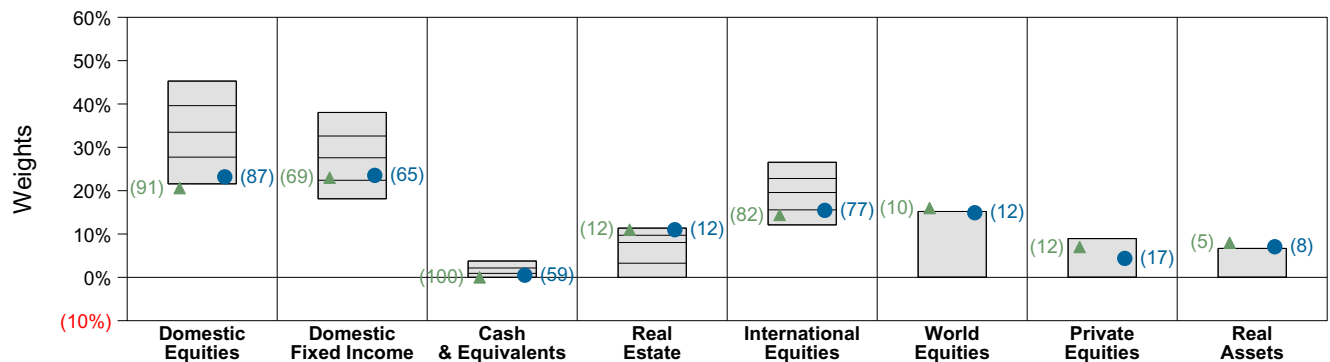
## Actual vs Target Asset Allocation As of September 30, 2020

The top left chart shows the Fund's asset allocation as of September 30, 2020. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Callan Public Fund Sponsor Database.



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	778,805	23.2%	20.6%	2.6%	87,433
International Equities	518,922	15.5%	14.4%	1.0%	34,962
World Equities	500,635	14.9%	16.0%	(1.1%)	(36,660)
Private Equities	146,672	4.4%	7.0%	(2.6%)	(88,394)
Domestic Fixed Income	790,155	23.5%	23.0%	0.5%	17,794
Real Estate	369,011	11.0%	11.0%	(0.0%)	(379)
Timber	62,156	1.9%	1.9%	(0.0%)	(0)
Infrastructure	175,030	5.2%	6.1%	(0.9%)	(31,461)
Cash & Equivalents	16,704	0.5%	0.0%	0.5%	16,704
<b>Total</b>	<b>3,358,091</b>	<b>100.0%</b>	<b>100.0%</b>		

### Asset Class Weights vs Callan Public Fund Sponsor Database



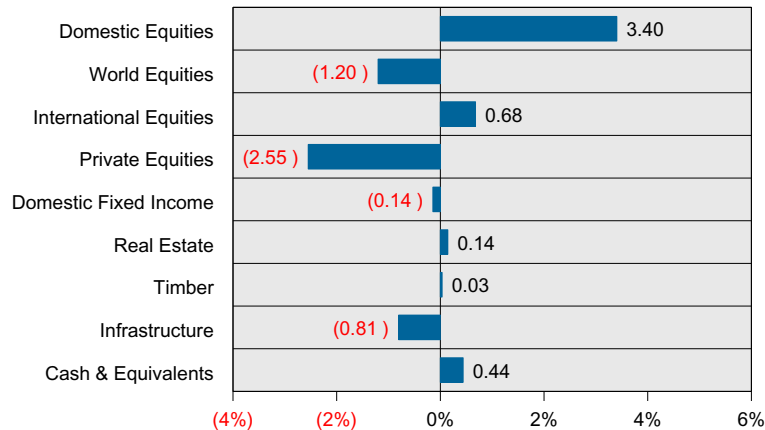
	Domestic Equities	Domestic Fixed Income	Cash & Equivalents	Real Estate	International Equities	World Equities	Private Equities	Real Assets
10th Percentile	45.29	38.05	3.77	11.36	26.55	15.20	8.94	6.68
25th Percentile	39.62	32.61	2.16	9.71	22.81	0.00	0.00	0.00
Median	33.48	27.59	0.91	8.04	19.57	0.00	0.00	0.00
75th Percentile	27.74	22.40	0.00	3.26	15.57	0.00	0.00	0.00
90th Percentile	21.57	18.13	0.00	0.00	12.10	0.00	0.00	0.00
<b>Fund</b>	● 23.19	23.53	0.50	10.99	15.45	14.91	4.37	7.06
<b>Target</b>	▲ 20.59	23.00	0.00	11.00	14.41	16.00	7.00	8.00
% Group Invested	93.18%	98.48%	74.24%	79.55%	89.39%	18.18%	24.24%	19.70%

\* Current Quarter Target = 16.0% MSCI World, 16.0% Blmbg Aggregate, 15.8% Russell 1000 Index, 11.0% NCREIF Total Index, 11.0% MSCI World ex US, 7.0% NDSIB PERS - Private Equity, 7.0% Blmbg:HY Corp 2% Iss Cap, 4.8% Russell 2000 Index, 3.4% MSCI EM, 3.1% CPI All Urban Cons lagged 3 months, 3.1% NCREIF NFI-ODCE Eq Wt Net and 1.9% NCREIF Timberland Index.

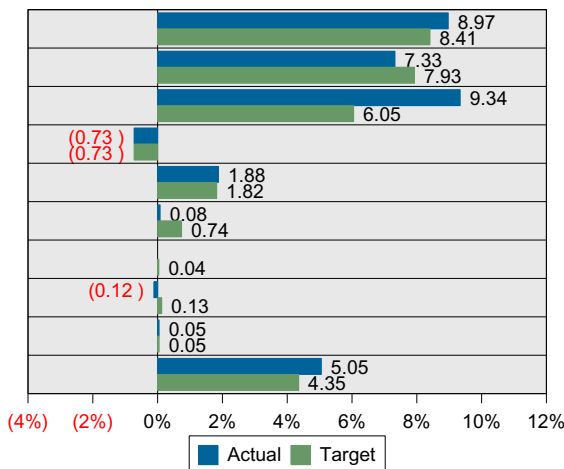
## Quarterly Total Fund Relative Attribution - September 30, 2020

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

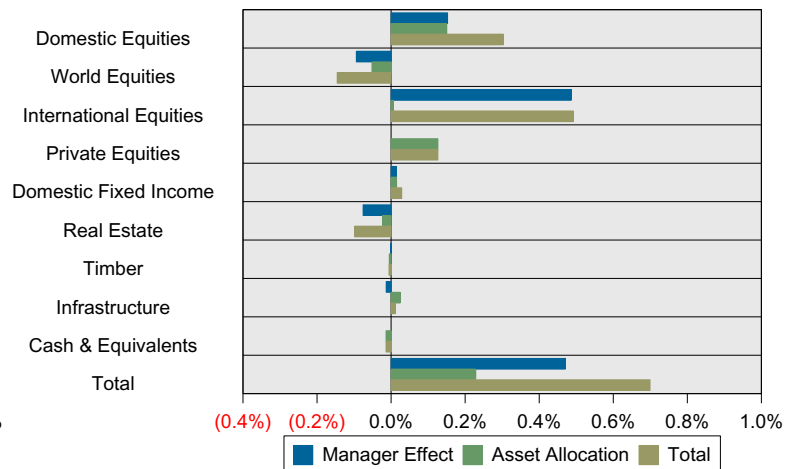
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended September 30, 2020

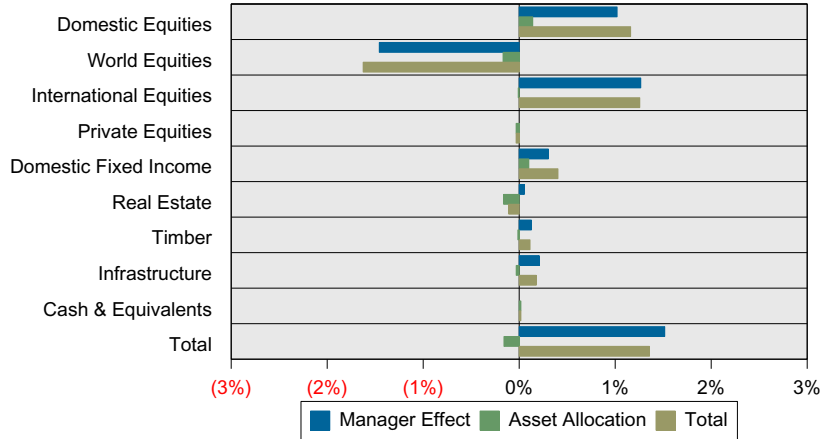
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	24%	21%	8.97%	8.41%	0.15%	0.15%	0.30%
World Equities	15%	16%	7.33%	7.93%	(0.09)%	(0.05)%	(0.15)%
International Equities	15%	14%	9.34%	6.05%	0.49%	0.01%	0.49%
Private Equities	4%	7%	(0.73)%	(0.73)%	0.00%	0.13%	0.13%
Domestic Fixed Income	23%	23%	1.88%	1.82%	0.01%	0.01%	0.03%
Real Estate	11%	11%	0.08%	0.74%	(0.08)%	(0.02)%	(0.10)%
Timber	2%	2%	0.00%	0.04%	(0.00)%	(0.00)%	(0.01)%
Infrastructure	5%	6%	(0.12)%	0.13%	(0.01)%	0.02%	0.01%
Cash & Equivalents	0%	0%	0.05%	0.05%	0.00%	(0.01)%	(0.01)%
<b>Total</b>			<b>5.05%</b>	<b>4.35%</b>	<b>+ 0.47%</b>	<b>+ 0.23%</b>	<b>0.70%</b>

\* Current Quarter Target = 16.0% MSCI World, 16.0% Blmbg Aggregate, 15.8% Russell 1000 Index, 11.0% NCREIF Total Index, 11.0% MSCI World ex US, 7.0% NDSIB PERS - Private Equity, 7.0% Blmbg:HY Corp 2% Iss Cap, 4.8% Russell 2000 Index, 3.4% MSCI EM, 3.1% CPI All Urban Cons lagged 3 months, 3.1% NCREIF NFI-ODCE Eq Wt Net and 1.9% NCREIF Timberland Index.

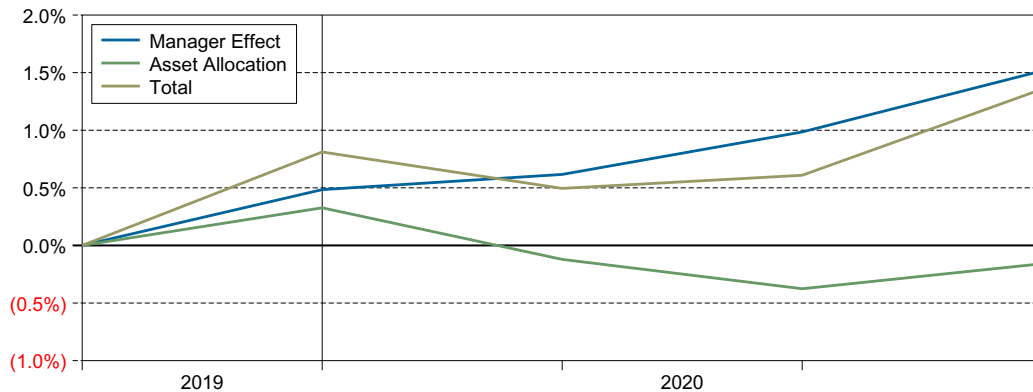
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### One Year Relative Attribution Effects



### Cumulative Relative Attribution Effects



### One Year Relative Attribution Effects

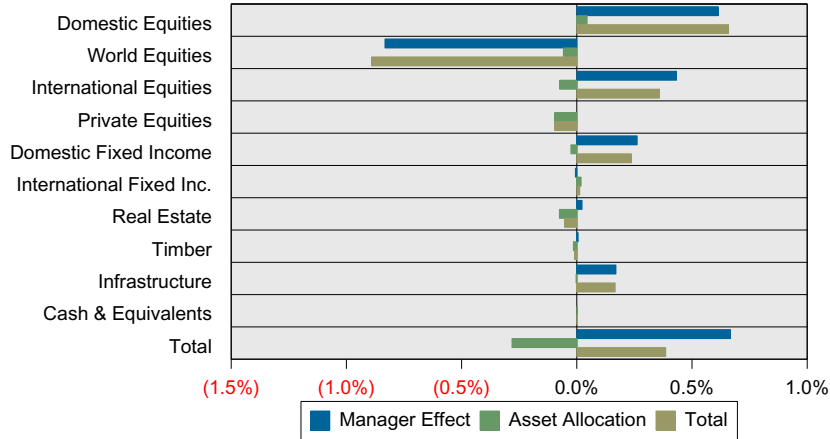
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	22%	21%	17.39%	12.29%	1.02%	0.14%	1.16%
World Equities	15%	16%	0.70%	10.41%	(1.46%)	(0.17%)	(1.63%)
International Equities	15%	14%	10.98%	2.65%	1.27%	(0.01%)	1.26%
Private Equities	4%	7%	2.73%	2.73%	0.00%	(0.03%)	(0.03%)
Domestic Fixed Income	23%	23%	7.21%	6.03%	0.30%	0.10%	0.40%
Real Estate	12%	11%	2.32%	2.00%	0.05%	(0.16%)	(0.11%)
Timber	2%	2%	6.28%	0.19%	0.13%	(0.01%)	0.11%
Infrastructure	5%	6%	4.57%	0.77%	0.21%	(0.03%)	0.18%
Cash & Equivalents	0%	0%	0.98%	0.98%	0.00%	0.02%	0.02%
<b>Total</b>			<b>8.41%</b>	<b>7.05%</b>	<b>+ 1.52%</b>	<b>+ (0.16%)</b>	<b>1.36%</b>

\* Current Quarter Target = 16.0% MSCI World, 16.0% Blmbg Aggregate, 15.8% Russell 1000 Index, 11.0% NCREIF Total Index, 11.0% MSCI World ex US, 7.0% NDSIB PERS - Private Equity, 7.0% Blmbg:HY Corp 2% Iss Cap, 4.8% Russell 2000 Index, 3.4% MSCI EM, 3.1% CPI All Urban Cons lagged 3 months, 3.1% NCREIF NFI-ODCE Eq Wt Net and 1.9% NCREIF Timberland Index.

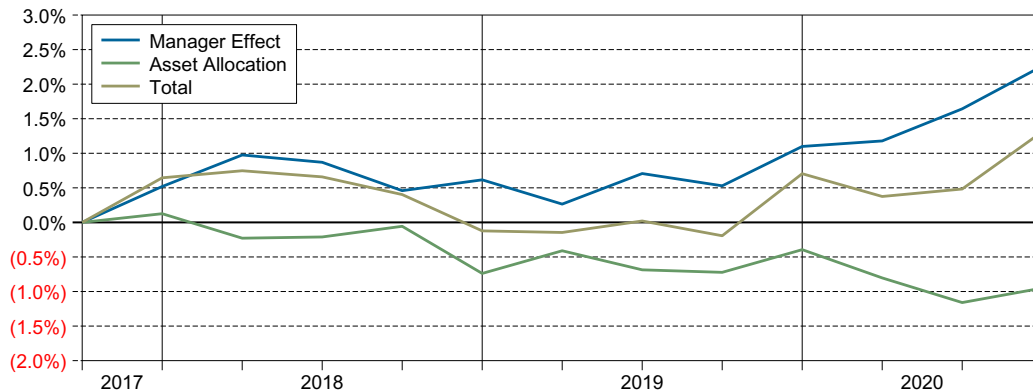
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Three Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Three Year Annualized Relative Attribution Effects

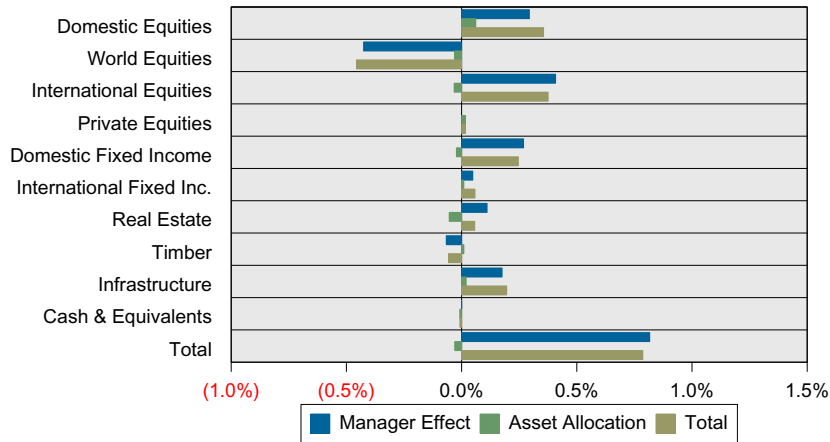
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	12.80%	9.89%	0.61%	0.04%	0.66%
World Equities	16%	16%	2.39%	7.74%	(0.83%)	(0.06%)	(0.89%)
International Equities	16%	14%	3.82%	1.11%	0.43%	(0.07%)	0.36%
Private Equities	4%	7%	6.25%	6.25%	0.00%	(0.10%)	(0.10%)
Domestic Fixed Income	23%	22%	6.14%	5.00%	0.26%	(0.03%)	0.24%
International Fixed Inc.	1%	1%	-	-	(0.01%)	0.02%	0.01%
Real Estate	11%	11%	5.30%	5.11%	0.02%	(0.08%)	(0.05%)
Timber	2%	2%	2.55%	2.09%	0.01%	(0.01%)	(0.01%)
Infrastructure	5%	6%	6.10%	2.61%	0.17%	(0.00%)	0.17%
Cash & Equivalents	1%	0%	1.67%	1.67%	0.00%	0.00%	0.00%
<b>Total</b>			<b>6.64%</b>	<b>6.25%</b>	<b>+ 0.67%</b>	<b>+ (0.28%)</b>	<b>0.39%</b>

\* Current Quarter Target = 16.0% MSCI World, 16.0% Blmbg Aggregate, 15.8% Russell 1000 Index, 11.0% NCREIF Total Index, 11.0% MSCI World ex US, 7.0% NDSIB PERS - Private Equity, 7.0% Blmbg:HY Corp 2% Iss Cap, 4.8% Russell 2000 Index, 3.4% MSCI EM, 3.1% CPI All Urban Cons lagged 3 months, 3.1% NCREIF NFI-ODCE Eq Wt Net and 1.9% NCREIF Timberland Index.

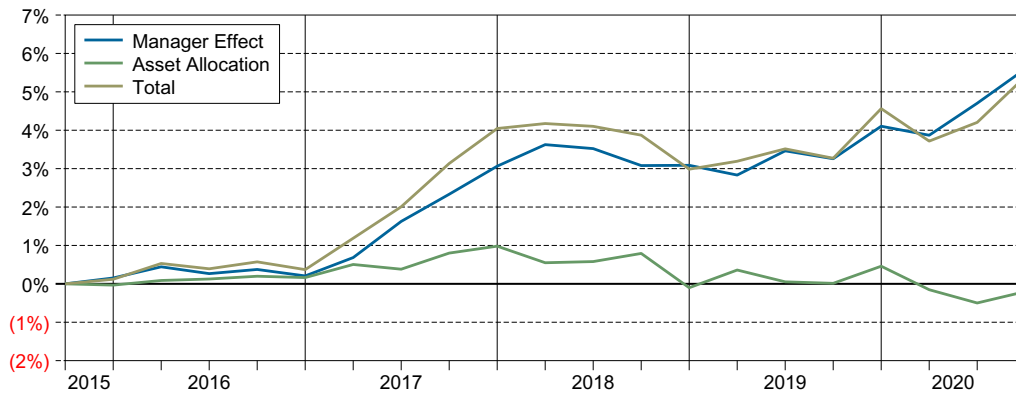
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Five Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Five Year Annualized Relative Attribution Effects

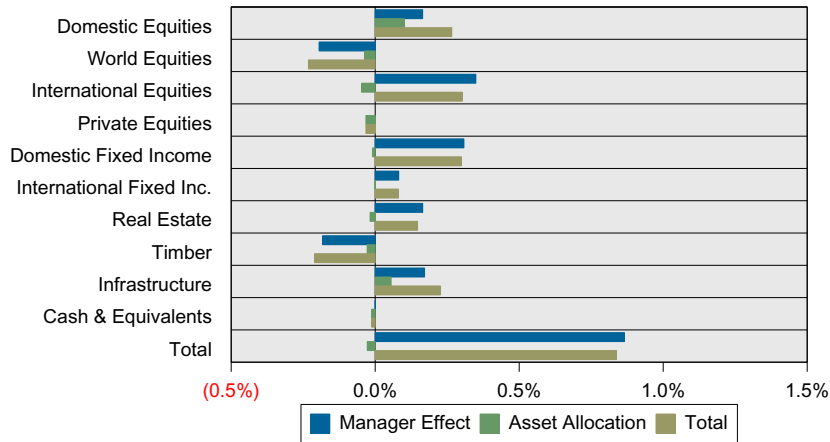
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	14.15%	12.72%	0.29%	0.06%	0.36%
World Equities	16%	16%	7.62%	10.48%	(0.43%)	(0.03%)	(0.46%)
International Equities	16%	14%	8.75%	6.14%	0.41%	(0.03%)	0.38%
Private Equities	3%	7%	3.79%	3.79%	0.00%	0.02%	0.02%
Domestic Fixed Income	21%	20%	6.25%	4.96%	0.27%	(0.02%)	0.25%
International Fixed Inc.	2%	2%	-	-	0.05%	0.01%	0.06%
Real Estate	11%	11%	7.24%	6.28%	0.11%	(0.05%)	0.06%
Timber	2%	3%	0.38%	2.56%	(0.07%)	0.01%	(0.06%)
Infrastructure	5%	6%	6.01%	2.27%	0.18%	0.02%	0.20%
Cash & Equivalents	1%	0%	1.26%	1.24%	0.00%	(0.01%)	(0.01%)
<b>Total</b>			<b>8.61%</b>	<b>7.83%</b>	<b>+ 0.82%</b>	<b>+ (0.03%)</b>	<b>0.79%</b>

\* Current Quarter Target = 16.0% MSCI World, 16.0% Blmbg Aggregate, 15.8% Russell 1000 Index, 11.0% NCREIF Total Index, 11.0% MSCI World ex US, 7.0% NDSIB PERS - Private Equity, 7.0% Blmbg:HY Corp 2% Iss Cap, 4.8% Russell 2000 Index, 3.4% MSCI EM, 3.1% CPI All Urban Cons lagged 3 months, 3.1% NCREIF NFI-ODCE Eq Wt Net and 1.9% NCREIF Timberland Index.

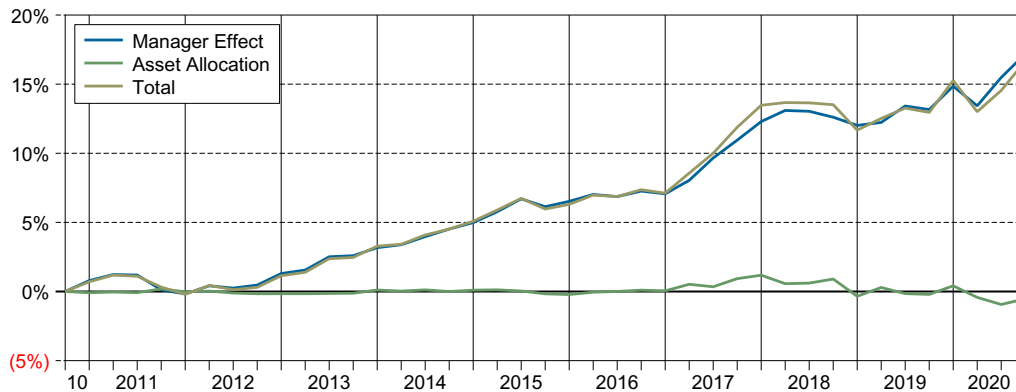
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Ten Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Ten Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	25%	24%	13.87%	12.91%	0.16%	0.10%	0.27%
World Equities	13%	13%	-	-	(0.19)%	(0.04)%	(0.23)%
International Equities	16%	15%	6.25%	4.00%	0.35%	(0.05)%	0.30%
Private Equities	4%	6%	4.13%	4.13%	0.00%	(0.03)%	(0.03)%
Domestic Fixed Income	20%	20%	6.14%	4.53%	0.31%	(0.01)%	0.30%
International Fixed Inc.	4%	4%	-	-	0.08%	(0.00)%	0.08%
Real Estate	10%	10%	11.25%	9.37%	0.16%	(0.02)%	0.15%
Timber	3%	3%	-	-	(0.18)%	(0.03)%	(0.21)%
Infrastructure	4%	5%	-	-	0.17%	0.06%	0.23%
Cash & Equivalents	1%	1%	0.67%	0.66%	0.00%	(0.01)%	(0.01)%
<b>Total</b>			<b>8.36%</b>	<b>7.52%</b>	<b>+ 0.87%</b>	<b>+ (0.03)%</b>	<b>0.84%</b>

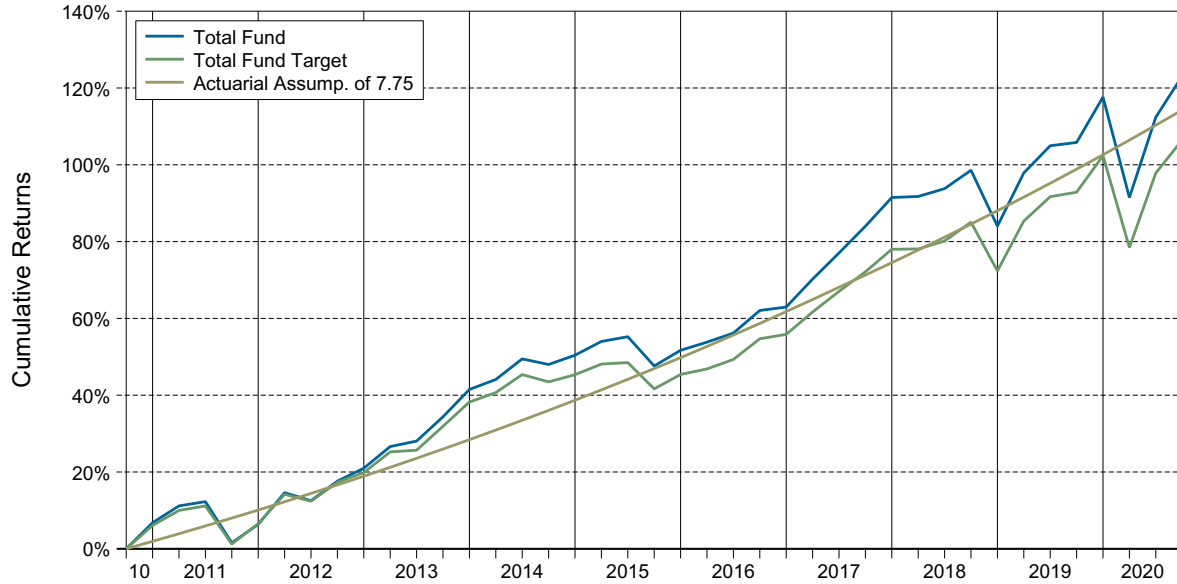
\* Current Quarter Target = 16.0% MSCI World, 16.0% Blmbg Aggregate, 15.8% Russell 1000 Index, 11.0% NCREIF Total Index, 11.0% MSCI World ex US, 7.0% NDSIB PERS - Private Equity, 7.0% Blmbg:HY Corp 2% Iss Cap, 4.8% Russell 2000 Index, 3.4% MSCI EM, 3.1% CPI All Urban Cons lagged 3 months, 3.1% NCREIF NFI-ODCE Eq Wt Net and 1.9% NCREIF Timberland Index.



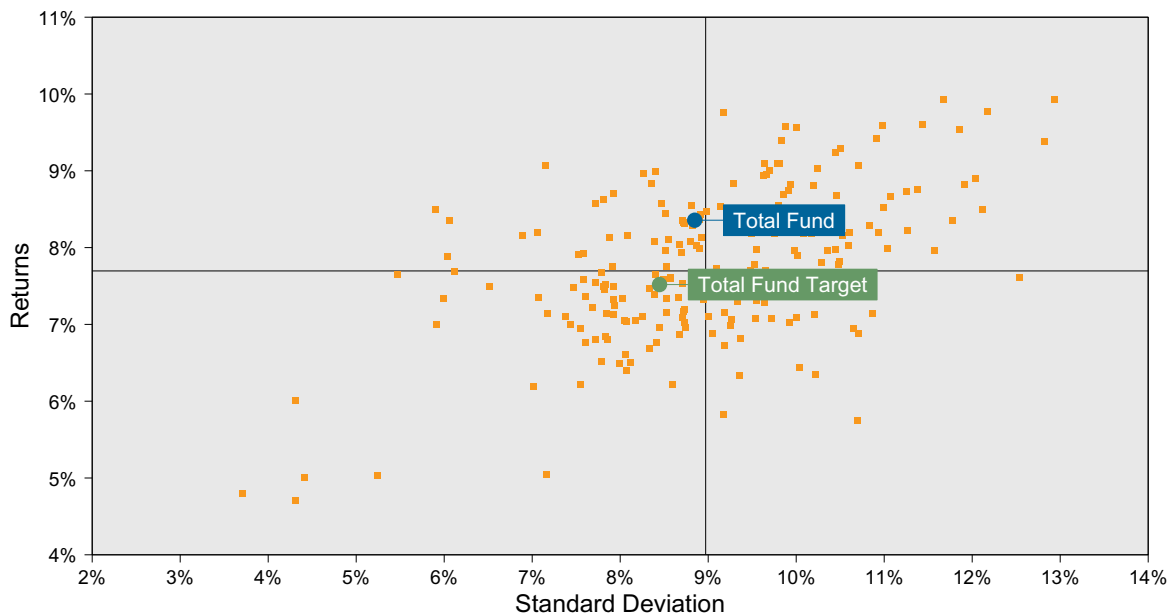
## Cumulative Performance Relative to Target

The first chart below illustrates the cumulative performance of the Total Fund relative to the cumulative performance of the Fund's Target Asset Mix. The Target Mix is assumed to be rebalanced each quarter with no transaction costs. The second chart below shows the return and the risk of the Total Fund and the Target Mix, contrasted with the returns and risks of the funds in the Callan Public Fund Sponsor Database.

### Cumulative Returns Actual vs Target



### Ten Year Annualized Risk vs Return



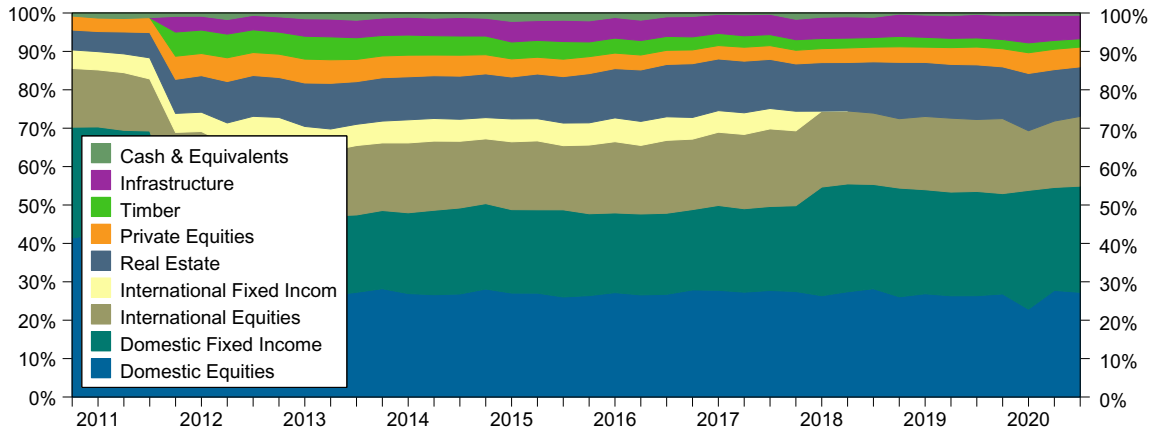
Squares represent membership of the Callan Public Fund Sponsor Database

\* Current Quarter Target = 16.0% MSCI World, 16.0% Blmbg Aggregate, 15.8% Russell 1000 Index, 11.0% NCREIF Total Index, 11.0% MSCI World ex US, 7.0% NDSIB PERS - Private Equity, 7.0% Blmbg:HY Corp 2% Iss Cap, 4.8% Russell 2000 Index, 3.4% MSCI EM, 3.1% CPI All Urban Cons lagged 3 months, 3.1% NCREIF NFI-ODCE Eq Wt Net and 1.9% NCREIF Timberland Index.

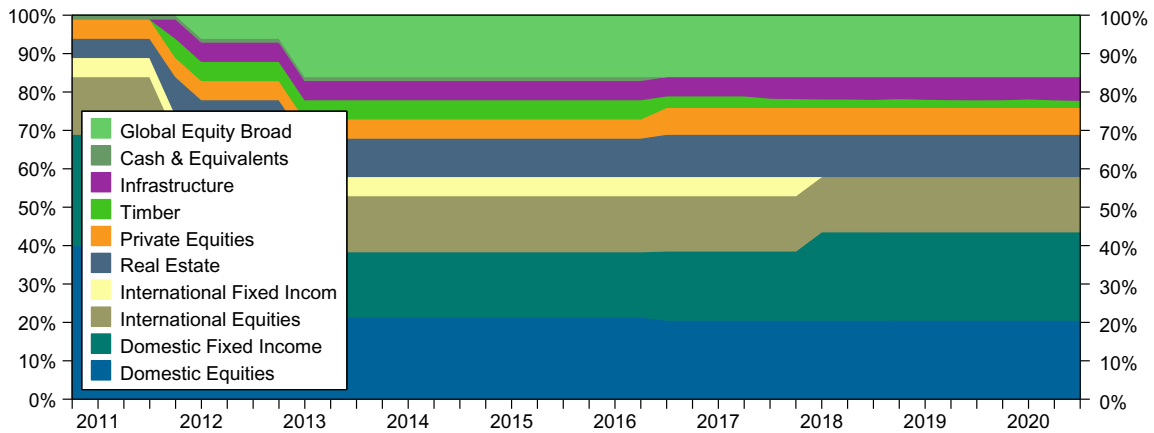
## Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Callan Public Fund Sponsor Database.

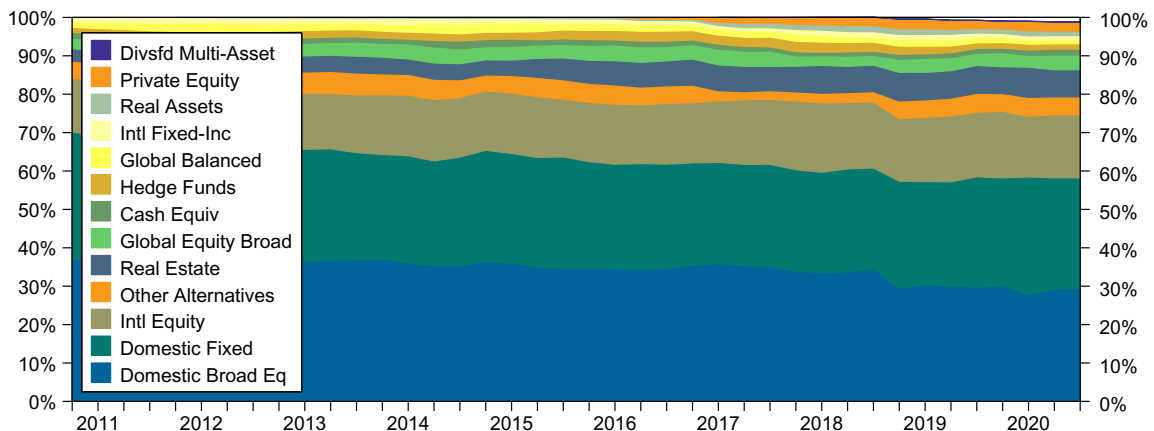
### Actual Historical Asset Allocation



### Target Historical Asset Allocation



### Average Callan Public Fund Sponsor Database Historical Asset Allocation

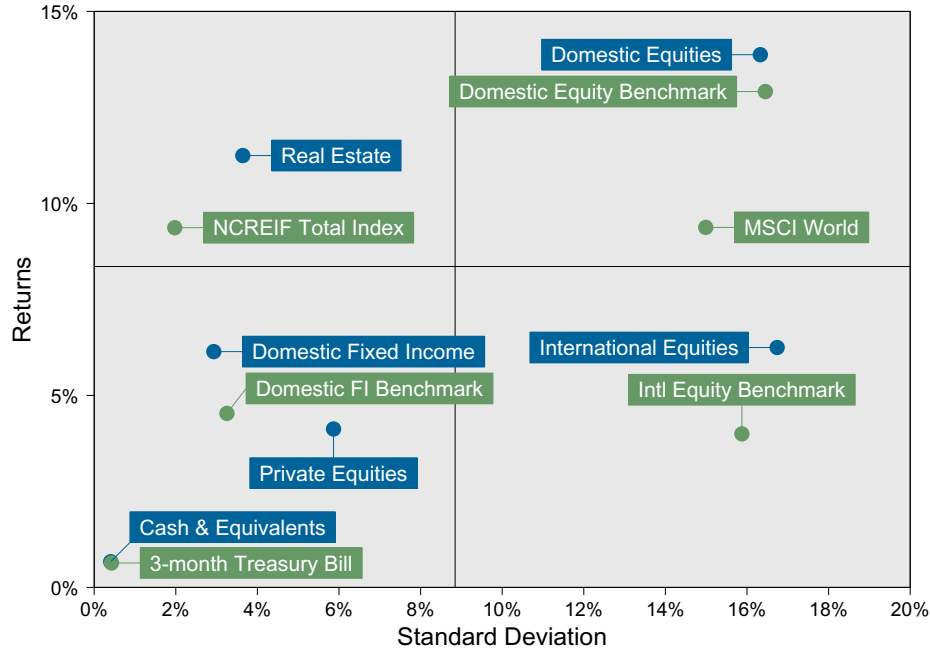


\* Current Quarter Target = 16.0% MSCI World, 16.0% Blmbg Aggregate, 15.8% Russell 1000 Index, 11.0% NCREIF Total Index, 11.0% MSCI World ex US, 7.0% NDSIB PERS - Private Equity, 7.0% Blmbg:HY Corp 2% Iss Cap, 4.8% Russell 2000 Index, 3.4% MSCI EM, 3.1% CPI All Urban Cons lagged 3 months, 3.1% NCREIF NFI-ODCE Eq Wt Net and 1.9% NCREIF Timberland Index.

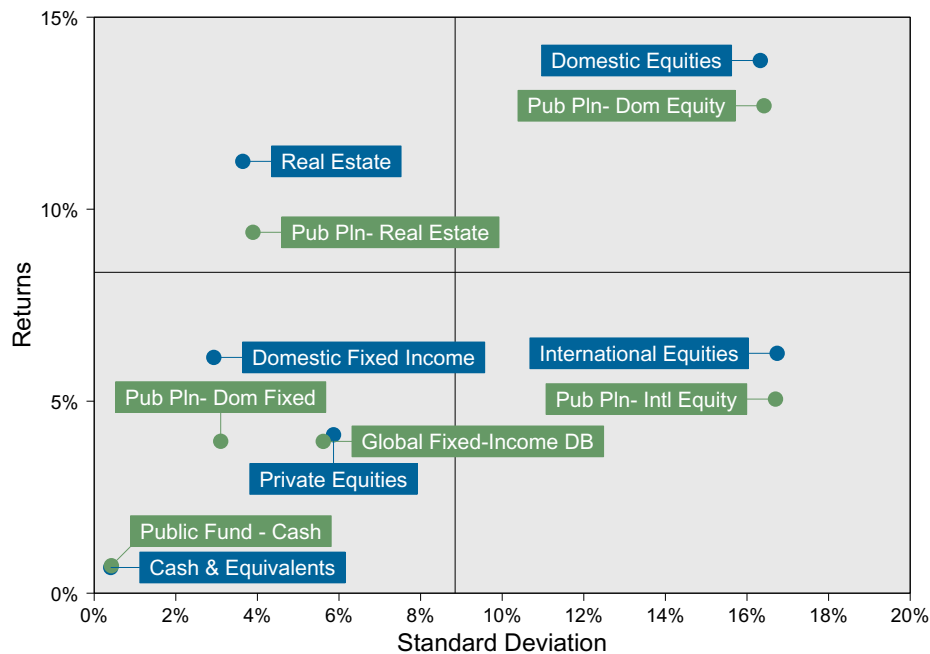
## Asset Class Risk and Return

The charts below show the ten year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

### Ten Year Annualized Risk vs Return Asset Classes vs Benchmark Indices



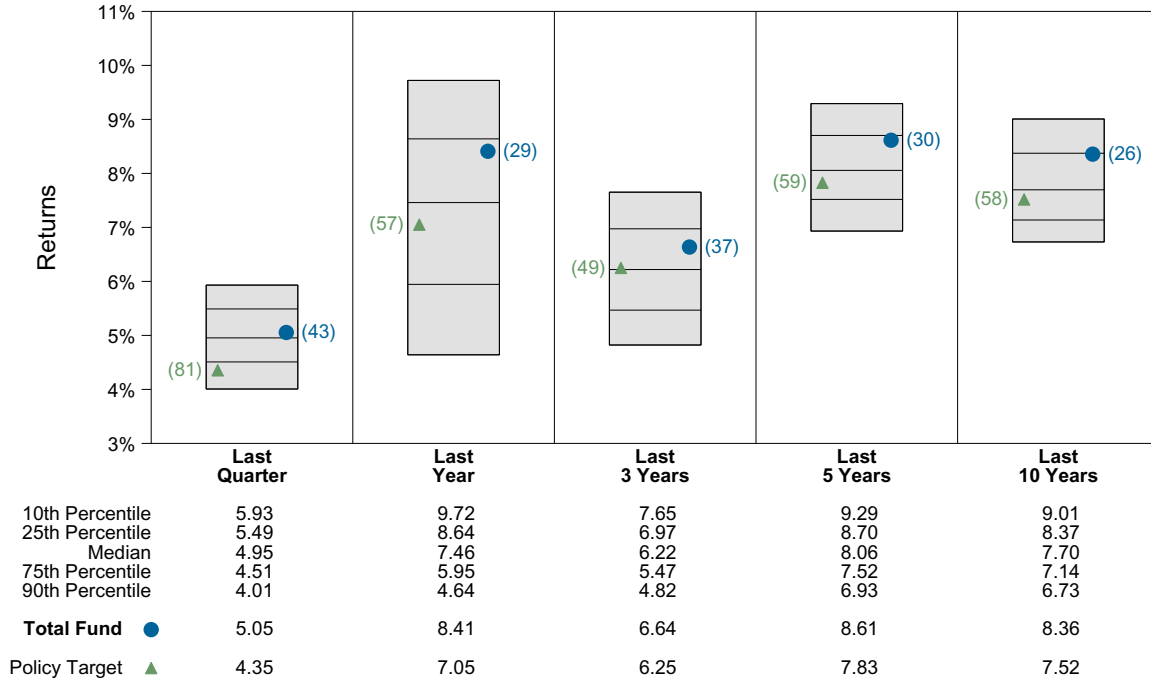
### Ten Year Annualized Risk vs Return Asset Classes vs Asset Class Median



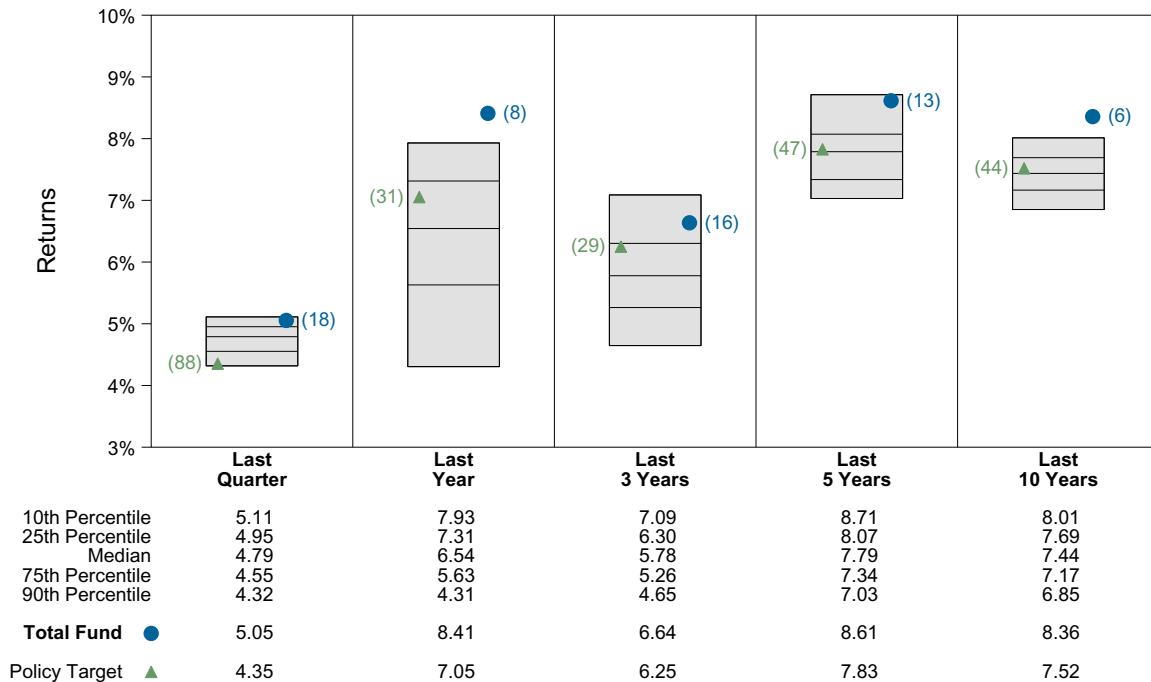
## Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the Callan Public Fund Sponsor Database for periods ended September 30, 2020. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

### Callan Public Fund Sponsor Database



### Asset Allocation Adjusted Ranking

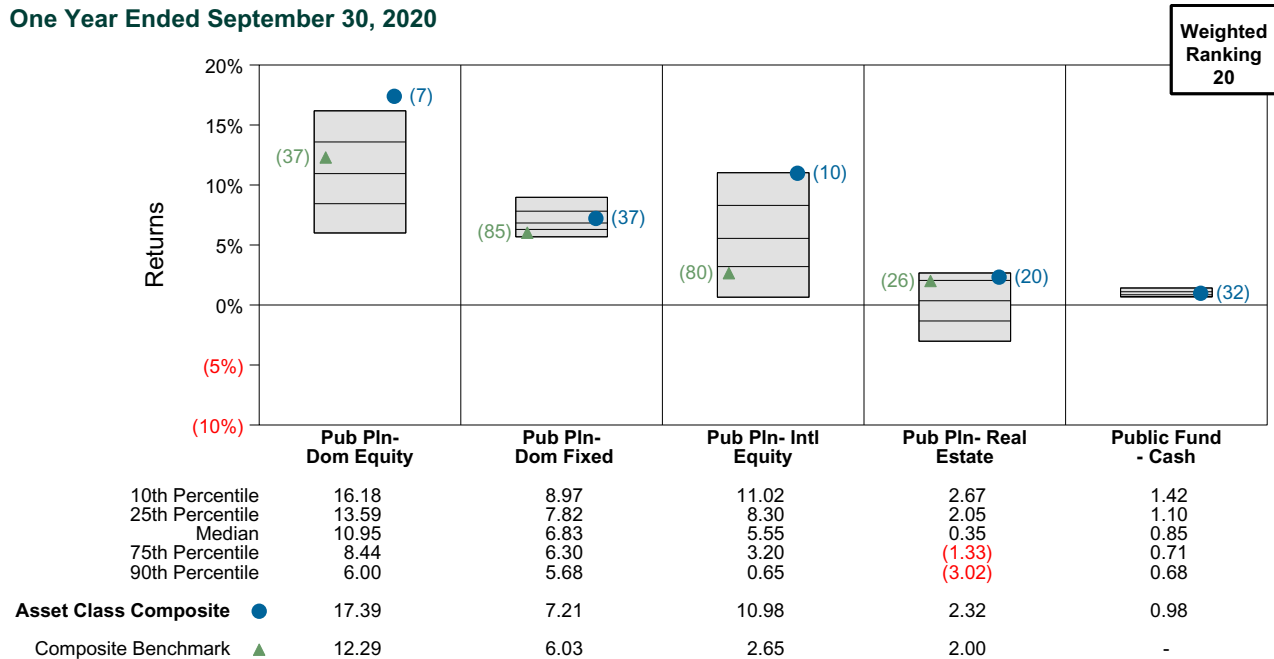


\* Current Quarter Target = 16.0% MSCI World, 16.0% Blmbg Aggregate, 15.8% Russell 1000 Index, 11.0% NCREIF Total Index, 11.0% MSCI World ex US, 7.0% NDSIB PERS - Private Equity, 7.0% Blmbg:HY Corp 2% Iss Cap, 4.8% Russell 2000 Index, 3.4% MSCI EM, 3.1% CPI All Urban Cons lagged 3 months, 3.1% NCREIF NFI-ODCE Eq Wt Net and 1.9% NCREIF Timberland Index.

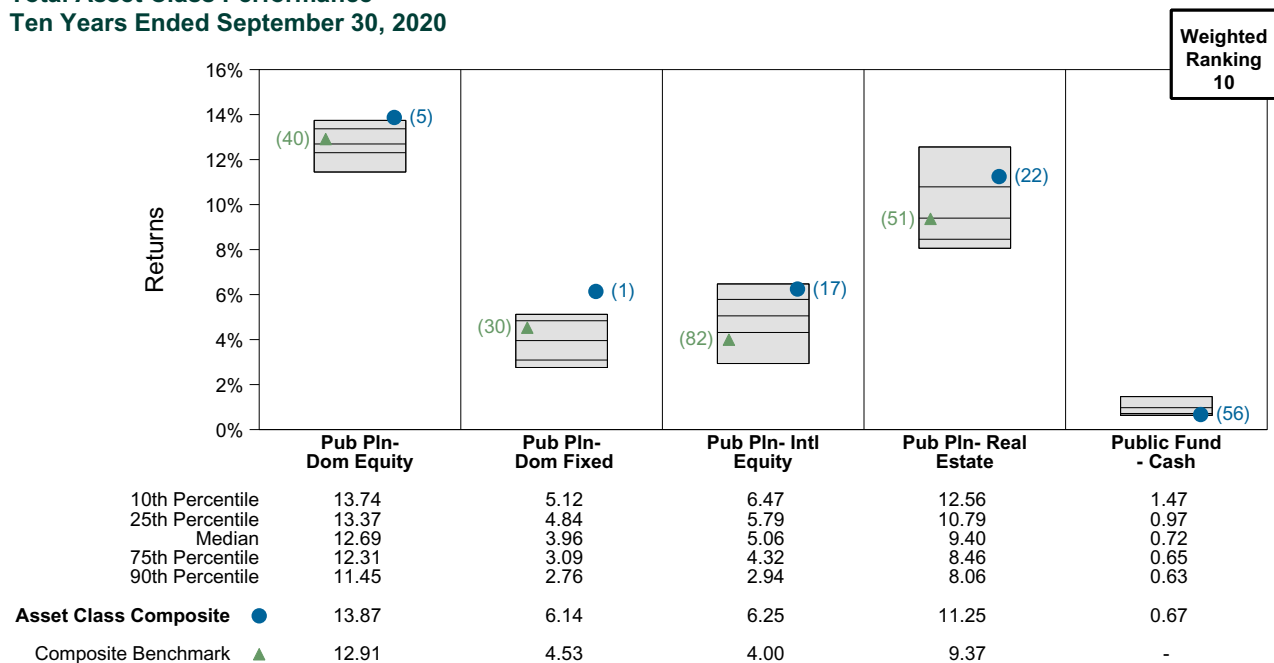
## Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

### Total Asset Class Performance One Year Ended September 30, 2020



### Total Asset Class Performance Ten Years Ended September 30, 2020



\* Current Quarter Target = 16.0% MSCI World, 16.0% Blmbg Aggregate, 15.8% Russell 1000 Index, 11.0% NCREIF Total Index, 11.0% MSCI World ex US, 7.0% NDSIB PERS - Private Equity, 7.0% Blmbg:HY Corp 2% Iss Cap, 4.8% Russell 2000 Index, 3.4% MSCI EM, 3.1% CPI All Urban Cons lagged 3 months, 3.1% NCREIF NFI-ODCE Eq Wt Net and 1.9% NCREIF Timberland Index.

## Asset Class Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2020, with the distribution as of June 30, 2020. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Class Allocation

	September 30, 2020		Net New Inv.	Inv. Return	June 30, 2020	
	Market Value	Weight			Market Value	Weight
<b>Global Equities</b>	<b>\$1,945,033,968</b>	<b>57.92%</b>	<b>\$(52,015,785)</b>	<b>\$148,311,429</b>	<b>\$1,848,738,325</b>	<b>57.56%</b>
<b>Public Equities</b>	<b>\$1,798,361,688</b>	<b>53.55%</b>	<b>\$(54,247,884)</b>	<b>\$149,388,212</b>	<b>\$1,703,221,360</b>	<b>53.02%</b>
<b>World Equities</b>	<b>\$500,635,001</b>	<b>14.91%</b>	<b>\$29,402</b>	<b>\$34,145,542</b>	<b>\$466,460,056</b>	<b>14.52%</b>
<b>Domestic Equities</b>	<b>\$778,804,938</b>	<b>23.19%</b>	<b>\$(54,212,743)</b>	<b>\$70,899,704</b>	<b>\$762,117,977</b>	<b>23.73%</b>
Large Cap	618,955,693	18.43%	(53,664,064)	64,193,106	608,426,651	18.94%
Small Cap	159,849,245	4.76%	(548,679)	6,706,599	153,691,326	4.78%
<b>International Equities</b>	<b>\$518,921,749</b>	<b>15.45%</b>	<b>\$(64,543)</b>	<b>\$44,342,965</b>	<b>\$474,643,327</b>	<b>14.78%</b>
Developed	388,276,335	11.56%	202,343	29,681,692	358,392,299	11.16%
Emerging Markets	130,645,415	3.89%	(266,886)	14,661,273	116,251,028	3.62%
<b>Private Equities</b>	<b>\$146,672,280</b>	<b>4.37%</b>	<b>\$2,232,099</b>	<b>\$(1,076,783)</b>	<b>\$145,516,965</b>	<b>4.53%</b>
<b>Global Fixed Income</b>	<b>\$790,155,303</b>	<b>23.53%</b>	<b>\$40,086,871</b>	<b>\$13,860,436</b>	<b>\$736,207,996</b>	<b>22.92%</b>
<b>Domestic Fixed Income</b>	<b>\$790,155,303</b>	<b>23.53%</b>	<b>\$40,086,871</b>	<b>\$13,860,436</b>	<b>\$736,207,996</b>	<b>22.92%</b>
Investment Grade	561,782,140	16.73%	41,468,611	8,869,284	511,444,245	15.92%
Below Investment Grade	228,373,163	6.80%	(1,381,740)	4,991,152	224,763,751	7.00%
<b>Global Real Assets</b>	<b>\$606,197,425</b>	<b>18.05%</b>	<b>\$(2,288,573)</b>	<b>\$79,045</b>	<b>\$608,406,953</b>	<b>18.94%</b>
<b>Real Estate</b>	<b>\$369,011,431</b>	<b>10.99%</b>	<b>\$934,319</b>	<b>\$286,158</b>	<b>\$367,790,954</b>	<b>11.45%</b>
<b>Other Real Assets</b>	<b>\$237,185,994</b>	<b>7.06%</b>	<b>\$(3,222,892)</b>	<b>\$(207,113)</b>	<b>\$240,615,999</b>	<b>7.49%</b>
Infrastructure	175,029,558	5.21%	(2,102,281)	(207,114)	177,338,953	5.52%
Timber	62,156,436	1.85%	(1,120,610)	0	63,277,045	1.97%
<b>Cash</b>	<b>\$16,704,363</b>	<b>0.50%</b>	<b>\$(2,062,391)</b>	<b>\$6,532</b>	<b>\$18,760,223</b>	<b>0.58%</b>
<b>Total Fund</b>	<b>\$3,358,091,060</b>	<b>100.0%</b>	<b>\$(16,279,878)</b>	<b>\$162,257,441</b>	<b>\$3,212,113,497</b>	<b>100.0%</b>

PLEASE REFER TO PAGES 29-31 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Equities</b>					
Gross	7.93%	9.76%	6.89%	10.17%	-
Net	7.85%	9.52%	6.67%	9.93%	-
Weighted Benchmark	6.60%	8.68%	6.99%	9.75%	-
<b>Public Equities</b>					
Gross	8.67%	10.47%	-	-	-
Net	8.58%	10.21%	-	-	-
Weighted Benchmark	7.59%	8.96%	-	-	-
<b>World Equities</b>					
Gross	7.33%	0.70%	2.39%	7.62%	-
Net	7.23%	0.35%	2.05%	7.25%	-
MSCI World	7.93%	10.41%	7.74%	10.48%	9.37%
<b>Domestic Equities</b>					
Gross	8.97%	17.39%	12.80%	14.15%	13.87%
Net	8.92%	17.22%	12.62%	13.96%	13.65%
Weighted Benchmark	8.41%	12.29%	9.89%	12.72%	12.91%
<b>Large Cap</b>					
Gross	10.12%	22.83%	15.08%	15.51%	14.71%
Net	10.15%	22.77%	14.99%	15.39%	14.51%
Benchmark(1)	9.47%	16.01%	12.38%	14.09%	13.78%
<b>Small Cap Equity</b>					
Gross	4.37%	(0.36%)	5.17%	9.40%	10.95%
Net	4.04%	(0.84%)	4.76%	8.99%	10.62%
Russell 2000 Index	4.93%	0.39%	1.77%	8.00%	9.85%
<b>International Equities</b>					
Gross	9.34%	10.98%	3.82%	8.75%	6.25%
Net	9.17%	10.67%	3.61%	8.54%	5.98%
Weighted Benchmark	6.05%	2.65%	1.11%	6.14%	4.00%
<b>Developed</b>					
Gross	8.28%	8.88%	3.48%	8.03%	6.53%
Net	8.23%	8.65%	3.25%	7.79%	6.25%
Benchmark(2)	4.92%	0.16%	0.62%	5.17%	4.42%
<b>Emerging Markets</b>					
Gross	12.60%	17.57%	4.81%	10.73%	4.95%
Net	12.06%	17.00%	4.64%	10.63%	4.71%
Benchmark(3)	9.56%	10.54%	2.42%	8.97%	2.53%
<b>Private Equities</b>					
Net	(0.73%)	2.73%	6.25%	3.78%	4.08%

(1) S&P 500 Index through 12/31/2011 and the Russell 1000 Index thereafter.

(2) 50% Hedged EAFE through 3/31/2011, MSCI EAFE through 6/30/2016; MSCI World ex-US thereafter.

(3) MSCI Emerging Mkts Idx (Gross) through 6/30/2011 and MSCI Emerging Mkts Idx Net thereafter.

PLEASE REFER TO PAGES 32-36 FOR INVESTMENT MANAGER LEVEL RETURNS.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Fixed Income</b>					
Gross	1.88%	7.21%	6.35%	6.43%	-
Net	1.84%	7.08%	6.20%	6.24%	-
Weighted Benchmark	1.82%	6.03%	5.37%	5.16%	-
<b>Domestic Fixed Income</b>					
Gross	1.88%	7.21%	6.14%	6.25%	6.14%
Net	1.84%	7.08%	5.99%	6.08%	5.93%
Weighted Benchmark	1.82%	6.03%	5.00%	4.96%	4.53%
<b>Inv. Grade Fixed Income</b>					
Gross	1.72%	8.49%	6.54%	5.83%	5.53%
Net	1.69%	8.39%	6.44%	5.72%	5.38%
Blmbg Aggregate Index	0.62%	6.98%	5.24%	4.18%	3.64%
<b>Below Inv. Grade Fixed Income</b>					
Gross	2.22%	3.39%	4.83%	7.00%	7.50%
Net	2.17%	3.18%	4.59%	6.69%	7.12%
Blmbg HY Corp 2% Issue	4.58%	3.20%	4.19%	6.78%	6.46%
<b>Global Real Assets</b>					
Gross	0.01%	3.40%	5.16%	5.93%	-
Net	(0.12%)	2.94%	4.71%	5.49%	-
Weighted Benchmark	0.47%	1.43%	4.00%	4.56%	-
<b>Real Estate</b>					
Gross	0.08%	2.32%	5.30%	7.24%	11.25%
Net	(0.10%)	1.78%	4.78%	6.72%	10.70%
NCREIF Total Index	0.74%	2.00%	5.11%	6.28%	9.37%
<b>Other Real Assets</b>					
Gross	(0.09%)	5.09%	-	-	-
Net	(0.14%)	4.75%	-	-	-
Weighted Benchmark	0.11%	0.63%	-	-	-
<b>Infrastructure</b>					
Gross	(0.12%)	4.57%	6.10%	6.01%	-
Net	(0.19%)	4.10%	5.62%	5.49%	-
Benchmark(1)	0.13%	0.77%	2.61%	2.27%	-
<b>Timber</b>					
Net	0.00%	6.28%	2.55%	0.38%	-
NCREIF Timberland Index	0.04%	0.19%	2.09%	2.56%	4.40%
<b>Cash &amp; Equivalents - Net</b>					
3-month Treasury Bill	0.05%	0.98%	1.67%	1.26%	0.67%
	0.04%	1.10%	1.69%	1.20%	0.64%
<b>Total Fund</b>					
Gross	5.05%	8.41%	6.64%	8.61%	8.36%
Net	4.97%	8.15%	6.39%	8.35%	8.05%
Target*	4.35%	7.05%	6.25%	7.83%	7.52%

\* Current Quarter Target = 16.0% MSCI World, 16.0% Blmbg Aggregate, 15.8% Russell 1000 Index, 11.0% NCREIF Total Index, 11.0% MSCI World ex US, 7.0% NDSIB PERS - Private Equity, 7.0% Blmbg:HY Corp 2% Iss Cap, 4.8% Russell 2000 Index, 3.4% MSCI EM, 3.1% CPI All Urban Cons lagged 3 months, 3.1% NCREIF NFI-ODCE Eq Wt Net and 1.9% NCREIF Timberland Index.

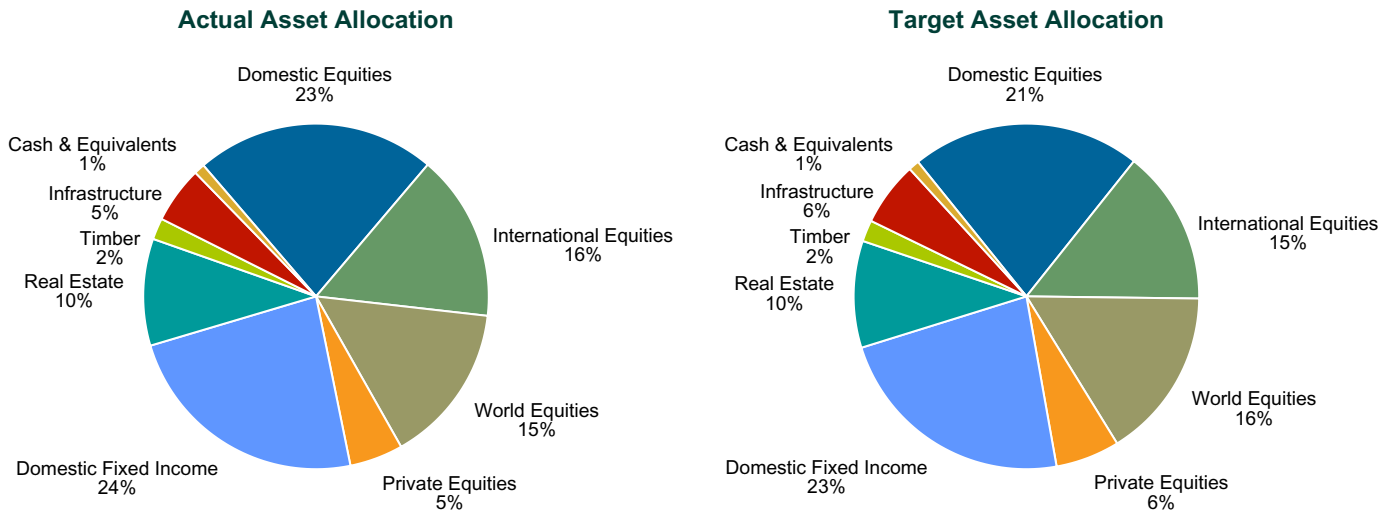
(1) CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.

PLEASE REFER TO PAGES 32-36 FOR INVESTMENT MANAGER LEVEL RETURNS.



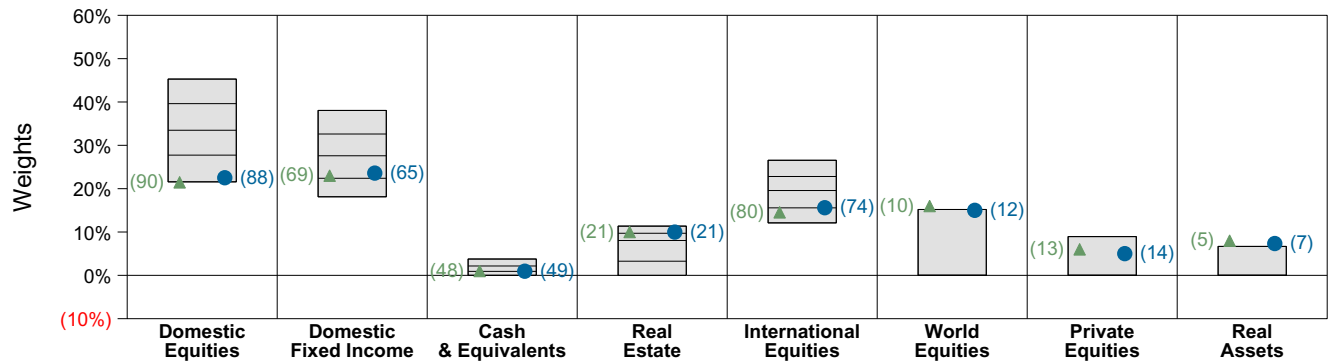
## Actual vs Target Asset Allocation As of September 30, 2020

The top left chart shows the Fund's asset allocation as of September 30, 2020. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Callan Public Fund Sponsor Database.



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	610,151	22.5%	21.5%	1.1%	28,748
International Equities	422,637	15.6%	14.5%	1.1%	28,783
World Equities	406,408	15.0%	16.0%	(1.0%)	(27,040)
Private Equities	135,701	5.0%	6.0%	(1.0%)	(26,842)
Domestic Fixed Income	639,095	23.6%	23.0%	0.6%	16,015
Real Estate	270,315	10.0%	10.0%	(0.0%)	(590)
Timber	55,483	2.0%	2.0%	(0.0%)	(0)
Infrastructure	143,425	5.3%	6.0%	(0.7%)	(17,816)
Cash & Equivalents	25,833	1.0%	1.0%	(0.0%)	(1,258)
<b>Total</b>	<b>2,709,046</b>	<b>100.0%</b>	<b>100.0%</b>		

### Asset Class Weights vs Callan Public Fund Sponsor Database



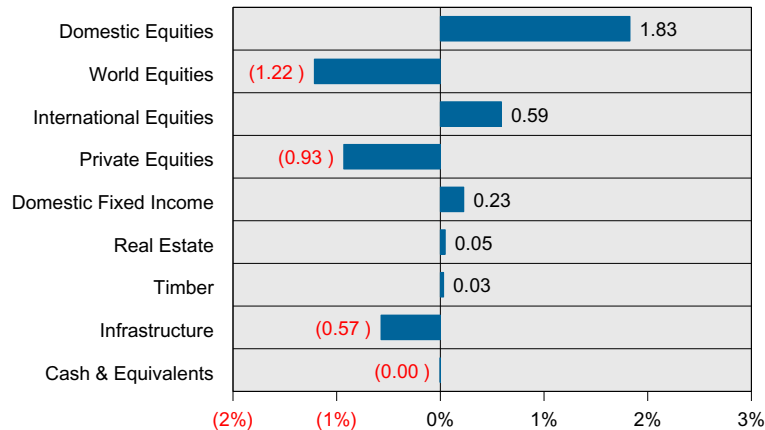
	Domestic Equities	Domestic Fixed Income	Cash & Equivalents	Real Estate	International Equities	World Equities	Private Equities	Real Assets
10th Percentile	45.29	38.05	3.77	11.36	26.55	15.20	8.94	6.68
25th Percentile	39.62	32.61	2.16	9.71	22.81	0.00	0.00	0.00
Median	33.48	27.59	0.91	8.04	19.57	0.00	0.00	0.00
75th Percentile	27.74	22.40	0.00	3.26	15.57	0.00	0.00	0.00
90th Percentile	21.57	18.13	0.00	0.00	12.10	0.00	0.00	0.00
<b>Fund</b>	● 22.52	● 23.59	● 0.95	● 9.98	● 15.60	● 15.00	● 5.01	● 7.34
<b>Target</b>	▲ 21.46	▲ 23.00	▲ 1.00	▲ 10.00	▲ 14.54	▲ 16.00	▲ 6.00	▲ 8.00
% Group Invested	93.18%	98.48%	74.24%	79.55%	89.39%	18.18%	24.24%	19.70%

\* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 16.0% Blmbg Aggregate, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.0% NDTFFR-Private Equity, 4.8% Russell 2000 Index, 3.0% NCREIF NFI-ODCE Eq Wt Net, 3.0% CPI All Urban Cons lagged 3 months, 2.8% MSCI EM, 2.0% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

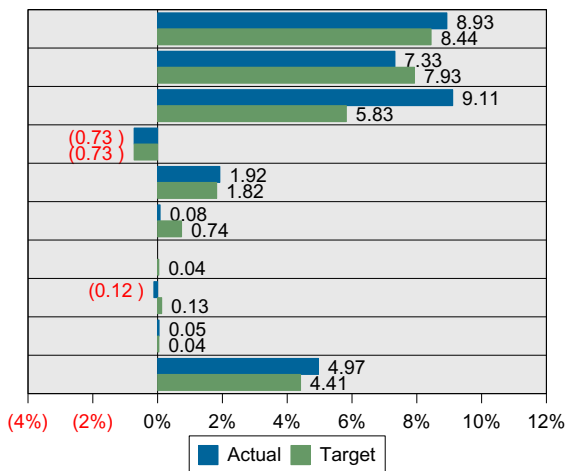
## Quarterly Total Fund Relative Attribution - September 30, 2020

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

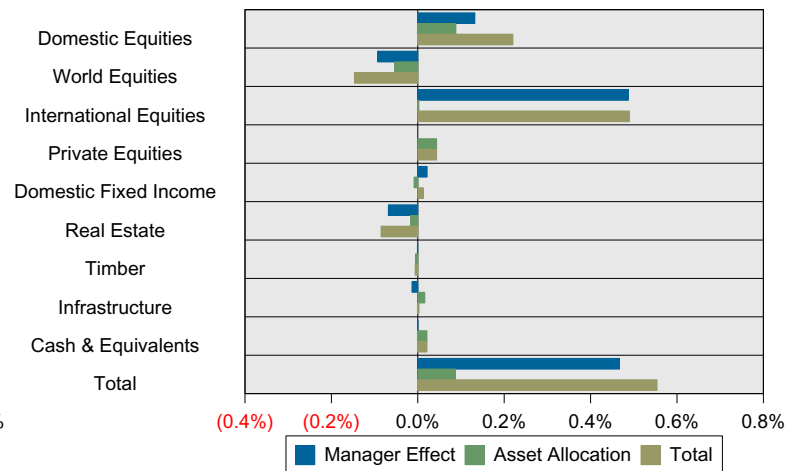
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended September 30, 2020

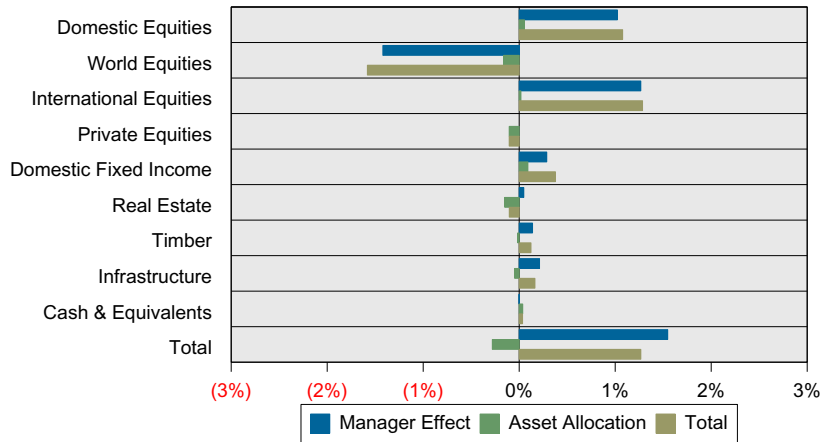
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	8.93%	8.44%	0.13%	0.09%	0.22%
World Equities	15%	16%	7.33%	7.93%	(0.09)%	(0.05)%	(0.15)%
International Equities	15%	15%	9.11%	5.83%	0.49%	0.00%	0.49%
Private Equities	5%	6%	(0.73)%	(0.73)%	0.00%	0.04%	0.04%
Domestic Fixed Income	23%	23%	1.92%	1.82%	0.02%	(0.01)%	0.01%
Real Estate	10%	10%	0.08%	0.74%	(0.07)%	(0.02)%	(0.08)%
Timber	2%	2%	0.00%	0.04%	(0.00)%	(0.01)%	(0.01)%
Infrastructure	5%	6%	(0.12)%	0.13%	(0.01)%	0.02%	0.00%
Cash & Equivalents	1%	1%	0.05%	0.04%	0.00%	0.02%	0.02%
<b>Total</b>			<b>4.97%</b>	<b>4.41%</b>	<b>+ 0.47%</b>	<b>+ 0.09%</b>	<b>0.55%</b>

\* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 16.0% Blmbg Aggregate, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.0% NDTFFR-Private Equity, 4.8% Russell 2000 Index, 3.0% NCREIF NFI-ODCE Eq Wt Net, 3.0% CPI All Urban Cons lagged 3 months, 2.8% MSCI EM, 2.0% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

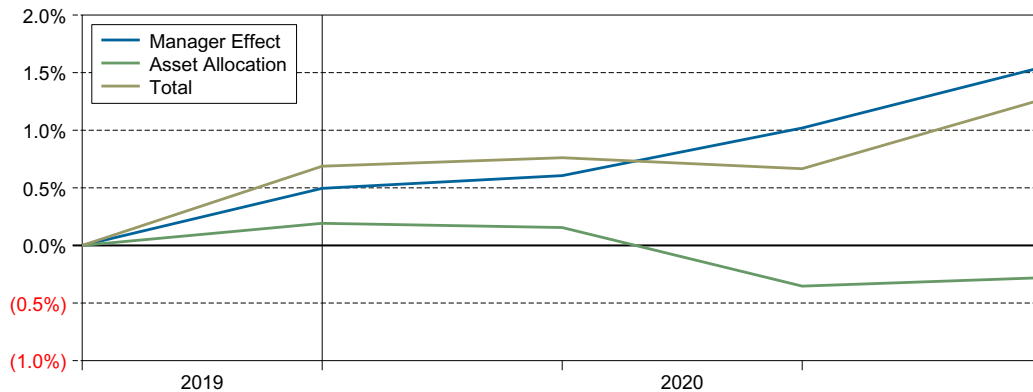
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### One Year Relative Attribution Effects



### Cumulative Relative Attribution Effects



### One Year Relative Attribution Effects

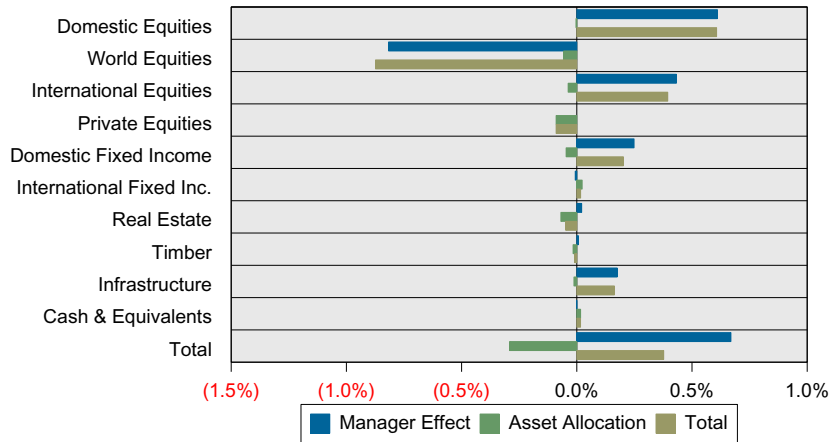
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	22%	21%	17.51%	12.41%	1.02%	0.05%	1.08%
World Equities	15%	16%	0.70%	10.41%	(1.42%)	(0.16%)	(1.58%)
International Equities	15%	15%	10.52%	2.16%	1.27%	0.02%	1.28%
Private Equities	5%	6%	2.73%	2.73%	0.00%	(0.10%)	(0.10%)
Domestic Fixed Income	24%	23%	7.15%	6.03%	0.29%	0.09%	0.38%
Real Estate	11%	10%	2.32%	2.00%	0.05%	(0.15%)	(0.10%)
Timber	2%	2%	6.28%	0.19%	0.14%	(0.02%)	0.12%
Infrastructure	6%	6%	4.57%	0.77%	0.21%	(0.05%)	0.16%
Cash & Equivalents	1%	1%	0.98%	1.10%	(0.00%)	0.04%	0.03%
<b>Total</b>			<b>8.33%</b>	<b>7.06%</b>	<b>+ 1.55%</b>	<b>+ (0.28%)</b>	<b>1.27%</b>

\* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 16.0% Blmbg Aggregate, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.0% NDTFFR-Private Equity, 4.8% Russell 2000 Index, 3.0% NCREIF NFI-ODCE Eq Wt Net, 3.0% CPI All Urban Cons lagged 3 months, 2.8% MSCI EM, 2.0% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

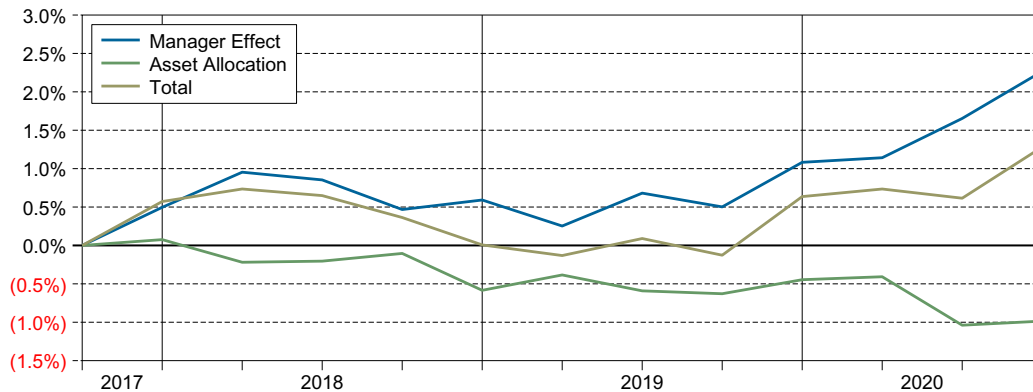
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Three Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Three Year Annualized Relative Attribution Effects

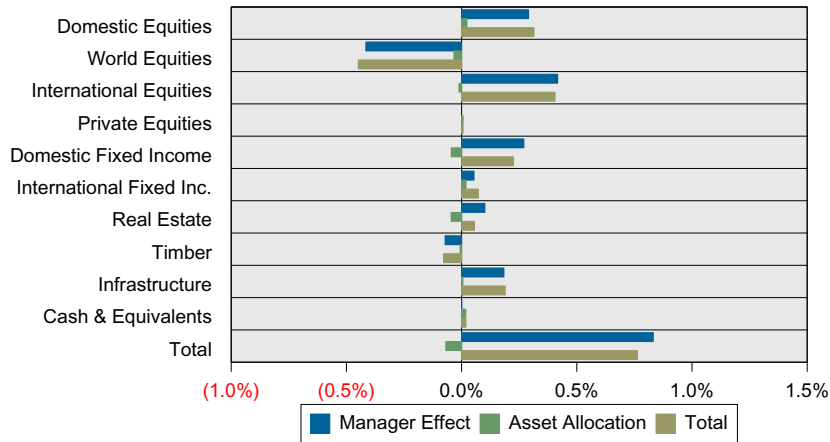
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	12.86%	9.97%	0.61%	(0.00%)	0.61%
World Equities	16%	16%	2.39%	7.74%	(0.82%)	(0.06%)	(0.87%)
International Equities	15%	15%	3.73%	1.01%	0.43%	(0.04%)	0.39%
Private Equities	4%	6%	6.25%	6.25%	0.00%	(0.09%)	(0.09%)
Domestic Fixed Income	23%	22%	6.06%	4.97%	0.25%	(0.05%)	0.20%
International Fixed Inc.	1%	1%	-	-	(0.01%)	0.02%	0.02%
Real Estate	10%	10%	5.30%	5.11%	0.02%	(0.07%)	(0.05%)
Timber	2%	2%	2.55%	2.09%	0.01%	(0.02%)	(0.01%)
Infrastructure	5%	6%	6.10%	2.61%	0.18%	(0.01%)	0.16%
Cash & Equivalents	1%	1%	1.67%	1.69%	(0.00%)	0.02%	0.02%
<b>Total</b>			<b>6.62%</b>	<b>6.24%</b>	<b>+ 0.67%</b>	<b>(0.29%)</b>	<b>0.38%</b>

\* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 16.0% Blmbg Aggregate, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.0% NDTFFR-Private Equity, 4.8% Russell 2000 Index, 3.0% NCREIF NFI-ODCE Eq Wt Net, 3.0% CPI All Urban Cons lagged 3 months, 2.8% MSCI EM, 2.0% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

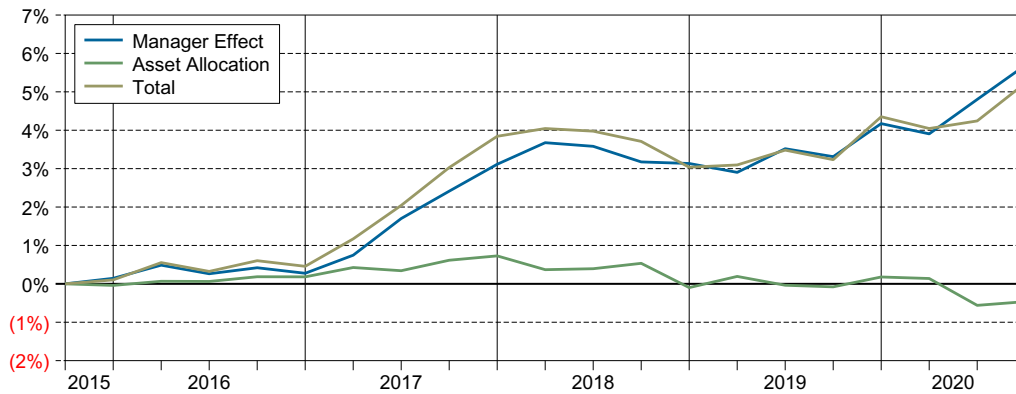
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Five Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Five Year Annualized Relative Attribution Effects

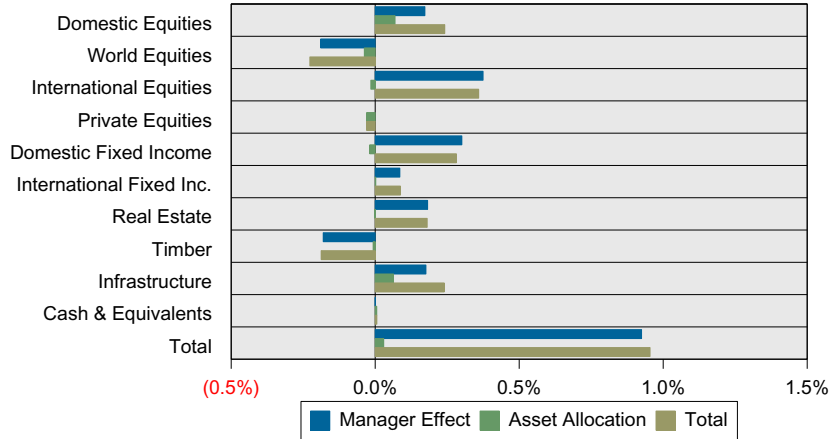
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	14.17%	12.77%	0.29%	0.02%	0.31%
World Equities	16%	16%	7.62%	10.48%	(0.42%)	(0.03%)	(0.45%)
International Equities	15%	15%	8.62%	5.95%	0.42%	(0.01%)	0.41%
Private Equities	4%	6%	3.78%	3.78%	0.00%	0.01%	0.01%
Domestic Fixed Income	21%	20%	6.16%	4.82%	0.27%	(0.04%)	0.23%
International Fixed Inc.	3%	3%	-	-	0.05%	0.02%	0.07%
Real Estate	10%	10%	7.24%	6.28%	0.10%	(0.05%)	0.06%
Timber	3%	3%	0.38%	2.56%	(0.07%)	(0.01%)	(0.08%)
Infrastructure	5%	5%	6.01%	2.27%	0.18%	0.01%	0.19%
Cash & Equivalents	1%	1%	1.26%	1.20%	0.00%	0.02%	0.02%
<b>Total</b>			<b>8.55%</b>	<b>7.79%</b>	<b>+ 0.83%</b>	<b>+ (0.07%)</b>	<b>0.76%</b>

\* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 16.0% Blmbg Aggregate, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.0% NDTFFR-Private Equity, 4.8% Russell 2000 Index, 3.0% NCREIF NFI-ODCE Eq Wt Net, 3.0% CPI All Urban Cons lagged 3 months, 2.8% MSCI EM, 2.0% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

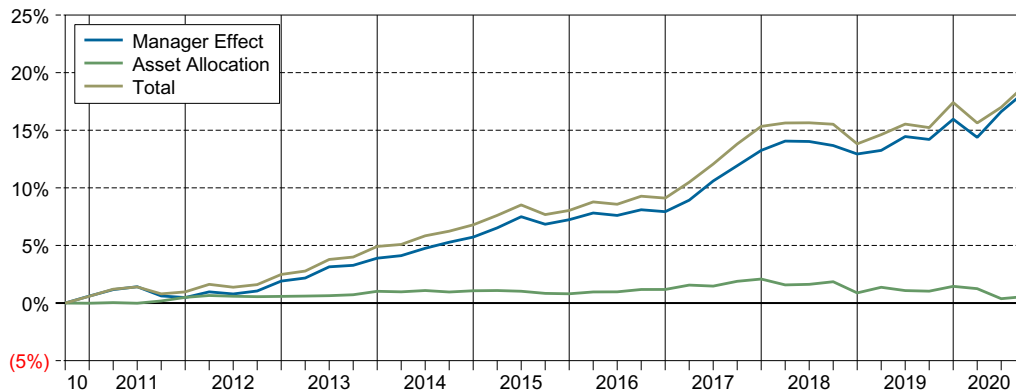
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Ten Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Ten Year Annualized Relative Attribution Effects

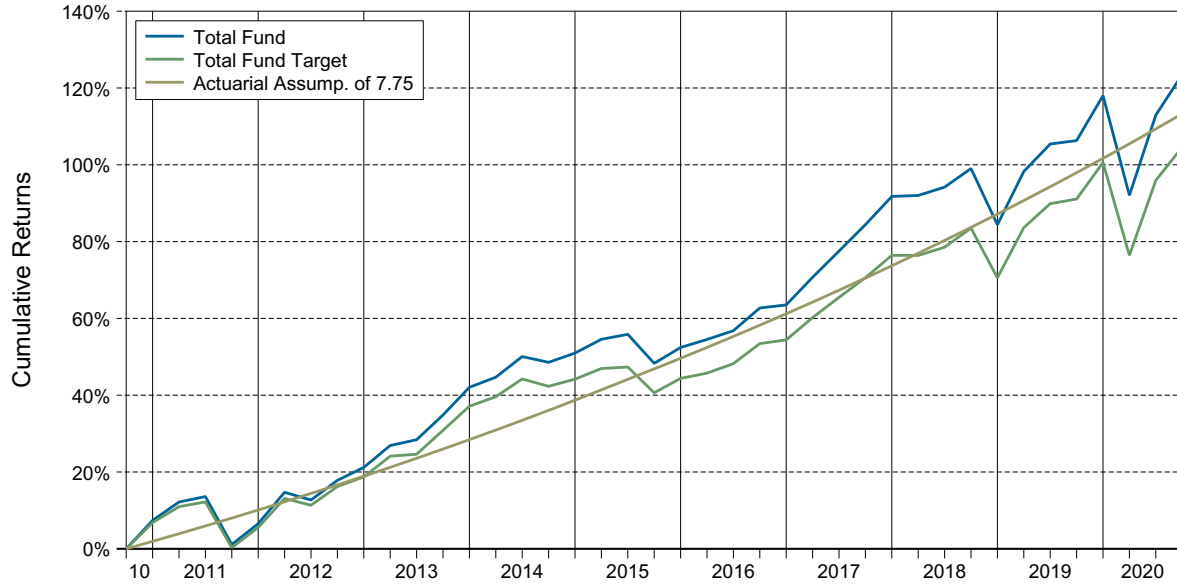
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	25%	24%	13.90%	12.93%	0.17%	0.07%	0.24%
World Equities	13%	13%	-	-	(0.19%)	(0.04%)	(0.23%)
International Equities	17%	16%	6.35%	4.12%	0.37%	(0.02%)	0.36%
Private Equities	4%	5%	4.14%	4.14%	0.00%	(0.03%)	(0.03%)
Domestic Fixed Income	19%	19%	6.02%	4.40%	0.30%	(0.02%)	0.28%
International Fixed Inc.	4%	4%	-	-	0.09%	0.00%	0.09%
Real Estate	10%	10%	11.24%	9.37%	0.18%	(0.00%)	0.18%
Timber	3%	3%	-	-	(0.18%)	(0.01%)	(0.19%)
Infrastructure	4%	5%	-	-	0.18%	0.06%	0.24%
Cash & Equivalents	1%	1%	0.67%	0.64%	0.00%	0.01%	0.01%
<b>Total</b>			<b>8.37%</b>	<b>7.42%</b>	<b>+ 0.92%</b>	<b>+ 0.03%</b>	<b>0.95%</b>

\* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 16.0% Blmbg Aggregate, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.0% NDTFFR-Private Equity, 4.8% Russell 2000 Index, 3.0% NCREIF NFI-ODCE Eq Wt Net, 3.0% CPI All Urban Cons lagged 3 months, 2.8% MSCI EM, 2.0% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

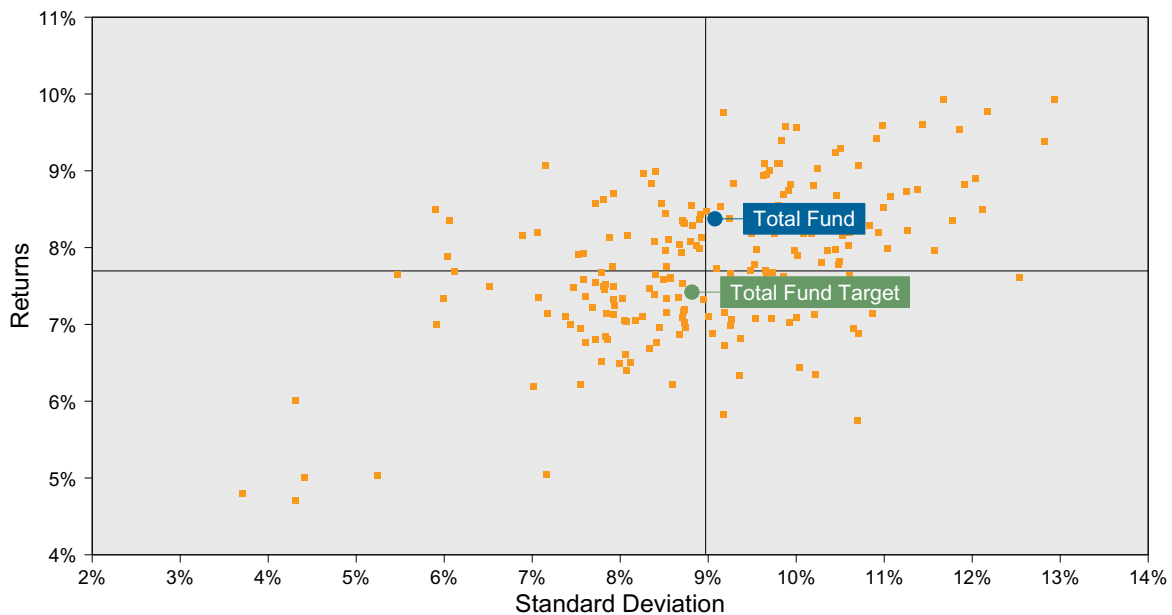
## Cumulative Performance Relative to Target

The first chart below illustrates the cumulative performance of the Total Fund relative to the cumulative performance of the Fund's Target Asset Mix. The Target Mix is assumed to be rebalanced each quarter with no transaction costs. The second chart below shows the return and the risk of the Total Fund and the Target Mix, contrasted with the returns and risks of the funds in the Callan Public Fund Sponsor Database.

### Cumulative Returns Actual vs Target



### Ten Year Annualized Risk vs Return



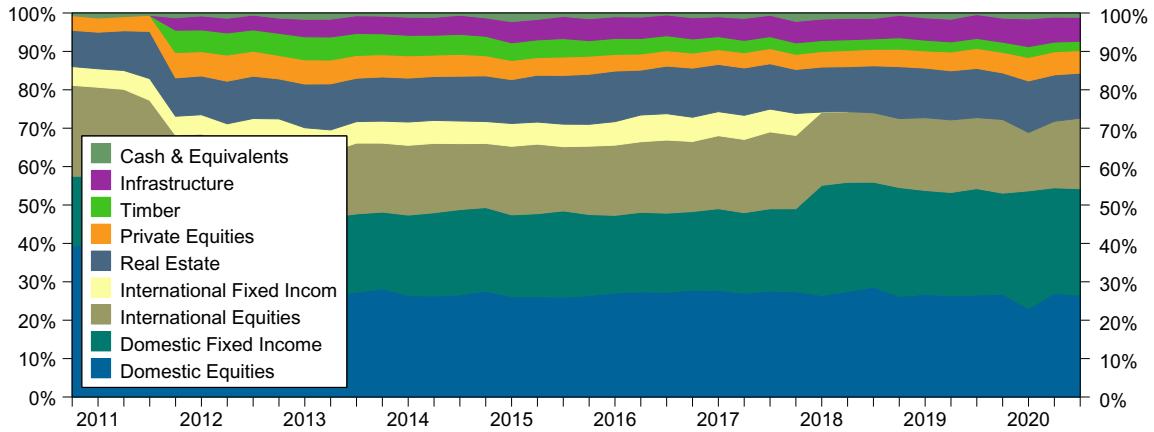
Squares represent membership of the Callan Public Fund Sponsor Database

\* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 16.0% Blmbg Aggregate, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.0% NDTFFR-Private Equity, 4.8% Russell 2000 Index, 3.0% NCREIF NFI-ODCE Eq Wt Net, 3.0% CPI All Urban Cons lagged 3 months, 2.8% MSCI EM, 2.0% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

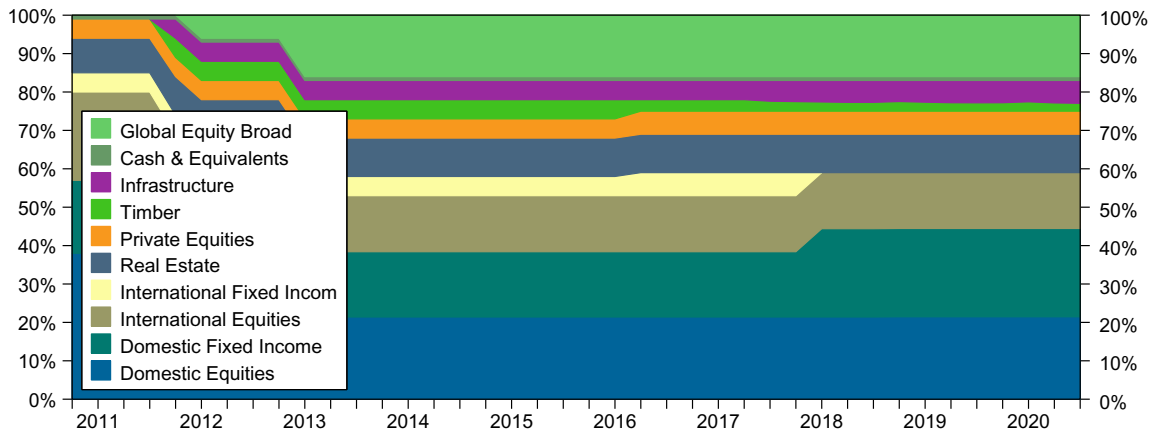
## Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Callan Public Fund Sponsor Database.

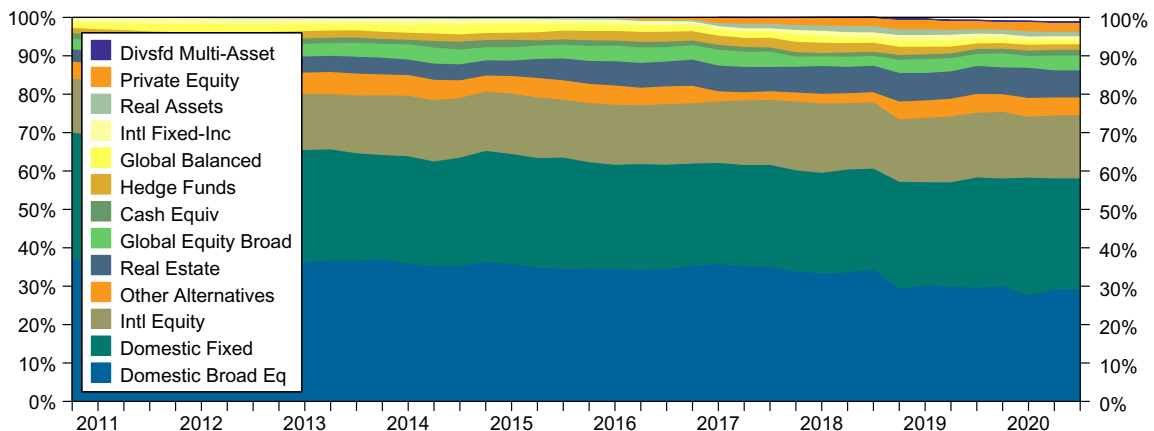
### Actual Historical Asset Allocation



### Target Historical Asset Allocation



### Average Callan Public Fund Sponsor Database Historical Asset Allocation



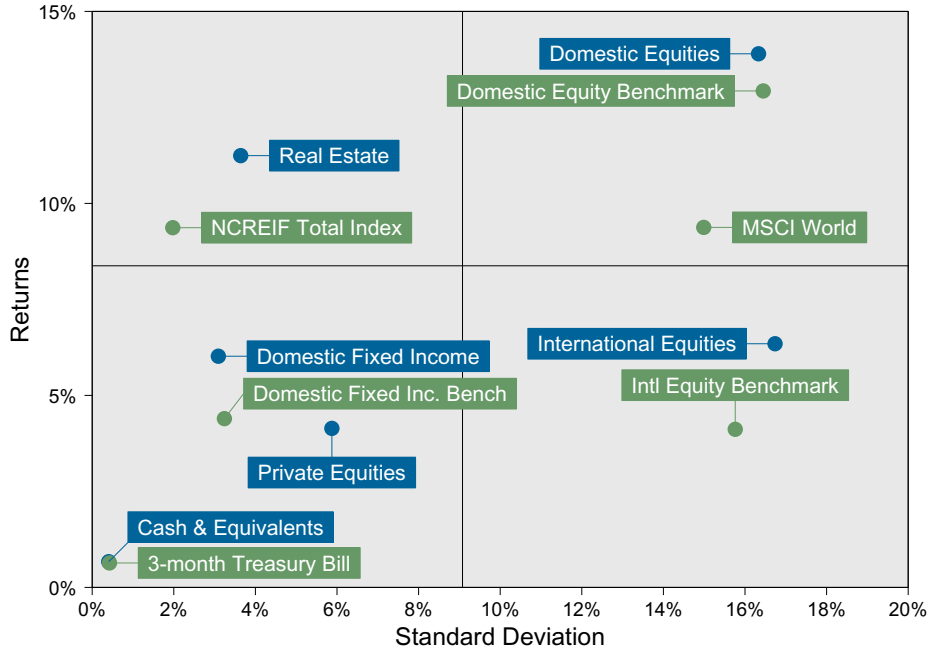
\* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 16.0% Blmbg Aggregate, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.0% NDTFFR-Private Equity, 4.8% Russell 2000 Index, 3.0% NCREIF NFI-ODCE Eq Wt Net, 3.0% CPI All Urban Cons lagged 3 months, 2.8% MSCI EM, 2.0% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.



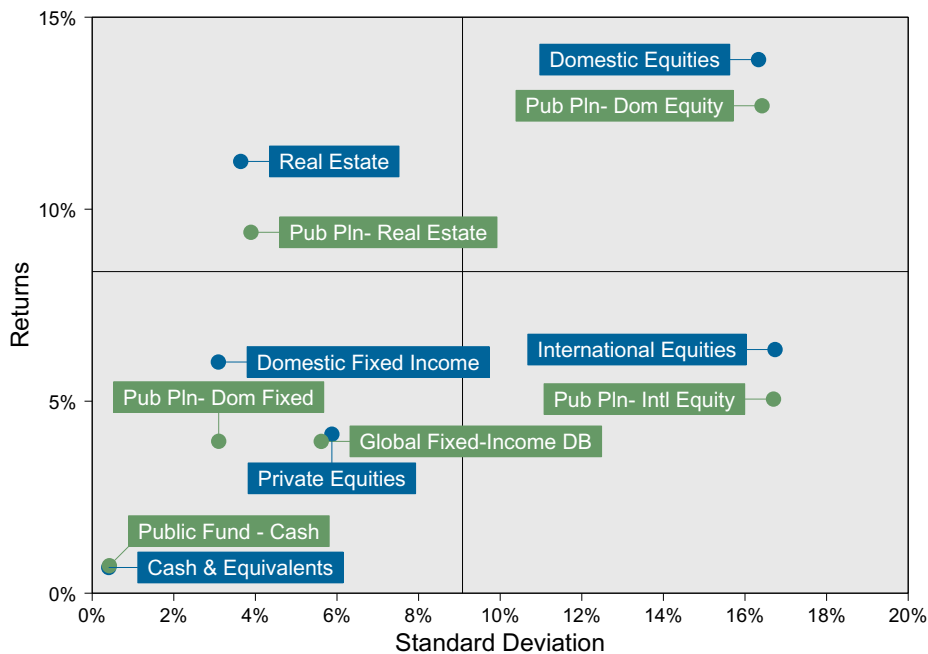
## Asset Class Risk and Return

The charts below show the ten year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

### Ten Year Annualized Risk vs Return Asset Classes vs Benchmark Indices



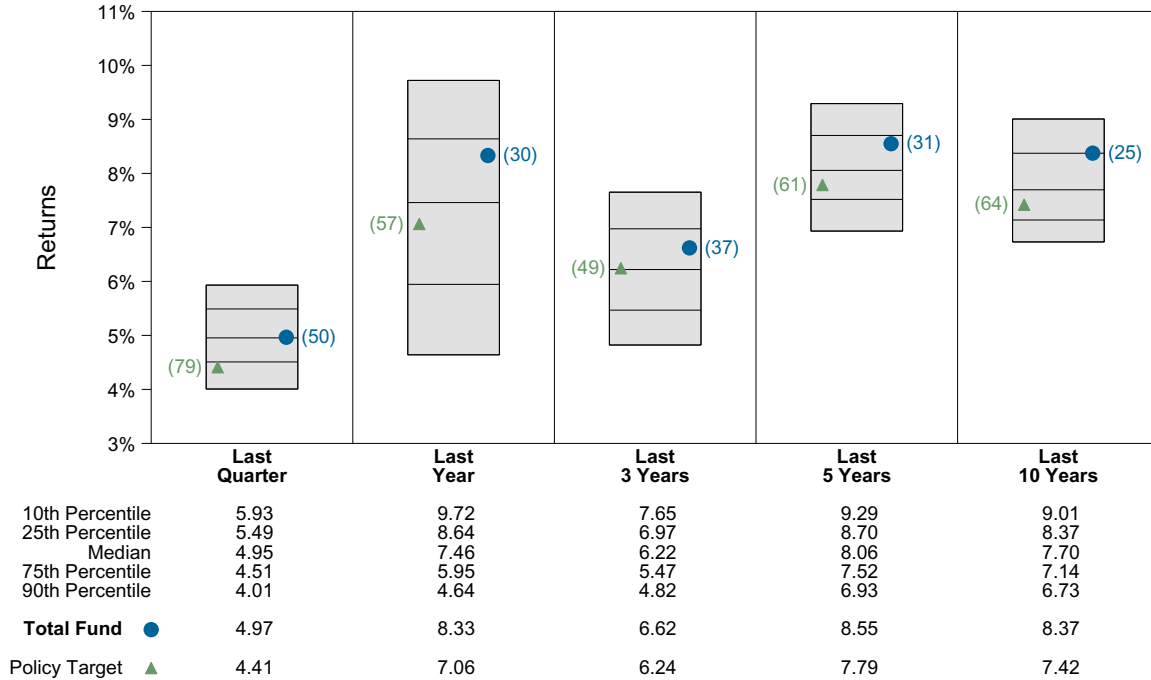
### Ten Year Annualized Risk vs Return Asset Classes vs Asset Class Median



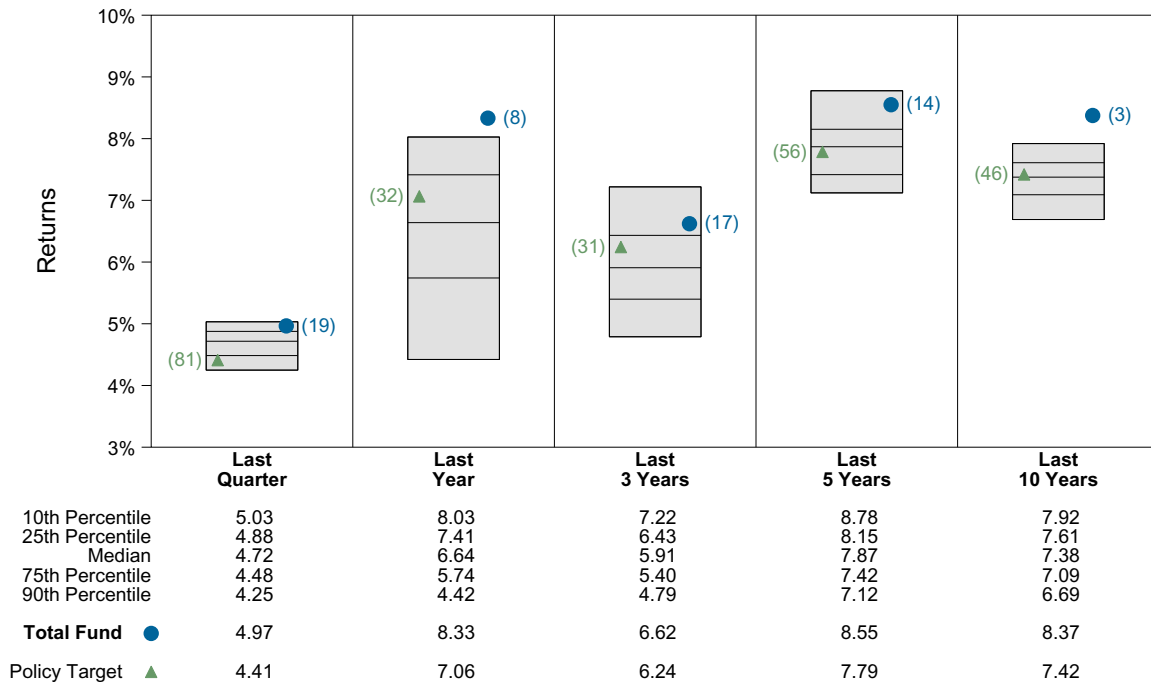
## Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the Callan Public Fund Sponsor Database for periods ended September 30, 2020. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

### Callan Public Fund Sponsor Database



### Asset Allocation Adjusted Ranking

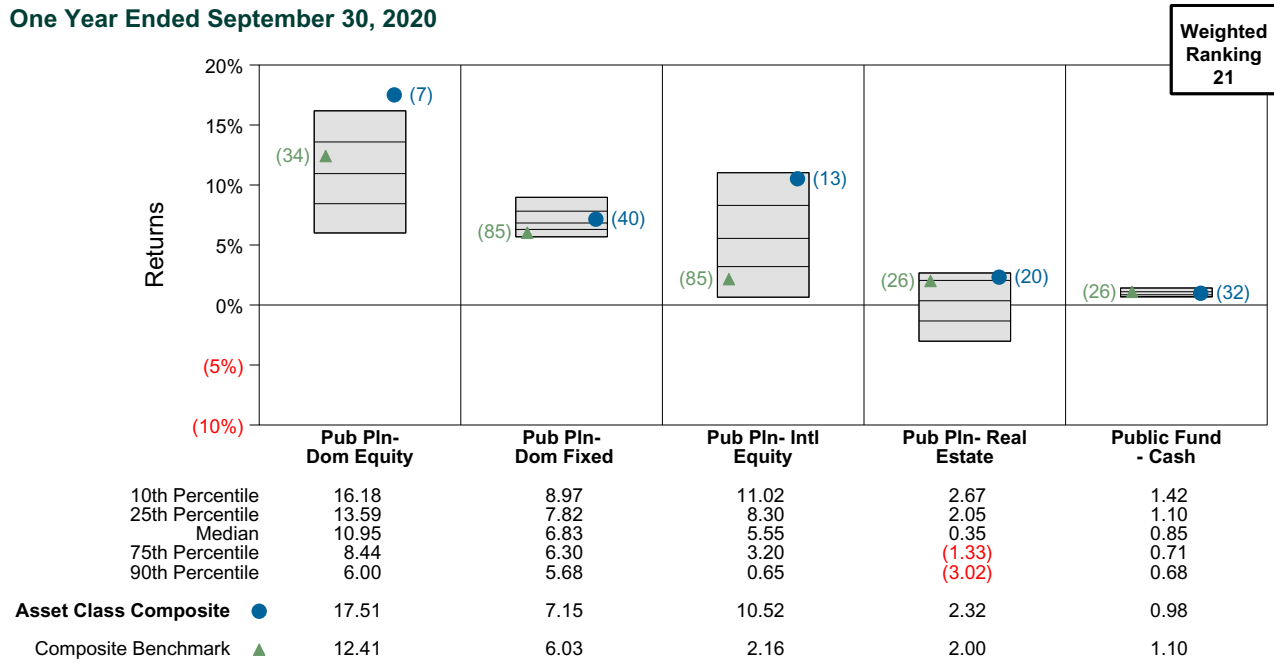


\* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 16.0% Blmbg Aggregate, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.0% NDTFFR-Private Equity, 4.8% Russell 2000 Index, 3.0% NCREIF NFI-ODCE Eq Wt Net, 3.0% CPI All Urban Cons lagged 3 months, 2.8% MSCI EM, 2.0% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

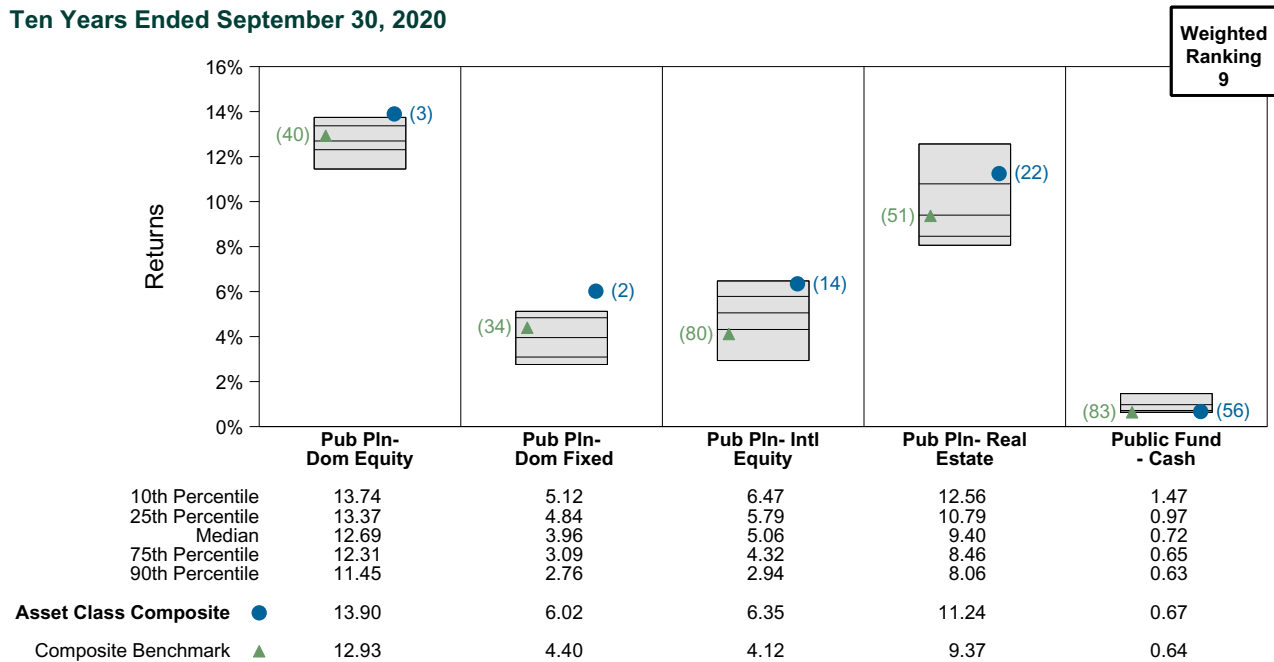
## Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

### Total Asset Class Performance One Year Ended September 30, 2020



### Total Asset Class Performance Ten Years Ended September 30, 2020



\* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 16.0% Blmbg Aggregate, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.0% NDTFFR-Private Equity, 4.8% Russell 2000 Index, 3.0% NCREIF NFI-ODCE Eq Wt Net, 3.0% CPI All Urban Cons lagged 3 months, 2.8% MSCI EM, 2.0% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

## Asset Class Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2020, with the distribution as of June 30, 2020. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Class Allocation

	September 30, 2020			Inv. Return	June 30, 2020	
	Market Value	Weight	Net New Inv.		Market Value	Weight
<b>Global Equities</b>	<b>\$1,574,895,929</b>	<b>58.13%</b>	<b>\$(46,810,522)</b>	<b>\$118,142,302</b>	<b>\$1,503,564,150</b>	<b>57.55%</b>
<b>Public Equities</b>	<b>\$1,439,194,770</b>	<b>53.13%</b>	<b>\$(48,865,392)</b>	<b>\$119,138,411</b>	<b>\$1,368,921,751</b>	<b>52.39%</b>
<b>World Equities</b>	<b>\$406,407,521</b>	<b>15.00%</b>	<b>\$109,179</b>	<b>\$27,710,319</b>	<b>\$378,588,023</b>	<b>14.49%</b>
<b>Domestic Equities</b>	<b>\$610,150,504</b>	<b>22.52%</b>	<b>\$(49,163,382)</b>	<b>\$56,151,442</b>	<b>\$603,162,444</b>	<b>23.09%</b>
Large Cap	479,159,849	17.69%	(48,705,936)	50,657,476	477,208,309	18.26%
Small Cap	130,990,655	4.84%	(457,446)	5,493,966	125,954,135	4.82%
<b>International Equities</b>	<b>\$422,636,745</b>	<b>15.60%</b>	<b>\$188,810</b>	<b>\$35,276,651</b>	<b>\$387,171,284</b>	<b>14.82%</b>
Developed	339,224,513	12.52%	225,374	25,928,167	313,070,972	11.98%
Emerging Markets	83,412,232	3.08%	(36,564)	9,348,484	74,100,312	2.84%
<b>Private Equities</b>	<b>\$135,701,159</b>	<b>5.01%</b>	<b>\$2,054,870</b>	<b>\$(996,110)</b>	<b>\$134,642,399</b>	<b>5.15%</b>
<b>Global Fixed Income</b>	<b>\$639,095,331</b>	<b>23.59%</b>	<b>\$13,251,872</b>	<b>\$11,808,413</b>	<b>\$614,035,046</b>	<b>23.50%</b>
<b>Domestic Fixed Income</b>	<b>\$639,095,331</b>	<b>23.59%</b>	<b>\$13,251,872</b>	<b>\$11,808,413</b>	<b>\$614,035,046</b>	<b>23.50%</b>
Investment Grade	454,827,056	16.79%	14,500,600	7,464,709	432,861,747	16.57%
Below Investment Grade	184,268,274	6.80%	(1,248,729)	4,343,704	181,173,299	6.93%
<b>Global Real Assets</b>	<b>\$469,222,251</b>	<b>17.32%</b>	<b>\$(2,252,127)</b>	<b>\$40,098</b>	<b>\$471,434,280</b>	<b>18.04%</b>
<b>Real Estate</b>	<b>\$270,314,709</b>	<b>9.98%</b>	<b>\$510,531</b>	<b>\$209,757</b>	<b>\$269,594,421</b>	<b>10.32%</b>
<b>Other Real Assets</b>	<b>\$198,907,542</b>	<b>7.34%</b>	<b>\$(2,762,658)</b>	<b>\$(169,659)</b>	<b>\$201,839,859</b>	<b>7.73%</b>
Infrastructure	143,424,927	5.29%	(1,762,369)	(169,660)	145,356,956	5.56%
Timber	55,482,615	2.05%	(1,000,289)	0	56,482,903	2.16%
<b>Cash</b>	<b>\$25,832,824</b>	<b>0.95%</b>	<b>\$2,138,379</b>	<b>\$11,421</b>	<b>\$23,683,023</b>	<b>0.91%</b>
<b>Total Fund</b>	<b>\$2,709,046,334</b>	<b>100.0%</b>	<b>\$(33,672,398)</b>	<b>\$130,002,233</b>	<b>\$2,612,716,499</b>	<b>100.0%</b>

PLEASE REFER TO PAGES 29-31 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Equities</b>					
Gross	7.76%	9.69%	6.94%	10.15%	-
Net	7.68%	9.45%	6.72%	9.92%	-
Weighted Benchmark	6.69%	8.61%	6.90%	9.67%	-
<b>Public Equities</b>					
Gross	8.59%	10.49%	-	-	-
Net	8.50%	10.23%	-	-	-
Weighted Benchmark	7.55%	8.90%	-	-	-
<b>World Equities</b>					
Gross	7.33%	0.70%	2.39%	7.62%	-
Net	7.23%	0.35%	2.05%	7.25%	-
MSCI World	7.93%	10.41%	7.74%	10.48%	9.37%
<b>Domestic Equities</b>					
Gross	8.93%	17.51%	12.86%	14.17%	13.90%
Net	8.88%	17.34%	12.69%	13.99%	13.67%
Weighted Benchmark	8.44%	12.41%	9.97%	12.77%	12.93%
<b>Large Cap</b>					
Gross	10.11%	22.86%	15.09%	15.51%	14.70%
Net	10.14%	22.80%	14.99%	15.39%	14.51%
Benchmark(1)	9.47%	16.01%	12.38%	14.09%	13.78%
<b>Small Cap</b>					
Gross	4.37%	(0.38%)	5.16%	9.39%	10.97%
Net	4.04%	(0.86%)	4.75%	8.99%	10.64%
Russell 2000 Index	4.93%	0.39%	1.77%	8.00%	9.85%
<b>International Equities</b>					
Gross	9.11%	10.52%	3.73%	8.62%	6.35%
Net	8.96%	10.23%	3.51%	8.41%	6.07%
Weighted Benchmark	5.83%	2.16%	1.01%	5.95%	4.12%
<b>Developed</b>					
Gross	8.28%	8.86%	3.47%	8.03%	6.62%
Net	8.23%	8.63%	3.25%	7.79%	6.34%
Benchmark(2)	4.92%	0.16%	0.62%	5.17%	4.42%
<b>Emerging Markets</b>					
Gross	12.60%	17.57%	4.80%	10.73%	4.93%
Net	12.06%	17.00%	4.64%	10.63%	4.68%
Benchmark(3)	9.56%	10.54%	2.42%	8.97%	2.53%
<b>Private Equities</b>					
Net	(0.73%)	2.73%	6.25%	3.78%	4.09%

(1) S&P 500 Index through 12/31/2011 and the Russell 1000 Index thereafter.

(2) 50% Hedged EAFE through 3/31/2011; MSCI EAFE through 6/30/16; MSCI World ex-US thereafter.

(3) MSCI Emerging Mkts Idx (Gross) through 6/30/2011 and MSCI Emerging Mkts Idx Net thereafter.

PLEASE REFER TO PAGES 32-36 FOR INVESTMENT MANAGER LEVEL RETURNS.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Fixed Income</b>					
Gross	1.92%	7.15%	6.31%	6.35%	-
Net	1.88%	7.01%	6.15%	6.15%	-
Weighted Benchmark	1.82%	6.03%	5.43%	5.07%	-
<b>Domestic Fixed Income</b>					
Gross	1.92%	7.15%	6.06%	6.16%	6.02%
Net	1.88%	7.01%	5.91%	5.98%	5.88%
Weighted Benchmark	1.82%	6.03%	4.97%	4.82%	4.40%
<b>Inv. Grade Fixed Income</b>					
Gross	1.72%	8.50%	6.54%	5.84%	5.53%
Net	1.69%	8.40%	6.44%	5.72%	5.38%
Blmbg Aggregate	0.62%	6.98%	5.24%	4.18%	3.64%
<b>Below Inv. Grade Fixed Income</b>					
Gross	2.40%	3.43%	4.84%	7.01%	7.50%
Net	2.34%	3.21%	4.58%	6.68%	7.11%
Blmbg HY Corp 2% Issue	4.58%	3.20%	4.19%	6.78%	6.46%
<b>Global Real Assets</b>					
Gross	0.01%	3.50%	5.14%	5.80%	-
Net	(0.12%)	3.05%	4.70%	5.36%	-
Weighted Benchmark	0.46%	1.39%	3.93%	4.51%	-
<b>Real Estate</b>					
Gross	0.08%	2.32%	5.30%	7.24%	11.24%
Net	(0.10%)	1.78%	4.78%	6.72%	10.70%
NCREIF Total Index	0.74%	2.00%	5.11%	6.28%	9.37%
<b>Other Real Assets</b>					
Gross	(0.08%)	5.12%	-	-	-
Net	(0.14%)	4.78%	-	-	-
Weighted Benchmark	0.11%	0.62%	-	-	-
<b>Infrastructure</b>					
Gross	(0.12%)	4.57%	6.10%	6.01%	-
Net	(0.19%)	4.10%	5.62%	5.49%	-
Benchmark(1)	0.13%	0.77%	2.61%	2.27%	-
<b>Timber</b>					
Net	0.00%	6.28%	2.55%	0.38%	-
NCREIF Timberland Index	0.04%	0.19%	2.09%	2.56%	4.40%
<b>Cash &amp; Equivalents - Net</b>					
3-month Treasury Bill	0.04%	1.10%	1.69%	1.20%	0.64%
<b>Total Fund</b>					
Gross	4.97%	8.33%	6.62%	8.55%	8.37%
Net	4.89%	8.08%	6.38%	8.29%	8.07%
Target*	4.41%	7.06%	6.24%	7.79%	7.42%

\* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 16.0% Blmbg Aggregate, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 7.0% Blmbg:HY Corp 2% Iss Cap, 6.0% NDTFFR-Private Equity, 4.8% Russell 2000 Index, 3.0% NCREIF NFI-ODCE Eq Wt Net, 3.0% CPI All Urban Cons lagged 3 months, 2.8% MSCI EM, 2.0% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

(1) CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.

PLEASE REFER TO PAGES 32-36 FOR INVESTMENT MANAGER LEVEL RETURNS.

# Domestic Equities

## Period Ended September 30, 2020

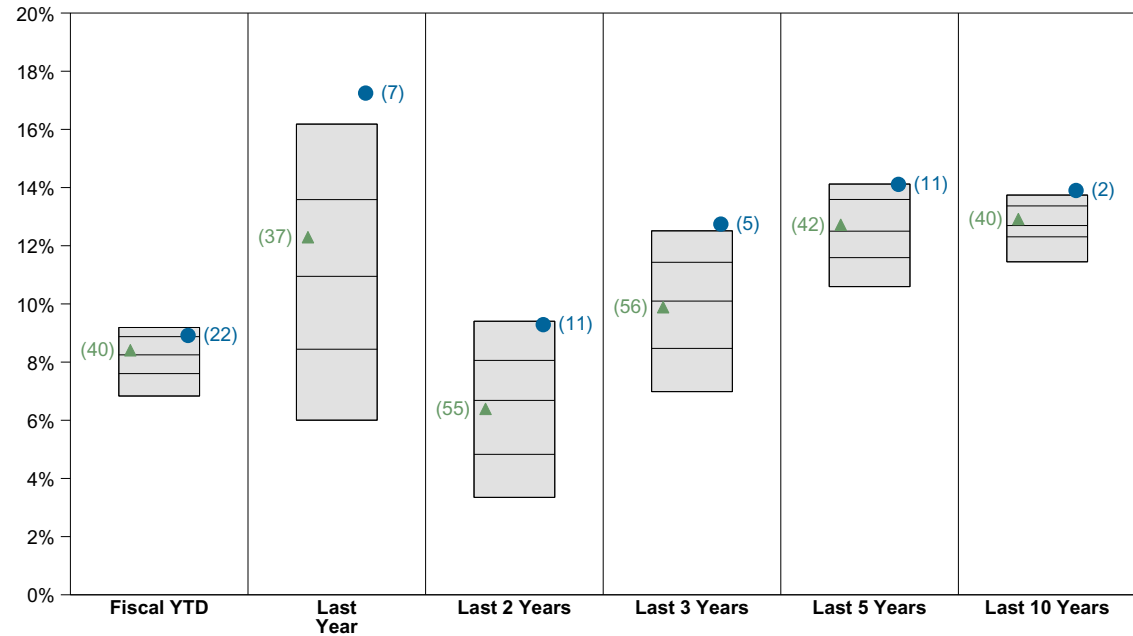
### Quarterly Summary and Highlights

- Domestic Equities's portfolio posted a 8.92% return for the quarter placing it in the 22 percentile of the Public Fund - Domestic Equity group for the quarter and in the 7 percentile for the last year.
- Domestic Equities's portfolio outperformed the Domestic Equity Target by 0.51% for the quarter and outperformed the Domestic Equity Target for the year by 4.96%.

### Quarterly Asset Growth

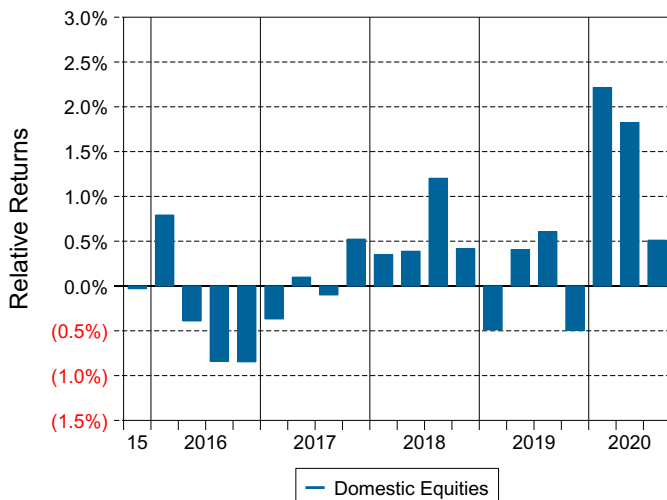
Beginning Market Value	\$1,409,632,590
Net New Investment	\$-105,612,905
Investment Gains/(Losses)	\$130,666,608
Ending Market Value	\$1,434,686,293

### Performance vs Public Fund - Domestic Equity (Gross)

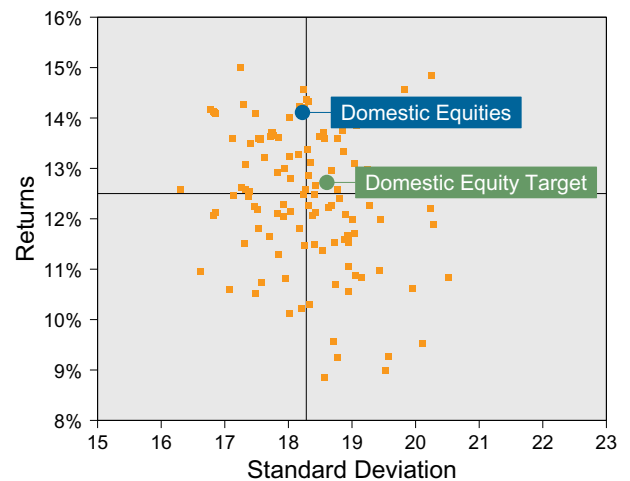


10th Percentile	9.19	16.18	9.40	12.51	14.12	13.74
25th Percentile	8.87	13.59	8.06	11.43	13.59	13.37
Median	8.25	10.95	6.68	10.10	12.50	12.69
75th Percentile	7.60	8.44	4.83	8.47	11.59	12.31
90th Percentile	6.83	6.00	3.35	6.98	10.59	11.45
<b>Domestic Equities</b>	<b>8.92</b>	<b>17.25</b>	<b>9.29</b>	<b>12.74</b>	<b>14.11</b>	<b>13.90</b>
Domestic Equity Target	8.41	12.29	6.39	9.89	12.72	12.92

### Relative Return vs Domestic Equity Target



### Public Fund - Domestic Equity (Gross) Annualized Five Year Risk vs Return



# L.A. Capital Period Ended September 30, 2020

## Investment Philosophy

The LA Capital Structured portfolio is a large growth portfolio benchmarked to the Russell 1000 Growth Index. It is an active assignment meaning that it targets a 2% alpha and constrains its risk budget (tracking error) to 4% relative to the benchmark. LA Capital believes that investment results are driven by Investor Preferences and thus recognize that when preferences shift a different posture related to that factor is warranted.

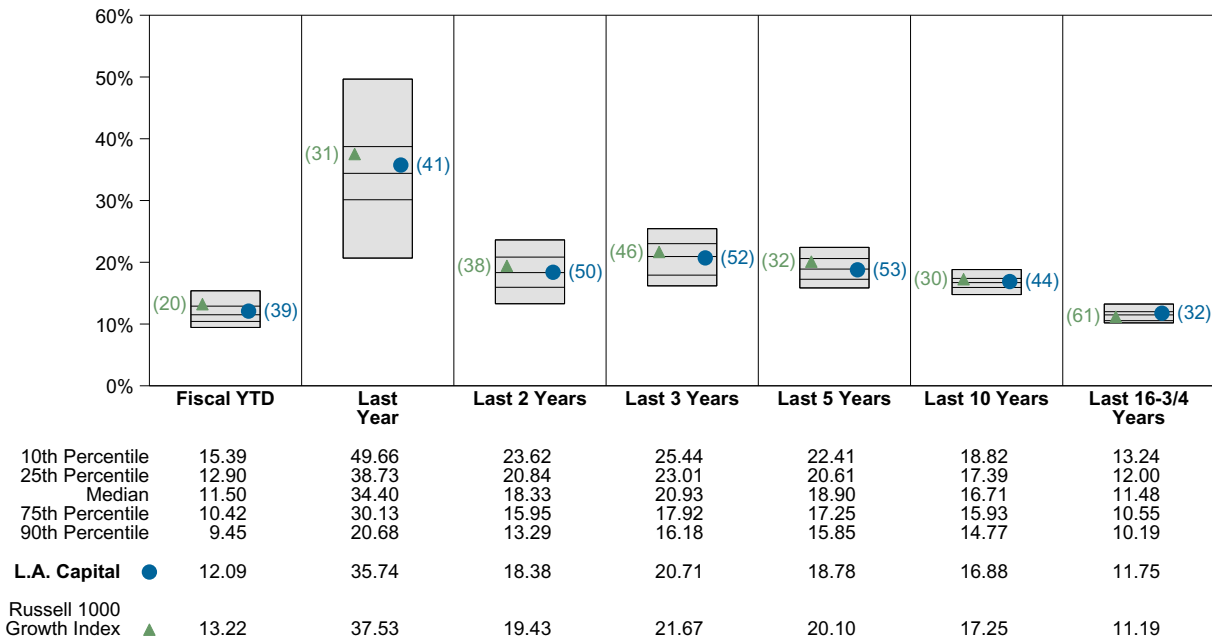
## Quarterly Summary and Highlights

- L.A. Capital's portfolio posted a 12.09% return for the quarter placing it in the 39 percentile of the Callan Large Cap Growth group for the quarter and in the 41 percentile for the last year.
- L.A. Capital's portfolio underperformed the Russell 1000 Growth Index by 1.13% for the quarter and underperformed the Russell 1000 Growth Index for the year by 1.79%.

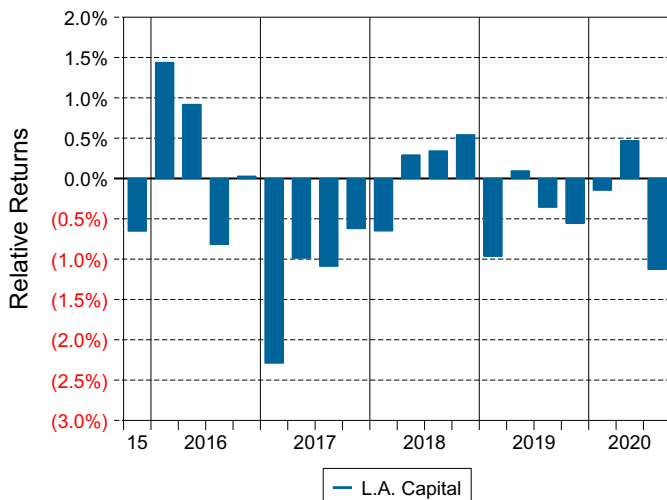
## Quarterly Asset Growth

Beginning Market Value	\$467,547,672
Net New Investment	\$-60,228,009
Investment Gains/(Losses)	\$59,672,728
Ending Market Value	\$466,992,391

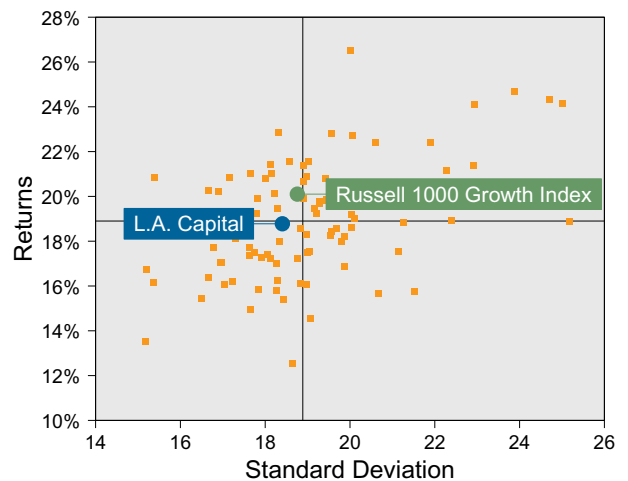
## Performance vs Callan Large Cap Growth (Gross)



## Relative Return vs Russell 1000 Growth Index



## Callan Large Cap Growth (Gross) Annualized Five Year Risk vs Return





# L.A. Capital Management Enhanced Index Period Ended September 30, 2020

## Investment Philosophy

The LA Capital Enhanced portfolio is a large core portfolio benchmarked to the Russell 1000 Index. Characterized as an enhanced index assignment, its objective is to track the benchmark with lower variability. The pension portfolio began in August of 2000 and the insurance portfolio was initiated in April of 2004. Since October of 2006 a small portion of each of the two core accounts was allocated into the Large Cap Alpha Fund with intent to add incremental alpha to the assignment given that the information ratio was expected to be higher.

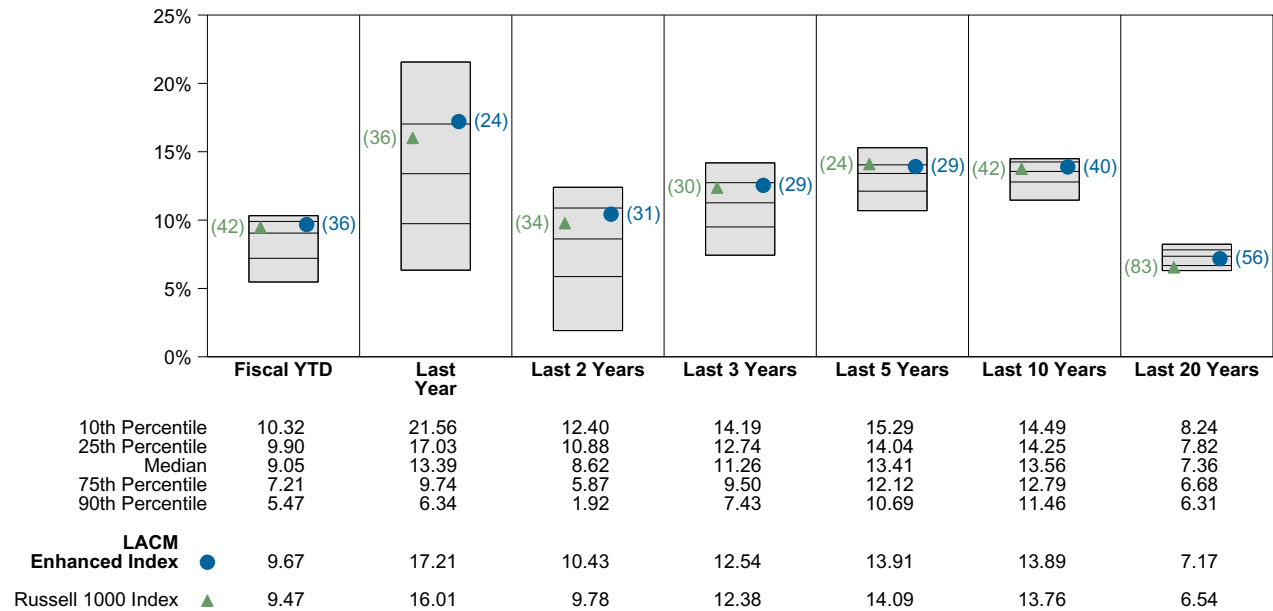
## Quarterly Summary and Highlights

- LACM Enhanced Index's portfolio posted a 9.67% return for the quarter placing it in the 36 percentile of the Callan Large Cap Core group for the quarter and in the 24 percentile for the last year.
- LACM Enhanced Index's portfolio outperformed the Russell 1000 Index by 0.20% for the quarter and outperformed the Russell 1000 Index for the year by 1.20%.

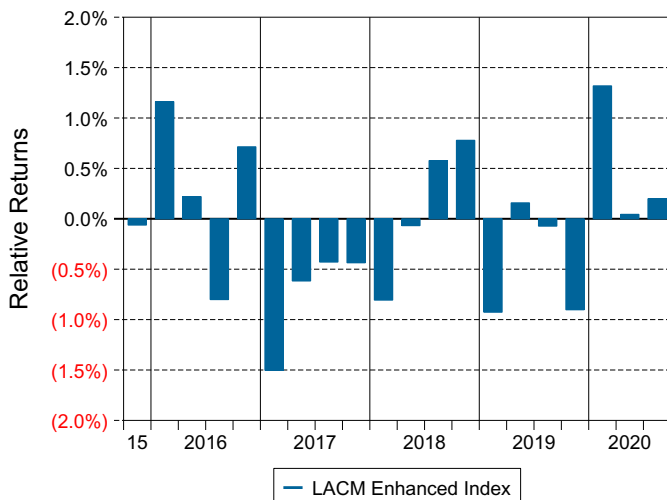
## Quarterly Asset Growth

Beginning Market Value	\$207,524,148
Net New Investment	\$-53,694
Investment Gains/(Losses)	\$20,068,011
Ending Market Value	\$227,538,464

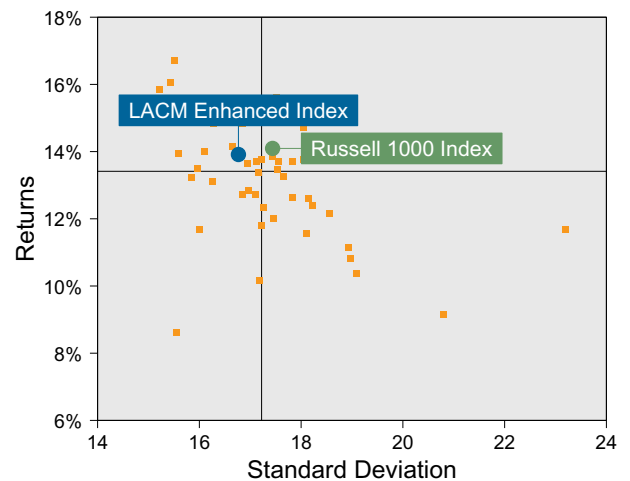
## Performance vs Callan Large Cap Core (Gross)



## Relative Return vs Russell 1000 Index



## Callan Large Cap Core (Gross) Annualized Five Year Risk vs Return



# Northern Trust AM Enh S&P500 Period Ended September 30, 2020

## Investment Philosophy

Northern Trust AM Enhanced S&P 500 employs a quantitative investment approach, focusing on the stock selection process as the principal source of value added. The account invests primarily in a broadly diversified portfolio of equity securities that include securities convertible into equity securities (including common stock), warrants, rights and units or shares in trusts, exchange traded funds and investment companies. The Investment Manager intends to use futures and options to manage market risk associated with the account's investments.

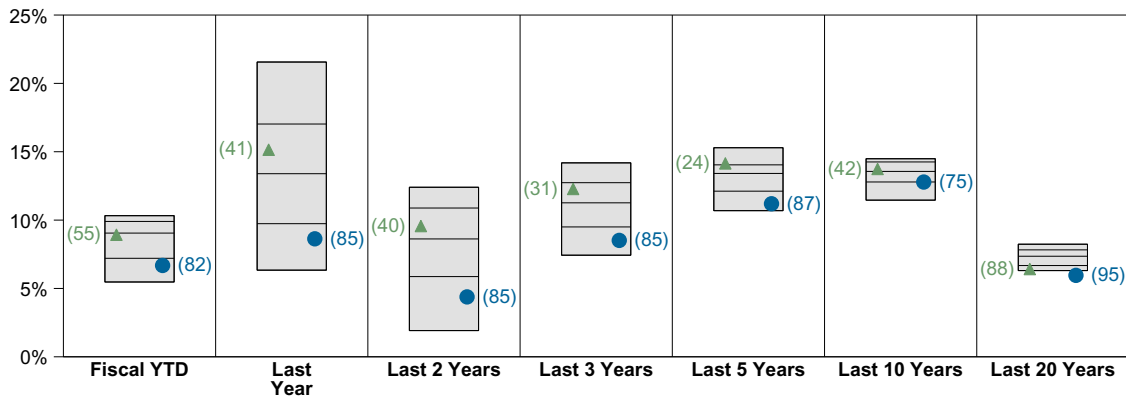
## Quarterly Summary and Highlights

- Northern Trust AM Enh S&P500's portfolio posted a 6.68% return for the quarter placing it in the 82 percentile of the Callan Large Cap Core group for the quarter and in the 85 percentile for the last year.
- Northern Trust AM Enh S&P500's portfolio underperformed the S&P 500 Index by 2.25% for the quarter and underperformed the S&P 500 Index for the year by 6.52%.

## Quarterly Asset Growth

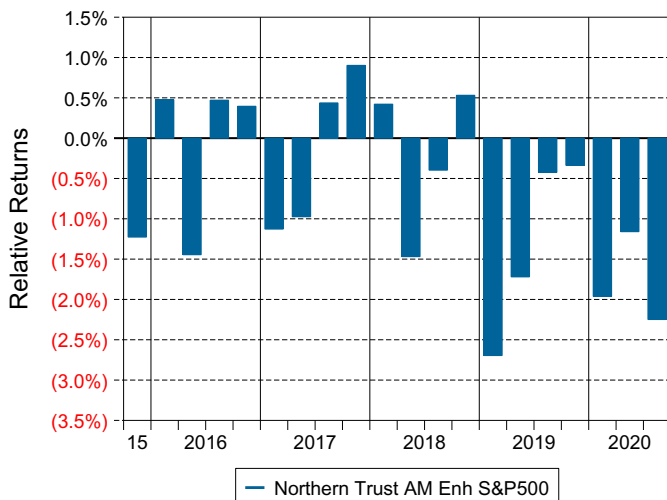
Beginning Market Value	\$195,843,557
Net New Investment	\$-0
Investment Gains/(Losses)	\$13,084,819
Ending Market Value	\$208,928,376

## Performance vs Callan Large Cap Core (Gross)

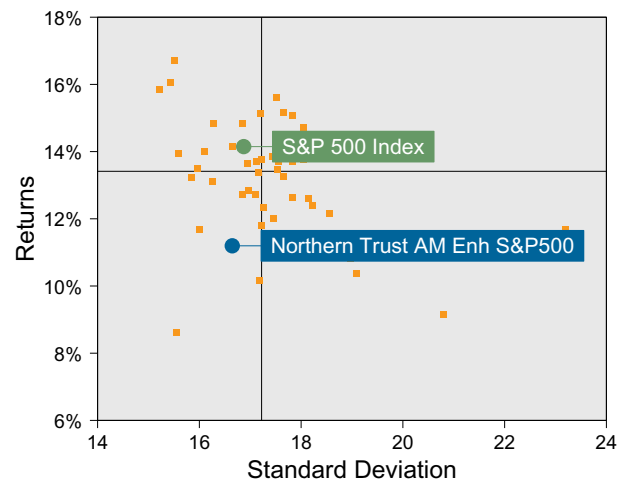


10th Percentile	10.32	21.56	12.40	14.19	15.29	14.49	8.24
25th Percentile	9.90	17.03	10.88	12.74	14.04	14.25	7.82
Median	9.05	13.39	8.62	11.26	13.41	13.56	7.36
75th Percentile	7.21	9.74	5.87	9.50	12.12	12.79	6.68
90th Percentile	5.47	6.34	1.92	7.43	10.69	11.46	6.31
<b>Northern Trust AM Enh S&amp;P500</b>	● 6.68	8.63	4.38	8.52	11.20	12.78	5.96
S&P 500 Index	▲ 8.93	15.15	9.57	12.28	14.15	13.74	6.42

## Relative Return vs S&P 500 Index



## Callan Large Cap Core (Gross) Annualized Five Year Risk vs Return



# Parametric Enh S&P 500 Period Ended September 30, 2020

## Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

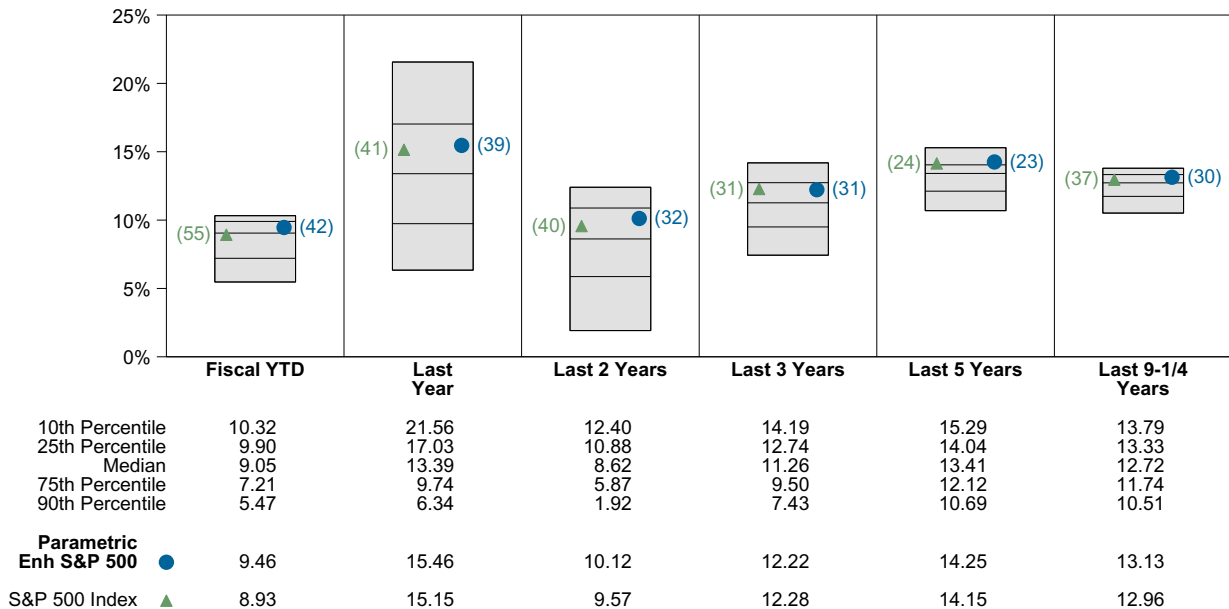
## Quarterly Summary and Highlights

- Parametric Enh S&P 500's portfolio posted a 9.46% return for the quarter placing it in the 42 percentile of the Callan Large Cap Core group for the quarter and in the 39 percentile for the last year.
- Parametric Enh S&P 500's portfolio outperformed the S&P 500 Index by 0.53% for the quarter and outperformed the S&P 500 Index for the year by 0.31%.

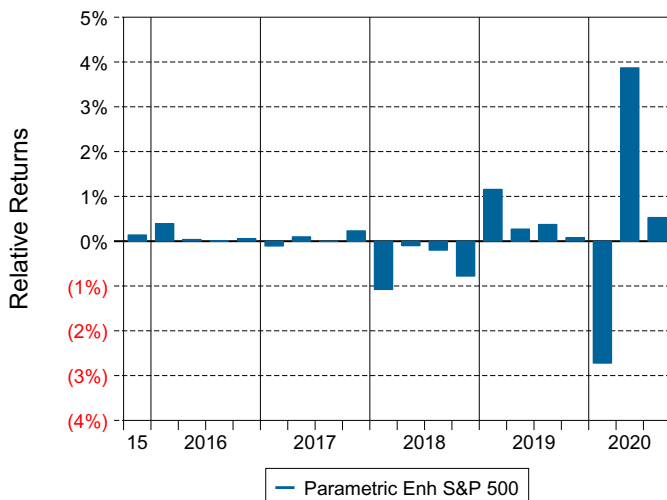
## Quarterly Asset Growth

Beginning Market Value	\$244,568,480
Net New Investment	\$-44,361,166
Investment Gains/(Losses)	\$24,981,003
Ending Market Value	\$225,188,317

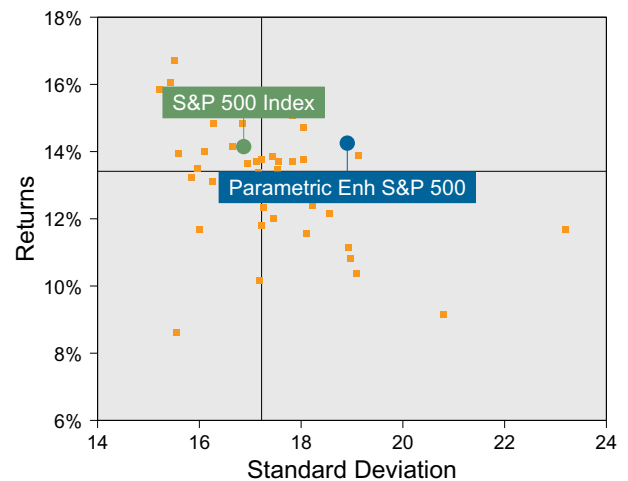
## Performance vs Callan Large Cap Core (Gross)



## Relative Return vs S&P 500 Index



## Callan Large Cap Core (Gross) Annualized Five Year Risk vs Return



# Atlanta Capital

## Period Ended September 30, 2020

### Investment Philosophy

Atlanta believes that high quality companies produce consistently increasing earnings and dividends, thereby providing attractive returns with moderate risk over the long-term.

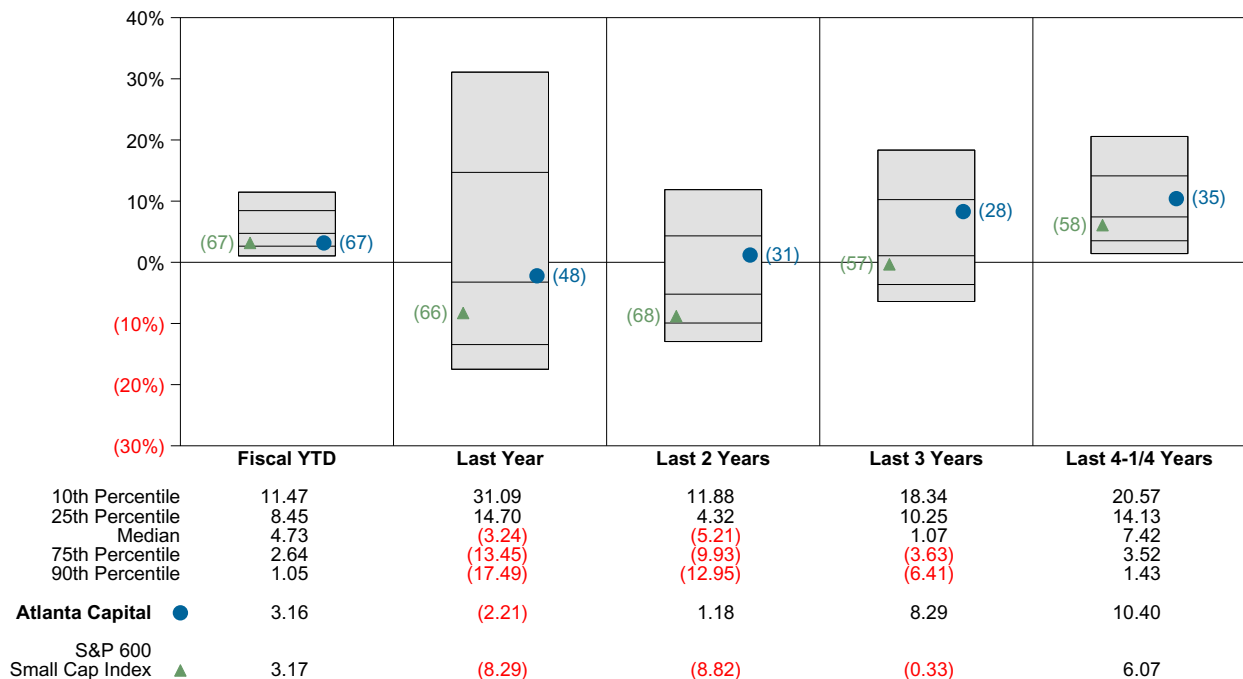
### Quarterly Summary and Highlights

- Atlanta Capital's portfolio posted a 3.16% return for the quarter placing it in the 67 percentile of the Callan Small Capitalization group for the quarter and in the 48 percentile for the last year.
- Atlanta Capital's portfolio underperformed the S&P 600 Small Cap Index by 0.01% for the quarter and outperformed the S&P 600 Small Cap Index for the year by 6.08%.

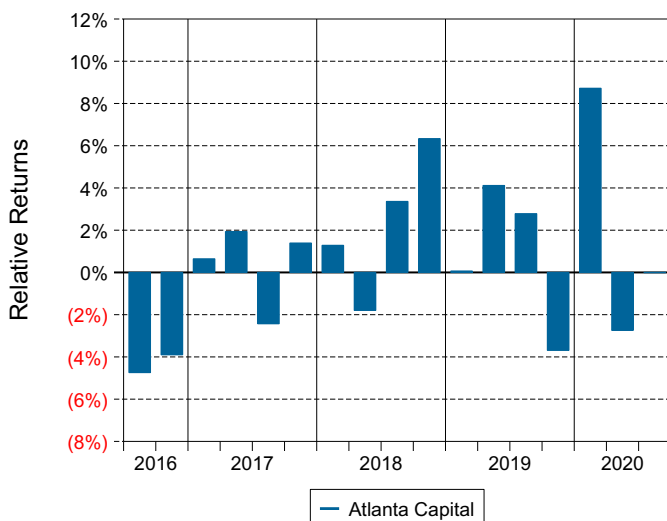
### Quarterly Asset Growth

Beginning Market Value	\$144,383,507
Net New Investment	\$-443,345
Investment Gains/(Losses)	\$4,577,294
Ending Market Value	\$148,517,456

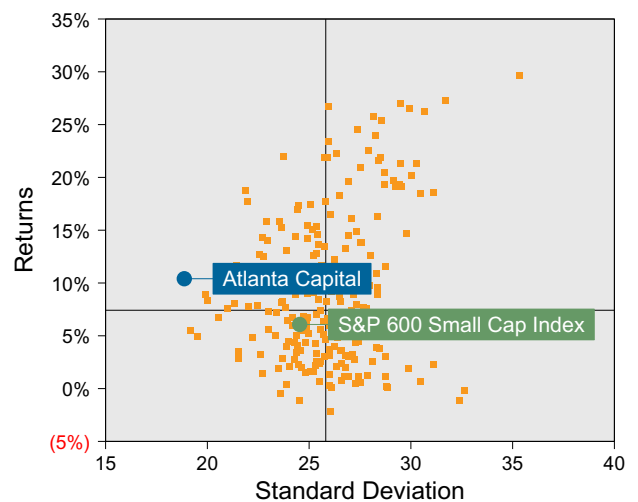
### Performance vs Callan Small Capitalization (Gross)



### Relative Return vs S&P 600 Small Cap Index



### Callan Small Capitalization (Gross) Annualized Four and One-Quarter Year Risk vs Return



# Parametric Enh SmCap Period Ended September 30, 2020

## Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

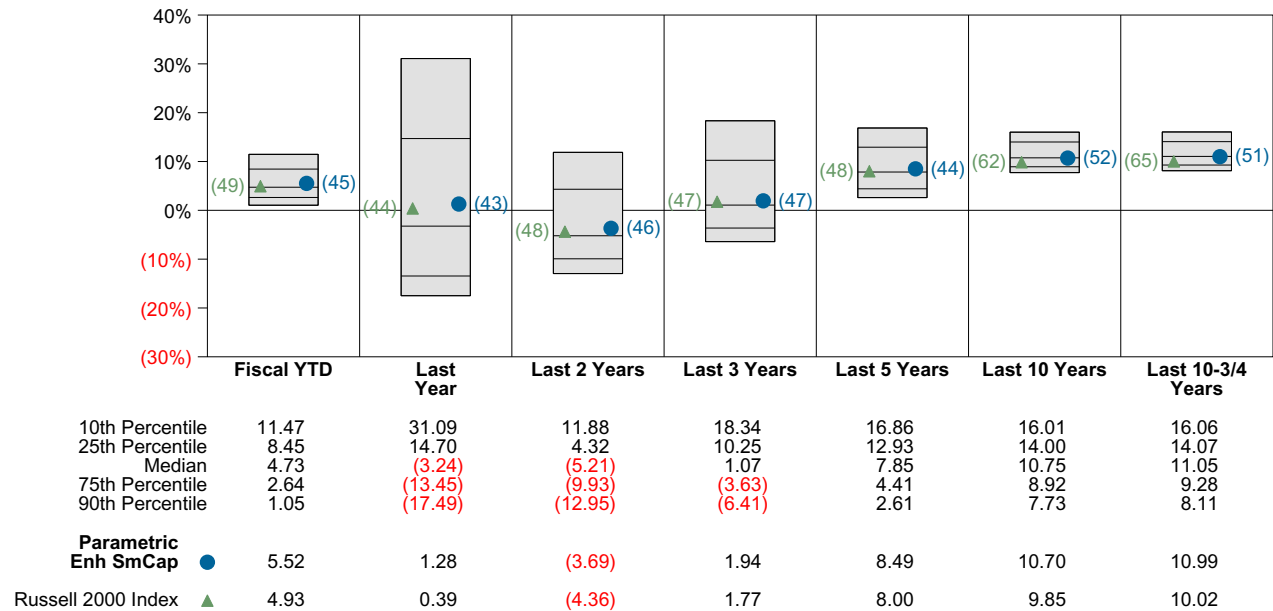
## Quarterly Summary and Highlights

- Parametric Enh SmCap's portfolio posted a 5.52% return for the quarter placing it in the 45 percentile of the Callan Small Capitalization group for the quarter and in the 43 percentile for the last year.
- Parametric Enh SmCap's portfolio outperformed the Russell 2000 Index by 0.59% for the quarter and outperformed the Russell 2000 Index for the year by 0.89%.

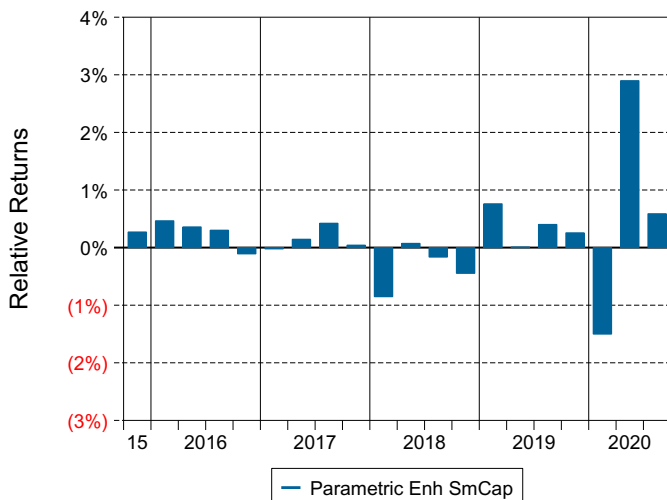
## Quarterly Asset Growth

Beginning Market Value	\$149,763,050
Net New Investment	\$-524,155
Investment Gains/(Losses)	\$8,282,393
Ending Market Value	\$157,521,288

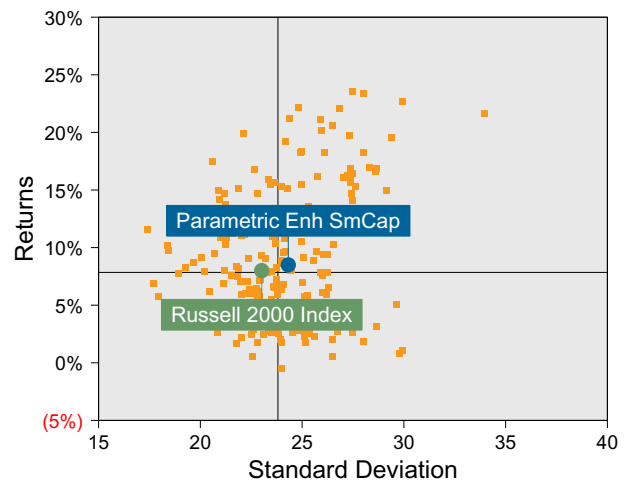
## Performance vs Callan Small Capitalization (Gross)



## Relative Return vs Russell 2000 Index



## Callan Small Capitalization (Gross) Annualized Five Year Risk vs Return



# International Equities

## Period Ended September 30, 2020

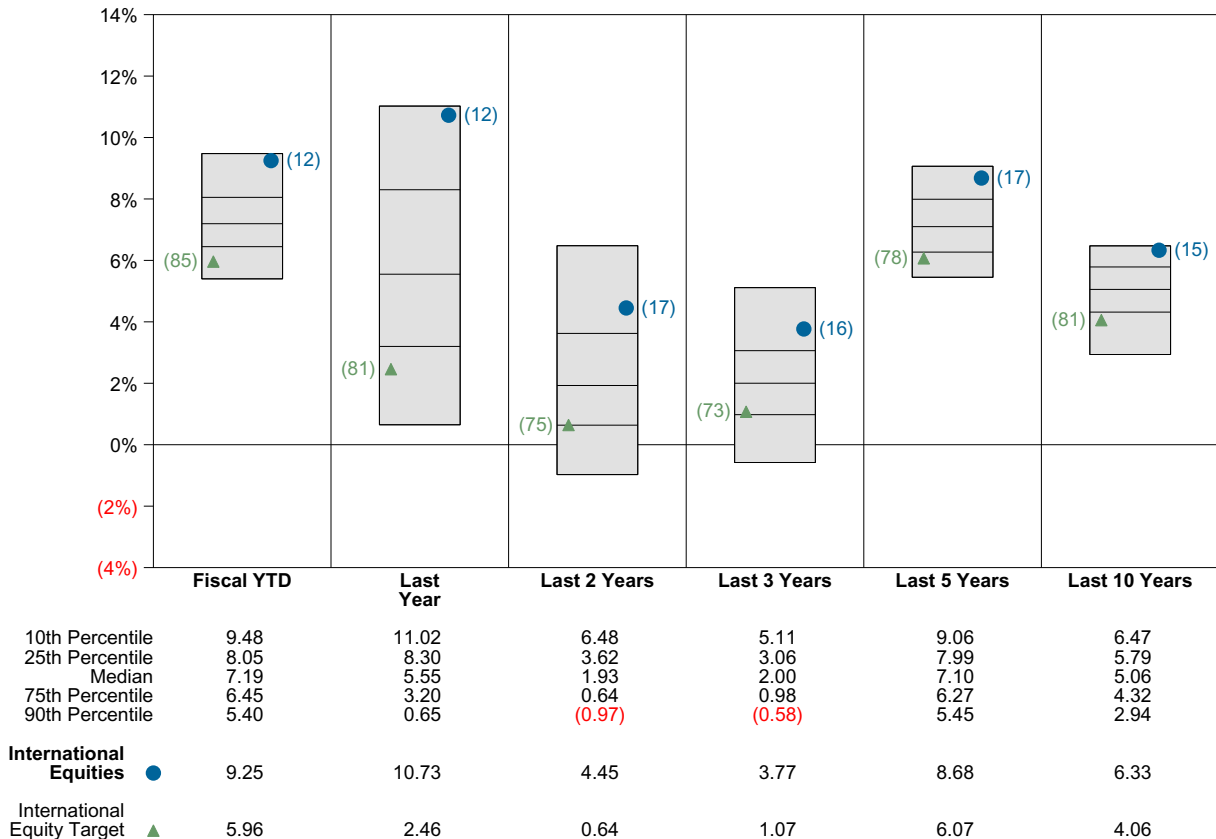
### Quarterly Summary and Highlights

- International Equities's portfolio posted a 9.25% return for the quarter placing it in the 12 percentile of the Public Fund - International Equity group for the quarter and in the 12 percentile for the last year.
- International Equities's portfolio outperformed the International Equity Target by 3.29% for the quarter and outperformed the International Equity Target for the year by 8.27%.

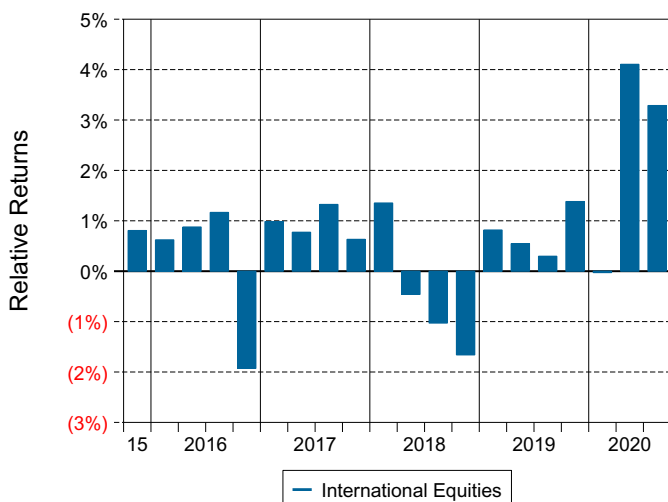
### Quarterly Asset Growth

Beginning Market Value	\$886,643,373
Net New Investment	\$-1,433,432
Investment Gains/(Losses)	\$82,003,551
Ending Market Value	\$967,213,491

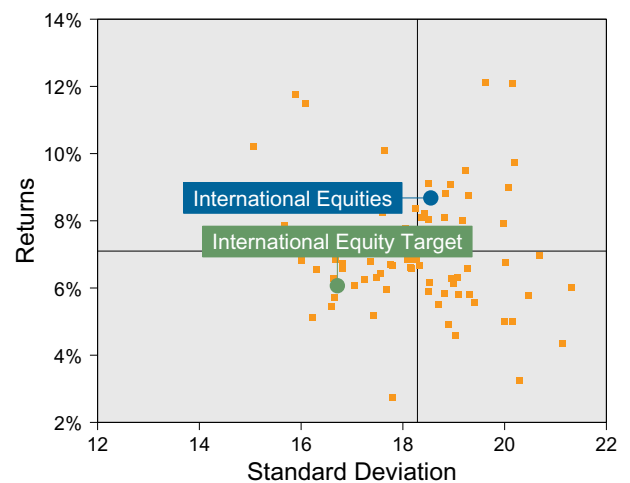
### Performance vs Public Fund - International Equity (Gross)



### Relative Return vs International Equity Target



### Public Fund - International Equity (Gross) Annualized Five Year Risk vs Return



# DFA International Small Cap Value Fund

## Period Ended September 30, 2020

### Investment Philosophy

The International Small Cap Value Portfolio invests in the stocks of small, non-US developed markets companies that Dimensional believes to be value stocks at the time of purchase. Specifically, it looks at companies that fall within the smallest 8-10% of each country's market capitalization, and who's shares have a high book value in relation to their market value (BtM). It does not invest in emerging markets.

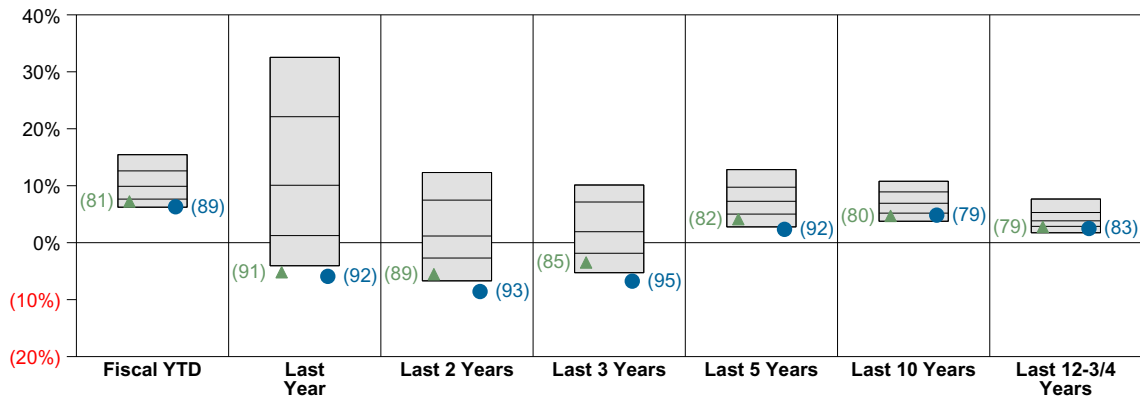
### Quarterly Summary and Highlights

- DFA Intl Small Cap Value's portfolio posted a 6.30% return for the quarter placing it in the 89 percentile of the Callan International Small Cap Mut Funds group for the quarter and in the 92 percentile for the last year.
- DFA Intl Small Cap Value's portfolio underperformed the World ex US SC Value by 0.94% for the quarter and underperformed the World ex US SC Value for the year by 0.73%.

### Quarterly Asset Growth

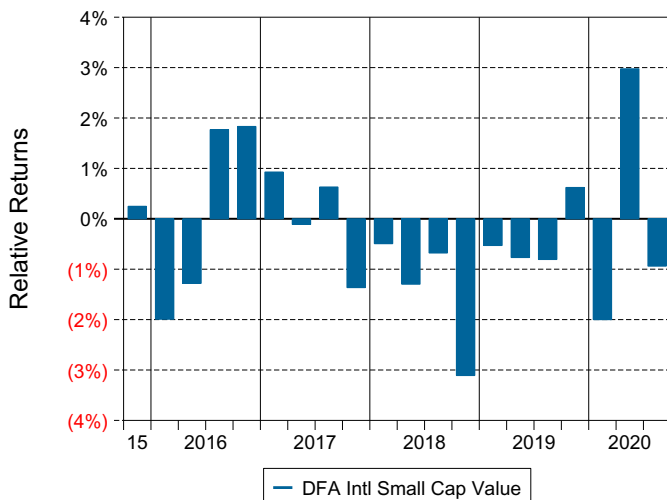
Beginning Market Value	\$62,992,993
Net New Investment	\$0
Investment Gains/(Losses)	\$3,968,419
Ending Market Value	\$66,961,412

### Performance vs Callan International Small Cap Mut Funds (Net)

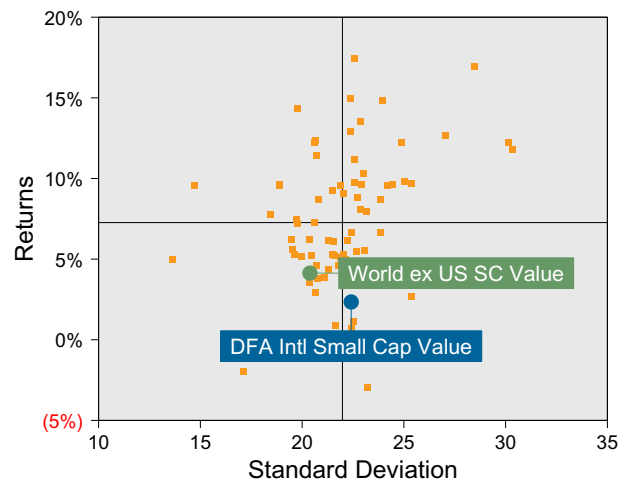


	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 12-3/4 Years
10th Percentile	15.45	32.54	12.32	10.13	12.83	10.78	7.67
25th Percentile	12.60	22.12	7.47	7.14	9.74	8.91	5.29
Median	9.90	10.08	1.17	1.92	7.27	6.92	3.84
75th Percentile	7.65	1.24	(2.70)	(1.86)	5.02	5.19	2.86
90th Percentile	6.23	(4.05)	(6.70)	(5.27)	2.77	3.76	1.74
<b>DFA Intl Small Cap Value</b>	6.30	(5.91)	(8.58)	(6.75)	2.34	4.83	2.49
World ex US SC Value	7.24	(5.19)	(5.54)	(3.48)	4.13	4.70	2.78

### Relative Return vs World ex US SC Value



### Callan International Small Cap Mut Funds (Net) Annualized Five Year Risk vs Return



# Northern Tr AM Wrld ex US Period Ended September 30, 2020

## Investment Philosophy

The Fund's objective is to provide investment results that approximate the overall performance of the MSCI World ex-US Equity Index.

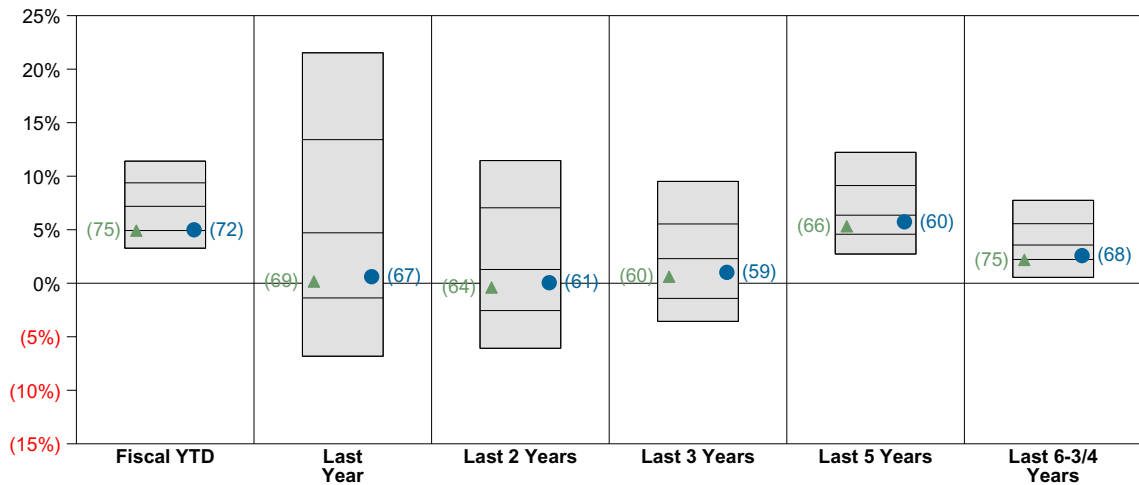
## Quarterly Summary and Highlights

- Northern Tr AM Wrld ex US's portfolio posted a 4.99% return for the quarter placing it in the 72 percentile of the Callan Non-US Equity group for the quarter and in the 67 percentile for the last year.
- Northern Tr AM Wrld ex US's portfolio outperformed the MSCI World ex US by 0.07% for the quarter and outperformed the MSCI World ex US for the year by 0.45%.

## Quarterly Asset Growth

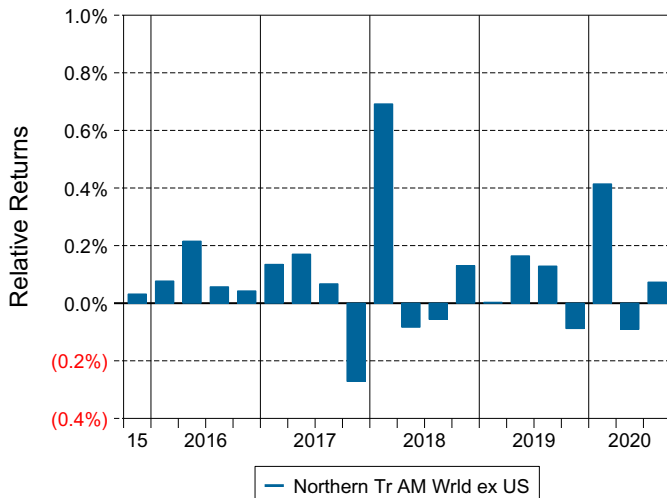
Beginning Market Value	\$337,298,788
Net New Investment	\$-21,894
Investment Gains/(Losses)	\$16,842,122
Ending Market Value	\$354,119,016

## Performance vs Callan Non-US Equity (Gross)

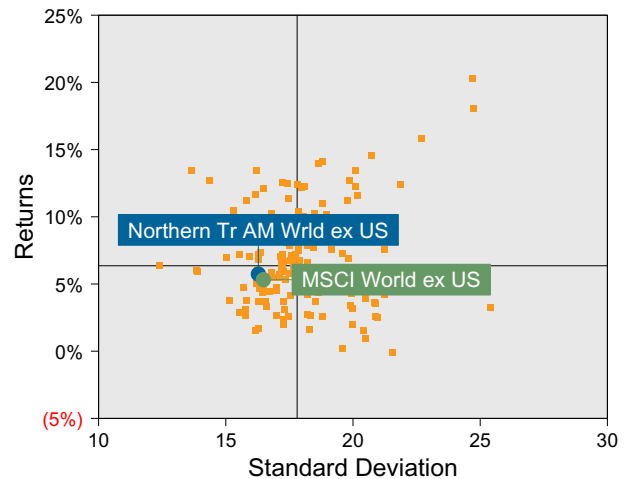


	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6-3/4 Years
10th Percentile	11.41	21.53	11.46	9.51	12.23	7.75
25th Percentile	9.38	13.42	7.05	5.54	9.13	5.56
Median	7.18	4.71	1.28	2.30	6.36	3.57
75th Percentile	4.92	(1.37)	(2.55)	(1.42)	4.58	2.22
90th Percentile	3.27	(6.82)	(6.08)	(3.56)	2.73	0.55
Northern Tr AM Wrld ex US	● 4.99	0.61	0.05	1.02	5.74	2.58
MSCI World ex US	▲ 4.92	0.16	(0.39)	0.62	5.32	2.18

## Relative Return vs MSCI World ex US



## Callan Non-US Equity (Gross) Annualized Five Year Risk vs Return





# Wellington Management Period Ended September 30, 2020

## Investment Philosophy

The International Small Cap Opportunities investment approach is bottom-up focused, and leverages the global research resources at Wellington Management. In implementing purchase decisions, consideration is given to the size, liquidity, and volatility of these prospects. Sell decisions are based on changing fundamentals or valuations, or on finding better opportunities elsewhere. The assets are not hedged.

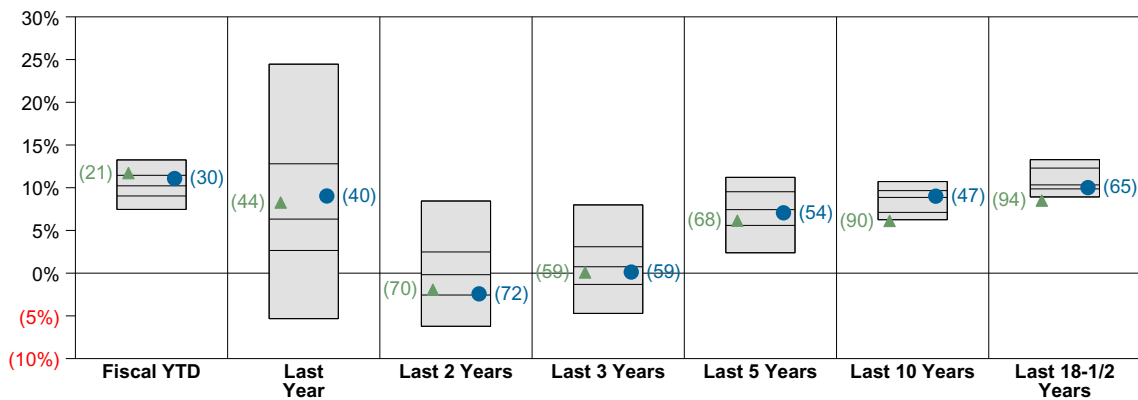
## Quarterly Summary and Highlights

- Wellington Management's portfolio posted a 11.08% return for the quarter placing it in the 30 percentile of the Callan International Small Cap group for the quarter and in the 40 percentile for the last year.
- Wellington Management's portfolio underperformed the S&P BMI EPAC <\$2 B by 0.64% for the quarter and outperformed the S&P BMI EPAC <\$2 B for the year by 0.76%.

## Quarterly Asset Growth

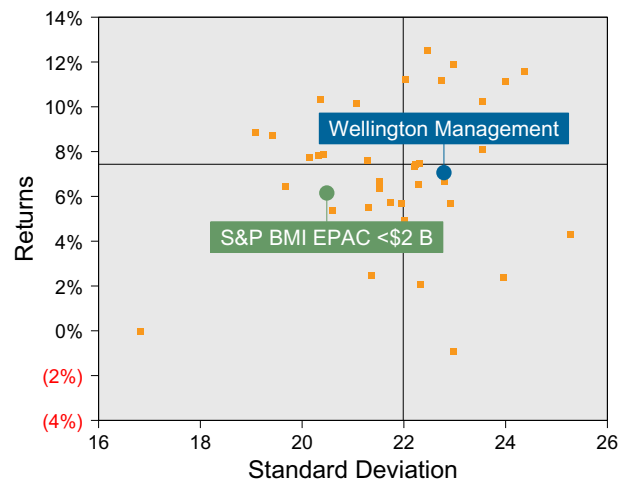
Beginning Market Value	\$70,434,081
Net New Investment	\$-147,563
Investment Gains/(Losses)	\$7,790,285
Ending Market Value	\$78,076,803

## Performance vs Callan International Small Cap (Gross)



10th Percentile	13.26	24.46	8.44	7.99	11.22	10.72	13.28
25th Percentile	11.45	12.80	2.48	3.09	9.53	9.66	12.30
Median	10.22	6.33	(0.18)	0.75	7.43	8.87	10.33
75th Percentile	9.04	2.66	(2.56)	(1.32)	5.59	7.11	9.86
90th Percentile	7.46	(5.32)	(6.22)	(4.71)	2.38	6.25	8.92

## Callan International Small Cap (Gross) Annualized Five Year Risk vs Return



## Relative Return vs S&P BMI EPAC <\$2 B



# William Blair

## Period Ended September 30, 2020

### Investment Philosophy

One of the basic investment tenets of William Blair & Company has been its focus on quality growth companies. They believe that investing in quality growth companies will generate above average results with generally less risk than the market. This opportunity exists because they believe the market underestimates the durability and rate of growth in companies that have the following characteristics: strong management with a unique vision, competitive advantages that prolong the duration and size of earnings growth, and conservative financing. Internationally, they believe that this philosophy can be combined with strategic flexibility in managing geographic exposure, capitalization, sector emphasis, and relative growth and valuation at the portfolio level in order to provide an appropriate degree of adaptability to cyclical conditions.

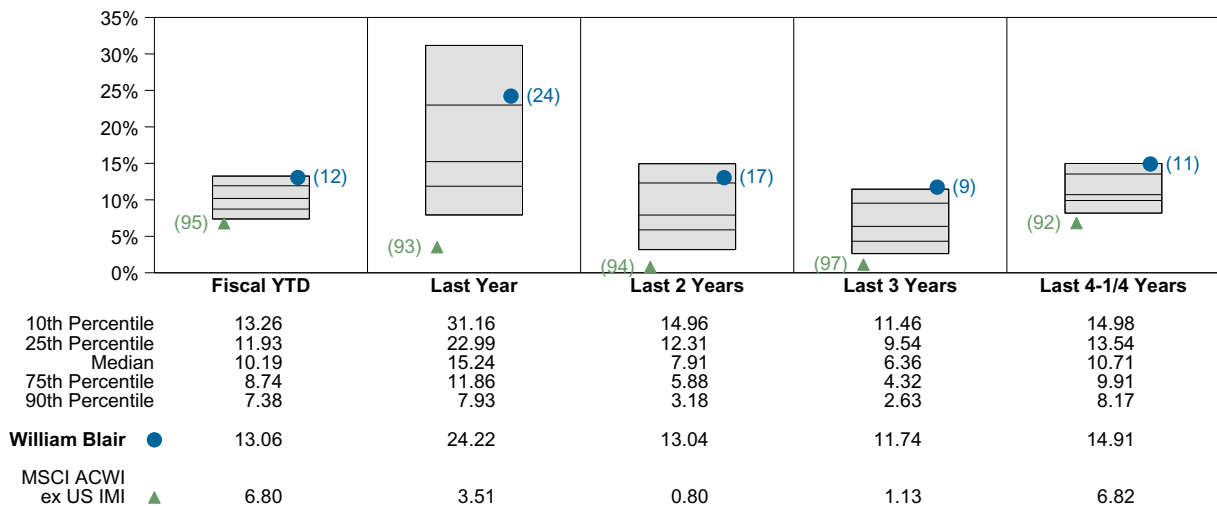
### Quarterly Summary and Highlights

- William Blair's portfolio posted a 13.06% return for the quarter placing it in the 12 percentile of the Callan Non-US All Country Growth Equity group for the quarter and in the 24 percentile for the last year.
- William Blair's portfolio outperformed the MSCI ACWI ex US IMI by 6.26% for the quarter and outperformed the MSCI ACWI ex US IMI for the year by 20.71%.

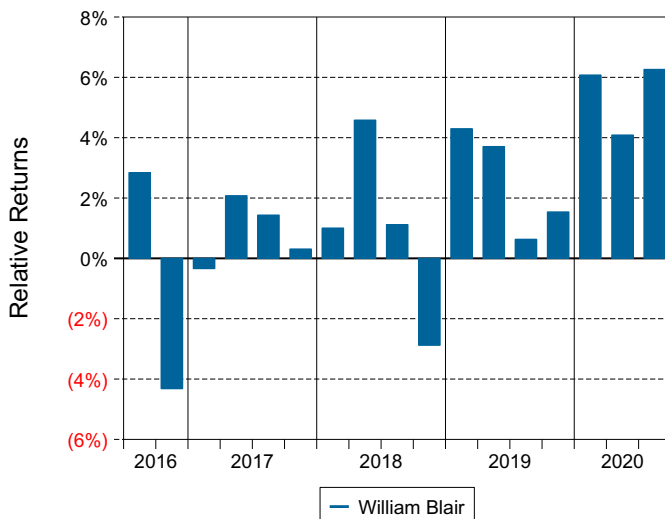
### Quarterly Asset Growth

Beginning Market Value	\$217,602,222
Net New Investment	\$-175,280
Investment Gains/(Losses)	\$28,406,296
Ending Market Value	\$245,833,238

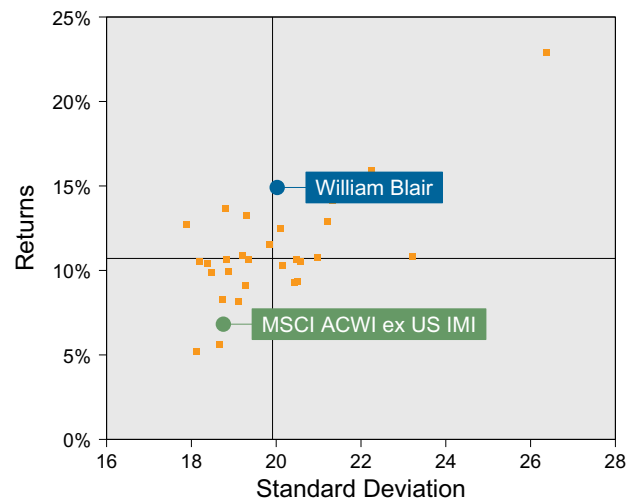
### Performance vs Callan Non-US All Country Growth Equity (Gross)



### Relative Return vs MSCI ACWI ex US IMI



### Callan Non-US All Country Growth Equity (Gross) Annualized Four and One-Quarter Year Risk vs Return



# Axiom Emerging Markets

## Period Ended September 30, 2020

### Investment Philosophy

The Emerging Markets Equity strategy seeks to invest in emerging market securities issued by companies whose key business drivers are both improving and exceeding expectations, as determined by Axiom's stock selection techniques focused on fundamental company analysis. The strategy considers companies either (i) located in countries that are not included in the MSCI Developed Markets Index series or (ii) that derive a majority of their revenues or assets from a country or countries not included in the MSCI Developed Markets Index series, in each case at the time of investment. Although the Manager generally expects the strategy's investment portfolio to be geographically diverse, there are no prescribed limits on geographic distribution of the strategy's investments and the strategy has the authority to invest in securities traded in securities markets or any country in the world.

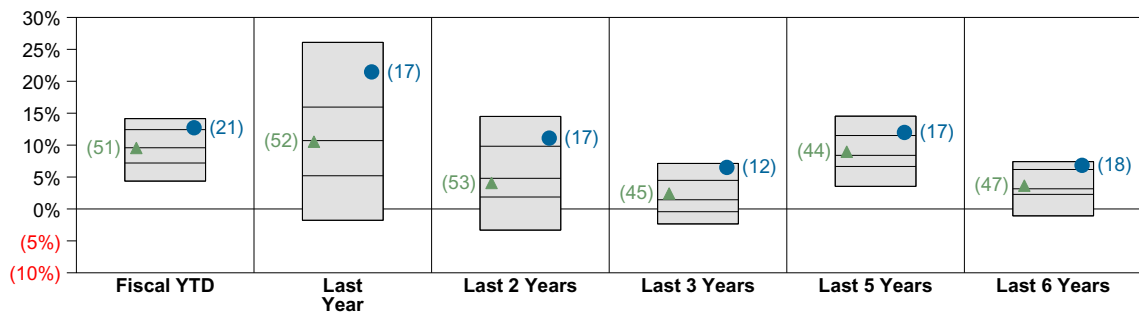
### Quarterly Summary and Highlights

- Axiom Emerging Markets's portfolio posted a 12.72% return for the quarter placing it in the 21 percentile of the Callan Emerging Markets Equity Mut Funds group for the quarter and in the 17 percentile for the last year.
- Axiom Emerging Markets's portfolio outperformed the MSCI EM by 3.16% for the quarter and outperformed the MSCI EM for the year by 10.93%.

### Quarterly Asset Growth

Beginning Market Value	\$149,376,770
Net New Investment	\$0
Investment Gains/(Losses)	\$18,998,267
Ending Market Value	\$168,375,037

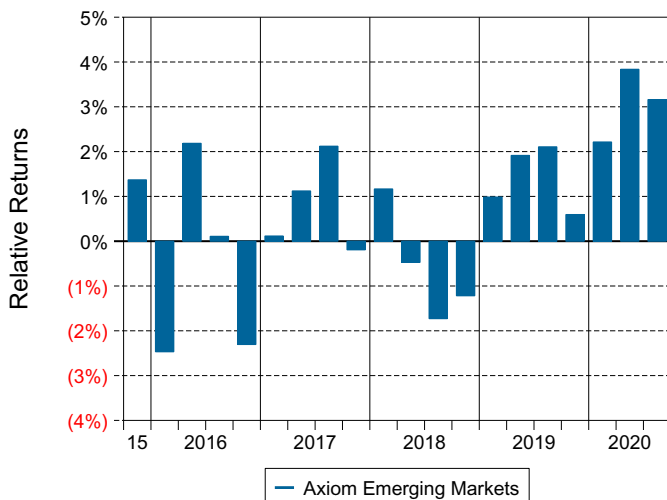
### Performance vs Callan Emerging Markets Equity Mut Funds (Net)



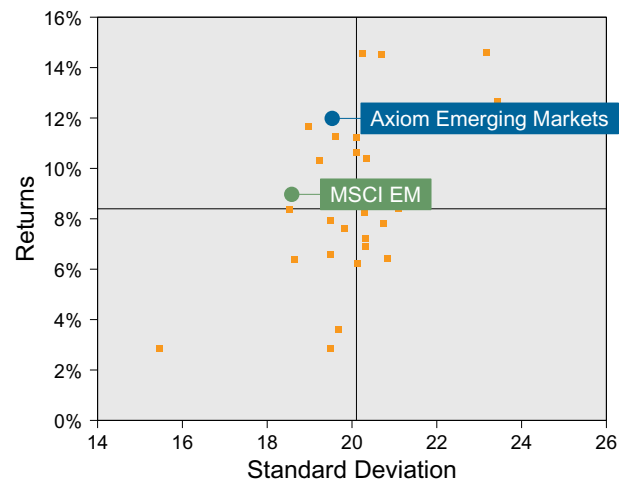
10th Percentile	14.15	26.10	14.49	7.13	14.54	7.41
25th Percentile	12.43	15.96	9.83	4.48	11.50	6.18
Median	9.58	10.70	4.80	1.44	8.40	3.16
75th Percentile	7.20	5.20	1.87	(0.43)	6.66	2.29
90th Percentile	4.36	(1.77)	(3.32)	(2.34)	3.54	(1.08)

<b>Axiom Emerging Markets</b>	●	12.72	21.47	11.10	6.51	11.98	6.83
MSCI EM	▲	9.56	10.54	4.08	2.42	8.97	3.65

### Relative Return vs MSCI EM



### Callan Emerging Markets Equity Mut Funds (Net) Annualized Five Year Risk vs Return



# DFA Emerging Markets Period Ended September 30, 2020

## Investment Philosophy

The Emerging Markets Small Cap Portfolio invests in small cap emerging markets companies. Presently, this means investment in companies whose market capitalization is less than \$2.3 billion at the time of purchase. Dimensional considers, among other things, information disseminated by the International Finance Corporation in determining and approving emerging market countries.

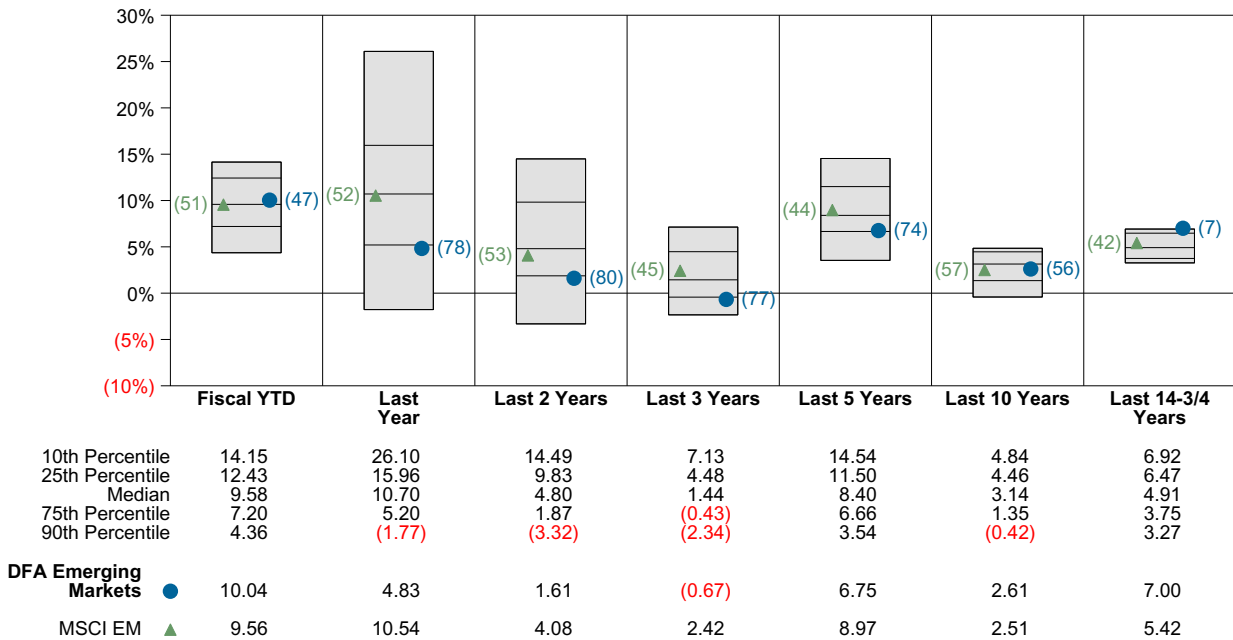
## Quarterly Summary and Highlights

- DFA Emerging Markets's portfolio posted a 10.04% return for the quarter placing it in the 47 percentile of the Callan Emerging Markets Equity Mut Funds group for the quarter and in the 78 percentile for the last year.
- DFA Emerging Markets's portfolio outperformed the MSCI EM by 0.48% for the quarter and underperformed the MSCI EM for the year by 5.71%.

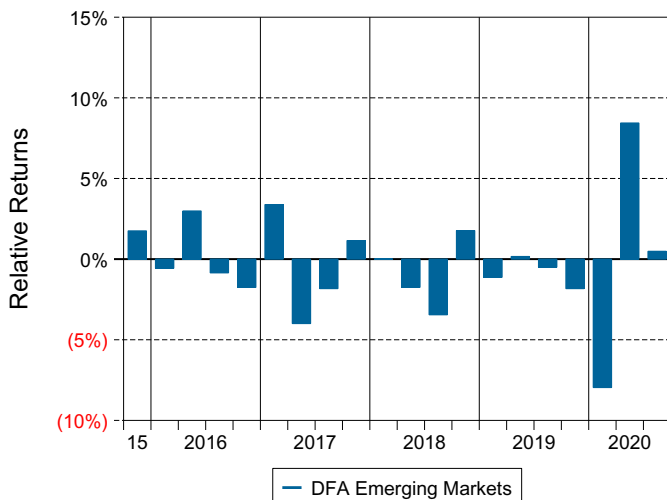
## Quarterly Asset Growth

Beginning Market Value	\$48,934,224
Net New Investment	\$0
Investment Gains/(Losses)	\$4,913,761
Ending Market Value	\$53,847,985

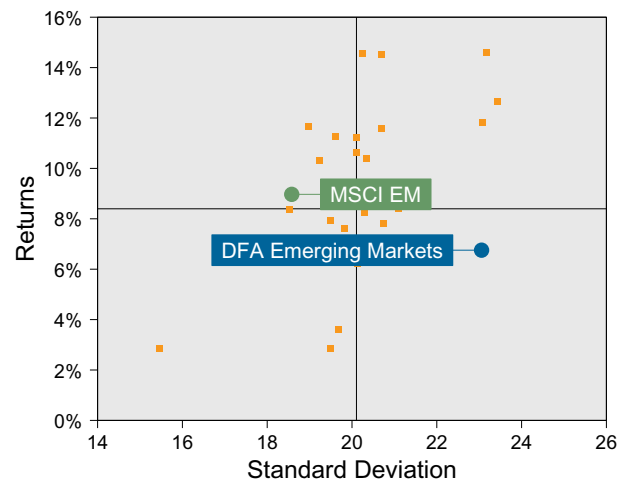
## Performance vs Callan Emerging Markets Equity Mut Funds (Net)



## Relative Return vs MSCI EM



## Callan Emerging Markets Equity Mut Funds (Net) Annualized Five Year Risk vs Return



# EPOCH Investment Period Ended September 30, 2020

## Investment Philosophy

Epoch seeks to produce superior risk adjusted returns by building portfolios of businesses with outstanding risk/reward profiles without running a high degree of capital risk. They analyze businesses in the same manner private investors would in looking to purchase the entire company. The strategy only invests in businesses that are understood and where they have confidence in the financial statements. They seek businesses that generate "free cash flow" and securities that have unrecognized potential yet possess a combination of above average yield, above average free cash flow growth, and/or below average valuation. Global Choice is a "best ideas" portfolio at Epoch with every stock held in other strategies managed by the firm.

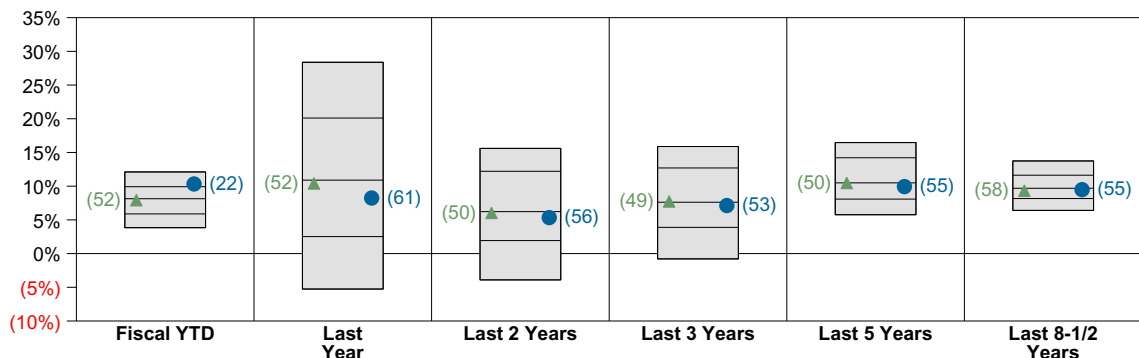
## Quarterly Summary and Highlights

- EPOCH Investment's portfolio posted a 10.32% return for the quarter placing it in the 22 percentile of the Callan Global Equity group for the quarter and in the 61 percentile for the last year.
- EPOCH Investment's portfolio outperformed the MSCI World by 2.40% for the quarter and underperformed the MSCI World for the year by 2.17%.

## Quarterly Asset Growth

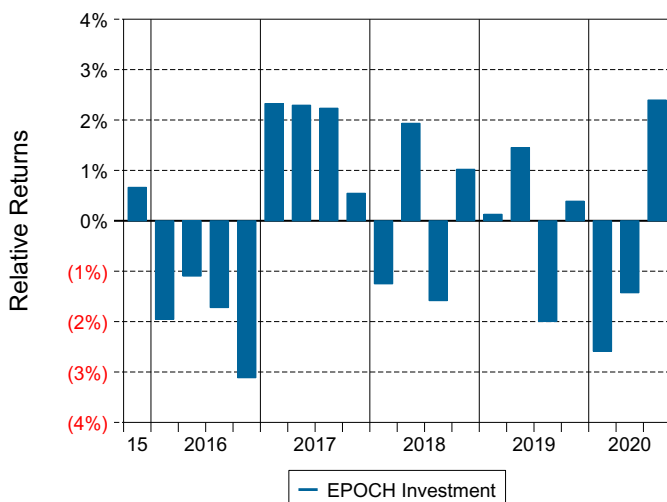
Beginning Market Value	\$435,815,791
Net New Investment	\$-689,710
Investment Gains/(Losses)	\$44,975,457
Ending Market Value	\$480,101,539

## Performance vs Callan Global Equity (Gross)

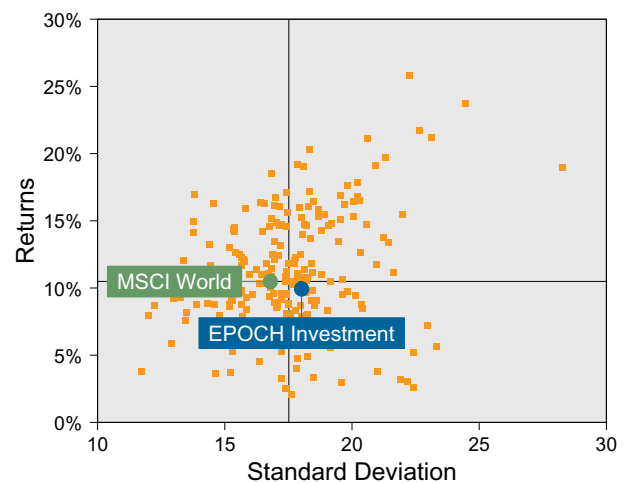


10th Percentile	12.11	28.38	15.61	15.88	16.47	13.74
25th Percentile	9.92	20.11	12.21	12.70	14.21	11.62
Median	8.14	10.89	6.22	7.62	10.49	9.69
75th Percentile	5.89	2.52	1.93	3.89	8.08	8.16
90th Percentile	3.84	(5.26)	(3.90)	(0.79)	5.76	6.40
<b>EPOCH Investment</b> ●	10.32	8.24	5.33	7.13	9.93	9.48
<b>MSCI World</b> ▲	7.93	10.41	6.03	7.74	10.48	9.33

## Relative Return vs MSCI World



## Callan Global Equity (Gross) Annualized Five Year Risk vs Return



# LSV Asset Management

## Period Ended September 30, 2020

### Investment Philosophy

The Global Value (ACWI) Equity strategy is managed using quantitative techniques to select individual securities in a risk-controlled, bottom-up approach. Value factors and security selection dominate sector/industry factors as explainers of performance. **The Benchmark is comprised of MSCI ACWI through June 30, 2019; MSCI ACWI IMI Index thereafter.**

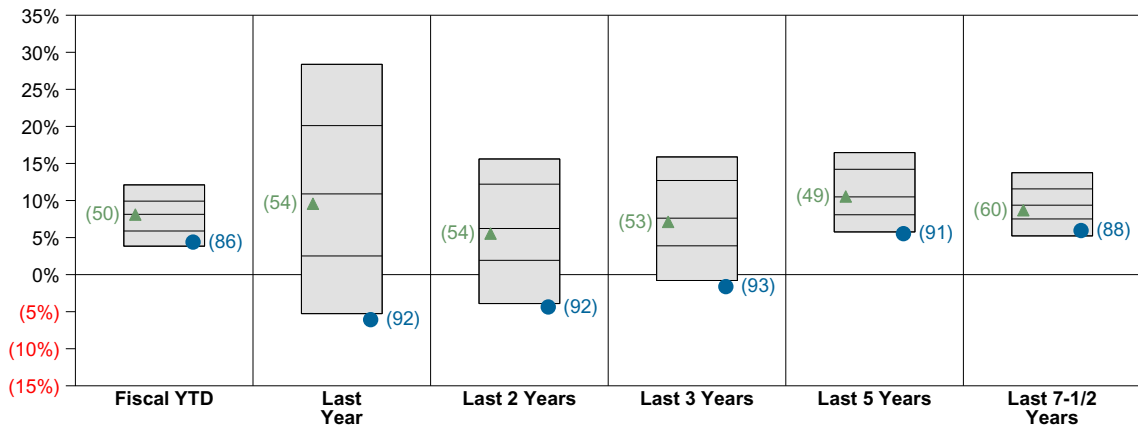
### Quarterly Summary and Highlights

- LSV Asset Management's portfolio posted a 4.39% return for the quarter placing it in the 86 percentile of the Callan Global Equity group for the quarter and in the 92 percentile for the last year.
- LSV Asset Management's portfolio underperformed the Benchmark by 3.72% for the quarter and underperformed the Benchmark for the year by 15.64%.

### Quarterly Asset Growth

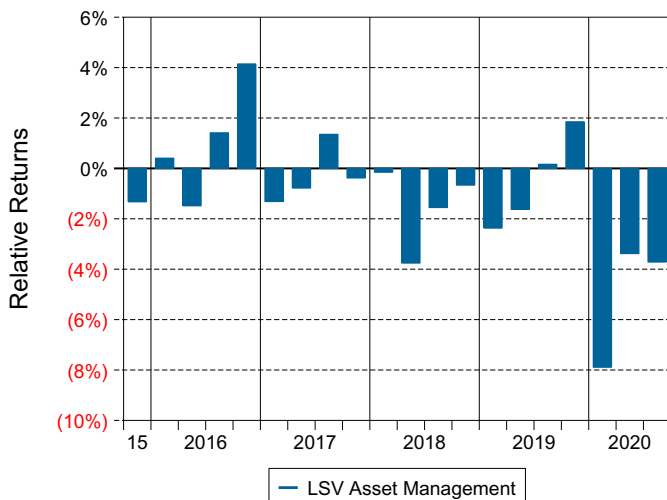
Beginning Market Value	\$444,925,217
Net New Investment	\$-109,899
Investment Gains/(Losses)	\$19,524,767
Ending Market Value	\$464,340,085

### Performance vs Callan Global Equity (Gross)

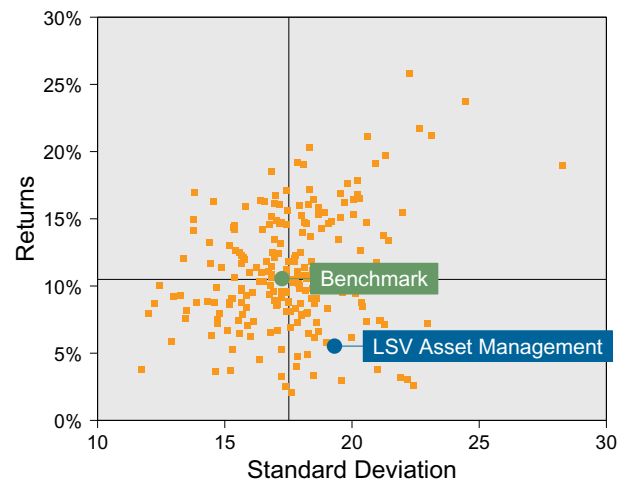


	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 7-1/2 Years
10th Percentile	12.11	28.38	15.61	15.88	16.47	13.75
25th Percentile	9.92	20.11	12.21	12.70	14.21	11.57
Median	8.14	10.89	6.22	7.62	10.49	9.37
75th Percentile	5.89	2.52	1.93	3.89	8.08	7.51
90th Percentile	3.84	(5.26)	(3.90)	(0.79)	5.76	5.22
<b>LSV Asset Management</b>	● 4.39	(6.08)	(4.37)	(1.62)	5.53	5.95
<b>Benchmark</b>	▲ 8.11	9.57	5.54	7.12	10.55	8.69

### Relative Return vs Benchmark



### Callan Global Equity (Gross) Annualized Five Year Risk vs Return



## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 19-3/4 Years
<b>Private Equity</b>	<b>(0.73%)</b>	<b>2.73%</b>	<b>6.24%</b>	<b>3.78%</b>	<b>2.79%</b>
Adams Street Direct Co-Invest Fd	(26.01%)	(58.45%)	(38.53%)	(24.55%)	-
Adams Street Direct Fd 2010	0.08%	(0.89%)	10.88%	9.51%	-
Adams Street 1998 Partnership	(2.90%)	(0.40%)	2.57%	2.09%	1.76%
Adams Street 1999 Partnership	4.44%	10.64%	2.51%	3.01%	2.48%
Adams Street 2000 Partnership	(6.06%)	(3.78%)	4.58%	2.69%	3.31%
Adams Street 2001 Partnership	0.93%	(5.46%)	1.89%	0.68%	3.23%
Adams Street 2002 Partnership	(2.70%)	(0.84%)	(4.18%)	3.40%	-
Adams Street 2003 Partnership	(6.25%)	(7.59%)	2.14%	3.04%	-
Adams Street 2010 Partnership	1.29%	12.28%	15.70%	13.80%	-
Adams Street 2008 Fund	3.31%	11.01%	14.08%	14.55%	-
Adams Street 1999 Non-US	0.67%	1.75%	1.84%	4.01%	5.46%
Adams Street 2000 Non-US	(1.84%)	10.87%	6.92%	4.99%	3.67%
Adams Street 2001 Non-US	(2.72%)	0.96%	7.21%	(0.37%)	-
Adams Street 2002 Non-US	(4.49%)	(5.26%)	0.29%	3.92%	-
Adams Street 2003 Non-US	(2.10%)	(9.50%)	(8.33%)	3.81%	-
Adams Street 2004 Non-US	(1.48%)	(1.70%)	3.83%	2.23%	-
Adams Street 2010 Non-US	3.82%	15.75%	16.67%	17.14%	-
Adams Street 2010 NonUS Emg	(3.36%)	4.40%	11.02%	11.34%	-
Adams Street 2015 Global Fd	(2.13%)	14.50%	16.58%	-	-
Adams Street 2016 Global Fd	(1.84%)	9.87%	11.59%	-	-
Adams Street 2017 Global Fd	(1.45%)	9.79%	-	-	-
Adams Street 2018 Global Fd	(5.01%)	12.98%	-	-	-
Adams Street 2019 Global Fd	(4.81%)	-	-	-	-
Adams Street BVCF IV Fund	14.45%	(99.87%)	(89.03%)	(73.31%)	(18.10%)
BlackRock	(0.40%)	2.22%	4.33%	-	-
Remaining Misc. Funds*	2.13%	(5.18%)	1.26%	(2.41%)	-
Russell 1000 Index	9.47%	16.01%	12.38%	14.09%	7.15%
Russell 2000 Index	4.93%	0.39%	1.77%	8.00%	7.36%

\* Comprised of Matlin Patterson II, Matlin Patterson III, InvestAmerica Lewis & Clark, InvestAmerica L&C II, Corsair III, Capital Intl Fd V, Capital Intl Fd VI, EIG, Quantum Energy Partners, Hearthstone MSII, Hearthstone MSIII.

# Domestic Fixed Income Period Ended September 30, 2020

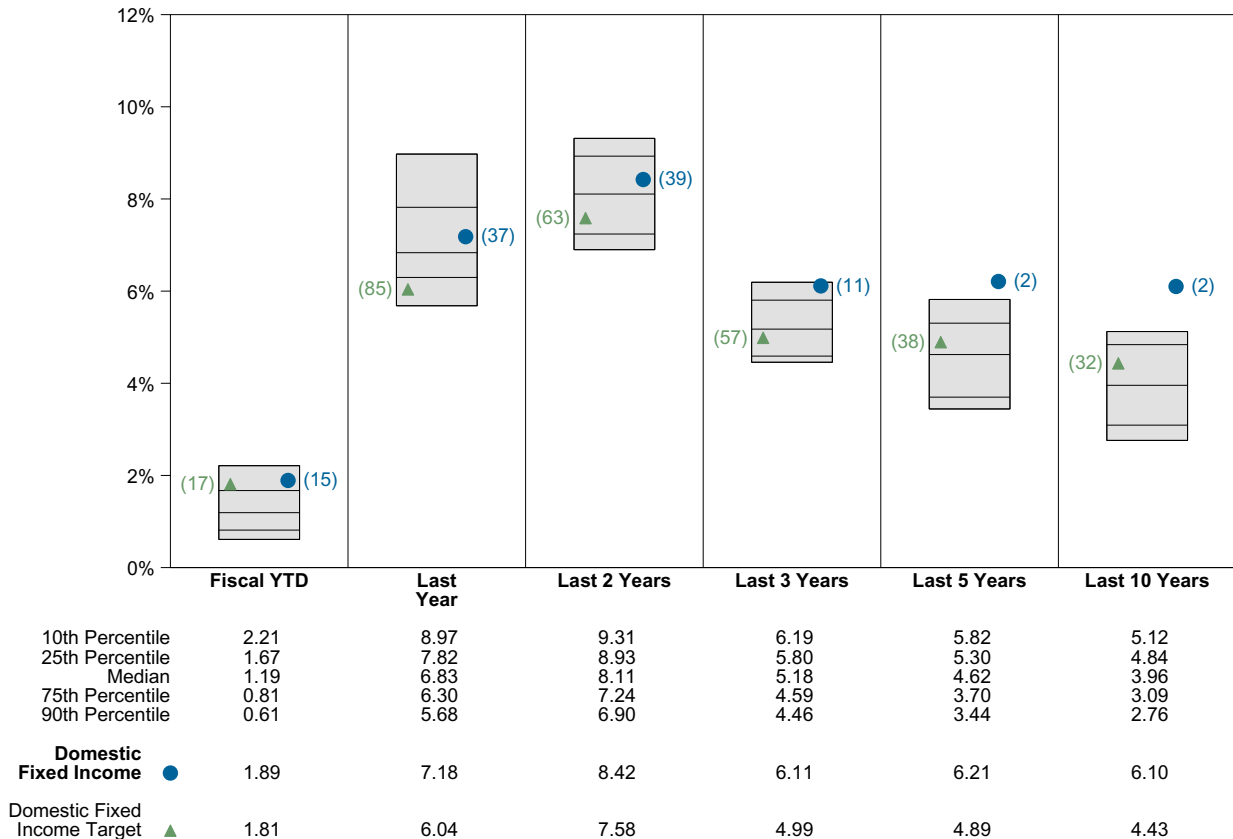
## Quarterly Summary and Highlights

- Domestic Fixed Income's portfolio posted a 1.89% return for the quarter placing it in the 15 percentile of the Public Fund - Domestic Fixed group for the quarter and in the 37 percentile for the last year.
- Domestic Fixed Income's portfolio outperformed the Domestic Fixed Income Target by 0.08% for the quarter and outperformed the Domestic Fixed Income Target for the year by 1.14%.

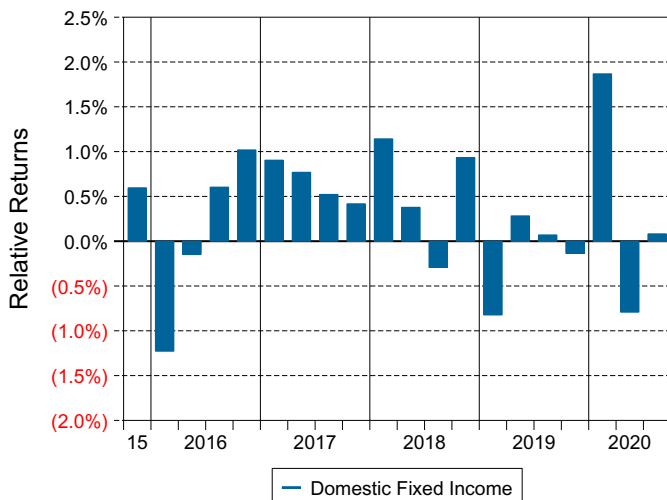
## Quarterly Asset Growth

Beginning Market Value	\$1,417,572,171
Net New Investment	\$54,071,670
Investment Gains/(Losses)	\$26,882,888
Ending Market Value	\$1,498,526,730

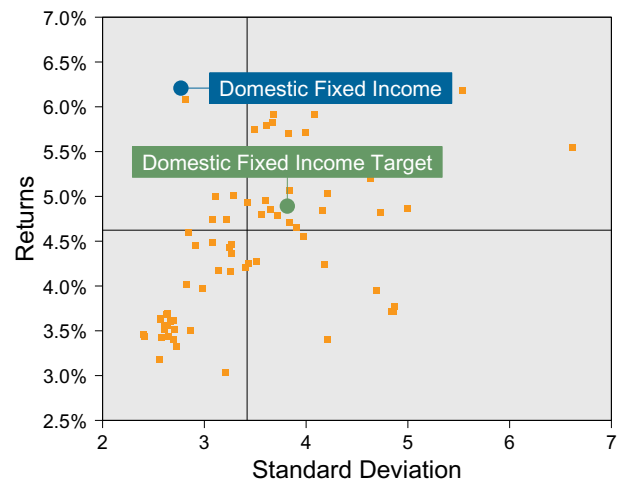
## Performance vs Public Fund - Domestic Fixed (Gross)



## Relative Returns vs Domestic Fixed Income Target



## Public Fund - Domestic Fixed (Gross) Annualized Five Year Risk vs Return





# Declaration Total Return Period Ended September 30, 2020

## Investment Philosophy

The Fund's portfolio holdings consist primarily of RMBS issued by private sector companies (Non-Agency RMBS) and government agencies (Agency MBS) and CMBS issued by private sector companies. Agency MBS includes securities issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Government National Mortgage Association (Ginnie Mae). Portfolio holdings may range from short tenure senior classes to stressed issues or subordinated securities with substantial risk of non-payment and correspondingly higher yields. Smaller portfolio allocations may include consumer asset-backed securities (ABS), or other structured credit securities and corporate bonds. As a diversification strategy and a potential hedge to credit risk, the Fund may invest in securities which tend to benefit from slow mortgage prepayments and economic growth, such as interest only (IO) MBS.

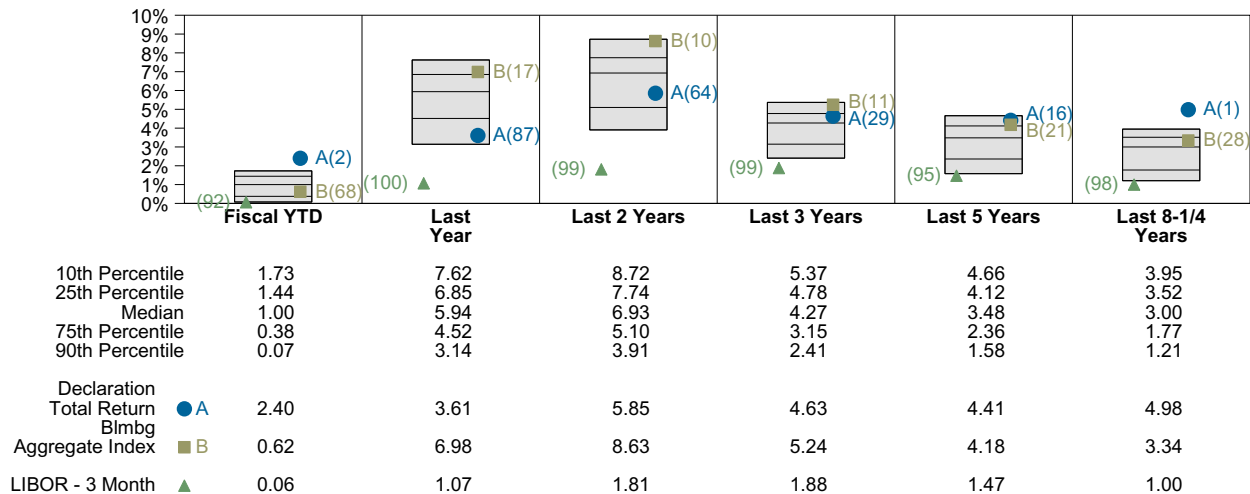
## Quarterly Summary and Highlights

- Declaration Total Return's portfolio posted a 2.40% return for the quarter placing it in the 2 percentile of the Callan Intermediate Fixed Inc Mut Funds group for the quarter and in the 87 percentile for the last year.
- Declaration Total Return's portfolio outperformed the LIBOR - 3 Month by 2.34% for the quarter and outperformed the LIBOR - 3 Month for the year by 2.54%.

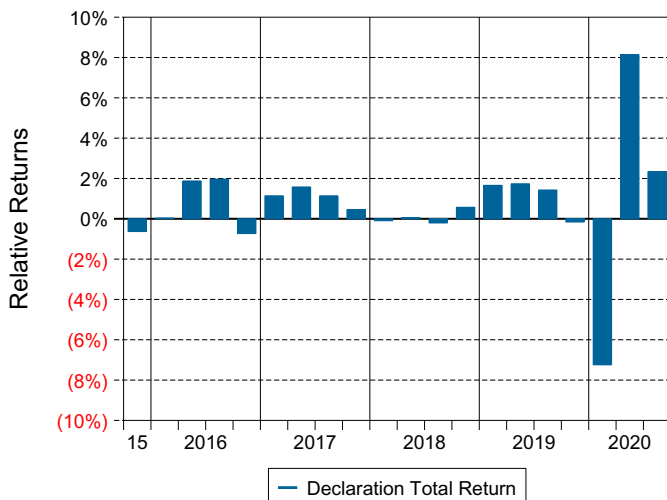
## Quarterly Asset Growth

Beginning Market Value	\$123,598,969
Net New Investment	-\$71,587
Investment Gains/(Losses)	\$2,962,660
Ending Market Value	\$126,490,042

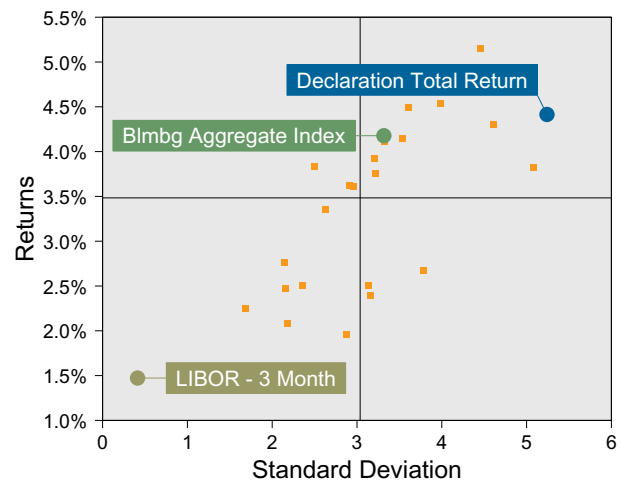
## Performance vs Callan Intermediate Fixed Inc Mut Funds (Net)



## Relative Return vs LIBOR - 3 Month



## Callan Intermediate Fixed Inc Mut Funds (Net) Annualized Five Year Risk vs Return



# PIMCO DiSCO II

## Period Ended September 30, 2020

### Investment Philosophy

The PIMCO Distressed Senior Credit Opportunities Fund is an opportunistic private-equity style Fund which seeks to provide investors enhanced returns principally through long-biased investments in undervalued senior and super senior structured credit securities that are expected to produce attractive levels of current income and that may also appreciate in value over the long term. The fund will look to capitalize on forced sales by liquidity constrained investors.

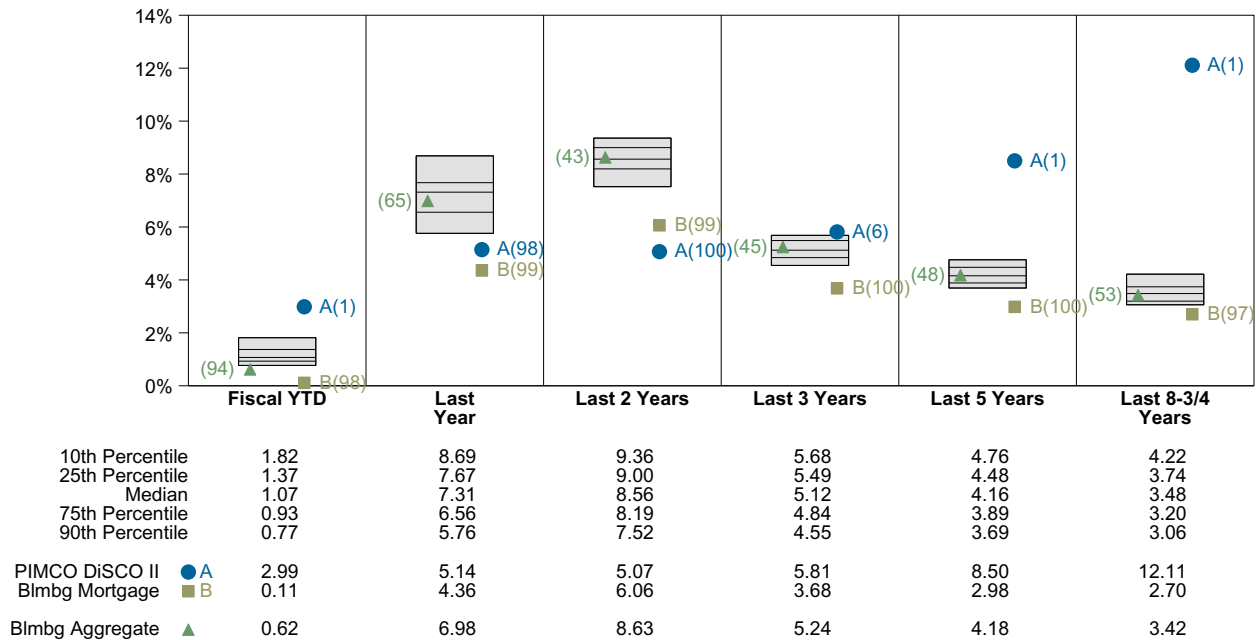
### Quarterly Summary and Highlights

- PIMCO DiSCO II's portfolio posted a 2.99% return for the quarter placing it in the 1 percentile of the Callan Core Bond Mutual Funds group for the quarter and in the 98 percentile for the last year.
- PIMCO DiSCO II's portfolio outperformed the Blmbg Aggregate by 2.37% for the quarter and underperformed the Blmbg Aggregate for the year by 1.84%.

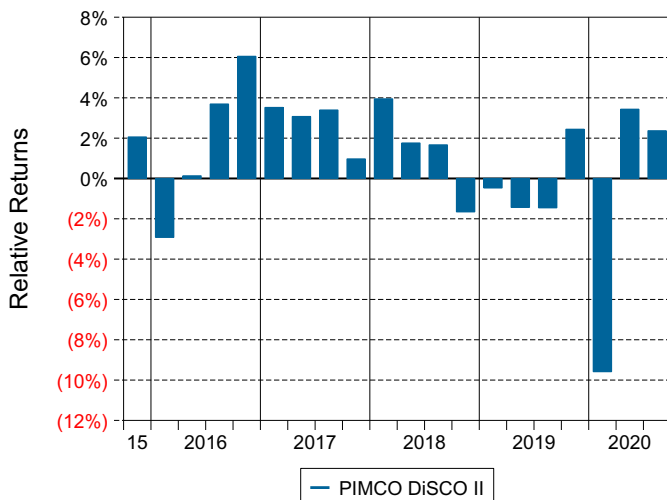
### Quarterly Asset Growth

Beginning Market Value	\$107,101,266
Net New Investment	\$0
Investment Gains/(Losses)	\$3,197,616
Ending Market Value	\$110,298,882

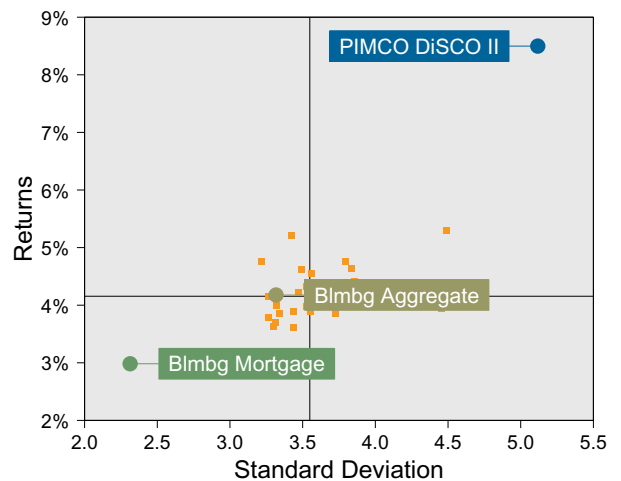
### Performance vs Callan Core Bond Mutual Funds (Net)



### Relative Return vs Blmbg Aggregate



### Callan Core Bond Mutual Funds (Net) Annualized Five Year Risk vs Return



# PIMCO Core Plus Constrained Period Ended September 30, 2020

## Investment Philosophy

PIMCO's investment process utilizes both "top-down" and "bottom-up" strategies. Top-down strategies focus on duration, yield curve positioning, volatility, and sector rotation. These strategies are deployed from a macro view of the portfolio driven by their secular outlook of the forces likely to influence the economy and financial markets over the next three to five years and their cyclical views of two- to four-quarter trends. Implementation in portfolios is effected by selecting securities that achieve the designated objectives. Bottom-up strategies drive their security selection process and facilitate the identification and analysis of undervalued securities. **The product changed from Commingled Fund to Separate Account in March 2014. \*Libor-3 month through February 28, 2017; Fund's performance through March 31, 2014; Libor-3 month through June 30, 2018; Bloomberg Aggregate thereafter.**

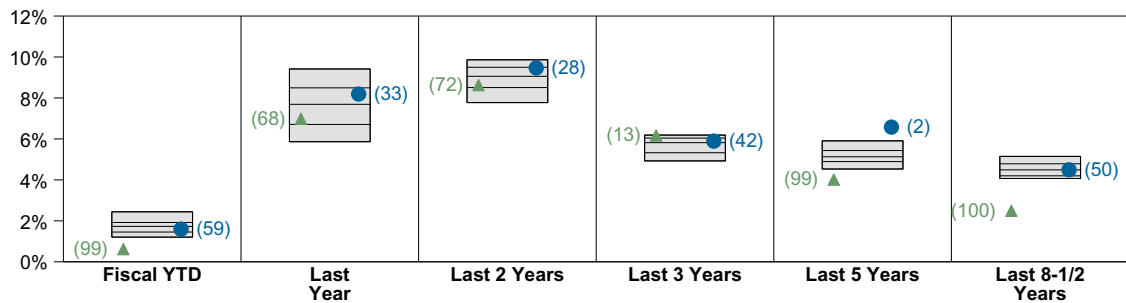
## Quarterly Summary and Highlights

- PIMCO Core Plus Constrained's portfolio posted a 1.59% return for the quarter placing it in the 59 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 33 percentile for the last year.
- PIMCO Core Plus Constrained's portfolio outperformed the Blended Benchmark\* by 0.97% for the quarter and outperformed the Blended Benchmark\* for the year by 1.21%.

## Quarterly Asset Growth

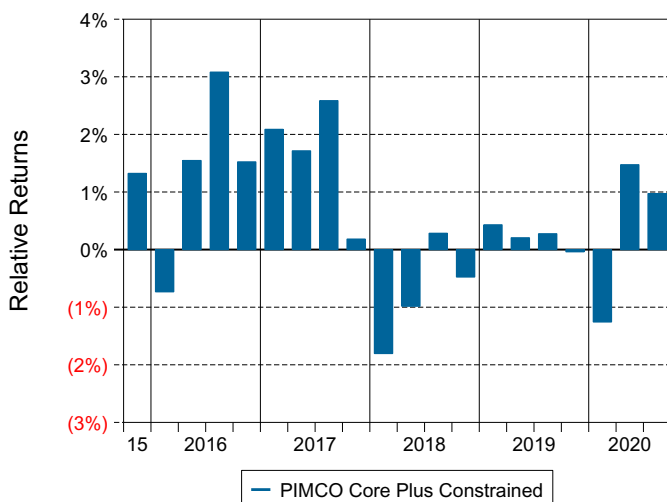
Beginning Market Value	\$332,401,854
Net New Investment	\$23,780,759
Investment Gains/(Losses)	\$5,304,448
Ending Market Value	\$361,487,061

## Performance vs Callan Core Plus Fixed Income (Gross)

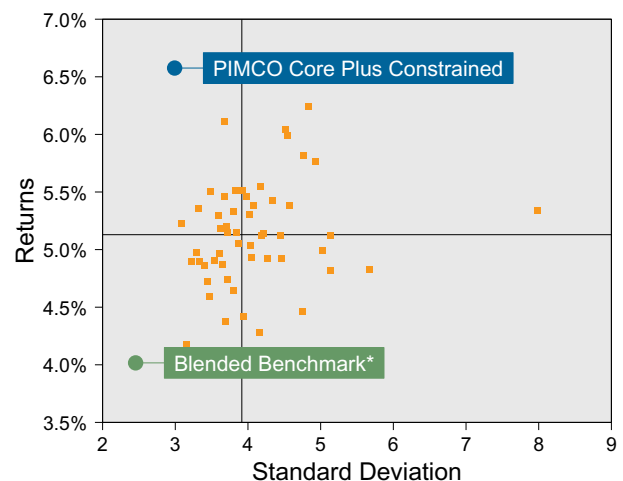


10th Percentile	2.44	9.42	9.86	6.19	5.91	5.15
25th Percentile	1.92	8.49	9.50	6.04	5.43	4.78
Median	1.73	7.69	9.06	5.82	5.13	4.49
75th Percentile	1.45	6.71	8.51	5.33	4.89	4.20
90th Percentile	1.20	5.86	7.77	4.93	4.53	4.07
<b>PIMCO Core Plus Constrained</b>	<b>● 1.59</b>	<b>8.19</b>	<b>9.47</b>	<b>5.89</b>	<b>6.58</b>	<b>4.49</b>
Blended Benchmark*	<b>▲ 0.62</b>	<b>6.98</b>	<b>8.63</b>	<b>6.17</b>	<b>4.02</b>	<b>2.49</b>

## Relative Return vs Blended Benchmark\*



## Callan Core Plus Fixed Income (Gross) Annualized Five Year Risk vs Return



# Prudential Core Period Ended September 30, 2020

## Investment Philosophy

The PGIM Fixed Income Core Fixed Income strategy seeks to provide +60 bps over the Bloomberg Barclays Aggregate Index over a market cycle. The strategy tends to generate its excess return from fairly equal increments of both sector allocation and subsector/security allocation. Duration and yield curve positioning is generally de-emphasized, but will be considered when market opportunities dictate. The primary way they add value is through intensive research-based sector, industry, and security selection. The strategy is predominately investment grade, but may also invest nominally in crossover/high yield bonds and emerging markets debt, when guidelines permit.

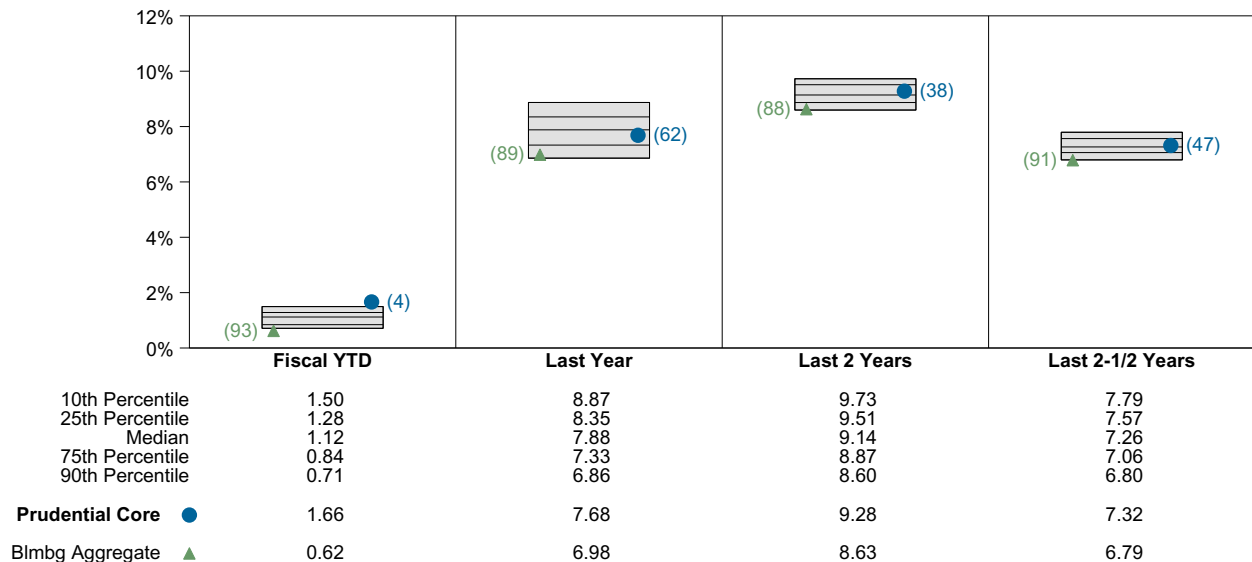
## Quarterly Summary and Highlights

- Prudential Core's portfolio posted a 1.66% return for the quarter placing it in the 4 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 62 percentile for the last year.
- Prudential Core's portfolio outperformed the Blmbg Aggregate by 1.04% for the quarter and outperformed the Blmbg Aggregate for the year by 0.70%.

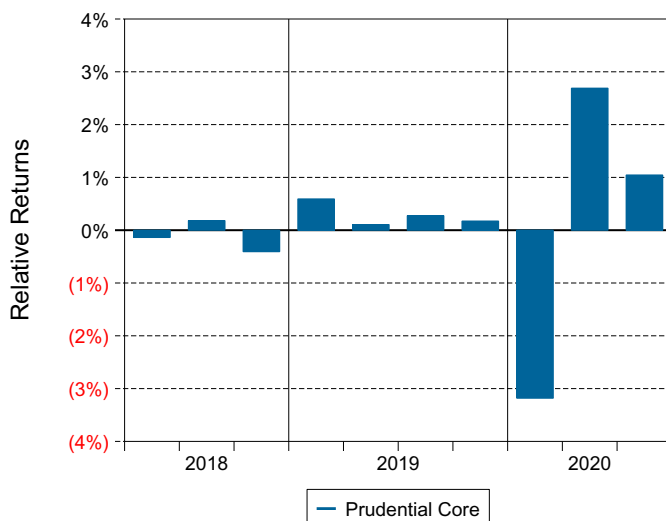
## Quarterly Asset Growth

Beginning Market Value	\$333,888,880
Net New Investment	\$23,897,018
Investment Gains/(Losses)	\$5,565,859
Ending Market Value	\$363,351,758

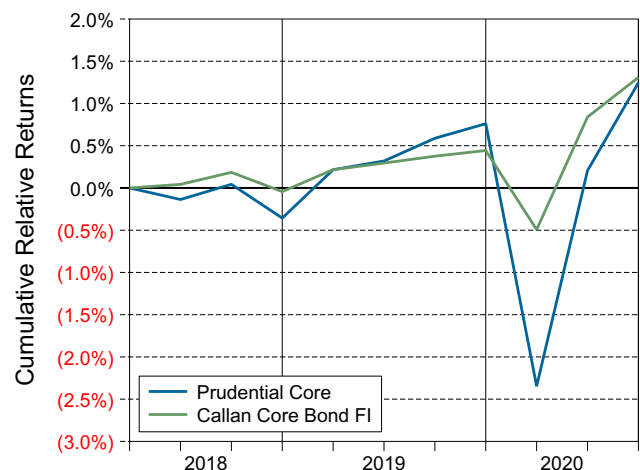
## Performance vs Callan Core Bond Fixed Income (Gross)



## Relative Return vs Blmbg Aggregate



## Cumulative Returns vs Blmbg Aggregate



# SSgA Long US Treas Index Period Ended September 30, 2020

## Investment Philosophy

The Fund seeks an investment return that approximates as closely as practicable, before expenses, the performance of the Barclays Capital U.S. Long Treasury Bond Index over the long term.

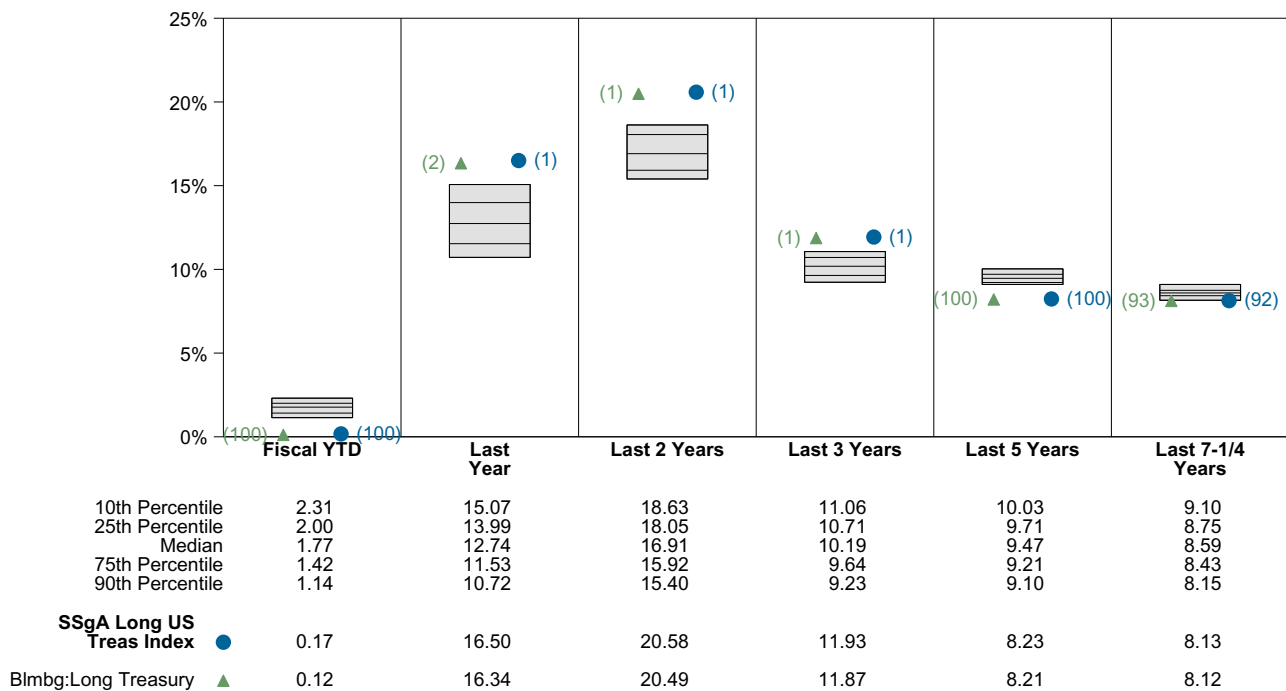
## Quarterly Summary and Highlights

- SSgA Long US Treas Index's portfolio posted a 0.17% return for the quarter placing it in the 100 percentile of the Callan Extended Maturity Fixed Income group for the quarter and in the 1 percentile for the last year.
- SSgA Long US Treas Index's portfolio outperformed the Blmbg:Long Treasury by 0.06% for the quarter and outperformed the Blmbg:Long Treasury for the year by 0.16%.

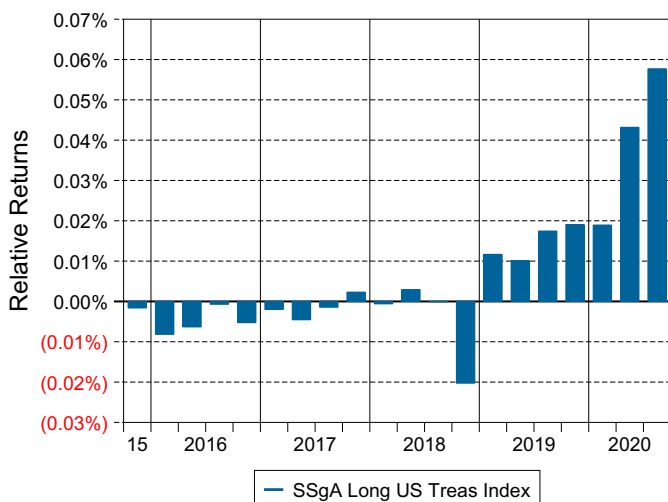
## Quarterly Asset Growth

Beginning Market Value	\$98,755,189
Net New Investment	\$8,996,277
Investment Gains/(Losses)	\$191,033
Ending Market Value	\$107,942,499

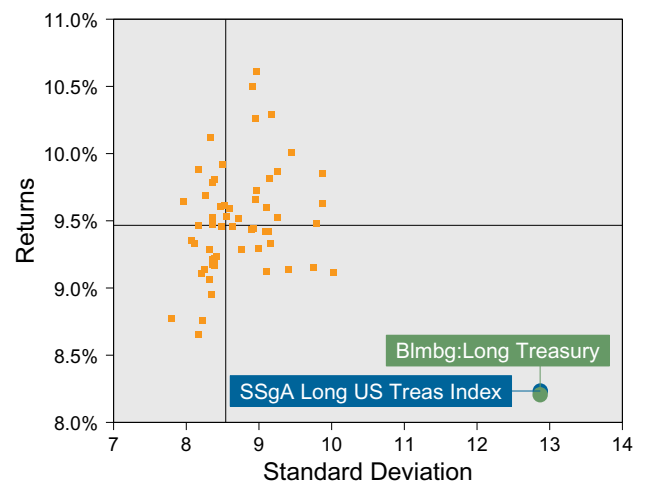
## Performance vs Callan Extended Maturity Fixed Income (Gross)



## Relative Return vs Blmbg:Long Treasury



## Callan Extended Maturity Fixed Income (Gross) Annualized Five Year Risk vs Return



# Ares ND Credit Strategies Fd Period Ended September 30, 2020

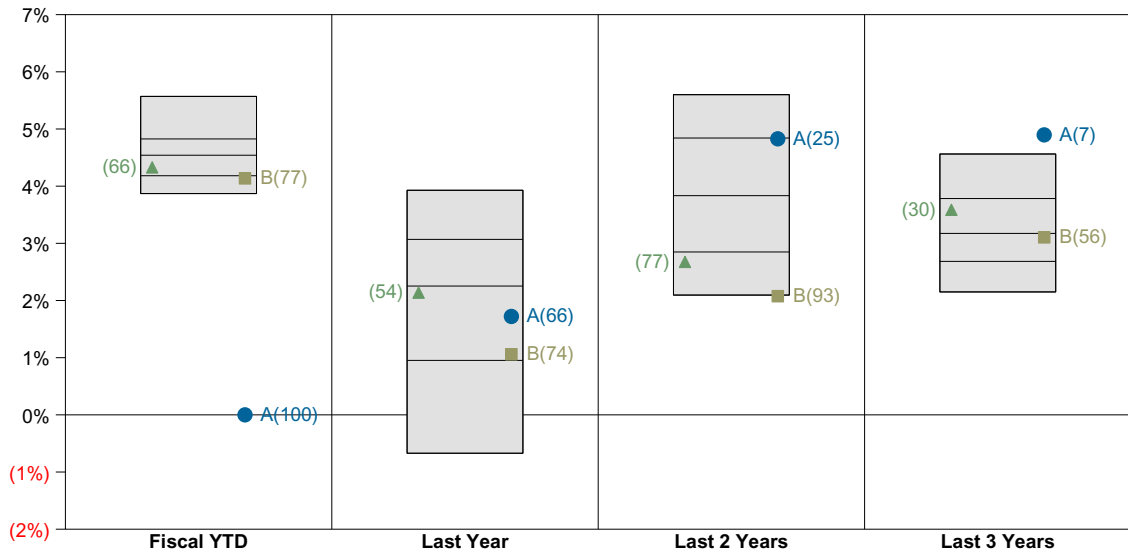
## Quarterly Summary and Highlights

- Ares ND Credit Strategies Fd's portfolio posted a 0.00% return for the quarter placing it in the 100 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 66 percentile for the last year.
- Ares ND Credit Strategies Fd's portfolio underperformed the S&P/LSTA Leveraged Loan B Index by 4.33% for the quarter and underperformed the S&P/LSTA Leveraged Loan B Index for the year by 0.42%.

## Quarterly Asset Growth

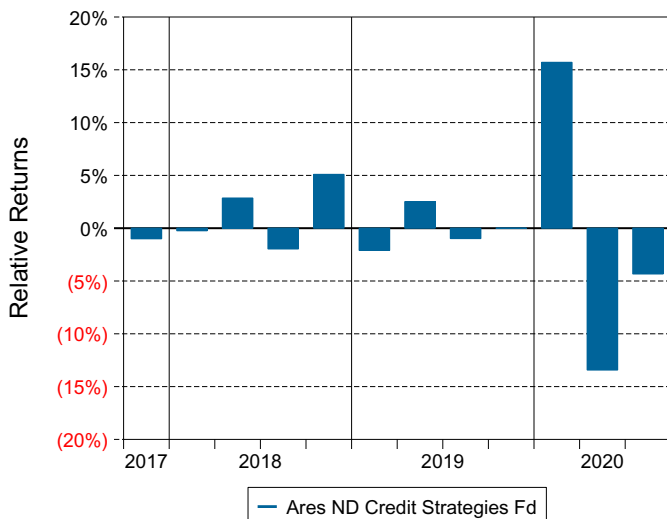
Beginning Market Value	\$117,100,737
Net New Investment	\$0
Investment Gains/(Losses)	\$0
Ending Market Value	\$117,100,737

## Performance vs Callan High Yield Mutual Funds (Net)

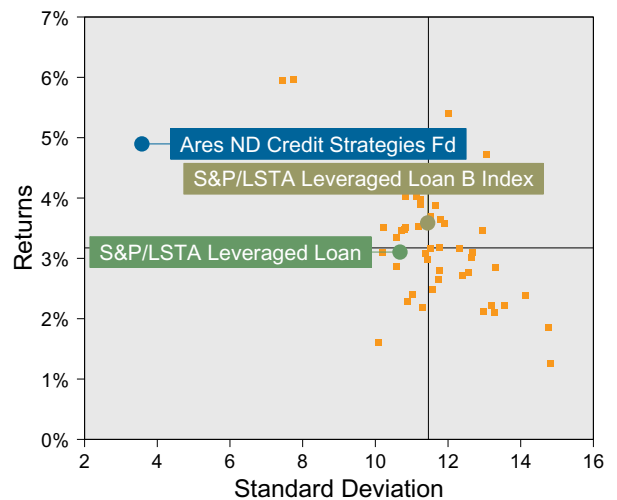


	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years
10th Percentile	5.57	3.93	5.60	4.56
25th Percentile	4.83	3.07	4.84	3.78
Median	4.54	2.25	3.83	3.17
75th Percentile	4.18	0.95	2.85	2.68
90th Percentile	3.87	(0.67)	2.09	2.15
Ares ND Credit Strategies Fd (A)	0.00	1.72	4.83	4.90
S&P/LSTA Leveraged Loan (B)	4.14	1.06	2.08	3.10
S&P/LSTA Leveraged Loan B Index (A)	4.33	2.14	2.68	3.59

## Relative Returns vs S&P/LSTA Leveraged Loan B Index



## Callan High Yield Mutual Funds (Net) Annualized Three Year Risk vs Return



# Cerberus ND Private Credit Fd Period Ended September 30, 2020

## Investment Philosophy

The investment objective of the LLC is to achieve superior risk-adjusted rates of return primarily through origination of, and investment in, secured debt assets consistent with the Loan Opportunities Strategy of the Cerberus Business Finance lending platform ("CBF", "Cerberus Business Finance" or the "Cerberus Lending Platform"). The Cerberus Lending Platform is a direct origination and lending business focused on providing secured debt primarily to U.S. middle-market companies. The LLC expects to generate both current income and capital appreciation.

## Quarterly Summary and Highlights

- Cerberus ND Private Credit Fd's portfolio posted a 1.27% return for the quarter placing it in the 100 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 1 percentile for the last year.
- Cerberus ND Private Credit Fd's portfolio underperformed the S&P/LSTA Leveraged Loan B Index by 3.05% for the quarter and outperformed the S&P/LSTA Leveraged Loan B Index for the year by 6.71%.

## Quarterly Asset Growth

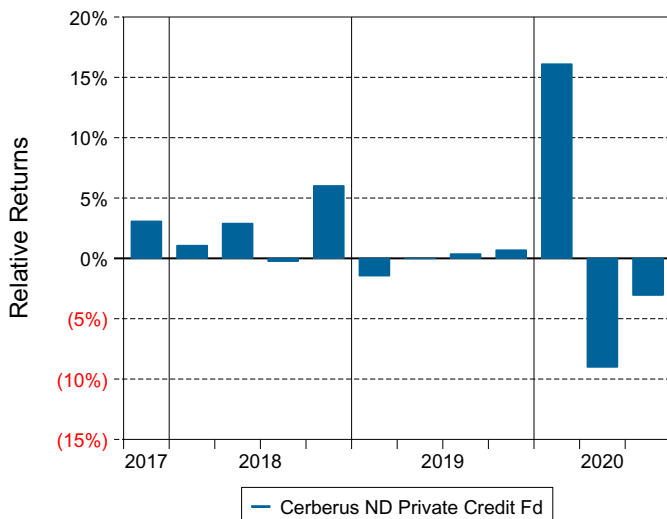
Beginning Market Value	\$121,605,406
Net New Investment	\$0
Investment Gains/(Losses)	\$1,549,886
Ending Market Value	\$123,155,292

## Performance vs Callan High Yield Mutual Funds (Net)

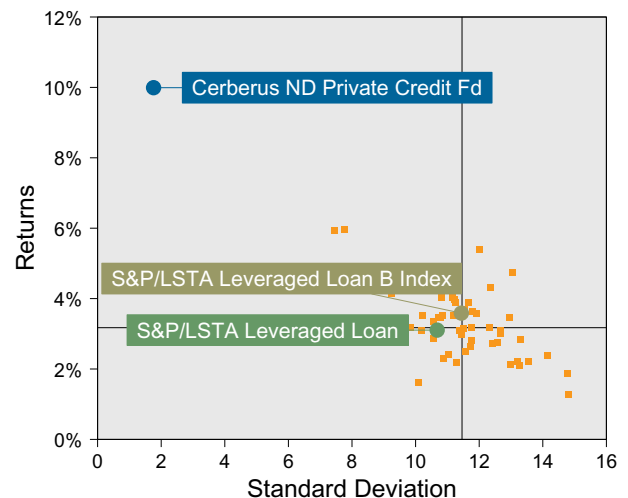


	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years
10th Percentile	5.57	3.93	5.60	4.56
25th Percentile	4.83	3.07	4.84	3.78
Median	4.54	2.25	3.83	3.17
75th Percentile	4.18	0.95	2.85	2.68
90th Percentile	3.87	(0.67)	2.09	2.15
Cerberus ND Private Credit Fd S&P/LSTA Leveraged Loan	● A 1.27	● A 8.85	● A 8.67	● A 9.99
S&P/LSTA Leveraged Loan B Index	▲ 4.33	▲ 2.14	▲ 2.68	▲ 3.59

## Relative Returns vs S&P/LSTA Leveraged Loan B Index



## Callan High Yield Mutual Funds (Net) Annualized Three Year Risk vs Return



# Goldman Sachs 2006 Offshore Period Ended September 30, 2020

## Investment Philosophy

GS Mezzanine Partners seeks large-sized mezzanine investments comprised generally of fixed income securities and an associated equity component. They focus on providing "private high yield" capital for mid- to large-sized leveraged and management buyout transactions, recapitalizations, financings, re-financings, acquisitions and restructurings for private equity firms, private family companies and corporate issuers.

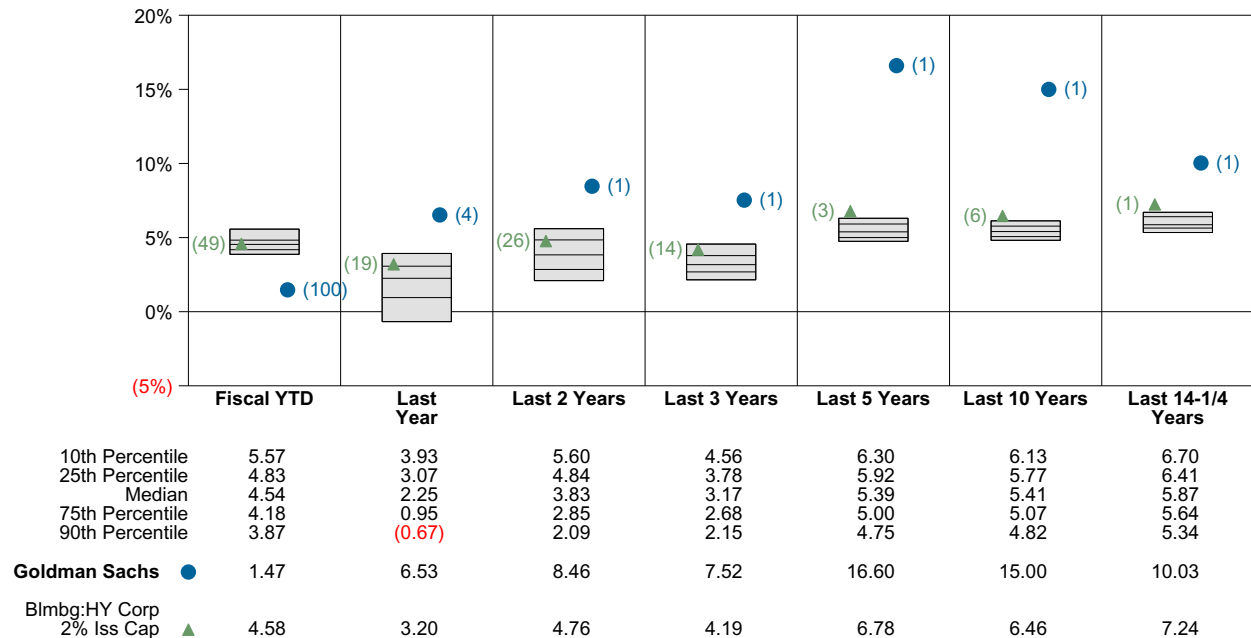
## Quarterly Summary and Highlights

- Goldman Sachs's portfolio posted a 1.47% return for the quarter placing it in the 100 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 4 percentile for the last year.
- Goldman Sachs's portfolio underperformed the Blmbg:HY Corp 2% Iss Cap by 3.11% for the quarter and outperformed the Blmbg:HY Corp 2% Iss Cap for the year by 3.33%.

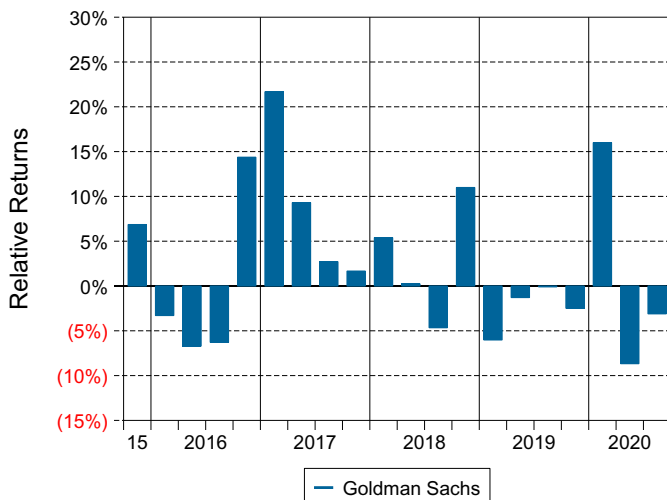
## Quarterly Asset Growth

Beginning Market Value	\$65,384
Net New Investment	\$0
Investment Gains/(Losses)	\$963
Ending Market Value	\$66,347

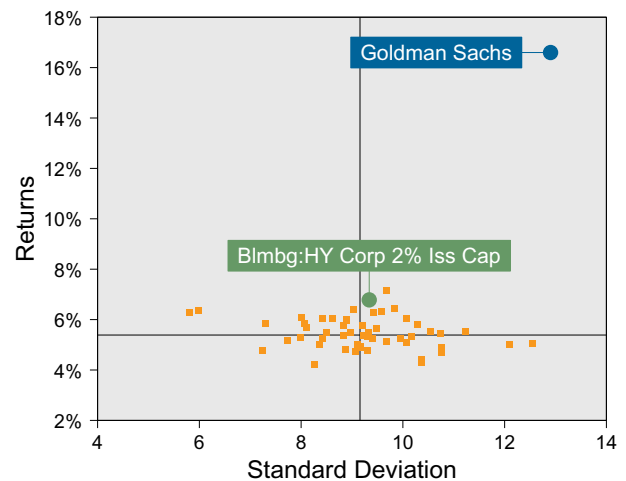
## Performance vs Callan High Yield Mutual Funds (Net)



## Relative Return vs Blmbg:HY Corp 2% Iss Cap



## Callan High Yield Mutual Funds (Net) Annualized Five Year Risk vs Return





# Goldman Sachs Offshore Fund V Period Ended September 30, 2020

## Investment Philosophy

GS Mezzanine Partners seeks large-sized mezzanine investments comprised generally of fixed income securities and an associated equity component. They focus on providing "private high yield" capital for mid- to large-sized leveraged and management buyout transactions, recapitalizations, financings, re-financings, acquisitions and restructurings for private equity firms, private family companies and corporate issuers.

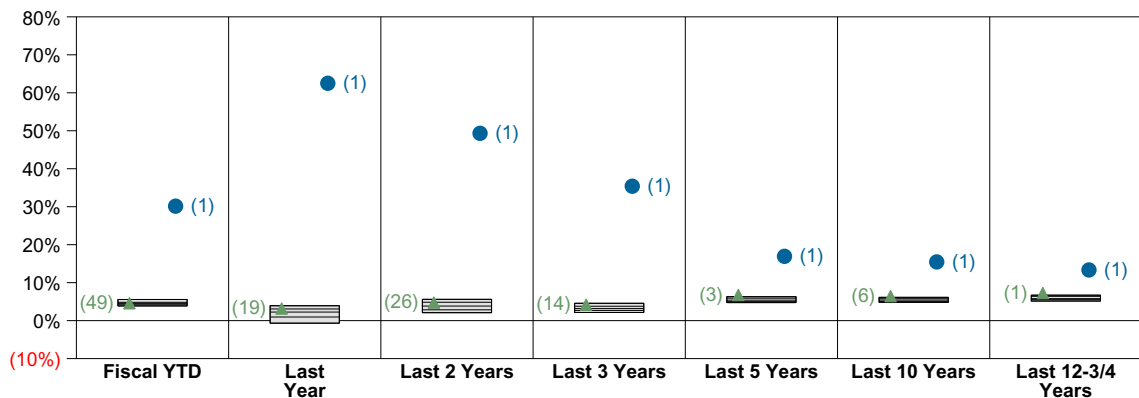
## Quarterly Summary and Highlights

- Goldman Sachs Offshore V's portfolio posted a 30.14% return for the quarter placing it in the 1 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 1 percentile for the last year.
- Goldman Sachs Offshore V's portfolio outperformed the Blmbg:HY Corp 2% Iss Cap by 25.56% for the quarter and outperformed the Blmbg:HY Corp 2% Iss Cap for the year by 59.30%.

## Quarterly Asset Growth

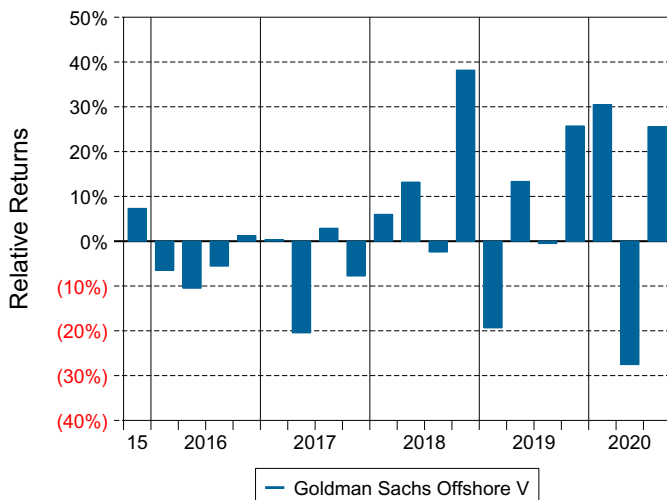
Beginning Market Value	\$163,777
Net New Investment	\$0
Investment Gains/(Losses)	\$49,366
Ending Market Value	\$213,143

## Performance vs Callan High Yield Mutual Funds (Net)

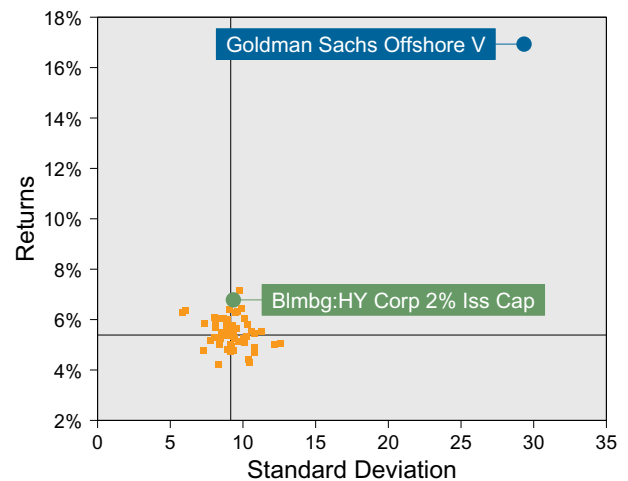


10th Percentile	5.57	3.93	5.60	4.56	6.30	6.13	6.70
25th Percentile	4.83	3.07	4.84	3.78	5.92	5.77	6.39
Median	4.54	2.25	3.83	3.17	5.39	5.41	5.79
75th Percentile	4.18	0.95	2.85	2.68	5.00	5.07	5.53
90th Percentile	3.87	(0.67)	2.09	2.15	4.75	4.82	5.16
<b>Goldman Sachs Offshore V</b>	<b>30.14</b>	<b>62.50</b>	<b>49.33</b>	<b>35.39</b>	<b>16.93</b>	<b>15.46</b>	<b>13.34</b>
Blmbg:HY Corp 2% Iss Cap	4.58	3.20	4.76	4.19	6.78	6.46	7.28

## Relative Return vs Blmbg:HY Corp 2% Iss Cap



## Callan High Yield Mutual Funds (Net) Annualized Five Year Risk vs Return



# Loomis Sayles

## Period Ended September 30, 2020

### Investment Philosophy

The High Yield Full Discretion Strategy seeks to identify attractive sectors and specific investment opportunities primarily within the global fixed income market through a global economic and interest rate framework. Portfolio managers incorporate a long-term macroeconomic view along with a stringent bottom-up investment evaluation process that drives security selection and resulting sector allocations. Opportunistic investments in non-benchmark sectors including investment grade corporate, emerging market, and non-US dollar debt and convertible bonds help to manage overall portfolio risk and enhance total return potential.

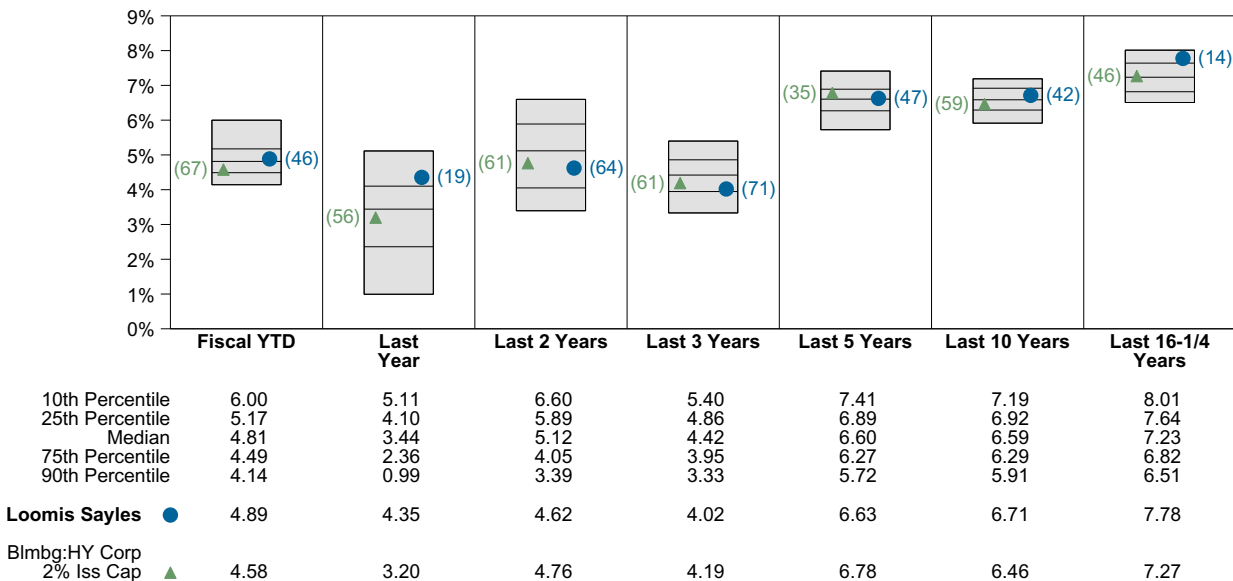
### Quarterly Summary and Highlights

- Loomis Sayles's portfolio posted a 4.89% return for the quarter placing it in the 46 percentile of the Callan High Yield Fixed Income group for the quarter and in the 19 percentile for the last year.
- Loomis Sayles's portfolio outperformed the Blmbg:HY Corp 2% Iss Cap by 0.31% for the quarter and outperformed the Blmbg:HY Corp 2% Iss Cap for the year by 1.16%.

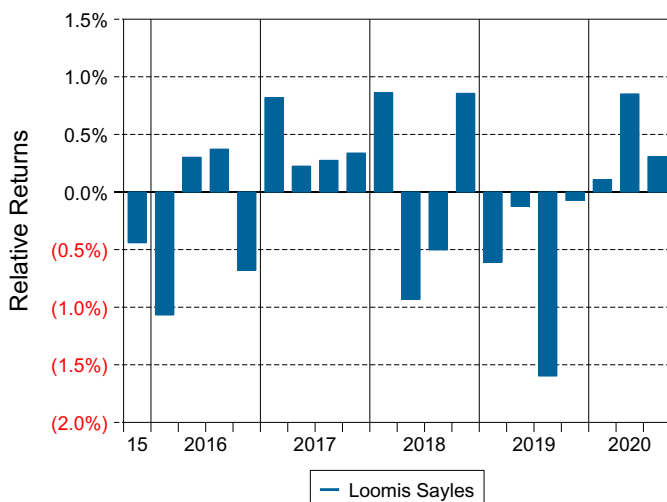
### Quarterly Asset Growth

Beginning Market Value	\$164,970,414
Net New Investment	\$-206,213
Investment Gains/(Losses)	\$8,060,907
Ending Market Value	\$172,825,108

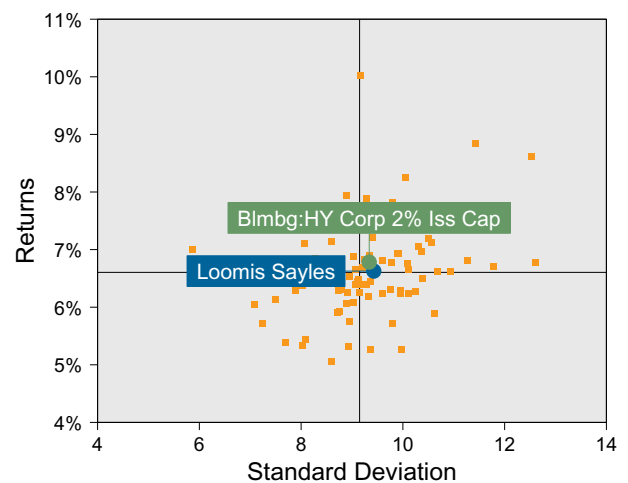
### Performance vs Callan High Yield Fixed Income (Gross)



### Relative Return vs Blmbg:HY Corp 2% Iss Cap



### Callan High Yield Fixed Income (Gross) Annualized Five Year Risk vs Return



# PIMCO Bravo II Fund

## Period Ended September 30, 2020

### Investment Philosophy

The BRAVO II Fund is a private equity style fund targeting an annualized IRR of 15-20% and multiple of 1.8-2x, net of fees and carried interest with an initial 5-year term. The fund will seek to capitalize on non-economic asset sale decisions by global financial institutions. The fund will have the flexibility to acquire attractively discounted, less liquid loans, structured credit and other assets tied to residential or commercial real estate markets in the U.S. and Europe.

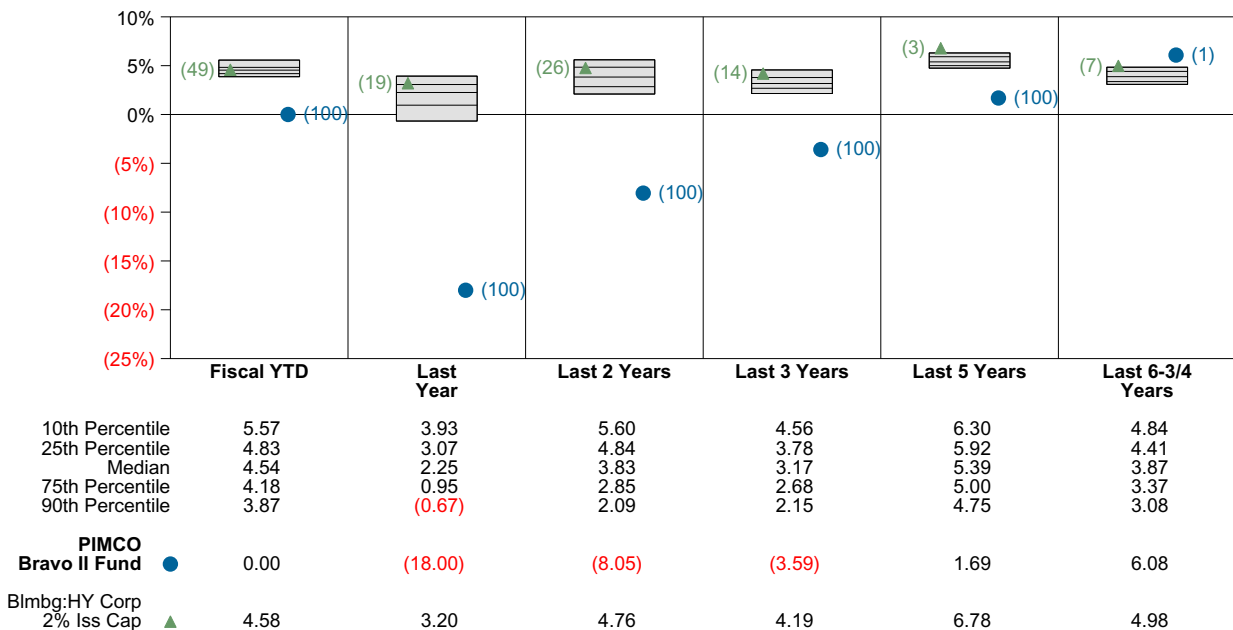
### Quarterly Summary and Highlights

- PIMCO Bravo II Fund's portfolio posted a 0.00% return for the quarter placing it in the 100 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 100 percentile for the last year.
- PIMCO Bravo II Fund's portfolio underperformed the Blmbg:HY Corp 2% Iss Cap by 4.58% for the quarter and underperformed the Blmbg:HY Corp 2% Iss Cap for the year by 21.20%.

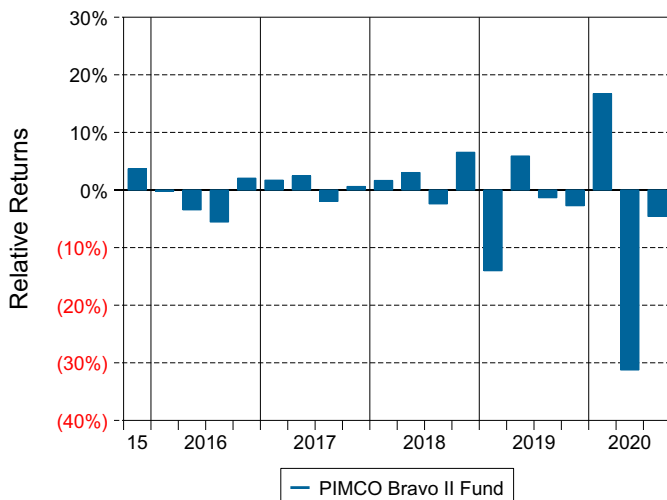
### Quarterly Asset Growth

Beginning Market Value	\$17,916,232
Net New Investment	\$-2,320,371
Investment Gains/(Losses)	\$-0
Ending Market Value	\$15,595,861

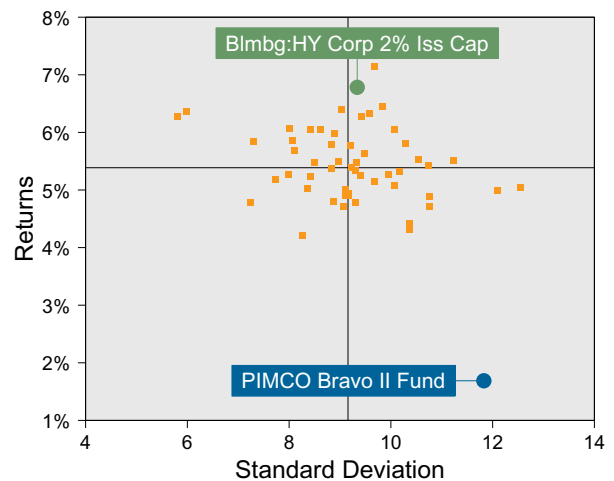
### Performance vs Callan High Yield Mutual Funds (Net)



### Relative Return vs Blmbg:HY Corp 2% Iss Cap



### Callan High Yield Mutual Funds (Net) Annualized Five Year Risk vs Return



# Real Estate Period Ended September 30, 2020

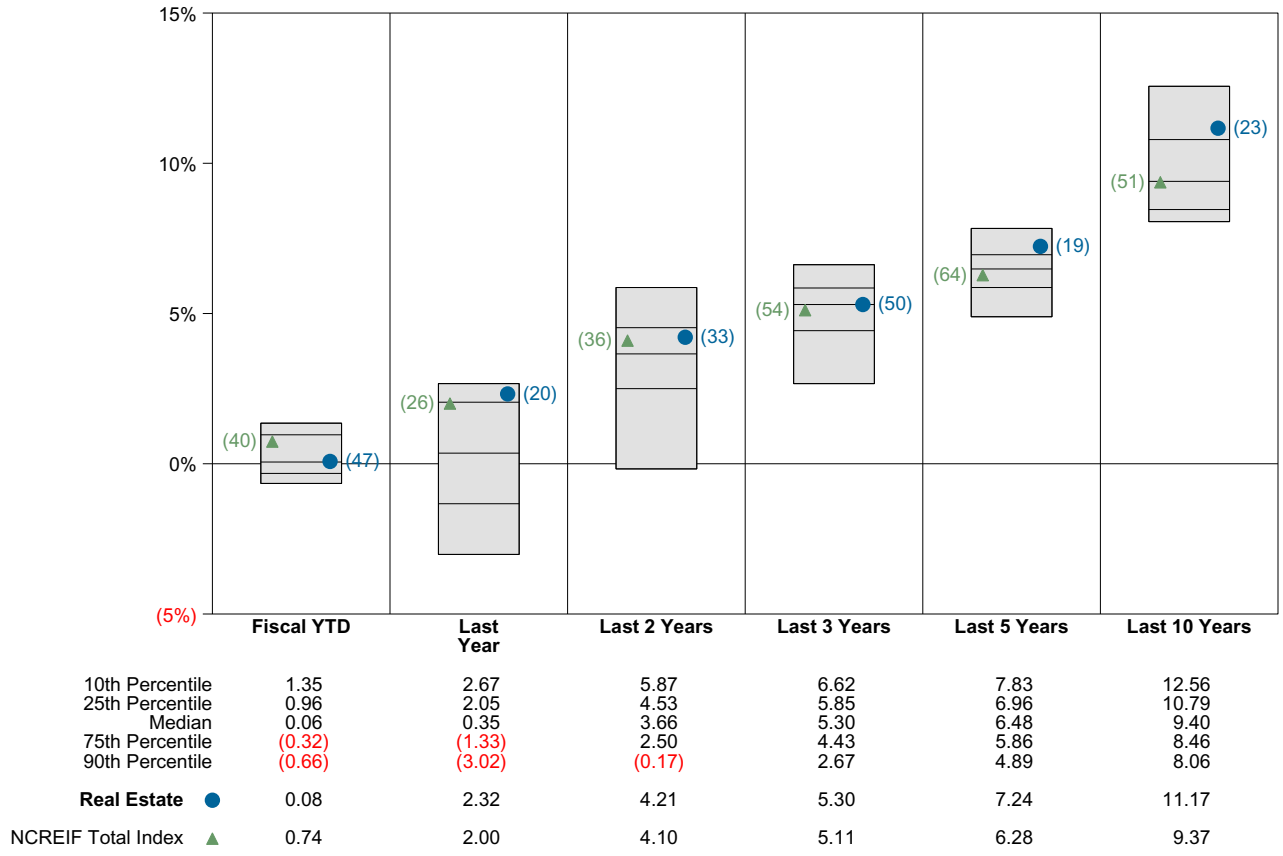
## Quarterly Summary and Highlights

- Real Estate's portfolio posted a 0.08% return for the quarter placing it in the 47 percentile of the Public Fund - Real Estate group for the quarter and in the 20 percentile for the last year.
- Real Estate's portfolio underperformed the NCREIF Total Index by 0.66% for the quarter and outperformed the NCREIF Total Index for the year by 0.32%.

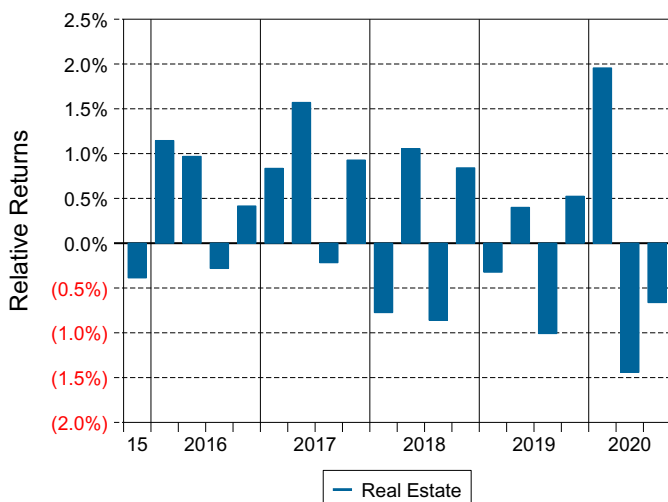
## Quarterly Asset Growth

Beginning Market Value	\$659,447,086
Net New Investment	\$3,388,710
Investment Gains/(Losses)	\$513,027
Ending Market Value	\$663,348,823

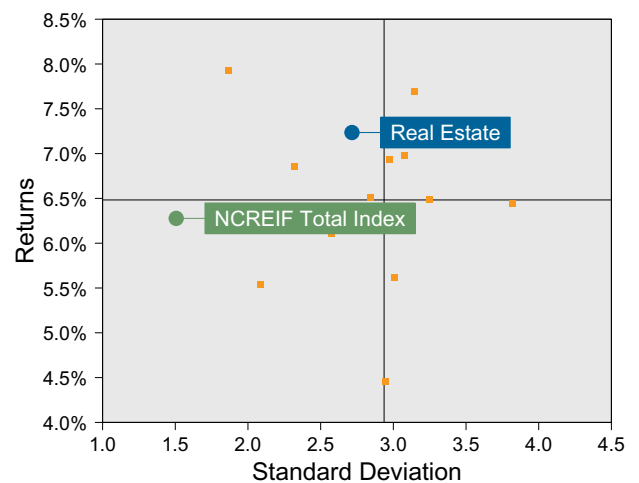
## Performance vs Public Fund - Real Estate (Gross)



## Relative Return vs NCREIF Total Index



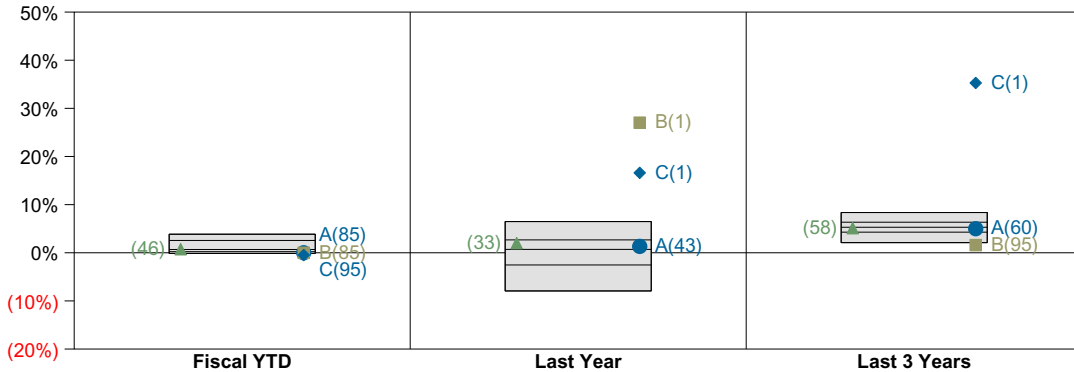
## Public Fund - Real Estate (Gross) Annualized Five Year Risk vs Return



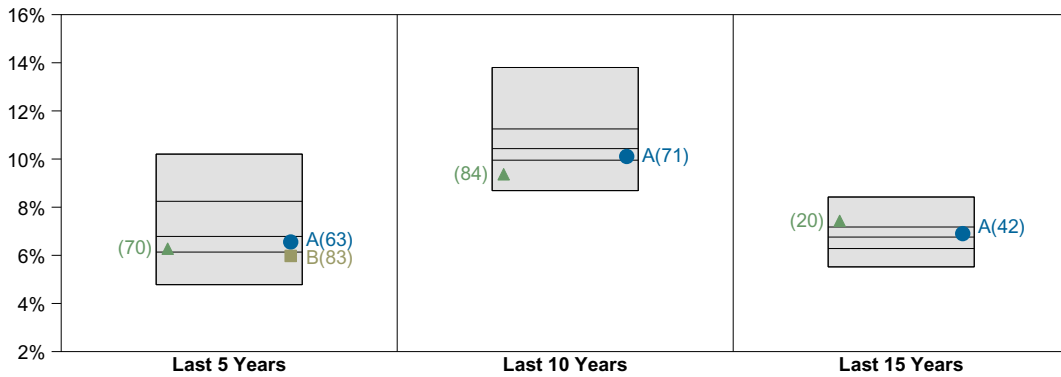
# North Dakota State Investment Board Pension Funds Performance vs Callan Total Domestic Real Estate DB Periods Ended September 30, 2020

## Return Ranking

The chart below illustrates fund rankings over various periods versus the Callan Total Domestic Real Estate DB. The bars represent the range of returns from the 10th percentile to the 90th percentile for each period for all funds in the Callan Total Domestic Real Estate DB. The numbers to the right of the bar represent the percentile rankings of the funds being analyzed. The table below the chart details the rates of return plotted in the graph above.



10th Percentile	3.85	6.48	8.36
25th Percentile	2.56	2.67	6.35
Median	0.68	0.70	5.30
75th Percentile	0.23	(2.53)	4.28
90th Percentile	(0.13)	(7.94)	2.11
Invesco Core Real Estate ● A	0.00	1.32	5.00
Invesco Fund III ■ B	0.00	27.02	1.59
Invesco Asia RE Fund III ◆ C	(0.48)	16.60	35.27
NCREIF Total Index ▲	0.74	2.00	5.11

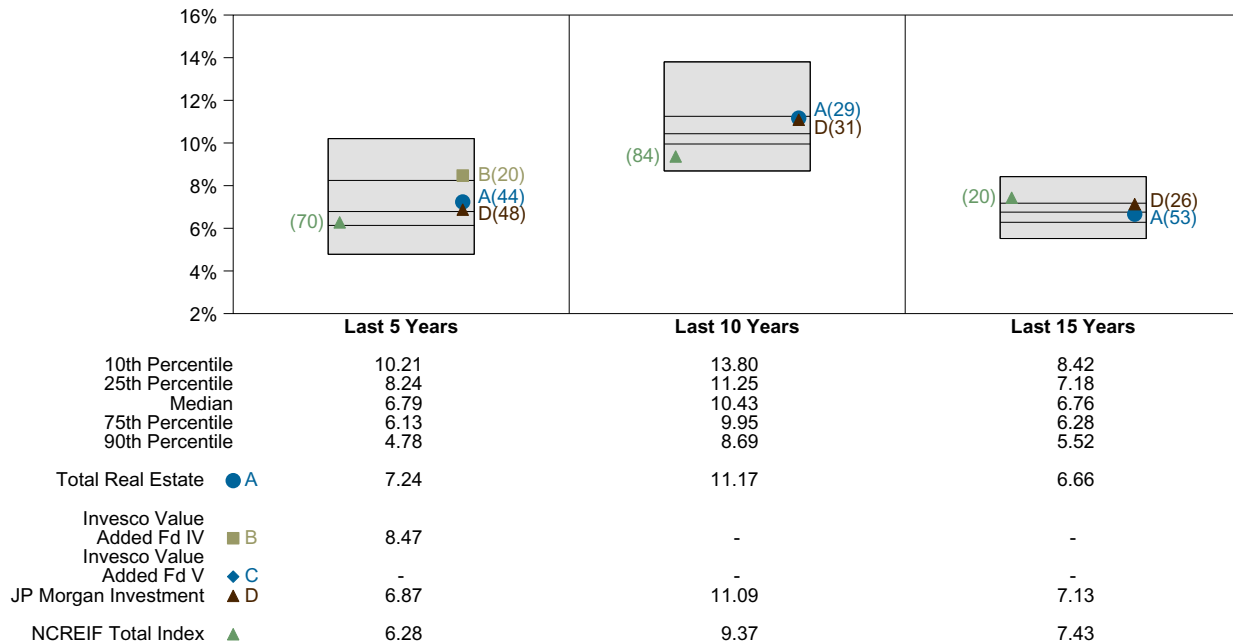
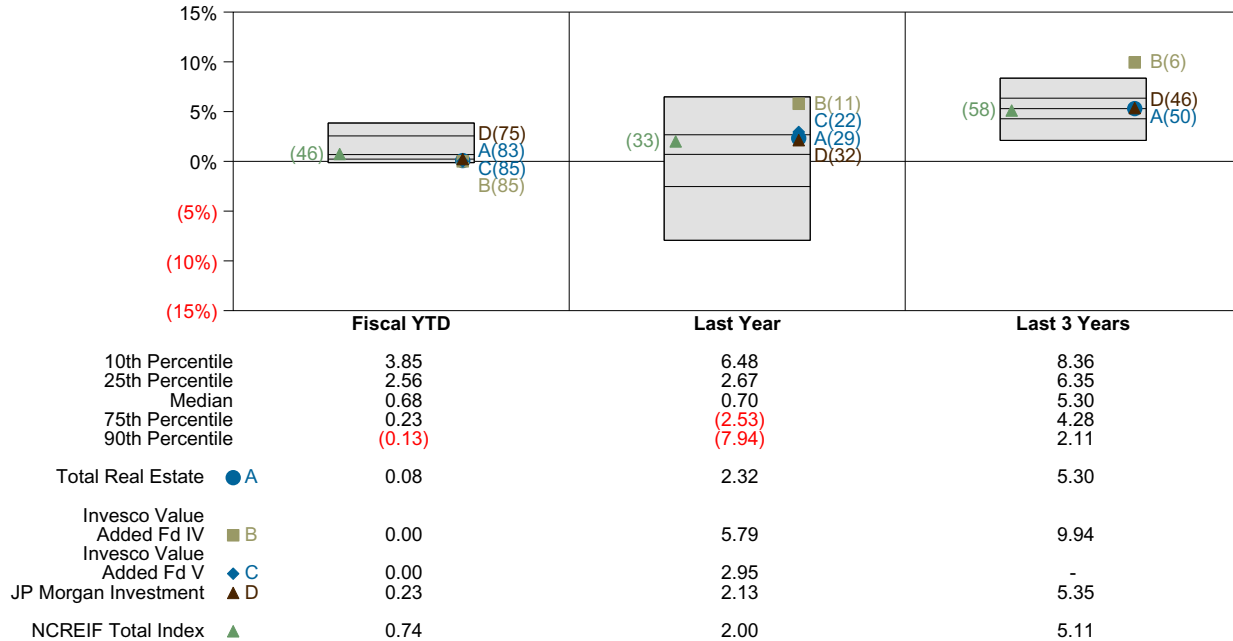


10th Percentile	10.21	13.80	8.42
25th Percentile	8.24	11.25	7.18
Median	6.79	10.43	6.76
75th Percentile	6.13	9.95	6.28
90th Percentile	4.78	8.69	5.52
Invesco Core Real Estate ● A	6.55	10.11	6.90
Invesco Fund III ■ B	5.98	-	-
Invesco Asia RE Fund III ◆ C	-	-	-
NCREIF Total Index ▲	6.28	9.37	7.43

# North Dakota State Investment Board Pension Funds Performance vs Callan Total Domestic Real Estate DB Periods Ended September 30, 2020

## Return Ranking

The chart below illustrates fund rankings over various periods versus the Callan Total Domestic Real Estate DB. The bars represent the range of returns from the 10th percentile to the 90th percentile for each period for all funds in the Callan Total Domestic Real Estate DB. The numbers to the right of the bar represent the percentile rankings of the funds being analyzed. The table below the chart details the rates of return plotted in the graph above.



# TIR Teredo

## Period Ended September 30, 2020

### Investment Philosophy

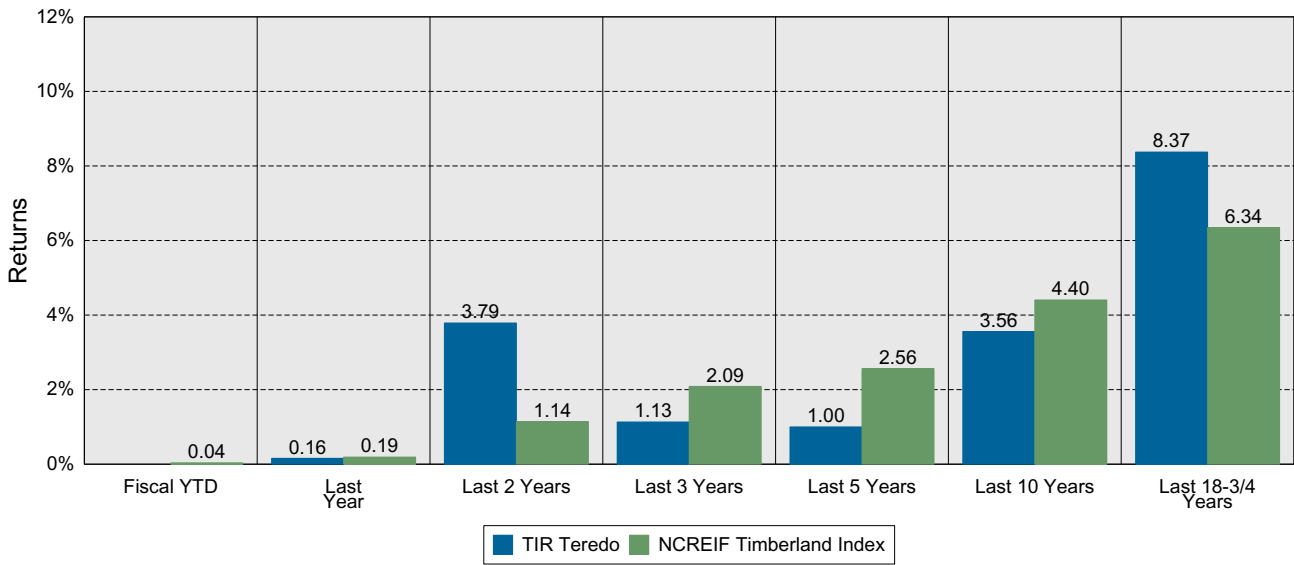
Teredo Timber LLC - The investment objective of Teredo is to provide competitive investment returns from increasing saw timber production through the 20 year term of the partnership. TIR's management strategy is to maximize saw timber volume by applying intensive forest management techniques which accelerate growth through the diameter class distribution. Periodic cash flows are produced from thinning and final harvests of the individual timber stands.

### Quarterly Summary and Highlights

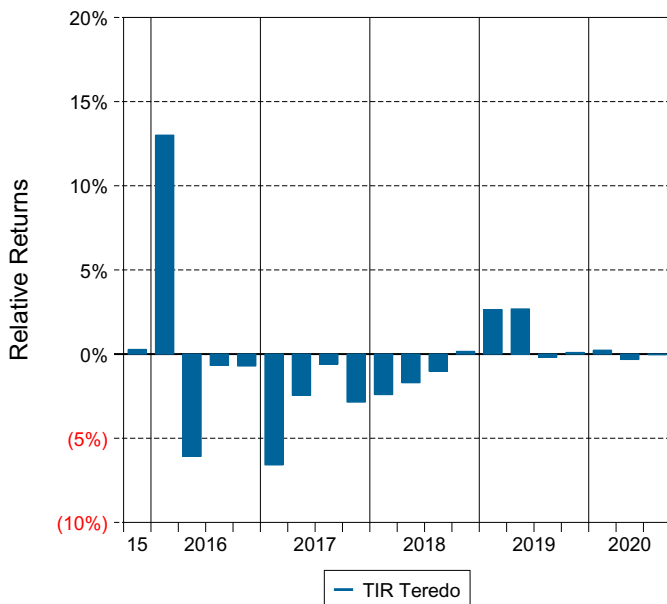
- TIR Teredo's portfolio underperformed the NCREIF Timberland Index by 0.04% for the quarter and underperformed the NCREIF Timberland Index for the year by 0.03%.

### Quarterly Asset Growth

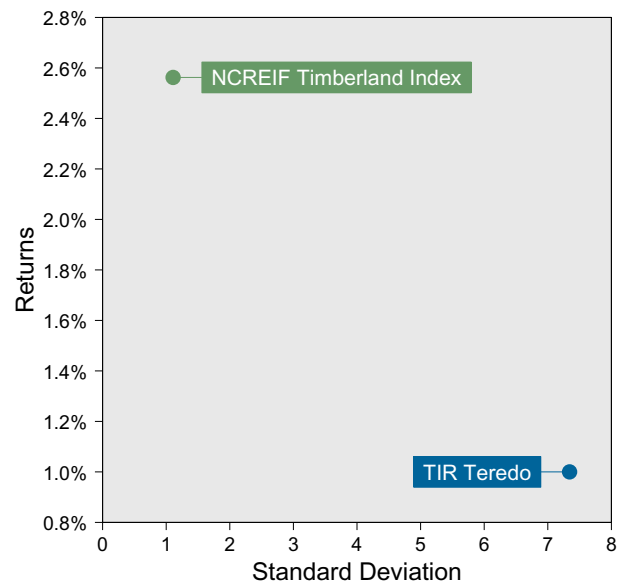
Beginning Market Value	\$27,726,922
Net New Investment	\$-1,000,000
Investment Gains/(Losses)	\$0
Ending Market Value	\$26,726,922



Relative Return vs NCREIF Timberland Index



Annualized Five Year Risk vs Return



# TIR Springbank

## Period Ended September 30, 2020

### Investment Philosophy

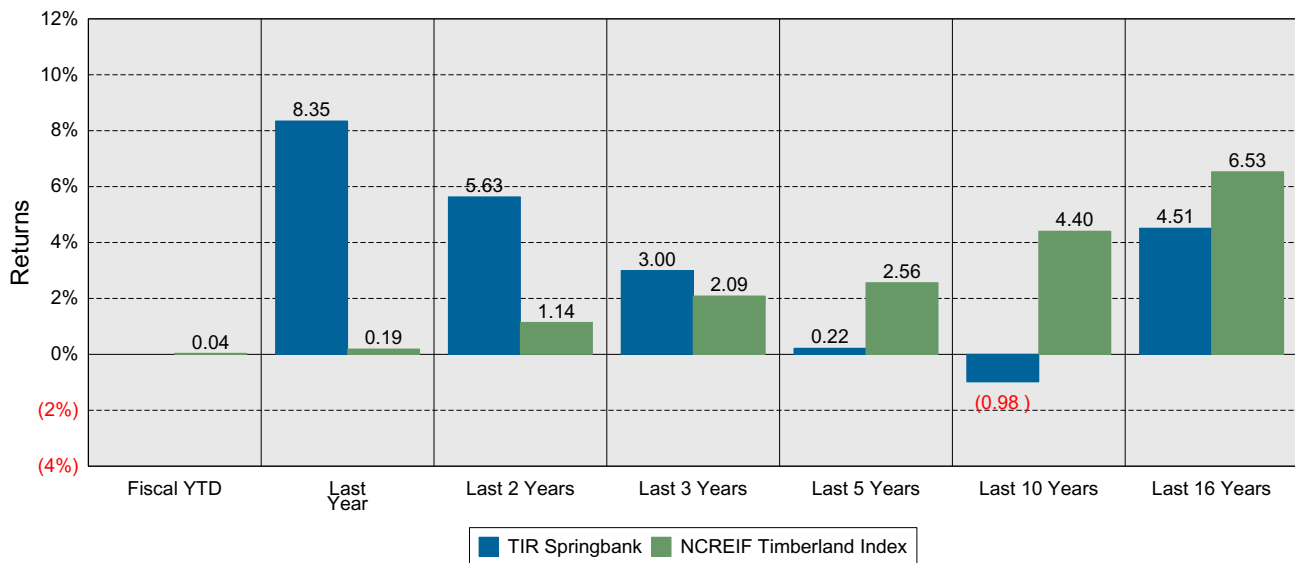
Springbank LLC - The investment objective of Springbank is to maximize long-term investment potential by means of the formation of a dedicated land management group, intensive timber management to increase timber production, the coordination of timber harvesting with land management activities and direct marketing and selective real estate partnerships.

### Quarterly Summary and Highlights

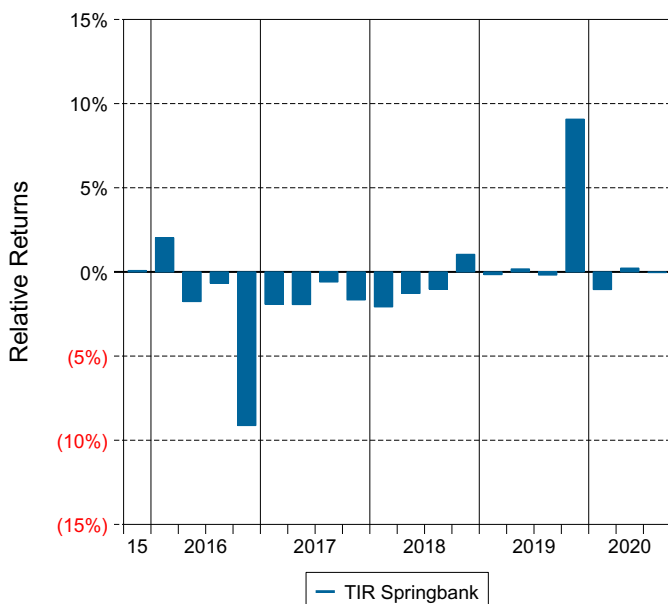
- TIR Springbank's portfolio underperformed the NCREIF Timberland Index by 0.04% for the quarter and outperformed the NCREIF Timberland Index for the year by 8.16%.

### Quarterly Asset Growth

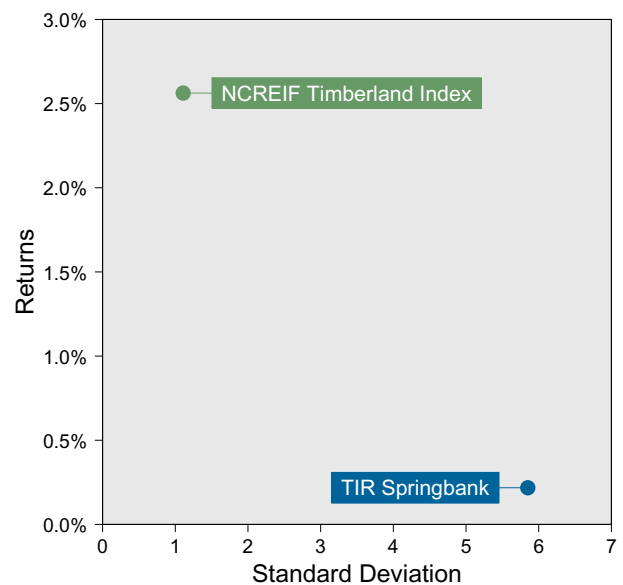
Beginning Market Value	\$97,403,055
Net New Investment	\$-1,216,000
Investment Gains/(Losses)	\$1
Ending Market Value	\$96,187,056



Relative Return vs NCREIF Timberland Index



Annualized Five Year Risk vs Return





# ISQ Global Infrastructure II

## Period Ended September 30, 2020

### Investment Philosophy

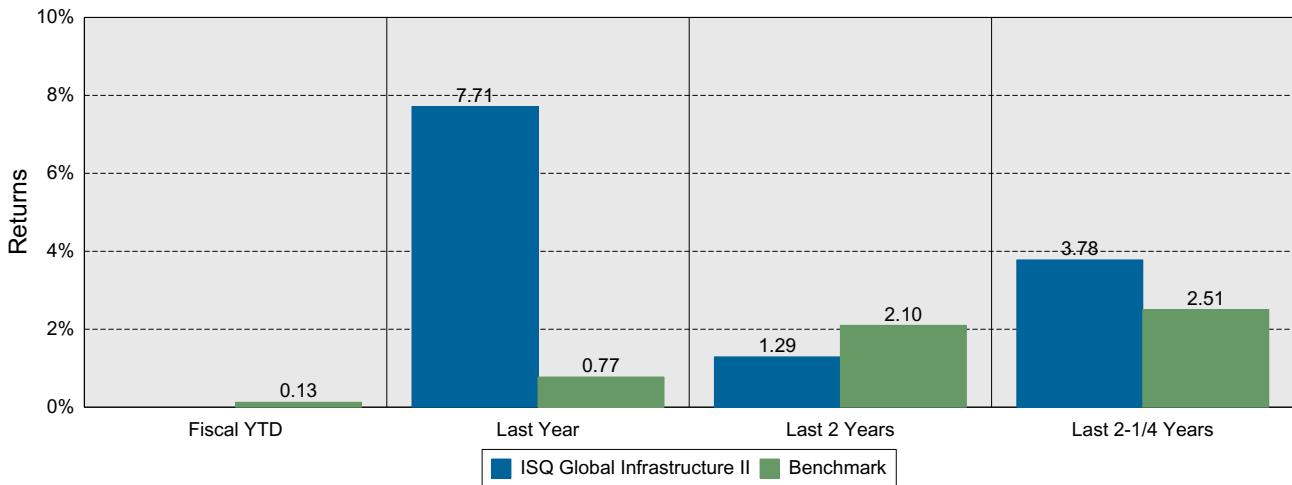
The ISQ Global Infrastructure Fund II seeks to achieve long-term capital appreciation as well as current income through equity and equity related investments in infrastructure and infrastructure related assets located globally, with a focus on North America, Europe, and selected growth economies in Asia and Latin America. The Fund may also invest in debt Securities that have equity-like returns or an equity component, or are related to its equity investments, including without limitation convertible debt, bank loans and participations and other similar instruments. **The Benchmark is comprised of 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net.**

### Quarterly Summary and Highlights

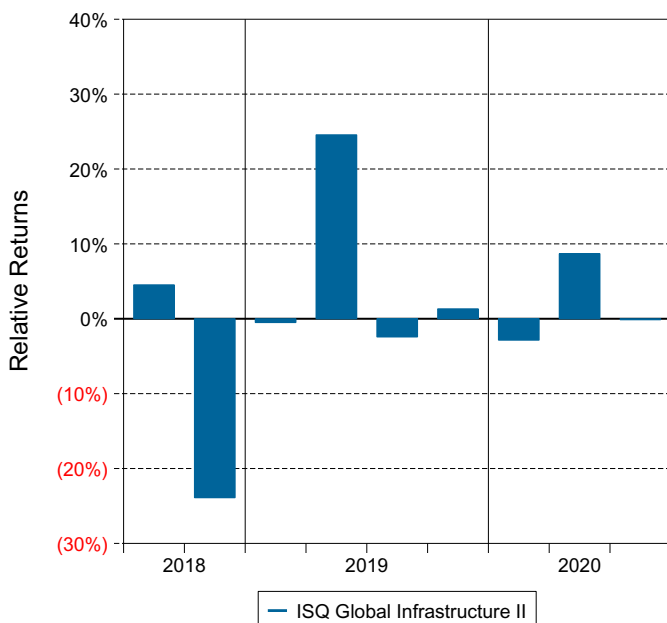
- ISQ Global Infrastructure II's portfolio underperformed the Benchmark by 0.13% for the quarter and outperformed the Benchmark for the year by 6.94%.

### Quarterly Asset Growth

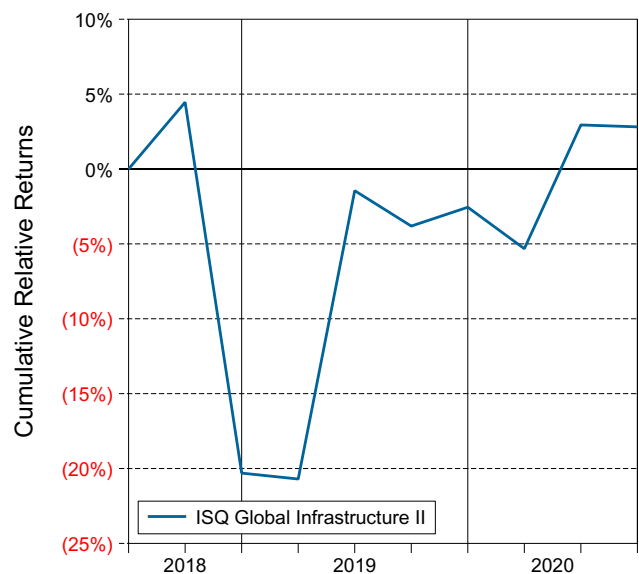
Beginning Market Value	\$43,204,927
Net New Investment	\$0
Investment Gains/(Losses)	\$0
Ending Market Value	\$43,204,927



Relative Return vs Benchmark



Cumulative Returns vs Benchmark



# The Rohatyn Group

## Period Ended September 30, 2020

### Investment Philosophy

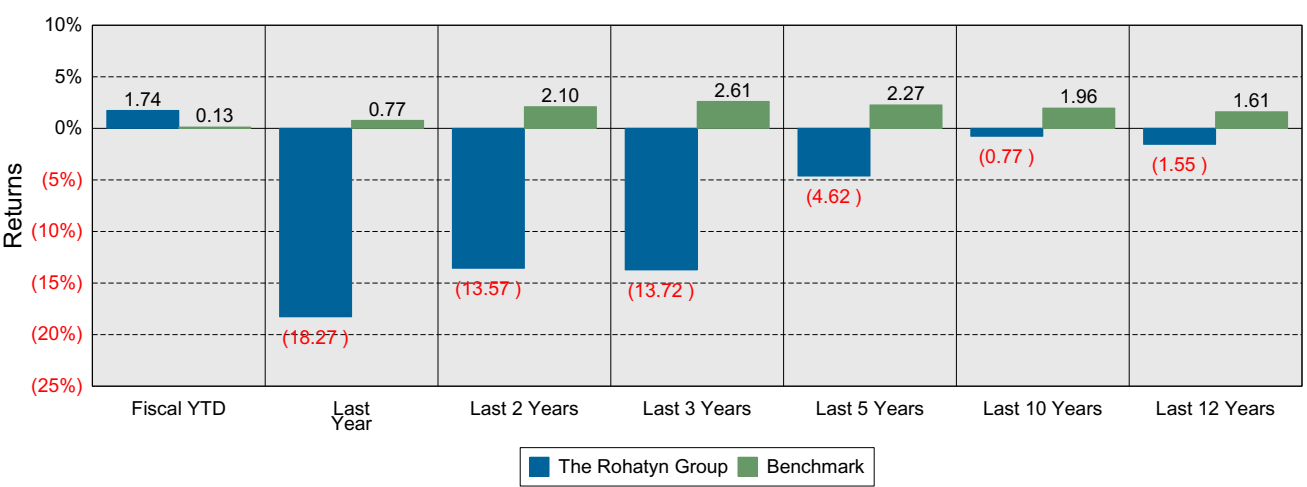
The Rohatyn Group's Asian Infrastructure & Related Resources Opportunity (AIRRO) Fund seeks to invest in infrastructure and related resources opportunities across the greater Asia Pacific region. The Fund seeks to invest in a broad range of assets, including: core infrastructure, power both from conventional and renewable sources, communications, water and waste-water, public works, urban development and other "social" infrastructure assets and related resources. The management of the AIRRO Fund was transferred from JP Morgan to The Rohatyn Group in May, 2018. **The Benchmark is comprised of CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.**

### Quarterly Summary and Highlights

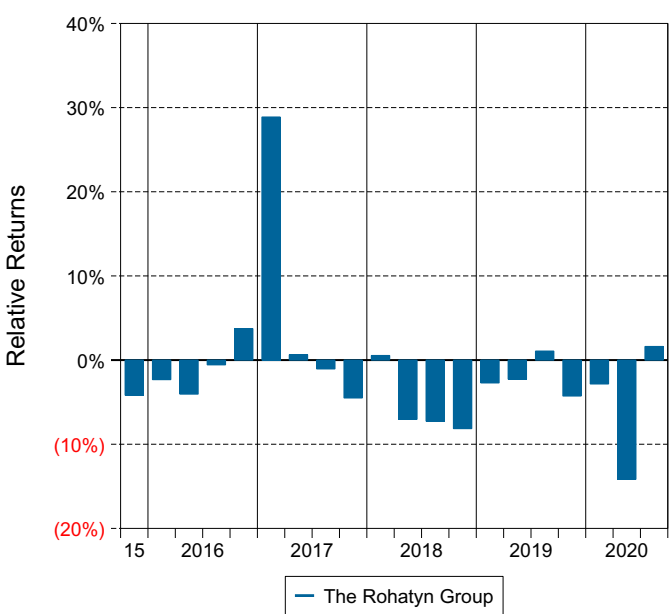
- The Rohatyn Group's portfolio outperformed the Benchmark by 1.61% for the quarter and underperformed the Benchmark for the year by 19.04%.

### Quarterly Asset Growth

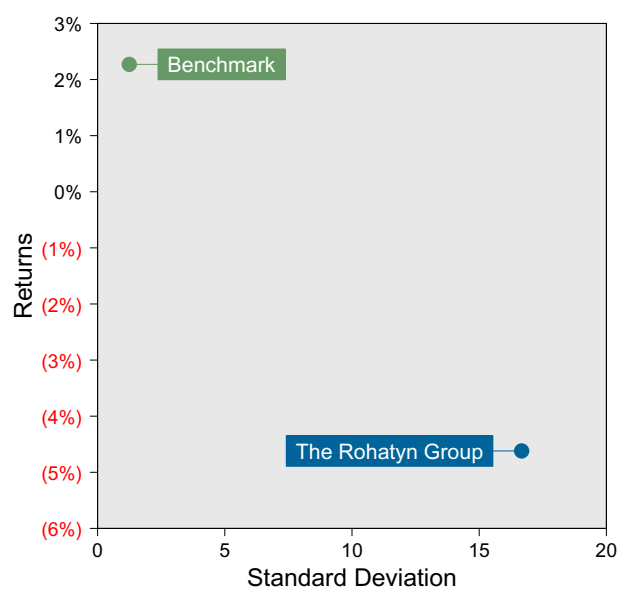
Beginning Market Value	\$15,420,000
Net New Investment	\$0
Investment Gains/(Losses)	\$267,795
Ending Market Value	\$15,687,795



### Relative Return vs Benchmark



### Annualized Five Year Risk vs Return



# JPM Infrastructure Fund

## Period Ended September 30, 2020

### Investment Philosophy

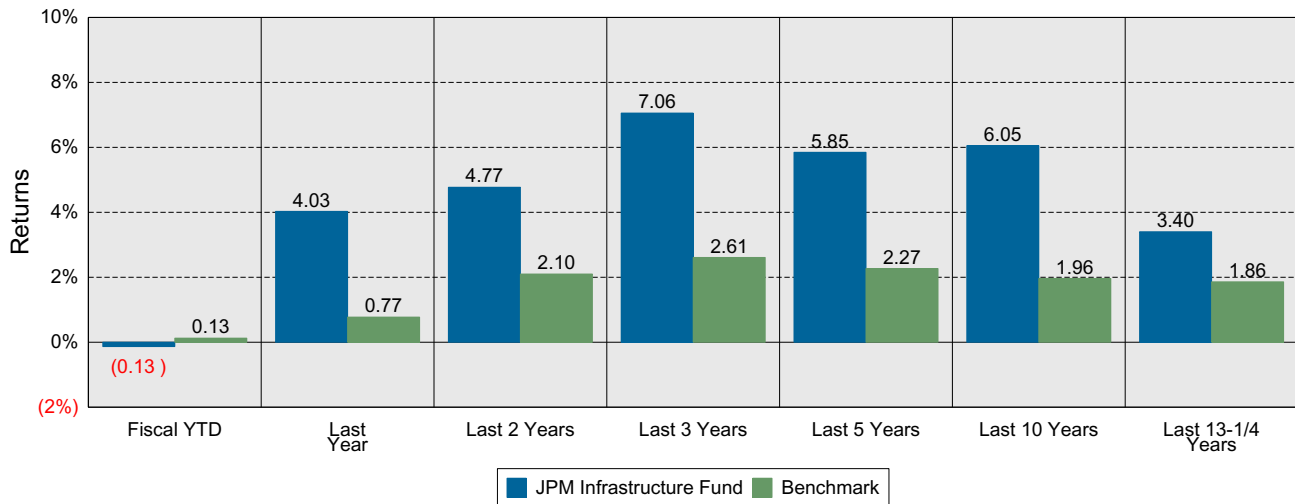
The only open-ended private commingled infrastructure fund in the U.S., the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas pipelines; electricity transmission and distribution facilities; contracted power generation assets; water distribution; waste-water collection and processing; railway lines and rapid rail links; and seaports and airports. **The Benchmark is comprised of CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.**

### Quarterly Summary and Highlights

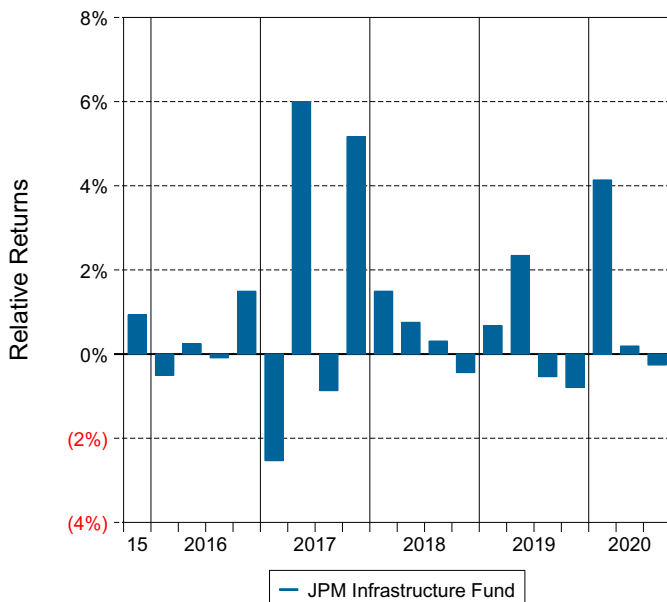
- JPM Infrastructure Fund's portfolio underperformed the Benchmark by 0.26% for the quarter and outperformed the Benchmark for the year by 3.26%.

### Quarterly Asset Growth

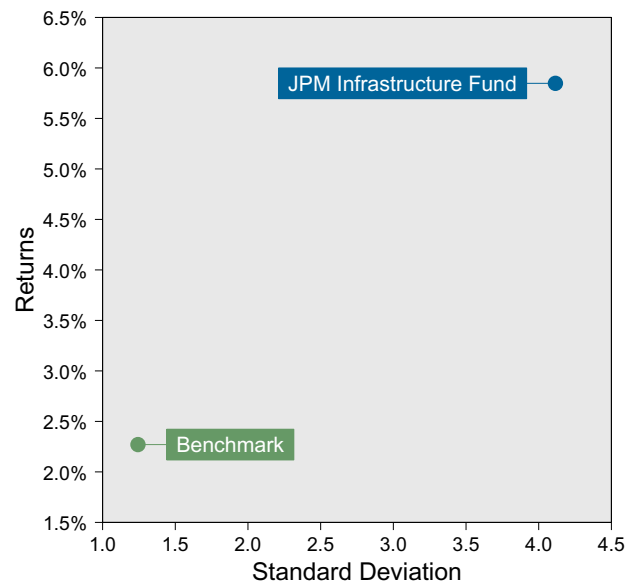
Beginning Market Value	\$176,109,128
Net New Investment	\$-5,916,324
Investment Gains/(Losses)	\$-243,613
Ending Market Value	\$169,949,190



### Relative Return vs Benchmark



### Annualized Five Year Risk vs Return



# Grosvenor Cust. Infrastructure Period Ended September 30, 2020

## Investment Philosophy

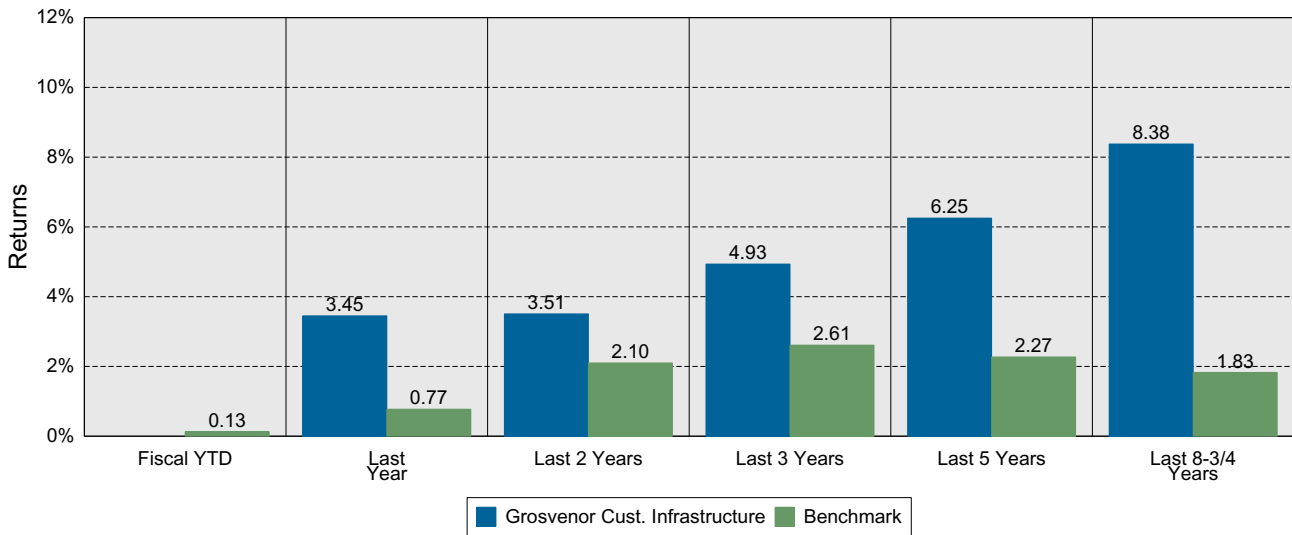
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%). **The Benchmark is comprised of CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.**

## Quarterly Summary and Highlights

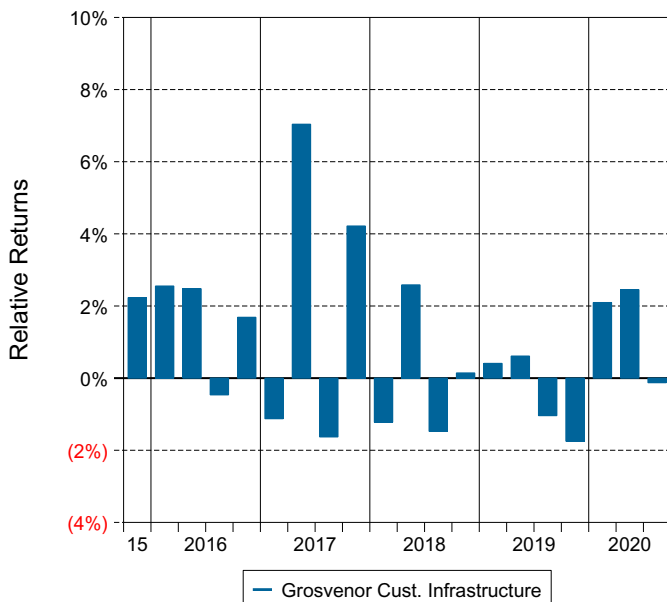
- Grosvenor Cust. Infrastructure's portfolio underperformed the Benchmark by 0.13% for the quarter and outperformed the Benchmark for the year by 2.68%.

## Quarterly Asset Growth

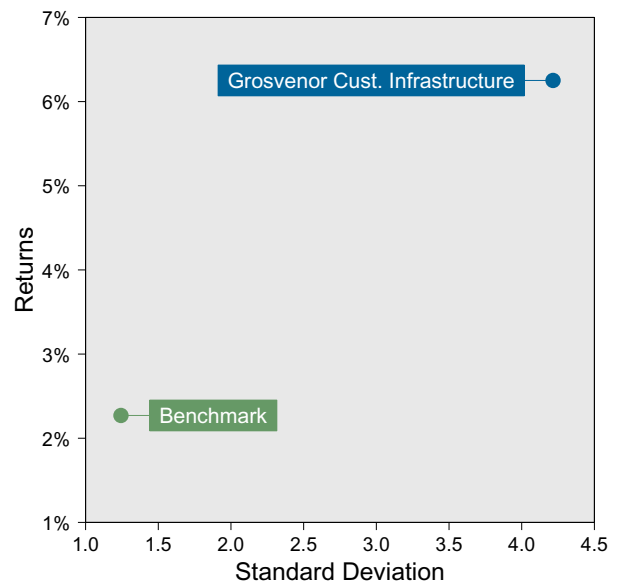
Beginning Market Value	\$20,559,066
Net New Investment	\$0
Investment Gains/(Losses)	\$0
Ending Market Value	\$20,559,066



Relative Return vs Benchmark



Annualized Five Year Risk vs Return



# Grosvenor Cust. Infrastructure II Period Ended September 30, 2020

## Investment Philosophy

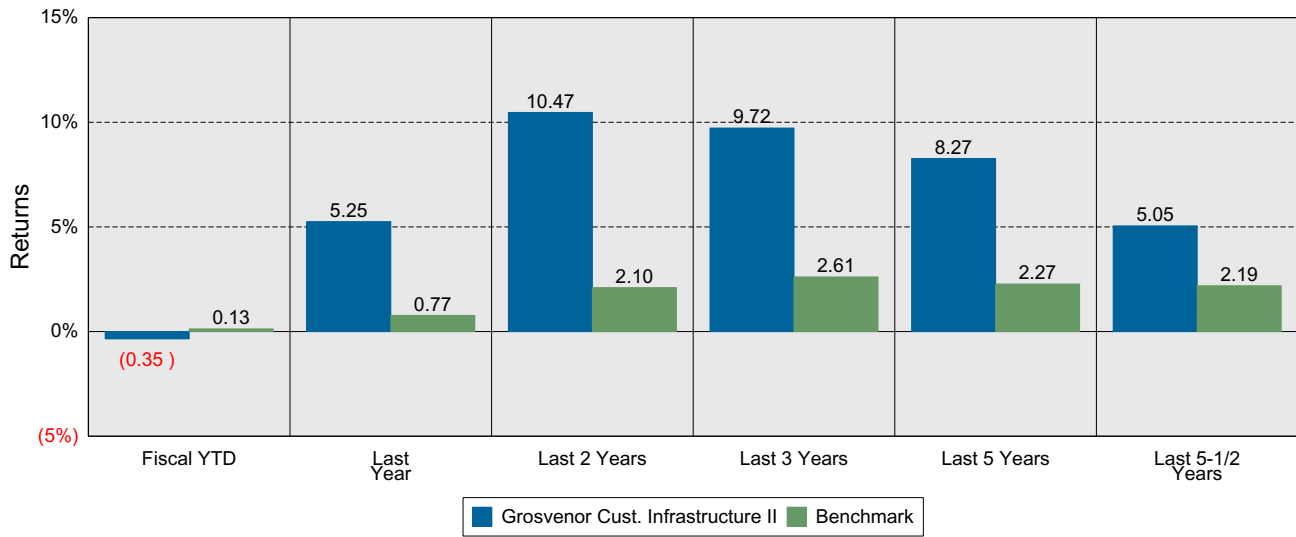
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure yields (30%), co-investments (40%) and opportunistic secondary fund purchases (30%). **The Benchmark is comprised of CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.**

## Quarterly Summary and Highlights

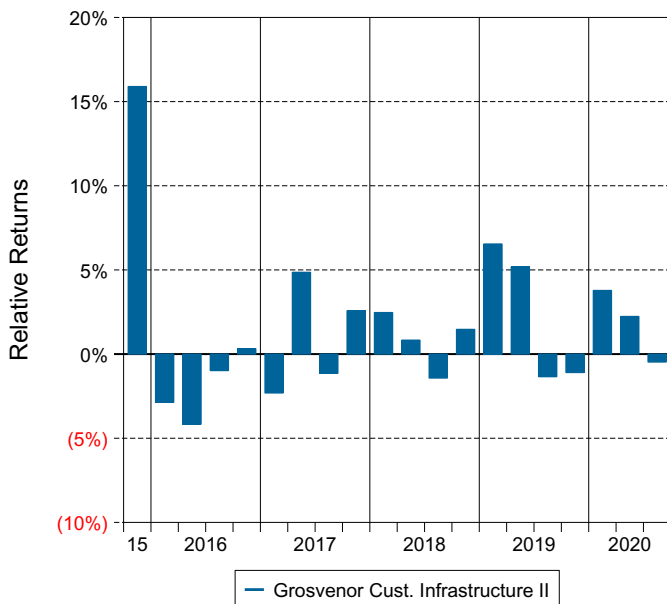
- Grosvenor Cust. Infrastructure II's portfolio underperformed the Benchmark by 0.47% for the quarter and outperformed the Benchmark for the year by 4.48%.

## Quarterly Asset Growth

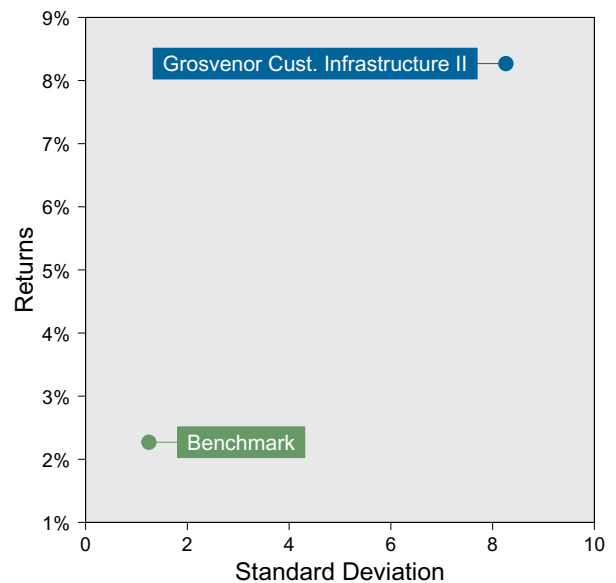
Beginning Market Value	\$18,339,842
Net New Investment	\$-284,824
Investment Gains/(Losses)	\$-63,856
Ending Market Value	\$17,991,162



## Relative Return vs Benchmark



## Annualized Five Year Risk vs Return



# Macquarie Infras. Partners IV Period Ended September 30, 2020

## Investment Philosophy

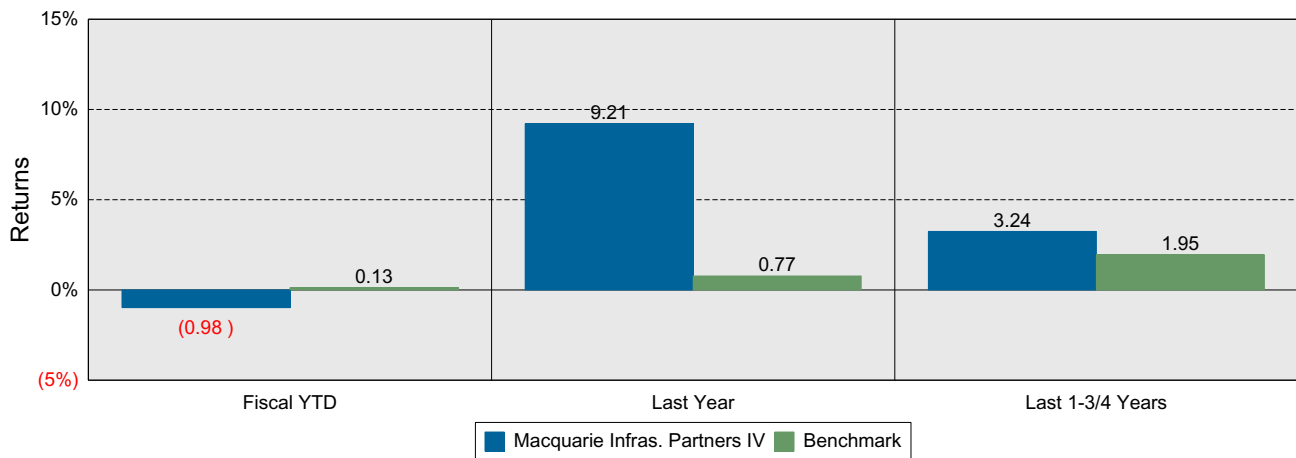
Macquarie's principal investment philosophy is to invest in infrastructure assets that exhibit monopolistic and/or contractual revenue drivers, limited substitution risk and high barriers to entry. The manager has continued to focus on investments where the team's sector expertise and operating experience will provide a competitive advantage in sourcing and due diligence. Furthermore, the manager will also continue to focus on opportunities where its active management capabilities can add value for investors in terms of enhancing returns and the substantial mitigation and/or elimination of material operational risks. **The Benchmark is comprised of 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net.**

## Quarterly Summary and Highlights

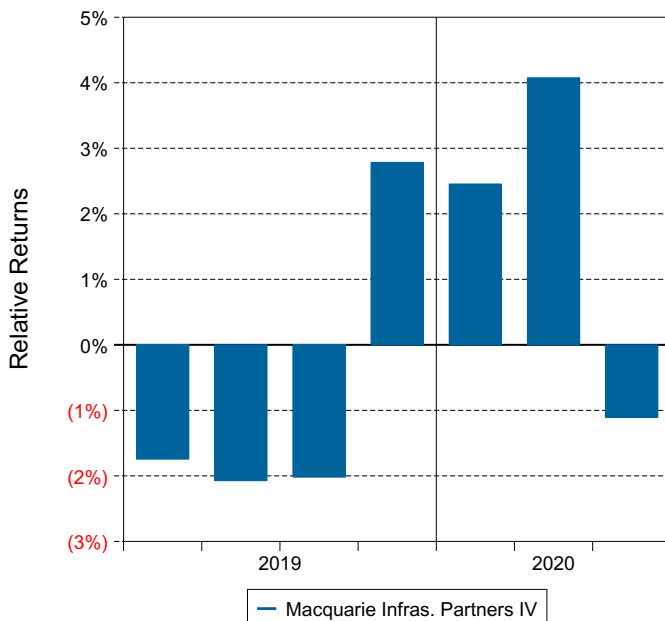
- Macquarie Infras. Partners IV's portfolio underperformed the Benchmark by 1.10% for the quarter and outperformed the Benchmark for the year by 8.44%.

## Quarterly Asset Growth

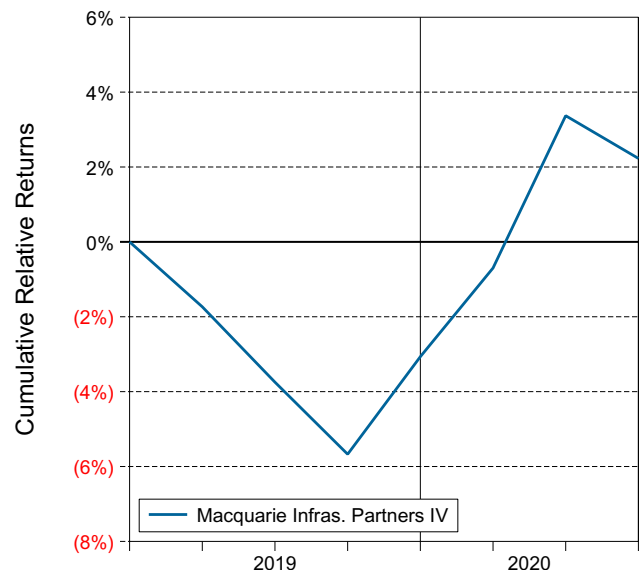
Beginning Market Value	\$61,923,359
Net New Investment	\$2,889,066
Investment Gains/(Losses)	\$-607,582
Ending Market Value	\$64,204,843



Relative Return vs Benchmark



Cumulative Returns vs Benchmark



## Research and Educational Programs

The Callan Institute provides research to update clients on the latest industry trends and carefully structured educational programs to enhance the knowledge of industry professionals. Visit [www.callan.com/library](http://www.callan.com/library) to see all of our publications, and [www.callan.com/blog](http://www.callan.com/blog) to view our blog “Perspectives.” For more information contact Barb Gerraty at 415-274-3093 / [institute@callan.com](mailto:institute@callan.com).

## New Research from Callan’s Experts

**[2020 ESG Survey](#)** | Callan’s eighth annual survey assessing the status of environmental, social, and governance (ESG) investing in the U.S. institutional investment market.

**[Coping with COVID-19: How Work Is Evolving for Investment Managers—2nd Edition](#)** | Following up on our June publication, Callan again surveyed investment managers regarding how their firms were responding to the COVID-19 pandemic, focusing on office closures and reopenings, work-from-home approaches, business travel, and meetings. Respondents reflected a variety of firms by location, employee size, ownership structure, and assets under management.

**[Private Equity Fees and Terms Study](#)** | To help institutional investors better evaluate private equity funds, Callan conducted an extensive analysis of the fees and terms for private equity partnerships. Using that data, we created this study to help investors evaluate a partnership’s terms compared to its peers.

**[Real Estate Indicators: Too Hot to Touch or Cool Enough to Handle?](#)** | Callan’s Real Assets Consulting group identifies seven indicators that, combined with an understanding of prevailing market dynamics, have helped signal when the institutional real estate market is overheated or cooled.

### Blog Highlights

**[How Investors Can Address Climate Risk in Real Estate](#)** | Climate risk, which refers to the hazards associated with climate change, can significantly threaten real estate portfolios. Institutional investors and real estate investment managers must evaluate the increasing significance of climate risk given the material financial impact that climate change can have on real estate portfolios.

**[Fine-Tuning Implementation of the CARES Act](#)** | Drafting the CARES Act was expedited, which means there is a limited congressional record to clarify provisions. The IRS has issued two notices and a FAQ to clarify how defined contribution (DC) plan sponsors should implement the provisions, touching on required notices, tax reporting, and recordkeeping.

**[DOL Proposes Tightened Proxy Voting Guidelines](#)** | The department’s new proposal dovetails with SEC guidance finalized in 2020 and would create a refined set of circumstances in which plan fiduciaries may engage in proxy voting.

### Quarterly Periodicals

**[Private Equity Trends, 2Q20](#)** | A high-level summary of private equity activity in the quarter through all the investment stages

**[Active vs. Passive Charts, 2Q20](#)** | A comparison of active managers alongside relevant benchmarks over the long term

**[Market Pulse Flipbook, 2Q20](#)** | A quarterly market reference guide covering trends in the U.S. economy, developments for institutional investors, and the latest data on the capital markets

**[Capital Market Review, 2Q20](#)** | Analysis and a broad overview of the economy and public and private market activity each quarter across a wide range of asset classes

**[Hedge Fund Quarterly, 2Q20](#)** | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

**[Real Assets Reporter, 2Q20](#)** | In this quarter’s edition, Barbara Bernard and Sally Haskins discuss how new risk-retention rules affect the CMBS market. In addition, it includes analysis of the performance of real estate and other real assets in 2Q20.

## Events

Miss out on a Callan conference or workshop? Event summaries and speakers' presentations are available on our website: [www.callan.com/library/](http://www.callan.com/library/)

Please mark your calendar and look forward to upcoming invitations:

### 2021 National Conference

June 21-23, 2021

San Francisco | Palace Hotel

For more information about events, please contact Barb Gerraty: 415-274-3093 / [gerraty@callan.com](mailto:gerraty@callan.com)

## Education: By the Numbers

50+

Unique pieces of research the Institute generates each year

525

Attendees (on average) of the Institute's annual National Conference

3,700

Total attendees of the "Callan College" since 1994

## Education

Founded in 1994, the "Callan College" offers educational sessions for industry professionals involved in the investment decision-making process.

### Introduction to Investments—Virtual

This program familiarizes institutional investor trustees and staff and asset management advisers with basic investment theory, terminology, and practices. It is held over three days with virtual modules of 2.5-3 hours. This course is designed for individuals with less than two years of experience with asset-management oversight and/or support responsibilities. Tuition is \$950 per person and includes instruction and digital materials.

**Please look for our updated schedule for 2021 in November**

Additional information including registration can be found at: [www.callan.com/cc-introduction-virtual/](http://www.callan.com/cc-introduction-virtual/)

### Introduction to Investments—In Person

This program familiarizes institutional investor trustees and staff and asset management advisers with basic investment theory, terminology, and practices. It lasts one-and-a-half days and is designed for individuals with less than two years of experience with asset-management oversight and/or support responsibilities. Tuition is \$2,350 per person and includes instruction, all materials, breakfast and lunch on each day, and dinner on the first evening with the instructors.

Additional information including dates and registration can be found at: [www.callan.com/callan-college-intro-2/](http://www.callan.com/callan-college-intro-2/)



"Research is the foundation of all we do at Callan, and sharing our best thinking with the investment community is our way of helping to foster dialogue to raise the bar across the industry."

Greg Allen, CEO and Chief Research Officer



## List of Callan's Investment Manager Clients

Confidential – For Callan Client Use Only

Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry, and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor, and disclose potential conflicts on an ongoing basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database, or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please note that if an investment manager receives a product or service on a complimentary basis (e.g., attending an educational event), they are not included in the list below. Callan is committed to ensuring that we do not consider an investment manager's business relationship with Callan, or lack thereof, in performing evaluations for or making suggestions or recommendations to its other clients. Please refer to Callan's ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group, and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance department.

Manager Name
Aberdeen Standard Investments
Acadian Asset Management LLC
AEGON USA Investment Management Inc.
AllianceBernstein
Allianz
American Century Investments
Amundi Pioneer Asset Management
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Aristotle Capital Management, LLC
Atlanta Capital Management Co., LLC
Aviva Investors Americas
AXA Investment Managers
Baillie Gifford International, LLC
Baird Advisors
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC

Manager Name
BlackRock
BMO Global Asset Management
BNP Paribas Asset Management
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
BrightSphere Investment Group
Brown Brothers Harriman & Company
Cambiar Investors, LLC
CapFinancial Partners, LLC
Capital Group
Carillon Tower Advisers
CastleArk Management, LLC
Causeway Capital Management LLC
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.

**Manager Name**

Columbia Management Investments

Columbus Circle Investors

Credit Suisse Asset Management

D.E. Shaw Investment Management, L.L.C.

DePrince, Race &amp; Zollo, Inc.

Dimensional Fund Advisors LP

Doubleline

Duff &amp; Phelps Investment Management Co.

DWS

EARNEST Partners, LLC

Eaton Vance Management

Epoch Investment Partners, Inc.

Fayez Sarofim &amp; Company

Federated Hermes, Inc.

Fidelity Institutional Asset Management

Fiera Capital Corporation

First Hawaiian Bank Wealth Management Division

First State Investments

Fisher Investments

Franklin Templeton

Fred Alger Management, Inc.

GAM (USA) Inc.

GCM Grosvenor

Glenmeade Investment Management, LP

GlobeFlex Capital, L.P.

Goldman Sachs

Green Square Capital Advisors, LLC

Guggenheim Investments

GW&amp;K Investment Management

Harbor Capital Group Trust

Hartford Investment Management Co.

Heitman LLC

Hotchkis &amp; Wiley Capital Management, LLC

Income Research + Management, Inc.

Insight Investment Management Limited

Intech Investment Management, LLC

Intercontinental Real Estate Corporation

Invesco

Investec Asset Management North America, Inc.

Ivy Investments

**Manager Name**

J.P. Morgan

Janus

Jennison Associates LLC

Jobs Peak Advisors

KeyCorp

Lazard Asset Management

Legal &amp; General Investment Management America

Lincoln National Corporation

Longview Partners

Loomis, Sayles &amp; Company, L.P.

Lord Abbett &amp; Company

Los Angeles Capital Management

LSV Asset Management

MackKay Shields LLC

Macquarie Investment Management (MIM)

Manulife Investment Management

Marathon Asset Management, L.P.

McKinley Capital Management, LLC

Mellon

MetLife Investment Management

MFS Investment Management

MidFirst Bank

Mondrian Investment Partners Limited

Montag &amp; Caldwell, LLC

Morgan Stanley Investment Management

Mountain Pacific Advisors, LLC

MUFG Union Bank, N.A.

Natixis Investment Managers

Neuberger Berman

Newton Investment Management

Nikko Asset Management Co., Ltd.

Nile Capital Group LLC

Northern Trust Asset Management

Nuveen

P/E Investments

Pacific Investment Management Company

Parametric Portfolio Associates LLC

Pathway Capital Management

Peregrine Capital Management, LLC

Perkins Investment Management

**Manager Name**

PFM Asset Management LLC

PGIM Fixed Income

PineBridge Investments

PNC Capital Advisors, LLC

Polen Capital Management

Principal Global Investors

Putnam Investments, LLC

QMA LLC

RBC Global Asset Management

Regions Financial Corporation

Robeco Institutional Asset Management, US Inc.

Rothschild &amp; Co. Asset Management US

S&amp;P Dow Jones Indices

Schroder Investment Management North America Inc.

SLC Management

Smith Graham &amp; Co. Investment Advisors, L.P.

State Street Global Advisors

Stone Harbor Investment Partners L.P.

Strategic Global Advisors

T. Rowe Price Associates, Inc.

**Manager Name**

The TCW Group, Inc.

Thompson, Siegel &amp; Walmsley LLC

Thornburg Investment Management, Inc.

Tri-Star Trust Bank

UBS Asset Management

USAA Real Estate

VanEck

Versus Capital Group

Victory Capital Management Inc.

Virtus Investment Partners, Inc.

Vontobel Asset Management, Inc.

Voya

WCM Investment Management

WEDGE Capital Management

Wellington Management Company LLP

Wells Fargo Asset Management

Western Asset Management Company LLC

Westfield Capital Management Company, LP

William Blair &amp; Company LLC

September 30, 2020



**North Dakota State Investment  
Board Insurance Trust**

**Investment Measurement Service  
Quarterly Review**

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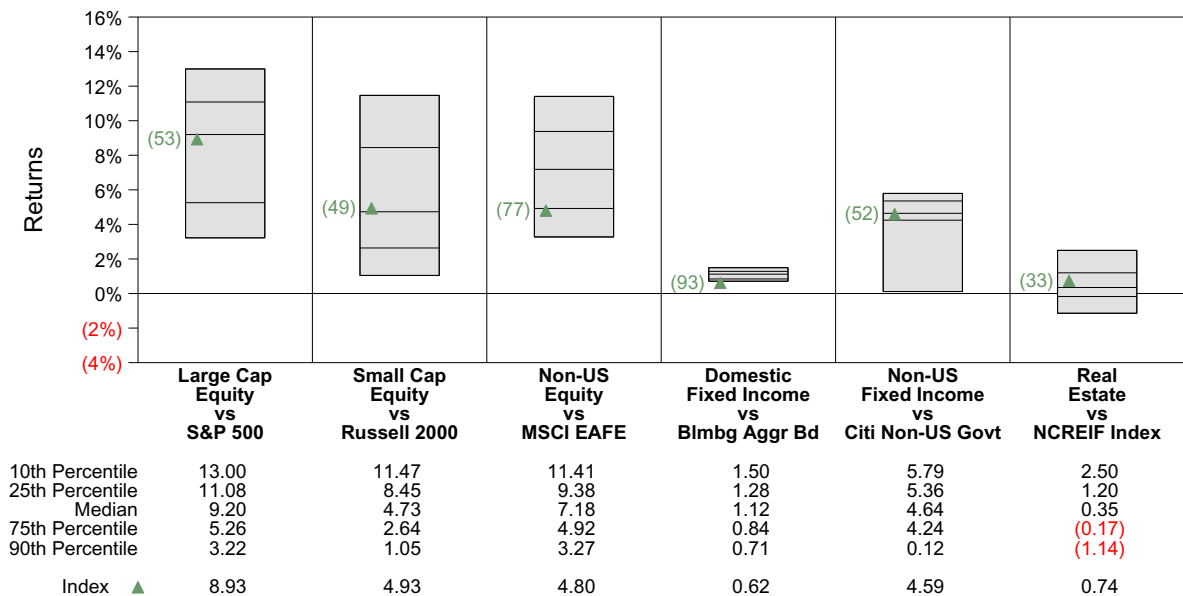
## Market Overview

### Active Management vs Index Returns

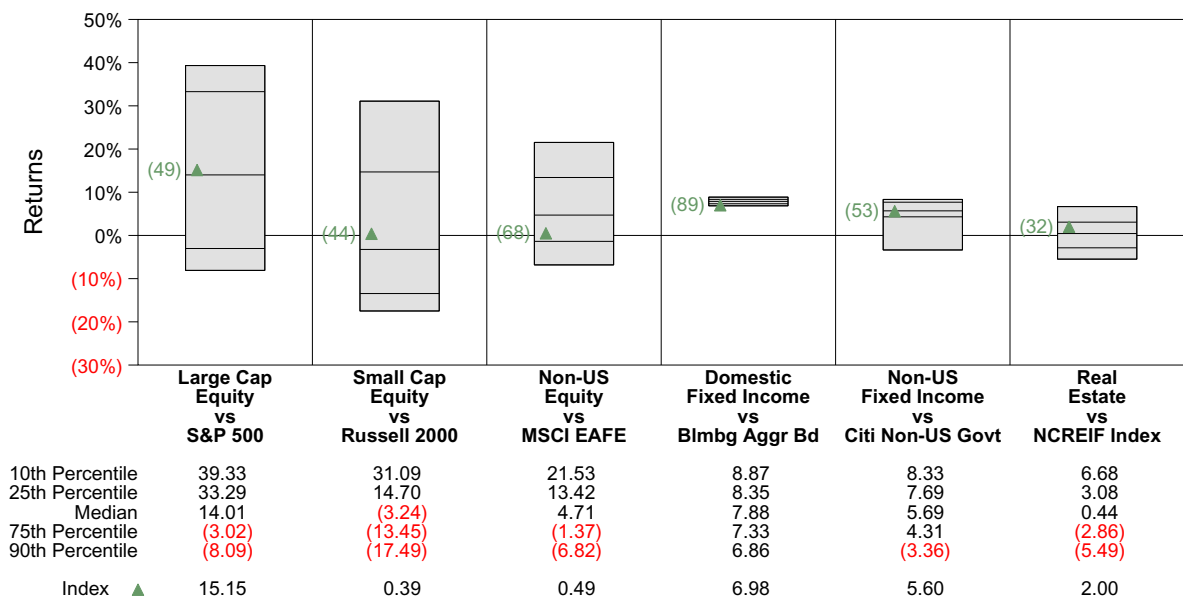
#### Market Overview

The charts below illustrate the range of returns across managers in Callan's Separate Account database over the most recent one quarter and one year time periods. The database is broken down by asset class to illustrate the difference in returns across those asset classes. An appropriate index is also shown for each asset class for comparison purposes. As an example, the first bar in the upper chart illustrates the range of returns for domestic equity managers over the last quarter. The triangle represents the S&P 500 return. The number next to the triangle represents the ranking of the S&P 500 in the Large Cap Equity manager database.

#### Range of Separate Account Manager Returns by Asset Class One Quarter Ended September 30, 2020



#### Range of Separate Account Manager Returns by Asset Class One Year Ended September 30, 2020





## Caution Needed— Hard Road Ahead!

### ECONOMY

**2** The huge jump in 3Q GDP still leaves it 3.5% below its previous peak (4Q19). Employment remains more than 10 million jobs short of the level reached in the U.S. in February of this year, and many other measures of economic activity remain below pre-pandemic levels.

## Equity Jump Provided Some Help to Returns

### INSTITUTIONAL INVESTORS

**4** Institutional investors saw more gains in 3Q20 as equities rebounded, but not enough to overcome lagging global ex-U.S. equity returns, which hindered performance against a 60% equities/40% bonds benchmark. But results over 20 years continue to match the benchmark.

## Continued Gains, but With a Big Asterisk

### EQUITY

**6** The S&P 500 rose in 3Q20 and has gained 5.6% year to date, but would be negative without the big jumps of the major technology firms. Supported by low rates, global equity returns were broadly positive across developed and emerging markets but have been muted YTD.

## Low Returns in U.S.; Muted Gain Globally

### FIXED INCOME

**8** U.S. Treasury yields were relatively unchanged, and the Aggregate was roughly flat. Corporate and CMBS were the strongest investment grade sectors as investors hunted for yield. Global fixed income rose amid rate cuts, but U.S. dollar weakness dampened hedged returns.

## Virus Hit All Sectors; REITs Lagged Equities

### REAL ESTATE/REAL ASSETS

**10** All sectors experienced negative appreciation in 3Q20, but income rose for every sector except for Hotels. Rent collection held up well for most sectors. All property types will see an impact on vacancy rates due to the pandemic. Most REITs trade at a discount to net asset value.

## Activity Muted by Impact of Pandemic

### PRIVATE EQUITY

**12** Most private equity activity measures were down in 3Q20 compared to the previous quarter, a pattern that also held for most year-to-date comparisons. A rough averaging across fundraising and private investments and exits indicates a 30% drop in year-over-year activity.

## Stimulus Hopes, Fed Boost Risky Trades

### HEDGE FUNDS/MACs

**13** Representing a portfolio of hedge fund interests without implementation costs, the Credit Suisse Hedge Fund Index rose 3.4% in 3Q20. As a live hedge fund portfolio, net of fees and expenses, the median manager in the Callan Hedge Fund-of-Funds Database Group advanced 3.7%.

## Index's 2Q20 Gain of 15% Largest Ever

### DEFINED CONTRIBUTION

**15** The Callan DC Index's rebound comes one quarter after the largest drop since 4Q08. The index also had its largest-ever increase in balances, driven primarily by robust investment returns. TDFs regained their position atop the inflows leaderboard.

## Broad Market Quarterly Returns

**U.S. Equity**  
Russell 3000



**9.2%**

**Global ex-U.S. Equity**  
MSCI ACWI ex USA



**6.3%**

**U.S. Fixed Income**  
Bloomberg Barclays Agg



**0.6%**

**Global ex-U.S. Fixed Income**  
Bloomberg Barclays GBI ex US



**4.1%**

Sources: Bloomberg Barclays, FTSE Russell, MSCI

# Caution—Hard Road Ahead!

ECONOMY | Jay Kloepfer

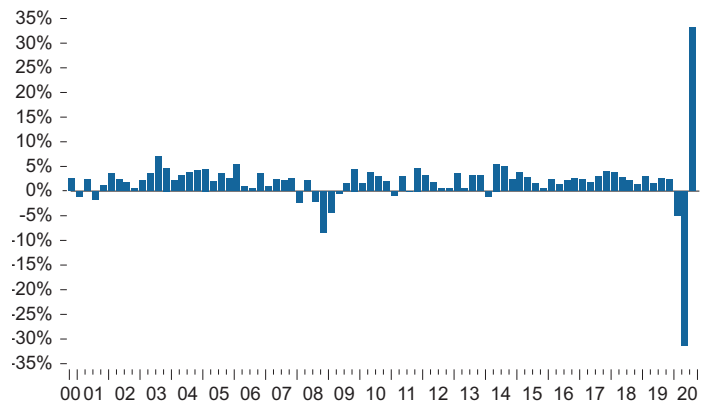
GDP growth came roaring back in 3Q20 as expected, notching a 33.1% gain, following the 31.4% decline in 2Q. The 3Q growth rate set a record by a wide margin (as did the decline), but the interpretation of quarterly GDP growth is problematic when trying to understand the true condition of the U.S. and global economies. GDP is customarily reported as quarterly growth, translated to an annual rate, which helps remove some of the seasonal noise that interferes with evaluating economic activity in normal times. The past nine months have been anything but normal, and annualized quarterly growth rates on either side of a global economic shutdown are perhaps less meaningful than analyzing the level of current and future economic activity relative to that seen before the onset of the pandemic. The huge jump in 3Q still leaves GDP 3.5% below its previous peak (4Q19). Employment remains more than 10 million jobs short of the level reached in the U.S. in February of this year, and many other measures of economic activity such as personal consumption remain below pre-pandemic levels.

The surge in 3Q GDP clearly reflects the gradual reopening of the U.S. and global economies that began back in May. The sharp increases in jobs, spending, and output were concentrated in May, June, and July. Growth in subsequent months has been much more modest. High-frequency tracking of the economy from the likes of GDPNow (from the Federal Reserve) and IHS Markit not only signaled slowing growth in August and September, but these forecasters are now expecting 4Q GDP growth to cycle back down to 5% annualized.

This would bring the level of GDP back close to where we started 2020, but the road forward into 2021 will be challenging. Growth across industry sectors, regions within the U.S., and occupations and income groups has been widely disparate. Technology illustrates the dichotomy. Defined as a combination of the Information Technology and Communication Services sectors, technology has seen lights-out performance in the stock market, up 22% collectively year-to-date through September, and accounts for 39% of the market cap of the S&P 500. Yet

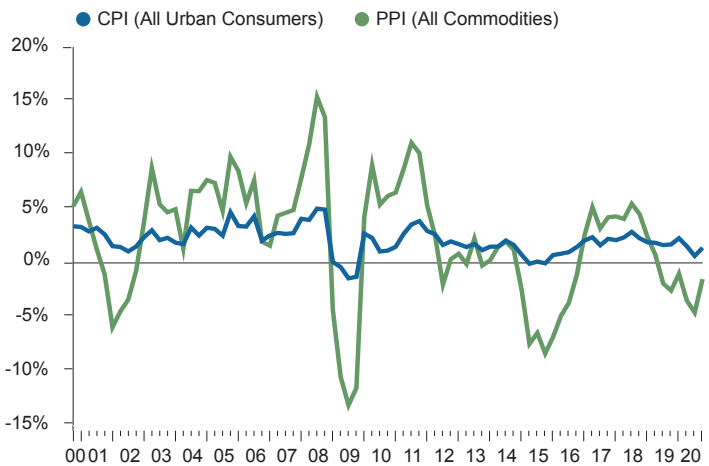
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

these two sectors account for just 6% of GDP, and only 2% of the U.S. job market as of August. The vast majority of jobs lost during the pandemic were in services (transportation, health care, financial business, and personal) as well as hospitality and retail. These sectors are underrepresented in the stock market, yet they employed a substantial portion of the U.S. workforce as the pandemic struck.

The slowdown in August, September, and into the fourth quarter came in part from a concern by both businesses and consumers

about the end to the stimulus payments and to extended unemployment benefits in September. Without another round of stimulus and further extension of jobless aid, growth will likely be restrained as the economy continues to operate under pandemic constraints and the effect from the stimulus earlier in the year wanes. The increase in COVID-19 infection rates both around the U.S. and the world, the so-called third wave, will further burden strained medical systems and increase pandemic-related deaths. The rising tide of infections may force the return of more stringent restrictions at the state level to control the virus, although a sudden stop to economic activity similar to what happened in the spring is unlikely.

Not all the economic news is dour as we head into the fourth quarter. Manufacturers' orders for durable goods have shown considerable strength, and consumer purchases of durable goods have been incredibly robust. Excluding capital goods like defense hardware and civilian aircraft, orders for durable goods have fully recovered to pre-pandemic levels. Trade has surprised on the upside with a narrowing of the trade deficit, even with demand for exports depressed by weakness in the global economy. Another surprising source of strength has been the housing market. Investment in new housing has already reached its pre-pandemic peak, driven by low mortgage rates and newly created demand for improved and larger housing by people leaving the urban cores of many large cities. Underlying demographics such as the aging baby boom and the maturation of families in the next generation suggest this trend is near-term in nature and will likely fade as we see some sort of resolution to the pandemic, perhaps in the second half of 2021.

Government assistance targeted to aid those affected by pandemic-related closures helped greatly to support household

### Recent Quarterly Economic Indicators

	3Q20	2Q20	1Q20	4Q19	3Q19	2Q19	1Q19	4Q18
Employment Cost–Total Compensation Growth	2.4%	2.7%	2.8%	2.7%	2.8%	2.7%	2.8%	2.9%
Nonfarm Business–Productivity Growth	4.9%*	10.1%	-0.3%	1.6%	0.3%	2.0%	3.7%	0.8%
GDP Growth	33.1%	-32.9%	-5.0%	2.4%	2.6%	1.5%	2.9%	1.3%
Manufacturing Capacity Utilization	70.3%	63.1%	73.9%	75.0%	75.4%	75.5%	76.4%	77.0%
Consumer Sentiment Index (1966=100)	75.6	74.0	96.4	97.2	93.8	98.4	94.5	98.2

\* Estimate

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan

### The Long-Term View

Index	3Q20	Periods Ended 9/30/20			
		Year	5 Yrs	10 Yrs	25 Yrs
<b>U.S. Equity</b>					
Russell 3000	9.2	15.0	13.7	13.5	9.3
S&P 500	8.9	15.1	14.1	13.7	9.3
Russell 2000	4.9	0.4	8.0	9.9	8.0
<b>Global ex-U.S. Equity</b>					
MSCI EAFE	4.8	0.5	5.3	4.6	4.6
MSCI ACWI ex USA	6.3	3.0	6.2	4.0	--
MSCI Emerging Markets	9.6	10.5	9.0	2.5	--
MSCI ACWI ex USA Small Cap	10.5	7.0	6.8	5.3	5.8
<b>Fixed Income</b>					
Bloomberg Barclays Agg	0.6	7.0	4.2	3.6	5.3
90-Day T-Bill	0.0	1.1	1.2	0.6	2.3
Bloomberg Barclays Long G/C	1.2	12.9	8.8	7.4	7.7
Bloomberg Barclays GI Agg ex US	4.1	5.5	3.6	1.3	3.9
<b>Real Estate</b>					
NCREIF Property	0.7	2.0	6.3	9.4	9.1
FTSE Nareit Equity	1.4	-18.2	3.9	7.9	9.3
<b>Alternatives</b>					
CS Hedge Fund	3.4	2.4	2.8	3.6	7.3
Cambridge PE*	9.9	7.7	11.4	13.4	14.9
Bloomberg Commodity	9.1	-8.2	-3.1	-6.0	0.9
Gold Spot Price	5.3	28.7	11.2	3.8	6.6
<b>Inflation – CPI-U</b>	1.0	1.4	1.8	1.8	2.1

\*Data for most recent period lags by a quarter. Data as of 6/30/20.

Sources: Bloomberg, Bloomberg Barclays, Bureau of Economic Analysis, Credit Suisse, FTSE Russell, MSCI, NCREIF, Refinitiv/Cambridge, S&P Dow Jones Indices

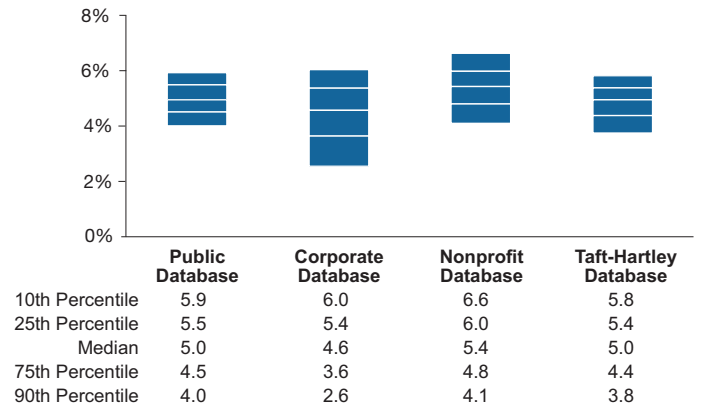
incomes, spending, and therefore production. While the job market has a long way to go to recover all the jobs lost, the unemployment rate has surprised to the positive, falling from 14.7% in April to 7.9% in September. The thorn in the job market's side has been the number of initial unemployment claims, which remains stubbornly high at 837,000 in September, still far above prior periods of stress. For reference, at the bottom of the GFC in March 2009, initial claims hit 665,000.

# Equity Gains Provided Some Help to 3Q Returns

## INSTITUTIONAL INVESTORS

- The continuing equity rebound helped boost institutional investors' returns over the 12 months ending Sept. 30, especially compared to the negative results at the end of 1Q20. Corporate plans performed the best, possibly driven by higher bond allocations given the performance of the Bloomberg Barclays US Aggregate Bond Index. Taft-Hartley plans trailed their peers.
- But the exceptionally strong gains in U.S. equity did not provide a big-enough short-term boost to investor returns to help them match a 60% S&P 500/40% Aggregate benchmark during 3Q20, held down by lagging results for global ex-U.S. equities.
- Over shorter time periods ranging up to 10 years, all investor types lagged the 60%/40% benchmark, but over a 20-year time period, all types posted returns roughly in line with that benchmark.
- Institutional investors continued to increase allocations to alternative asset classes, while interest in increasing exposure to equities or fixed income was minimal.

### Quarterly Returns, Callan Database Groups



Source: Callan

- Amid the pandemic, investors are shifting their focus from “What happened?” to “What should we do now?”
- Their liquidity needs have eased, but they are still top of mind.

### Callan Database Median and Index Returns\* for Periods Ended 9/30/20

Database Group	Quarter	Year-to-date	Year	3 Years	5 Years	10 Years
Public Database	5.0	2.2	7.5	6.2	8.1	7.7
Corporate Database	4.6	4.9	9.5	7.5	8.9	8.2
Nonprofit Database	5.4	1.5	7.3	5.9	8.0	7.5
Taft-Hartley Database	5.0	1.6	7.1	6.4	8.2	8.1
All Institutional Investors	5.0	2.4	7.8	6.4	8.2	7.9
Large (>\$1 billion)	4.9	2.8	8.0	6.8	8.3	8.1
Medium (\$100mm - \$1bn)	5.0	2.4	7.9	6.5	8.3	8.0
Small (<\$100 million)	5.2	2.1	7.6	6.1	8.0	7.6

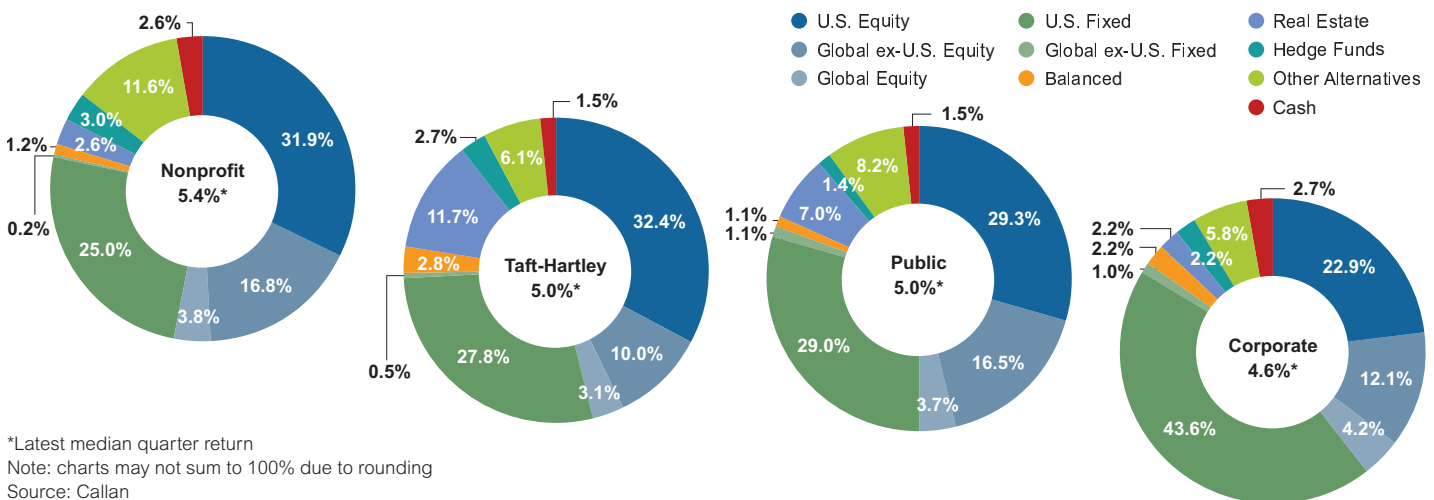
\*Returns less than one year are not annualized.

Source: Callan. Callan's database includes the following groups: public defined benefit (DB) plans, corporate DB plans, nonprofits, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan's clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.

- Investors across the board are reevaluating the purpose and the future of all asset classes:
  - Fixed income
  - Public equity
  - Hedge funds and liquid alternatives
  - Private equity, private credit, and the notion of private capital
- Asset class structures are the focus of many investors.
- It has been business as usual for many investors in the face of political, economic, and public health upheaval; this is a rational response when so much is uncertain.
- Many institutional investors are examining active vs. passive, value, and alternatives to cap-weighted passive allocations for their global equity structure.
- Opportunistic allocations are making a return as investors eye tactical investments.
- Both corporate and public defined benefit (DB) plans have prioritized funding status.
- DB plans also indicated they planned to reduce their passive exposure, a shift from previous quarters.
- More corporate DB plans are putting their liability-driven investing (LDI) plans on hold, and there was a reduction in LDI interest for corporate DB plans amid concerns about the impact of a continued low-rate environment.
- Public DB plans continued to focus beyond the traditional

- asset classes.
- They are also exploring alternatives to cap-weighted passive exposures to combat the concentration risk in U.S. equity.
- Some have also re-introduced opportunistic buckets—with a zero target, up to 5% allocation—to fund opportunities as they arise.
- Fees continue to be the top issue for DC plan sponsors. But they have expressed growing interest in investment structures and reducing the number of options in the plan.
- DC litigation has not slowed down during the pandemic.
- Recordkeeper consolidation activity picked up in 3Q20 with notable announcements from two key providers.
- Nonprofits showed growing interest in private real estate. But their appetite for ESG investing significantly declined, although there was a notable rise in the share of clients hiring staff specifically for ESG.
- More nonprofits expressed interest in private real estate.
- Callan’s strategic asset allocation work with endowments and community foundations is focused on evaluating investment portfolios that can support the desired distribution rate in order to balance intergenerational equity. Subdued expectations for capital markets returns are challenging both the risk tolerance of the organization and the sustainability of established spending rates.

Average Asset Allocation, Callan Database Groups



# Equity

## U.S. Equities

### Gains YTD

- S&P +8.9% for the quarter, bringing YTD to +5.6%
- Consumer Discretionary (+15%) and Industrials (+13%) dominated, with Tech (+12%) a close third in risk-on market.
- S&P 500 YTD would be negative if not for Facebook, Microsoft, Amazon, Alphabet, and Apple, representing 33% of the return.
- YTD, pandemic punished some sectors, rewarded others
- Tech +29% YTD; Cons. Disc. +23% (online retailers +60%)
- Energy -48% amid declining crude and natural gas prices
- Demand from hotels/cruise lines/airlines down as those industries have dropped 40%+

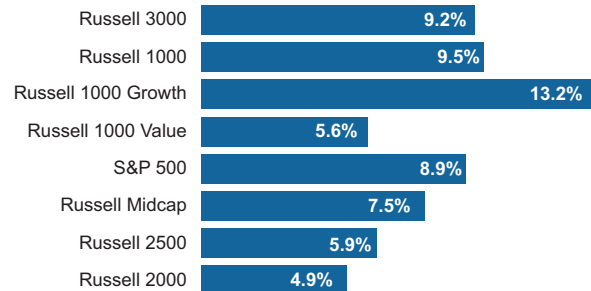
### Small cap reverses to trail large cap

- Following a stellar 2Q20 recovery, small cap trailed large.
- Behind large cap by a wide margin over last 12 months

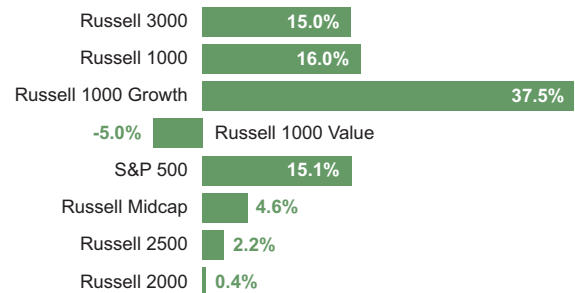
### Growth continues to outpace value across market caps

- Growth, value dispersion near all-time high driven by Tech
- YTD RUS1G +25% vs. RUS1V -12%
- Growth stock P/E near 2x historical average across market caps
- Today's index concentration surpasses levels seen in the late 90's Dot-Com boom.
- Index concentration of the top five names is at 5 standard deviations above the 30-year average of approximately 13%.
- Large and small value indices continue to underperform large and small growth in 3Q20 and YTD.

## U.S. Equity: Quarterly Returns



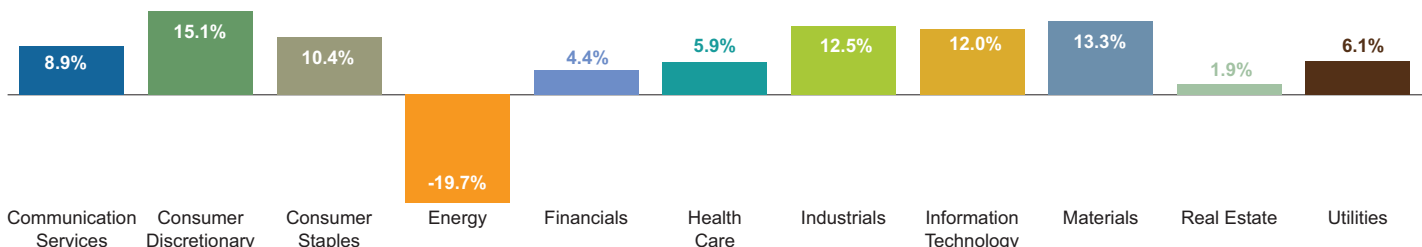
## U.S. Equity: One-Year Returns



Sources: FTSE Russell and S&P Dow Jones Indices

- Higher interest rates, a steeper yield curve, economic growth, and improving consumer confidence are among the catalysts that could result in value outperforming.
- S&P 500 Index currently delivers a dividend yield well above the 10-year Treasury, which can help support current valuation levels.

## Quarterly Performance of Industry Sectors



Source: S&P Dow Jones Indices



## Global/Global ex-U.S. Equity

### Continued recovery into 3Q20

- Returns broadly positive across developed and emerging markets but muted YTD
- Recent support from ultra-low interest rates and upward earnings revisions
- EM recovery driven by global risk-on environment; key countries within EM (China and South Korea) have better managed the pandemic
- Small cap continued to outperform large as lockdowns eased and business confidence improved.

### Rebound for cyclicals

- Materials, Industrials, and Consumer Discretionary outperformed as consumption and production resumed.
- Factor performance led by momentum (rebound) and volatility (risk-on market mentality)

### U.S. dollar vs. other currencies

- U.S. dollar lost ground versus every developed market currency on expectation of lower-for-longer U.S. rates due to Fed's shift in approach toward inflation and employment.

### COVID-19 exacerbated outperformance of growth vs. value

- Growth outpaced value by 34% year-to-date as of Sept. 30.
- Extremely narrow market with performance dominated by Tech
- Growth benefited from strong performance by Information Technology (27%), while Financials (-22%) and Energy (-46%) weighed on value.
- YTD performance gap between growth and value has not been seen over the past 45 years.

### What may stoke value rotation?

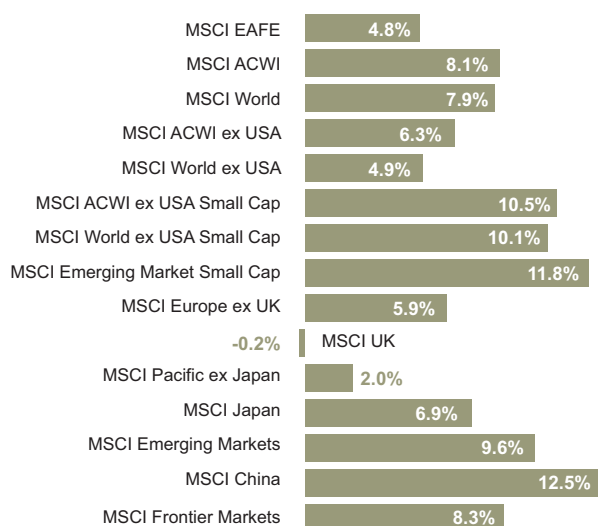
- Higher bond yields may be needed to drive value rebound.
- Bond yields correlated to value/growth since the GFC

### Key drivers: global recovery, U.S. elections

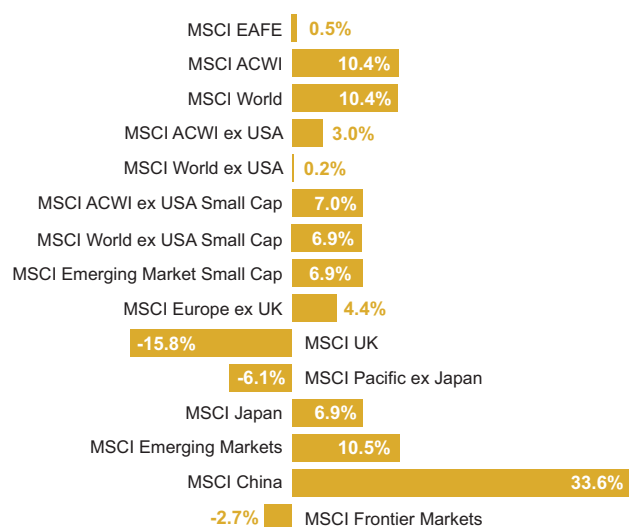
- Management of COVID-19 a key variable to recovery
- Advanced economies have struggled to contain the pandemic relative to emerging markets.

- Asian currencies have maintained resiliency relative to the U.S. dollar due to better COVID-19 management and economic outlook.

### Global ex-U.S. Equity: Quarterly Returns (U.S. Dollar)



### Global ex-U.S. Equity: One-Year Returns (U.S. Dollar)



Source: MSCI

# Fixed Income

## U.S. Fixed Income

### Treasury yields largely unchanged

- 10-year UST yield at 0.69% in 3Q20, up 3 bps from 2Q20 but off sharply from year-end level of 1.92%
- TIPS did well as inflation expectations rose from 1.34% to 1.63%.
- No rate hikes expected until at least 2023

### Bloomberg Barclays Aggregate roughly flat

- Corporate and CMBS the strongest investment grade sectors as investors hunted for yield
- Corporate supply (\$1 trillion YTD) at a record as companies rushed to take advantage of ultra-low interest rates

### Risk-on sentiment helped high yield and loans

- Non-investment grade sectors rallied, but remained roughly flat YTD.
- The high yield bond market also experienced high levels of net new issuance (over \$120 billion YTD).

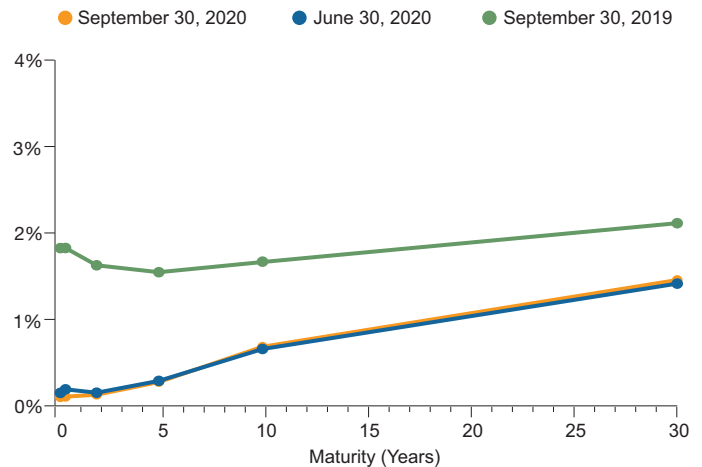
### Munis boosted by favorable supply/demand dynamics

- Robust demand and muted supply of tax-exempt municipals
- Issuance in taxable municipals sharply higher
- Tax revenues better than expected, but challenges remain and stimulus uncertain (but needed)

### High yield trended higher in quality

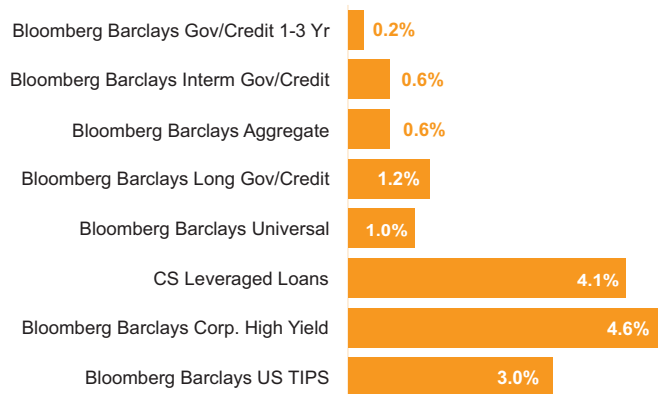
- BB/Ba-rated debt, the highest-quality category within high yield, experienced a surge of new issuance as 2020 remains a year of record new issuance across corporate debt.
- Reconstitution of downgraded investment grade debt into high yield has also added to the category.
- BBs now represent over half of the Bloomberg Barclays US High Yield Index.
- Historically, composition changes have generated market inefficiencies that managers can seek to exploit.

## U.S. Treasury Yield Curves



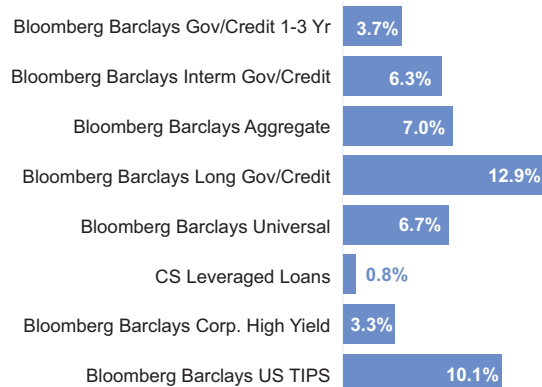
Source: Bloomberg

## U.S. Fixed Income: Quarterly Returns



Sources: Bloomberg Barclays and Credit Suisse

## U.S. Fixed Income: One-Year Returns



Sources: Bloomberg Barclays and Credit Suisse



**Default rate has trended higher, but below GFC levels**

- Additionally, spreads at the height of COVID-19 implied a 16.8% default rate, but thus far defaults have been well below market expectations at 5.8%.

**High yield spreads have rallied; managers are putting a greater focus on security selection**

- Recovery rates remain low relative to the 30-year average, concentrated within pandemic-sensitive sectors (particularly retail and energy) and subordinated debt.
- The ratio of downgrades to upgrades is higher than in 2008.

**Global Fixed Income**

**Rate cuts spur gains**

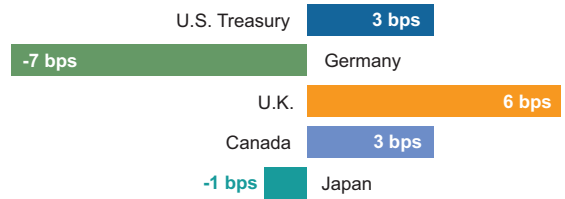
- Central banks continued to act aggressively to provide support via rate cuts, asset purchase programs, and other forms of stimulus.
- Broad-based U.S. dollar weakness dampened hedged returns as the USD lost 4% versus the euro and the British pound, and 2% versus the yen.
- Over 70% of global sovereign debt has negative real yields, a record high, according to JP Morgan.

**Emerging market debt made up ground**

- Emerging market debt indices gained in 3Q20 but remain down from year-end.
- U.S. dollar-denominated index (EMBI Global Diversified) outperformed local currency as U.S. rates fell; returns were mixed across the 70+ constituents, but most were positive.
- Local currency index (GBI-EM Global Diversified) was up slightly but returns varied widely among constituents (Russia: -8%; Brazil: -3%; Mexico and S. Africa: +6%).
- Staggered inclusion of China bonds continued with the weight rising to 7% in the JPM GBI-EM Global Diversified Index.

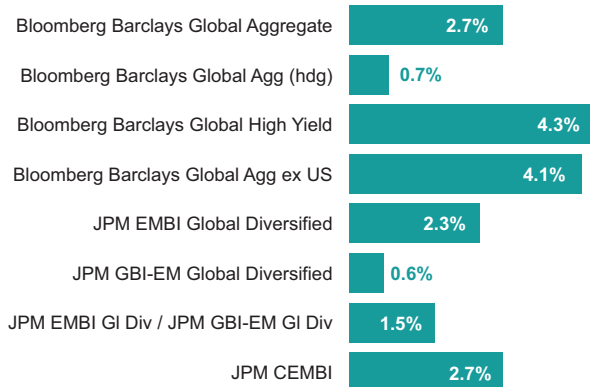
**Change in 10-Year Global Government Bond Yields**

2Q20 to 3Q20



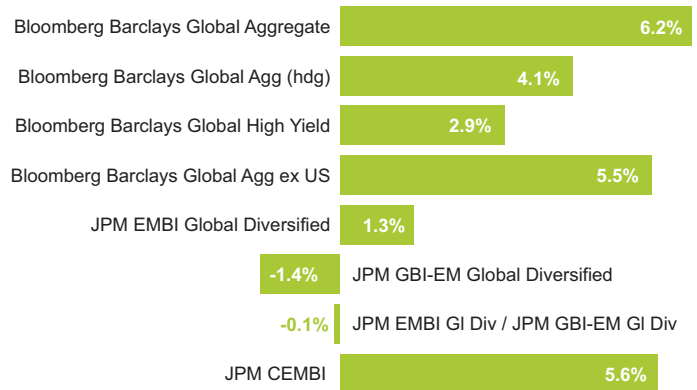
Source: Bloomberg Barclays

**Global Fixed Income: Quarterly Returns**



Sources: Bloomberg Barclays and JPMorgan Chase

**Global Fixed Income: One-Year Returns**



Sources: Bloomberg Barclays and JPMorgan Chase

# Pandemic Hit All Sectors; REITs Gained but Trailed Equities

REAL ESTATE/REAL ASSETS | Munir Iman

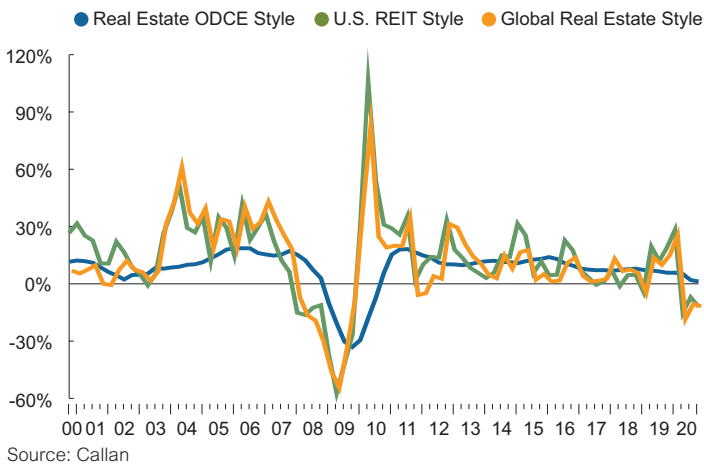
## All sectors saw negative appreciation

- Pandemic's impact reflected in 3Q20 results
- Income remained positive except in Hotel sector.
- All sectors experienced negative appreciation; Industrial remained the best performer.
- Dispersion of returns by manager within the ODCE Index due to both composition of underlying portfolios and valuation methodologies/approach
- Negative appreciation returns expected for 4Q and beyond

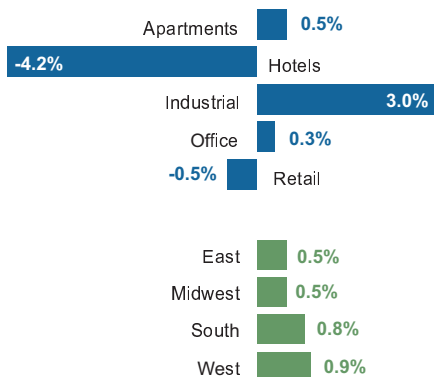
## U.S. real estate fundamentals

- Vacancy rates for all property types are or will be impacted.
- Net operating income has declined as retail continues to suffer.

## Rolling One-Year Returns



## Sector Quarterly Returns by Property Type and Region



Source: NCREIF

- 3Q rent collections showed relatively stable income throughout the quarter in the Industrial, Apartment, and Office sectors. The Retail sector remained challenged, with regional malls impacted most heavily.
- Class A/B urban apartments relatively strong, followed by certain types of Industrial and Office
- New construction will be basically halted in future quarters except for pre-leased properties.
- Transaction volume dropped off during the quarter with the exception of industrial assets with strong-credit tenants trading at pre-COVID-19 levels.
- Cap rates remained steady during the quarter. The spread between cap rates and 10-year Treasuries is relatively high, leading some market participants to speculate that cap rates will not adjust much. Price discovery is happening and there are limited transactions.

## Global REITs rose but lagged the equity market recovery

- Global REITs underperformed in 3Q20, gaining 2.1% compared to 7.9% for global equities (MSCI World).
- U.S. REITs rose 1.4% in 3Q20, lagging the S&P 500 Index, which jumped 8.9%.
- Globally, REITs except in the U.S. and Singapore are trading at a discount to net asset value. In some regions the discount is at a five-year high.
- Property sectors are mixed, between trading at a discount or premium.

## Real estate investment opportunities

- Primary opportunity: purchase of mispriced publicly traded real estate, both equity and debt
- Emerging opportunity: purchase of mezzanine loans from forced sellers
- Industrial development can be implemented by well-capitalized owners that do not need a construction loan.
- Low LTV loans on core properties
- Distress, take-privates, rescue capital, recapitalizations, value add re-leasing strategies, and lending strategies will move into the opportunity set for investment as the pandemic

## REAL ESTATE/REAL ASSETS (Continued)

- and social distancing continue and operating income is squeezed by tenants not paying rent.
- If core open end real estate funds are on the sidelines due to redemption queues, there may be more opportunities to buy core assets with less competition or to buy assets from the funds themselves.
- Industrial has been the one bright spot, as e-commerce take up has accelerated.

### Infrastructure opportunities

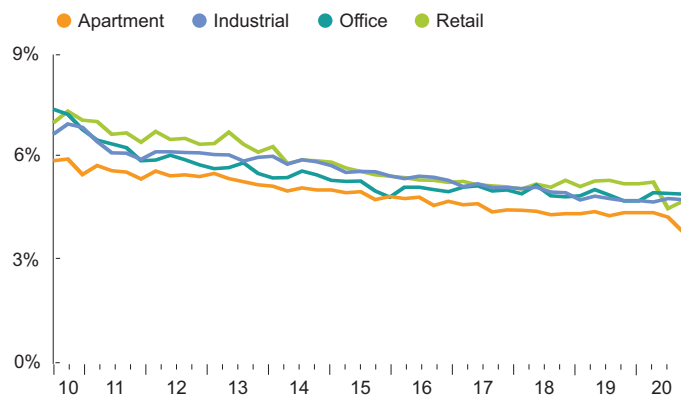
- Strong performance from communications assets has drawn interest from infrastructure investors across the sector, and in some cases real estate investors for data centers.
- Pandemic could accelerate the purchase of assets or formation of PPPs from cash-strapped governments/municipalities

- Potential purchase of mispriced publicly traded infrastructure
- Some sellers looking to secure strong pricing for stable assets with steady cash flows
- Opportunity for purchase of assets from over-leveraged buyers and/or with GDP-linked revenue

### Timberland and farmland opportunities

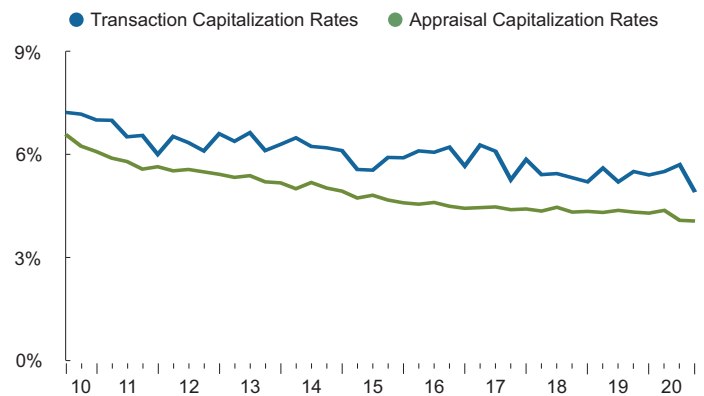
- Investment in farmland may increase if it proves to be a true diversifier in the pandemic.
- Volatility in commodity prices and changing supply chains may provide buying opportunities from overleveraged farmers and those who cannot shift crops away from restaurant/institutional use to grocery stores and suppliers to individual consumers.
- Institutional investment in timber has been waning for several years. The pandemic is unlikely to turn that tide.

### NCREIF Capitalization Rates by Property Type



Source: NCREIF. Capitalization rates (net operating income / current market value (or sale price)) are appraisal-based.

### NCREIF Transaction and Appraisal Capitalization Rates



Source: NCREIF  
Note: Transaction capitalization rate is equal weighted.

### Callan Database Median and Index Returns\* for Periods Ended 9/30/20

Private Real Assets	Quarter	Year to Date	Year	3 Years	5 Years	10 Years	15 Years
<b>Real Estate ODCE Style</b>	<b>0.3</b>	<b>-0.4</b>	<b>1.2</b>	<b>4.6</b>	<b>6.3</b>	<b>9.4</b>	<b>5.7</b>
NFI-ODCE (value wt net)	0.3	-0.7	0.5	4.2	5.7	9.3	5.7
NCREIF Property	0.7	0.4	2.0	5.1	6.3	9.4	7.4
NCREIF Farmland	0.6	1.1	2.1	4.7	5.8	10.7	12.7
NCREIF Timberland	0.0	0.2	0.2	2.1	2.6	4.4	6.1
<b>Public Real Estate</b>							
<b>Global Real Estate Style</b>	<b>3.1</b>	<b>-13.9</b>	<b>-11.8</b>	<b>2.6</b>	<b>4.4</b>	<b>6.9</b>	<b>5.3</b>
FTSE EPRA Nareit Developed	2.1	-19.7	-18.3	-1.5	2.0	4.7	--
<b>Global ex-U.S. Real Estate Style</b>	<b>5.5</b>	<b>-12.0</b>	<b>-6.7</b>	<b>3.6</b>	<b>4.8</b>	<b>6.6</b>	<b>5.5</b>
FTSE EPRA Nareit Dev ex US	3.9	-18.5	-13.9	-0.6	2.5	3.7	--
<b>U.S. REIT Style</b>	<b>1.8</b>	<b>-12.3</b>	<b>-12.0</b>	<b>3.4</b>	<b>5.8</b>	<b>9.2</b>	<b>7.0</b>
EPRA Nareit Equity REITs	1.4	-17.5	-18.2	0.2	3.9	7.9	5.9

\*Returns less than one year are not annualized.  
Sources: Callan, FTSE Russell, NCREIF

# Pandemic's Impact Muted

PRIVATE EQUITY | Gary Robertson

Private equity activity measures were generally down in 3Q20, although the IPO market for both venture capital and buyouts showed large increases. So far this year, venture capital has been less affected by the pandemic than buyouts. While capital markets seemed to stabilize in the quarter, pricing private transactions based on future earnings power remains challenging.

Private equity partnerships holding final closes totaled \$107 billion, with 224 new partnerships formed, according to PitchBook. The dollar volume fell 36% from 2Q20, and the number of funds holding final closes fell 12%. So far this year, 2020 is running 7% behind 2019. Energy and mezzanine have fallen out of favor with investors, but other strategies are in line with historical market share.

The number of new buyout transactions increased but transactions were smaller, according to PitchBook. Funds closed 1,500 company investments with \$65 billion in disclosed deal value, a 31% increase in count but a 32% drop in dollar value from 2Q20.

According to PitchBook, new financing rounds in venture capital companies totaled 6,234, with \$76 billion of announced value. The number of investments was down 13% from the prior quarter, and announced value rose 7%. The median pre-money valuations of Series A through D rounds continued to increase, with only seed stage remaining flat.

## Private Equity Performance (%) (Pooled Horizon IRRs through 6/30/20\*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
All Venture	11.51	14.97	17.99	12.08	15.98	11.88	5.95	27.61
Growth Equity	12.85	13.08	16.42	13.12	14.11	13.10	10.94	14.66
All Buyouts	9.25	5.77	11.38	11.79	14.17	12.29	11.36	12.95
Mezzanine	2.99	2.91	8.50	8.85	10.79	10.03	7.87	9.50
Credit Opportunities	5.61	-5.64	2.35	4.30	8.65	8.50	9.30	9.41
Control Distressed	9.49	-1.35	3.85	6.29	10.15	9.39	9.96	10.43
<b>All Private Equity</b>	<b>10.02</b>	<b>7.82</b>	<b>12.53</b>	<b>11.28</b>	<b>13.82</b>	<b>11.90</b>	<b>9.68</b>	<b>13.94</b>
S&P 500	20.54	7.51	10.73	10.73	13.99	8.83	5.91	9.27
Russell 3000	22.03	6.67	10.19	9.96	14.57	9.36	8.00	9.10

Note: Private equity returns are net of fees. Sources: Refinitiv/Cambridge and S&P Dow Jones Indices  
\*Most recent data available at time of publication

## Funds Closed 1/1/20 to 9/30/20

Strategy	No. of Funds	Amt (\$mm)	Share
Venture Capital	409	81,381	19%
Growth Equity	69	42,029	10%
Buyouts	195	196,737	45%
Mezzanine Debt	9	7,501	2%
Distressed	18	22,924	5%
Energy	4	6,216	1%
Secondary and Other	57	59,609	14%
Fund-of-Funds	44	20,612	5%
<b>Totals</b>	<b>805</b>	<b>437,009</b>	<b>100%</b>

Source: PitchBook (Figures may not total due to rounding.)

There were 294 private M&A exits of private equity-backed companies (excluding venture capital), PitchBook reports, with disclosed values totaling \$37 billion. Exits were up 12% from the prior quarter but announced dollar volume plunged 70%. The year-to-date exit count declined 41%. There were 40 private-equity backed IPOs in 3Q raising \$6 billion, a steep jump from 17 totaling \$12 billion previously.

Venture-backed M&A exits totaled 336 transactions with disclosed value of \$15 billion. The number of sales increased 3% and announced dollar volume slid 35%. The year-to-date exit count declined 24%. There were 122 VC-backed IPOs with a combined float of \$15 billion. For comparison, 2Q had 326 IPOs and total issuance of \$23 billion.

Note: Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of *Capital Markets Review* and other Callan publications.

# Stimulus Hopes Boosted Risky Bets

HEDGE FUNDS/MACs | Jim McKee

Hope may not be a strategy, but it elevated risk appetites in 3Q20. Active bets of hedge funds proved mostly positive amid the backdrop of rebounding equity and credit markets, continued low rates, and the potential for additional government stimulus payments.

Representing a paper portfolio of hedge fund interests without implementation costs, the Credit Suisse Hedge Fund Index (CS HFI) rose 3.4% in 3Q20. As a live hedge fund portfolio, net of fees and expenses, the median manager in the Callan Hedge Fund-of-Funds Peer Group advanced 3.7%.

Representing 50 large, broadly diversified hedge funds with low-beta exposure to equity markets, the average manager in the Callan Institutional Hedge Fund (CIHF) Peer Group added 3.1%. The average CIHF fund focused on Hedged Equity grew 4.1%, benefiting from continued stock and sector

## Hedge Fund Style Group Returns



Sources: Callan, Credit Suisse, Federal Reserve

## Callan Peer Group Median and Index Returns\* for Periods Ended 9/30/20

Hedge Fund Universe	Quarter	Year to Date	Year	3 Years	5 Years	10 Years
Callan Institutional Hedge Fund Peer Group	2.9	1.6	4.4	3.9	4.7	5.6
Callan Fund-of-Funds Peer Group	3.7	2.4	5.1	3.5	3.8	4.2
Callan Absolute Return FOF Style	3.3	1.1	2.0	3.1	2.8	3.6
Callan Core Diversified FOF Style	3.9	2.1	5.0	3.5	3.8	4.1
Callan Long/Short Equity FOF Style	6.3	6.6	10.1	5.0	5.0	5.5
BB GS Cross Asset Risk Premia 6% Vol Idx	-0.7	-5.5	-6.8	2.5	2.8	5.0
Credit Suisse Hedge Fund	3.4	0.0	2.4	2.7	2.8	3.6
CS Convertible Arbitrage	5.6	5.8	9.4	4.1	4.5	4.0
CS Distressed	0.9	-4.9	-3.7	-1.2	1.3	3.2
CS Emerging Markets	4.9	6.3	14.6	3.9	6.3	4.5
CS Equity Market Neutral	3.1	1.0	2.0	-0.4	0.2	1.6
CS Event-Driven Multi	6.1	-3.5	-0.9	1.2	1.3	2.1
CS Fixed Income Arb	3.6	0.3	2.6	3.2	3.6	4.5
CS Global Macro	4.6	0.5	1.3	4.1	3.4	3.9
CS Long/Short Equity	2.8	0.2	5.3	3.5	3.6	4.9
CS Managed Futures	-1.0	-3.8	-6.3	1.4	-1.4	0.5
CS Multi-Strategy	3.4	0.5	1.8	2.3	3.6	5.6
CS Risk Arbitrage	4.0	4.2	6.3	3.1	4.3	2.7
HFRI Asset Wtd Composite	2.5	-4.4	-2.2	1.4	2.4	3.4
90-Day T-Bill + 5%	1.3	4.4	6.1	6.7	6.2	5.6

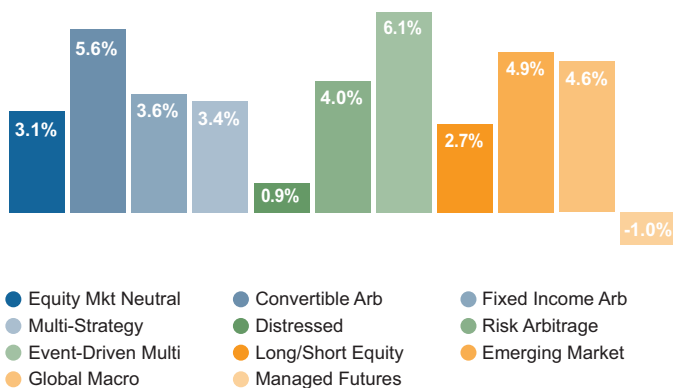
\*Net of fees. Sources: Bloomberg Barclays GSAM, Callan, Credit Suisse, Hedge Fund Research

dispersion. Those more exposed to Hedged Credit strategies advanced 3.1% on average but were still suffering a 2.4% year-to-date loss, as the recovery of illiquid credit lagged more liquid markets.

Within the Callan Hedge Fund-of-Funds Group, market exposures notably affected performance in 3Q. Benefiting from beta tailwinds, the median Callan Long/Short Equity FOF (+6.3%) easily beat the Callan Absolute Return FOF (+3.3%), which typically have exposures to less liquid risk premia like credit. With fuller exposure to both non-directional and directional styles, the Core Diversified FOF gained 3.9%.

Within CS HFI, the best-performing strategy last quarter was Event-Driven Multi-Strategy (+6.1%), which tends to benefit more in risk-on environments with soft equity catalysts. Another strong strategy was Convertible Arbitrage (+5.6%), as it benefited from unusually strong issuance with discounted pricing. Although the big interest in risk assets helped, Distressed clawed ahead only 0.9% with its deep value assets mired in COVID-stricken parts of the economy. Without any meaningful asset class trends to track, Managed Futures (-1.0%) was the only CS HFI strategy that lost value.

### Credit Suisse Hedge Fund Strategy Returns

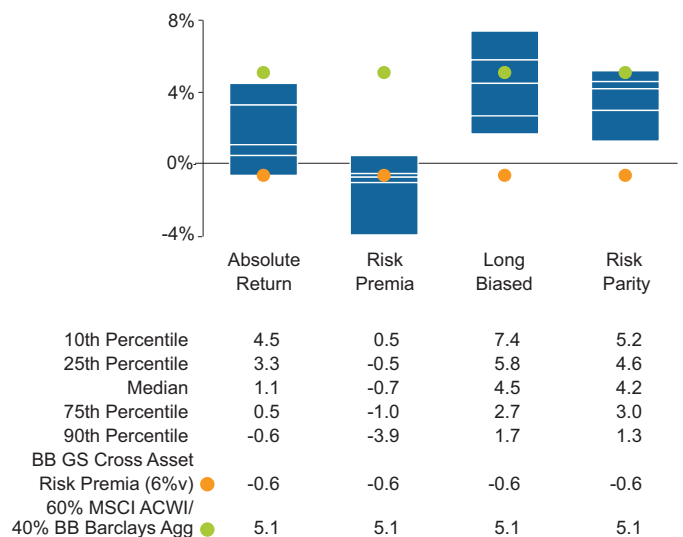


Source: Credit Suisse

Measuring the performance of systematic risk premia in 3Q, the Bloomberg GSAM Risk Premia Index (RPI) lost 0.6% based upon a 6% volatility target. Among the Index's unlevered components of risk premia, the biggest detractor was U.S. Equity Value L/S (-6.5%), which has now fallen 22.8% YTD. Another big detractor within the RPI was Currency Carry (-2.4%). As the risk premia that often complements the performance of value, U.S. Equity Momentum L/S gained 3.2%.

Within Callan's database of liquid alternative solutions, the median managers of Callan Multi-Asset Class (MAC) Style Groups generated mixed results, gross of fees, consistent with their underlying risk exposures. For example, the median Callan Risk Premia MAC fell 0.7% based on its exposures to alternative betas (such as those in the Bloomberg GSAM index noted above) targeting 5% to 15% portfolio volatility. Typically targeting equal risk-weighted allocations to major asset classes with leverage, the Callan Risk Parity MAC (+4.2%) trailed the traditional unlevered benchmark of 60% MSCI ACWI and 40% Bloomberg Barclays US Aggregate Bond Index (+5.1%) that was less impacted by a stalled bond market. Though usually long equity bias within its dynamic asset allocation mandate, the Callan Long-Biased MAC (+4.5%) similarly underperformed the 60%/40% index.

### MAC Style Group Returns



Sources: Bloomberg Barclays, Callan, Eurekahedge, S&P Dow Jones Indices



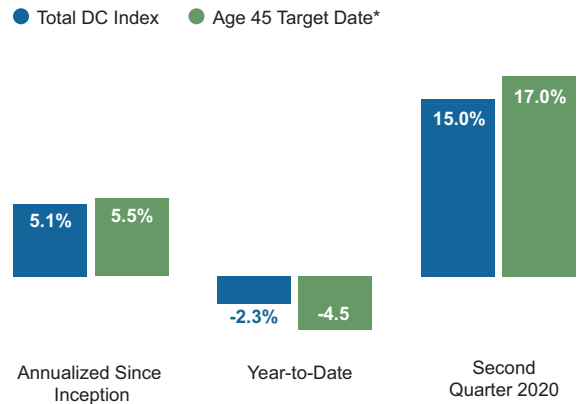
# Index's 2Q20 Gain of 15% Is Its Largest Ever

DEFINED CONTRIBUTION | Patrick Wisdom

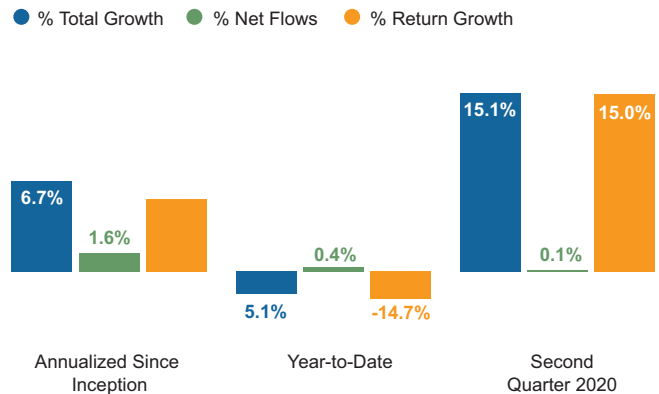
- The Callan DC Index™ jumped 15.0% in 2Q20, its largest gain since inception. It was also a sharp reversal from its 15.0% plunge in the first quarter, which was the largest drop since 4Q08. The Age 45 Target Date Fund (analogous to the 2040 vintage) posted a larger second-quarter gain (17.0%), attributable to its higher allocation to equity, which outperformed fixed income during the quarter.
- The Index also recorded its largest-ever increase in balances during 2Q (15.1%), a quarter after experiencing its biggest-ever quarterly drop. The quarter's robust investment returns were the primary driver.
- After an unusual first quarter in which target date funds (TDFs) received only 1.9% of net inflows, TDFs reclaimed their usual spot atop the inflow leaderboard with quarterly net flows of 41.4%.
- Brokerage windows (7.2%) saw their second consecutive quarter of inflows. On the other hand, U.S. small/mid cap equity (-28.3%) had the largest percentage of outflows.
- Second-quarter turnover (i.e., net transfer activity levels within DC plans) returned to a more typical level, decreasing to 0.37% from the previous quarter's measure of 0.96%.
- The Index's overall allocation to equity increased to 68.4% after dipping to 66.0% in the previous quarter, the smallest since 2012.
- The percentage of assets allocated to U.S. large cap increased by more than 1.6 percentage points, bringing the overall allocation to 25.4%. U.S. small/mid cap (7.7%) saw the next largest increase from the previous quarter.
- Stable value (10.2%) had the largest decrease in allocation after having the largest gain during the previous quarter.
- The prevalence of a money market offering (47.7%) increased by nearly 4 percentage points from the previous quarter and sits at its highest mark since 3Q17.

*The Callan DC Index is an equally weighted index tracking the cash flows and performance of over 100 plans, representing nearly \$300 billion in assets. The Index is updated quarterly and is available on Callan's website.*

## Investment Performance



## Growth Sources



## Net Cash Flow Analysis (2Q20)

(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	41.40%
U.S. Fixed Income	31.91%
U.S. Large Cap	-21.06%
U.S. Smid Cap	-28.29%
<b>Total Turnover**</b>	<b>0.37%</b>

Data provided here is the most recent available at time of publication.

Source: Callan DC Index

Note: DC Index inception date is January 2006.

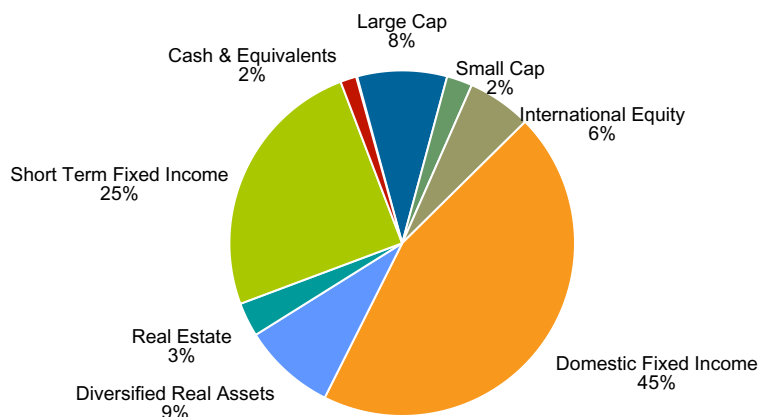
\* The Age 45 Fund transitioned from the average 2035 TDF to the 2040 TDF in June 2018.

\*\* Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

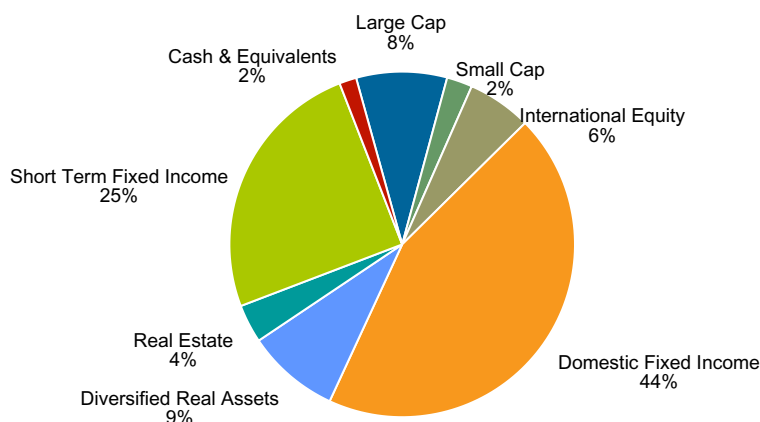
## Actual vs Target Asset Allocation As of September 30, 2020

The first chart below shows the Fund's asset allocation as of September 30, 2020. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

**Actual Asset Allocation**



**Target Asset Allocation**



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	255,768	8.4%	8.5%	(0.1%)	(2,910)
Small Cap	74,502	2.4%	2.4%	0.0%	937
International Equity	184,725	6.0%	6.0%	(0.0%)	(40)
Domestic Fixed Income	1,369,611	44.8%	44.3%	0.5%	14,540
Diversified Real Assets	265,682	8.7%	8.7%	(0.0%)	(316)
Real Estate	97,836	3.2%	3.6%	(0.4%)	(11,275)
Short Term Fixed Income	761,462	24.9%	24.9%	0.0%	0
Cash & Equivalents	47,123	1.5%	1.6%	(0.0%)	(936)
<b>Total</b>	<b>3,056,708</b>	<b>100.0%</b>	<b>100.0%</b>		

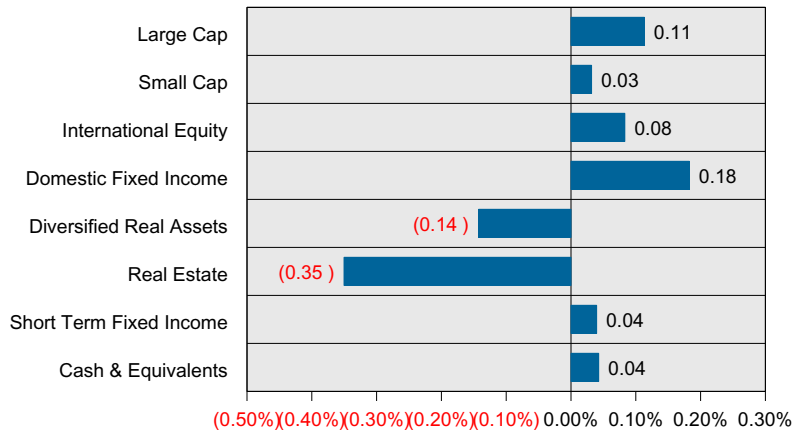
\* Current Quarter Target = 44.3% Blmbg Aggregate, 24.9% Blmbg Gov/Cred 1-3 Yr, 8.7% NDSIB INS DRA Weighted Benchmark, 8.5% Russell 1000 Index, 6.0% MSCI World ex US, 3.6% NCREIF Total Index, 2.4% Russell 2000 Index and 1.6% 3-month Treasury Bill.



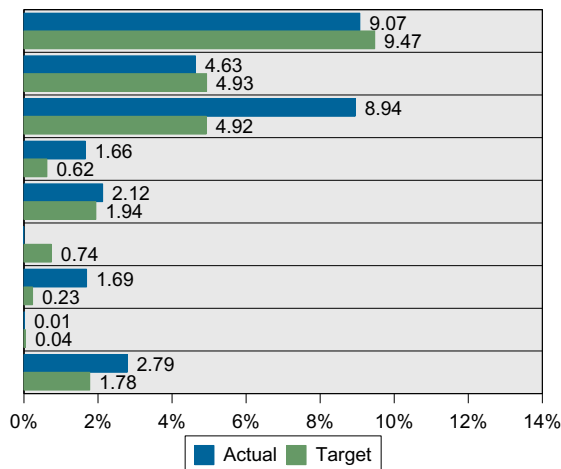
## Quarterly Total Fund Relative Attribution - September 30, 2020

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

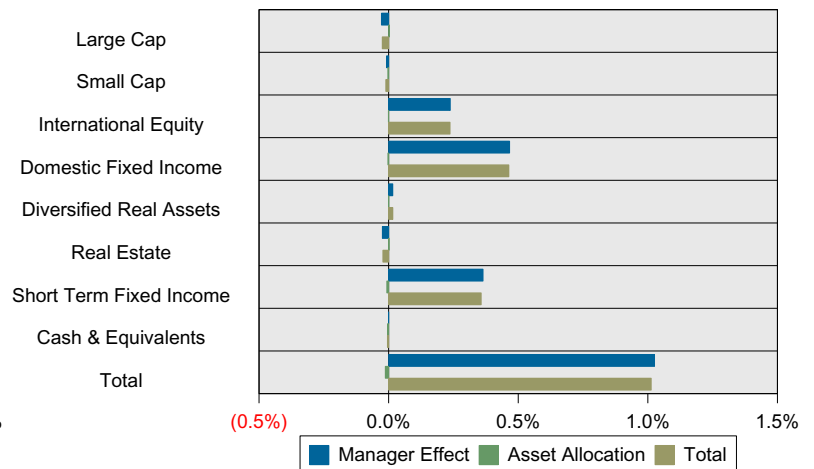
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended September 30, 2020

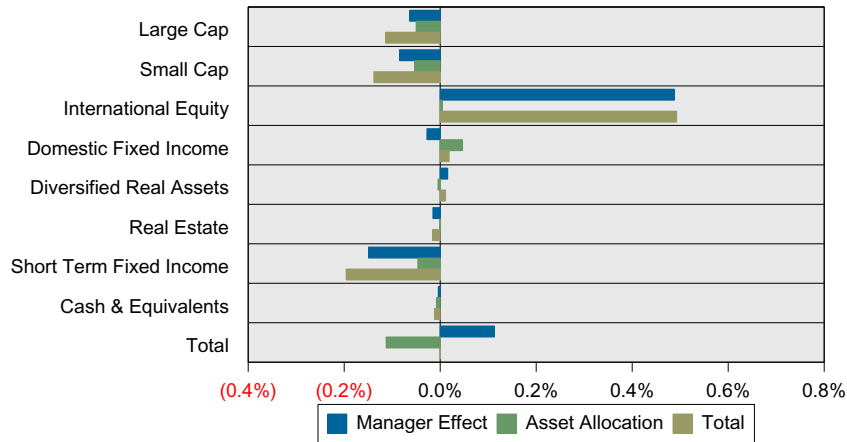
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	9%	9%	9.07%	9.47%	(0.03%)	0.00%	(0.02%)
Small Cap	2%	2%	4.63%	4.93%	(0.01%)	(0.00%)	(0.01%)
International Equity	6%	6%	8.94%	4.92%	0.24%	(0.00%)	0.24%
Domestic Fixed Income	45%	44%	1.66%	0.62%	0.47%	(0.00%)	0.46%
Diversified Real Assets	9%	9%	2.12%	1.94%	0.02%	0.00%	0.02%
Real Estate	3%	4%	0.00%	0.74%	(0.02%)	0.00%	(0.02%)
Short Term Fixed Income	25%	25%	1.69%	0.23%	0.36%	(0.01%)	0.36%
Cash & Equivalents	1%	1%	0.01%	0.04%	(0.00%)	(0.00%)	(0.00%)
<b>Total</b>			<b>2.79%</b>	<b>1.78%</b>	<b>+ 1.03%</b>	<b>+ (0.01%)</b>	<b>1.01%</b>

\* Current Quarter Target = 44.3% Blmbg Aggregate, 24.9% Blmbg Gov/Cred 1-3 Yr, 8.7% NDSIB INS DRA Weighted Benchmark, 8.5% Russell 1000 Index, 6.0% MSCI World ex US, 3.6% NCREIF Total Index, 2.4% Russell 2000 Index and 1.6% 3-month Treasury Bill.

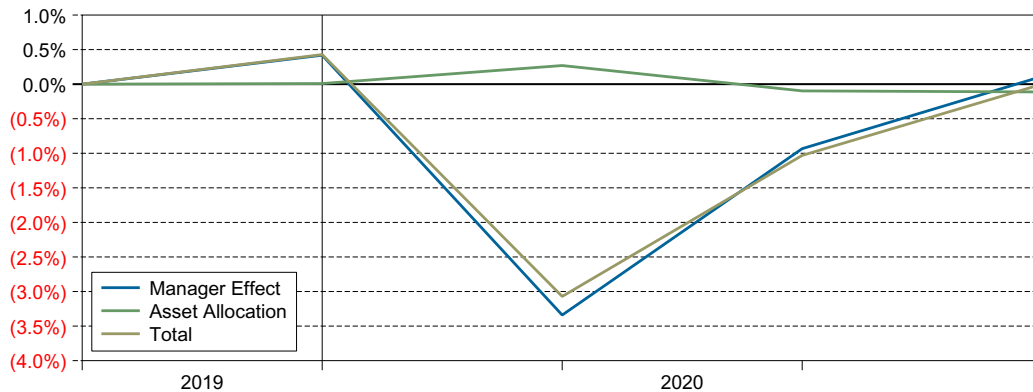
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### One Year Relative Attribution Effects



### Cumulative Relative Attribution Effects



### One Year Relative Attribution Effects

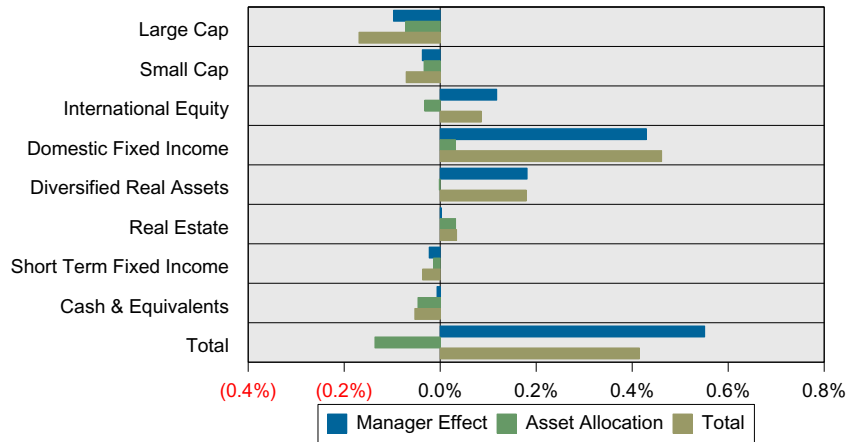
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	8%	9%	14.92%	16.01%	(0.06%)	(0.05%)	(0.11%)
Small Cap	2%	2%	(2.94%)	0.39%	(0.08%)	(0.05%)	(0.14%)
International Equity	6%	6%	7.67%	0.16%	0.49%	0.00%	0.49%
Domestic Fixed Income	45%	45%	7.06%	6.98%	(0.03%)	0.05%	0.02%
Diversified Real Assets	9%	9%	6.52%	6.31%	0.02%	(0.00%)	0.01%
Real Estate	3%	4%	1.41%	2.00%	(0.02%)	(0.00%)	(0.02%)
Short Term Fixed Income	25%	25%	3.19%	3.73%	(0.15%)	(0.05%)	(0.20%)
Cash & Equivalents	1%	1%	0.85%	1.10%	(0.00%)	(0.01%)	(0.01%)
<b>Total</b>			<b>6.48%</b>	<b>6.48%</b>	<b>0.11%</b>	<b>(0.11%)</b>	<b>0.00%</b>

\* Current Quarter Target = 44.3% Blmbg Aggregate, 24.9% Blmbg Gov/Cred 1-3 Yr, 8.7% NDSIB INS DRA Weighted Benchmark, 8.5% Russell 1000 Index, 6.0% MSCI World ex US, 3.6% NCREIF Total Index, 2.4% Russell 2000 Index and 1.6% 3-month Treasury Bill.

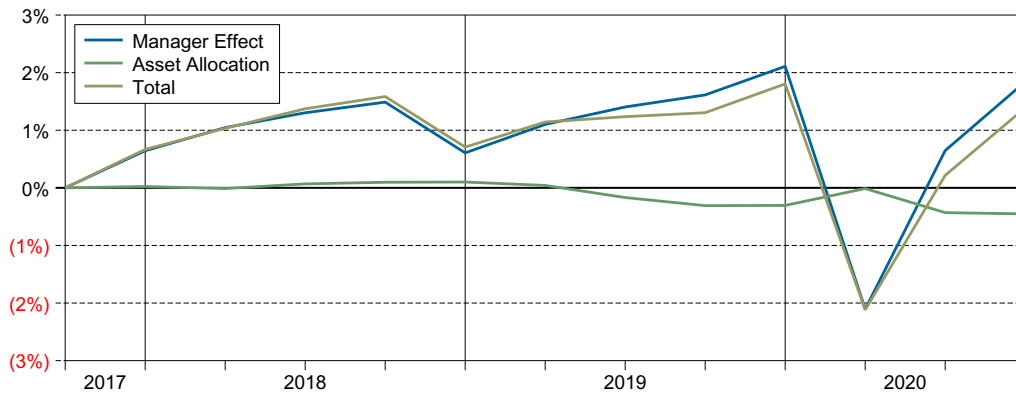
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Three Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Three Year Annualized Relative Attribution Effects

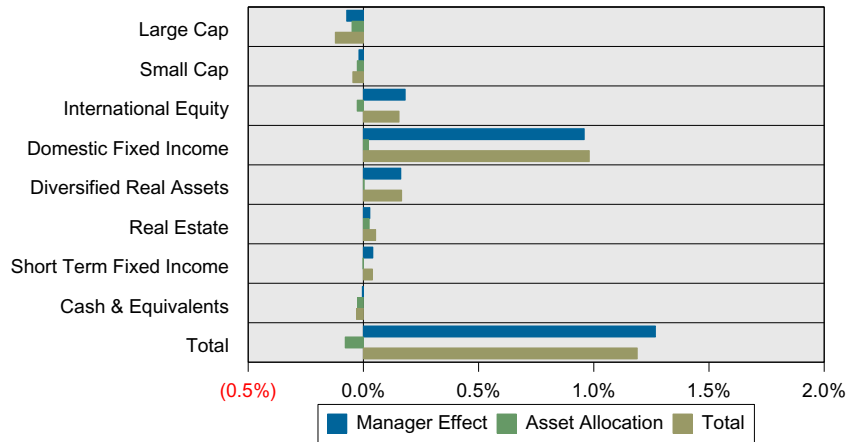
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	10%	10%	11.21%	12.38%	(0.10%)	(0.07%)	(0.17%)
Small Cap	3%	3%	0.44%	1.77%	(0.04%)	(0.03%)	(0.07%)
International Equity	7%	7%	2.25%	0.62%	0.12%	(0.03%)	0.09%
Domestic Fixed Income	50%	50%	6.13%	5.24%	0.43%	0.03%	0.46%
Diversified Real Assets	10%	11%	6.18%	4.64%	0.18%	(0.00%)	0.18%
Real Estate	5%	4%	4.73%	5.11%	0.00%	0.03%	0.03%
Short Term Fixed Income	12%	13%	2.93%	2.84%	(0.02%)	(0.01%)	(0.04%)
Cash & Equivalents	3%	3%	1.50%	1.69%	(0.01%)	(0.05%)	(0.05%)
<b>Total</b>			<b>5.82%</b>	<b>5.41%</b>	<b>+ 0.55%</b>	<b>+ (0.14%)</b>	<b>0.41%</b>

\* Current Quarter Target = 44.3% Blmbg Aggregate, 24.9% Blmbg Gov/Cred 1-3 Yr, 8.7% NDSIB INS DRA Weighted Benchmark, 8.5% Russell 1000 Index, 6.0% MSCI World ex US, 3.6% NCREIF Total Index, 2.4% Russell 2000 Index and 1.6% 3-month Treasury Bill.

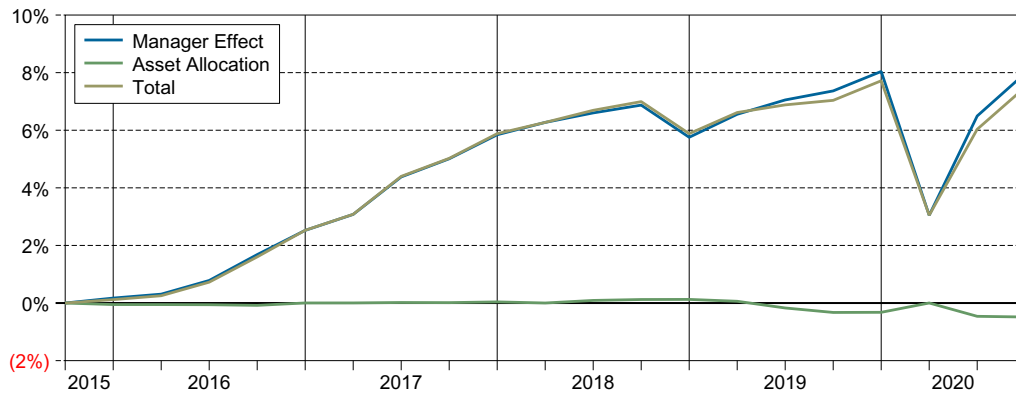
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Five Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Five Year Annualized Relative Attribution Effects

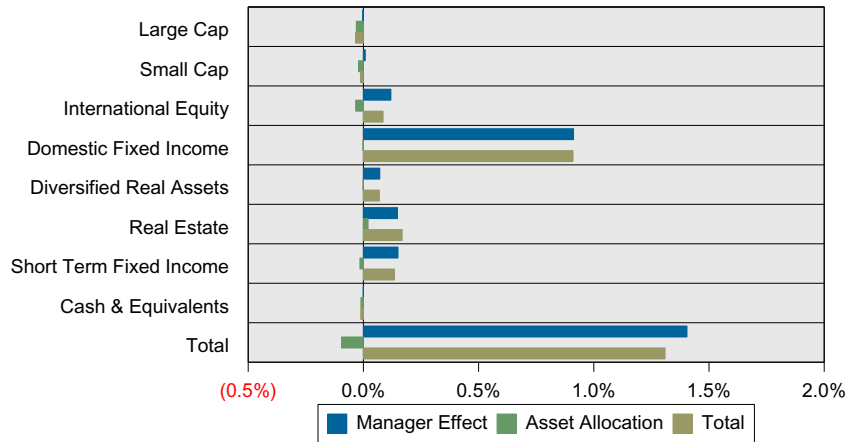
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	10%	10%	13.24%	14.09%	(0.07%)	(0.05%)	(0.12%)
Small Cap	3%	3%	7.32%	8.00%	(0.02%)	(0.03%)	(0.05%)
International Equity	7%	7%	7.65%	5.17%	0.18%	(0.03%)	0.15%
Domestic Fixed Income	48%	49%	6.18%	4.18%	0.96%	0.02%	0.98%
Diversified Real Assets	11%	11%	5.27%	3.91%	0.16%	0.00%	0.17%
Real Estate	5%	4%	6.50%	6.28%	0.03%	0.03%	0.05%
Short Term Fixed Income	13%	13%	2.34%	1.97%	0.04%	(0.00%)	0.04%
Cash & Equivalents	3%	3%	1.06%	1.20%	(0.00%)	(0.03%)	(0.03%)
<b>Total</b>			<b>6.56%</b>	<b>5.38%</b>	<b>+ 1.27%</b>	<b>+ (0.08%)</b>	<b>1.19%</b>

\* Current Quarter Target = 44.3% Blmbg Aggregate, 24.9% Blmbg Gov/Cred 1-3 Yr, 8.7% NDSIB INS DRA Weighted Benchmark, 8.5% Russell 1000 Index, 6.0% MSCI World ex US, 3.6% NCREIF Total Index, 2.4% Russell 2000 Index and 1.6% 3-month Treasury Bill.

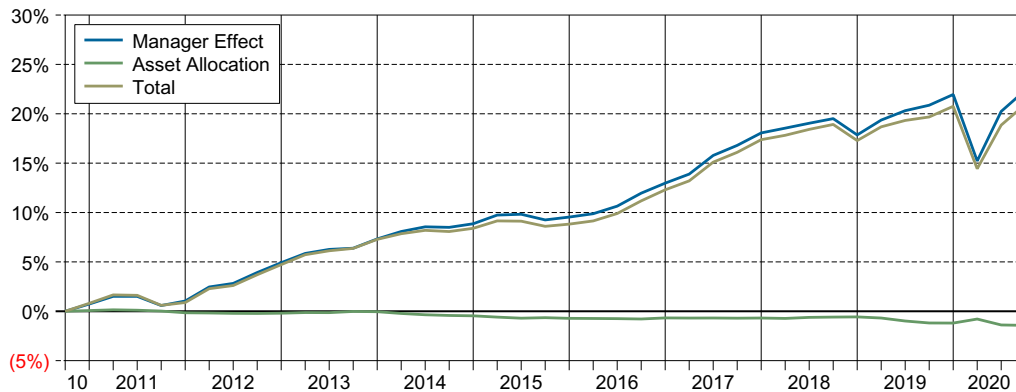
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Ten Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Ten Year Annualized Relative Attribution Effects

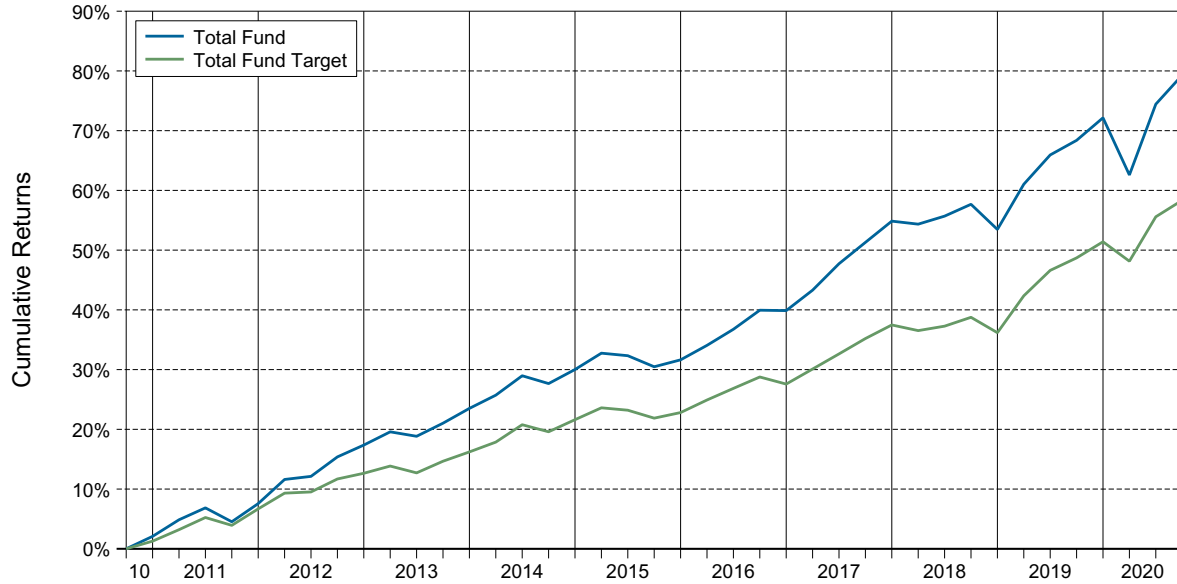
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	10%	10%	13.79%	13.78%	(0.00%)	(0.03%)	(0.03%)
Small Cap	3%	3%	10.15%	9.85%	0.01%	(0.02%)	(0.01%)
International Equity	7%	7%	6.35%	4.42%	0.12%	(0.03%)	0.09%
Domestic Fixed Income	42%	42%	5.94%	3.64%	0.91%	(0.00%)	0.91%
Diversified Real Assets	12%	12%	4.55%	3.73%	0.07%	(0.00%)	0.07%
Real Estate	5%	4%	12.67%	9.37%	0.15%	0.02%	0.17%
Short Term Fixed Income	19%	19%	1.94%	1.27%	0.15%	(0.01)%	0.14%
Cash & Equivalents	3%	3%	0.60%	0.64%	(0.00%)	(0.01)%	(0.01)%
<b>Total</b>			<b>6.01%</b>	<b>4.70%</b>	<b>+ 1.40%</b>	<b>+ (0.09%)</b>	<b>1.31%</b>

\* Current Quarter Target = 44.3% Blmbg Aggregate, 24.9% Blmbg Gov/Cred 1-3 Yr, 8.7% NDSIB INS DRA Weighted Benchmark, 8.5% Russell 1000 Index, 6.0% MSCI World ex US, 3.6% NCREIF Total Index, 2.4% Russell 2000 Index and 1.6% 3-month Treasury Bill.

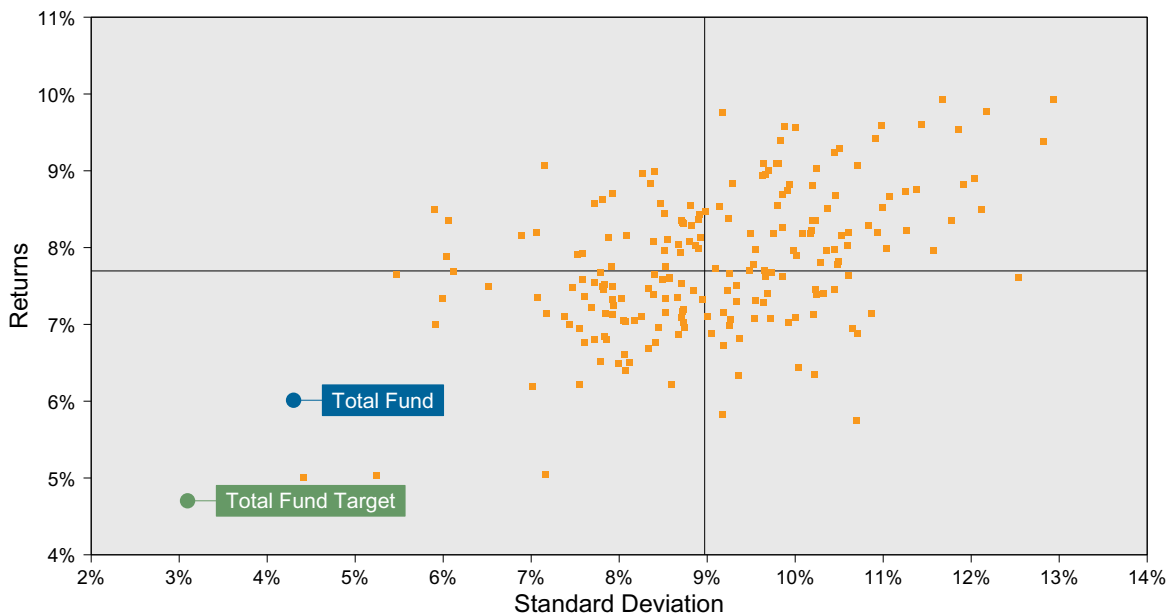
## Cumulative Performance Relative to Target

The first chart below illustrates the cumulative performance of the Total Fund relative to the cumulative performance of the Fund's Target Asset Mix. The Target Mix is assumed to be rebalanced each quarter with no transaction costs. The second chart below shows the return and the risk of the Total Fund and the Target Mix, contrasted with the returns and risks of the funds in the Callan Public Fund Sponsor Database.

### Cumulative Returns Actual vs Target



### Ten Year Annualized Risk vs Return



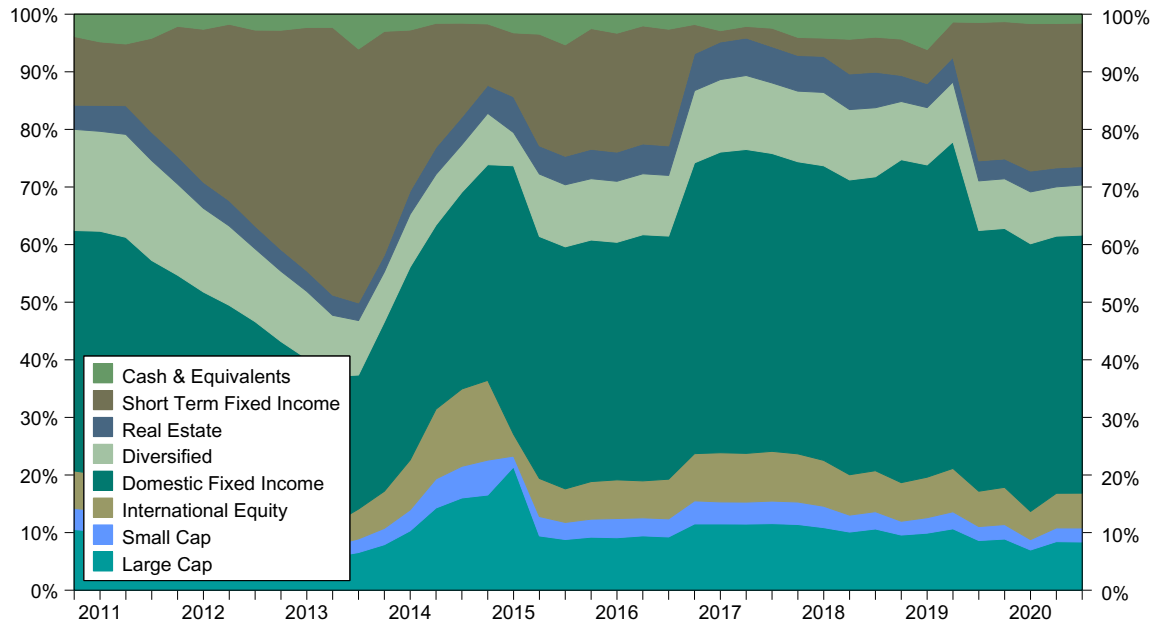
Squares represent membership of the Callan Public Fund Sponsor Database

\* Current Quarter Target = 44.3% Blmbg Aggregate, 24.9% Blmbg Gov/Cred 1-3 Yr, 8.7% NDSIB INS DRA Weighted Benchmark, 8.5% Russell 1000 Index, 6.0% MSCI World ex US, 3.6% NCREIF Total Index, 2.4% Russell 2000 Index and 1.6% 3-month Treasury Bill.

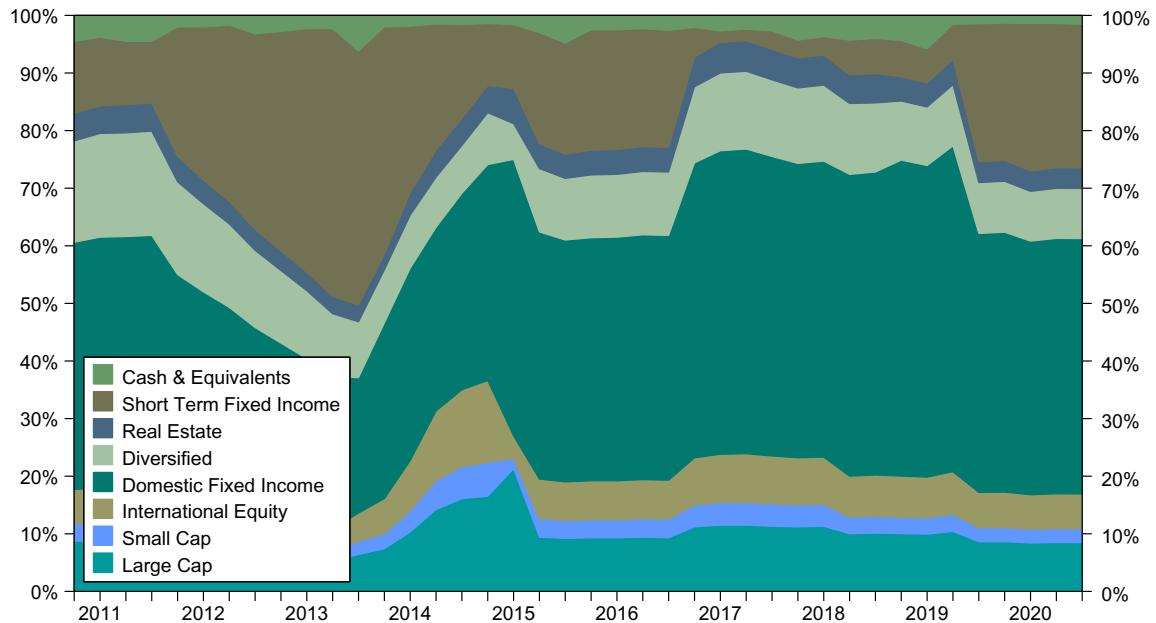
## Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, and the fund's historical target asset allocation.

### Actual Historical Asset Allocation



### Target Historical Asset Allocation

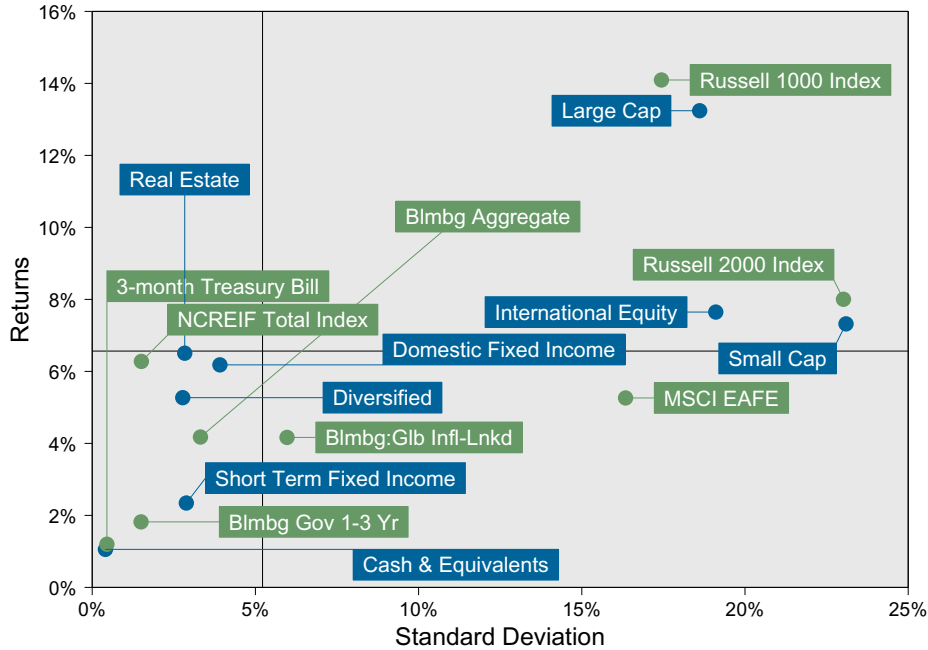


\* Current Quarter Target = 44.3% Blmbg Aggregate, 24.9% Blmbg Gov/Cred 1-3 Yr, 8.7% NDSIB INS DRA Weighted Benchmark, 8.5% Russell 1000 Index, 6.0% MSCI World ex US, 3.6% NCREIF Total Index, 2.4% Russell 2000 Index and 1.6% 3-month Treasury Bill.

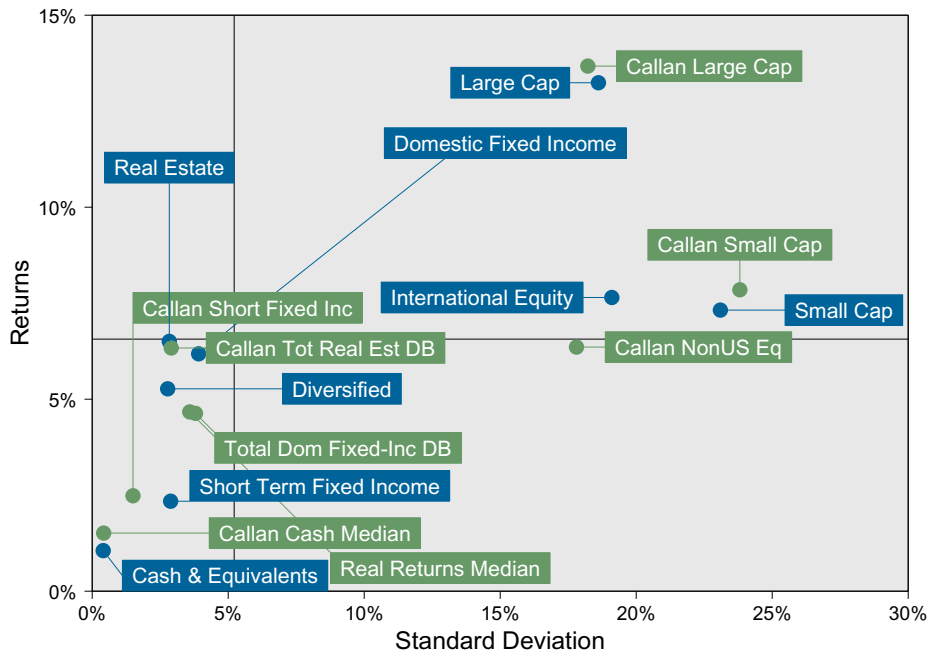
## Asset Class Risk and Return

The charts below show the five year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

**Five Year Annualized Risk vs Return  
Asset Classes vs Benchmark Indices**



**Five Year Annualized Risk vs Return  
Asset Classes vs Asset Class Median**

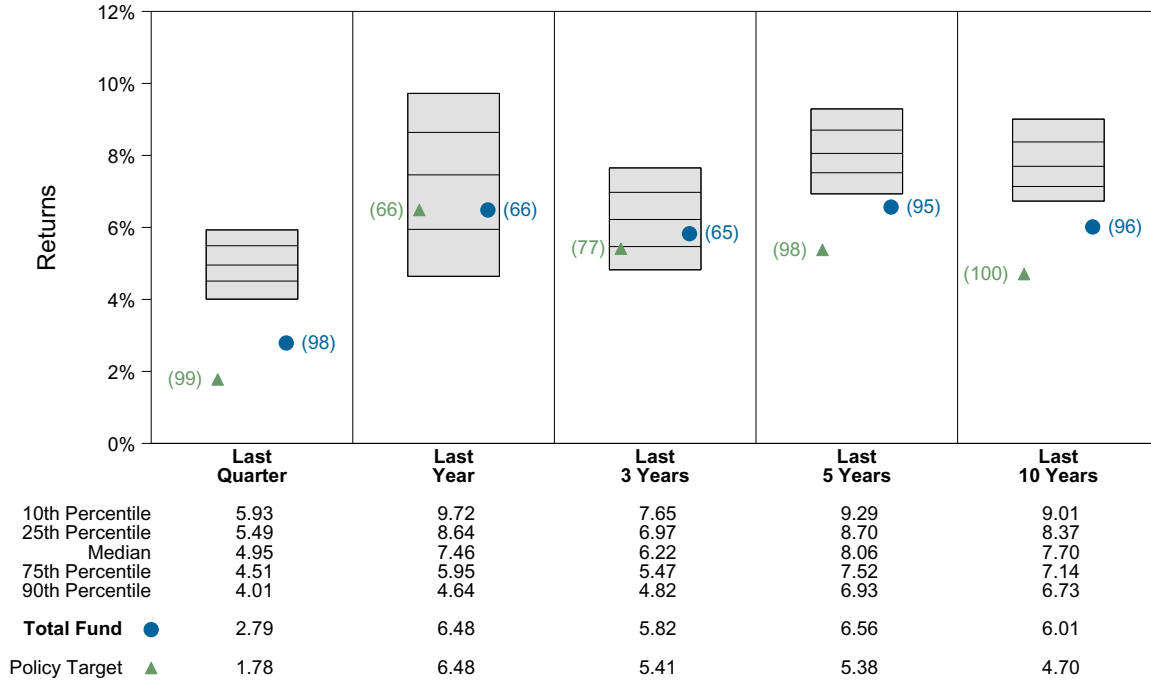




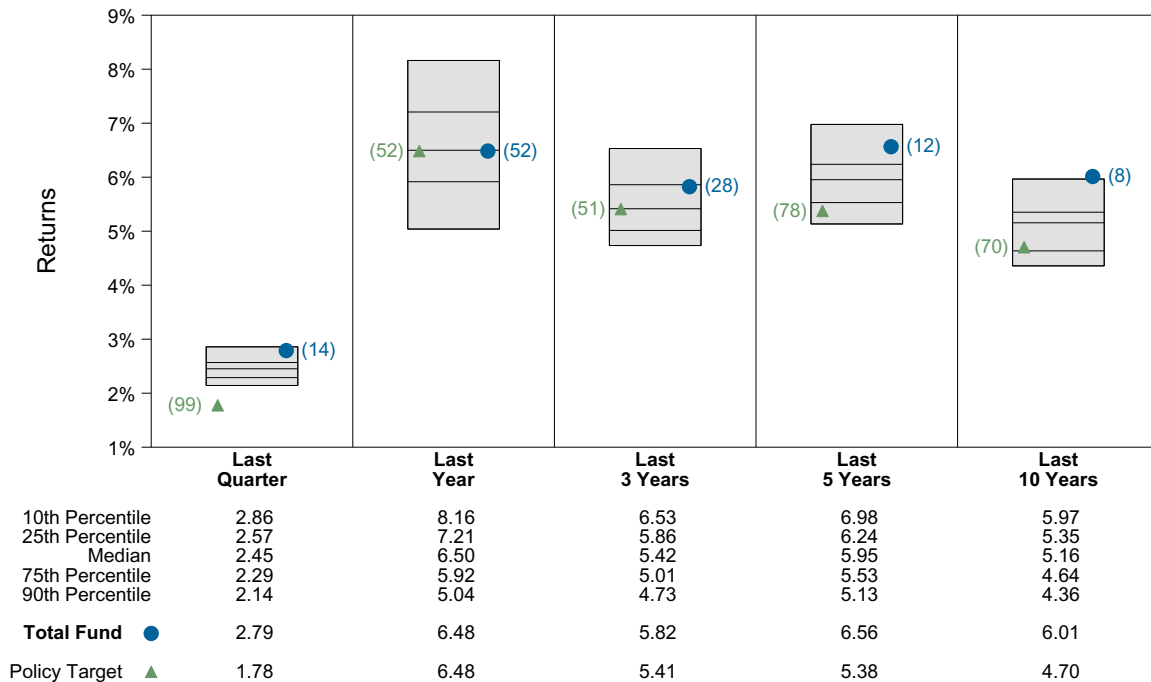
## Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the Callan Public Fund Sponsor Database for periods ended September 30, 2020. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

### Callan Public Fund Sponsor Database



### Asset Allocation Adjusted Ranking

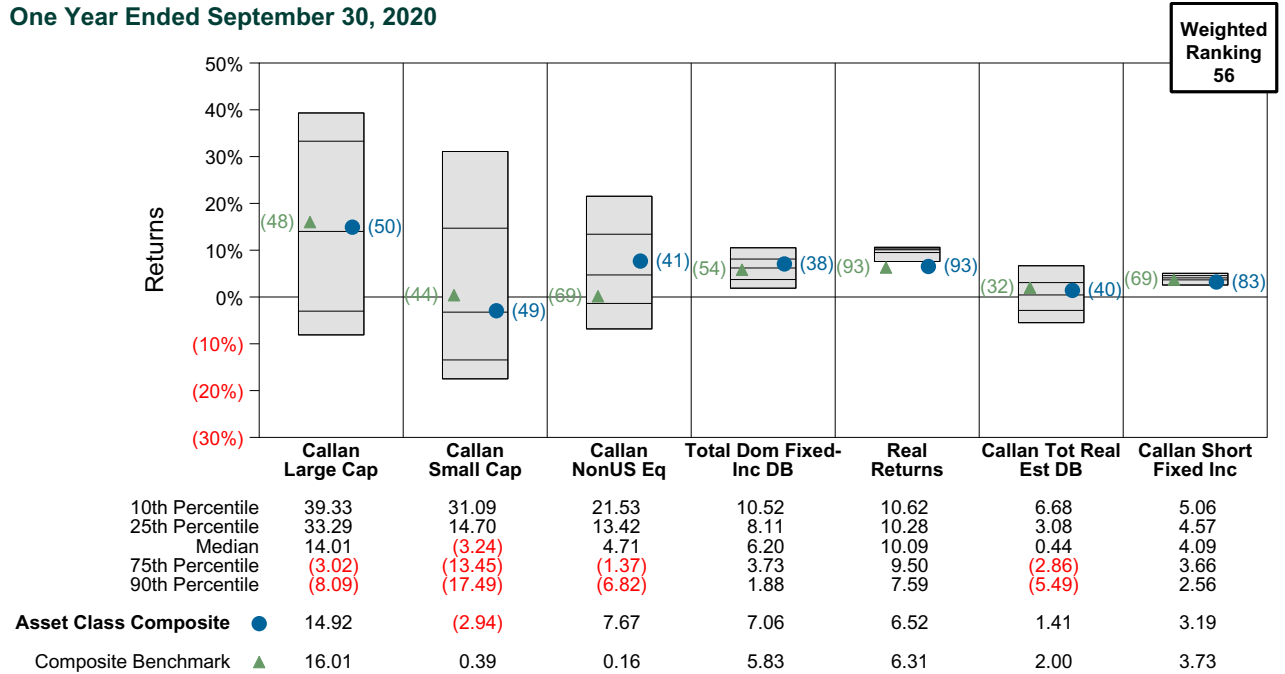


\* Current Quarter Target = 44.3% Blmbg Aggregate, 24.9% Blmbg Gov/Cred 1-3 Yr, 8.7% NDSIB INS DRA Weighted Benchmark, 8.5% Russell 1000 Index, 6.0% MSCI World ex US, 3.6% NCREIF Total Index, 2.4% Russell 2000 Index and 1.6% 3-month Treasury Bill.

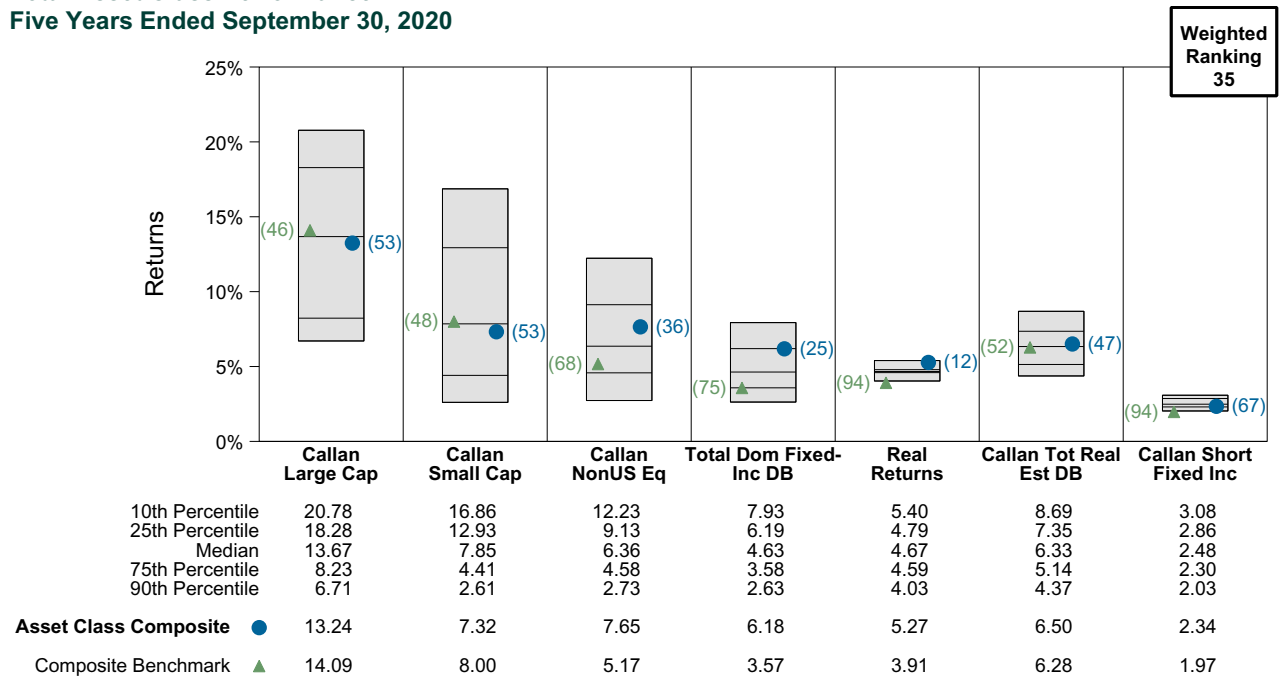
## Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

### Total Asset Class Performance One Year Ended September 30, 2020



### Total Asset Class Performance Five Years Ended September 30, 2020



\* Current Quarter Target = 44.3% Blmbg Aggregate, 24.9% Blmbg Gov/Cred 1-3 Yr, 8.7% NDSIB INS DRA Weighted Benchmark, 8.5% Russell 1000 Index, 6.0% MSCI World ex US, 3.6% NCREIF Total Index, 2.4% Russell 2000 Index and 1.6% 3-month Treasury Bill.

## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2020, with the distribution as of June 30, 2020. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Distribution Across Investment Managers

	September 30, 2020			Inv. Return	June 30, 2020	
	Market Value	Weight	Net New Inv.		Market Value	Weight
<b>Global Equity</b>	<b>\$514,994,650</b>	<b>16.85%</b>	<b>\$(31,199,412)</b>	<b>\$43,220,117</b>	<b>\$502,973,946</b>	<b>16.83%</b>
<b>Domestic Equity</b>	<b>\$330,269,239</b>	<b>10.80%</b>	<b>\$(20,076,500)</b>	<b>\$27,034,917</b>	<b>\$323,310,821</b>	<b>10.82%</b>
<b>Large Cap</b>	<b>\$255,767,525</b>	<b>8.37%</b>	<b>\$(19,934,648)</b>	<b>\$23,726,974</b>	<b>\$251,975,200</b>	<b>8.43%</b>
Parametric Large Cap	55,523,061	1.82%	(9,836,784)	6,022,437	59,337,408	1.99%
L.A. Capital Large Cap Growth	82,999,654	2.72%	(10,040,331)	10,308,085	82,731,900	2.77%
L.A. Capital Enhanced	56,436,751	1.85%	(12,701)	5,013,261	51,436,191	1.72%
LSV Large Cap Value	60,808,059	1.99%	(42,410)	2,383,009	58,467,460	1.96%
Parametric Large Cap Overlay	0	0.00%	(2,422)	181	2,241	0.00%
<b>Small Cap</b>	<b>\$74,501,714</b>	<b>2.44%</b>	<b>\$(141,852)</b>	<b>\$3,307,944</b>	<b>\$71,335,622</b>	<b>2.39%</b>
Atlanta Capital	31,692,560	1.04%	(51,873)	1,028,858	30,715,575	1.03%
Parametric Small Cap	42,809,149	1.40%	(89,200)	2,278,748	40,619,602	1.36%
PIMCO RAE	4	0.00%	(779)	338	445	0.00%
<b>International Equity</b>	<b>\$184,725,412</b>	<b>6.04%</b>	<b>\$(11,122,913)</b>	<b>\$16,185,200</b>	<b>\$179,663,125</b>	<b>6.01%</b>
DFA Int'l Small Cap Value	18,828,898	0.62%	0	1,115,881	17,713,017	0.59%
LSV Intl Value	56,861,135	1.86%	(4,054,949)	2,068,341	58,847,743	1.97%
Vanguard Intl Explorer Fund	17,428,040	0.57%	0	1,525,957	15,902,083	0.53%
William Blair	91,607,339	3.00%	(7,066,646)	11,474,851	87,199,134	2.92%
Parametric Intl Equity Overlay	0	0.00%	(1,318)	170	1,148	0.00%
<b>Domestic Fixed Income</b>	<b>\$1,369,611,269</b>	<b>44.81%</b>	<b>\$13,206,308</b>	<b>\$22,123,541</b>	<b>\$1,334,281,419</b>	<b>44.64%</b>
Declaration Total Return	96,874,430	3.17%	(54,826)	2,269,000	94,660,256	3.17%
PIMCO Core Plus Constrained	193,101,926	6.32%	9,799,037	2,614,282	180,688,607	6.05%
PIMCO DiSCO II	45,773,467	1.50%	0	1,357,321	44,416,146	1.49%
PIMCO Bravo II Fund	7,967,888	0.26%	(1,185,472)	1	9,153,359	0.31%
Prudential	361,641,408	11.83%	4,813,500	6,459,663	350,368,246	11.72%
SSgA US Govt Credit Bd Idx	192,569,118	6.30%	(7,226)	1,527,540	191,048,804	6.39%
Wells Capital	113,864,519	3.73%	(53,471)	3,252,159	110,665,831	3.70%
Western Asset Management	357,818,513	11.71%	(103,673)	4,643,534	353,278,652	11.82%
Parametric Fixed Inc Overlay	0	0.00%	(1,561)	43	1,518	0.00%
<b>Global Real Assets</b>	<b>\$363,517,784</b>	<b>11.89%</b>	<b>\$3,773,936</b>	<b>\$5,434,237</b>	<b>\$354,309,611</b>	<b>11.85%</b>
<b>Real Estate</b>	<b>\$97,835,772</b>	<b>3.20%</b>	<b>\$(728,046)</b>	<b>\$30</b>	<b>\$98,563,788</b>	<b>3.30%</b>
Invesco Core Real Estate	51,056,933	1.67%	(378,948)	0	51,435,881	1.72%
JP Morgan RE Inc & Growth	46,778,838	1.53%	(349,098)	30	47,127,907	1.58%
<b>Diversified</b>	<b>\$265,682,012</b>	<b>8.69%</b>	<b>\$4,501,982</b>	<b>\$5,434,207</b>	<b>\$255,745,823</b>	<b>8.56%</b>
Western Asset TIPS	162,200,300	5.31%	5,956,542	5,434,207	150,809,552	5.05%
JP Morgan Infrastructure	40,130,482	1.31%	(1,454,560)	0	41,585,042	1.39%
Eastern Timber Opportunities	53,071,696	1.74%	0	0	53,071,696	1.78%
Grosvenor Cust. Infrastructure	10,279,534	0.34%	0	0	10,279,534	0.34%
<b>Short Term Fixed Income</b>	<b>\$761,461,611</b>	<b>24.91%</b>	<b>\$(305,353)</b>	<b>\$12,660,549</b>	<b>\$749,106,415</b>	<b>25.06%</b>
Barings Active Short Duration	376,190,306	12.31%	(115,013)	10,322,800	365,982,519	12.24%
JP Morgan Short Term Bonds	385,271,305	12.60%	(190,340)	2,337,749	383,123,897	12.82%
<b>Cash</b>	<b>\$47,122,970</b>	<b>1.54%</b>	<b>\$(1,178,338)</b>	<b>\$7,135</b>	<b>\$48,294,174</b>	<b>1.62%</b>
Northern Trust Cash Account	26,857,402	0.88%	(1,178,338)	1,340	28,034,400	0.94%
Bank of ND	20,265,569	0.66%	0	5,795	20,259,774	0.68%
<b>Total Fund</b>	<b>\$3,056,708,284</b>	<b>100.0%</b>	<b>\$(15,702,860)</b>	<b>\$83,445,579</b>	<b>\$2,988,965,565</b>	<b>100.0%</b>

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Equity</b>					
Gross	8.42%	9.66%	-	-	-
Net	8.37%	9.45%	-	-	-
Weighted Benchmark	7.20%	8.00%	-	-	-
<b>Domestic Equity</b>					
Gross	8.09%	10.70%	8.80%	11.99%	12.96%
Net	8.06%	10.54%	8.63%	11.78%	12.71%
Weighted Benchmark	8.46%	12.49%	-	-	-
<b>Large Cap</b>					
Gross	9.07%	14.92%	11.21%	13.24%	13.79%
Net	9.09%	14.80%	11.05%	13.05%	13.58%
Benchmark(1)	9.47%	16.01%	12.38%	14.09%	13.78%
Parametric Clifton Large Cap - Gross	9.37%	15.15%	12.20%	14.36%	14.01%
Parametric Clifton Large Cap - Net	9.64%	15.43%	12.29%	14.37%	13.92%
S&P 500 Index	8.93%	15.15%	12.28%	14.15%	13.74%
L.A. Capital - Gross	11.82%	35.66%	20.66%	18.59%	16.82%
L.A. Capital - Net	11.77%	35.39%	20.41%	18.35%	16.59%
Russell 1000 Growth Index	13.22%	37.53%	21.67%	20.10%	17.25%
L.A. Capital Enhanced - Gross	9.75%	17.58%	12.64%	13.99%	13.95%
L.A. Capital Enhanced - Net	9.72%	17.46%	12.52%	13.85%	13.80%
Russell 1000 Index	9.47%	16.01%	12.38%	14.09%	13.76%
LSV Asset Management - Gross	4.08%	(10.16%)	(1.44%)	5.32%	9.78%
LSV Asset Management - Net	4.00%	(10.41%)	(1.72%)	5.01%	9.47%
Russell 1000 Value Index	5.59%	(5.03%)	2.63%	7.66%	9.95%
<b>Small Cap</b>					
Gross	4.63%	(2.94%)	0.44%	7.32%	10.15%
Net	4.44%	(3.21%)	0.26%	7.07%	9.79%
Russell 2000 Index	4.93%	0.39%	1.77%	8.00%	9.85%
Atlanta Capital - Gross	3.35%	-	-	-	-
Atlanta Capital - Net	3.18%	-	-	-	-
S&P 600 Small Cap Index	3.17%	(8.29%)	(0.33%)	7.20%	10.57%
Parametric Clifton Small Cap - Gross	5.60%	1.70%	2.07%	8.61%	10.82%
Parametric Clifton SmallCap - Net	5.39%	1.49%	2.00%	8.40%	10.49%
Russell 2000 Index	4.93%	0.39%	1.77%	8.00%	9.85%
<b>International Equity</b>					
Gross	8.94%	7.67%	2.25%	7.65%	6.35%
Net	8.87%	7.36%	1.94%	7.32%	6.01%
Benchmark(2)	4.92%	0.16%	0.62%	5.17%	4.42%
DFA Intl Small Cap Value - Net	6.30%	(5.91%)	(6.75%)	2.34%	4.83%
World ex US SC Va	7.24%	(5.19%)	(3.48%)	4.13%	4.70%
LSV Asset Management - Gross	3.45%	(7.95%)	(5.04%)	2.98%	3.98%
LSV Asset Management - Net	3.35%	(8.31%)	(5.40%)	2.59%	3.57%
Benchmark(3)	4.80%	0.49%	0.62%	5.26%	4.47%
Vanguard Intl Explorer Fund - Net	9.60%	8.19%	(1.38%)	5.48%	5.97%
BMI, EPAC, <\$2 B	11.71%	8.27%	0.09%	6.15%	6.12%
William Blair - Gross	13.10%	24.12%	11.69%	-	-
William Blair - Net	13.02%	23.67%	11.27%	-	-
MSCI ACWI ex US IMI	6.80%	3.51%	1.13%	6.31%	4.17%

(1) S&P 500 Index through 12/31/2011 and Russell 1000 Index thereafter.

(2) MSCI EAFE through 9/30/2000; 50% Hedged EAFE through 3/31/2011; MSCI EAFE again through 6/30/2016; MSCI World ex-US thereafter.

(3) MSCI EAFE through 9/30/2000; 50% Hedged EAFE through 3/31/2011; MSCI EAFE again thereafter.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Domestic Fixed Income</b>					
Gross	1.66%	7.06%	6.13%	6.18%	5.94%
Net	1.62%	6.92%	6.00%	6.06%	5.79%
Blmbg Aggregate	0.62%	6.98%	5.24%	4.18%	3.64%
Declaration Total Return - Net	2.40%	3.61%	4.64%	4.42%	-
Libor-3 Month	0.06%	1.07%	1.88%	1.47%	0.89%
PIMCO Core Plus Cons. - Gross	1.45%	8.47%	-	-	-
PIMCO Core Plus Cons. - Net	1.34%	8.26%	-	-	-
Blmbg Aggregate	0.62%	6.98%	5.24%	4.18%	3.64%
PIMCO DiSCO II - Net	3.06%	5.22%	5.84%	8.51%	-
PIMCO Bravo II Fund - Net	0.00%	(18.00%)	(3.59%)	1.69%	-
Blmbg Aggregate	0.62%	6.98%	5.24%	4.18%	3.64%
Prudential - Gross	1.84%	7.61%	6.21%	5.95%	5.44%
Prudential - Net	1.79%	7.39%	5.98%	5.69%	5.23%
Blmbg Aggregate	0.62%	6.98%	5.24%	4.18%	3.64%
Wells Capital - Gross	2.94%	8.56%	7.16%	7.30%	6.35%
Wells Capital - Net	2.89%	8.36%	6.98%	7.12%	6.15%
Blmbg Credit Baa	2.10%	6.97%	6.38%	6.41%	5.31%
Western Asset - Gross	1.31%	6.86%	5.98%	5.58%	5.22%
Western Asset - Net	1.29%	6.73%	5.86%	5.45%	5.07%
Blmbg Aggregate	0.62%	6.98%	5.24%	4.18%	3.64%
SSgA US Govt Cr Bd Idx - Gross	0.80%	8.23%	5.95%	4.71%	-
SSgA US Govt Cr Bd Idx - Net	0.80%	8.21%	5.93%	4.69%	-
Blmbg Govt/Credit Bd	0.78%	8.03%	5.86%	4.66%	3.87%
<b>Global Real Assets</b>					
Gross	1.53%	5.08%	-	-	-
Net	1.51%	4.78%	-	-	-
Weighted Benchmark	1.59%	5.05%	-	-	-
<b>Real Estate</b>					
Gross	0.00%	1.41%	4.73%	6.50%	12.67%
Net	0.01%	0.93%	4.20%	5.90%	11.79%
NCREIF Total Index	0.74%	2.00%	5.11%	6.28%	9.37%
Invesco Core Real Estate - Gross	0.00%	1.34%	5.02%	6.57%	-
Invesco Core Real Estate - Net	0.00%	1.00%	4.68%	6.22%	-
NCREIF Total Index	0.74%	2.00%	5.11%	6.28%	9.37%
JP Morgan - Gross	0.00%	1.50%	4.37%	6.38%	12.84%
JP Morgan - Net	0.03%	0.86%	3.65%	5.54%	11.74%
NCREIF Total Index	0.74%	2.00%	5.11%	6.28%	9.37%

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Diversified</b>					
Gross	2.12%	6.52%	6.18%	5.27%	4.55%
Net	2.09%	6.31%	5.94%	5.01%	4.25%
Weighted Benchmark	1.94%	6.31%	4.64%	3.91%	3.73%
Western Asset TIPS - Gross	3.61%	10.28%	5.36%	4.69%	3.45%
Western Asset TIPS - Net	3.58%	10.16%	5.24%	4.56%	3.31%
Benchmark(1)	3.18%	10.56%	5.86%	4.91%	3.85%
JP Morgan Infrastructure - Gross	0.01%	4.90%	7.81%	6.63%	6.91%
JP Morgan Infrastructure - Net	(0.12%)	4.06%	7.08%	5.86%	5.92%
Benchmark(2)	0.13%	0.77%	2.61%	2.27%	1.96%
Eastern Timber Opportunities - Net	0.00%	(1.57%)	3.75%	2.91%	3.40%
NCREIF Timberland Index	0.04%	0.19%	2.09%	2.56%	4.40%
Grosvenor Cust. Infrastructure - Net	0.00%	3.45%	4.93%	6.25%	-
Benchmark(2)	0.13%	0.77%	2.61%	2.27%	1.96%
<b>Short Term Fixed Income</b>					
Gross	1.69%	3.19%	2.93%	2.34%	1.94%
Net	1.65%	3.09%	2.82%	2.18%	1.81%
Benchmark(3)	0.23%	3.73%	2.84%	1.97%	1.27%
Barings Active Short Duration - Gross	2.82%	1.58%	-	-	-
Barings Active Short Duration - Net	2.79%	1.47%	-	-	-
Blmbg Gov/Cred 1-3 Yr	0.23%	3.73%	2.84%	2.09%	1.57%
JP Morgan Short Term Bds - Gross	0.61%	4.82%	3.42%	2.49%	-
JP Morgan Short Term Bds - Net	0.56%	4.72%	3.31%	2.34%	-
Blmbg Gov/Credit 1-3 Yr	0.23%	3.73%	2.84%	2.09%	1.57%
<b>Cash &amp; Equivalents - Net</b>					
Cash Account- Net	0.00%	0.75%	1.41%	0.97%	0.56%
Bank of ND - Net	0.03%	0.97%	1.64%	-	-
90 Day Treasury Bills	0.04%	1.10%	1.69%	1.20%	0.64%
<b>Total Fund</b>					
Gross	2.79%	6.48%	5.82%	6.56%	6.01%
Net	2.75%	6.32%	5.66%	6.38%	5.80%
Target*	1.78%	6.48%	5.41%	5.38%	4.70%

\* Current Quarter Target = 44.3% Blmbg Aggregate, 24.9% Blmbg Gov/Cred 1-3 Yr, 8.7% NDSIB INS DRA Weighted Benchmark, 8.5% Russell 1000 Index, 6.0% MSCI World ex US, 3.6% NCREIF Total Index, 2.4% Russell 2000 Index and 1.6% 3-month Treasury Bill.

(1) Blmbg US TIPS through 12/31/2009; Blmbg Global Inflation-Linked through 10/31/18; Blmbg US Government Inflation Bond Index thereafter.

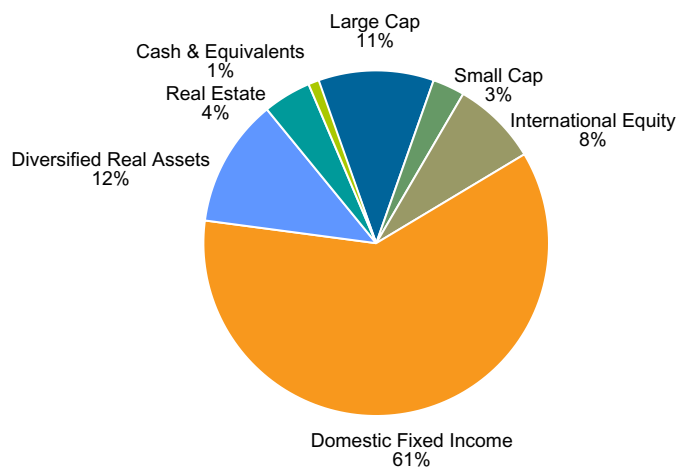
(2) CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.

(3) Blmbg Gov 1-3 Yr through March 31, 2017 and Blmbg Gov/Credit 1-3 Yr thereafter.

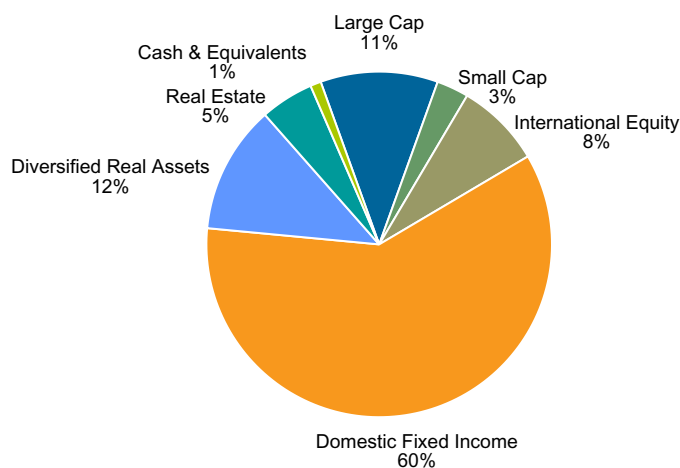
## Actual vs Target Asset Allocation As of September 30, 2020

The first chart below shows the Fund's asset allocation as of September 30, 2020. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

**Actual Asset Allocation**



**Target Asset Allocation**



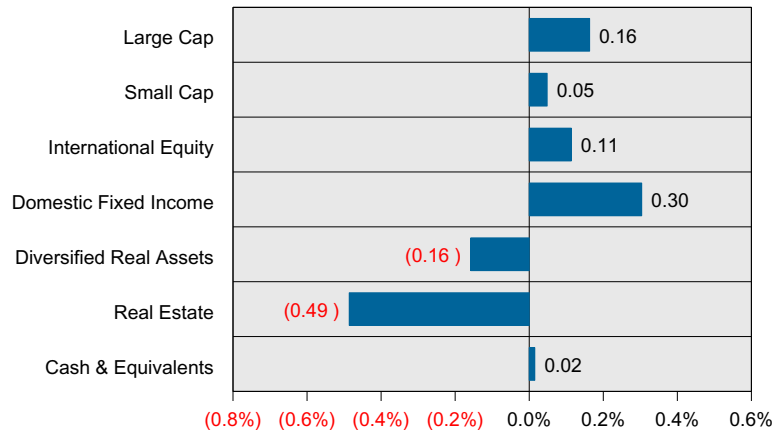
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	236,796	10.9%	11.0%	(0.1%)	(2,818)
Small Cap	66,288	3.0%	3.0%	0.0%	939
International Equity	174,214	8.0%	8.0%	(0.0%)	(51)
Domestic Fixed Income	1,321,497	60.7%	60.0%	0.7%	14,512
Diversified Real Assets	261,071	12.0%	12.0%	(0.0%)	(326)
Real Estate	97,640	4.5%	5.0%	(0.5%)	(11,275)
Cash & Equivalents	20,804	1.0%	1.0%	(0.0%)	(980)
<b>Total</b>	<b>2,178,310</b>	<b>100.0%</b>	<b>100.0%</b>		

\* Current Quarter Target = 60.0% Blmbg Aggregate, 12.0% NDSIB WSI DRA Weighted Benchmark, 11.0% Russell 1000 Index, 8.0% MSCI World ex US, 5.0% NCREIF Total Index, 3.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

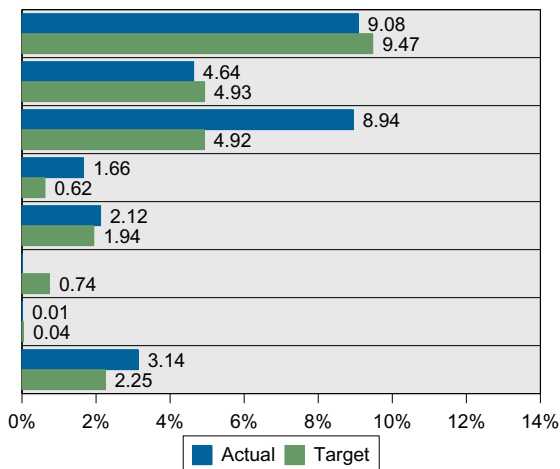
## Quarterly Total Fund Relative Attribution - September 30, 2020

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

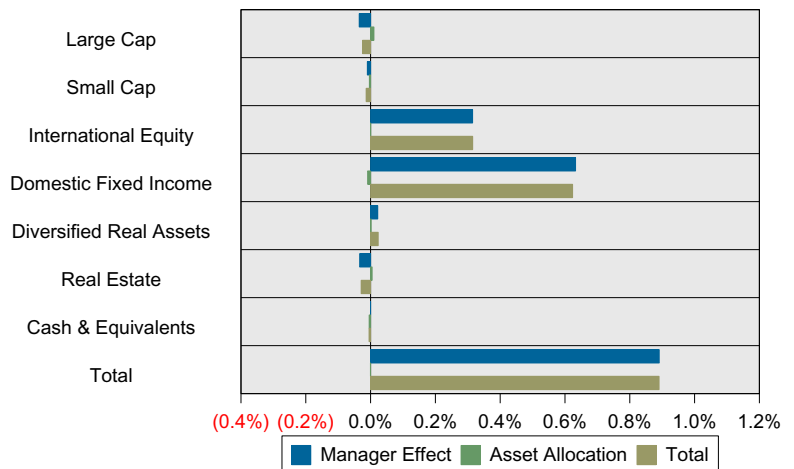
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended September 30, 2020

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	11%	11%	9.08%	9.47%	(0.04%)	0.01%	(0.02%)
Small Cap	3%	3%	4.64%	4.93%	(0.01%)	(0.00%)	(0.01%)
International Equity	8%	8%	8.94%	4.92%	0.31%	0.00%	0.32%
Domestic Fixed Income	60%	60%	1.66%	0.62%	0.63%	(0.01%)	0.62%
Diversified Real Assets	12%	12%	2.12%	1.94%	0.02%	0.00%	0.02%
Real Estate	5%	5%	0.00%	0.74%	(0.03%)	0.00%	(0.03%)
Cash & Equivalents	1%	1%	0.01%	0.04%	(0.00%)	(0.00%)	(0.00%)
<b>Total</b>			<b>3.14%</b>	<b>2.25%</b>	<b>0.89%</b>	<b>(0.00%)</b>	<b>0.89%</b>

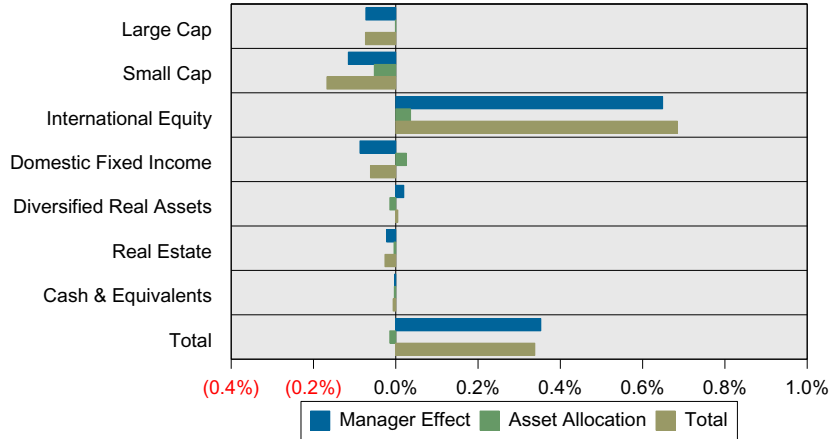
\* Current Quarter Target = 60.0% Blmbg Aggregate, 12.0% NDSIB WSI DRA Weighted Benchmark, 11.0% Russell 1000 Index, 8.0% MSCI World ex US, 5.0% NCREIF Total Index, 3.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.



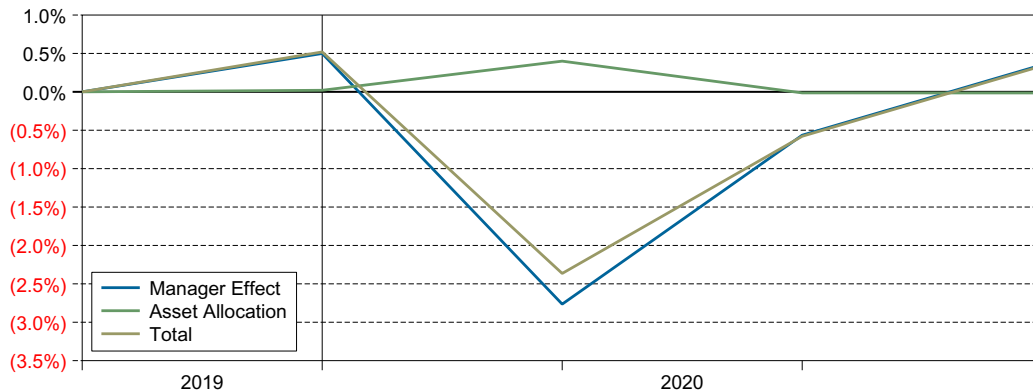
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### One Year Relative Attribution Effects



### Cumulative Relative Attribution Effects



### One Year Relative Attribution Effects

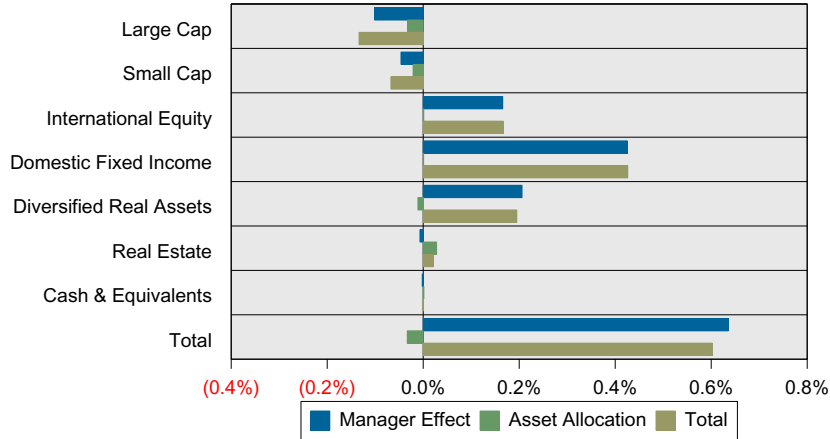
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	11%	11%	14.98%	16.01%	(0.07%)	(0.00%)	(0.07%)
Small Cap	3%	3%	(3.29%)	0.39%	(0.12%)	(0.05%)	(0.17%)
International Equity	8%	8%	7.69%	0.16%	0.65%	0.04%	0.68%
Domestic Fixed Income	61%	60%	7.07%	6.98%	(0.09%)	0.03%	(0.06%)
Diversified Real Assets	12%	12%	6.51%	6.30%	0.02%	(0.01%)	0.01%
Real Estate	5%	5%	1.41%	2.00%	(0.02%)	(0.00%)	(0.03%)
Cash & Equivalents	1%	1%	0.85%	1.10%	(0.00%)	(0.00%)	(0.01%)
<b>Total</b>			<b>7.64%</b>	<b>7.30%</b>	<b>+ 0.35%</b>	<b>+ (0.01%)</b>	<b>0.34%</b>

\* Current Quarter Target = 60.0% Blmbg Aggregate, 12.0% NDSIB WSI DRA Weighted Benchmark, 11.0% Russell 1000 Index, 8.0% MSCI World ex US, 5.0% NCREIF Total Index, 3.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

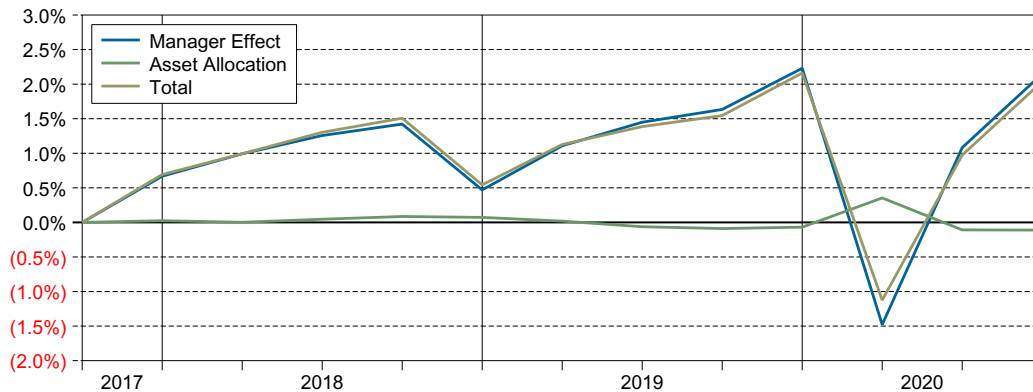
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Three Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Three Year Annualized Relative Attribution Effects

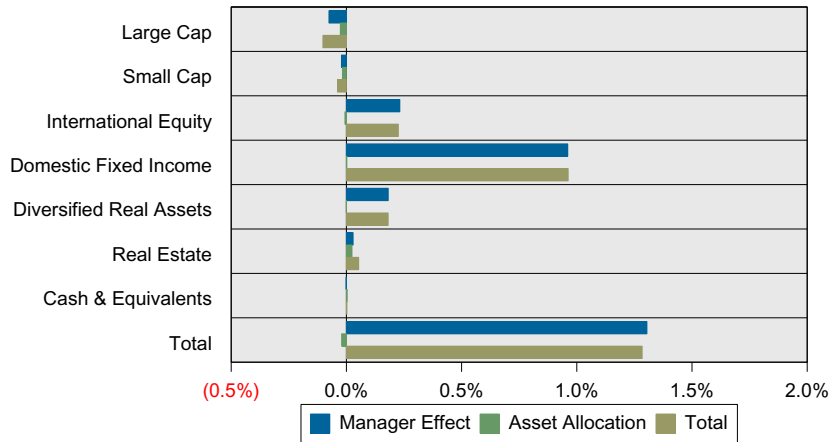
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	11%	11%	11.28%	12.38%	(0.10%)	(0.03%)	(0.13%)
Small Cap	3%	3%	0.31%	1.77%	(0.05%)	(0.02%)	(0.07%)
International Equity	8%	8%	2.29%	0.62%	0.17%	0.00%	0.17%
Domestic Fixed Income	58%	58%	6.08%	5.24%	0.43%	0.00%	0.43%
Diversified Real Assets	13%	13%	6.19%	4.67%	0.21%	(0.01%)	0.19%
Real Estate	6%	5%	4.73%	5.11%	(0.01%)	0.03%	0.02%
Cash & Equivalents	1%	1%	1.50%	1.69%	(0.00%)	0.00%	(0.00%)
<b>Total</b>			<b>6.48%</b>	<b>5.88%</b>	<b>+ 0.64%</b>	<b>+ (0.03%)</b>	<b>0.60%</b>

\* Current Quarter Target = 60.0% Blmbg Aggregate, 12.0% NDSIB WSI DRA Weighted Benchmark, 11.0% Russell 1000 Index, 8.0% MSCI World ex US, 5.0% NCREIF Total Index, 3.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

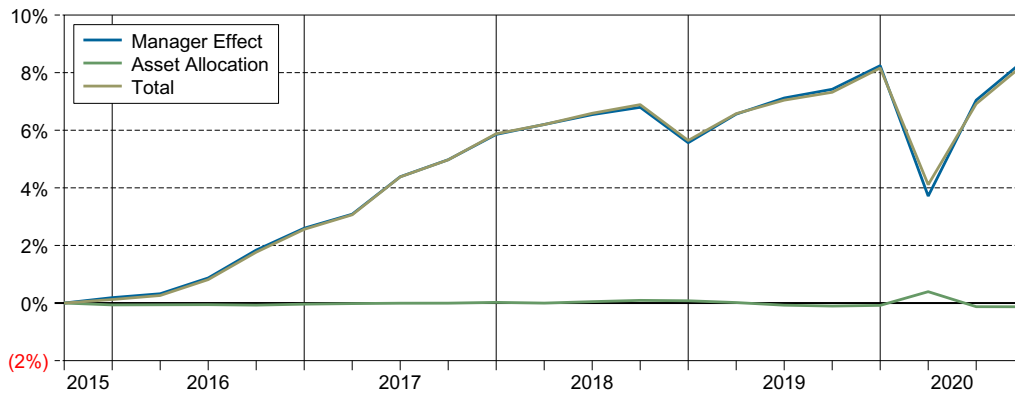
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Five Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Five Year Annualized Relative Attribution Effects

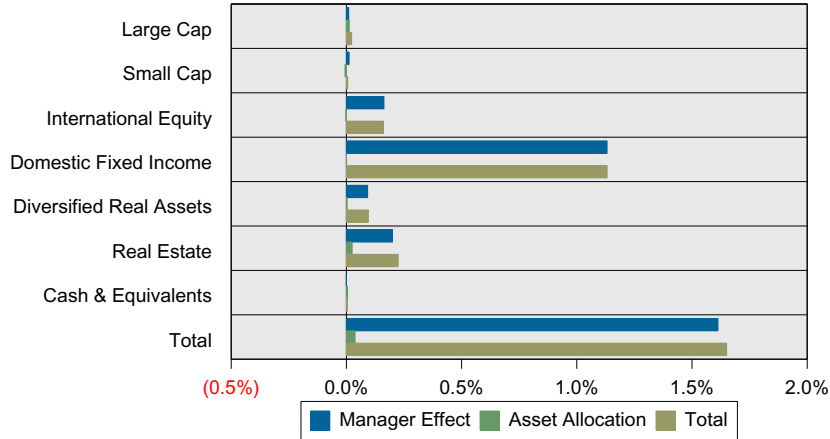
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	12%	12%	13.30%	14.09%	(0.08%)	(0.03%)	(0.10%)
Small Cap	4%	4%	7.24%	8.00%	(0.02%)	(0.02%)	(0.04%)
International Equity	8%	9%	7.68%	5.17%	0.23%	(0.01%)	0.23%
Domestic Fixed Income	56%	56%	6.01%	4.18%	0.96%	0.00%	0.96%
Diversified Real Assets	13%	14%	5.29%	3.98%	0.18%	(0.00%)	0.18%
Real Estate	6%	6%	6.50%	6.28%	0.03%	0.02%	0.05%
Cash & Equivalents	1%	1%	1.06%	1.20%	(0.00%)	0.00%	0.00%
<b>Total</b>			<b>7.27%</b>	<b>5.99%</b>	<b>+ 1.30%</b>	<b>+ (0.02%)</b>	<b>1.28%</b>

\* Current Quarter Target = 60.0% Blmbg Aggregate, 12.0% NDSIB WSI DRA Weighted Benchmark, 11.0% Russell 1000 Index, 8.0% MSCI World ex US, 5.0% NCREIF Total Index, 3.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

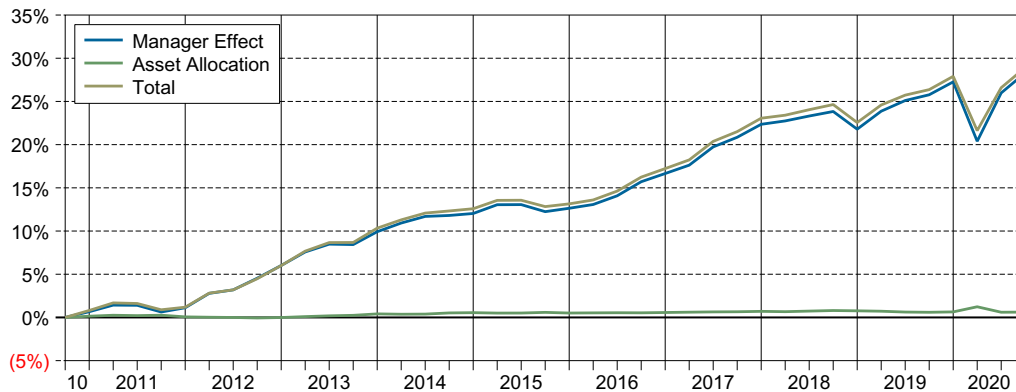
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Ten Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects

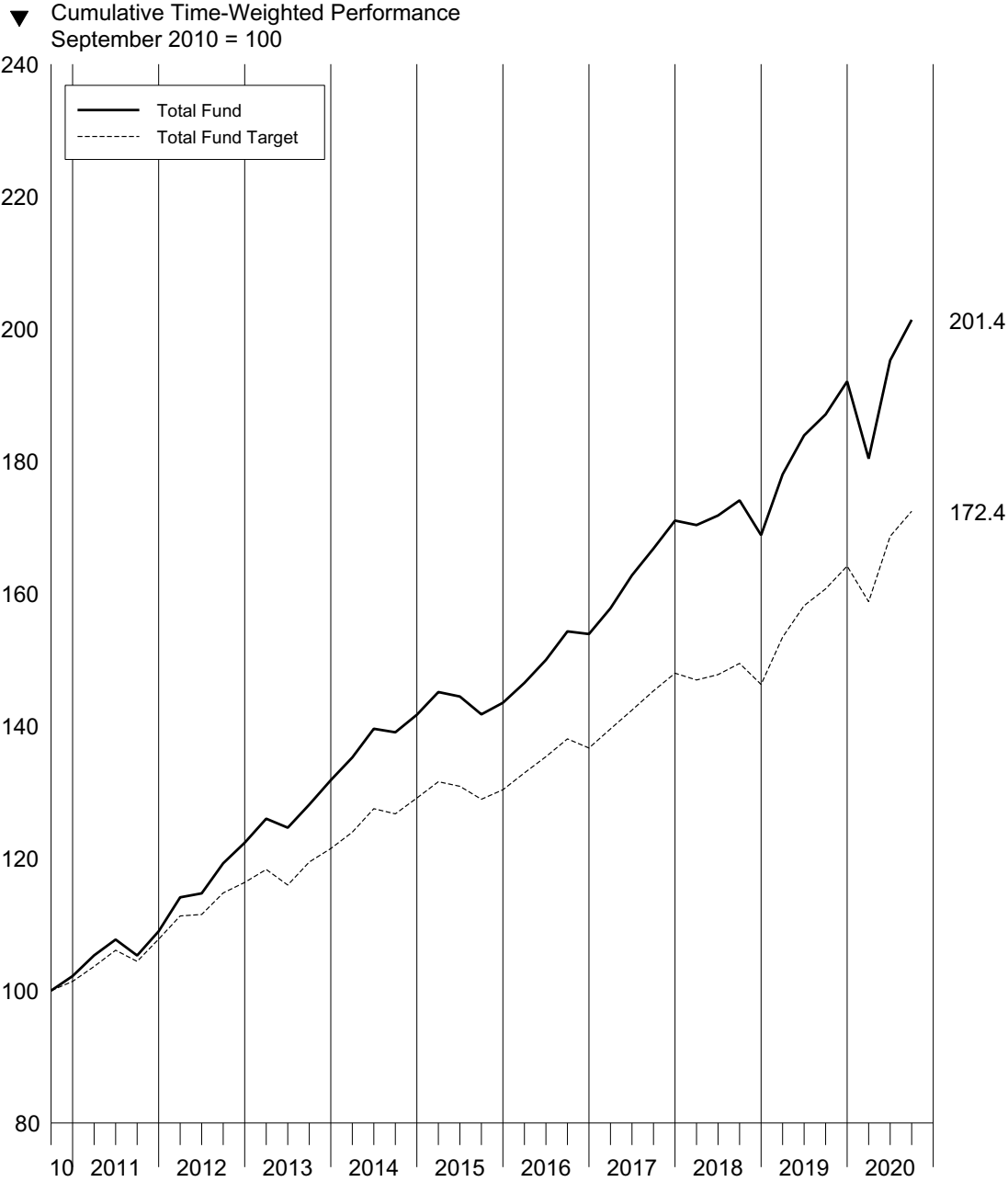


### Ten Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	11%	11%	13.80%	13.76%	0.01%	0.01%	0.02%
Small Cap	4%	3%	10.11%	9.85%	0.01%	(0.01%)	0.01%
International Equity	8%	8%	6.29%	4.42%	0.16%	(0.00%)	0.16%
Domestic Fixed Income	54%	54%	5.82%	3.64%	1.13%	0.00%	1.13%
Diversified Real Assets	17%	17%	4.65%	3.96%	0.09%	0.00%	0.10%
Real Estate	6%	6%	12.66%	9.37%	0.20%	0.03%	0.22%
Cash & Equivalents	1%	1%	0.61%	0.64%	(0.00%)	0.01%	0.00%
<b>Total</b>			<b>7.25%</b>	<b>5.60%</b>	<b>+ 1.61%</b>	<b>+ 0.04%</b>	<b>1.65%</b>

\* Current Quarter Target = 60.0% Blmbg Aggregate, 12.0% NDSIB WSI DRA Weighted Benchmark, 11.0% Russell 1000 Index, 8.0% MSCI World ex US, 5.0% NCREIF Total Index, 3.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

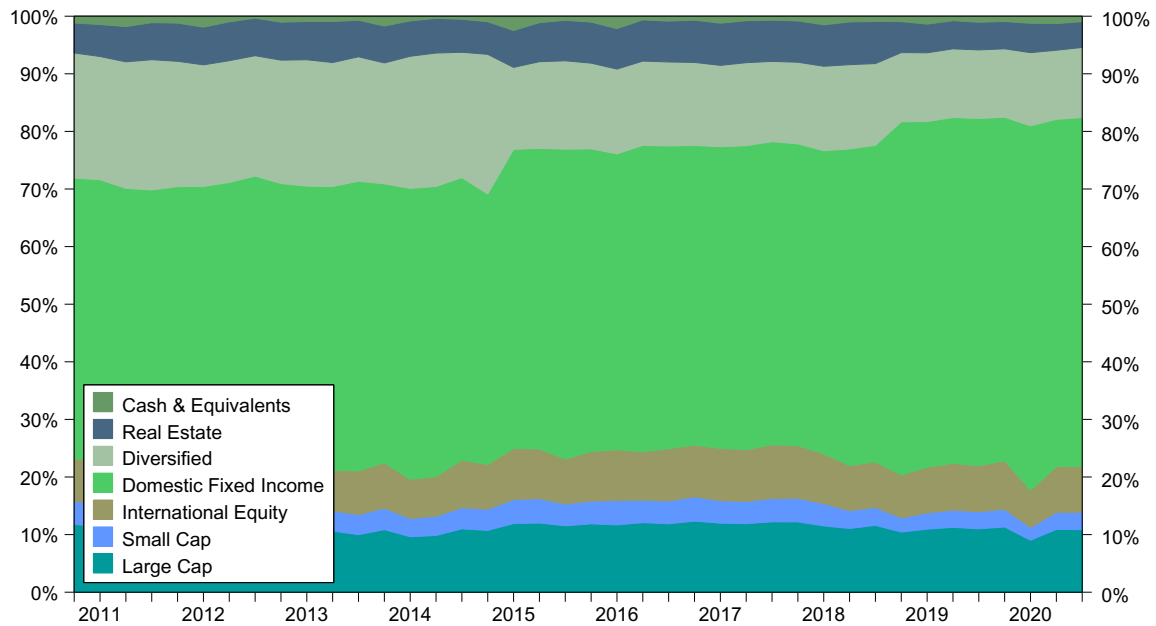
**NDSIB - Workforce Safety & Insurance  
Cumulative Results**



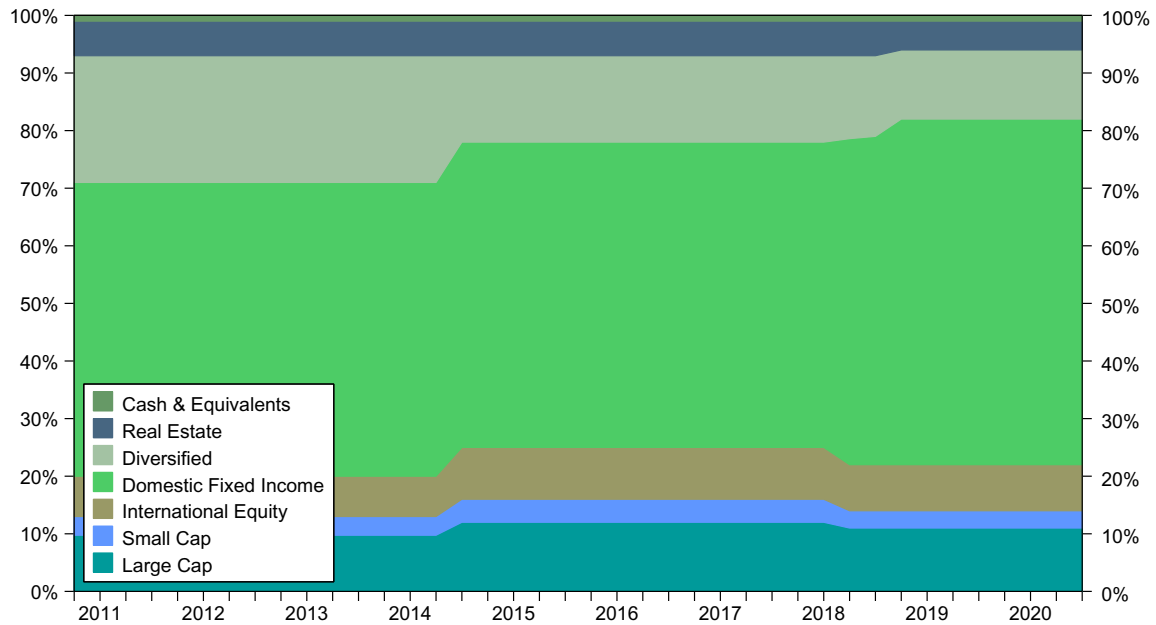
## Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, and the fund's historical target asset allocation.

### Actual Historical Asset Allocation



### Target Historical Asset Allocation

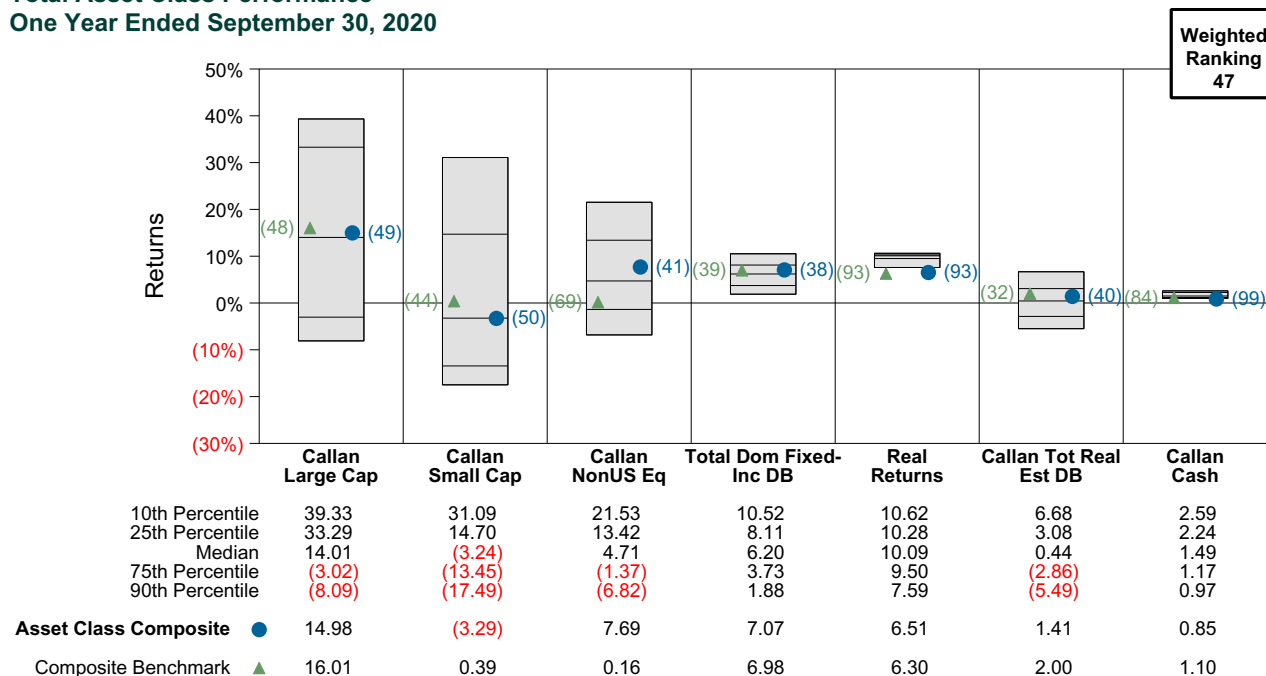


\* Current Quarter Target = 60.0% Blmgb Aggregate, 12.0% NDSIB WSI DRA Weighted Benchmark, 11.0% Russell 1000 Index, 8.0% MSCI World ex US, 5.0% NCREIF Total Index, 3.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

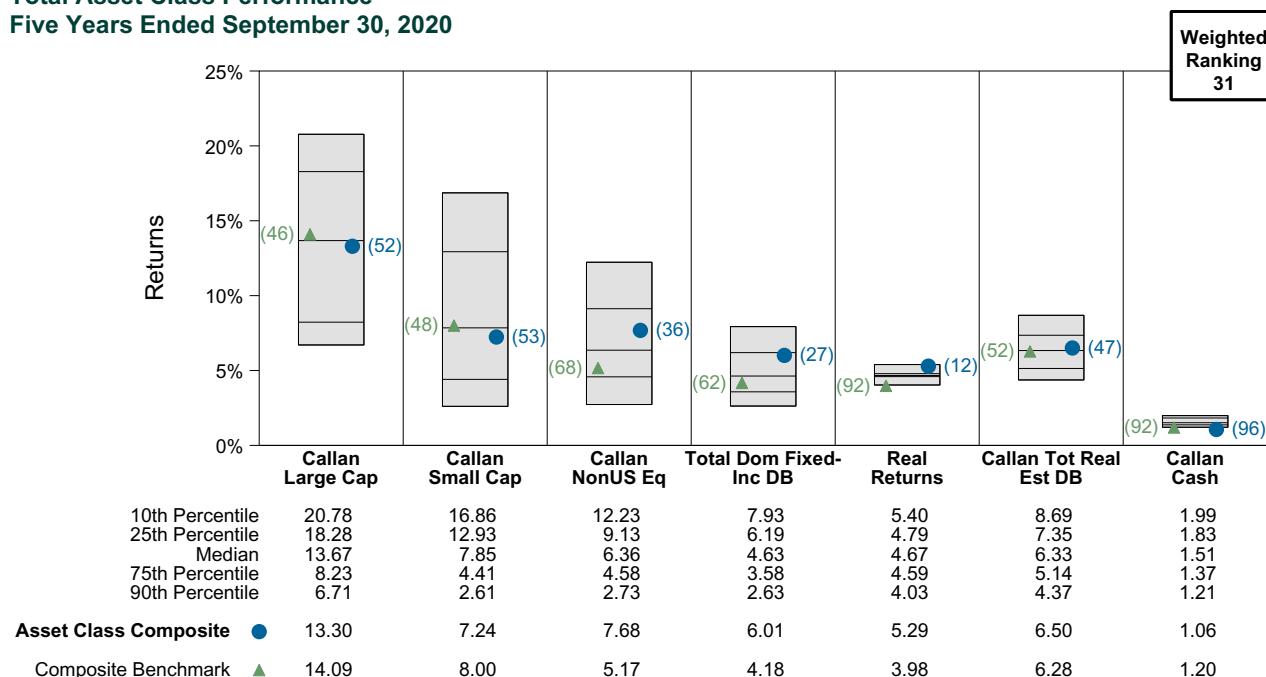
## Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

### Total Asset Class Performance One Year Ended September 30, 2020



### Total Asset Class Performance Five Years Ended September 30, 2020



\* Current Quarter Target = 60.0% Blmbg Aggregate, 12.0% NDSIB WSI DRA Weighted Benchmark, 11.0% Russell 1000 Index, 8.0% MSCI World ex US, 5.0% NCREIF Total Index, 3.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

## Asset Class Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2020, with the distribution as of June 30, 2020. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Class Allocation

	September 30, 2020		Net New Inv.	Inv. Return	June 30, 2020	
	Market Value	Weight			Market Value	Weight
<b>Global Equity</b>	<b>\$477,297,573</b>	<b>21.91%</b>	<b>\$(27,160,637)</b>	<b>\$40,032,675</b>	<b>\$464,425,535</b>	<b>21.85%</b>
<b>Domestic Equity</b>	<b>\$303,083,466</b>	<b>13.91%</b>	<b>\$(17,131,873)</b>	<b>\$24,807,662</b>	<b>\$295,407,677</b>	<b>13.90%</b>
Large Cap	236,795,578	10.87%	(17,383,412)	21,903,449	232,275,541	10.93%
Small Cap	66,287,888	3.04%	251,539	2,904,213	63,132,136	2.97%
<b>International Equity</b>	<b>\$174,214,107</b>	<b>8.00%</b>	<b>\$(10,028,764)</b>	<b>\$15,225,013</b>	<b>\$169,017,858</b>	<b>7.95%</b>
<b>Domestic Fixed Income</b>	<b>\$1,321,497,341</b>	<b>60.67%</b>	<b>\$15,974,729</b>	<b>\$21,285,547</b>	<b>\$1,284,237,065</b>	<b>60.41%</b>
<b>Global Real Assets</b>	<b>\$358,711,109</b>	<b>16.47%</b>	<b>\$3,623,847</b>	<b>\$5,329,921</b>	<b>\$349,757,341</b>	<b>16.45%</b>
Real Estate	97,640,210	4.48%	(745,982)	30	98,386,162	4.63%
Diversified	261,070,899	11.99%	4,369,829	5,329,891	251,371,179	11.82%
<b>Cash</b>	<b>\$20,803,587</b>	<b>0.96%</b>	<b>\$(6,660,868)</b>	<b>\$3,176</b>	<b>\$27,461,280</b>	<b>1.29%</b>
<b>Total Fund</b>	<b>\$2,178,309,609</b>	<b>100.0%</b>	<b>\$(14,222,929)</b>	<b>\$66,651,318</b>	<b>\$2,125,881,220</b>	<b>100.0%</b>

PLEASE REFER TO PAGE 30 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.



## Asset Class Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Equity</b>					
Gross	8.44%	9.74%	-	-	-
Net	8.40%	9.52%	-	-	-
Weighted Benchmark	7.19%	7.98%	-	-	-
<b>Domestic Equity</b>					
Gross	8.14%	10.84%	8.91%	12.06%	13.01%
Net	8.11%	10.69%	8.74%	11.85%	12.76%
Weighted Benchmark	8.49%	12.60%	-	-	-
<b>Large Cap</b>					
Gross	9.08%	14.98%	11.28%	13.30%	13.80%
Net	9.11%	14.86%	11.12%	13.11%	13.59%
Benchmark(1)	9.47%	16.01%	12.38%	14.09%	13.78%
<b>Small Cap</b>					
Gross	4.64%	(3.29%)	0.31%	7.24%	10.11%
Net	4.44%	(3.57%)	0.14%	6.99%	9.75%
Russell 2000	4.93%	0.39%	1.77%	8.00%	9.85%
<b>International Equity</b>					
Gross	8.94%	7.69%	2.29%	7.68%	6.29%
Net	8.87%	7.36%	1.98%	7.35%	5.93%
Benchmark(2)	4.92%	0.16%	0.62%	5.17%	4.42%
<b>Domestic Fixed Income</b>					
Gross	1.66%	7.07%	6.08%	6.01%	5.82%
Net	1.62%	6.93%	5.95%	5.88%	5.67%
Blmbg Aggregate	0.62%	6.98%	5.24%	4.18%	3.64%
<b>Global Real Assets</b>					
Gross	1.53%	5.06%	-	-	-
Net	1.50%	4.76%	-	-	-
Weighted Benchmark	1.59%	5.03%	-	-	-
<b>Real Estate</b>					
Gross	0.00%	1.41%	4.73%	6.50%	12.66%
Net	0.01%	0.93%	4.20%	5.90%	11.79%
NCREIF Total Index	0.74%	2.00%	5.11%	6.28%	9.37%
<b>Diversified</b>					
Gross	2.12%	6.51%	6.19%	5.29%	4.65%
Net	2.09%	6.30%	5.96%	5.03%	4.34%
Weighted Benchmark	1.94%	6.30%	4.67%	3.98%	3.96%
<b>Cash &amp; Equivalents - Net</b>	<b>0.01%</b>	<b>0.85%</b>	<b>1.50%</b>	<b>1.06%</b>	<b>0.61%</b>
90 Day Treasury Bills	0.04%	1.10%	1.69%	1.20%	0.64%
<b>Total Fund</b>					
Gross	3.14%	7.64%	6.48%	7.27%	7.25%
Net	3.10%	7.46%	6.29%	7.07%	7.00%
Target*	2.25%	7.30%	5.88%	5.99%	5.60%

\* Current Quarter Target = 60.0% Blmbg Aggregate, 12.0% NDSIB WSI DRA Weighted Benchmark, 11.0% Russell 1000 Index, 8.0% MSCI World ex US, 5.0% NCREIF Total Index, 3.0% Russell 2000 Index and 1.0% 3-month Treasury Bill.

(1) S&P 500 Index through 12/31/2011 and Russell 1000 Index thereafter.

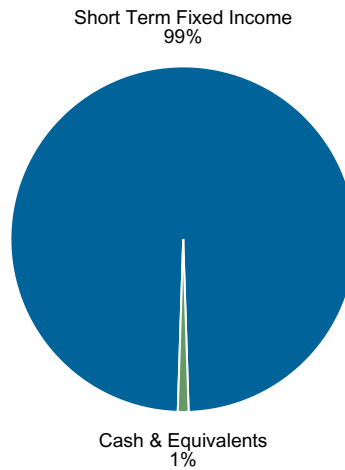
(2) MSCI EAFE through 9/30/2000; 50% Hedged EAFE through 3/31/2011; MSCI EAFE again through 6/30/2016; MSCI World ex-US thereafter.

PLEASE REFER TO PAGE 31-33 FOR INVESTMENT MANAGER LEVEL RETURNS.

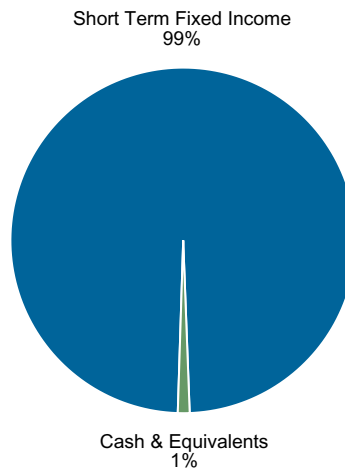
## Actual vs Target Asset Allocation As of September 30, 2020

The first chart below shows the Fund's asset allocation as of September 30, 2020. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

### Actual Asset Allocation



### Target Asset Allocation



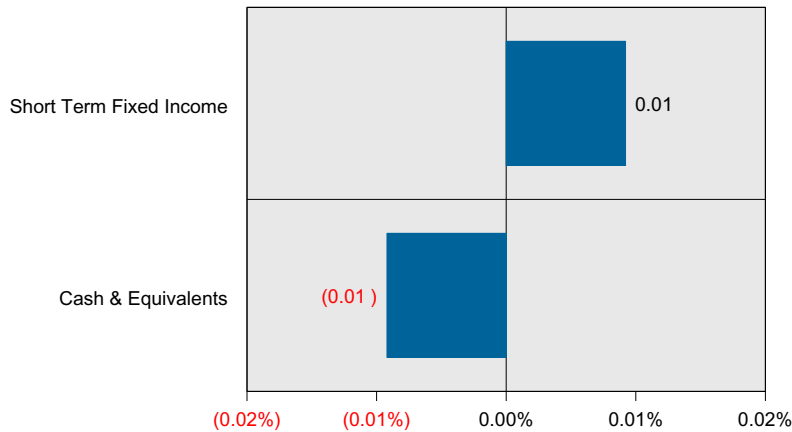
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Short Term Fixed Income	731,135	99.0%	98.9%	0.1%	420
Cash & Equivalents	7,558	1.0%	1.1%	(0.1%)	(420)
Total	738,694	100.0%	100.0%		

\* Current Quarter Target = 98.9% Blmbg Gov/Cred 1-3 Yr and 1.1% 3-month Treasury Bill.

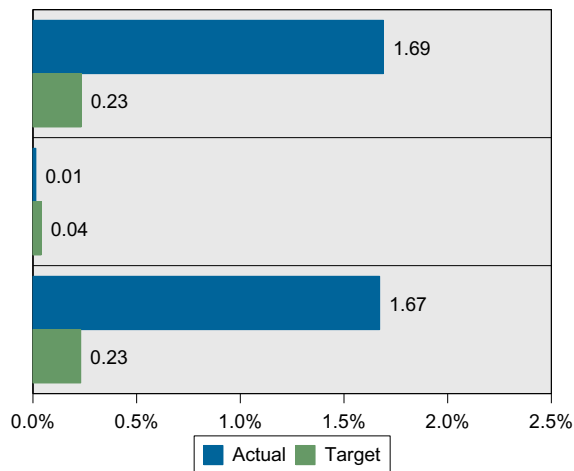
## Quarterly Total Fund Relative Attribution - September 30, 2020

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

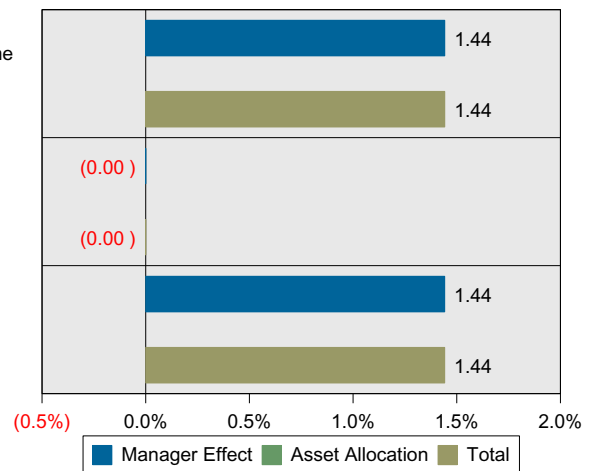
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended September 30, 2020

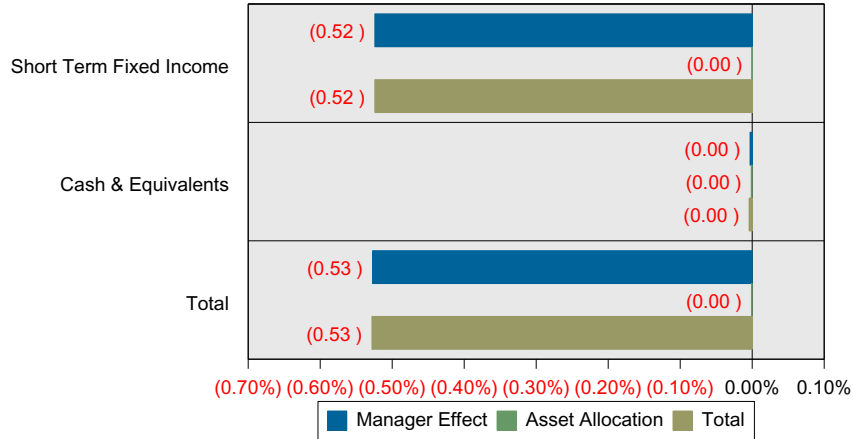
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Short Term Fixed Income	99%	99%	1.69%	0.23%	1.44%	0.00%	1.44%
Cash & Equivalents	1%	1%	0.01%	0.04%	(0.00%)	0.00%	(0.00%)
<b>Total</b>			<b>1.67%</b>	<b>0.23%</b>	<b>+ 1.44%</b>	<b>+ 0.00%</b>	<b>1.44%</b>

\* Current Quarter Target = 98.9% Blmbg Gov/Cred 1-3 Yr and 1.1% 3-month Treasury Bill.

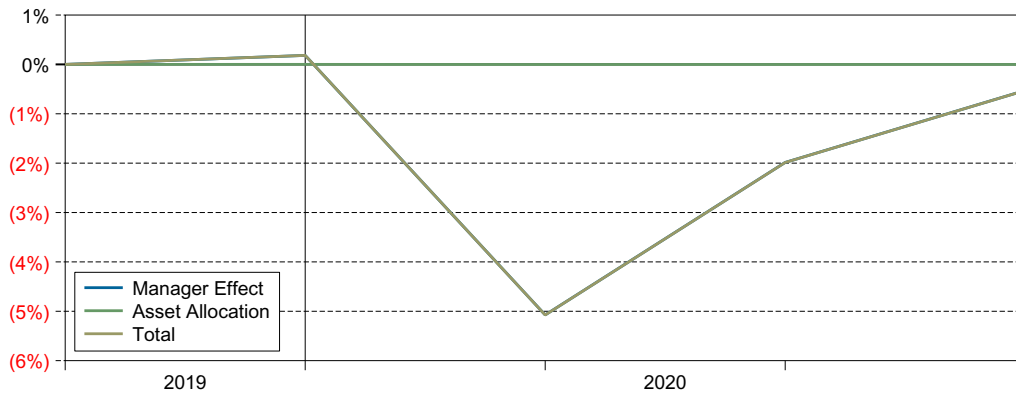
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### One Year Relative Attribution Effects



### Cumulative Relative Attribution Effects



### One Year Relative Attribution Effects

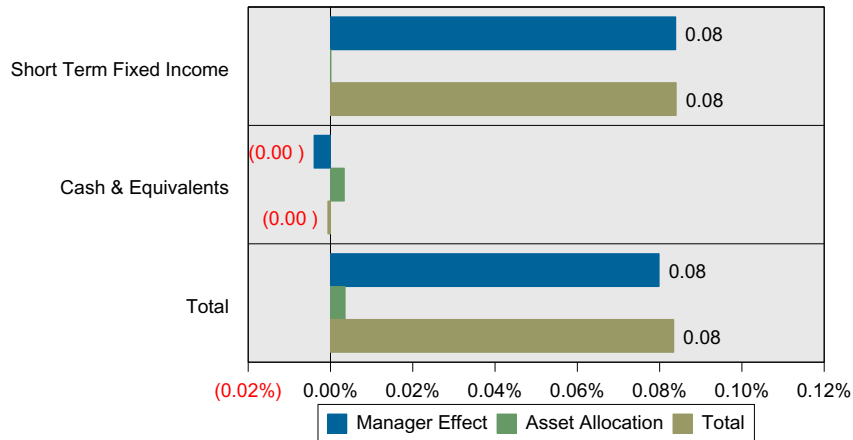
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Short Term Fixed Income	99%	99%	3.19%	3.73%	(0.52%)	(0.00%)	(0.52%)
Cash & Equivalents	1%	1%	0.85%	1.10%	(0.00%)	(0.00%)	(0.00%)
<b>Total</b>			<b>3.17%</b>	<b>3.70%</b>	<b>+ (0.53%)</b>	<b>+ (0.00%)</b>	<b>(0.53%)</b>

\* Current Quarter Target = 98.9% Blmbg Gov/Cred 1-3 Yr and 1.1% 3-month Treasury Bill.

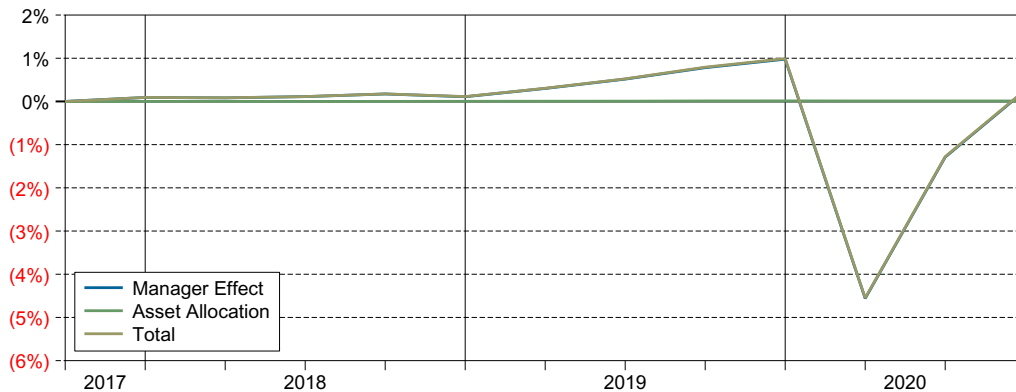
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Three Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Three Year Annualized Relative Attribution Effects

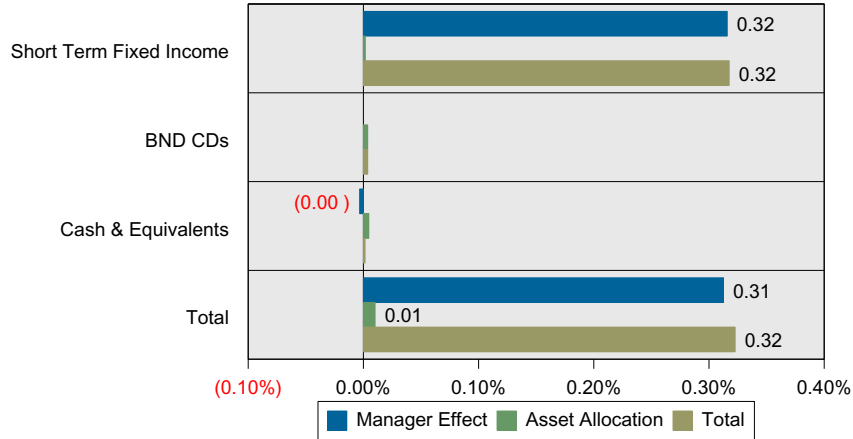
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Short Term Fixed Income	98%	98%	2.93%	2.84%	0.08%	0.00%	0.08%
Cash & Equivalents	2%	2%	1.50%	1.69%	(0.00%)	0.00%	(0.00%)
<b>Total</b>			<b>2.91%</b>	<b>= 2.83%</b>	<b>+ 0.08%</b>	<b>+ 0.00%</b>	<b>0.08%</b>

\* Current Quarter Target = 98.9% Blmbg Gov/Cred 1-3 Yr and 1.1% 3-month Treasury Bill.

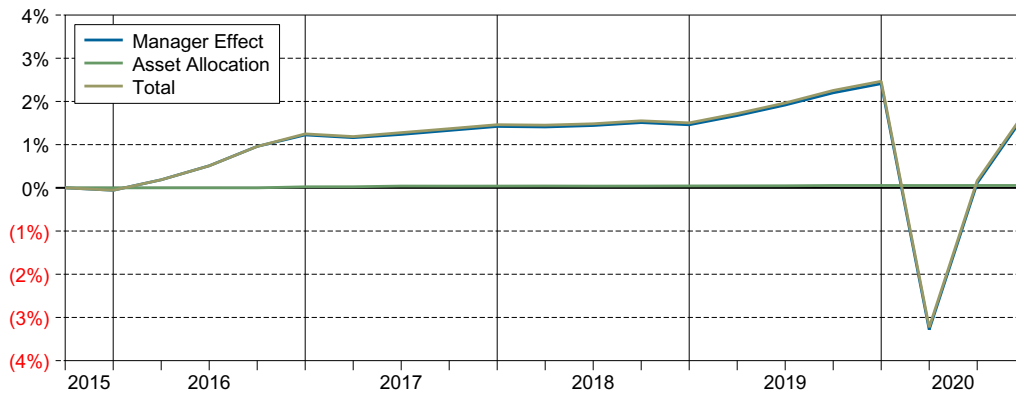
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Five Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Five Year Annualized Relative Attribution Effects

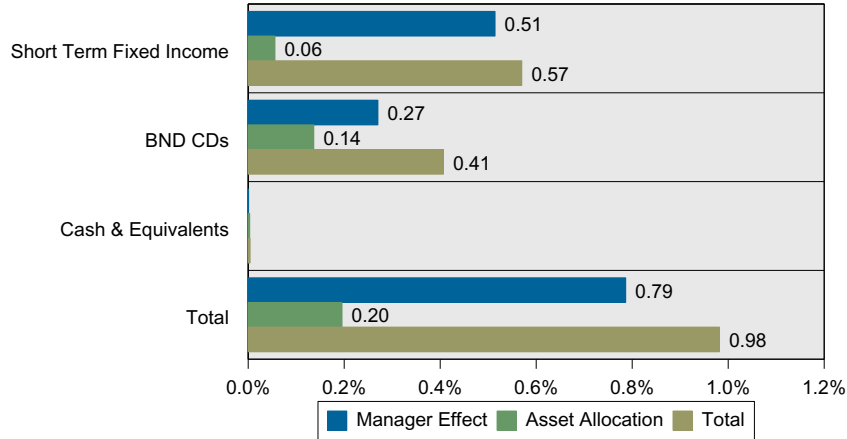
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Short Term Fixed Income	93%	93%	2.34%	1.97%	0.32%	0.00%	0.32%
BND CDs	5%	5%	-	-	0.00%	0.00%	0.00%
Cash & Equivalents	3%	3%	1.06%	1.20%	(0.00%)	0.00%	0.00%
<b>Total</b>			<b>2.38%</b>	<b>2.06%</b>	<b>+ 0.31%</b>	<b>+ 0.01%</b>	<b>0.32%</b>

\* Current Quarter Target = 98.9% Blmbg Gov/Cred 1-3 Yr and 1.1% 3-month Treasury Bill.

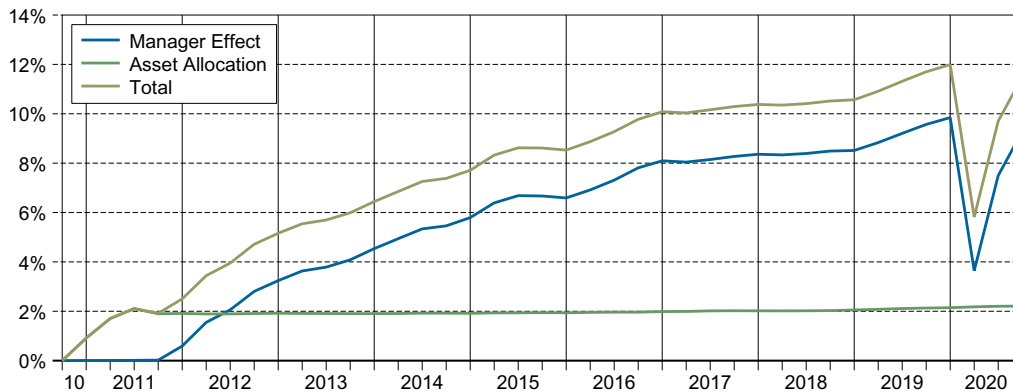
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Ten Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects

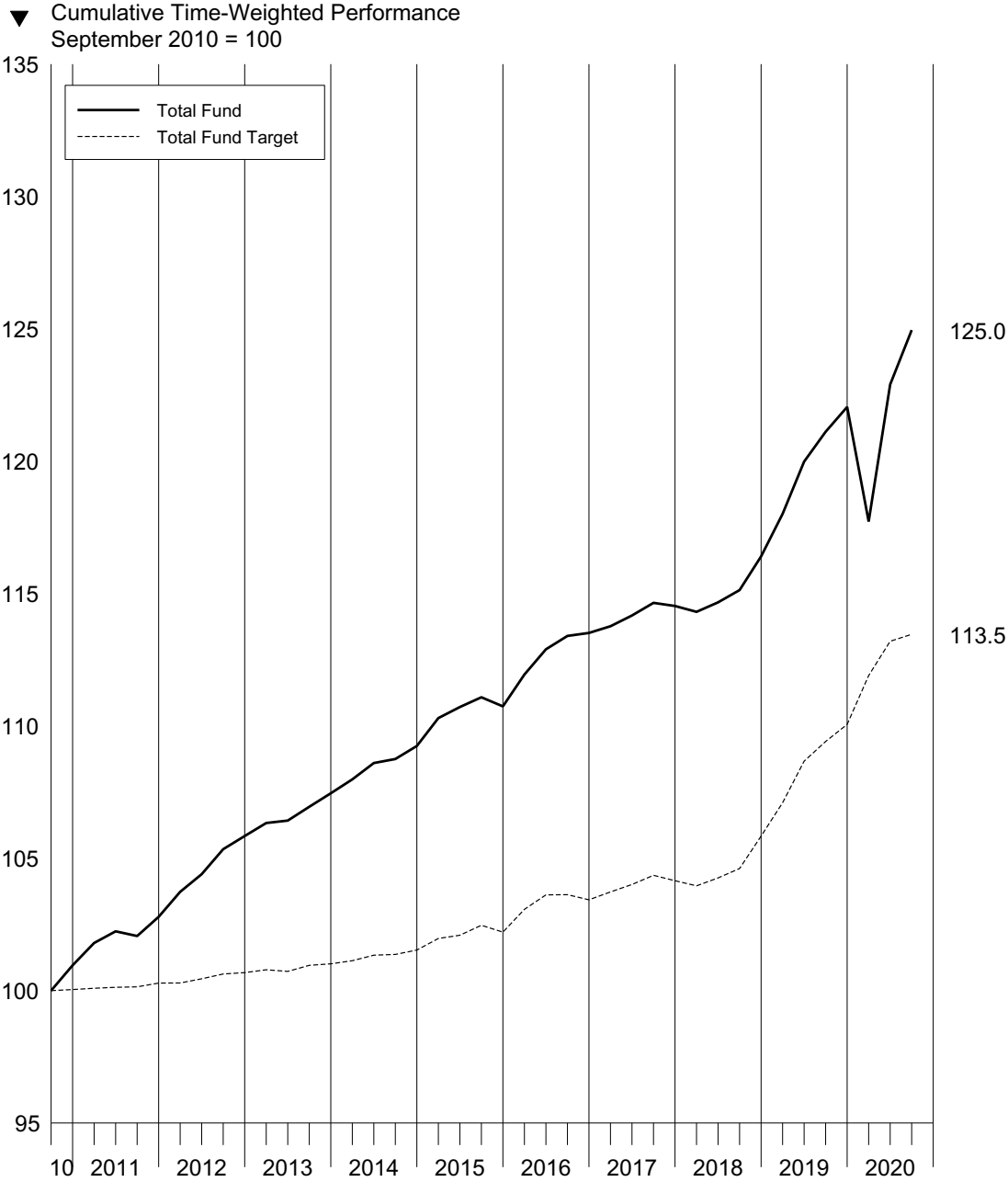


### Ten Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Short Term Fixed Income	83%	77%	2.02%	1.36%	0.51%	0.06%	0.57%
BND CDs	14%	11%	-	-	0.27%	0.14%	0.41%
Cash & Equivalents	3%	12%	0.61%	0.64%	0.00%	0.00%	0.00%
<b>Total</b>			<b>2.25%</b>	<b>= 1.27%</b>	<b>+ 0.79%</b>	<b>+ 0.20%</b>	<b>0.98%</b>

\* Current Quarter Target = 98.9% Blmbg Gov/Cred 1-3 Yr and 1.1% 3-month Treasury Bill.

**NDSIB - Budget Stabilization Fund  
Cumulative Results**

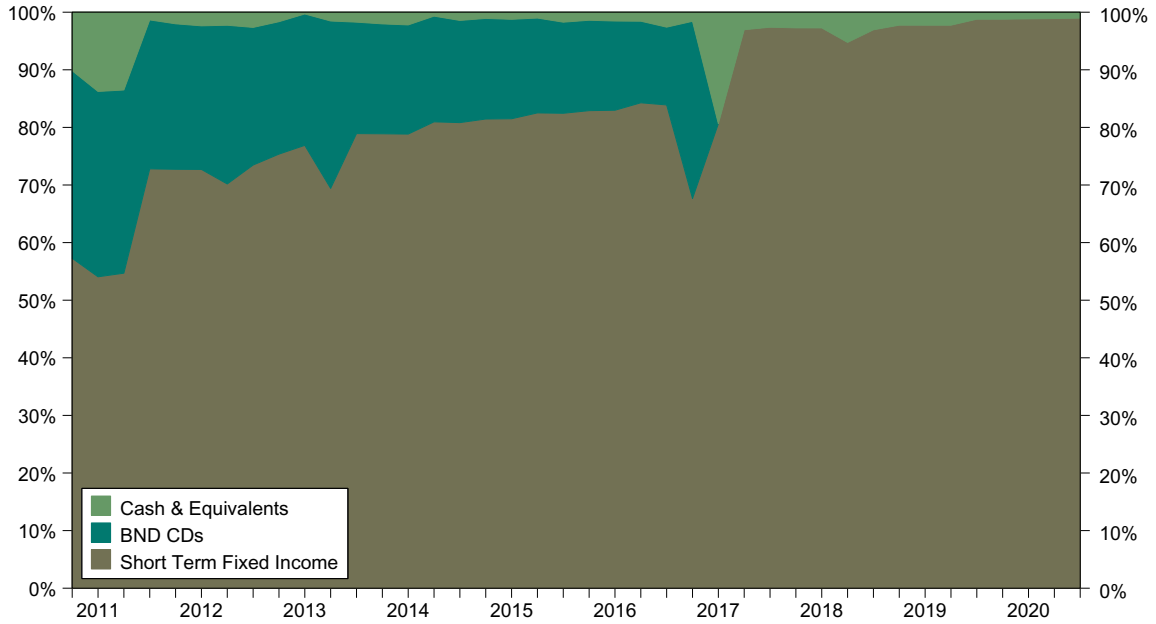




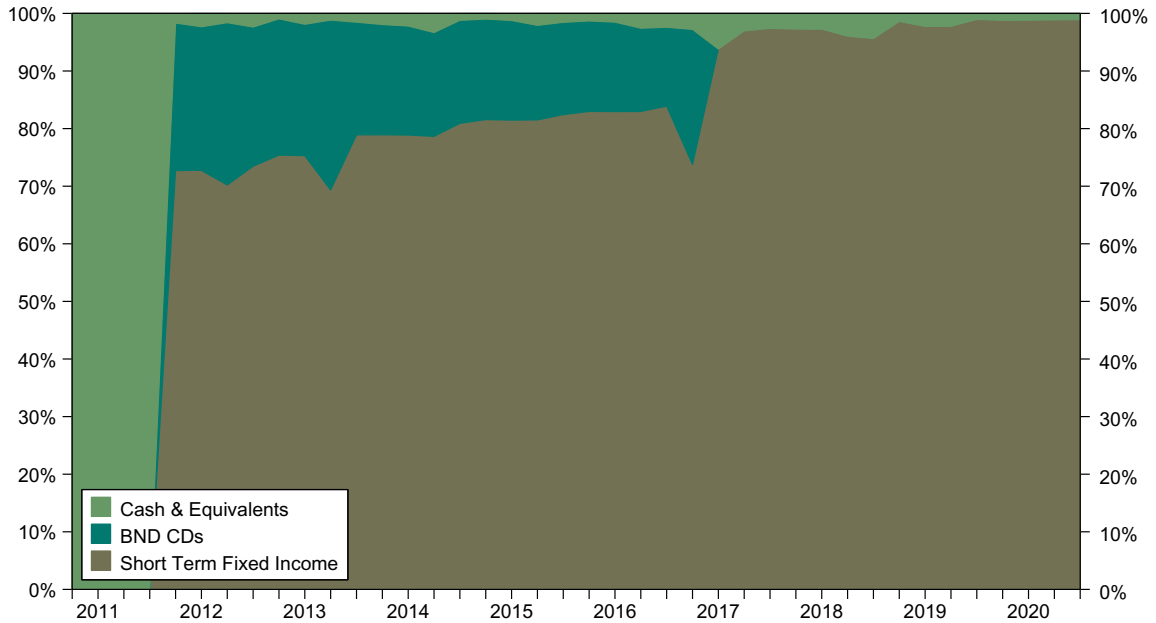
## Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, and the fund's historical target asset allocation.

### Actual Historical Asset Allocation



### Target Historical Asset Allocation



\* Current Quarter Target = 98.9% Blmbg Gov/Cred 1-3 Yr and 1.1% 3-month Treasury Bill.

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## Asset Class Allocation

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The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2020, with the distribution as of June 30, 2020. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Class Allocation

	September 30, 2020		Net New Inv.	Inv. Return	June 30, 2020	
	Market Value	Weight			Market Value	Weight
Short Term Fixed Income	\$731,135,409	98.98%	\$(293,192)	\$12,156,326	\$719,272,275	98.90%
Cash & Equivalents	\$7,558,144	1.02%	\$(445,764)	\$1,121	\$8,002,787	1.10%
Total Fund	\$738,693,553	100.0%	\$(738,956)	\$12,157,447	\$727,275,063	100.0%

PLEASE REFER TO PAGE 30 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Short Term Fixed Income</b>					
Gross	1.69%	3.19%	2.93%	2.34%	2.02%
Net	1.65%	3.09%	2.82%	2.17%	1.87%
Blended Benchmark(1)	0.23%	3.73%	2.84%	1.97%	-
<b>Cash &amp; Equivalents - Net</b>	<b>0.01%</b>	<b>0.85%</b>	<b>1.50%</b>	<b>1.06%</b>	<b>0.61%</b>
3-month Treasury Bill	0.04%	1.10%	1.69%	1.20%	0.64%
<b>Total Fund</b>					
Gross	1.67%	3.17%	2.91%	2.38%	2.25%
Net	1.63%	3.06%	2.80%	2.22%	2.13%
Target*	0.23%	3.70%	2.83%	2.06%	1.27%

\* Current Quarter Target = 98.9% Blmbg Gov/Cred 1-3 Yr and 1.1% 3-month Treasury Bill.

(1) Blmbg Gov 1-3 Yr through March 31, 2017 and Blmbg Gov/Credit 1-3 Yr thereafter.

PLEASE REFER TO PAGES 31-33 FOR INVESTMENT MANAGER LEVEL RETURNS.

# Large Cap Period Ended September 30, 2020

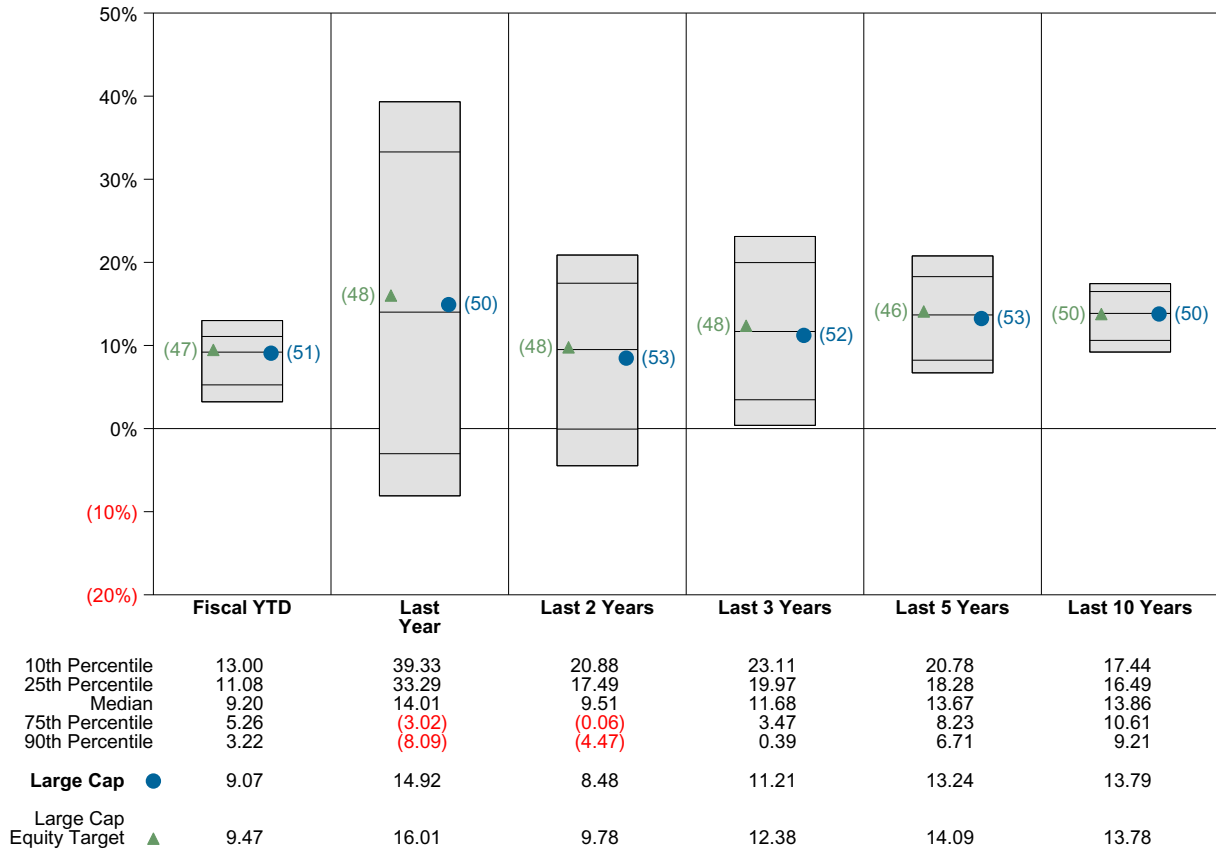
## Quarterly Summary and Highlights

- Large Cap's portfolio posted a 9.07% return for the quarter placing it in the 51 percentile of the Callan Large Capitalization group for the quarter and in the 50 percentile for the last year.
- Large Cap's portfolio underperformed the Large Cap Equity Target by 0.40% for the quarter and underperformed the Large Cap Equity Target for the year by 1.10%.

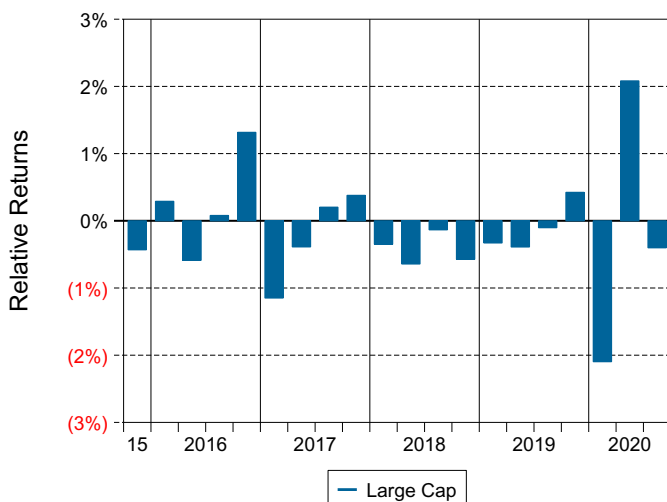
## Quarterly Asset Growth

Beginning Market Value	\$251,975,200
Net New Investment	\$-19,934,648
Investment Gains/(Losses)	\$23,726,974
Ending Market Value	\$255,767,525

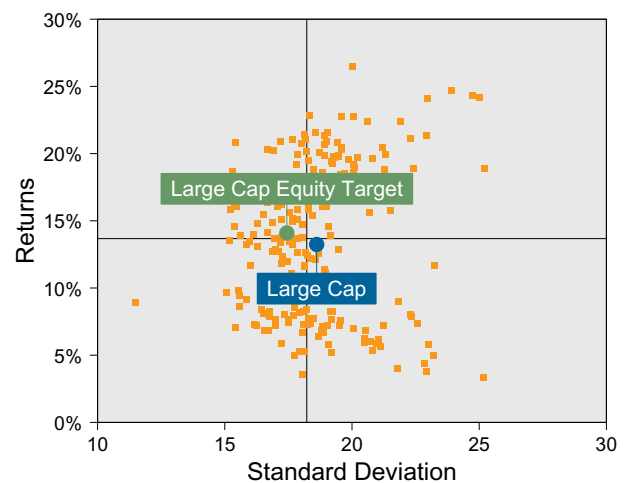
## Performance vs Callan Large Capitalization (Gross)



## Relative Return vs Large Cap Equity Target



## Callan Large Capitalization (Gross) Annualized Five Year Risk vs Return



# Parametric Large Cap Period Ended September 30, 2020

## Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

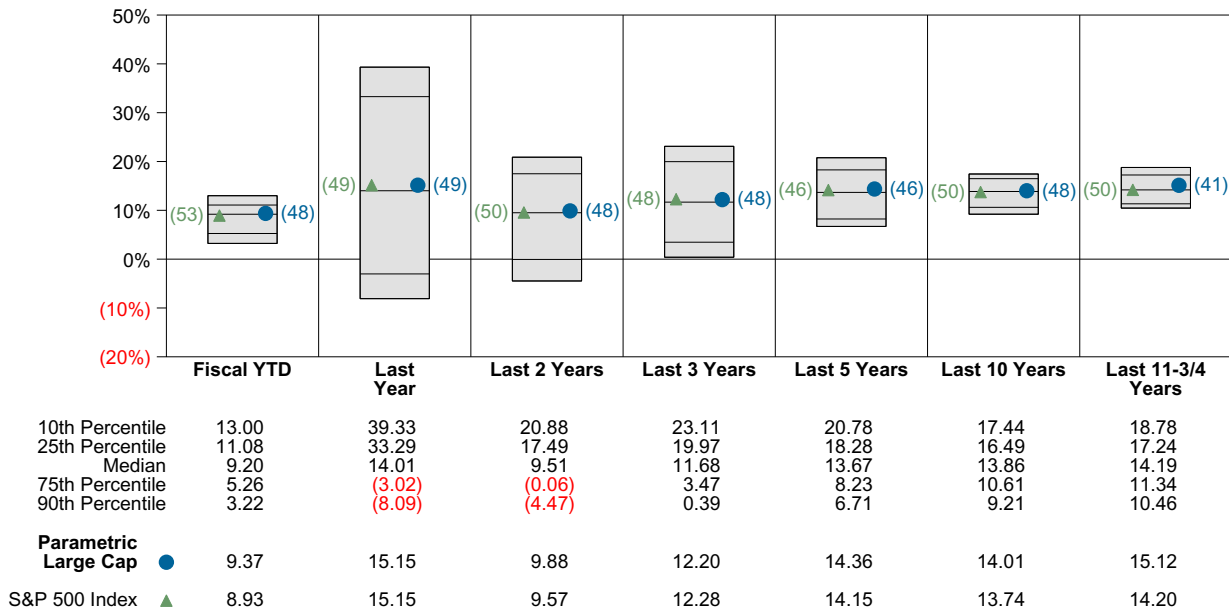
## Quarterly Summary and Highlights

- Parametric Large Cap's portfolio posted a 9.37% return for the quarter placing it in the 48 percentile of the Callan Large Capitalization group for the quarter and in the 49 percentile for the last year.
- Parametric Large Cap's portfolio outperformed the S&P 500 Index by 0.44% for the quarter and underperformed the S&P 500 Index for the year by 0.00%.

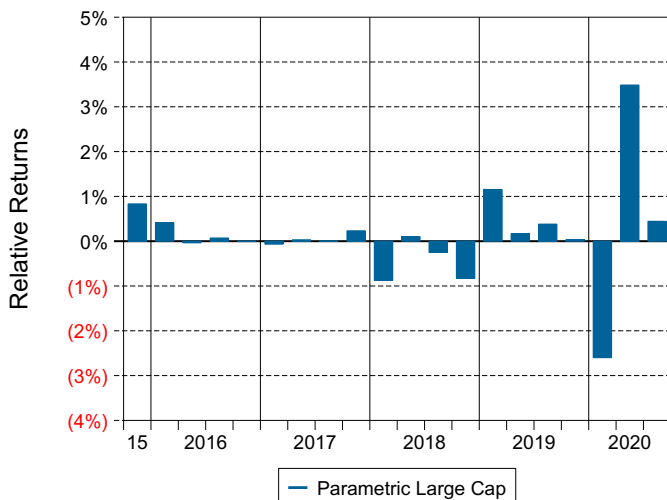
## Quarterly Asset Growth

Beginning Market Value	\$59,337,408
Net New Investment	\$-9,836,784
Investment Gains/(Losses)	\$6,022,437
Ending Market Value	\$55,523,061

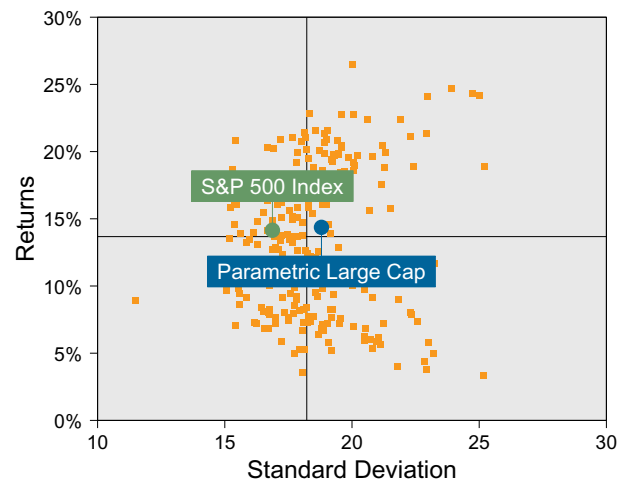
## Performance vs Callan Large Capitalization (Gross)



## Relative Return vs S&P 500 Index



## Callan Large Capitalization (Gross) Annualized Five Year Risk vs Return



# L.A. Capital Period Ended September 30, 2020

## Investment Philosophy

The LA Capital Structured portfolio is a large growth portfolio benchmarked to the Russell 1000 Growth Index. It is an active assignment meaning that it targets a 2% alpha and constrains its risk budget (tracking error) to 4% relative to the benchmark. LA Capital believes that investment results are driven by Investor Preferences and thus recognize that when preferences shift a different posture related to that factor is warranted.

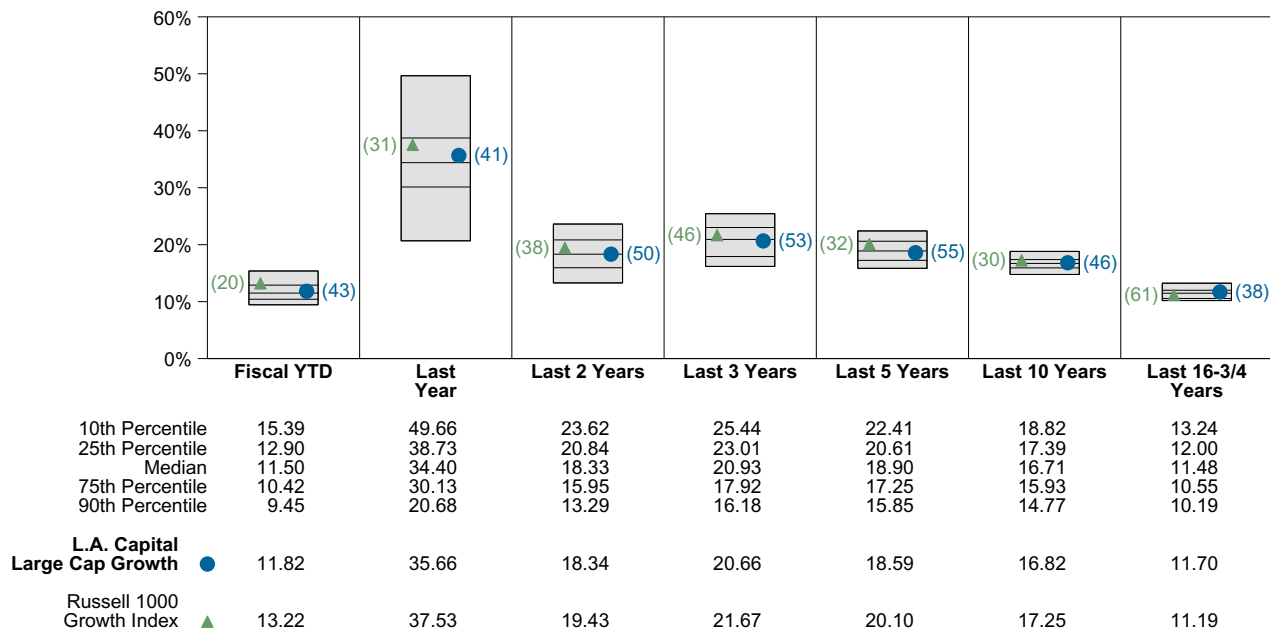
## Quarterly Summary and Highlights

- L.A. Capital Large Cap Growth's portfolio posted a 11.82% return for the quarter placing it in the 43 percentile of the Callan Large Cap Growth group for the quarter and in the 41 percentile for the last year.
- L.A. Capital Large Cap Growth's portfolio underperformed the Russell 1000 Growth Index by 1.39% for the quarter and underperformed the Russell 1000 Growth Index for the year by 1.87%.

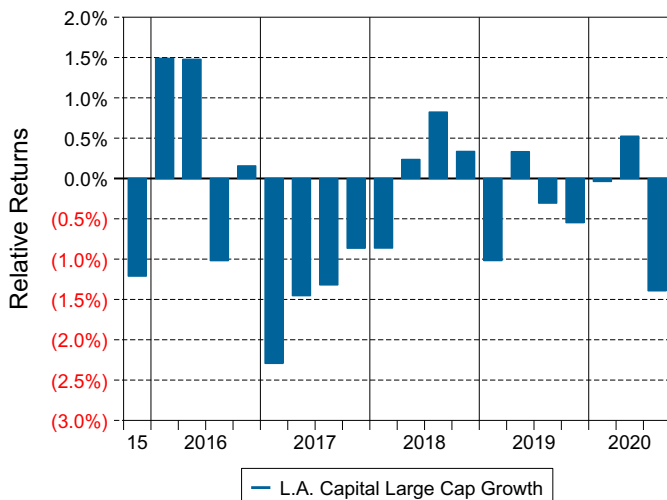
## Quarterly Asset Growth

Beginning Market Value	\$82,731,900
Net New Investment	\$-10,040,331
Investment Gains/(Losses)	\$10,308,085
Ending Market Value	\$82,999,654

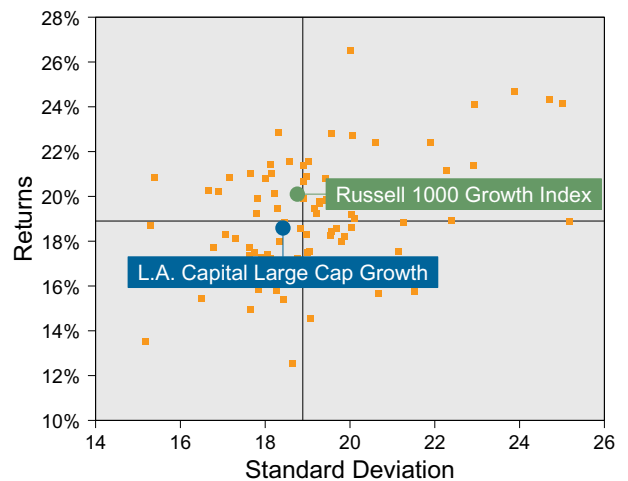
## Performance vs Callan Large Cap Growth (Gross)



## Relative Return vs Russell 1000 Growth Index



## Callan Large Cap Growth (Gross) Annualized Five Year Risk vs Return



# L.A. Capital Enhanced Period Ended September 30, 2020

## Investment Philosophy

The LA Capital Enhanced portfolio is a large core portfolio benchmarked to the Russell 1000 Index. Characterized as an enhanced index assignment, its objective is to track the benchmark with lower variability. The pension portfolio began in August of 2000 and the insurance portfolio was initiated in April of 2004. Since October of 2006 a small portion of each of the two core accounts was allocated into the Large Cap Alpha Fund with intent to add incremental alpha to the assignment given that the information ratio was expected to be higher.

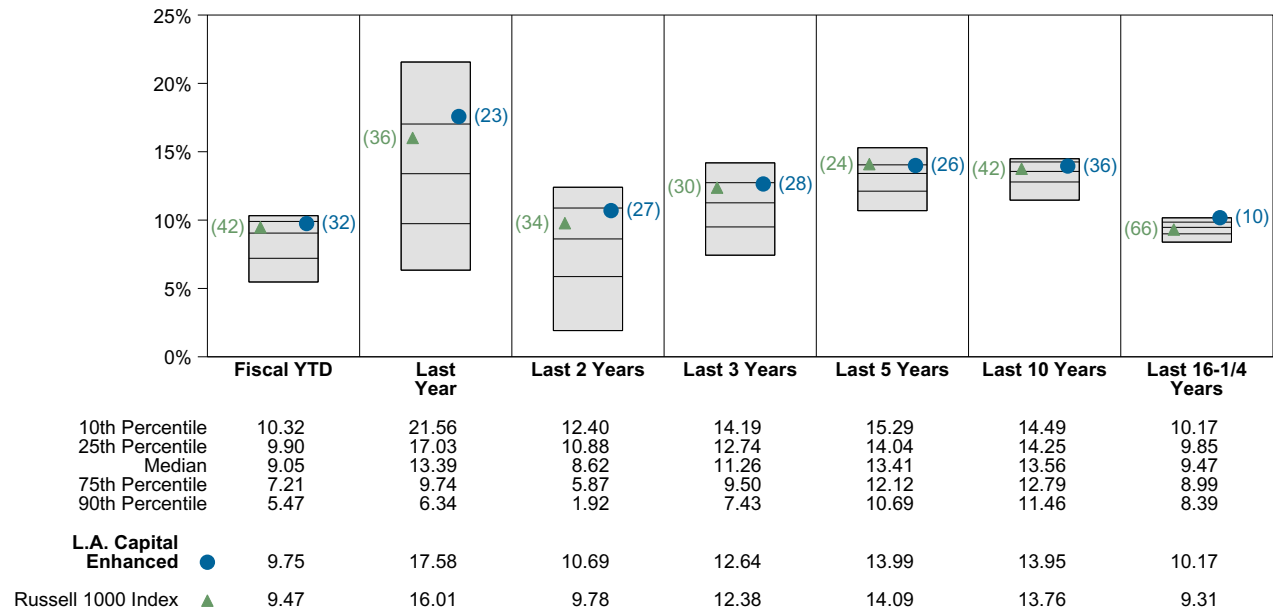
## Quarterly Summary and Highlights

- L.A. Capital Enhanced's portfolio posted a 9.75% return for the quarter placing it in the 32 percentile of the Callan Large Cap Core group for the quarter and in the 23 percentile for the last year.
- L.A. Capital Enhanced's portfolio outperformed the Russell 1000 Index by 0.28% for the quarter and outperformed the Russell 1000 Index for the year by 1.57%.

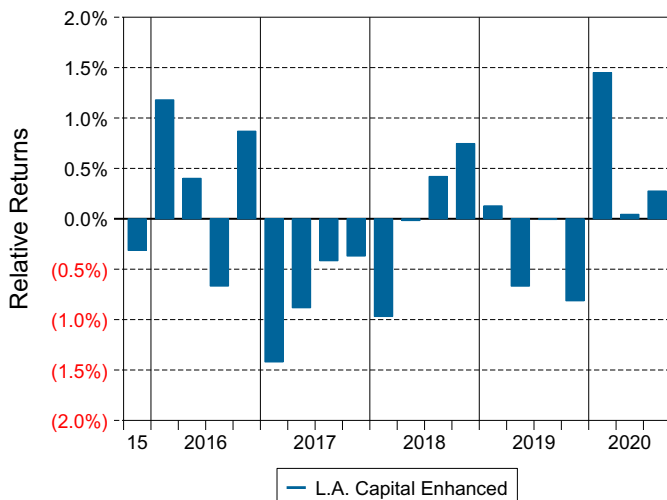
## Quarterly Asset Growth

Beginning Market Value	\$51,436,191
Net New Investment	-\$12,701
Investment Gains/(Losses)	\$5,013,261
Ending Market Value	\$56,436,751

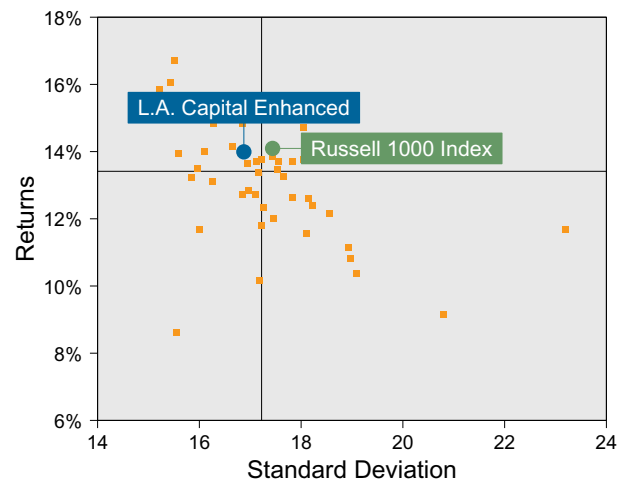
## Performance vs Callan Large Cap Core (Gross)



## Relative Return vs Russell 1000 Index



## Callan Large Cap Core (Gross) Annualized Five Year Risk vs Return



# LSV Asset Management

## Period Ended September 30, 2020

### Investment Philosophy

The objective of LSV Asset Management's Large Cap Value Equity (U.S.) strategy is to outperform the Russell 1000 Value by at least 200 basis points (gross of fees) per annum over a 3-5 year period with a tracking error of approximately 4%. Their stock selection process is a quantitative approach that ranks a broad universe of stocks on a combination of value and momentum factors and seeks to invest approximately 100 stocks in the most attractive securities possible within strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio is broadly diversified across industry groups and fully invested.

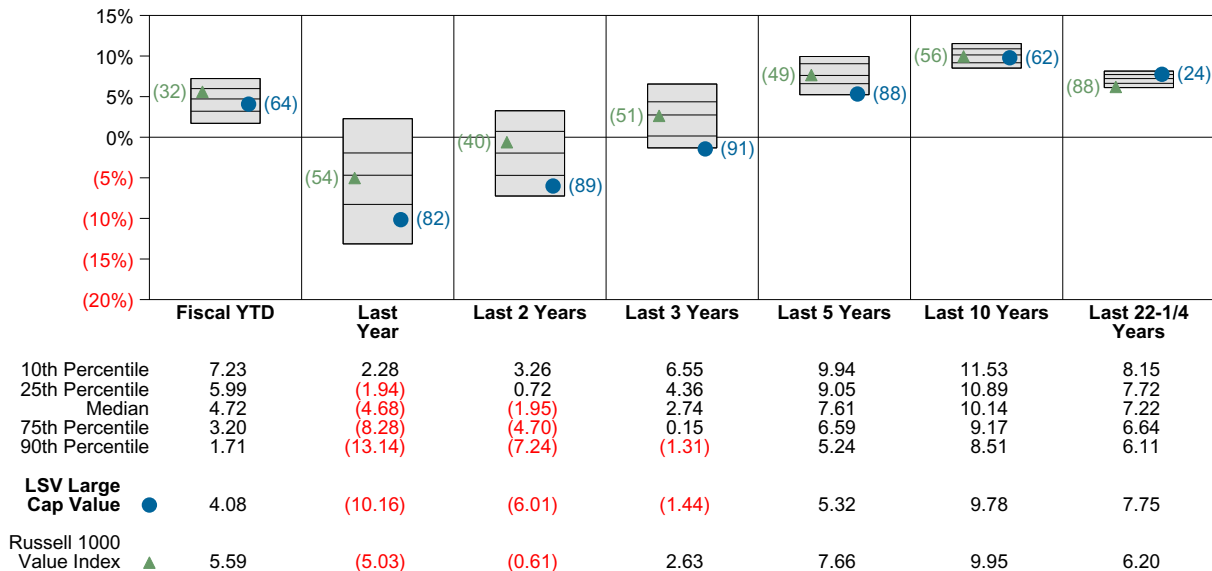
### Quarterly Summary and Highlights

- LSV Large Cap Value's portfolio posted a 4.08% return for the quarter placing it in the 64 percentile of the Callan Large Cap Value group for the quarter and in the 82 percentile for the last year.
- LSV Large Cap Value's portfolio underperformed the Russell 1000 Value Index by 1.52% for the quarter and underperformed the Russell 1000 Value Index for the year by 5.13%.

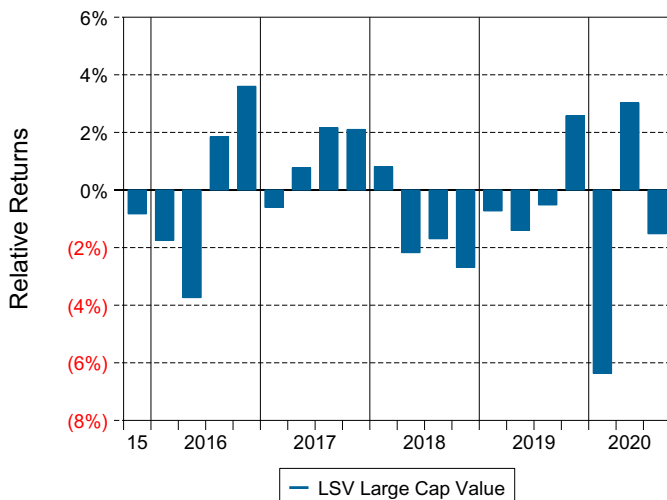
### Quarterly Asset Growth

Beginning Market Value	\$58,467,460
Net New Investment	\$-42,410
Investment Gains/(Losses)	\$2,383,009
Ending Market Value	\$60,808,059

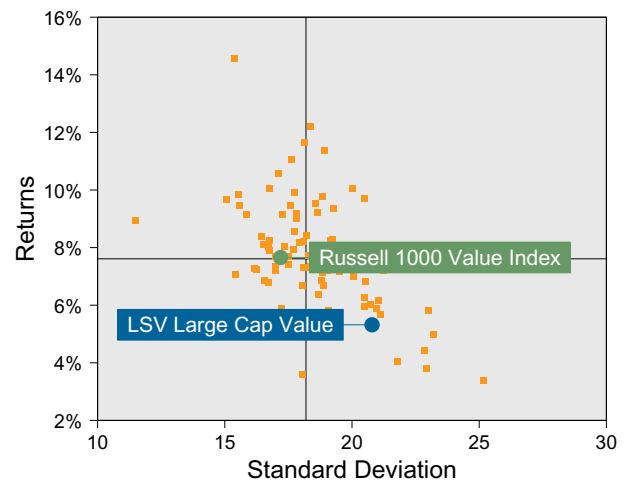
### Performance vs Callan Large Cap Value (Gross)



### Relative Return vs Russell 1000 Value Index



### Callan Large Cap Value (Gross) Annualized Five Year Risk vs Return





# Small Cap Period Ended September 30, 2020

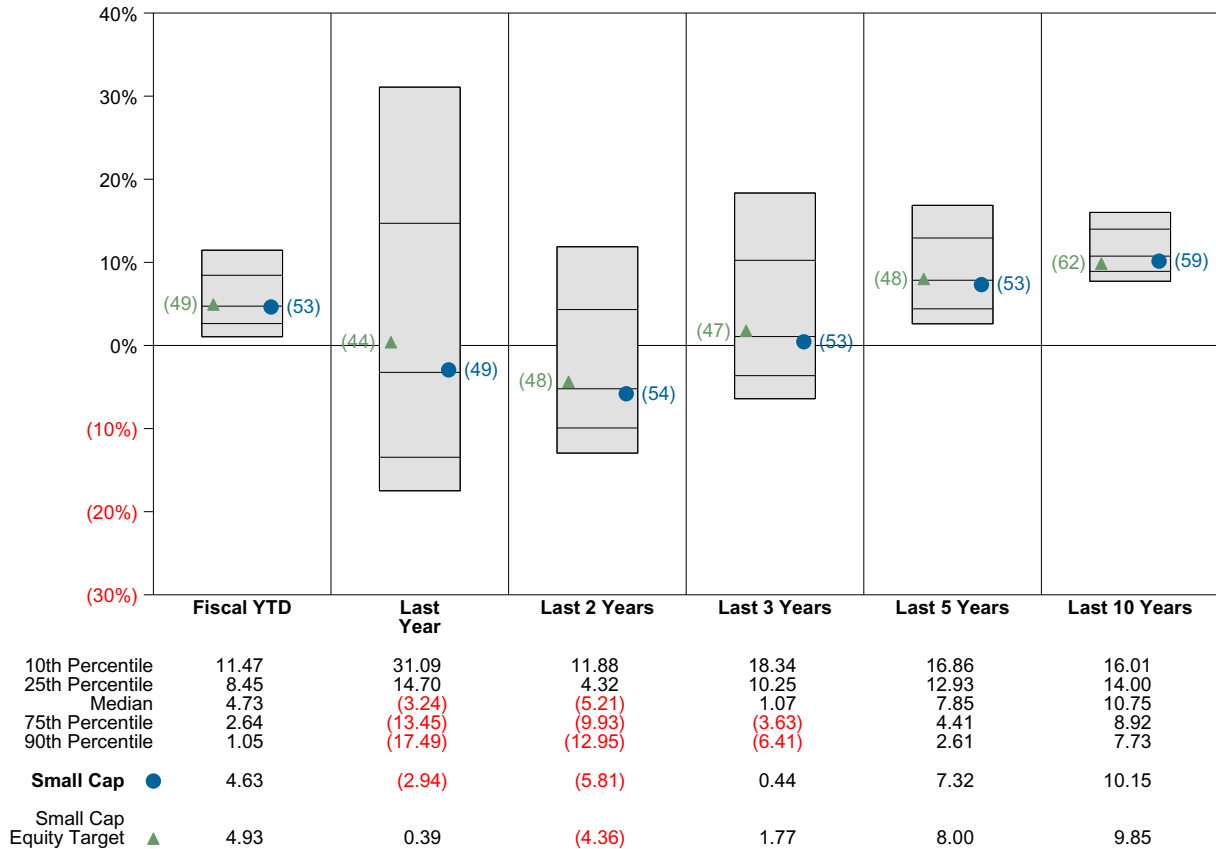
## Quarterly Summary and Highlights

- Small Cap's portfolio posted a 4.63% return for the quarter placing it in the 53 percentile of the Callan Small Capitalization group for the quarter and in the 49 percentile for the last year.
- Small Cap's portfolio underperformed the Small Cap Equity Target by 0.30% for the quarter and underperformed the Small Cap Equity Target for the year by 3.33%.

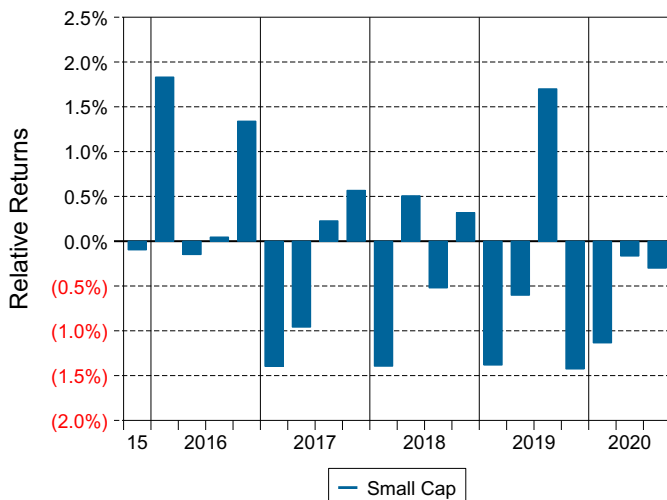
## Quarterly Asset Growth

Beginning Market Value	\$71,335,622
Net New Investment	\$-141,852
Investment Gains/(Losses)	\$3,307,944
Ending Market Value	\$74,501,714

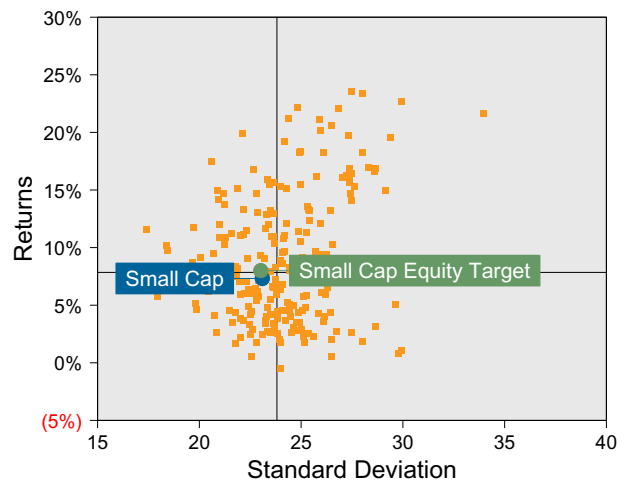
## Performance vs Callan Small Capitalization (Gross)



## Relative Return vs Small Cap Equity Target



## Callan Small Capitalization (Gross) Annualized Five Year Risk vs Return



# Atlanta Capital

## Period Ended September 30, 2020

### Investment Philosophy

Atlanta believes that high quality companies produce consistently increasing earnings and dividends, thereby providing attractive returns with moderate risk over the long-term.

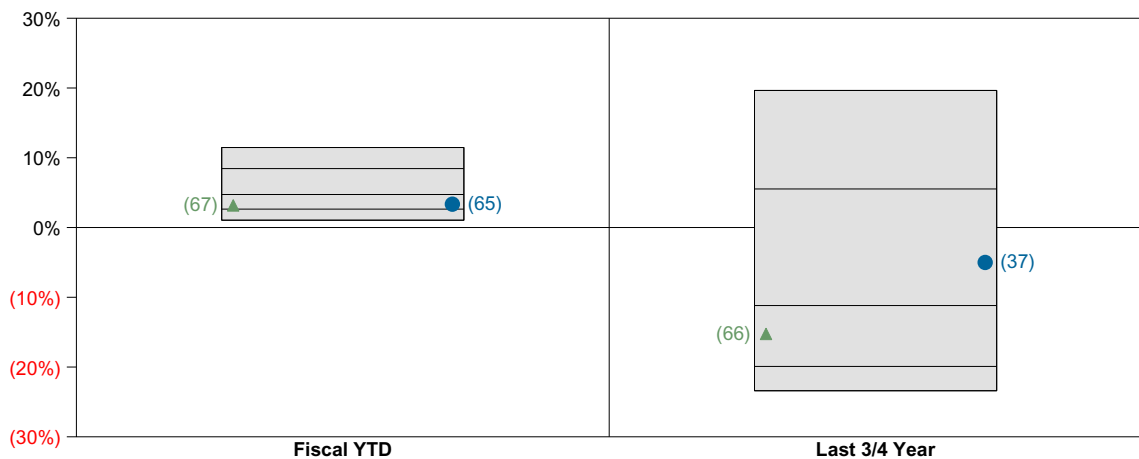
### Quarterly Summary and Highlights

- Atlanta Capital's portfolio posted a 3.35% return for the quarter placing it in the 65th percentile of the Callan Small Capitalization group for the quarter and in the 37th percentile for the last three-quarter year.
- Atlanta Capital's portfolio outperformed the S&P 600 Small Cap Index by 0.17% for the quarter and outperformed the S&P 600 Small Cap Index for the three-quarter year by 10.24%.

### Quarterly Asset Growth

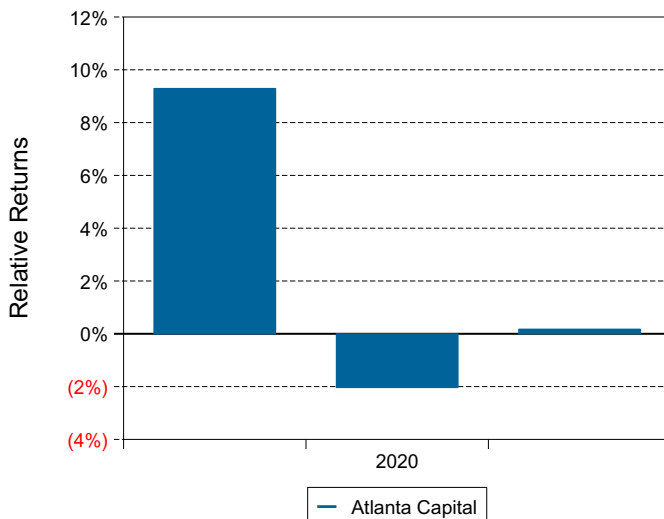
Beginning Market Value	\$30,715,575
Net New Investment	\$-51,873
Investment Gains/(Losses)	\$1,028,858
Ending Market Value	\$31,692,560

### Performance vs Callan Small Capitalization (Gross)

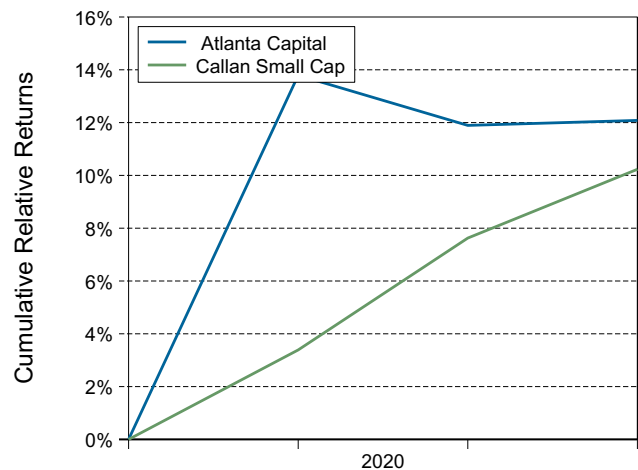


10th Percentile	11.47
25th Percentile	8.45
Median	4.73
75th Percentile	2.64
90th Percentile	1.05
<b>Atlanta Capital</b>	<b>3.35</b>
S&P 600 Small Cap Index	3.17

### Relative Return vs S&P 600 Small Cap Index



### Cumulative Returns vs S&P 600 Small Cap Index



# Parametric SmallCap Period Ended September 30, 2020

## Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

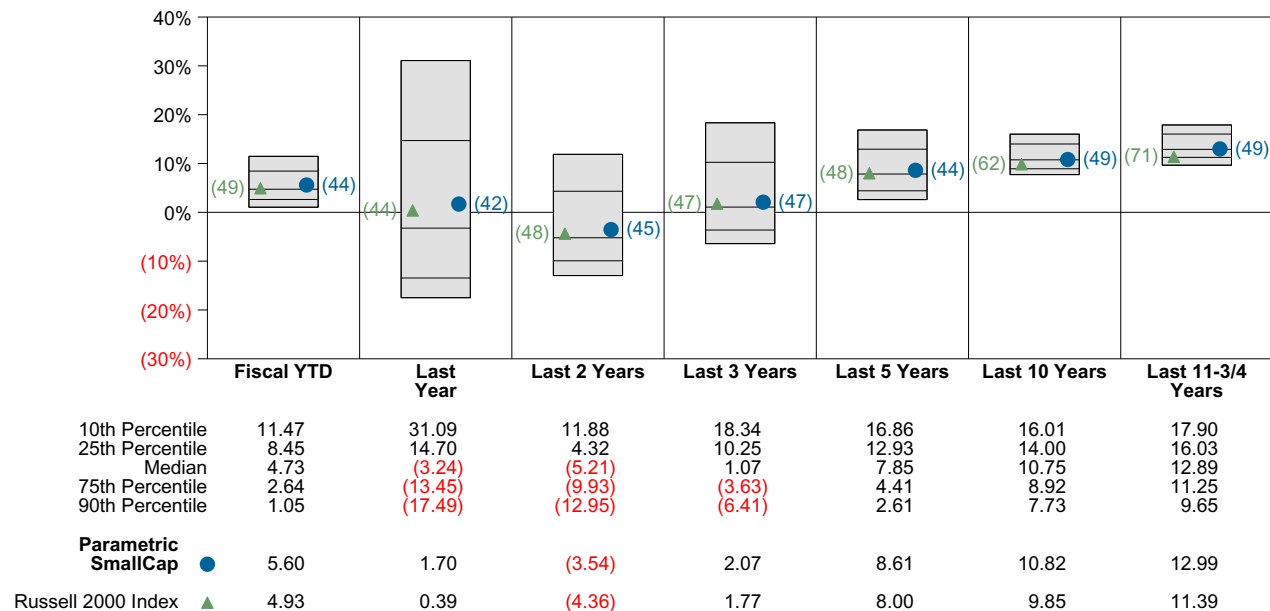
## Quarterly Summary and Highlights

- Parametric SmallCap's portfolio posted a 5.60% return for the quarter placing it in the 44 percentile of the Callan Small Capitalization group for the quarter and in the 42 percentile for the last year.
- Parametric SmallCap's portfolio outperformed the Russell 2000 Index by 0.67% for the quarter and outperformed the Russell 2000 Index for the year by 1.31%.

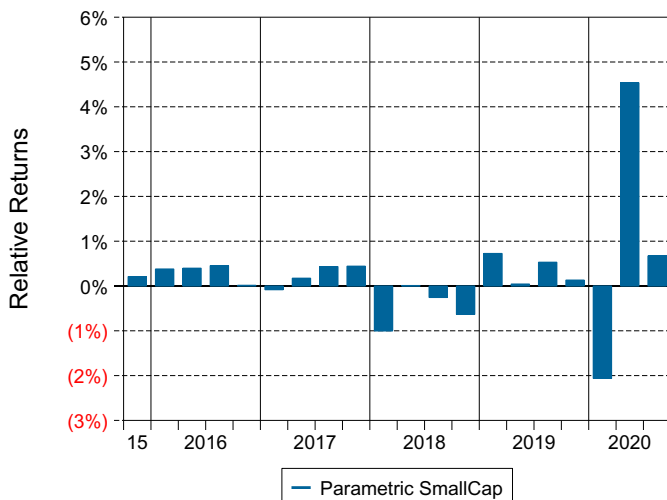
## Quarterly Asset Growth

Beginning Market Value	\$40,619,602
Net New Investment	\$-89,200
Investment Gains/(Losses)	\$2,278,748
Ending Market Value	\$42,809,149

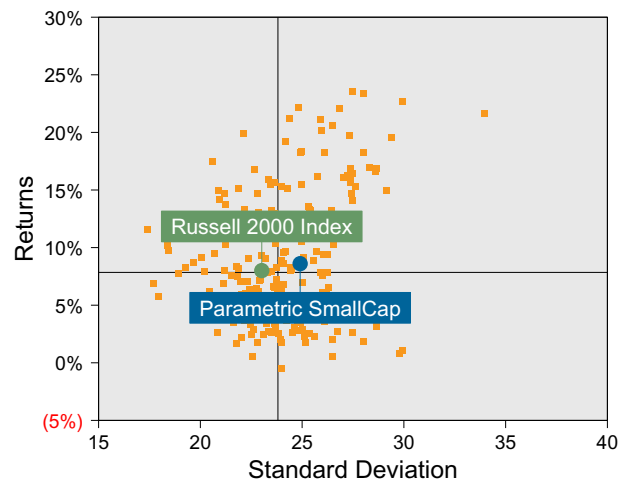
## Performance vs Callan Small Capitalization (Gross)



## Relative Return vs Russell 2000 Index



## Callan Small Capitalization (Gross) Annualized Five Year Risk vs Return



# International Equity

## Period Ended September 30, 2020

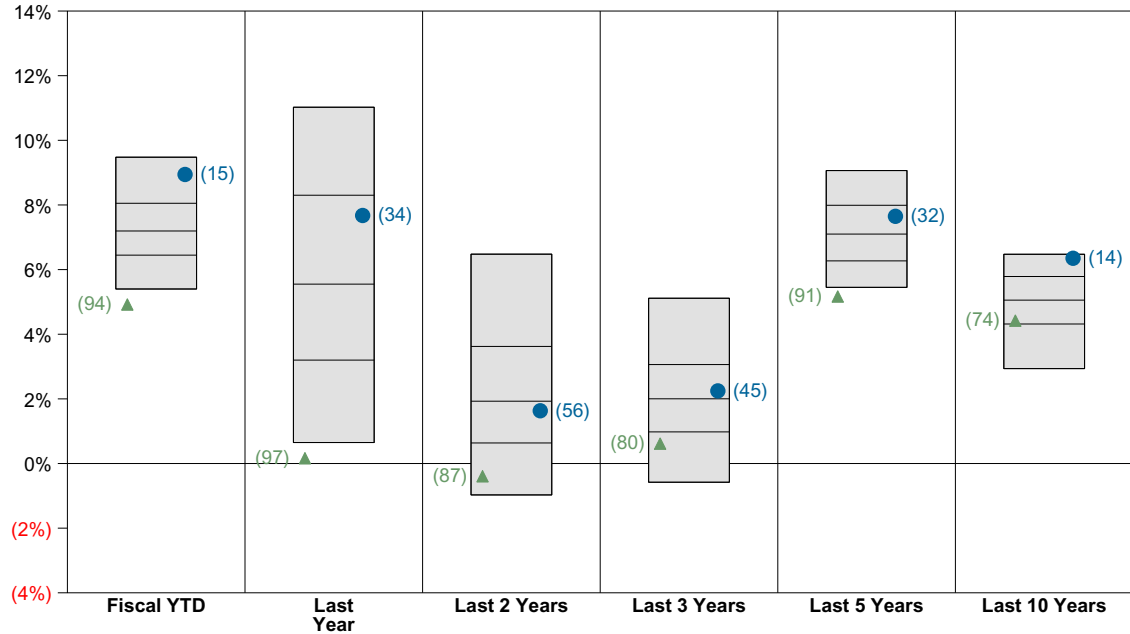
### Quarterly Summary and Highlights

- International Equity's portfolio posted a 8.94% return for the quarter placing it in the 15 percentile of the Public Fund - International Equity group for the quarter and in the 34 percentile for the last year.
- International Equity's portfolio outperformed the International Equity Target by 4.02% for the quarter and outperformed the International Equity Target for the year by 7.51%.

### Quarterly Asset Growth

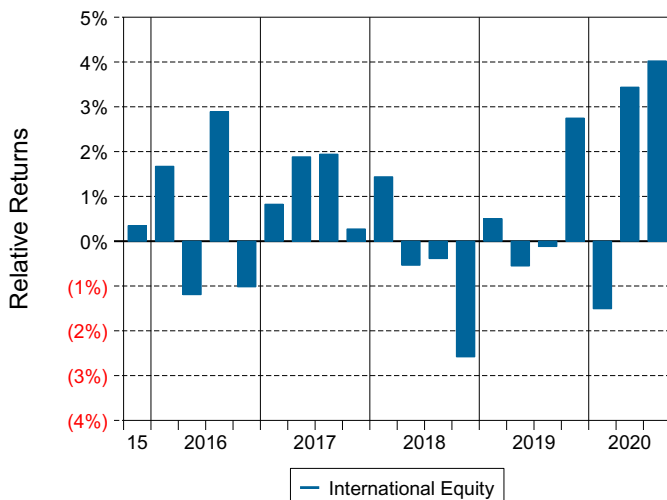
Beginning Market Value	\$179,663,125
Net New Investment	\$-11,122,913
Investment Gains/(Losses)	\$16,185,200
Ending Market Value	\$184,725,412

### Performance vs Public Fund - International Equity (Gross)

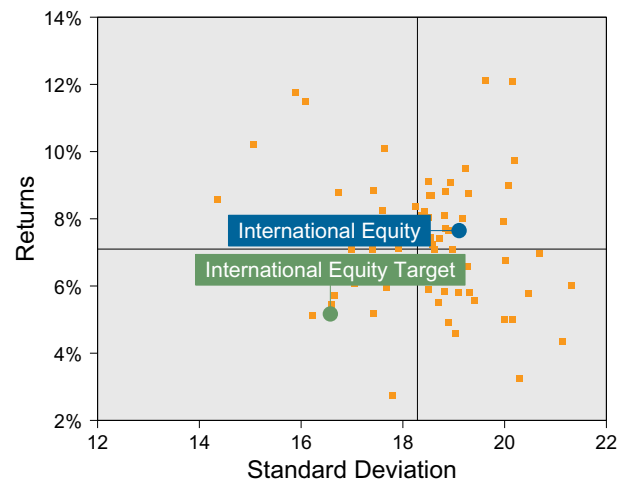


10th Percentile	9.48	11.02	6.48	5.11	9.06	6.47
25th Percentile	8.05	8.30	3.62	3.06	7.99	5.79
Median	7.19	5.55	1.93	2.00	7.10	5.06
75th Percentile	6.45	3.20	0.64	0.98	6.27	4.32
90th Percentile	5.40	0.65	(0.97)	(0.58)	5.45	2.94
<b>International Equity</b>	● 8.94	7.67	1.63	2.25	7.65	6.35
International Equity Target	▲ 4.92	0.16	(0.39)	0.62	5.17	4.42

### Relative Return vs International Equity Target



### Public Fund - International Equity (Gross) Annualized Five Year Risk vs Return



# DFA Intl Small Cap Value Period Ended September 30, 2020

## Investment Philosophy

The International Small Cap Value Portfolio invests in the stocks of small, non-US developed markets companies that Dimensional believes to be value stocks at the time of purchase. Specifically, it looks at companies that fall within the smallest 8-10% of each country's market capitalization, and who's shares have a high book value in relation to their market value (BtM). It does not invest in emerging markets.

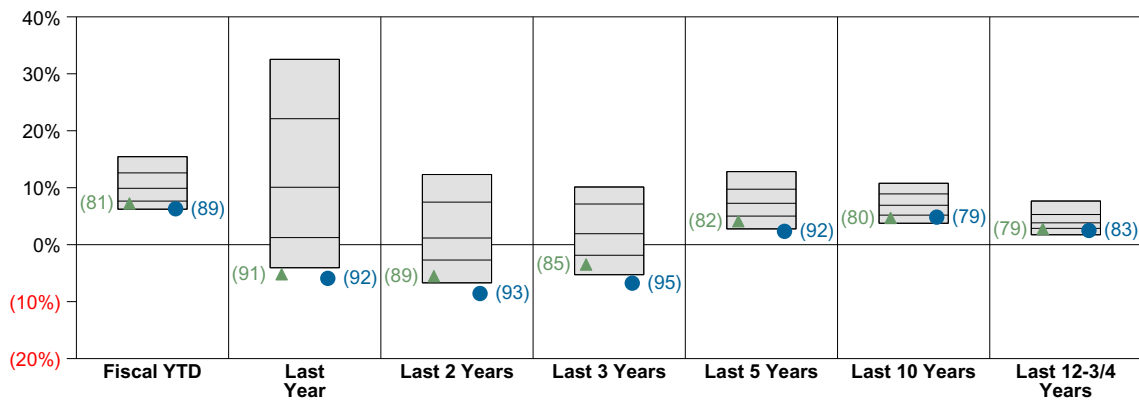
## Quarterly Summary and Highlights

- DFA Intl Small Cap Value's portfolio posted a 6.30% return for the quarter placing it in the 89 percentile of the Callan International Small Cap Mut Funds group for the quarter and in the 92 percentile for the last year.
- DFA Intl Small Cap Value's portfolio underperformed the World ex US SC Value by 0.94% for the quarter and underperformed the World ex US SC Value for the year by 0.73%.

## Quarterly Asset Growth

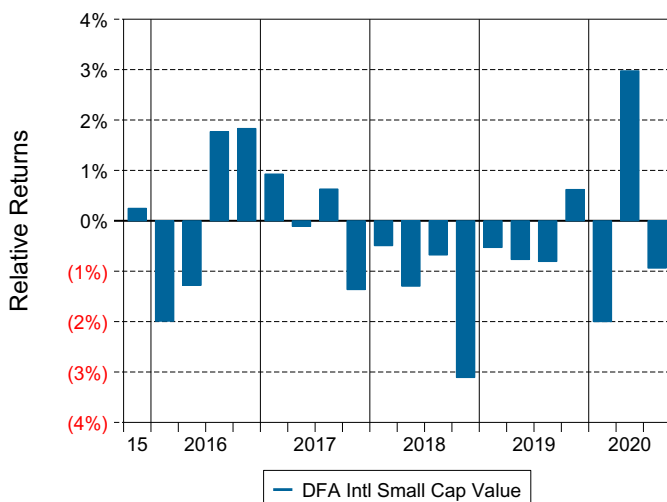
Beginning Market Value	\$17,713,017
Net New Investment	\$0
Investment Gains/(Losses)	\$1,115,881
Ending Market Value	\$18,828,898

## Performance vs Callan International Small Cap Mut Funds (Net)

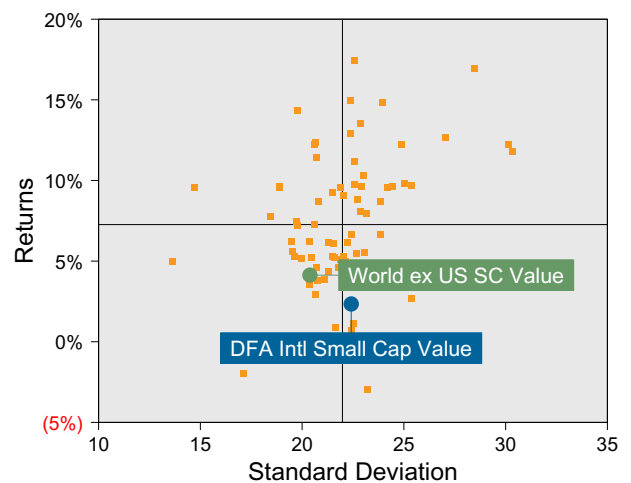


	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 12-3/4 Years
10th Percentile	15.45	32.54	12.32	10.13	12.83	10.78	7.67
25th Percentile	12.60	22.12	7.47	7.14	9.74	8.91	5.29
Median	9.90	10.08	1.17	1.92	7.27	6.92	3.84
75th Percentile	7.65	1.24	(2.70)	(1.86)	5.02	5.19	2.86
90th Percentile	6.23	(4.05)	(6.70)	(5.27)	2.77	3.76	1.74
<b>DFA Intl Small Cap Value</b>	6.30	(5.91)	(8.58)	(6.75)	2.34	4.83	2.49
World ex US SC Value	7.24	(5.19)	(5.54)	(3.48)	4.13	4.70	2.78

## Relative Return vs World ex US SC Value



## Callan International Small Cap Mut Funds (Net) Annualized Five Year Risk vs Return



# LSV Intl Value

## Period Ended September 30, 2020

### Investment Philosophy

The objective of LSV Asset Management's International Large Cap Value strategy is to outperform the MSCI EAFE Index by at least 250 basis points (gross of fees) per annum over an annualized 3-5 year period with a tracking error of approximately 5-6%. Their stock selection process is a quantitative approach that ranks a broad universe of stocks on a combination of value and momentum factors and seeks to invest approximately 150 stocks in the most attractive securities possible within strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio is broadly diversified across industry groups and fully invested. LSV weights countries at a neutral weight relative to the benchmark country weights. 50% of the portfolio is US dollar hedged. **\*MSCI EAFE through 9/30/2000; 50% Hedged EAFE through 3/31/2011 and MSCI EAFE again thereafter.**

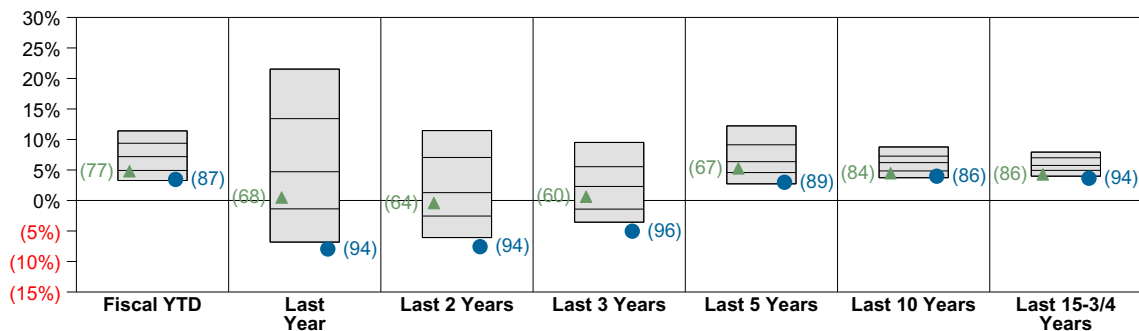
### Quarterly Summary and Highlights

- LSV Intl Value's portfolio posted a 3.45% return for the quarter placing it in the 87 percentile of the Callan Non-US Equity group for the quarter and in the 94 percentile for the last year.
- LSV Intl Value's portfolio underperformed the Benchmark by 1.35% for the quarter and underperformed the Benchmark for the year by 8.45%.

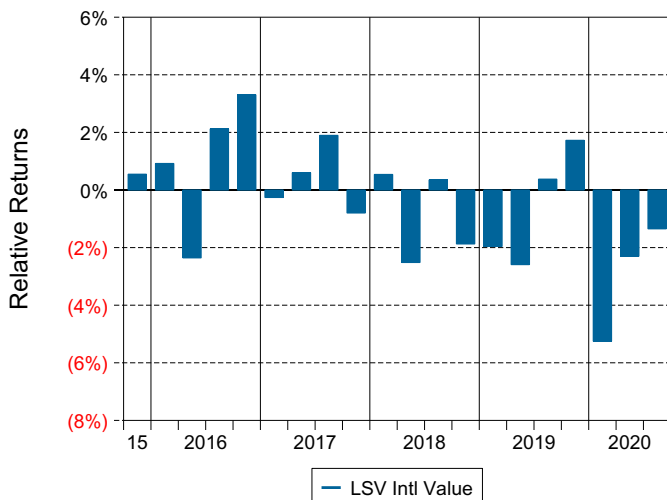
### Quarterly Asset Growth

Beginning Market Value	\$58,847,743
Net New Investment	\$-4,054,949
Investment Gains/(Losses)	\$2,068,341
Ending Market Value	\$56,861,135

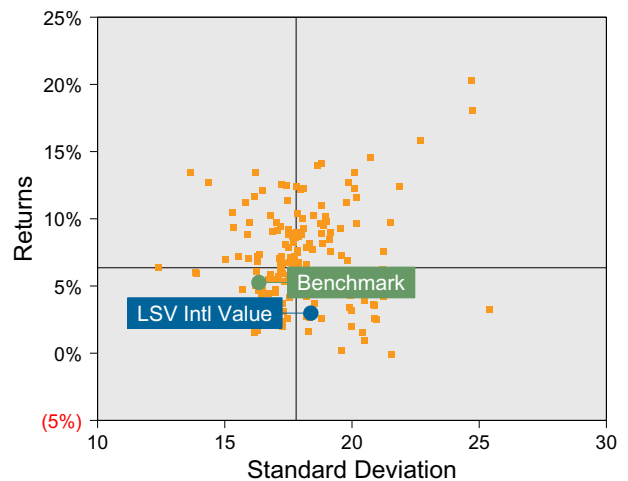
### Performance vs Callan Non-US Equity (Gross)



### Relative Return vs Benchmark



### Callan Non-US Equity (Gross) Annualized Five Year Risk vs Return



# Vanguard Intl Explorer Fund

## Period Ended September 30, 2020

### Investment Philosophy

Vanguard International Explorer Fund invests primarily in the equity securities of small-capitalization companies located outside the United States that the advisor believes offer the potential for long-term capital appreciation. The advisor considers, among other things, whether a company is likely to have above-average earnings growth, whether the company's securities are attractively valued, and whether the company has any proprietary advantages.

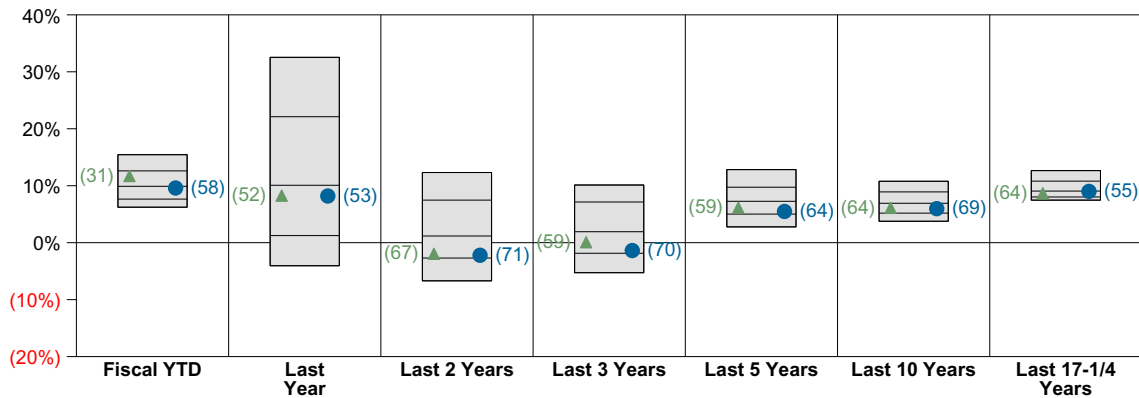
### Quarterly Summary and Highlights

- Vanguard Intl Explorer Fund's portfolio posted a 9.60% return for the quarter placing it in the 58 percentile of the Callan International Small Cap Mut Funds group for the quarter and in the 53 percentile for the last year.
- Vanguard Intl Explorer Fund's portfolio underperformed the S&P BMI EPAC <\$2 B by 2.12% for the quarter and underperformed the S&P BMI EPAC <\$2 B for the year by 0.08%.

### Quarterly Asset Growth

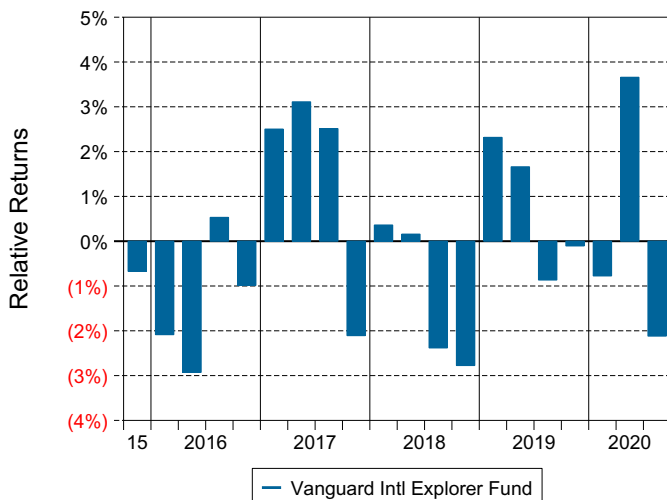
Beginning Market Value	\$15,902,083
Net New Investment	\$0
Investment Gains/(Losses)	\$1,525,957
Ending Market Value	\$17,428,040

### Performance vs Callan International Small Cap Mut Funds (Net)

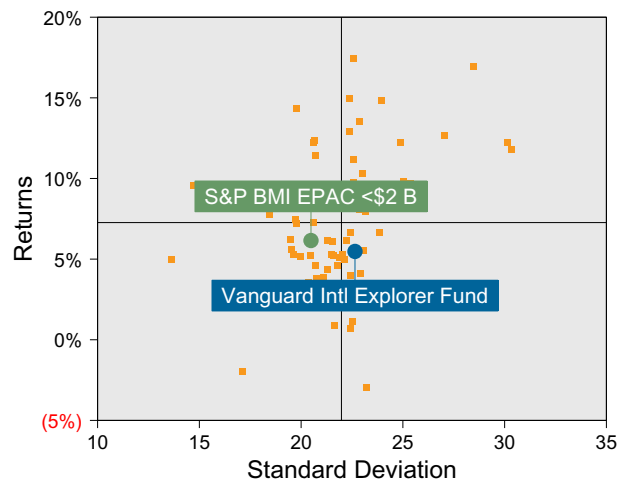


	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 17-1/4 Years
10th Percentile	15.45	32.54	12.32	10.13	12.83	10.78	12.66
25th Percentile	12.60	22.12	7.47	7.14	9.74	8.91	10.80
Median	9.90	10.08	1.17	1.92	7.27	6.92	9.06
75th Percentile	7.65	1.24	(2.70)	(1.86)	5.02	5.19	8.03
90th Percentile	6.23	(4.05)	(6.70)	(5.27)	2.77	3.76	7.47
<b>Vanguard Intl Explorer Fund</b>	● 9.60	8.19	(2.21)	(1.38)	5.48	5.97	9.00
S&P BMI EPAC <\$2 B	▲ 11.71	8.27	(1.94)	0.09	6.15	6.12	8.67

### Relative Return vs S&P BMI EPAC <\$2 B



### Callan International Small Cap Mut Funds (Net) Annualized Five Year Risk vs Return



# William Blair

## Period Ended September 30, 2020

### Investment Philosophy

One of the basic investment tenets of William Blair & Company has been its focus on quality growth companies. They believe that investing in quality growth companies will generate above average results with generally less risk than the market. This opportunity exists because they believe the market underestimates the durability and rate of growth in companies that have the following characteristics: strong management with a unique vision, competitive advantages that prolong the duration and size of earnings growth, and conservative financing. Internationally, they believe that this philosophy can be combined with strategic flexibility in managing geographic exposure, capitalization, sector emphasis, and relative growth and valuation at the portfolio level in order to provide an appropriate degree of adaptability to cyclical conditions.

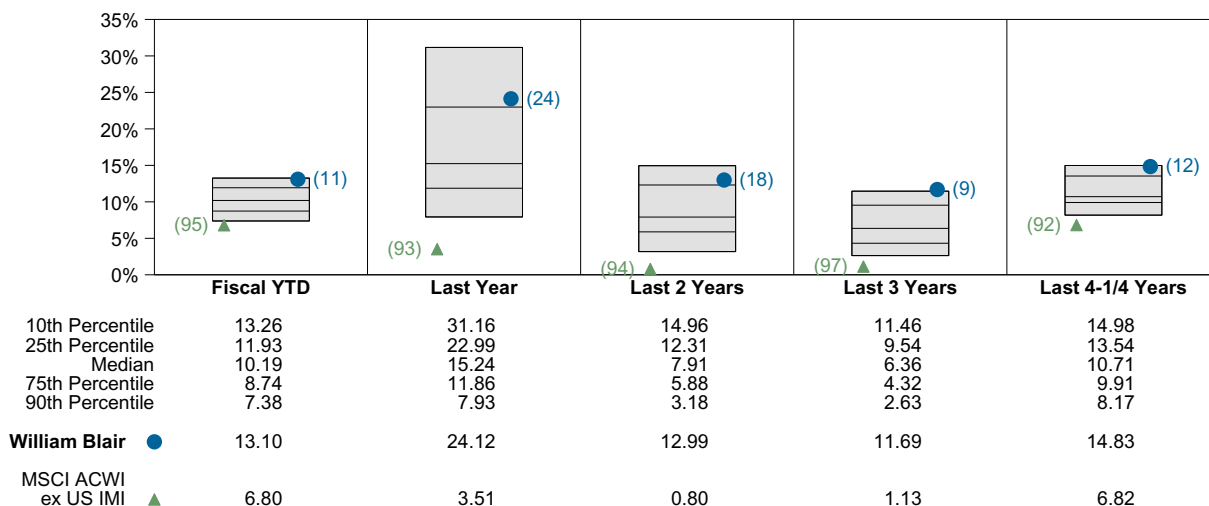
### Quarterly Summary and Highlights

- William Blair's portfolio posted a 13.10% return for the quarter placing it in the 11 percentile of the Callan Non-US All Country Growth Equity group for the quarter and in the 24 percentile for the last year.
- William Blair's portfolio outperformed the MSCI ACWI ex US IMI by 6.30% for the quarter and outperformed the MSCI ACWI ex US IMI for the year by 20.61%.

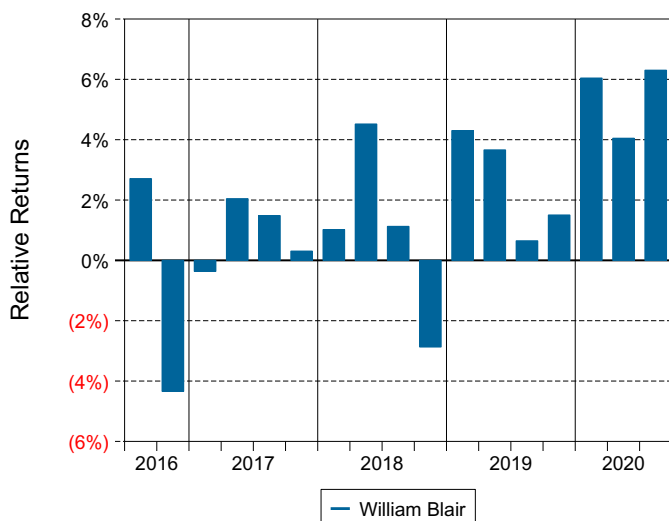
### Quarterly Asset Growth

Beginning Market Value	\$87,199,134
Net New Investment	\$-7,066,646
Investment Gains/(Losses)	\$11,474,851
Ending Market Value	\$91,607,339

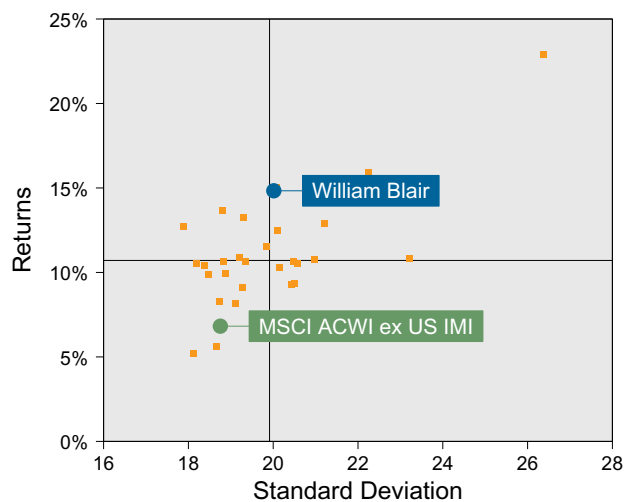
### Performance vs Callan Non-US All Country Growth Equity (Gross)



### Relative Return vs MSCI ACWI ex US IMI



### Callan Non-US All Country Growth Equity (Gross) Annualized Four and One-Quarter Year Risk vs Return





# Domestic Fixed Income Period Ended September 30, 2020

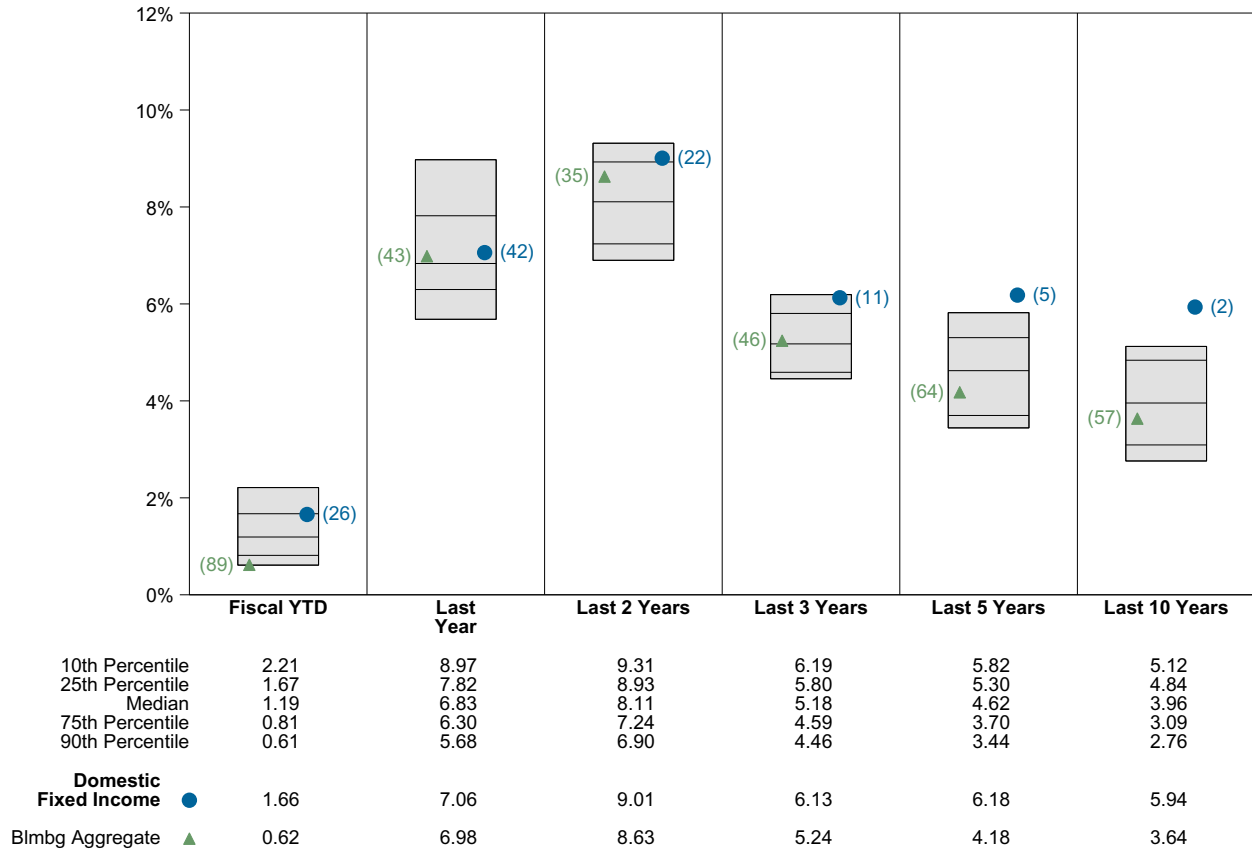
## Quarterly Summary and Highlights

- Domestic Fixed Income's portfolio posted a 1.66% return for the quarter placing it in the 26 percentile of the Public Fund - Domestic Fixed group for the quarter and in the 42 percentile for the last year.
- Domestic Fixed Income's portfolio outperformed the Blmbg Aggregate by 1.04% for the quarter and outperformed the Blmbg Aggregate for the year by 0.07%.

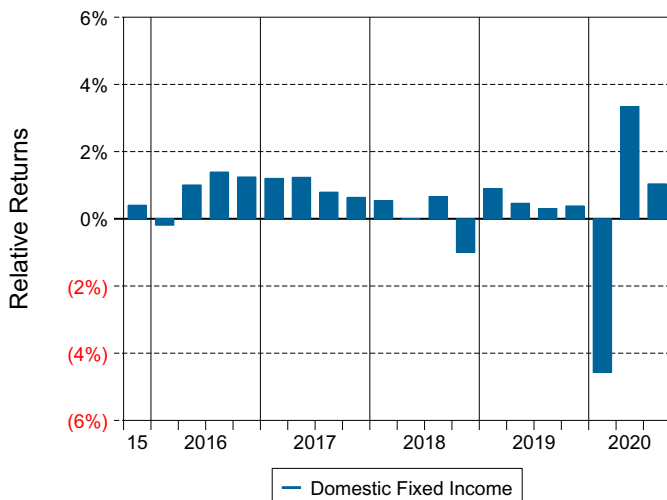
## Quarterly Asset Growth

Beginning Market Value	\$1,334,281,419
Net New Investment	\$13,206,308
Investment Gains/(Losses)	\$22,123,541
Ending Market Value	\$1,369,611,269

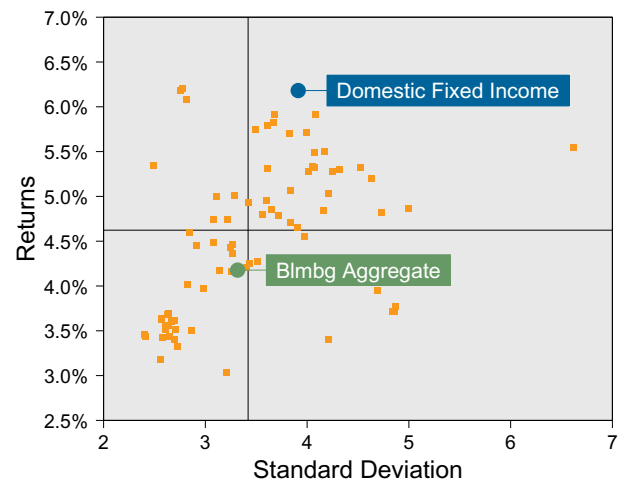
## Performance vs Public Fund - Domestic Fixed (Gross)



## Relative Return vs Blmbg Aggregate



## Public Fund - Domestic Fixed (Gross) Annualized Five Year Risk vs Return



# Declaration Total Return Period Ended September 30, 2020

## Investment Philosophy

The Fund's portfolio holdings consist primarily of RMBS issued by private sector companies (Non-Agency RMBS) and government agencies (Agency MBS) and CMBS issued by private sector companies. Agency MBS includes securities issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Government National Mortgage Association (Ginnie Mae). Portfolio holdings may range from short tenure senior classes to stressed issues or subordinated securities with substantial risk of non-payment and correspondingly higher yields. Smaller portfolio allocations may include consumer asset-backed securities (ABS), or other structured credit securities and corporate bonds. As a diversification strategy and a potential hedge to credit risk, the Fund may invest in securities which tend to benefit from slow mortgage prepayments and economic growth, such as interest only (IO) MBS.

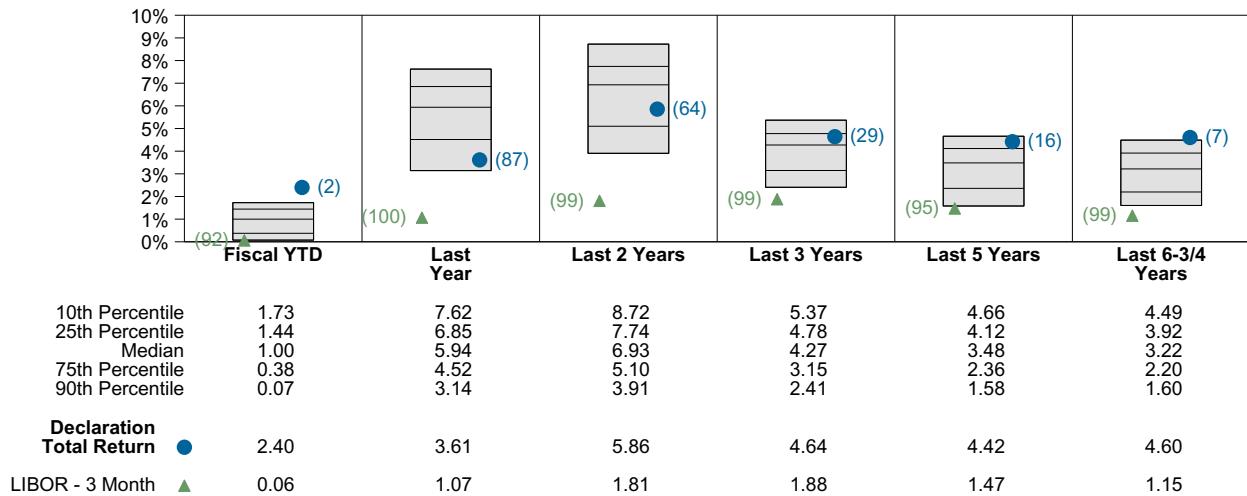
## Quarterly Summary and Highlights

- Declaration Total Return's portfolio posted a 2.40% return for the quarter placing it in the 2 percentile of the Callan Intermediate Fixed Inc Mut Funds group for the quarter and in the 87 percentile for the last year.
- Declaration Total Return's portfolio outperformed the LIBOR - 3 Month by 2.34% for the quarter and outperformed the LIBOR - 3 Month for the year by 2.55%.

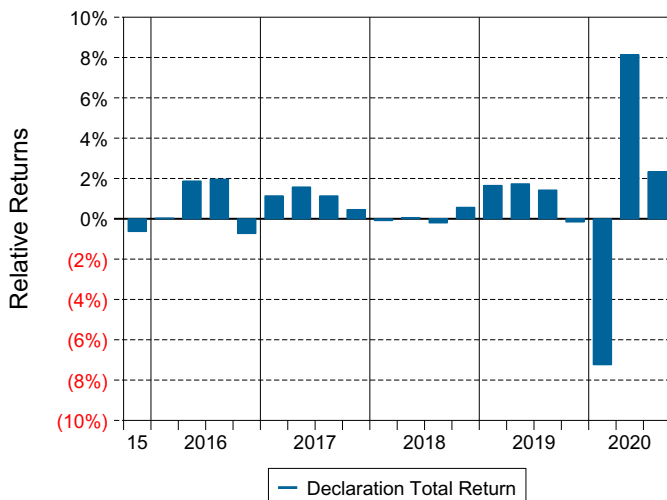
## Quarterly Asset Growth

Beginning Market Value	\$94,660,256
Net New Investment	-\$54,826
Investment Gains/(Losses)	\$2,269,000
Ending Market Value	\$96,874,430

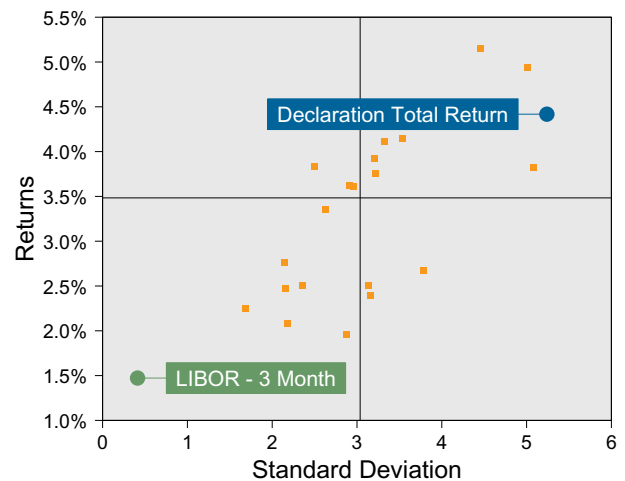
## Performance vs Callan Intermediate Fixed Inc Mut Funds (Net)



## Relative Return vs LIBOR - 3 Month



## Callan Intermediate Fixed Inc Mut Funds (Net) Annualized Five Year Risk vs Return



# PIMCO Core Plus Constrained Period Ended September 30, 2020

## Investment Philosophy

PIMCO's investment process utilizes both "top-down" and "bottom-up" strategies. Top-down strategies focus on duration, yield curve positioning, volatility, and sector rotation. These strategies are deployed from a macro view of the portfolio driven by their secular outlook of the forces likely to influence the economy and financial markets over the next three to five years and their cyclical views of two- to four-quarter trends. Implementation in portfolios is effected by selecting securities that achieve the designated objectives. Bottom-up strategies drive their security selection process and facilitate the identification and analysis of undervalued securities.

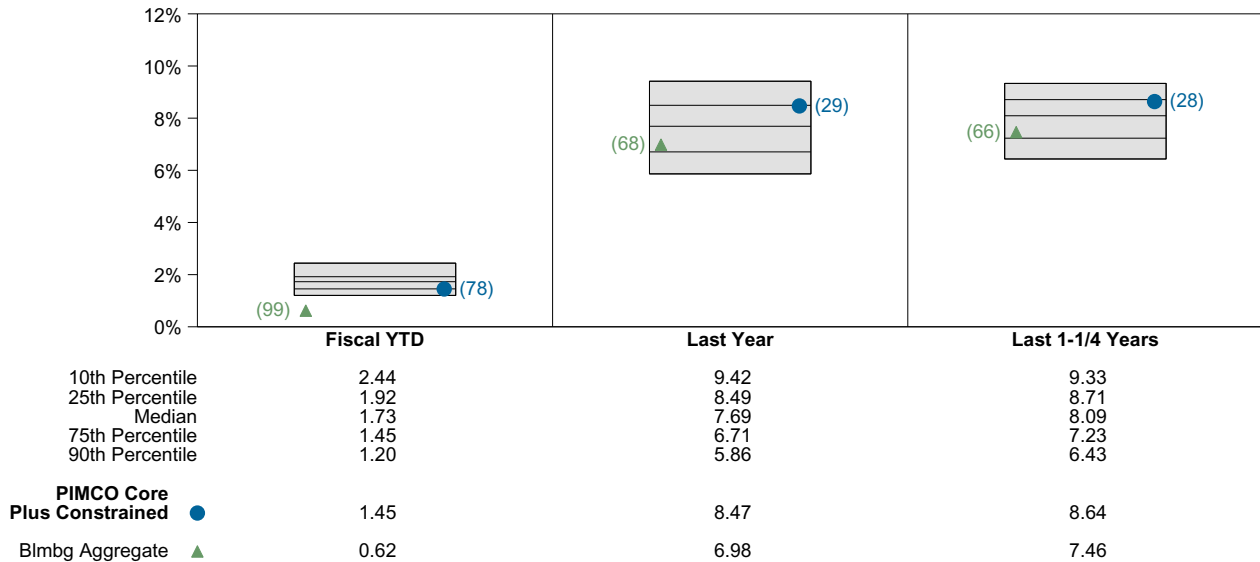
## Quarterly Summary and Highlights

- PIMCO Core Plus Constrained's portfolio posted a 1.45% return for the quarter placing it in the 78 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 29 percentile for the last year.
- PIMCO Core Plus Constrained's portfolio outperformed the Blmbg Aggregate by 0.83% for the quarter and outperformed the Blmbg Aggregate for the year by 1.48%.

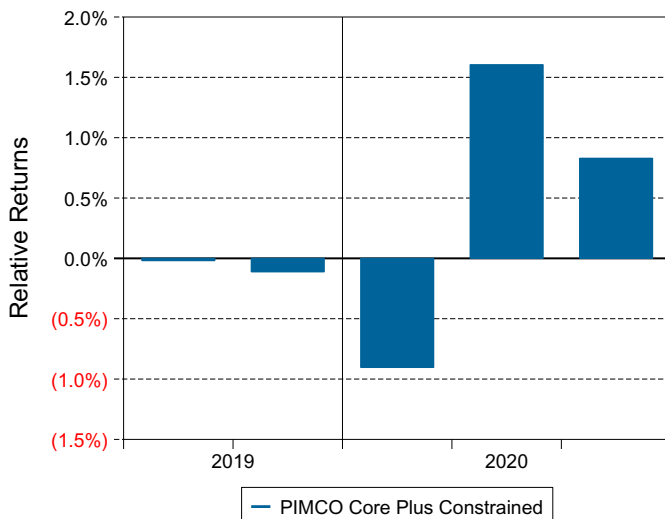
## Quarterly Asset Growth

Beginning Market Value	\$180,688,607
Net New Investment	\$9,799,037
Investment Gains/(Losses)	\$2,614,282
Ending Market Value	\$193,101,926

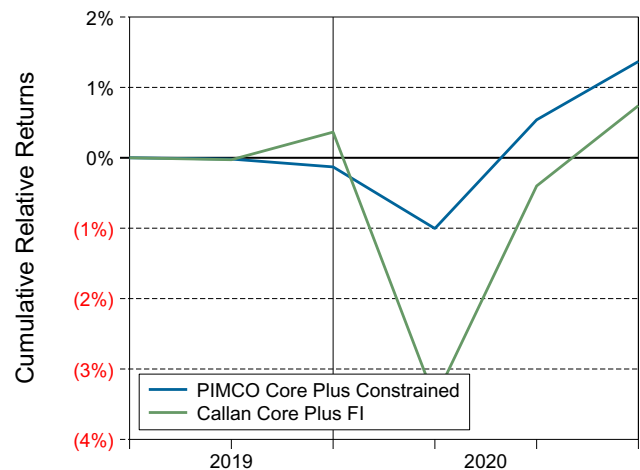
## Performance vs Callan Core Plus Fixed Income (Gross)



## Relative Return vs Blmbg Aggregate



## Cumulative Returns vs Blmbg Aggregate



# PIMCO DiSCO II

## Period Ended September 30, 2020

### Investment Philosophy

The PIMCO Distressed Senior Credit Opportunities Fund is an opportunistic private-equity style Fund which seeks to provide investors enhanced returns principally through long-biased investments in undervalued senior and super senior structured credit securities that are expected to produce attractive levels of current income and that may also appreciate in value over the long term. The fund will look to capitalize on forced sales by liquidity constrained investors.

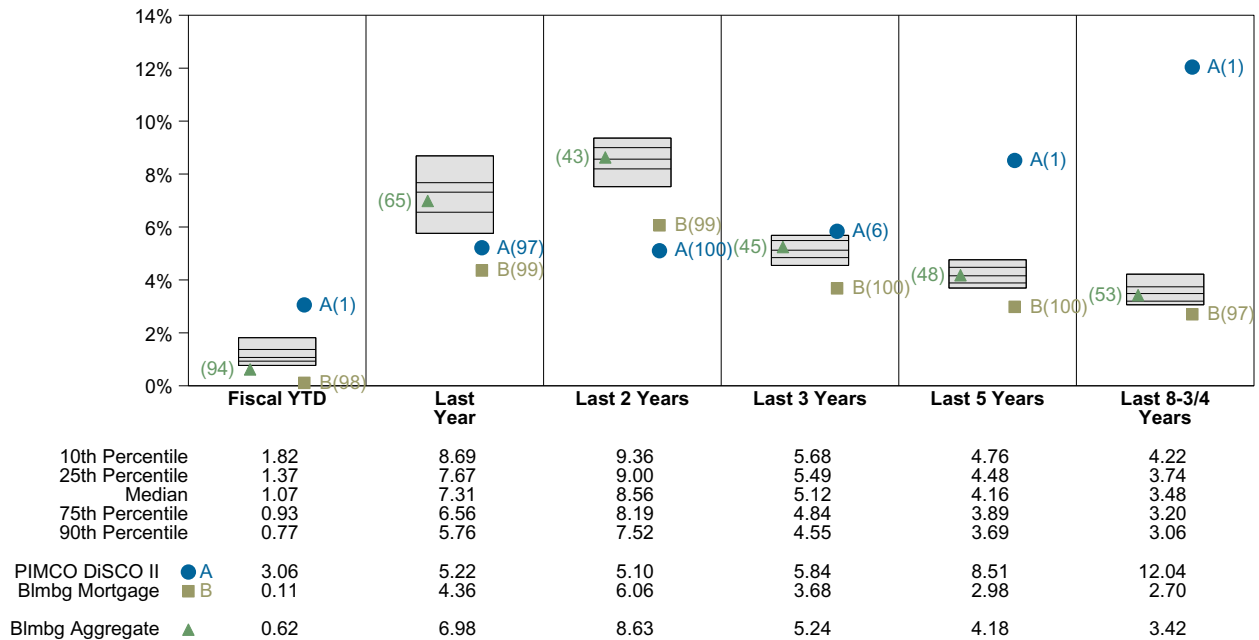
### Quarterly Summary and Highlights

- PIMCO DiSCO II's portfolio posted a 3.06% return for the quarter placing it in the 1 percentile of the Callan Core Bond Mutual Funds group for the quarter and in the 97 percentile for the last year.
- PIMCO DiSCO II's portfolio outperformed the Blmbg Aggregate by 2.44% for the quarter and underperformed the Blmbg Aggregate for the year by 1.77%.

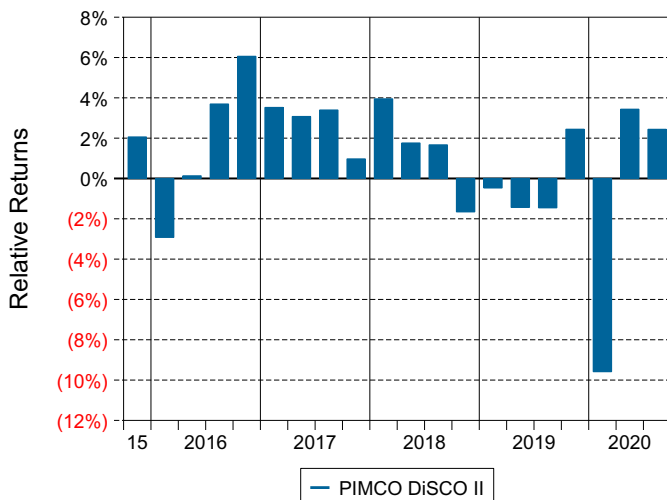
### Quarterly Asset Growth

Beginning Market Value	\$44,416,146
Net New Investment	\$0
Investment Gains/(Losses)	\$1,357,321
Ending Market Value	\$45,773,467

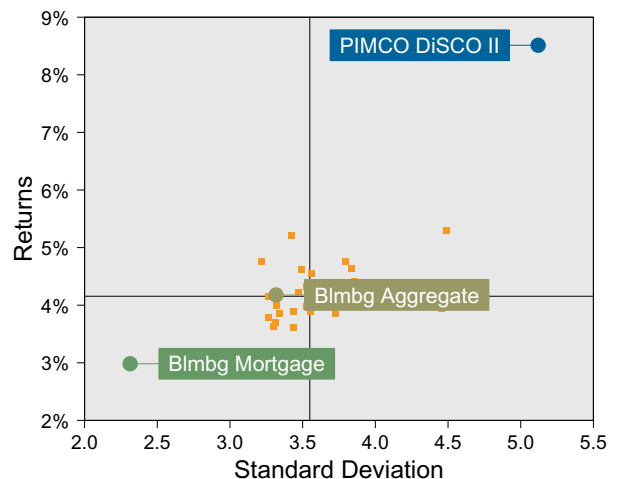
### Performance vs Callan Core Bond Mutual Funds (Net)



### Relative Return vs Blmbg Aggregate



### Callan Core Bond Mutual Funds (Net) Annualized Five Year Risk vs Return



# PIMCO Bravo II Fund

## Period Ended September 30, 2020

### Investment Philosophy

The BRAVO II Fund is a private equity style fund targeting an annualized IRR of 15-20% and multiple of 1.8-2x, net of fees and carried interest with an initial 5-year term. The fund will seek to capitalize on non-economic asset sale decisions by global financial institutions. The fund will have the flexibility to acquire attractively discounted, less liquid loans, structured credit and other assets tied to residential or commercial real estate markets in the U.S. and Europe.

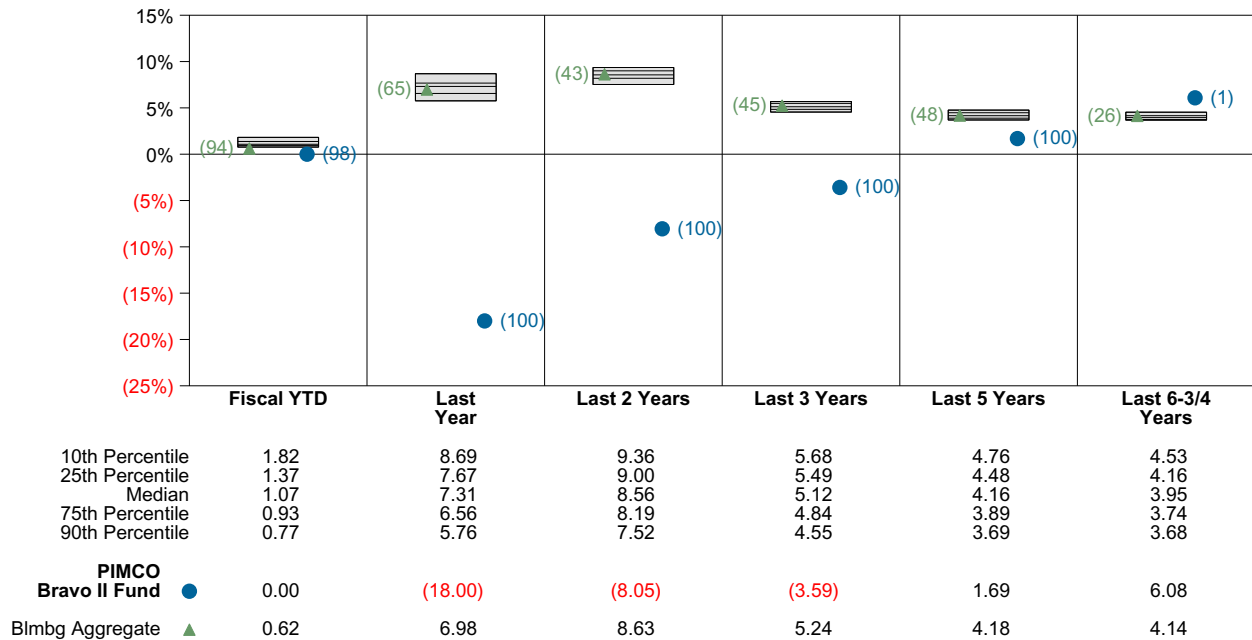
### Quarterly Summary and Highlights

- PIMCO Bravo II Fund's portfolio posted a 0.00% return for the quarter placing it in the 98 percentile of the Callan Core Bond Mutual Funds group for the quarter and in the 100 percentile for the last year.
- PIMCO Bravo II Fund's portfolio underperformed the Blmbg Aggregate by 0.62% for the quarter and underperformed the Blmbg Aggregate for the year by 24.99%.

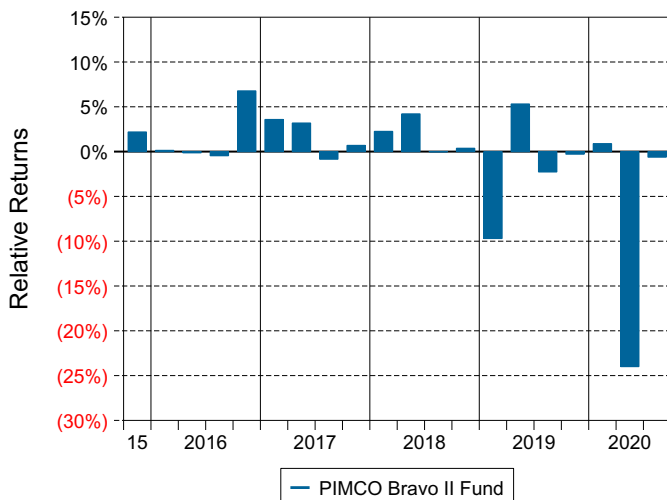
### Quarterly Asset Growth

Beginning Market Value	\$9,153,359
Net New Investment	\$-1,185,472
Investment Gains/(Losses)	\$1
Ending Market Value	\$7,967,888

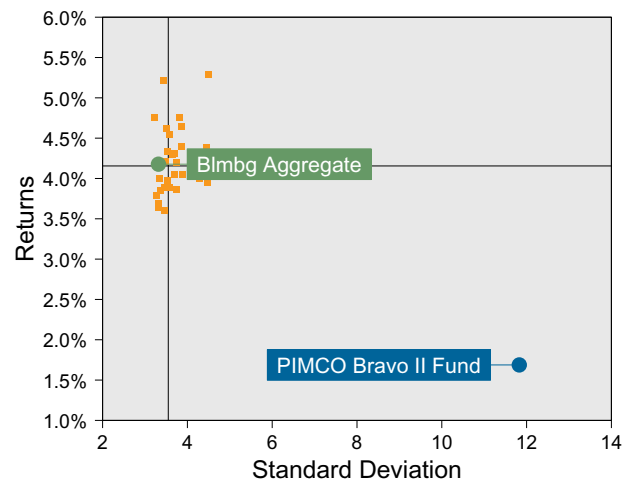
### Performance vs Callan Core Bond Mutual Funds (Net)



### Relative Return vs Blmbg Aggregate



### Callan Core Bond Mutual Funds (Net) Annualized Five Year Risk vs Return



# Prudential Core Plus

## Period Ended September 30, 2020

### Investment Philosophy

PGIM Fixed Income's Core Plus Strategy is an actively-managed strategy that seeks +150 bps over the Bloomberg Barclays U.S. Aggregate Bond Index or similar benchmark annualized over a market cycle (three to five years.) The Strategy seeks about half of its excess return from active sector allocation and up to one-third each from subsector/security selection and duration/yield curve/currencies, depending on market opportunities.

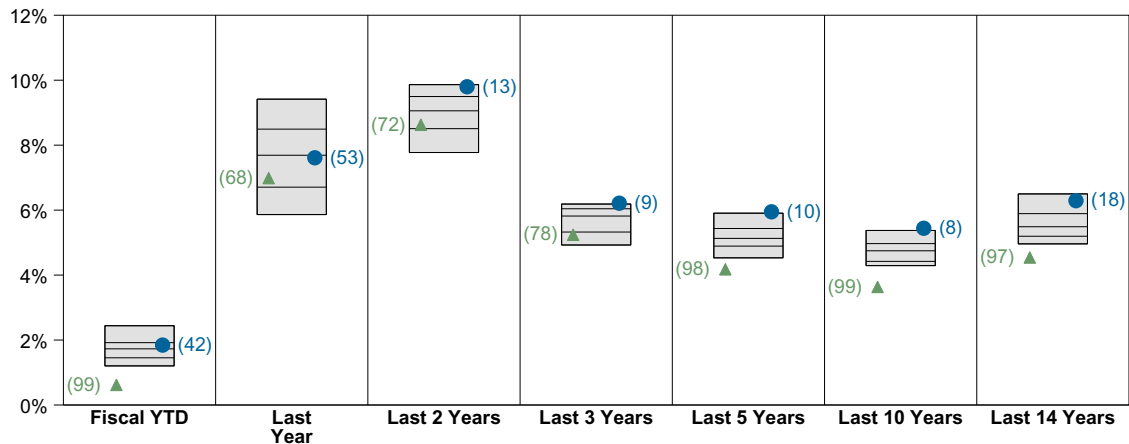
### Quarterly Summary and Highlights

- Prudential Core Plus's portfolio posted a 1.84% return for the quarter placing it in the 42 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 53 percentile for the last year.
- Prudential Core Plus's portfolio outperformed the Blmbg Aggregate by 1.22% for the quarter and outperformed the Blmbg Aggregate for the year by 0.63%.

### Quarterly Asset Growth

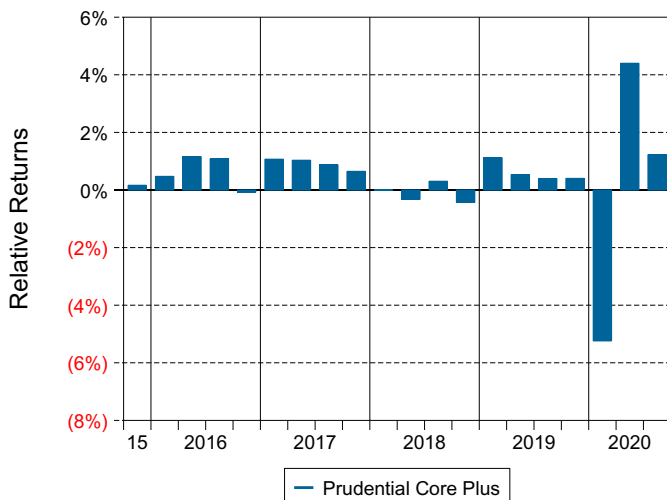
Beginning Market Value	\$350,368,246
Net New Investment	\$4,813,500
Investment Gains/(Losses)	\$6,459,663
Ending Market Value	\$361,641,408

### Performance vs Callan Core Plus Fixed Income (Gross)

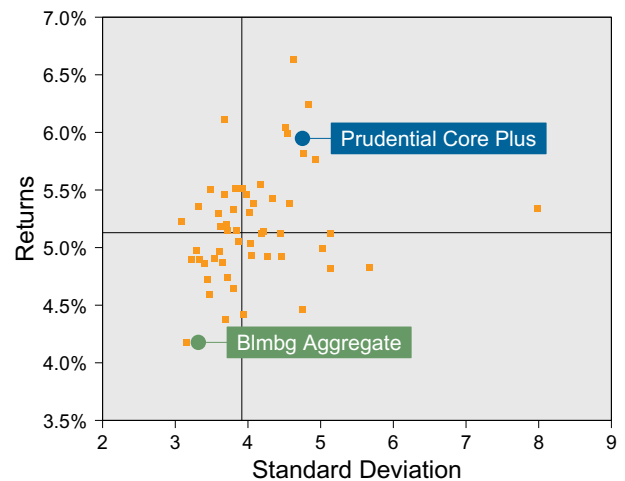


10th Percentile	2.44	9.42	9.86	6.19	5.91	5.37	6.50
25th Percentile	1.92	8.49	9.50	6.04	5.43	4.97	5.89
Median	1.73	7.69	9.06	5.82	5.13	4.75	5.49
75th Percentile	1.45	6.71	8.51	5.33	4.89	4.42	5.20
90th Percentile	1.20	5.86	7.77	4.93	4.53	4.29	4.96
<b>Prudential Core Plus</b> ●	1.84	7.61	9.80	6.21	5.95	5.44	6.29
Blmbg Aggregate ▲	0.62	6.98	8.63	5.24	4.18	3.64	4.54

### Relative Return vs Blmbg Aggregate



### Callan Core Plus Fixed Income (Gross) Annualized Five Year Risk vs Return



# SSgA US Govt Cr Bd Index Period Ended September 30, 2020

## Investment Philosophy

The Fund seeks an investment return that approximates as closely as practicable, before expenses, the performance of the Barclays Capital U.S. Government/Credit Bond Index over the long term.

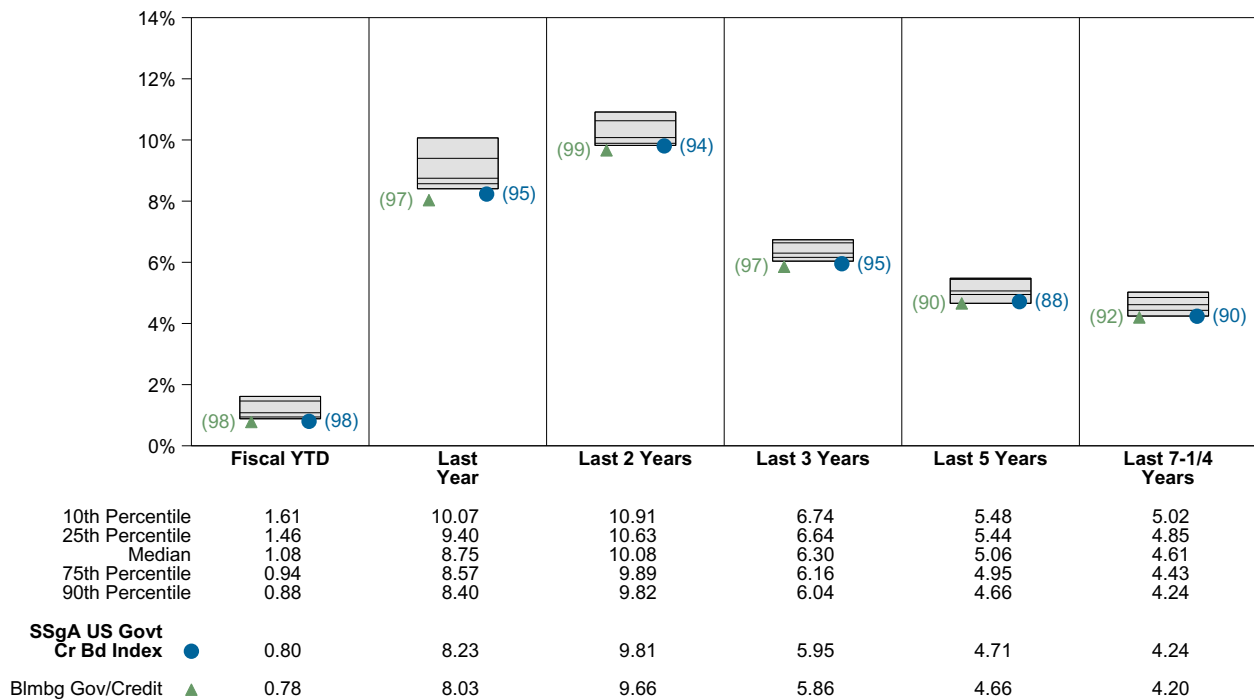
## Quarterly Summary and Highlights

- SSgA US Govt Cr Bd Index's portfolio posted a 0.80% return for the quarter placing it in the 98 percentile of the Callan Government/Credit group for the quarter and in the 95 percentile for the last year.
- SSgA US Govt Cr Bd Index's portfolio outperformed the Blmbg Gov/Credit by 0.02% for the quarter and outperformed the Blmbg Gov/Credit for the year by 0.20%.

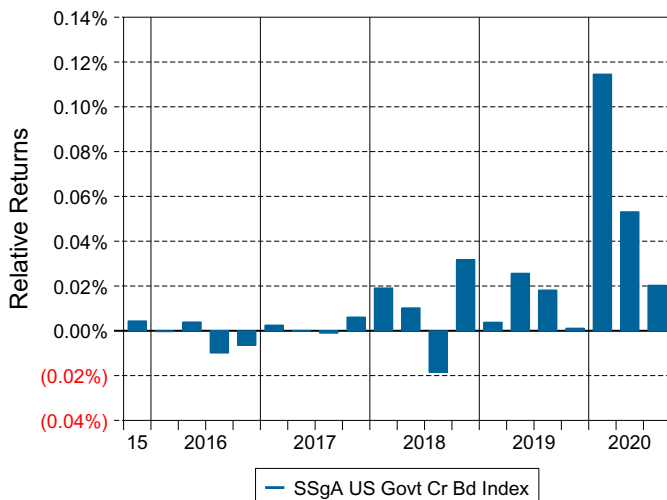
## Quarterly Asset Growth

Beginning Market Value	\$191,048,804
Net New Investment	\$-7,226
Investment Gains/(Losses)	\$1,527,540
Ending Market Value	\$192,569,118

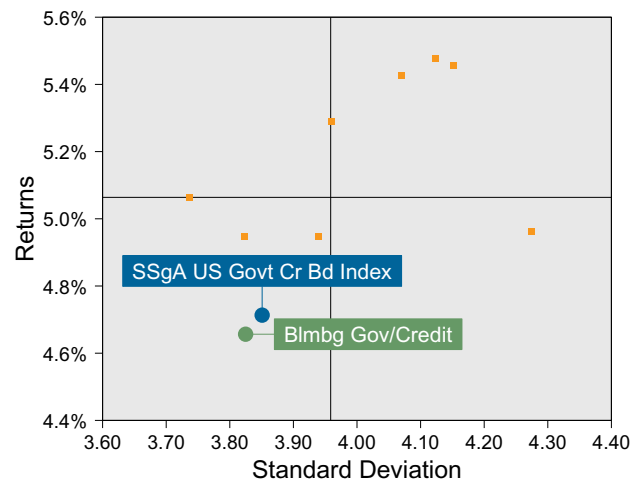
## Performance vs Callan Government/Credit (Gross)



## Relative Return vs Blmbg Gov/Credit



## Callan Government/Credit (Gross) Annualized Five Year Risk vs Return



# Wells Capital

## Period Ended September 30, 2020

### Investment Philosophy

The Medium Quality Credit fixed income strategy is designed to maximize total return from the high-grade corporate bond market while maintaining a strategic allocation to the BBB portion of the high yield market. The investment process for this fund starts with a "top-down" strategy. Security selection is determined by in-depth credit research, holding that in-depth knowledge of industries, companies, and their management teams can help identify credit trends that can lead to investment opportunities. Furthermore, a disciplined relative value framework is applied to help determine the optimal position to invest within an industry and within an individual issuer's capital structure.

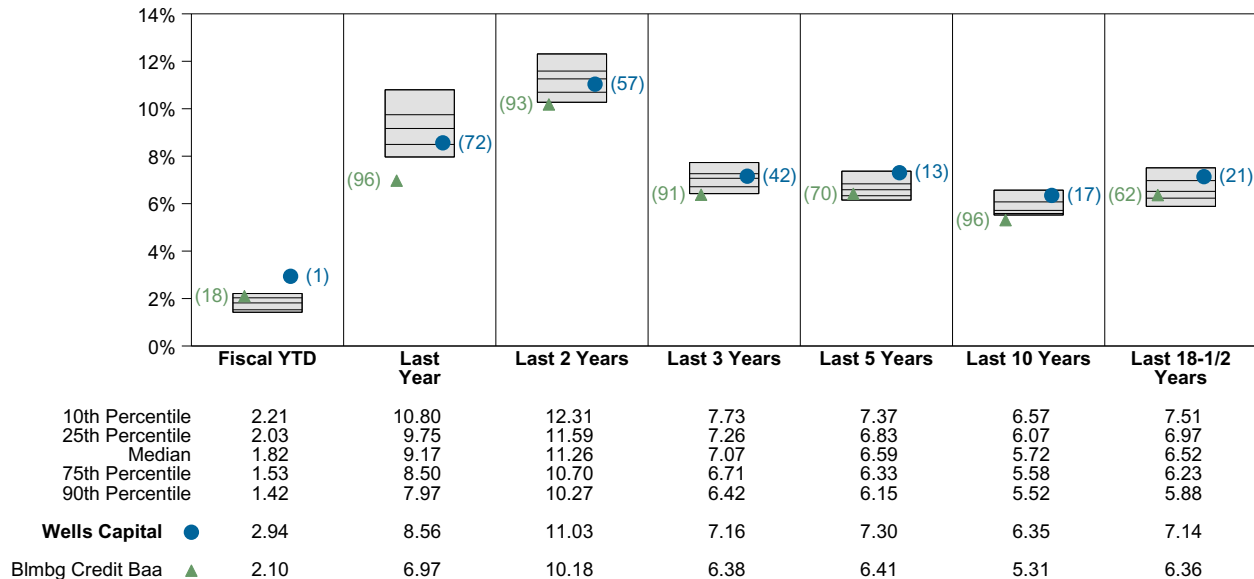
### Quarterly Summary and Highlights

- Wells Capital's portfolio posted a 2.94% return for the quarter placing it in the 1 percentile of the Callan Investment Grade Credit Fixed Inc group for the quarter and in the 72 percentile for the last year.
- Wells Capital's portfolio outperformed the Blmbg Credit Baa by 0.84% for the quarter and outperformed the Blmbg Credit Baa for the year by 1.59%.

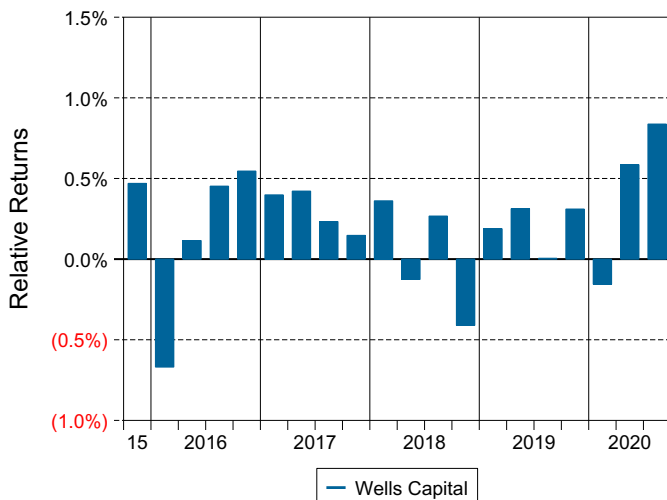
### Quarterly Asset Growth

Beginning Market Value	\$110,665,831
Net New Investment	\$-53,471
Investment Gains/(Losses)	\$3,252,159
Ending Market Value	\$113,864,519

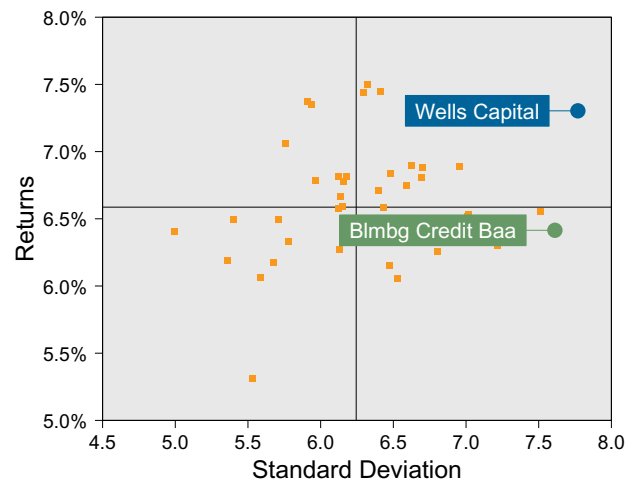
### Performance vs Callan Investment Grade Credit Fixed Inc (Gross)



### Relative Return vs Blmbg Credit Baa



### Callan Investment Grade Credit Fixed Inc (Gross) Annualized Five Year Risk vs Return





# Western Asset Management Company

## Period Ended September 30, 2020

### Investment Philosophy

Western Asset designs this portfolio using all major fixed-income sectors with a bias towards non-Treasuries, especially corporate, mortgage-backed and asset-backed securities. Value can be added through sector rotation, issue selection, duration and term structure weighting.

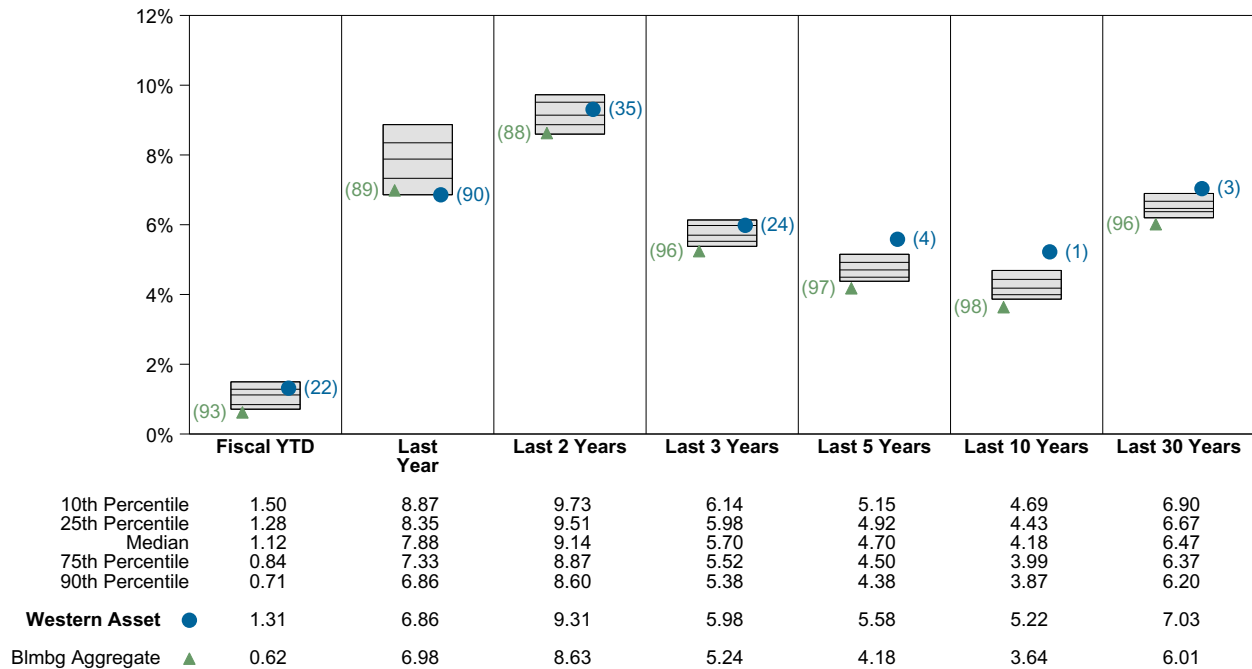
### Quarterly Summary and Highlights

- Western Asset's portfolio posted a 1.31% return for the quarter placing it in the 22 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 90 percentile for the last year.
- Western Asset's portfolio outperformed the Blmbg Aggregate by 0.69% for the quarter and underperformed the Blmbg Aggregate for the year by 0.13%.

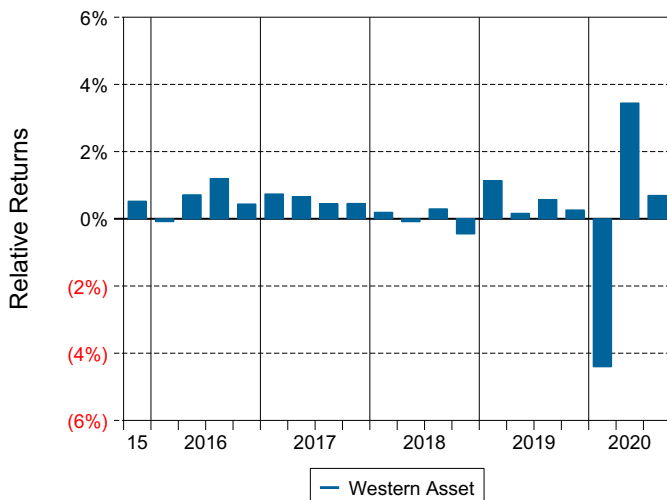
### Quarterly Asset Growth

Beginning Market Value	\$353,278,652
Net New Investment	\$-103,673
Investment Gains/(Losses)	\$4,643,534
Ending Market Value	\$357,818,513

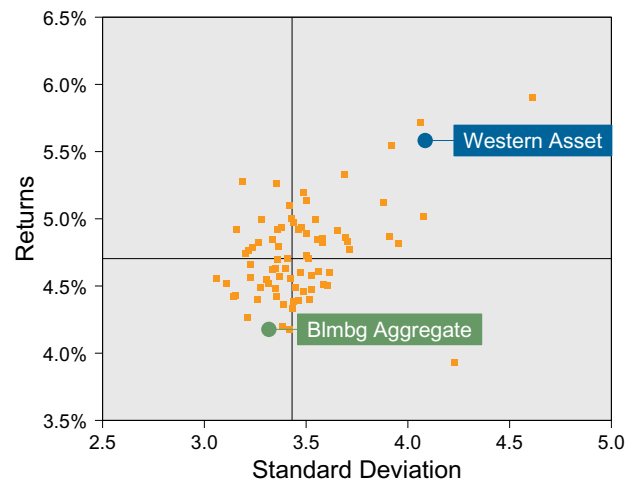
### Performance vs Callan Core Bond Fixed Income (Gross)



### Relative Return vs Blmbg Aggregate



### Callan Core Bond Fixed Income (Gross) Annualized Five Year Risk vs Return



# Real Estate Period Ended September 30, 2020

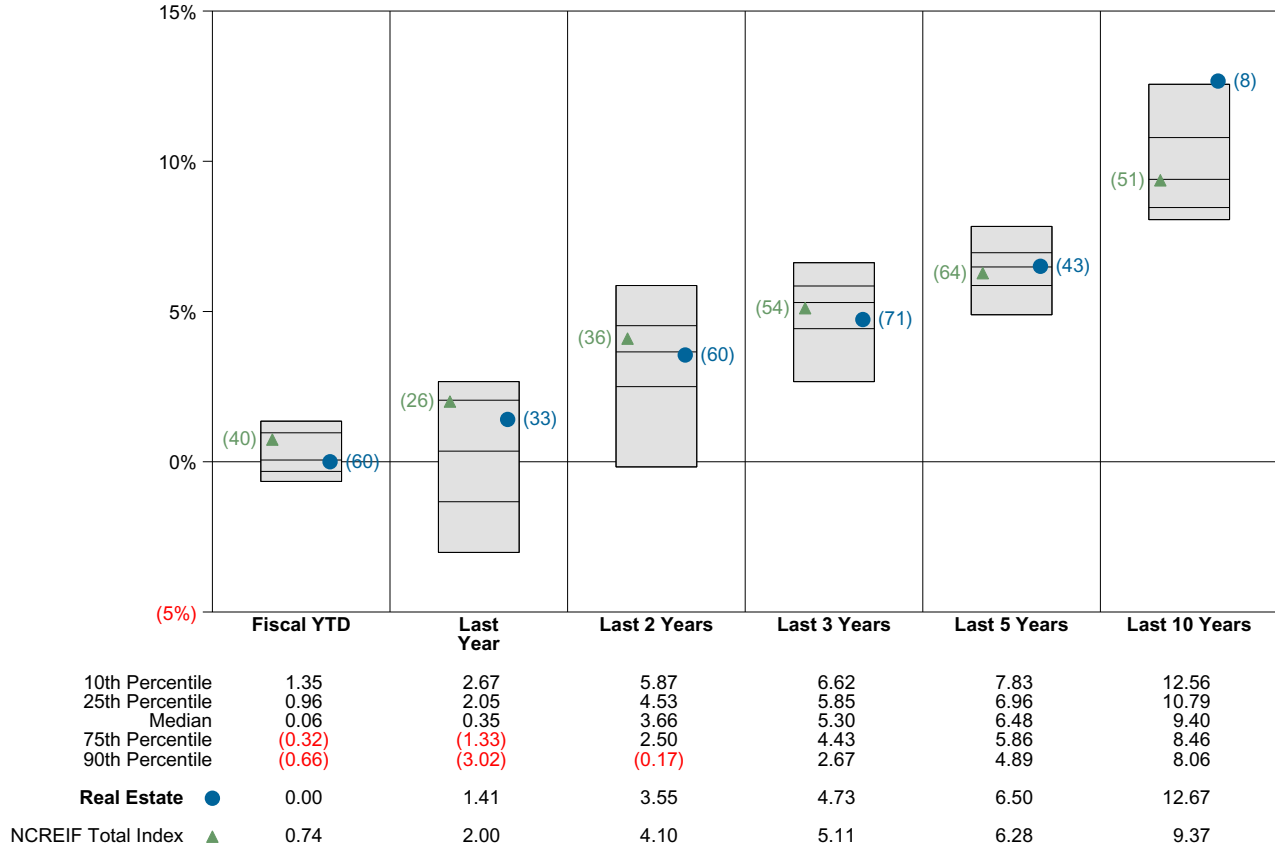
## Quarterly Summary and Highlights

- Real Estate's portfolio posted a 0.00% return for the quarter placing it in the 60 percentile of the Public Fund - Real Estate group for the quarter and in the 33 percentile for the last year.
- Real Estate's portfolio underperformed the NCREIF Total Index by 0.74% for the quarter and underperformed the NCREIF Total Index for the year by 0.60%.

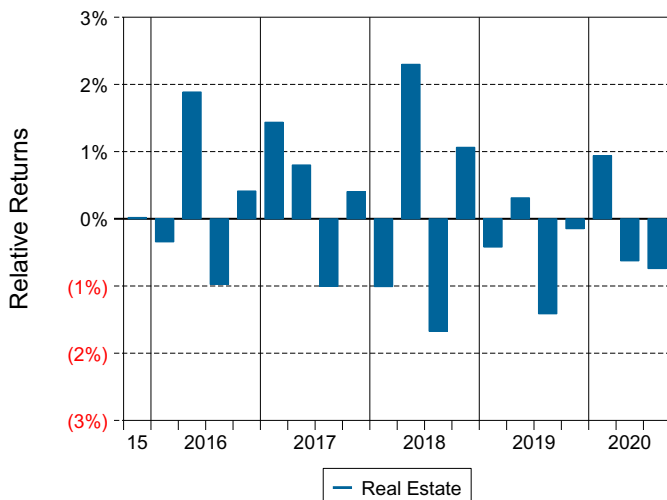
## Quarterly Asset Growth

Beginning Market Value	\$98,563,788
Net New Investment	\$-728,046
Investment Gains/(Losses)	\$30
Ending Market Value	\$97,835,772

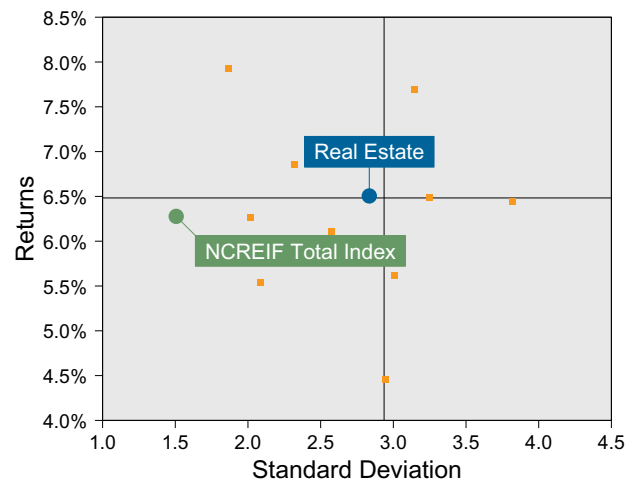
## Performance vs Public Fund - Real Estate (Gross)



## Relative Return vs NCREIF Total Index



## Public Fund - Real Estate (Gross) Annualized Five Year Risk vs Return



# Invesco Core Real Estate

## Period Ended September 30, 2020

### Investment Philosophy

IRE's investment philosophy is comprised of two fundamental principles: (1) maximize the predictability and consistency of investment returns and (2) minimize the risk of capital loss. This philosophy forms the cornerstone of the company's real estate investment philosophy.

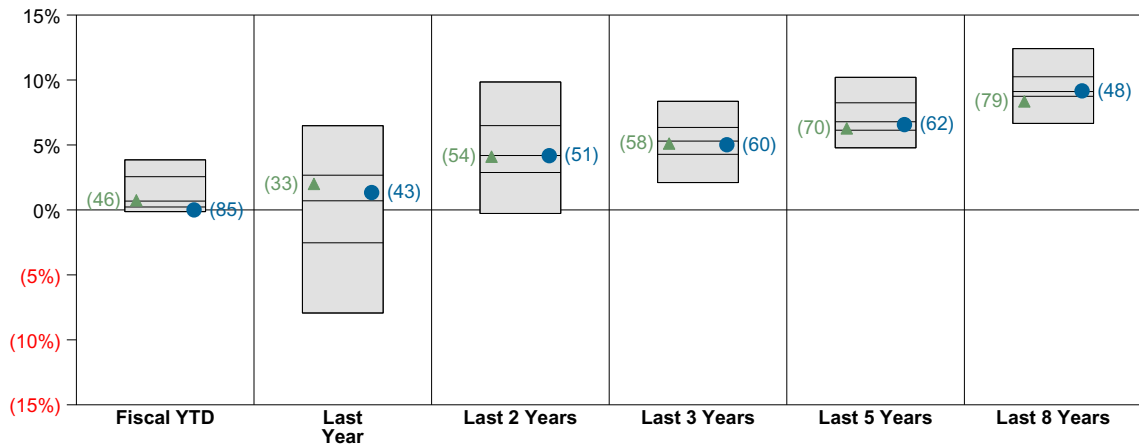
### Quarterly Summary and Highlights

- Invesco Core Real Estate's portfolio posted a 0.00% return for the quarter placing it in the 85 percentile of the Callan Total Domestic Real Estate DB group for the quarter and in the 43 percentile for the last year.
- Invesco Core Real Estate's portfolio underperformed the NCREIF Total Index by 0.74% for the quarter and underperformed the NCREIF Total Index for the year by 0.67%.

### Quarterly Asset Growth

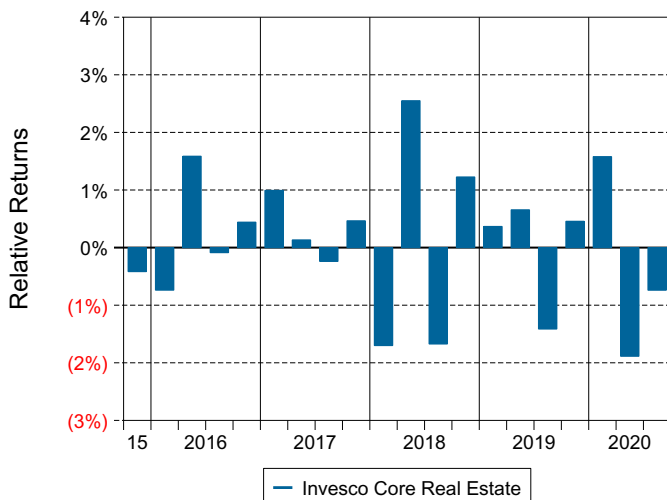
Beginning Market Value	\$51,435,881
Net New Investment	\$-378,948
Investment Gains/(Losses)	\$0
Ending Market Value	\$51,056,933

### Performance vs Callan Total Domestic Real Estate DB (Gross)

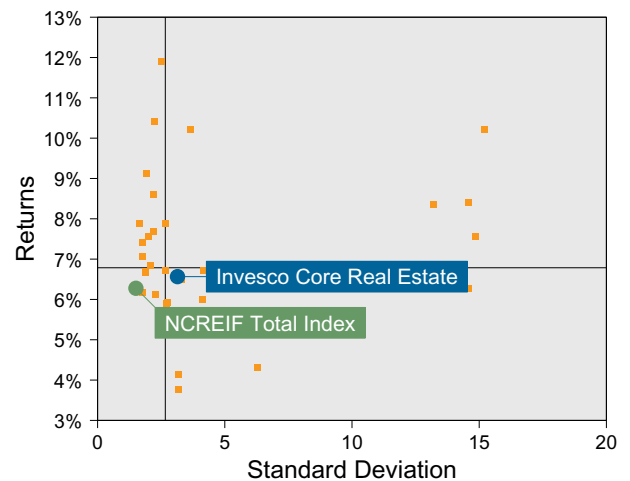


10th Percentile	3.85	6.48	9.85	8.36	10.21	12.41	
25th Percentile	2.56	2.67	6.49	6.35	8.24	10.25	
Median	0.68	0.70	4.19	5.30	6.79	9.11	
75th Percentile	0.23	(2.53)	2.88	4.28	6.13	8.75	
90th Percentile	(0.13)	(7.94)	(0.27)	2.11	4.78	6.66	
<b>Invesco Core Real Estate</b>	●	0.00	1.34	4.17	5.02	6.57	9.16
<b>NCREIF Total Index</b>	▲	0.74	2.00	4.10	5.11	6.28	8.35

### Relative Return vs NCREIF Total Index



### Callan Total Domestic Real Estate DB (Gross) Annualized Five Year Risk vs Return



# JP Morgan Real Estate Period Ended September 30, 2020

## Investment Philosophy

The J.P. Morgan U.S. Real Estate Income and Growth Fund seeks to construct and opportunistically manage a portfolio of core direct real estate investments, complemented by other real estate and real estate-related assets. The Fund pursues a broadly diversified absolute-return strategy and pursues all property investments on an opportunistic basis. The majority of the Fund's investments will be in direct core properties in the office, industrial, retail and residential sectors.

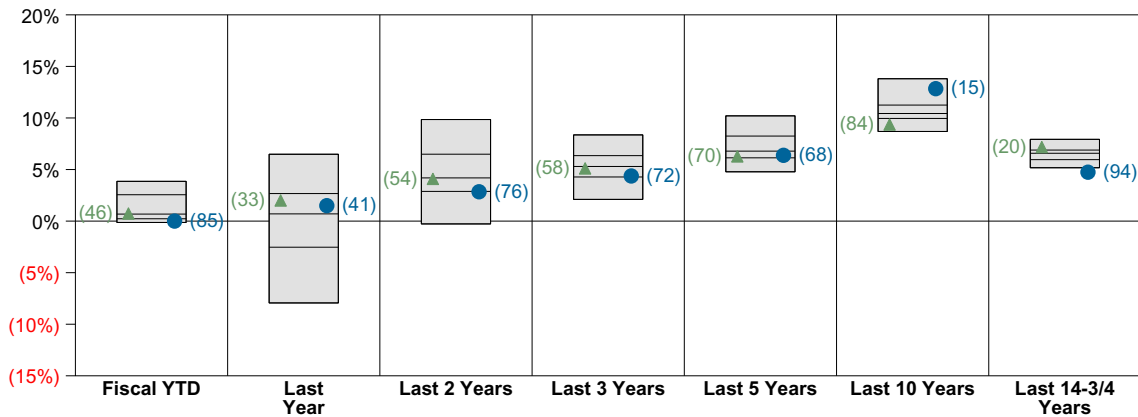
## Quarterly Summary and Highlights

- JP Morgan Real Estate's portfolio posted a 0.00% return for the quarter placing it in the 85 percentile of the Callan Total Domestic Real Estate DB group for the quarter and in the 41 percentile for the last year.
- JP Morgan Real Estate's portfolio underperformed the NCREIF Total Index by 0.74% for the quarter and underperformed the NCREIF Total Index for the year by 0.51%.

## Quarterly Asset Growth

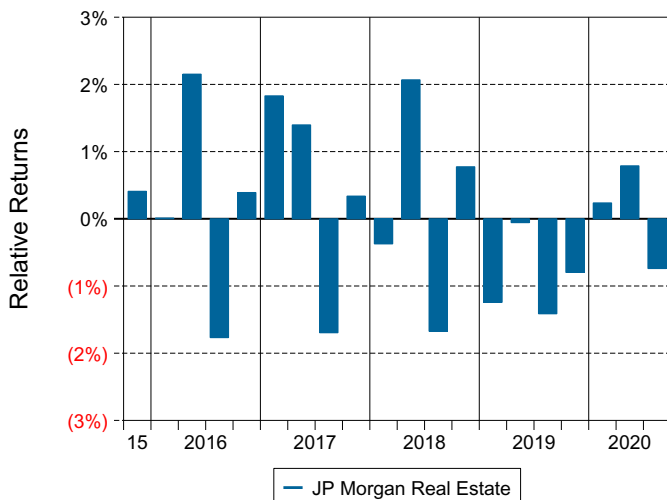
Beginning Market Value	\$47,127,907
Net New Investment	\$-349,098
Investment Gains/(Losses)	\$30
Ending Market Value	\$46,778,838

## Performance vs Callan Total Domestic Real Estate DB (Gross)

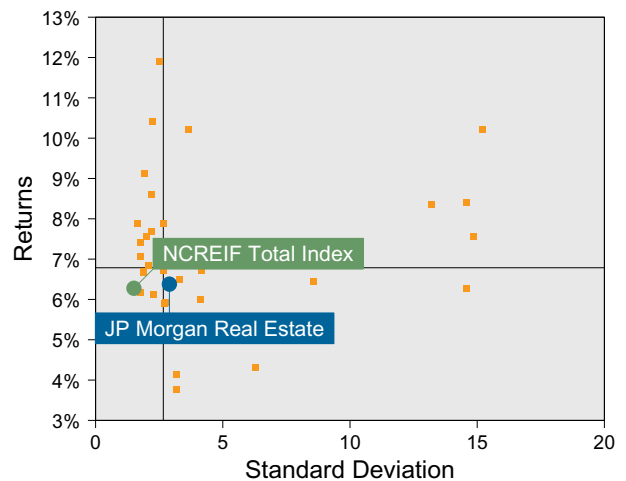


10th Percentile	3.85	6.48	9.85	8.36	10.21	13.80	7.93
25th Percentile	2.56	2.67	6.49	6.35	8.24	11.25	6.89
Median	0.68	0.70	4.19	5.30	6.79	10.43	6.58
75th Percentile	0.23	(2.53)	2.88	4.28	6.13	9.95	5.96
90th Percentile	(0.13)	(7.94)	(0.27)	2.11	4.78	8.69	5.17
<b>JP Morgan Real Estate</b>	● 0.00	1.50	2.84	4.37	6.38	12.84	4.74
<b>NCREIF Total Index</b>	▲ 0.74	2.00	4.10	5.11	6.28	9.37	7.18

## Relative Return vs NCREIF Total Index



## Callan Total Domestic Real Estate DB (Gross) Annualized Five Year Risk vs Return



# Western Asset TIPS Period Ended September 30, 2020

## Investment Philosophy

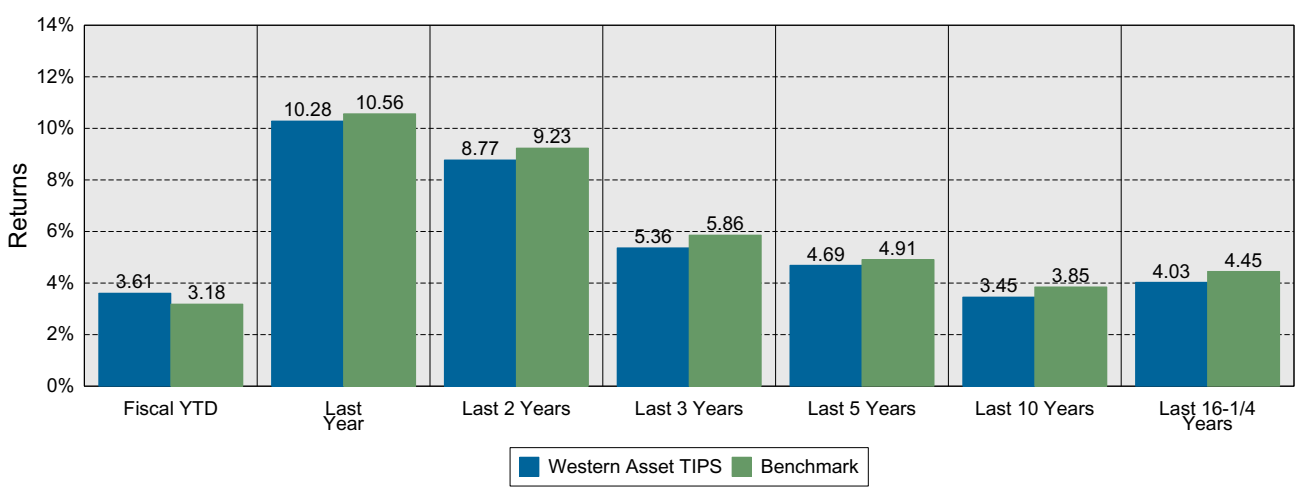
The Western Asset US TIPS Full Discretion strategy is an inflation-protected strategy that aims to maximize total return and add value through duration and curve positioning, sector allocation, and security selection, while approximating benchmark risk. The strategy invests in a diversified portfolio using higher-yielding inflation-protected instruments with a bias toward Treasury Inflation-Protected Securities (TIPS). Opportunistic investments include high-yield, emerging markets, non-dollar securities, commodities and bank loans that may also be employed using derivatives. **Benchmark: Bloomberg US TIPS through 12/31/2009; Bloomberg Global Inflation-Linked through 10/31/2018; Bloomberg US Govt Inflation Linked Bond Index thereafter.**

## Quarterly Summary and Highlights

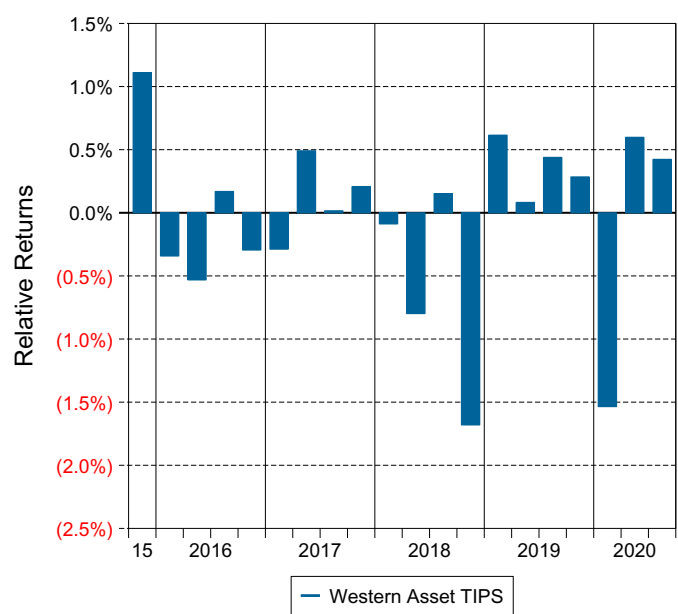
- Western Asset TIPS's portfolio outperformed the Benchmark by 0.42% for the quarter and underperformed the Benchmark for the year by 0.28%.

## Quarterly Asset Growth

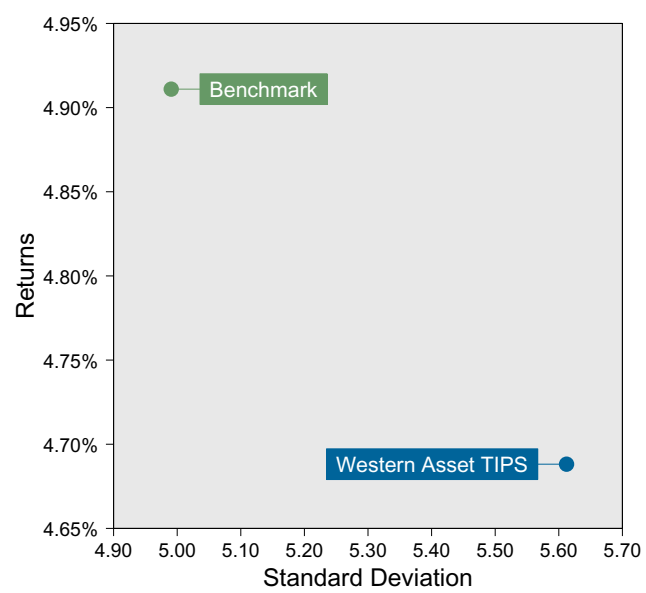
Beginning Market Value	\$150,809,552
Net New Investment	\$5,956,542
Investment Gains/(Losses)	\$5,434,207
Ending Market Value	\$162,200,300



## Relative Return vs Benchmark



## Annualized Five Year Risk vs Return



# Eastern Timber Opportunities Period Ended September 30, 2020

## Investment Philosophy

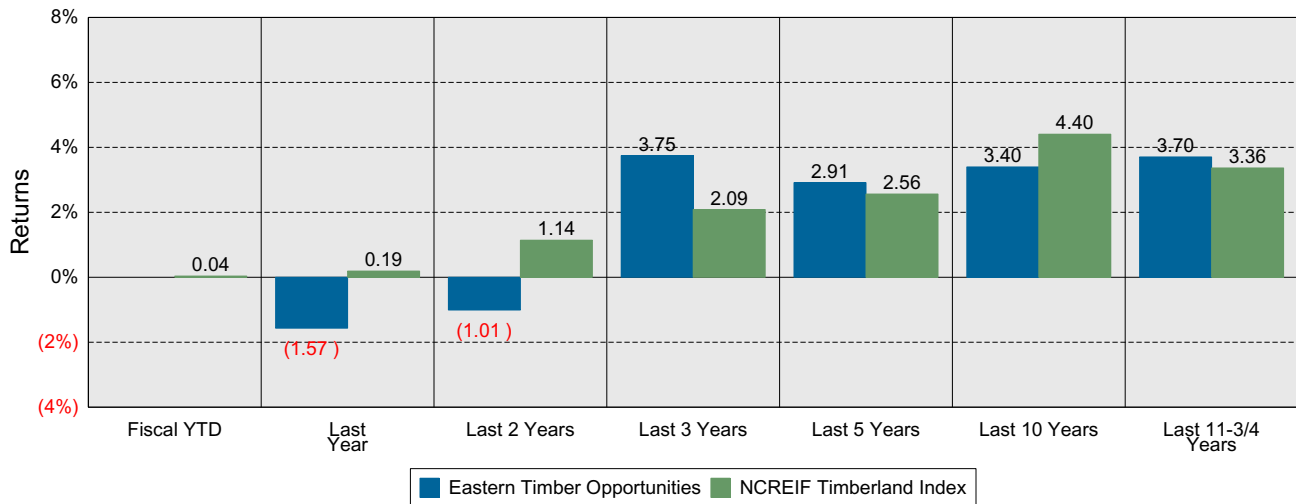
The investment objective of the Eastern Timberland Opportunities fund is to provide competitive timberland investment returns from Eastern US timberland investments by pursuing management strategies to increase timber production and land values through the investment term. TIR will maximize timber values within the portfolio with the application of intensive forest management techniques to accelerate the growth in timber volume and movement into higher value product categories. Additional value will be captured by realizing higher and better use opportunities for select timberland properties throughout the portfolio.

## Quarterly Summary and Highlights

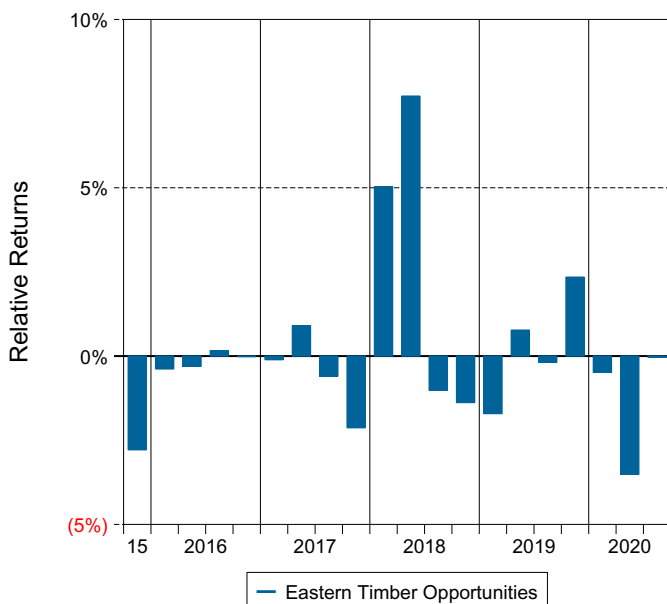
- Eastern Timber Opportunities's portfolio underperformed the NCREIF Timberland Index by 0.04% for the quarter and underperformed the NCREIF Timberland Index for the year by 1.76%.

## Quarterly Asset Growth

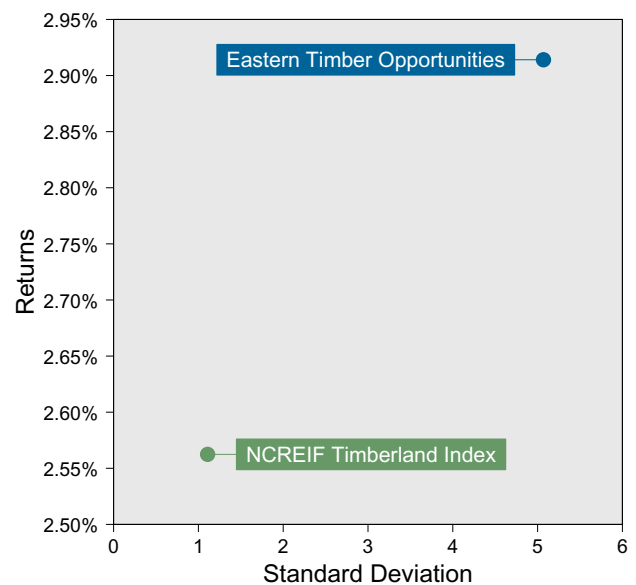
Beginning Market Value	\$53,071,696
Net New Investment	\$0
Investment Gains/(Losses)	\$0
Ending Market Value	\$53,071,696



## Relative Return vs NCREIF Timberland Index



## Annualized Five Year Risk vs Return



# JP Morgan Infrastructure Period Ended September 30, 2020

## Investment Philosophy

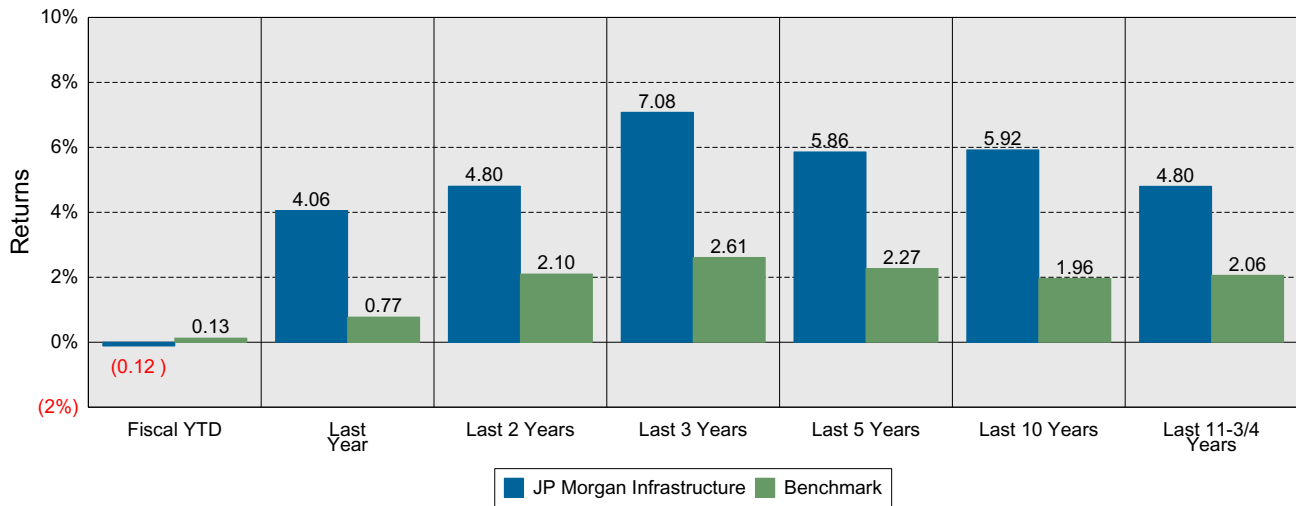
The only open-ended private commingled infrastructure fund in the U.S., the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas pipelines; electricity transmission and distribution facilities; contracted power generation assets; water distribution; waste-water collection and processing; railway lines and rapid rail links; and seaports and airports. **The Benchmark is comprised of CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.**

## Quarterly Summary and Highlights

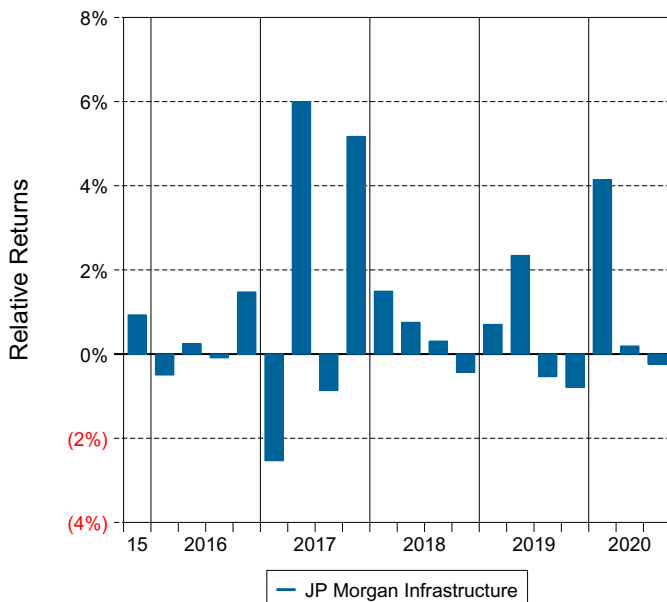
- JP Morgan Infrastructure's portfolio underperformed the Benchmark by 0.24% for the quarter and outperformed the Benchmark for the year by 3.28%.

## Quarterly Asset Growth

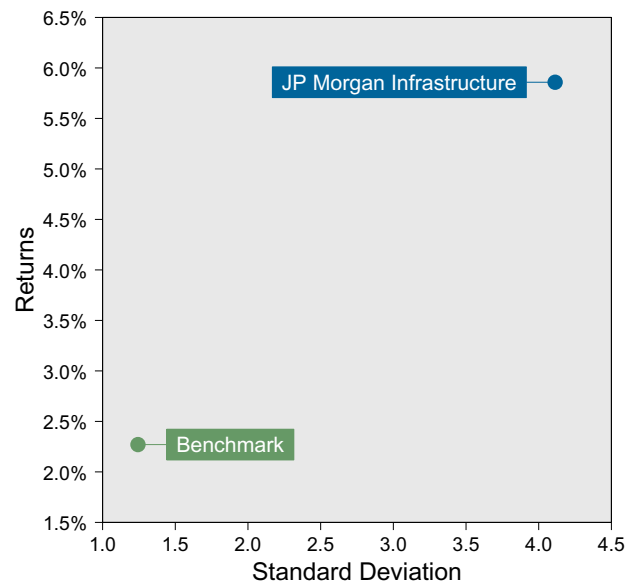
Beginning Market Value	\$41,585,042
Net New Investment	\$-1,404,624
Investment Gains/(Losses)	\$-49,936
Ending Market Value	\$40,130,482



## Relative Return vs Benchmark



## Annualized Five Year Risk vs Return



# Grosvenor Cust. Infrastructure Period Ended September 30, 2020

## Investment Philosophy

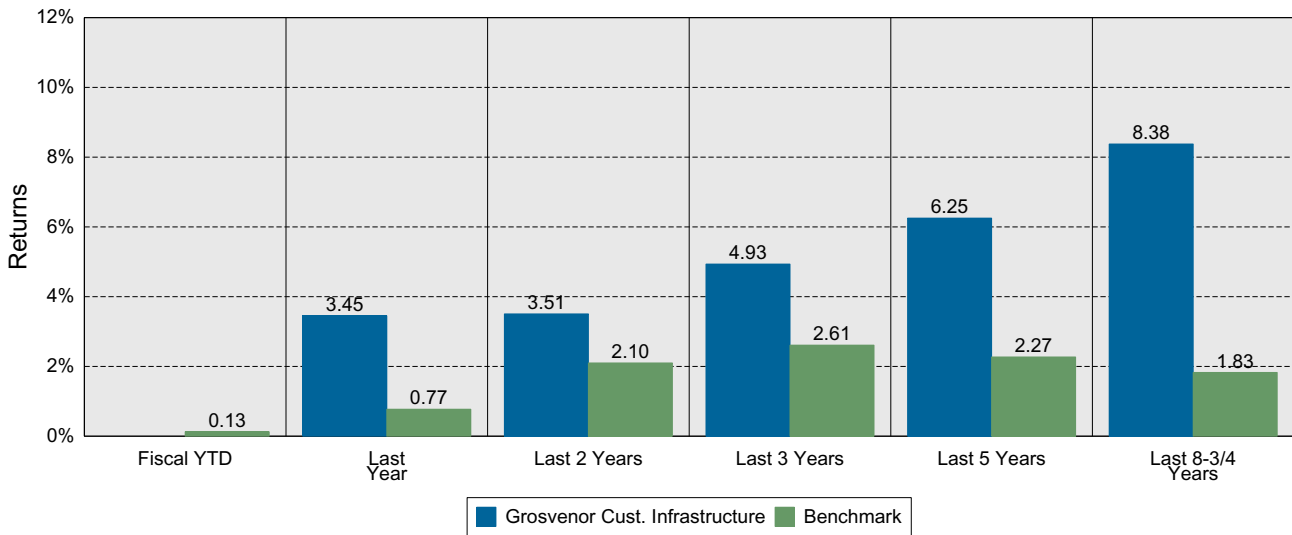
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%). **The Benchmark is comprised of CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.**

## Quarterly Summary and Highlights

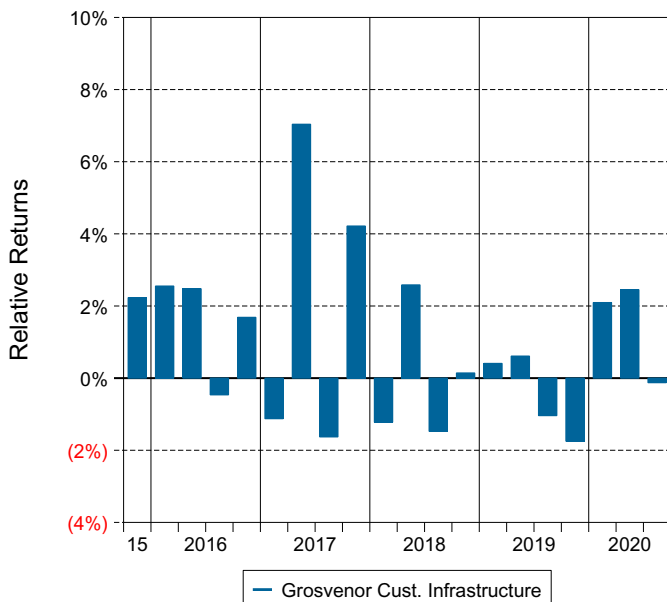
- Grosvenor Cust. Infrastructure's portfolio underperformed the Benchmark by 0.13% for the quarter and outperformed the Benchmark for the year by 2.68%.

## Quarterly Asset Growth

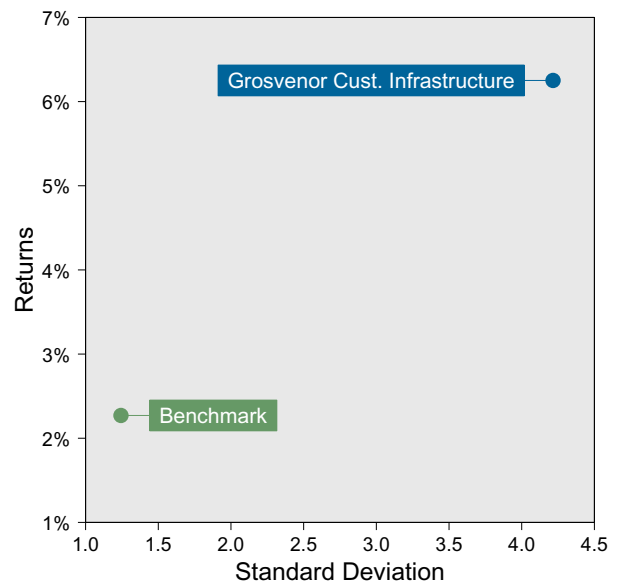
Beginning Market Value	\$10,279,534
Net New Investment	\$0
Investment Gains/(Losses)	\$0
Ending Market Value	\$10,279,534



Relative Return vs Benchmark



Annualized Five Year Risk vs Return





# Short Term Fixed Income Period Ended September 30, 2020

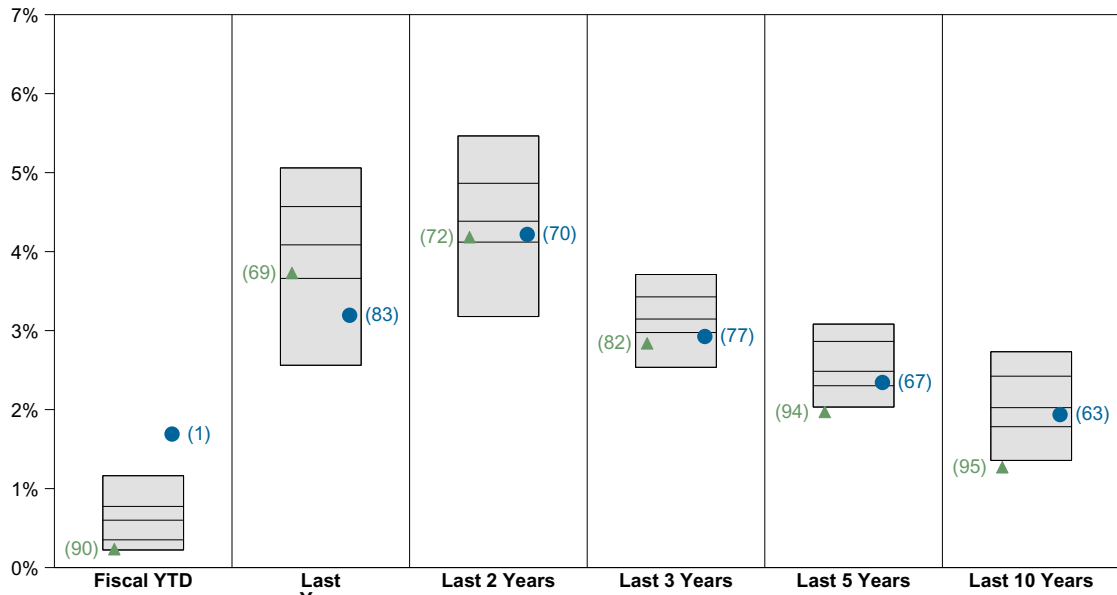
## Quarterly Summary and Highlights

- Short Term Fixed Income's portfolio posted a 1.69% return for the quarter placing it in the 1 percentile of the Callan Short Term Fixed Income group for the quarter and in the 83 percentile for the last year.
- Short Term Fixed Income's portfolio outperformed the Short Term Fixed Target by 1.46% for the quarter and underperformed the Short Term Fixed Target for the year by 0.53%.

## Quarterly Asset Growth

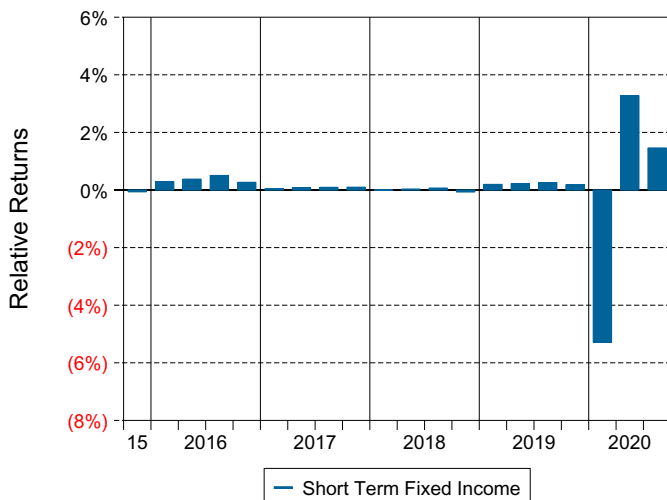
Beginning Market Value	\$749,106,415
Net New Investment	\$-305,353
Investment Gains/(Losses)	\$12,660,549
Ending Market Value	\$761,461,611

## Performance vs Callan Short Term Fixed Income (Gross)

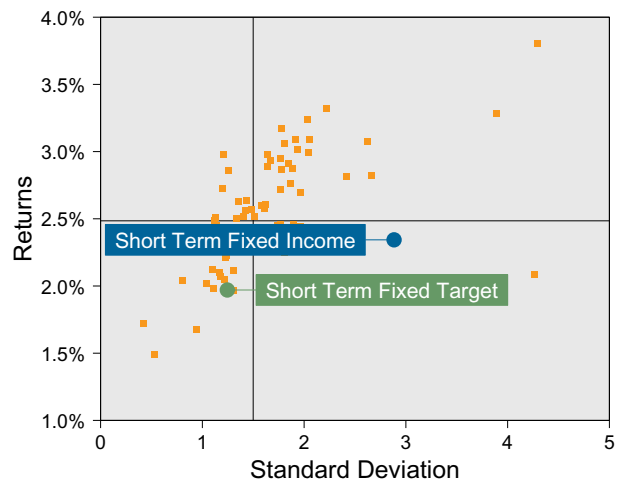


10th Percentile	1.16	5.06	5.46	3.71	3.08	2.73
25th Percentile	0.77	4.57	4.86	3.43	2.86	2.42
Median	0.60	4.09	4.38	3.15	2.48	2.02
75th Percentile	0.35	3.66	4.12	2.98	2.30	1.78
90th Percentile	0.22	2.56	3.18	2.54	2.03	1.36
<b>Short Term Fixed Income</b>	<b>1.69</b>	<b>3.19</b>	<b>4.22</b>	<b>2.93</b>	<b>2.34</b>	<b>1.94</b>
<b>Short Term Fixed Target</b>	<b>0.23</b>	<b>3.73</b>	<b>4.18</b>	<b>2.84</b>	<b>1.97</b>	<b>1.27</b>

## Relative Return vs Short Term Fixed Target



## Callan Short Term Fixed Income (Gross) Annualized Five Year Risk vs Return



# Barings Active Short Duration Period Ended September 30, 2020

## Investment Philosophy

Babson's Active Short Duration team employs a total return management style, which dynamically adjusts duration in response to actual yield curve conditions. The approach seeks to take advantage of a variety of relative value opportunities, predominantly in the investment grade universe, which should provide steady income and potential capital appreciation. Value is also added through security selection. The end result is a high quality/short duration portfolio that has historically captured most of the returns of moderate duration bonds.

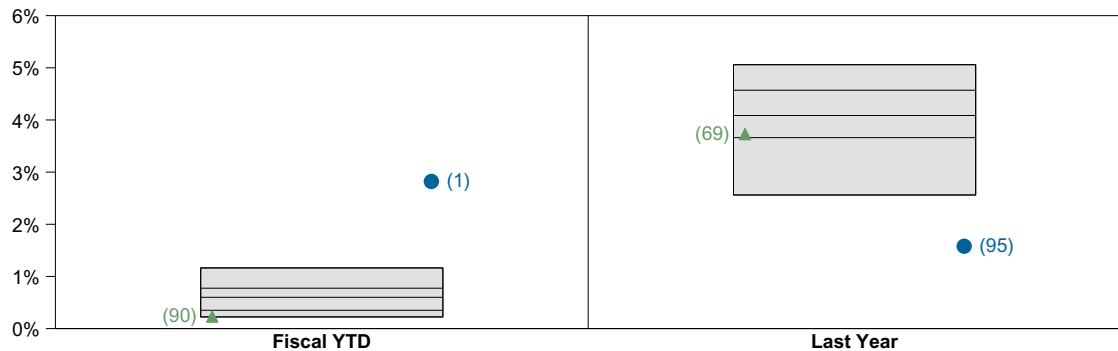
## Quarterly Summary and Highlights

- Barings Active Short Duration's portfolio posted a 2.82% return for the quarter placing it in the 1 percentile of the Callan Short Term Fixed Income group for the quarter and in the 95 percentile for the last year.
- Barings Active Short Duration's portfolio outperformed the Blmbg Gov/Cred 1-3 Yr by 2.59% for the quarter and underperformed the Blmbg Gov/Cred 1-3 Yr for the year by 2.15%.

## Quarterly Asset Growth

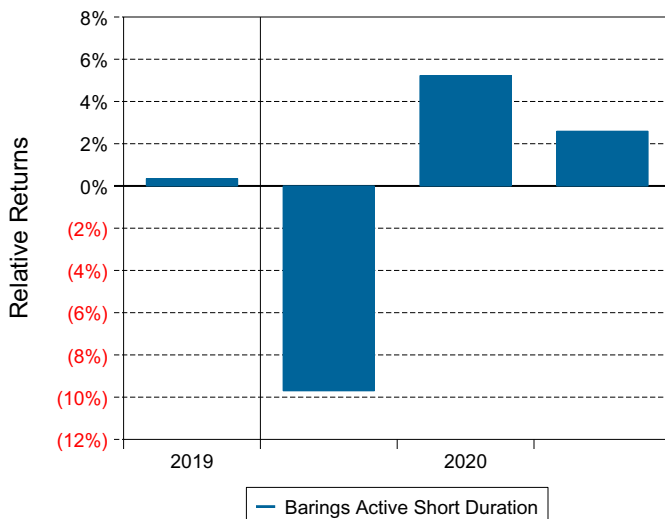
Beginning Market Value	\$365,982,519
Net New Investment	\$-115,013
Investment Gains/(Losses)	\$10,322,800
Ending Market Value	\$376,190,306

## Performance vs Callan Short Term Fixed Income (Gross)

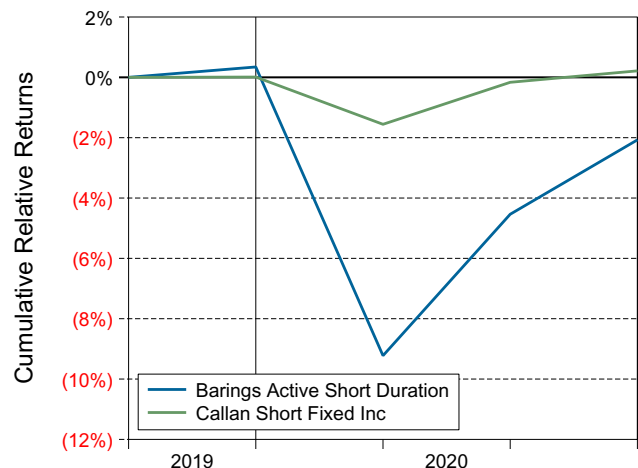


10th Percentile	1.16	5.06
25th Percentile	0.77	4.57
Median	0.60	4.09
75th Percentile	0.35	3.66
90th Percentile	0.22	2.56
<b>Barings Active Short Duration</b>	<b>2.82</b>	<b>1.58</b>
Blmbg Gov/Cred 1-3 Yr	0.23	3.73

## Relative Return vs Blmbg Gov/Cred 1-3 Yr



## Cumulative Returns vs Blmbg Gov/Cred 1-3 Yr



# JP Morgan Short Term Bonds Period Ended September 30, 2020

## Investment Philosophy

The investment objective of this account is to outperform the Barclays Capital 1-3 year Government/Credit Index while maintaining total return risk similar to that of the benchmark as measured over a market cycle. The weighted average effective duration of the portfolio will typically remain within +/- 30% of the benchmark.

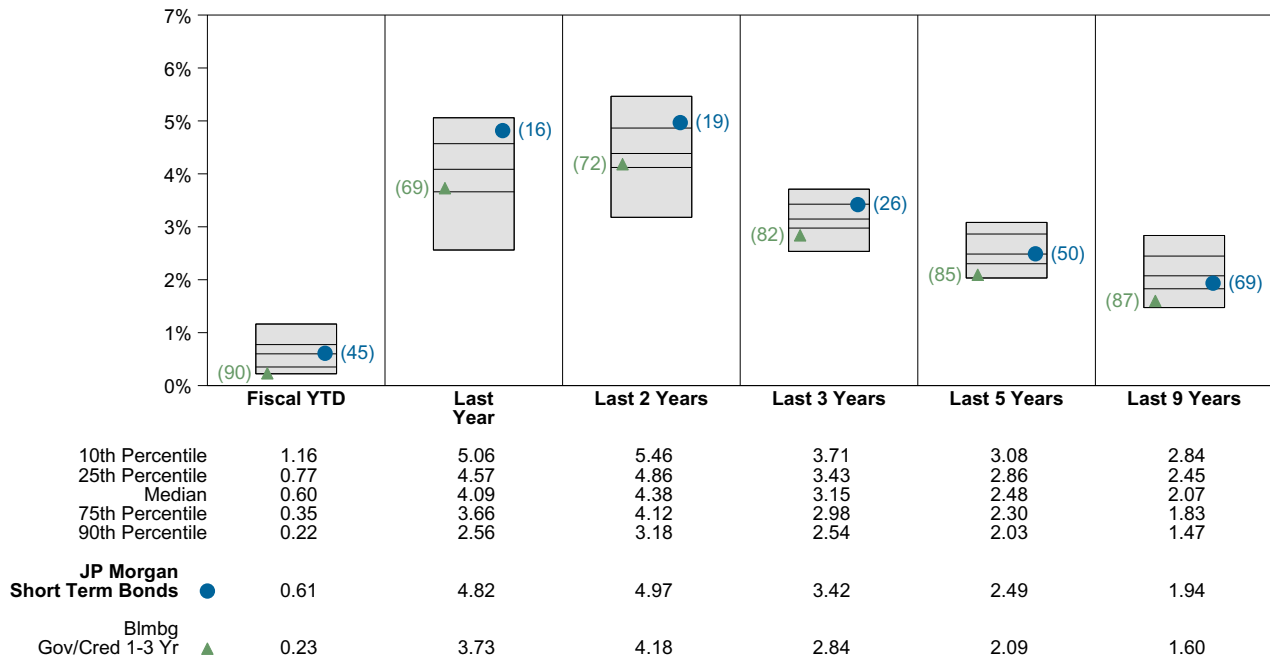
## Quarterly Summary and Highlights

- JP Morgan Short Term Bonds's portfolio posted a 0.61% return for the quarter placing it in the 45 percentile of the Callan Short Term Fixed Income group for the quarter and in the 16 percentile for the last year.
- JP Morgan Short Term Bonds's portfolio outperformed the Blmbg Gov/Cred 1-3 Yr by 0.38% for the quarter and outperformed the Blmbg Gov/Cred 1-3 Yr for the year by 1.09%.

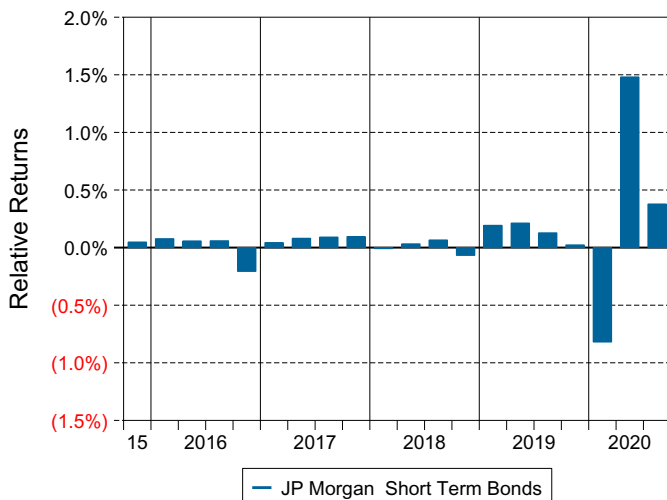
## Quarterly Asset Growth

Beginning Market Value	\$383,123,897
Net New Investment	\$-190,340
Investment Gains/(Losses)	\$2,337,749
Ending Market Value	\$385,271,305

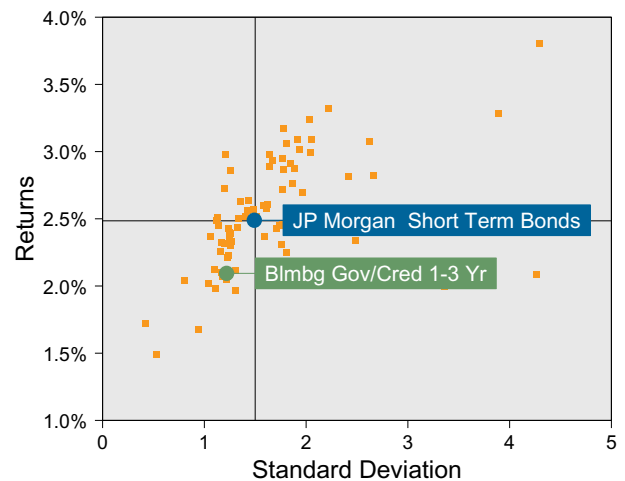
## Performance vs Callan Short Term Fixed Income (Gross)



## Relative Return vs Blmbg Gov/Cred 1-3 Yr



## Callan Short Term Fixed Income (Gross) Annualized Five Year Risk vs Return



## Research and Educational Programs

The Callan Institute provides research to update clients on the latest industry trends and carefully structured educational programs to enhance the knowledge of industry professionals. Visit [www.callan.com/library](http://www.callan.com/library) to see all of our publications, and [www.callan.com/blog](http://www.callan.com/blog) to view our blog “Perspectives.” For more information contact Barb Gerraty at 415-274-3093 / [institute@callan.com](mailto:institute@callan.com).

## New Research from Callan’s Experts

**[2020 ESG Survey](#)** | Callan’s eighth annual survey assessing the status of environmental, social, and governance (ESG) investing in the U.S. institutional investment market.

**[Coping with COVID-19: How Work Is Evolving for Investment Managers—2nd Edition](#)** | Following up on our June publication, Callan again surveyed investment managers regarding how their firms were responding to the COVID-19 pandemic, focusing on office closures and reopenings, work-from-home approaches, business travel, and meetings. Respondents reflected a variety of firms by location, employee size, ownership structure, and assets under management.

**[Private Equity Fees and Terms Study](#)** | To help institutional investors better evaluate private equity funds, Callan conducted an extensive analysis of the fees and terms for private equity partnerships. Using that data, we created this study to help investors evaluate a partnership’s terms compared to its peers.

**[Real Estate Indicators: Too Hot to Touch or Cool Enough to Handle?](#)** | Callan’s Real Assets Consulting group identifies seven indicators that, combined with an understanding of prevailing market dynamics, have helped signal when the institutional real estate market is overheated or cooled.

### Blog Highlights

**[How Investors Can Address Climate Risk in Real Estate](#)** | Climate risk, which refers to the hazards associated with climate change, can significantly threaten real estate portfolios. Institutional investors and real estate investment managers must evaluate the increasing significance of climate risk given the material financial impact that climate change can have on real estate portfolios.

**[Fine-Tuning Implementation of the CARES Act](#)** | Drafting the CARES Act was expedited, which means there is a limited congressional record to clarify provisions. The IRS has issued two notices and a FAQ to clarify how defined contribution (DC) plan sponsors should implement the provisions, touching on required notices, tax reporting, and recordkeeping.

**[DOL Proposes Tightened Proxy Voting Guidelines](#)** | The department’s new proposal dovetails with SEC guidance finalized in 2020 and would create a refined set of circumstances in which plan fiduciaries may engage in proxy voting.

### Quarterly Periodicals

**[Private Equity Trends, 2Q20](#)** | A high-level summary of private equity activity in the quarter through all the investment stages

**[Active vs. Passive Charts, 2Q20](#)** | A comparison of active managers alongside relevant benchmarks over the long term

**[Market Pulse Flipbook, 2Q20](#)** | A quarterly market reference guide covering trends in the U.S. economy, developments for institutional investors, and the latest data on the capital markets

**[Capital Market Review, 2Q20](#)** | Analysis and a broad overview of the economy and public and private market activity each quarter across a wide range of asset classes

**[Hedge Fund Quarterly, 2Q20](#)** | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

**[Real Assets Reporter, 2Q20](#)** | In this quarter’s edition, Barbara Bernard and Sally Haskins discuss how new risk-retention rules affect the CMBS market. In addition, it includes analysis of the performance of real estate and other real assets in 2Q20.

## Events

Miss out on a Callan conference or workshop? Event summaries and speakers' presentations are available on our website: [www.callan.com/library/](http://www.callan.com/library/)

Please mark your calendar and look forward to upcoming invitations:

### 2021 National Conference

June 21-23, 2021

San Francisco | Palace Hotel

For more information about events, please contact Barb Gerraty: 415-274-3093 / [gerraty@callan.com](mailto:gerraty@callan.com)

## Education: By the Numbers

50+

Unique pieces of research the Institute generates each year

525

Attendees (on average) of the Institute's annual National Conference

3,700

Total attendees of the "Callan College" since 1994

## Education

Founded in 1994, the "Callan College" offers educational sessions for industry professionals involved in the investment decision-making process.

### Introduction to Investments—Virtual

This program familiarizes institutional investor trustees and staff and asset management advisers with basic investment theory, terminology, and practices. It is held over three days with virtual modules of 2.5-3 hours. This course is designed for individuals with less than two years of experience with asset-management oversight and/or support responsibilities. Tuition is \$950 per person and includes instruction and digital materials.

**Please look for our updated schedule for 2021 in November**

Additional information including registration can be found at: [www.callan.com/cc-introduction-virtual/](http://www.callan.com/cc-introduction-virtual/)

### Introduction to Investments—In Person

This program familiarizes institutional investor trustees and staff and asset management advisers with basic investment theory, terminology, and practices. It lasts one-and-a-half days and is designed for individuals with less than two years of experience with asset-management oversight and/or support responsibilities. Tuition is \$2,350 per person and includes instruction, all materials, breakfast and lunch on each day, and dinner on the first evening with the instructors.

Additional information including dates and registration can be found at: [www.callan.com/callan-college-intro-2/](http://www.callan.com/callan-college-intro-2/)



"Research is the foundation of all we do at Callan, and sharing our best thinking with the investment community is our way of helping to foster dialogue to raise the bar across the industry."

Greg Allen, CEO and Chief Research Officer

## List of Callan's Investment Manager Clients

Confidential – For Callan Client Use Only

Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry, and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor, and disclose potential conflicts on an ongoing basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database, or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please note that if an investment manager receives a product or service on a complimentary basis (e.g., attending an educational event), they are not included in the list below. Callan is committed to ensuring that we do not consider an investment manager's business relationship with Callan, or lack thereof, in performing evaluations for or making suggestions or recommendations to its other clients. Please refer to Callan's ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group, and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance department.

Manager Name
Aberdeen Standard Investments
Acadian Asset Management LLC
AEGON USA Investment Management Inc.
AllianceBernstein
Allianz
American Century Investments
Amundi Pioneer Asset Management
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Aristotle Capital Management, LLC
Atlanta Capital Management Co., LLC
Aviva Investors Americas
AXA Investment Managers
Baillie Gifford International, LLC
Baird Advisors
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC

Manager Name
BlackRock
BMO Global Asset Management
BNP Paribas Asset Management
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
BrightSphere Investment Group
Brown Brothers Harriman & Company
Cambiar Investors, LLC
CapFinancial Partners, LLC
Capital Group
Carillon Tower Advisers
CastleArk Management, LLC
Causeway Capital Management LLC
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.

**Manager Name**

Columbia Management Investments

Columbus Circle Investors

Credit Suisse Asset Management

D.E. Shaw Investment Management, L.L.C.

DePrince, Race &amp; Zollo, Inc.

Dimensional Fund Advisors LP

Doubleline

Duff &amp; Phelps Investment Management Co.

DWS

EARNEST Partners, LLC

Eaton Vance Management

Epoch Investment Partners, Inc.

Fayez Sarofim &amp; Company

Federated Hermes, Inc.

Fidelity Institutional Asset Management

Fiera Capital Corporation

First Hawaiian Bank Wealth Management Division

First State Investments

Fisher Investments

Franklin Templeton

Fred Alger Management, Inc.

GAM (USA) Inc.

GCM Grosvenor

Glenmeade Investment Management, LP

GlobeFlex Capital, L.P.

Goldman Sachs

Green Square Capital Advisors, LLC

Guggenheim Investments

GW&amp;K Investment Management

Harbor Capital Group Trust

Hartford Investment Management Co.

Heitman LLC

Hotchkis &amp; Wiley Capital Management, LLC

Income Research + Management, Inc.

Insight Investment Management Limited

Intech Investment Management, LLC

Intercontinental Real Estate Corporation

Invesco

Investec Asset Management North America, Inc.

Ivy Investments

**Manager Name**

J.P. Morgan

Janus

Jennison Associates LLC

Jobs Peak Advisors

KeyCorp

Lazard Asset Management

Legal &amp; General Investment Management America

Lincoln National Corporation

Longview Partners

Loomis, Sayles &amp; Company, L.P.

Lord Abbett &amp; Company

Los Angeles Capital Management

LSV Asset Management

MackKay Shields LLC

Macquarie Investment Management (MIM)

Manulife Investment Management

Marathon Asset Management, L.P.

McKinley Capital Management, LLC

Mellon

MetLife Investment Management

MFS Investment Management

MidFirst Bank

Mondrian Investment Partners Limited

Montag &amp; Caldwell, LLC

Morgan Stanley Investment Management

Mountain Pacific Advisors, LLC

MUFG Union Bank, N.A.

Natixis Investment Managers

Neuberger Berman

Newton Investment Management

Nikko Asset Management Co., Ltd.

Nile Capital Group LLC

Northern Trust Asset Management

Nuveen

P/E Investments

Pacific Investment Management Company

Parametric Portfolio Associates LLC

Pathway Capital Management

Peregrine Capital Management, LLC

Perkins Investment Management

**Manager Name**

PFM Asset Management LLC

PGIM Fixed Income

PineBridge Investments

PNC Capital Advisors, LLC

Polen Capital Management

Principal Global Investors

Putnam Investments, LLC

QMA LLC

RBC Global Asset Management

Regions Financial Corporation

Robeco Institutional Asset Management, US Inc.

Rothschild &amp; Co. Asset Management US

S&amp;P Dow Jones Indices

Schroder Investment Management North America Inc.

SLC Management

Smith Graham &amp; Co. Investment Advisors, L.P.

State Street Global Advisors

Stone Harbor Investment Partners L.P.

Strategic Global Advisors

T. Rowe Price Associates, Inc.

**Manager Name**

The TCW Group, Inc.

Thompson, Siegel &amp; Walmsley LLC

Thornburg Investment Management, Inc.

Tri-Star Trust Bank

UBS Asset Management

USAA Real Estate

VanEck

Versus Capital Group

Victory Capital Management Inc.

Virtus Investment Partners, Inc.

Vontobel Asset Management, Inc.

Voya

WCM Investment Management

WEDGE Capital Management

Wellington Management Company LLP

Wells Fargo Asset Management

Western Asset Management Company LLC

Westfield Capital Management Company, LP

William Blair &amp; Company LLC



September 30, 2020



## North Dakota State Investment Board Legacy Fund

Investment Measurement Service  
Quarterly Review

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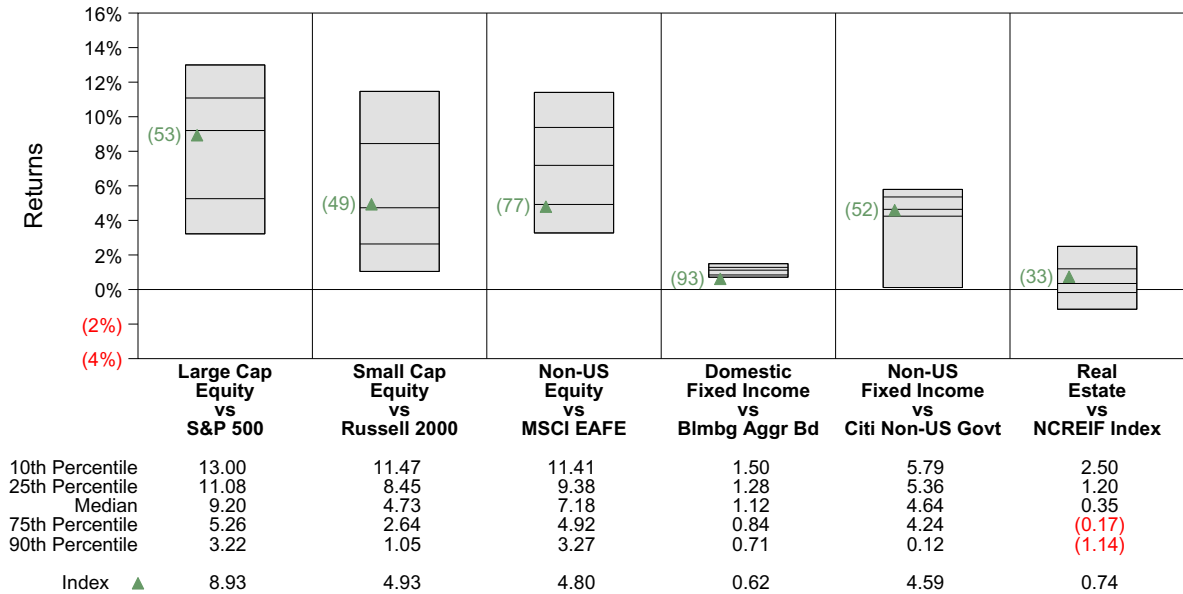
## Market Overview

### Active Management vs Index Returns

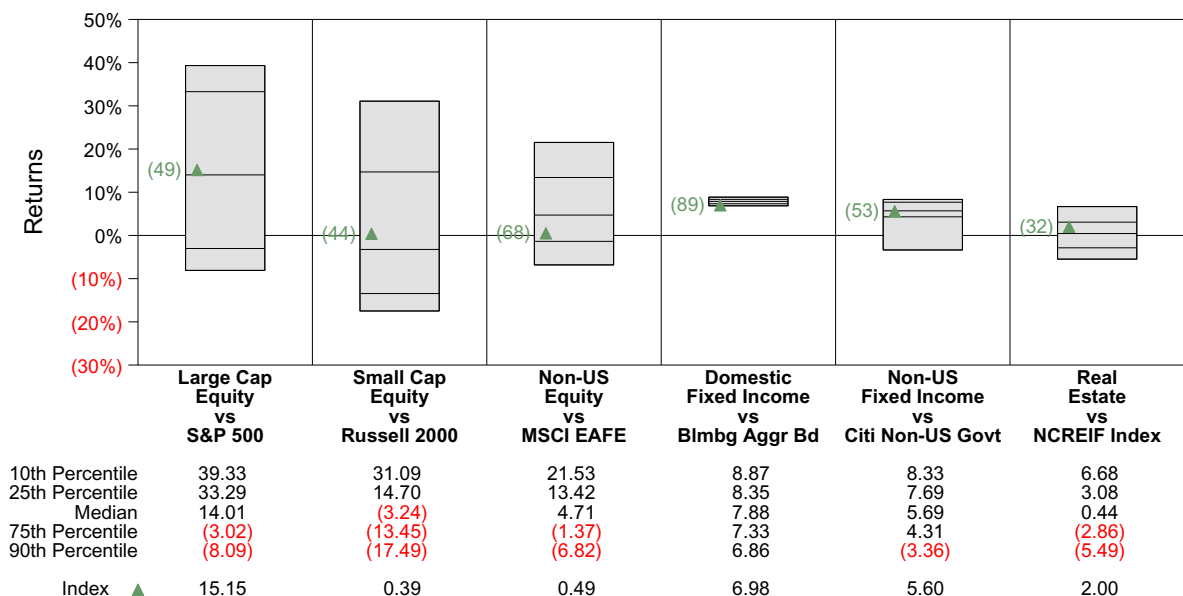
#### Market Overview

The charts below illustrate the range of returns across managers in Callan's Separate Account database over the most recent one quarter and one year time periods. The database is broken down by asset class to illustrate the difference in returns across those asset classes. An appropriate index is also shown for each asset class for comparison purposes. As an example, the first bar in the upper chart illustrates the range of returns for domestic equity managers over the last quarter. The triangle represents the S&P 500 return. The number next to the triangle represents the ranking of the S&P 500 in the Large Cap Equity manager database.

#### Range of Separate Account Manager Returns by Asset Class One Quarter Ended September 30, 2020



#### Range of Separate Account Manager Returns by Asset Class One Year Ended September 30, 2020



## Caution Needed— Hard Road Ahead!

### ECONOMY

**2** The huge jump in 3Q GDP still leaves it 3.5% below its previous peak (4Q19). Employment remains more than 10 million jobs short of the level reached in the U.S. in February of this year, and many other measures of economic activity remain below pre-pandemic levels.

## Equity Jump Provided Some Help to Returns

### INSTITUTIONAL INVESTORS

**4** Institutional investors saw more gains in 3Q20 as equities rebounded, but not enough to overcome lagging global ex-U.S. equity returns, which hindered performance against a 60% equities/40% bonds benchmark. But results over 20 years continue to match the benchmark.

## Continued Gains, but With a Big Asterisk

### EQUITY

**6** The S&P 500 rose in 3Q20 and has gained 5.6% year to date, but would be negative without the big jumps of the major technology firms. Supported by low rates, global equity returns were broadly positive across developed and emerging markets but have been muted YTD.

## Low Returns in U.S.; Muted Gain Globally

### FIXED INCOME

**8** U.S. Treasury yields were relatively unchanged, and the Aggregate was roughly flat. Corporate and CMBS were the strongest investment grade sectors as investors hunted for yield. Global fixed income rose amid rate cuts, but U.S. dollar weakness dampened hedged returns.

## Virus Hit All Sectors; REITs Lagged Equities

### REAL ESTATE/REAL ASSETS

**10** All sectors experienced negative appreciation in 3Q20, but income rose for every sector except for Hotels. Rent collection held up well for most sectors. All property types will see an impact on vacancy rates due to the pandemic. Most REITs trade at a discount to net asset value.

## Activity Muted by Impact of Pandemic

### PRIVATE EQUITY

**12** Most private equity activity measures were down in 3Q20 compared to the previous quarter, a pattern that also held for most year-to-date comparisons. A rough averaging across fundraising and private investments and exits indicates a 30% drop in year-over-year activity.

## Stimulus Hopes, Fed Boost Risky Trades

### HEDGE FUNDS/MACs

**13** Representing a portfolio of hedge fund interests without implementation costs, the Credit Suisse Hedge Fund Index rose 3.4% in 3Q20. As a live hedge fund portfolio, net of fees and expenses, the median manager in the Callan Hedge Fund-of-Funds Database Group advanced 3.7%.

## Index's 2Q20 Gain of 15% Largest Ever

### DEFINED CONTRIBUTION

**15** The Callan DC Index's rebound comes one quarter after the largest drop since 4Q08. The index also had its largest-ever increase in balances, driven primarily by robust investment returns. TDFs regained their position atop the inflows leaderboard.

## Broad Market Quarterly Returns

**U.S. Equity**  
Russell 3000



**9.2%**

**Global ex-U.S. Equity**  
MSCI ACWI ex USA



**6.3%**

**U.S. Fixed Income**  
Bloomberg Barclays Agg



**0.6%**

**Global ex-U.S. Fixed Income**  
Bloomberg Barclays GBI ex US



**4.1%**

Sources: Bloomberg Barclays, FTSE Russell, MSCI

# Caution—Hard Road Ahead!

ECONOMY | Jay Kloepfer

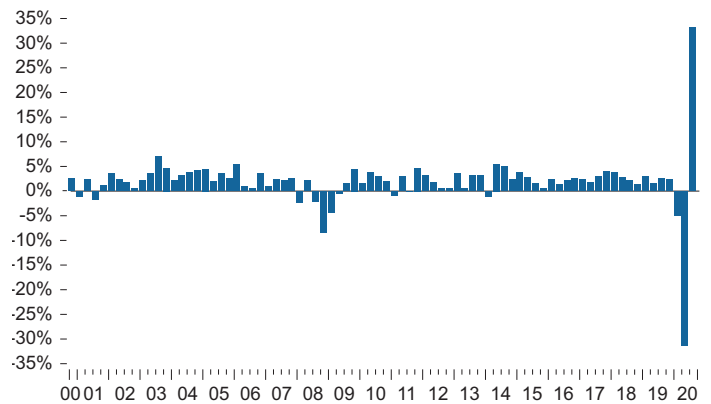
GDP growth came roaring back in 3Q20 as expected, notching a 33.1% gain, following the 31.4% decline in 2Q. The 3Q growth rate set a record by a wide margin (as did the decline), but the interpretation of quarterly GDP growth is problematic when trying to understand the true condition of the U.S. and global economies. GDP is customarily reported as quarterly growth, translated to an annual rate, which helps remove some of the seasonal noise that interferes with evaluating economic activity in normal times. The past nine months have been anything but normal, and annualized quarterly growth rates on either side of a global economic shutdown are perhaps less meaningful than analyzing the level of current and future economic activity relative to that seen before the onset of the pandemic. The huge jump in 3Q still leaves GDP 3.5% below its previous peak (4Q19). Employment remains more than 10 million jobs short of the level reached in the U.S. in February of this year, and many other measures of economic activity such as personal consumption remain below pre-pandemic levels.

The surge in 3Q GDP clearly reflects the gradual reopening of the U.S. and global economies that began back in May. The sharp increases in jobs, spending, and output were concentrated in May, June, and July. Growth in subsequent months has been much more modest. High-frequency tracking of the economy from the likes of GDPNow (from the Federal Reserve) and IHS Markit not only signaled slowing growth in August and September, but these forecasters are now expecting 4Q GDP growth to cycle back down to 5% annualized.

This would bring the level of GDP back close to where we started 2020, but the road forward into 2021 will be challenging. Growth across industry sectors, regions within the U.S., and occupations and income groups has been widely disparate. Technology illustrates the dichotomy. Defined as a combination of the Information Technology and Communication Services sectors, technology has seen lights-out performance in the stock market, up 22% collectively year-to-date through September, and accounts for 39% of the market cap of the S&P 500. Yet

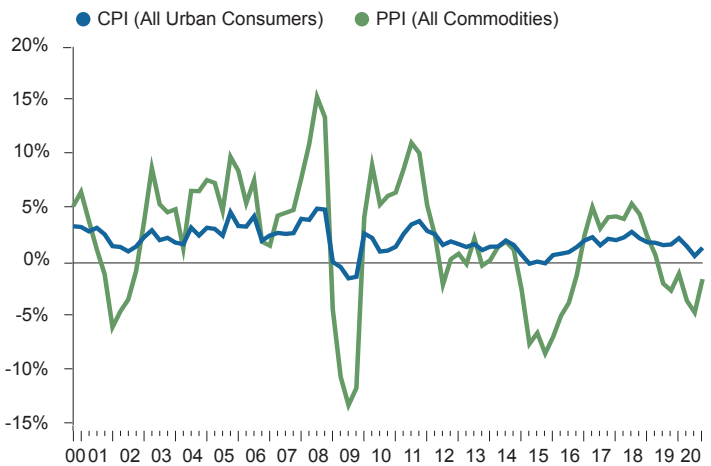
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

these two sectors account for just 6% of GDP, and only 2% of the U.S. job market as of August. The vast majority of jobs lost during the pandemic were in services (transportation, health care, financial business, and personal) as well as hospitality and retail. These sectors are underrepresented in the stock market, yet they employed a substantial portion of the U.S. workforce as the pandemic struck.

The slowdown in August, September, and into the fourth quarter came in part from a concern by both businesses and consumers

about the end to the stimulus payments and to extended unemployment benefits in September. Without another round of stimulus and further extension of jobless aid, growth will likely be restrained as the economy continues to operate under pandemic constraints and the effect from the stimulus earlier in the year wanes. The increase in COVID-19 infection rates both around the U.S. and the world, the so-called third wave, will further burden strained medical systems and increase pandemic-related deaths. The rising tide of infections may force the return of more stringent restrictions at the state level to control the virus, although a sudden stop to economic activity similar to what happened in the spring is unlikely.

Not all the economic news is dour as we head into the fourth quarter. Manufacturers' orders for durable goods have shown considerable strength, and consumer purchases of durable goods have been incredibly robust. Excluding capital goods like defense hardware and civilian aircraft, orders for durable goods have fully recovered to pre-pandemic levels. Trade has surprised on the upside with a narrowing of the trade deficit, even with demand for exports depressed by weakness in the global economy. Another surprising source of strength has been the housing market. Investment in new housing has already reached its pre-pandemic peak, driven by low mortgage rates and newly created demand for improved and larger housing by people leaving the urban cores of many large cities. Underlying demographics such as the aging baby boom and the maturation of families in the next generation suggest this trend is near-term in nature and will likely fade as we see some sort of resolution to the pandemic, perhaps in the second half of 2021.

Government assistance targeted to aid those affected by pandemic-related closures helped greatly to support household

### Recent Quarterly Economic Indicators

	3Q20	2Q20	1Q20	4Q19	3Q19	2Q19	1Q19	4Q18
Employment Cost–Total Compensation Growth	2.4%	2.7%	2.8%	2.7%	2.8%	2.7%	2.8%	2.9%
Nonfarm Business–Productivity Growth	4.9%*	10.1%	-0.3%	1.6%	0.3%	2.0%	3.7%	0.8%
GDP Growth	33.1%	-32.9%	-5.0%	2.4%	2.6%	1.5%	2.9%	1.3%
Manufacturing Capacity Utilization	70.3%	63.1%	73.9%	75.0%	75.4%	75.5%	76.4%	77.0%
Consumer Sentiment Index (1966=100)	75.6	74.0	96.4	97.2	93.8	98.4	94.5	98.2

\* Estimate

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan

### The Long-Term View

Index	3Q20	Periods Ended 9/30/20			
		Year	5 Yrs	10 Yrs	25 Yrs
<b>U.S. Equity</b>					
Russell 3000	9.2	15.0	13.7	13.5	9.3
S&P 500	8.9	15.1	14.1	13.7	9.3
Russell 2000	4.9	0.4	8.0	9.9	8.0
<b>Global ex-U.S. Equity</b>					
MSCI EAFE	4.8	0.5	5.3	4.6	4.6
MSCI ACWI ex USA	6.3	3.0	6.2	4.0	--
MSCI Emerging Markets	9.6	10.5	9.0	2.5	--
MSCI ACWI ex USA Small Cap	10.5	7.0	6.8	5.3	5.8
<b>Fixed Income</b>					
Bloomberg Barclays Agg	0.6	7.0	4.2	3.6	5.3
90-Day T-Bill	0.0	1.1	1.2	0.6	2.3
Bloomberg Barclays Long G/C	1.2	12.9	8.8	7.4	7.7
Bloomberg Barclays GI Agg ex US	4.1	5.5	3.6	1.3	3.9
<b>Real Estate</b>					
NCREIF Property	0.7	2.0	6.3	9.4	9.1
FTSE Nareit Equity	1.4	-18.2	3.9	7.9	9.3
<b>Alternatives</b>					
CS Hedge Fund	3.4	2.4	2.8	3.6	7.3
Cambridge PE*	9.9	7.7	11.4	13.4	14.9
Bloomberg Commodity	9.1	-8.2	-3.1	-6.0	0.9
Gold Spot Price	5.3	28.7	11.2	3.8	6.6
<b>Inflation – CPI-U</b>	1.0	1.4	1.8	1.8	2.1

\*Data for most recent period lags by a quarter. Data as of 6/30/20.

Sources: Bloomberg, Bloomberg Barclays, Bureau of Economic Analysis, Credit Suisse, FTSE Russell, MSCI, NCREIF, Refinitiv/Cambridge, S&P Dow Jones Indices

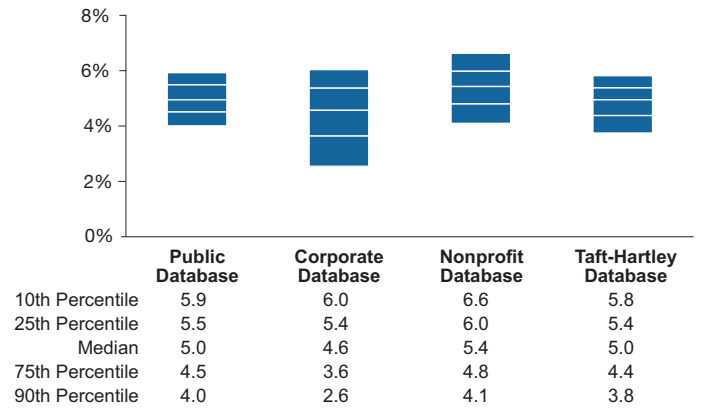
incomes, spending, and therefore production. While the job market has a long way to go to recover all the jobs lost, the unemployment rate has surprised to the positive, falling from 14.7% in April to 7.9% in September. The thorn in the job market's side has been the number of initial unemployment claims, which remains stubbornly high at 837,000 in September, still far above prior periods of stress. For reference, at the bottom of the GFC in March 2009, initial claims hit 665,000.

# Equity Gains Provided Some Help to 3Q Returns

## INSTITUTIONAL INVESTORS

- The continuing equity rebound helped boost institutional investors' returns over the 12 months ending Sept. 30, especially compared to the negative results at the end of 1Q20. Corporate plans performed the best, possibly driven by higher bond allocations given the performance of the Bloomberg Barclays US Aggregate Bond Index. Taft-Hartley plans trailed their peers.
- But the exceptionally strong gains in U.S. equity did not provide a big-enough short-term boost to investor returns to help them match a 60% S&P 500/40% Aggregate benchmark during 3Q20, held down by lagging results for global ex-U.S. equities.
- Over shorter time periods ranging up to 10 years, all investor types lagged the 60%/40% benchmark, but over a 20-year time period, all types posted returns roughly in line with that benchmark.
- Institutional investors continued to increase allocations to alternative asset classes, while interest in increasing exposure to equities or fixed income was minimal.

### Quarterly Returns, Callan Database Groups



Source: Callan

- Amid the pandemic, investors are shifting their focus from “What happened?” to “What should we do now?”
- Their liquidity needs have eased, but they are still top of mind.

### Callan Database Median and Index Returns\* for Periods Ended 9/30/20

Database Group	Quarter	Year-to-date	Year	3 Years	5 Years	10 Years
Public Database	5.0	2.2	7.5	6.2	8.1	7.7
Corporate Database	4.6	4.9	9.5	7.5	8.9	8.2
Nonprofit Database	5.4	1.5	7.3	5.9	8.0	7.5
Taft-Hartley Database	5.0	1.6	7.1	6.4	8.2	8.1
All Institutional Investors	5.0	2.4	7.8	6.4	8.2	7.9
Large (>\$1 billion)	4.9	2.8	8.0	6.8	8.3	8.1
Medium (\$100mm - \$1bn)	5.0	2.4	7.9	6.5	8.3	8.0
Small (<\$100 million)	5.2	2.1	7.6	6.1	8.0	7.6

\*Returns less than one year are not annualized.

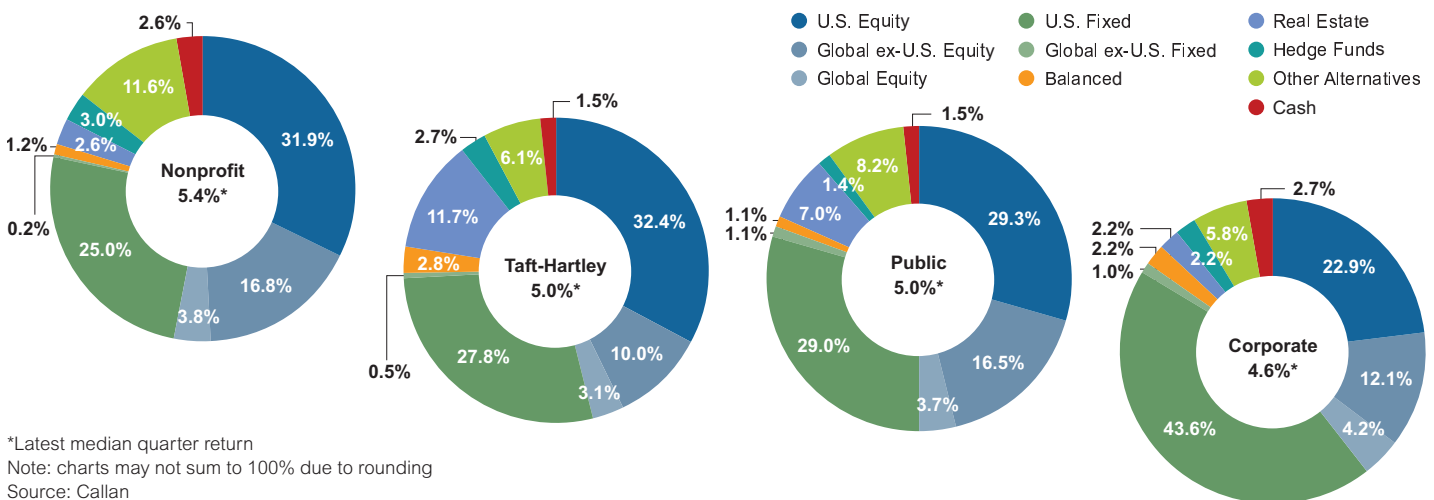
Source: Callan. Callan's database includes the following groups: public defined benefit (DB) plans, corporate DB plans, nonprofits, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan's clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.



- Investors across the board are reevaluating the purpose and the future of all asset classes:
  - Fixed income
  - Public equity
  - Hedge funds and liquid alternatives
  - Private equity, private credit, and the notion of private capital
- Asset class structures are the focus of many investors.
- It has been business as usual for many investors in the face of political, economic, and public health upheaval; this is a rational response when so much is uncertain.
- Many institutional investors are examining active vs. passive, value, and alternatives to cap-weighted passive allocations for their global equity structure.
- Opportunistic allocations are making a return as investors eye tactical investments.
- Both corporate and public defined benefit (DB) plans have prioritized funding status.
- DB plans also indicated they planned to reduce their passive exposure, a shift from previous quarters.
- More corporate DB plans are putting their liability-driven investing (LDI) plans on hold, and there was a reduction in LDI interest for corporate DB plans amid concerns about the impact of a continued low-rate environment.
- Public DB plans continued to focus beyond the traditional

- asset classes.
- They are also exploring alternatives to cap-weighted passive exposures to combat the concentration risk in U.S. equity.
- Some have also re-introduced opportunistic buckets—with a zero target, up to 5% allocation—to fund opportunities as they arise.
- Fees continue to be the top issue for DC plan sponsors. But they have expressed growing interest in investment structures and reducing the number of options in the plan.
- DC litigation has not slowed down during the pandemic.
- Recordkeeper consolidation activity picked up in 3Q20 with notable announcements from two key providers.
- Nonprofits showed growing interest in private real estate. But their appetite for ESG investing significantly declined, although there was a notable rise in the share of clients hiring staff specifically for ESG.
- More nonprofits expressed interest in private real estate.
- Callan’s strategic asset allocation work with endowments and community foundations is focused on evaluating investment portfolios that can support the desired distribution rate in order to balance intergenerational equity. Subdued expectations for capital markets returns are challenging both the risk tolerance of the organization and the sustainability of established spending rates.

Average Asset Allocation, Callan Database Groups



# Equity

## U.S. Equities

### Gains YTD

- S&P +8.9% for the quarter, bringing YTD to +5.6%
- Consumer Discretionary (+15%) and Industrials (+13%) dominated, with Tech (+12%) a close third in risk-on market.
- S&P 500 YTD would be negative if not for Facebook, Microsoft, Amazon, Alphabet, and Apple, representing 33% of the return.
- YTD, pandemic punished some sectors, rewarded others
- Tech +29% YTD; Cons. Disc. +23% (online retailers +60%)
- Energy -48% amid declining crude and natural gas prices
- Demand from hotels/cruise lines/airlines down as those industries have dropped 40%+

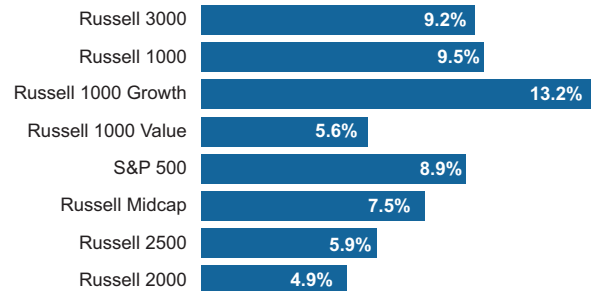
### Small cap reverses to trail large cap

- Following a stellar 2Q20 recovery, small cap trailed large.
- Behind large cap by a wide margin over last 12 months

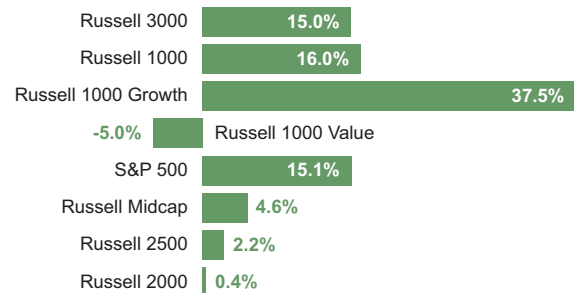
### Growth continues to outpace value across market caps

- Growth, value dispersion near all-time high driven by Tech
- YTD RUS1G +25% vs. RUS1V -12%
- Growth stock P/E near 2x historical average across market caps
- Today's index concentration surpasses levels seen in the late 90's Dot-Com boom.
- Index concentration of the top five names is at 5 standard deviations above the 30-year average of approximately 13%.
- Large and small value indices continue to underperform large and small growth in 3Q20 and YTD.

## U.S. Equity: Quarterly Returns



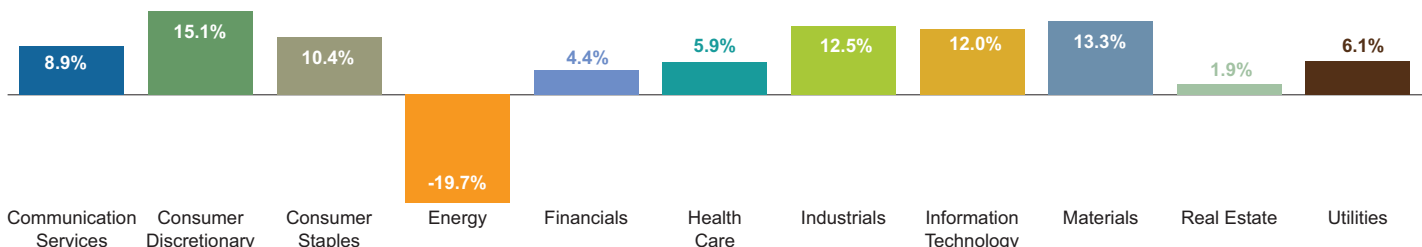
## U.S. Equity: One-Year Returns



Sources: FTSE Russell and S&P Dow Jones Indices

- Higher interest rates, a steeper yield curve, economic growth, and improving consumer confidence are among the catalysts that could result in value outperforming.
- S&P 500 Index currently delivers a dividend yield well above the 10-year Treasury, which can help support current valuation levels.

## Quarterly Performance of Industry Sectors



Source: S&P Dow Jones Indices

## Global/Global ex-U.S. Equity

### Continued recovery into 3Q20

- Returns broadly positive across developed and emerging markets but muted YTD
- Recent support from ultra-low interest rates and upward earnings revisions
- EM recovery driven by global risk-on environment; key countries within EM (China and South Korea) have better managed the pandemic
- Small cap continued to outperform large as lockdowns eased and business confidence improved.

### Rebound for cyclicals

- Materials, Industrials, and Consumer Discretionary outperformed as consumption and production resumed.
- Factor performance led by momentum (rebound) and volatility (risk-on market mentality)

### U.S. dollar vs. other currencies

- U.S. dollar lost ground versus every developed market currency on expectation of lower-for-longer U.S. rates due to Fed's shift in approach toward inflation and employment.

### COVID-19 exacerbated outperformance of growth vs. value

- Growth outpaced value by 34% year-to-date as of Sept. 30.
- Extremely narrow market with performance dominated by Tech
- Growth benefited from strong performance by Information Technology (27%), while Financials (-22%) and Energy (-46%) weighed on value.
- YTD performance gap between growth and value has not been seen over the past 45 years.

### What may stoke value rotation?

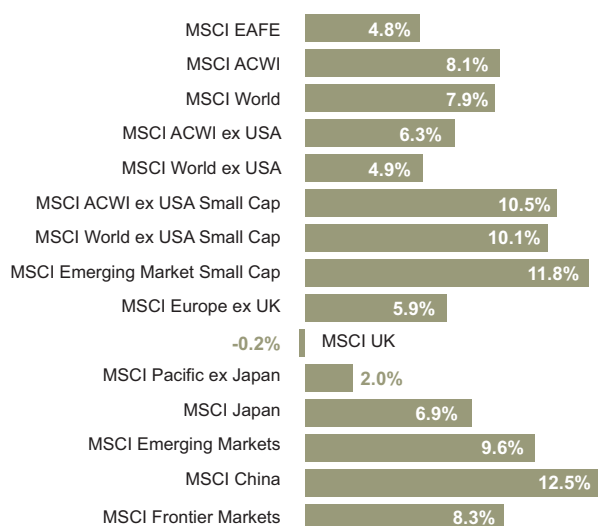
- Higher bond yields may be needed to drive value rebound.
- Bond yields correlated to value/growth since the GFC

### Key drivers: global recovery, U.S. elections

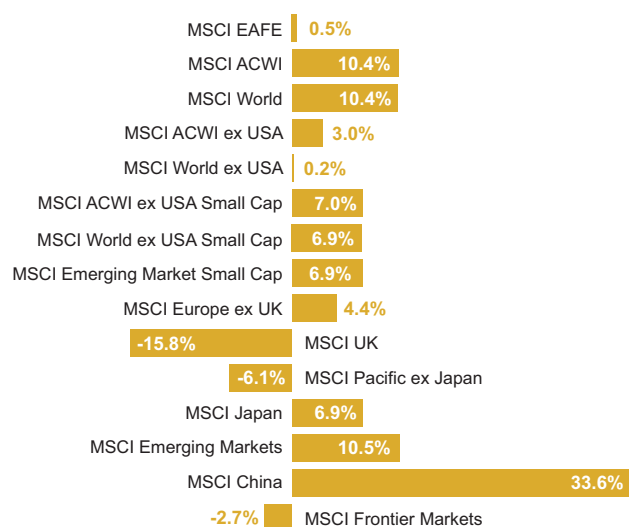
- Management of COVID-19 a key variable to recovery
- Advanced economies have struggled to contain the pandemic relative to emerging markets.

- Asian currencies have maintained resiliency relative to the U.S. dollar due to better COVID-19 management and economic outlook.

### Global ex-U.S. Equity: Quarterly Returns (U.S. Dollar)



### Global ex-U.S. Equity: One-Year Returns (U.S. Dollar)



Source: MSCI

# Fixed Income

## U.S. Fixed Income

### Treasury yields largely unchanged

- 10-year UST yield at 0.69% in 3Q20, up 3 bps from 2Q20 but off sharply from year-end level of 1.92%
- TIPS did well as inflation expectations rose from 1.34% to 1.63%.
- No rate hikes expected until at least 2023

### Bloomberg Barclays Aggregate roughly flat

- Corporate and CMBS the strongest investment grade sectors as investors hunted for yield
- Corporate supply (\$1 trillion YTD) at a record as companies rushed to take advantage of ultra-low interest rates

### Risk-on sentiment helped high yield and loans

- Non-investment grade sectors rallied, but remained roughly flat YTD.
- The high yield bond market also experienced high levels of net new issuance (over \$120 billion YTD).

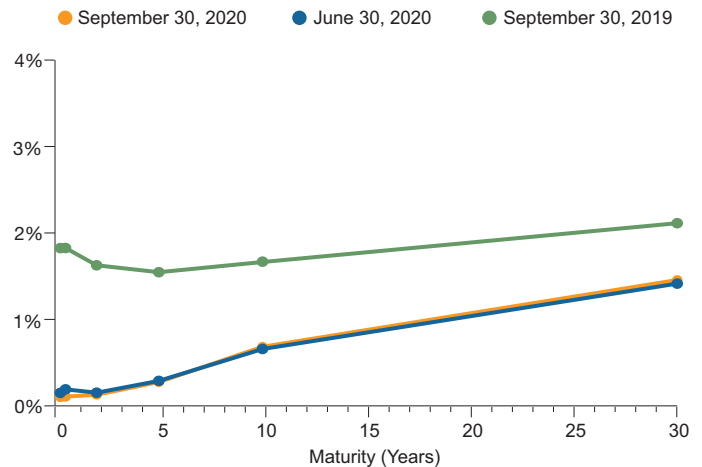
### Munis boosted by favorable supply/demand dynamics

- Robust demand and muted supply of tax-exempt municipals
- Issuance in taxable municipals sharply higher
- Tax revenues better than expected, but challenges remain and stimulus uncertain (but needed)

### High yield trended higher in quality

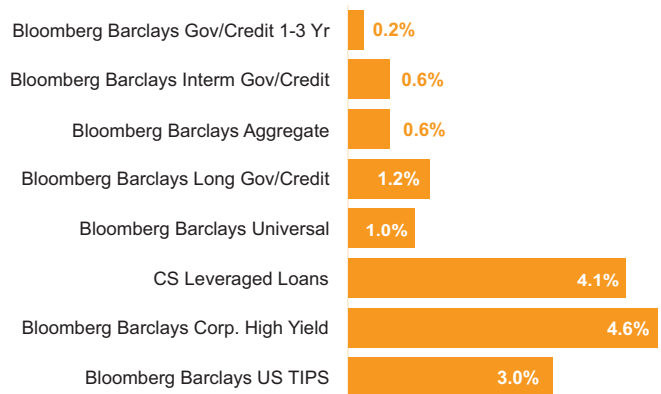
- BB/Ba-rated debt, the highest-quality category within high yield, experienced a surge of new issuance as 2020 remains a year of record new issuance across corporate debt.
- Reconstitution of downgraded investment grade debt into high yield has also added to the category.
- BBs now represent over half of the Bloomberg Barclays US High Yield Index.
- Historically, composition changes have generated market inefficiencies that managers can seek to exploit.

## U.S. Treasury Yield Curves



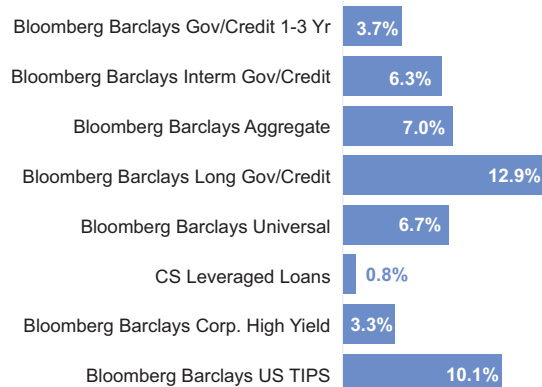
Source: Bloomberg

## U.S. Fixed Income: Quarterly Returns



Sources: Bloomberg Barclays and Credit Suisse

## U.S. Fixed Income: One-Year Returns



Sources: Bloomberg Barclays and Credit Suisse

**Default rate has trended higher, but below GFC levels**

- Additionally, spreads at the height of COVID-19 implied a 16.8% default rate, but thus far defaults have been well below market expectations at 5.8%.

**High yield spreads have rallied; managers are putting a greater focus on security selection**

- Recovery rates remain low relative to the 30-year average, concentrated within pandemic-sensitive sectors (particularly retail and energy) and subordinated debt.
- The ratio of downgrades to upgrades is higher than in 2008.

**Global Fixed Income**

**Rate cuts spur gains**

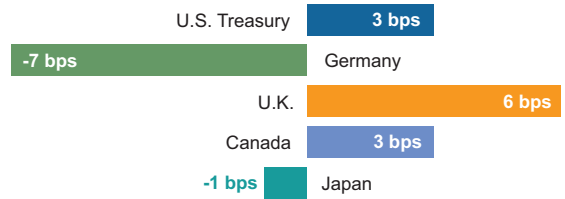
- Central banks continued to act aggressively to provide support via rate cuts, asset purchase programs, and other forms of stimulus.
- Broad-based U.S. dollar weakness dampened hedged returns as the USD lost 4% versus the euro and the British pound, and 2% versus the yen.
- Over 70% of global sovereign debt has negative real yields, a record high, according to JP Morgan.

**Emerging market debt made up ground**

- Emerging market debt indices gained in 3Q20 but remain down from year-end.
- U.S. dollar-denominated index (EMBI Global Diversified) outperformed local currency as U.S. rates fell; returns were mixed across the 70+ constituents, but most were positive.
- Local currency index (GBI-EM Global Diversified) was up slightly but returns varied widely among constituents (Russia: -8%; Brazil: -3%; Mexico and S. Africa: +6%).
- Staggered inclusion of China bonds continued with the weight rising to 7% in the JPM GBI-EM Global Diversified Index.

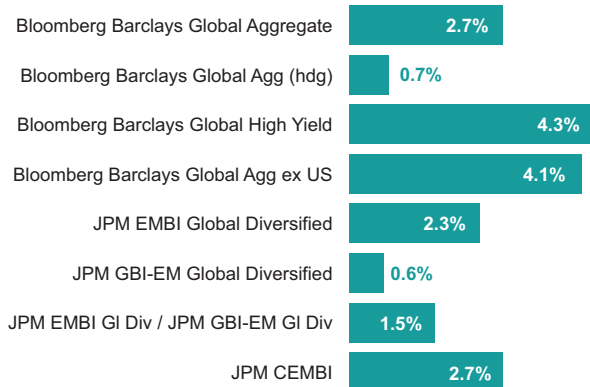
**Change in 10-Year Global Government Bond Yields**

2Q20 to 3Q20



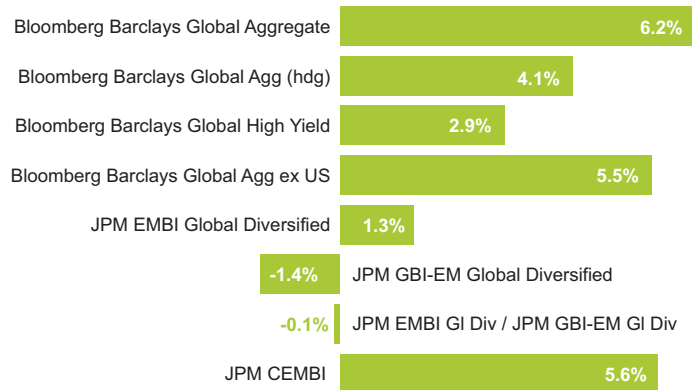
Source: Bloomberg Barclays

**Global Fixed Income: Quarterly Returns**



Sources: Bloomberg Barclays and JPMorgan Chase

**Global Fixed Income: One-Year Returns**



Sources: Bloomberg Barclays and JPMorgan Chase

# Pandemic Hit All Sectors; REITs Gained but Trailed Equities

REAL ESTATE/REAL ASSETS | Munir Iman

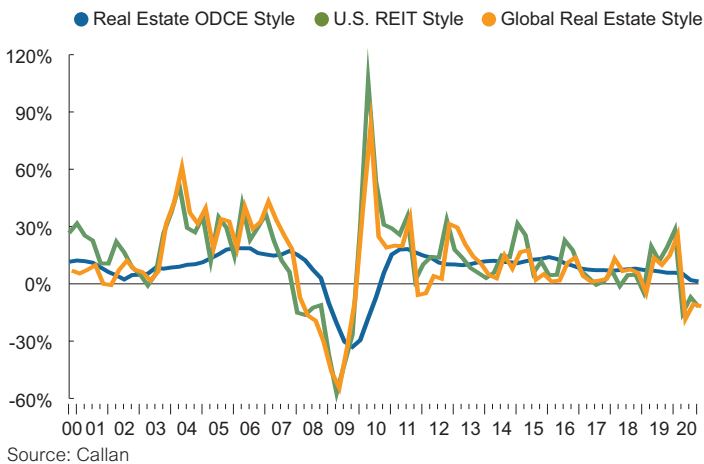
## All sectors saw negative appreciation

- Pandemic's impact reflected in 3Q20 results
- Income remained positive except in Hotel sector.
- All sectors experienced negative appreciation; Industrial remained the best performer.
- Dispersion of returns by manager within the ODCE Index due to both composition of underlying portfolios and valuation methodologies/approach
- Negative appreciation returns expected for 4Q and beyond

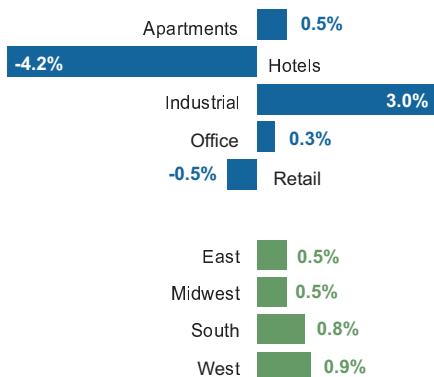
## U.S. real estate fundamentals

- Vacancy rates for all property types are or will be impacted.
- Net operating income has declined as retail continues to suffer.

## Rolling One-Year Returns



## Sector Quarterly Returns by Property Type and Region



- 3Q rent collections showed relatively stable income throughout the quarter in the Industrial, Apartment, and Office sectors. The Retail sector remained challenged, with regional malls impacted most heavily.
- Class A/B urban apartments relatively strong, followed by certain types of Industrial and Office
- New construction will be basically halted in future quarters except for pre-leased properties.
- Transaction volume dropped off during the quarter with the exception of industrial assets with strong-credit tenants trading at pre-COVID-19 levels.
- Cap rates remained steady during the quarter. The spread between cap rates and 10-year Treasuries is relatively high, leading some market participants to speculate that cap rates will not adjust much. Price discovery is happening and there are limited transactions.

## Global REITs rose but lagged the equity market recovery

- Global REITs underperformed in 3Q20, gaining 2.1% compared to 7.9% for global equities (MSCI World).
- U.S. REITs rose 1.4% in 3Q20, lagging the S&P 500 Index, which jumped 8.9%.
- Globally, REITs except in the U.S. and Singapore are trading at a discount to net asset value. In some regions the discount is at a five-year high.
- Property sectors are mixed, between trading at a discount or premium.

## Real estate investment opportunities

- Primary opportunity: purchase of mispriced publicly traded real estate, both equity and debt
- Emerging opportunity: purchase of mezzanine loans from forced sellers
- Industrial development can be implemented by well-capitalized owners that do not need a construction loan.
- Low LTV loans on core properties
- Distress, take-privates, rescue capital, recapitalizations, value add re-leasing strategies, and lending strategies will move into the opportunity set for investment as the pandemic

## REAL ESTATE/REAL ASSETS (Continued)

- and social distancing continue and operating income is squeezed by tenants not paying rent.
- If core open end real estate funds are on the sidelines due to redemption queues, there may be more opportunities to buy core assets with less competition or to buy assets from the funds themselves.
- Industrial has been the one bright spot, as e-commerce take up has accelerated.

### Infrastructure opportunities

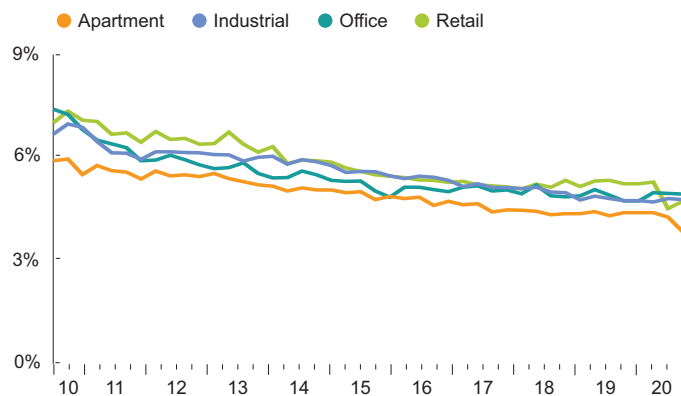
- Strong performance from communications assets has drawn interest from infrastructure investors across the sector, and in some cases real estate investors for data centers.
- Pandemic could accelerate the purchase of assets or formation of PPPs from cash-strapped governments/municipalities

- Potential purchase of mispriced publicly traded infrastructure
- Some sellers looking to secure strong pricing for stable assets with steady cash flows
- Opportunity for purchase of assets from over-leveraged buyers and/or with GDP-linked revenue

### Timberland and farmland opportunities

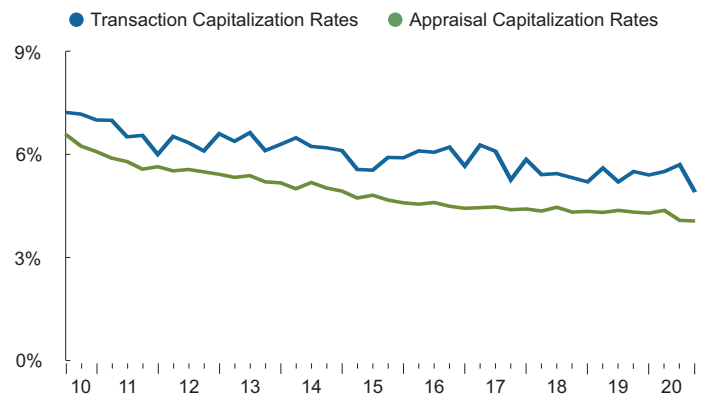
- Investment in farmland may increase if it proves to be a true diversifier in the pandemic.
- Volatility in commodity prices and changing supply chains may provide buying opportunities from overleveraged farmers and those who cannot shift crops away from restaurant/institutional use to grocery stores and suppliers to individual consumers.
- Institutional investment in timber has been waning for several years. The pandemic is unlikely to turn that tide.

### NCREIF Capitalization Rates by Property Type



Source: NCREIF. Capitalization rates (net operating income / current market value (or sale price)) are appraisal-based.

### NCREIF Transaction and Appraisal Capitalization Rates



Source: NCREIF  
Note: Transaction capitalization rate is equal weighted.

### Callan Database Median and Index Returns\* for Periods Ended 9/30/20

Private Real Assets	Quarter	Year to Date	Year	3 Years	5 Years	10 Years	15 Years
<b>Real Estate ODCE Style</b>	<b>0.3</b>	<b>-0.4</b>	<b>1.2</b>	<b>4.6</b>	<b>6.3</b>	<b>9.4</b>	<b>5.7</b>
NFI-ODCE (value wt net)	0.3	-0.7	0.5	4.2	5.7	9.3	5.7
NCREIF Property	0.7	0.4	2.0	5.1	6.3	9.4	7.4
NCREIF Farmland	0.6	1.1	2.1	4.7	5.8	10.7	12.7
NCREIF Timberland	0.0	0.2	0.2	2.1	2.6	4.4	6.1
<b>Public Real Estate</b>							
<b>Global Real Estate Style</b>	<b>3.1</b>	<b>-13.9</b>	<b>-11.8</b>	<b>2.6</b>	<b>4.4</b>	<b>6.9</b>	<b>5.3</b>
FTSE EPRA Nareit Developed	2.1	-19.7	-18.3	-1.5	2.0	4.7	--
<b>Global ex-U.S. Real Estate Style</b>	<b>5.5</b>	<b>-12.0</b>	<b>-6.7</b>	<b>3.6</b>	<b>4.8</b>	<b>6.6</b>	<b>5.5</b>
FTSE EPRA Nareit Dev ex US	3.9	-18.5	-13.9	-0.6	2.5	3.7	--
<b>U.S. REIT Style</b>	<b>1.8</b>	<b>-12.3</b>	<b>-12.0</b>	<b>3.4</b>	<b>5.8</b>	<b>9.2</b>	<b>7.0</b>
EPRA Nareit Equity REITs	1.4	-17.5	-18.2	0.2	3.9	7.9	5.9

\*Returns less than one year are not annualized.  
Sources: Callan, FTSE Russell, NCREIF



# Pandemic's Impact Muted

PRIVATE EQUITY | Gary Robertson

Private equity activity measures were generally down in 3Q20, although the IPO market for both venture capital and buyouts showed large increases. So far this year, venture capital has been less affected by the pandemic than buyouts. While capital markets seemed to stabilize in the quarter, pricing private transactions based on future earnings power remains challenging.

Private equity partnerships holding final closes totaled \$107 billion, with 224 new partnerships formed, according to PitchBook. The dollar volume fell 36% from 2Q20, and the number of funds holding final closes fell 12%. So far this year, 2020 is running 7% behind 2019. Energy and mezzanine have fallen out of favor with investors, but other strategies are in line with historical market share.

The number of new buyout transactions increased but transactions were smaller, according to PitchBook. Funds closed 1,500 company investments with \$65 billion in disclosed deal value, a 31% increase in count but a 32% drop in dollar value from 2Q20.

According to PitchBook, new financing rounds in venture capital companies totaled 6,234, with \$76 billion of announced value. The number of investments was down 13% from the prior quarter, and announced value rose 7%. The median pre-money valuations of Series A through D rounds continued to increase, with only seed stage remaining flat.

## Private Equity Performance (%) (Pooled Horizon IRRs through 6/30/20\*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
All Venture	11.51	14.97	17.99	12.08	15.98	11.88	5.95	27.61
Growth Equity	12.85	13.08	16.42	13.12	14.11	13.10	10.94	14.66
All Buyouts	9.25	5.77	11.38	11.79	14.17	12.29	11.36	12.95
Mezzanine	2.99	2.91	8.50	8.85	10.79	10.03	7.87	9.50
Credit Opportunities	5.61	-5.64	2.35	4.30	8.65	8.50	9.30	9.41
Control Distressed	9.49	-1.35	3.85	6.29	10.15	9.39	9.96	10.43
<b>All Private Equity</b>	<b>10.02</b>	<b>7.82</b>	<b>12.53</b>	<b>11.28</b>	<b>13.82</b>	<b>11.90</b>	<b>9.68</b>	<b>13.94</b>
S&P 500	20.54	7.51	10.73	10.73	13.99	8.83	5.91	9.27
Russell 3000	22.03	6.67	10.19	9.96	14.57	9.36	8.00	9.10

Note: Private equity returns are net of fees. Sources: Refinitiv/Cambridge and S&P Dow Jones Indices  
\*Most recent data available at time of publication

Note: Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of *Capital Markets Review* and other Callan publications.

## Funds Closed 1/1/20 to 9/30/20

Strategy	No. of Funds	Amt (\$mm)	Share
Venture Capital	409	81,381	19%
Growth Equity	69	42,029	10%
Buyouts	195	196,737	45%
Mezzanine Debt	9	7,501	2%
Distressed	18	22,924	5%
Energy	4	6,216	1%
Secondary and Other	57	59,609	14%
Fund-of-Funds	44	20,612	5%
<b>Totals</b>	<b>805</b>	<b>437,009</b>	<b>100%</b>

Source: PitchBook (Figures may not total due to rounding.)

There were 294 private M&A exits of private equity-backed companies (excluding venture capital), PitchBook reports, with disclosed values totaling \$37 billion. Exits were up 12% from the prior quarter but announced dollar volume plunged 70%. The year-to-date exit count declined 41%. There were 40 private-equity backed IPOs in 3Q raising \$6 billion, a steep jump from 17 totaling \$12 billion previously.

Venture-backed M&A exits totaled 336 transactions with disclosed value of \$15 billion. The number of sales increased 3% and announced dollar volume slid 35%. The year-to-date exit count declined 24%. There were 122 VC-backed IPOs with a combined float of \$15 billion. For comparison, 2Q had 326 IPOs and total issuance of \$23 billion.



# Stimulus Hopes Boosted Risky Bets

HEDGE FUNDS/MACs | Jim McKee

Hope may not be a strategy, but it elevated risk appetites in 3Q20. Active bets of hedge funds proved mostly positive amid the backdrop of rebounding equity and credit markets, continued low rates, and the potential for additional government stimulus payments.

Representing a paper portfolio of hedge fund interests without implementation costs, the Credit Suisse Hedge Fund Index (CS HFI) rose 3.4% in 3Q20. As a live hedge fund portfolio, net of fees and expenses, the median manager in the Callan Hedge Fund-of-Funds Peer Group advanced 3.7%.

Representing 50 large, broadly diversified hedge funds with low-beta exposure to equity markets, the average manager in the Callan Institutional Hedge Fund (CIHF) Peer Group added 3.1%. The average CIHF fund focused on Hedged Equity grew 4.1%, benefiting from continued stock and sector

## Hedge Fund Style Group Returns



Sources: Callan, Credit Suisse, Federal Reserve

## Callan Peer Group Median and Index Returns\* for Periods Ended 9/30/20

Hedge Fund Universe	Quarter	Year to Date	Year	3 Years	5 Years	10 Years
Callan Institutional Hedge Fund Peer Group	2.9	1.6	4.4	3.9	4.7	5.6
Callan Fund-of-Funds Peer Group	3.7	2.4	5.1	3.5	3.8	4.2
Callan Absolute Return FOF Style	3.3	1.1	2.0	3.1	2.8	3.6
Callan Core Diversified FOF Style	3.9	2.1	5.0	3.5	3.8	4.1
Callan Long/Short Equity FOF Style	6.3	6.6	10.1	5.0	5.0	5.5
BB GS Cross Asset Risk Premia 6% Vol Idx	-0.7	-5.5	-6.8	2.5	2.8	5.0
Credit Suisse Hedge Fund	3.4	0.0	2.4	2.7	2.8	3.6
CS Convertible Arbitrage	5.6	5.8	9.4	4.1	4.5	4.0
CS Distressed	0.9	-4.9	-3.7	-1.2	1.3	3.2
CS Emerging Markets	4.9	6.3	14.6	3.9	6.3	4.5
CS Equity Market Neutral	3.1	1.0	2.0	-0.4	0.2	1.6
CS Event-Driven Multi	6.1	-3.5	-0.9	1.2	1.3	2.1
CS Fixed Income Arb	3.6	0.3	2.6	3.2	3.6	4.5
CS Global Macro	4.6	0.5	1.3	4.1	3.4	3.9
CS Long/Short Equity	2.8	0.2	5.3	3.5	3.6	4.9
CS Managed Futures	-1.0	-3.8	-6.3	1.4	-1.4	0.5
CS Multi-Strategy	3.4	0.5	1.8	2.3	3.6	5.6
CS Risk Arbitrage	4.0	4.2	6.3	3.1	4.3	2.7
HFRI Asset Wtd Composite	2.5	-4.4	-2.2	1.4	2.4	3.4
90-Day T-Bill + 5%	1.3	4.4	6.1	6.7	6.2	5.6

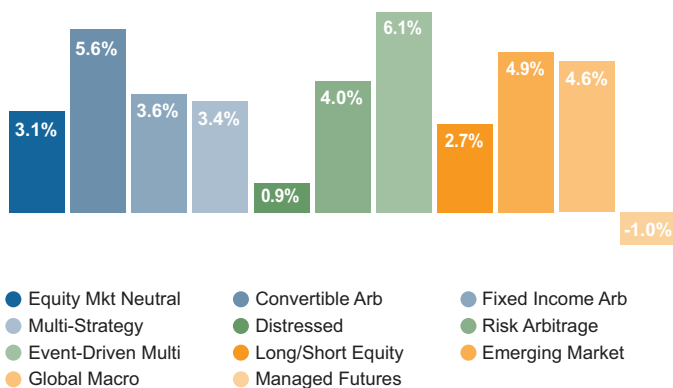
\*Net of fees. Sources: Bloomberg Barclays GSAM, Callan, Credit Suisse, Hedge Fund Research

dispersion. Those more exposed to Hedged Credit strategies advanced 3.1% on average but were still suffering a 2.4% year-to-date loss, as the recovery of illiquid credit lagged more liquid markets.

Within the Callan Hedge Fund-of-Funds Group, market exposures notably affected performance in 3Q. Benefiting from beta tailwinds, the median Callan Long/Short Equity FOF (+6.3%) easily beat the Callan Absolute Return FOF (+3.3%), which typically have exposures to less liquid risk premia like credit. With fuller exposure to both non-directional and directional styles, the Core Diversified FOF gained 3.9%.

Within CS HFI, the best-performing strategy last quarter was Event-Driven Multi-Strategy (+6.1%), which tends to benefit more in risk-on environments with soft equity catalysts. Another strong strategy was Convertible Arbitrage (+5.6%), as it benefited from unusually strong issuance with discounted pricing. Although the big interest in risk assets helped, Distressed clawed ahead only 0.9% with its deep value assets mired in COVID-stricken parts of the economy. Without any meaningful asset class trends to track, Managed Futures (-1.0%) was the only CS HFI strategy that lost value.

### Credit Suisse Hedge Fund Strategy Returns



Source: Credit Suisse

Measuring the performance of systematic risk premia in 3Q, the Bloomberg GSAM Risk Premia Index (RPI) lost 0.6% based upon a 6% volatility target. Among the Index's unlevered components of risk premia, the biggest detractor was U.S. Equity Value L/S (-6.5%), which has now fallen 22.8% YTD. Another big detractor within the RPI was Currency Carry (-2.4%). As the risk premia that often complements the performance of value, U.S. Equity Momentum L/S gained 3.2%.

Within Callan's database of liquid alternative solutions, the median managers of Callan Multi-Asset Class (MAC) Style Groups generated mixed results, gross of fees, consistent with their underlying risk exposures. For example, the median Callan Risk Premia MAC fell 0.7% based on its exposures to alternative betas (such as those in the Bloomberg GSAM index noted above) targeting 5% to 15% portfolio volatility. Typically targeting equal risk-weighted allocations to major asset classes with leverage, the Callan Risk Parity MAC (+4.2%) trailed the traditional unlevered benchmark of 60% MSCI ACWI and 40% Bloomberg Barclays US Aggregate Bond Index (+5.1%) that was less impacted by a stalled bond market. Though usually long equity bias within its dynamic asset allocation mandate, the Callan Long-Biased MAC (+4.5%) similarly underperformed the 60%/40% index.

### MAC Style Group Returns



Sources: Bloomberg Barclays, Callan, Eurekahedge, S&P Dow Jones Indices

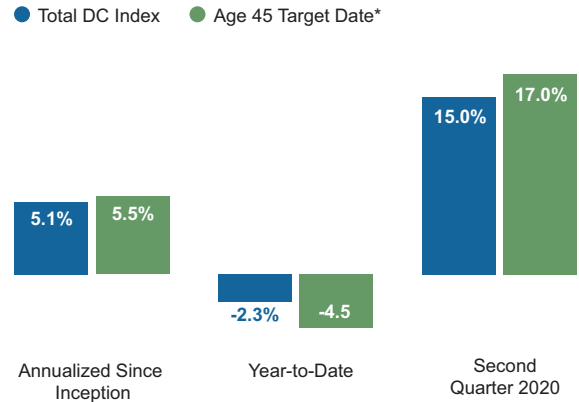
# Index's 2Q20 Gain of 15% Is Its Largest Ever

DEFINED CONTRIBUTION | Patrick Wisdom

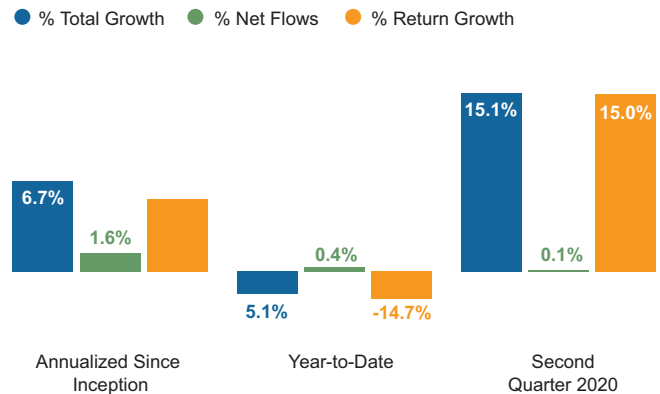
- The Callan DC Index™ jumped 15.0% in 2Q20, its largest gain since inception. It was also a sharp reversal from its 15.0% plunge in the first quarter, which was the largest drop since 4Q08. The Age 45 Target Date Fund (analogous to the 2040 vintage) posted a larger second-quarter gain (17.0%), attributable to its higher allocation to equity, which outperformed fixed income during the quarter.
- The Index also recorded its largest-ever increase in balances during 2Q (15.1%), a quarter after experiencing its biggest-ever quarterly drop. The quarter's robust investment returns were the primary driver.
- After an unusual first quarter in which target date funds (TDFs) received only 1.9% of net inflows, TDFs reclaimed their usual spot atop the inflow leaderboard with quarterly net flows of 41.4%.
- Brokerage windows (7.2%) saw their second consecutive quarter of inflows. On the other hand, U.S. small/mid cap equity (-28.3%) had the largest percentage of outflows.
- Second-quarter turnover (i.e., net transfer activity levels within DC plans) returned to a more typical level, decreasing to 0.37% from the previous quarter's measure of 0.96%.
- The Index's overall allocation to equity increased to 68.4% after dipping to 66.0% in the previous quarter, the smallest since 2012.
- The percentage of assets allocated to U.S. large cap increased by more than 1.6 percentage points, bringing the overall allocation to 25.4%. U.S. small/mid cap (7.7%) saw the next largest increase from the previous quarter.
- Stable value (10.2%) had the largest decrease in allocation after having the largest gain during the previous quarter.
- The prevalence of a money market offering (47.7%) increased by nearly 4 percentage points from the previous quarter and sits at its highest mark since 3Q17.

*The Callan DC Index is an equally weighted index tracking the cash flows and performance of over 100 plans, representing nearly \$300 billion in assets. The Index is updated quarterly and is available on Callan's website.*

## Investment Performance



## Growth Sources



## Net Cash Flow Analysis (2Q20)

(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	41.40%
U.S. Fixed Income	31.91%
U.S. Large Cap	-21.06%
U.S. Smid Cap	-28.29%
<b>Total Turnover**</b>	<b>0.37%</b>

Data provided here is the most recent available at time of publication.

Source: Callan DC Index

Note: DC Index inception date is January 2006.

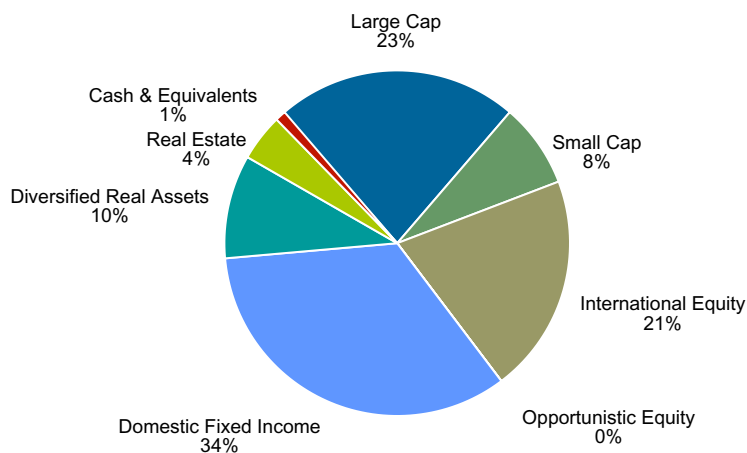
\* The Age 45 Fund transitioned from the average 2035 TDF to the 2040 TDF in June 2018.

\*\* Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

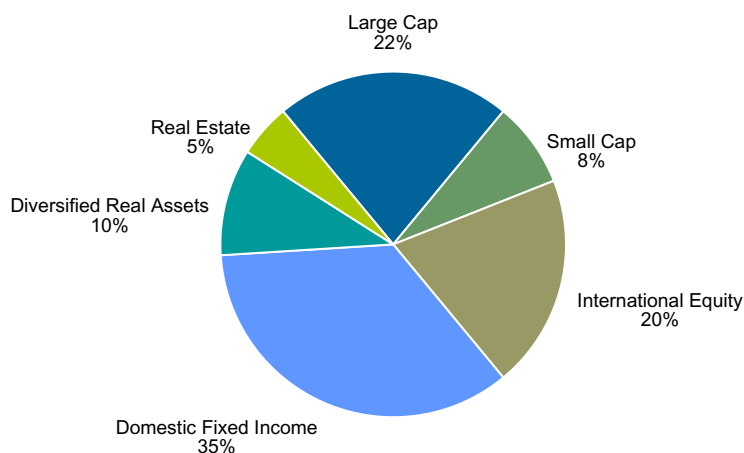
## Actual vs Target Asset Allocation As of September 30, 2020

The first chart below shows the Fund's asset allocation as of September 30, 2020. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

**Actual Asset Allocation**



**Target Asset Allocation**



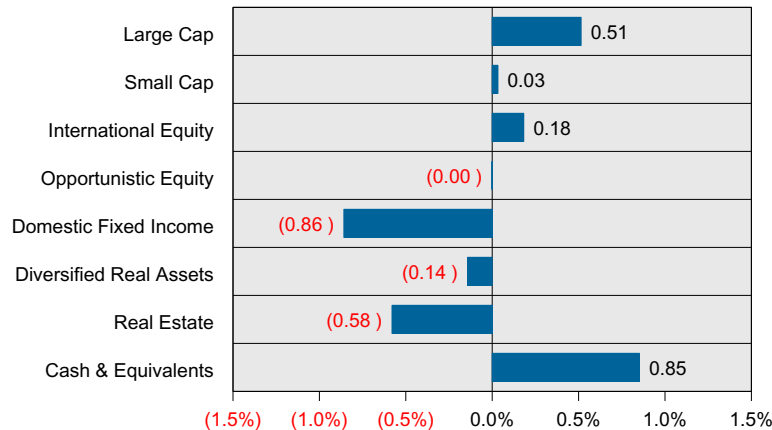
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	1,676,983	22.7%	22.0%	0.7%	48,885
Small Cap	583,651	7.9%	8.0%	(0.1%)	(8,384)
International Equity	1,517,289	20.5%	20.0%	0.5%	37,199
Opportunistic Equity	697	0.0%	0.0%	0.0%	697
Domestic Fixed Income	2,505,728	33.9%	35.0%	(1.1%)	(84,429)
Diversified Real Assets	719,173	9.7%	10.0%	(0.3%)	(20,872)
Real Estate	324,805	4.4%	5.0%	(0.6%)	(45,217)
Cash & Equivalents	72,121	1.0%	0.0%	1.0%	72,121
<b>Total</b>	<b>7,400,447</b>	<b>100.0%</b>	<b>100.0%</b>		

\* Current Quarter Target = 35.0% Blmbg Aggregate, 22.0% Russell 1000 Index, 20.0% MSCI EAFE, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.

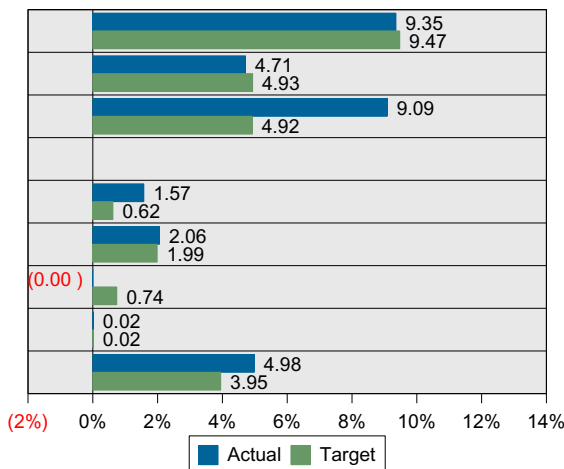
## Quarterly Total Fund Relative Attribution - September 30, 2020

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

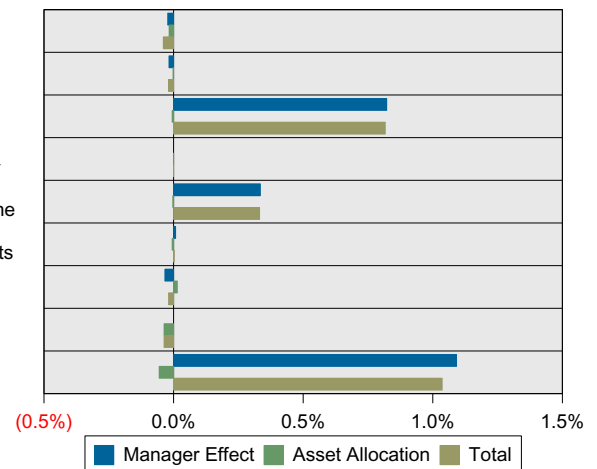
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended September 30, 2020

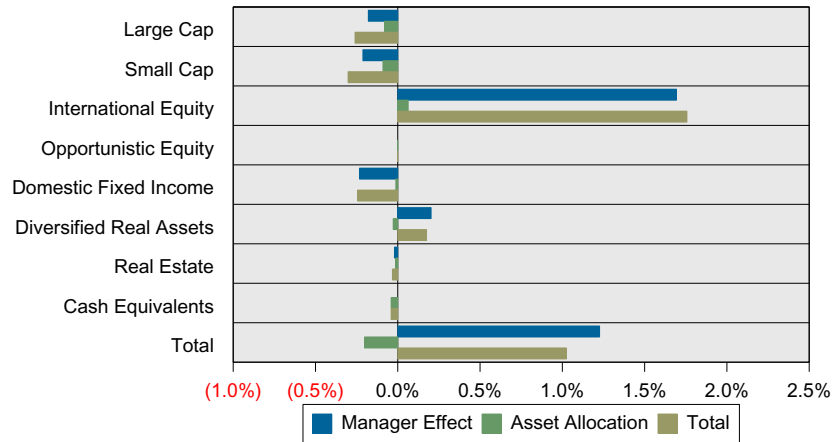
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	23%	22%	9.35%	9.47%	(0.02%)	(0.02%)	(0.04%)
Small Cap	8%	8%	4.71%	4.93%	(0.02%)	(0.00%)	(0.02%)
International Equity	20%	20%	9.09%	4.92%	0.82%	(0.01%)	0.82%
Opportunistic Equity	0%	0%	0.00%	0.00%	0.00%	(0.00%)	(0.00%)
Domestic Fixed Income	34%	35%	1.57%	0.62%	0.33%	(0.00%)	0.33%
Diversified Real Assets	10%	10%	2.06%	1.99%	0.01%	(0.01%)	0.00%
Real Estate	4%	5%	(0.00%)	0.74%	(0.03%)	0.01%	(0.02%)
Cash & Equivalents	1%	0%	0.02%	0.02%	0.00%	(0.04%)	(0.04%)
<b>Total</b>			<b>4.98%</b>	<b>3.95%</b>	<b>+ 1.09%</b>	<b>+ (0.06%)</b>	<b>1.04%</b>

\* Current Quarter Target = 35.0% Blmbg Aggregate, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.0% NDLEG-Opportunistic Equity.

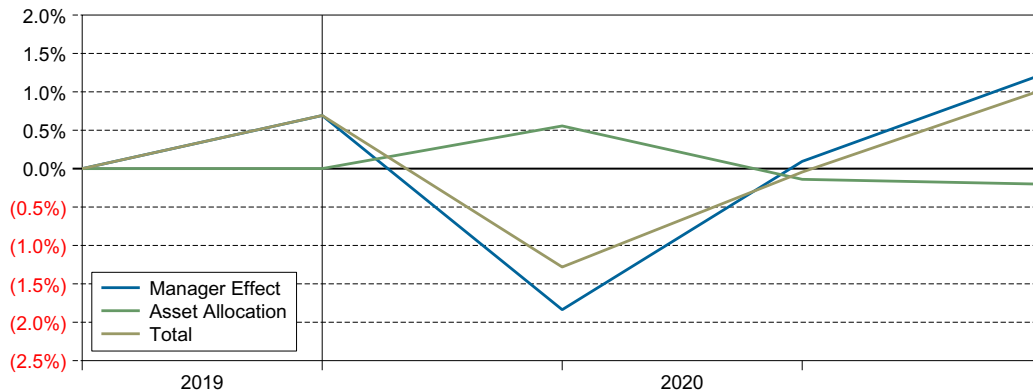
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### One Year Relative Attribution Effects



### Cumulative Relative Attribution Effects



### One Year Relative Attribution Effects

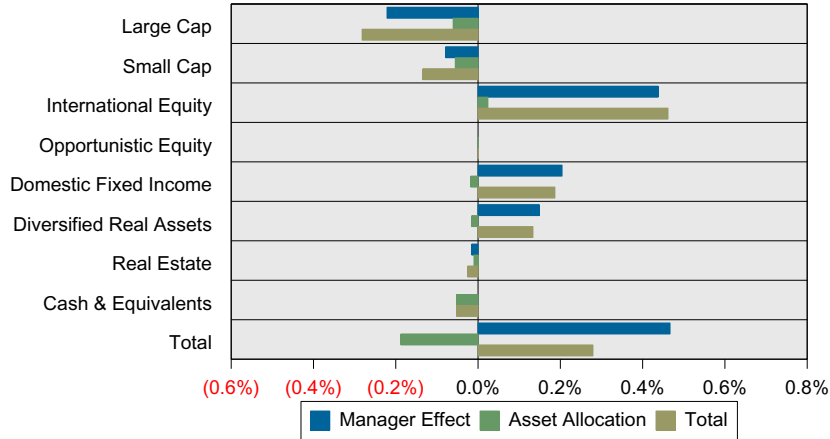
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	22%	22%	14.97%	16.01%	(0.18%)	(0.08%)	(0.26%)
Small Cap	8%	8%	(2.11%)	0.39%	(0.21%)	(0.09%)	(0.30%)
International Equity	20%	20%	8.17%	0.16%	1.69%	0.06%	1.76%
Opportunistic Equity	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Domestic Fixed Income	35%	35%	6.83%	6.98%	(0.23%)	(0.01%)	(0.24%)
Diversified Real Assets	10%	10%	8.75%	6.63%	0.20%	(0.03%)	0.17%
Real Estate	5%	5%	1.41%	2.00%	(0.02%)	(0.01%)	(0.03%)
Cash Equivalents	1%	0%	0.83%	0.83%	0.00%	(0.04%)	(0.04%)
<b>Total</b>			<b>8.48%</b>	<b>7.45%</b>	<b>+ 1.23%</b>	<b>+ (0.20%)</b>	<b>1.02%</b>

\* Current Quarter Target = 35.0% Blmbg Aggregate, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.0% NDLEG-Opportunistic Equity.

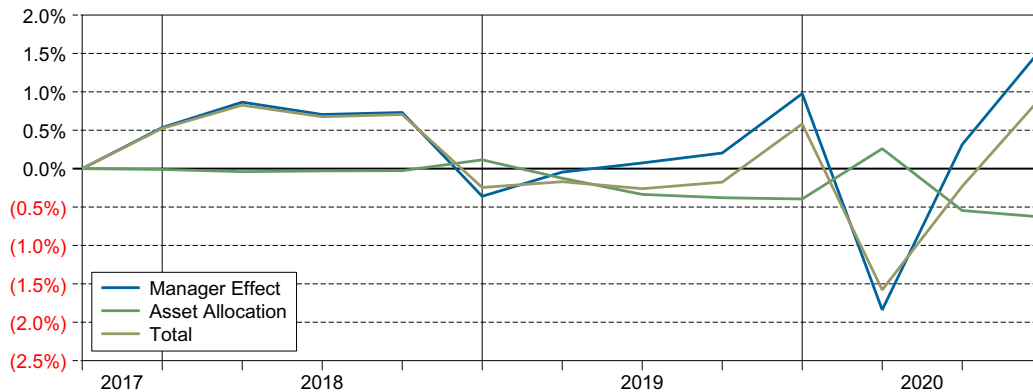
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Three Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Three Year Annualized Relative Attribution Effects

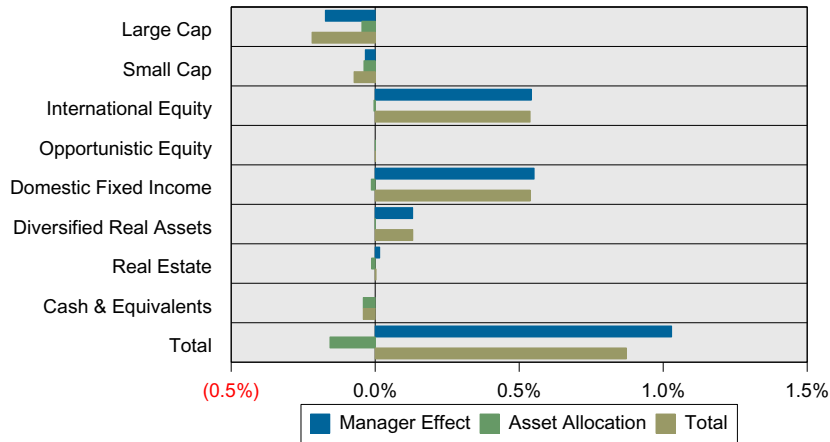
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	22%	22%	11.24%	12.38%	(0.22%)	(0.06%)	(0.28%)
Small Cap	8%	8%	0.83%	1.77%	(0.08%)	(0.06%)	(0.13%)
International Equity	20%	20%	2.57%	0.62%	0.44%	0.02%	0.46%
Opportunistic Equity	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Domestic Fixed Income	35%	35%	6.04%	5.24%	0.20%	(0.02%)	0.19%
Diversified Real Assets	10%	10%	6.10%	4.55%	0.15%	(0.02%)	0.13%
Real Estate	5%	5%	4.67%	5.11%	(0.02%)	(0.01%)	(0.03%)
Cash & Equivalents	1%	0%	1.49%	1.49%	0.00%	(0.05%)	(0.05%)
<b>Total</b>			<b>6.22%</b>	<b>5.94%</b>	<b>+ 0.47%</b>	<b>+ (0.19%)</b>	<b>0.28%</b>

\* Current Quarter Target = 35.0% Blmbg Aggregate, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.0% NDLEG-Opportunistic Equity.

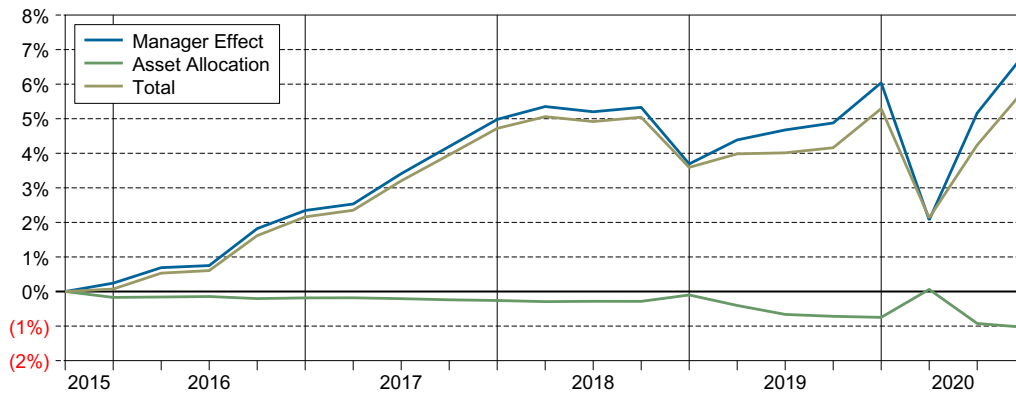
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Five Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	22%	22%	13.23%	14.09%	(0.17%)	(0.05%)	(0.22%)
Small Cap	8%	8%	7.61%	8.00%	(0.03%)	(0.04%)	(0.07%)
International Equity	20%	20%	7.77%	5.17%	0.54%	(0.00%)	0.54%
Opportunistic Equity	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Domestic Fixed Income	35%	35%	5.88%	4.18%	0.55%	(0.01%)	0.54%
Diversified Real Assets	10%	10%	5.26%	3.93%	0.13%	0.00%	0.13%
Real Estate	5%	5%	6.44%	6.28%	0.02%	(0.01%)	0.00%
Cash & Equivalents	1%	0%	1.05%	1.05%	0.00%	(0.04%)	(0.04%)
<b>Total</b>			<b>8.13%</b>	<b>7.26%</b>	<b>+ 1.03%</b>	<b>+ (0.16%)</b>	<b>0.87%</b>

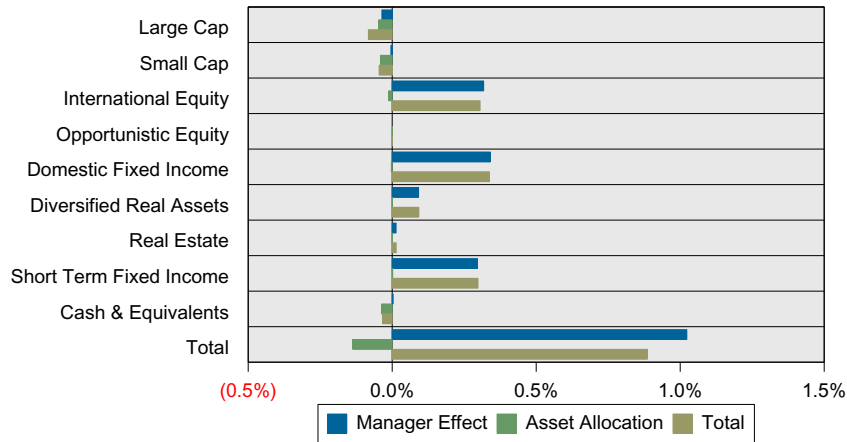
\* Current Quarter Target = 35.0% Blmbg Aggregate, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.0% NDLEG-Opportunistic Equity.



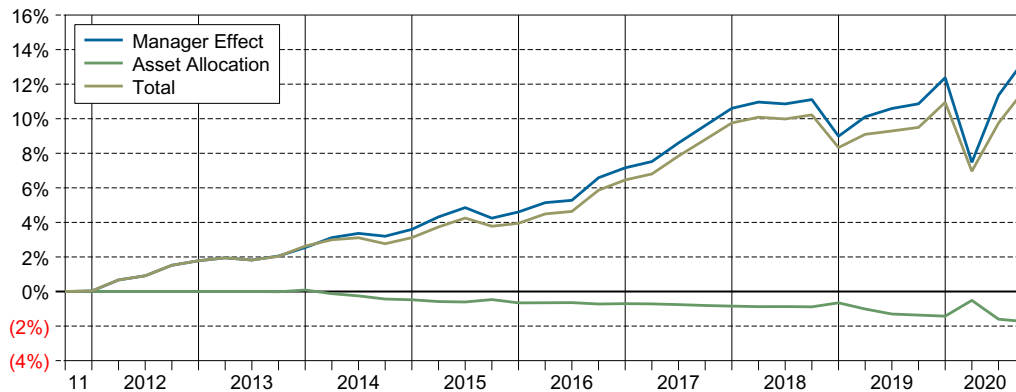
## Cumulative Total Fund Relative Attribution - September 30, 2020

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### Nine Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Nine Year Annualized Relative Attribution Effects

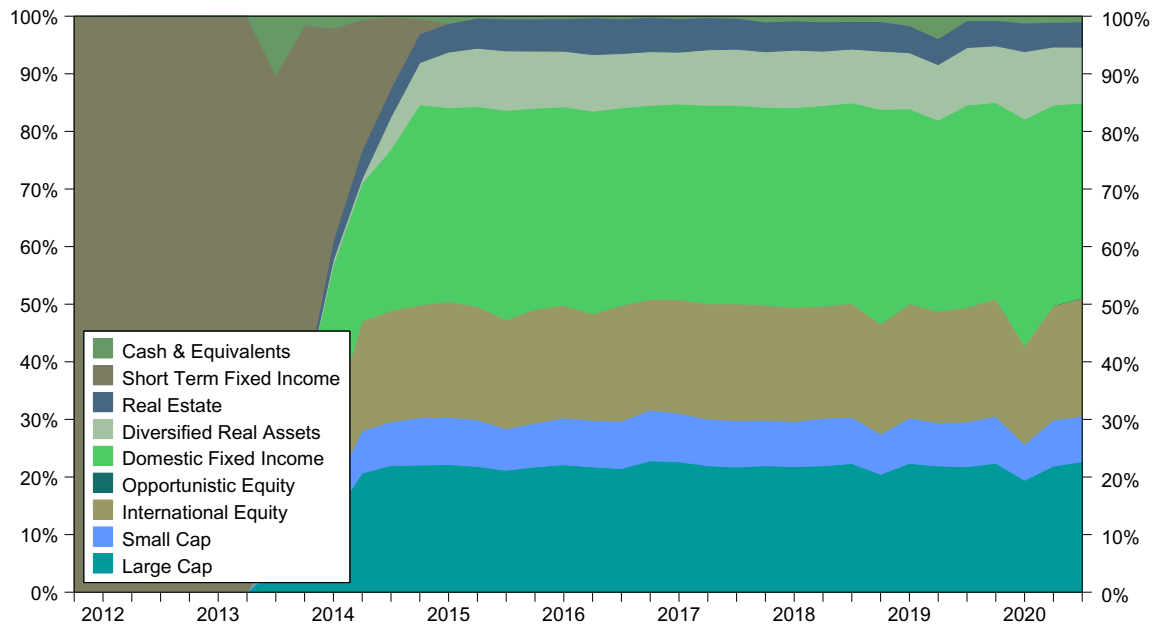
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	16%	16%	-	-	(0.04%)	(0.05%)	(0.08%)
Small Cap	6%	6%	-	-	(0.00%)	(0.04%)	(0.05%)
International Equity	15%	15%	-	-	0.32%	(0.01%)	0.31%
Opportunistic Equity	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Domestic Fixed Income	25%	26%	-	-	0.34%	(0.00%)	0.34%
Diversified Real Assets	7%	7%	-	-	0.09%	0.00%	0.09%
Real Estate	4%	4%	-	-	0.01%	0.00%	0.01%
Short Term Fixed Income	25%	25%	-	-	0.30%	0.00%	0.30%
Cash & Equivalents	3%	2%	0.63%	0.62%	0.00%	(0.04%)	(0.03%)
<b>Total</b>			<b>5.37%</b>	<b>4.48%</b>	<b>+ 1.02%</b>	<b>+ (0.14%)</b>	<b>0.89%</b>

\* Current Quarter Target = 35.0% Blmbg Aggregate, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.0% NDLEG-Opportunistic Equity.

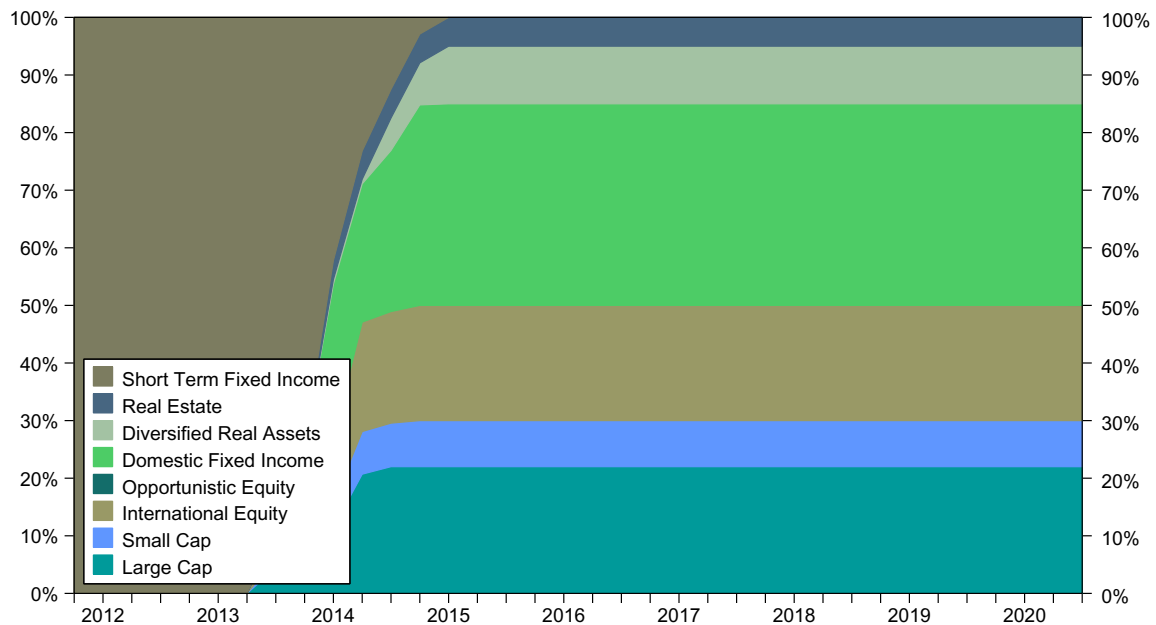
## Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, and the fund's historical target asset allocation.

### Actual Historical Asset Allocation



### Target Historical Asset Allocation

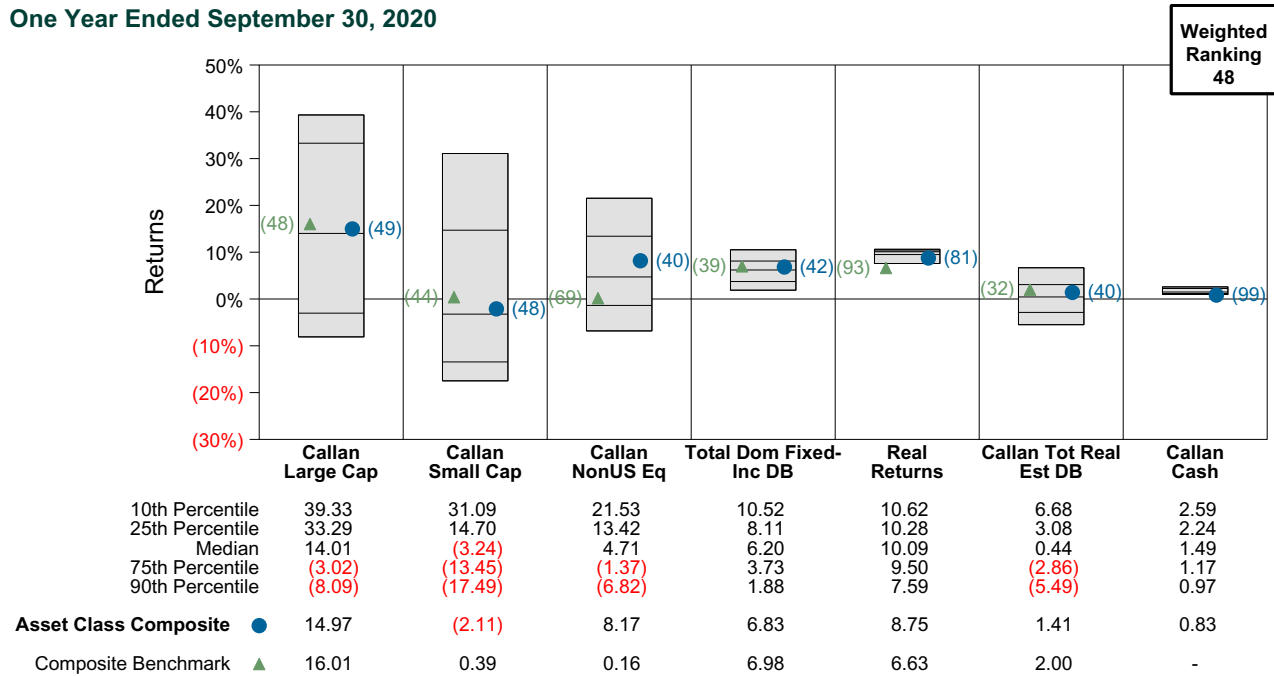


\* Current Quarter Target = 35.0% Blmbg Aggregate, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.0% NDLEG-Opportunistic Equity.

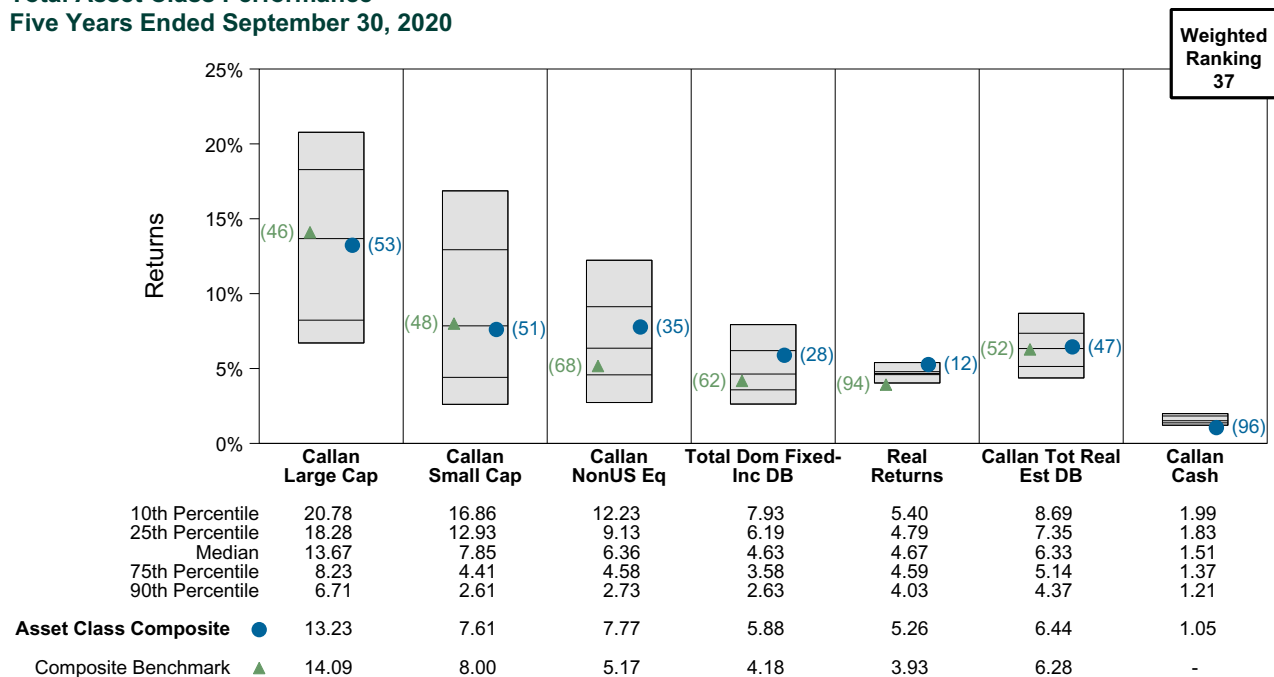
## Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

### Total Asset Class Performance One Year Ended September 30, 2020



### Total Asset Class Performance Five Years Ended September 30, 2020



\* Current Quarter Target = 35.0% Bimbg Aggregate, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.0% NDLEG-Opportunistic Equity.

## Asset Class Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2020, with the distribution as of June 30, 2020. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Class Allocation

	September 30, 2020			Inv. Return	June 30, 2020	
	Market Value	Weight	Net New Inv.		Market Value	Weight
<b>Global Equity</b>	<b>\$3,778,619,783</b>	<b>51.06%</b>	<b>\$(2,127,958)</b>	<b>\$296,245,288</b>	<b>\$3,484,502,453</b>	<b>49.78%</b>
<b>Domestic Equity</b>	<b>\$2,260,634,499</b>	<b>30.55%</b>	<b>\$(1,849,573)</b>	<b>\$169,822,032</b>	<b>\$2,092,662,040</b>	<b>29.90%</b>
<b>Large Cap</b>	<b>\$1,676,983,181</b>	<b>22.66%</b>	<b>\$44,504</b>	<b>\$143,406,106</b>	<b>\$1,533,532,571</b>	<b>21.91%</b>
L.A. Capital Enhanced	381,999,134	5.16%	(103,667)	34,320,598	347,782,203	4.97%
L.A. Capital Large Cap Growth	570,748,297	7.71%	(248,172)	62,281,545	508,714,925	7.27%
Parametric Large Cap	350,673,041	4.74%	667,060	30,422,850	319,583,130	4.57%
LSV Large Cap Value	373,562,710	5.05%	(259,241)	16,380,407	357,441,544	5.11%
Parametric Large Cap Overlay	0	0.00%	(11,475)	706	10,769	0.00%
<b>Small Cap</b>	<b>\$583,651,318</b>	<b>7.89%</b>	<b>\$(1,894,077)</b>	<b>\$26,415,926</b>	<b>\$559,129,469</b>	<b>7.99%</b>
Atlanta Capital	225,577,022	3.05%	(381,915)	7,295,189	218,663,748	3.12%
Parametric SmallCap	358,074,267	4.84%	(1,507,943)	19,120,199	340,462,010	4.86%
PIMCO RAE	29	0.00%	(4,219)	537	3,711	0.00%
<b>International Equity</b>	<b>\$1,517,288,566</b>	<b>20.50%</b>	<b>\$(975,103)</b>	<b>\$126,423,256</b>	<b>\$1,391,840,412</b>	<b>19.88%</b>
DFA Intl SmallCap Value	147,013,535	1.99%	0	8,712,649	138,300,887	1.98%
LSV Intl Value	440,980,419	5.96%	(413,693)	14,482,772	426,911,340	6.10%
Vanguard Intl Explorer Fund	152,442,669	2.06%	0	13,347,515	139,095,154	1.99%
William Blair	776,851,943	10.50%	(554,174)	89,879,454	687,526,663	9.82%
Parametric Intl Equity Overlay	0	0.00%	(7,235)	867	6,369	0.00%
<b>Opportunistic Equity</b>	<b>\$696,718</b>	<b>0.01%</b>	<b>\$696,718</b>	<b>\$0</b>	<b>-</b>	<b>-</b>
Sixth Street TAO	696,718	0.01%	696,718	0	-	-
<b>Domestic Fixed Income</b>	<b>\$2,505,727,543</b>	<b>33.86%</b>	<b>\$32,464,030</b>	<b>\$38,228,919</b>	<b>\$2,435,034,593</b>	<b>34.79%</b>
Ares ND Credit Strategies Fd	78,067,158	1.05%	0	0	78,067,158	1.12%
BND CDs	86,724,642	1.17%	(2,606,820)	515,655	88,815,807	1.27%
Cerberus ND Private Credit Fd	98,269,401	1.33%	0	1,268,089	97,001,312	1.39%
Declaration Total Return	200,504,903	2.71%	(113,475)	4,696,242	195,922,136	2.80%
PIMCO Bravo II	7,627,975	0.10%	(1,134,899)	0	8,762,874	0.13%
PIMCO DiSCO II	59,779,862	0.81%	0	1,684,405	58,095,457	0.83%
Prudential	717,185,664	9.69%	9,632,898	13,369,948	694,182,819	9.92%
SSgA US Govt Credit Bd Idx	343,254,435	4.64%	9,986,976	2,597,255	330,670,203	4.72%
Wells Capital	196,127,120	2.65%	(92,164)	5,472,872	190,746,412	2.73%
Western Asset Management	718,186,383	9.70%	16,799,229	8,624,255	692,762,899	9.90%
Parametric Fixed Inc Overlay	0	0.00%	(7,715)	199	7,516	0.00%
<b>Global Real Assets</b>	<b>\$1,043,978,191</b>	<b>14.11%</b>	<b>\$23,603,496</b>	<b>\$14,523,169</b>	<b>\$1,005,851,527</b>	<b>14.37%</b>
<b>Real Estate</b>	<b>\$324,805,235</b>	<b>4.39%</b>	<b>\$25,000,000</b>	<b>\$(966)</b>	<b>\$299,806,201</b>	<b>4.28%</b>
Invesco Core Real Estate	172,683,342	2.33%	25,000,000	(966)	147,684,308	2.11%
JP Morgan RE Inc & Growth	152,121,893	2.06%	0	0	152,121,893	2.17%
<b>Diversified</b>	<b>\$719,172,956</b>	<b>9.72%</b>	<b>\$(1,396,504)</b>	<b>\$14,524,134</b>	<b>\$706,045,326</b>	<b>10.09%</b>
Western Asset TIPS	442,808,805	5.98%	(123,318)	15,384,835	427,547,289	6.11%
ISQ Global Infrastructure II	49,851,839	0.67%	0	0	49,851,839	0.71%
JP Morgan Infrastructure	107,451,900	1.45%	(3,894,676)	(0)	111,346,576	1.59%
Grosvenor Cust. Infrastructure	44,977,901	0.61%	(712,048)	(159,644)	45,849,593	0.66%
Macquarie Infrass. Partners IV	74,082,511	1.00%	3,333,538	(701,056)	71,450,029	1.02%
<b>Cash</b>	<b>\$72,121,369</b>	<b>0.97%</b>	<b>\$(2,281,758)</b>	<b>\$8,437</b>	<b>\$74,394,690</b>	<b>1.06%</b>
Northern Trust Cash Account	45,583,599	0.62%	(4,888,577)	1,022	50,471,154	0.72%
Bank of ND	26,537,770	0.36%	2,606,820	7,414	23,923,536	0.34%
<b>Total Fund</b>	<b>\$7,400,446,886</b>	<b>100.0%</b>	<b>\$51,657,810</b>	<b>\$349,005,812</b>	<b>\$6,999,783,263</b>	<b>100.0%</b>

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 9 Years
<b>Global Equity</b>					
Gross	8.50%	9.39%	-	-	-
Net	8.42%	9.13%	-	-	-
Weighted Benchmark	6.94%	7.07%	-	-	-
<b>Domestic Equity</b>					
Gross	8.11%	10.17%	8.40%	11.75%	-
Net	8.03%	9.96%	8.22%	11.54%	-
Weighted Benchmark	8.25%	11.77%	-	-	-
<b>Large Cap</b>					
Gross	9.35%	14.97%	11.24%	13.23%	-
Net	9.36%	14.83%	11.07%	13.04%	-
Russell 1000 Index	9.47%	16.01%	12.38%	14.09%	15.28%
L.A. Capital Enhanced - Gross	9.87%	17.37%	12.57%	13.76%	-
L.A. Capital Enhanced - Net	9.84%	17.24%	12.43%	13.62%	-
Russell 1000 Index	9.47%	16.01%	12.38%	14.09%	15.28%
L.A. Capital LargeCap Growth - Gross	12.25%	35.64%	20.34%	18.37%	-
L.A. Capital LargeCap Growth - Net	12.19%	35.38%	20.10%	18.14%	-
Russell 1000 Growth Index	13.22%	37.53%	21.67%	20.10%	18.86%
Parametric Clifton Large Cap - Gross	9.53%	14.98%	12.21%	14.18%	-
Parametric Clifton Large Cap - Net	9.73%	15.19%	12.28%	14.18%	-
S&P 500 Index	8.93%	15.15%	12.28%	14.15%	15.24%
LSV Large Cap Value - Gross	4.58%	(9.50%)	(0.74%)	5.94%	-
LSV Large Cap Value - Net	4.51%	(9.75%)	(1.02%)	5.64%	-
Russell 1000 Value Index	5.59%	(5.03%)	2.63%	7.66%	11.35%
<b>Small Cap</b>					
Gross	4.71%	(2.11%)	0.83%	7.61%	-
Net	4.39%	(2.50%)	0.62%	7.35%	-
Russell 2000 Index	4.93%	0.39%	1.77%	8.00%	11.45%
Atlanta Capital - Gross	3.33%	-	-	-	-
Atlanta Capital - Net	3.16%	-	-	-	-
S&P 600 Small Cap Index	3.17%	(8.29%)	(0.33%)	7.20%	11.78%
Parametric Clifton Small Cap - Gross	5.60%	2.41%	2.58%	8.91%	-
Parametric Clifton Small Cap - Net	5.17%	2.00%	2.44%	8.69%	-
Russell 2000 Index	4.93%	0.39%	1.77%	8.00%	11.45%
<b>International Equity</b>					
Gross	9.09%	8.17%	2.57%	7.77%	-
Net	9.01%	7.85%	2.27%	7.45%	-
Benchmark(1)	4.92%	0.16%	0.62%	5.17%	6.25%
DFA Intl Small Cap Value	6.30%	(5.91%)	(6.75%)	2.34%	-
World ex US SC Va	7.24%	(5.19%)	(3.48%)	4.13%	6.20%
LSV Intl Value - Gross	3.39%	(8.02%)	(4.83%)	3.05%	-
LSV Intl Value - Net	3.30%	(8.38%)	(5.19%)	2.66%	-
MSCI EAFE Index	4.80%	0.49%	0.62%	5.26%	6.30%
Vanguard Intl Explorer Fund	9.60%	8.19%	(1.38%)	5.48%	-
BMI, EPAC, <\$2 B	11.71%	8.27%	0.09%	6.15%	7.54%
William Blair - Gross	13.08%	24.24%	11.76%	-	-
William Blair - Net	12.99%	23.79%	11.35%	-	-
MSCI ACWI ex US IMI	6.80%	3.51%	1.13%	6.31%	5.96%

(1) MSCI EAFE through 6/30/2016 and MSCI World ex-US thereafter.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 9 Years
<b>Domestic Fixed Income</b>					
Gross	1.57%	6.83%	6.04%	5.88%	-
Net	1.55%	6.72%	5.93%	5.76%	-
Blmbg Aggregate	0.62%	6.98%	5.24%	4.18%	3.46%
Ares ND Credit Strategies Fd - Net	0.00%	1.72%	4.90%	-	-
Cerberus ND Private Credit Fd - Net	1.31%	9.01%	10.05%	-	-
S&P/LSTA Leveraged Loan B	4.33%	2.14%	3.59%	4.37%	4.96%
BND CDs - Net	0.59%	2.53%	3.04%	-	-
Declaration Total Return - Net	2.40%	3.60%	4.63%	4.41%	-
Libor-3 Month	0.06%	1.07%	1.88%	1.47%	0.96%
PIMCO Bravo II - Net(1)	0.00%	(18.00%)	(3.59%)	1.69%	-
PIMCO DiSCO II - Net (1)	2.90%	5.02%	5.77%	8.47%	-
Blmbg Aggregate	0.62%	6.98%	5.24%	4.18%	3.46%
Prudential - Gross	1.93%	8.07%	6.55%	6.26%	-
Prudential - Net	1.88%	7.85%	6.31%	6.01%	-
Blmbg Aggregate	0.62%	6.98%	5.24%	4.18%	3.46%
Wells Capital - Gross	2.87%	8.67%	7.14%	7.25%	-
Wells Capital - Net	2.82%	8.47%	6.95%	7.07%	-
Blmbg Credit Baa	2.10%	6.97%	6.38%	6.41%	5.55%
Western Asset - Gross	1.25%	7.20%	6.12%	5.59%	-
Western Asset - Net	1.22%	7.07%	6.00%	5.46%	-
Blmbg Aggregate	0.62%	6.98%	5.24%	4.18%	3.46%
SSgA US Govt Credit Bd Idx - Gross	0.80%	8.25%	5.96%	4.72%	-
SSgA US Govt Credit Bd Idx - Net	0.80%	8.24%	5.94%	4.69%	-
Blmbg Govt/Credit Bd	0.78%	8.03%	5.86%	4.66%	3.73%

(1) Prior to 7/1/2019, the Legacy Fund participated in these portfolios via the Insurance Pool. Beginning 7/1/2019, its portion of the pool was segregated into its own portfolios. Returns prior to that date reflect the data from the Insurance pool.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended September 30, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 9 Years
<b>Global Real Assets</b>					
Gross	1.41%	6.45%	-	-	-
Net	1.38%	6.13%	-	-	-
Weighted Benchmark	1.57%	5.08%	-	-	-
<b>Real Estate</b>					
Gross	(0.00%)	1.41%	4.67%	6.44%	-
Net	0.01%	0.92%	4.14%	5.85%	-
NCREIF Total Index	0.74%	2.00%	5.11%	6.28%	8.64%
Invesco Core Real Estate - Gross	(0.00%)	1.32%	5.00%	6.55%	-
Invesco Core Real Estate - Net	(0.00%)	0.98%	4.67%	6.21%	-
NCREIF Total Index	0.74%	2.00%	5.11%	6.28%	8.64%
JP Morgan RE Inc & Growth - Gross	0.00%	1.50%	4.36%	6.38%	-
JP Morgan RE Inc & Growth - Net	0.03%	0.86%	3.64%	5.54%	-
NCREIF Total Index	0.74%	2.00%	5.11%	6.28%	8.64%
<b>Diversified</b>					
Gross	2.06%	8.75%	6.10%	5.26%	-
Net	2.02%	8.52%	5.87%	5.01%	-
Weighted Benchmark	1.99%	6.63%	4.55%	3.93%	-
Western Asset TIPS - Gross	3.60%	10.31%	5.39%	4.70%	-
Western Asset TIPS - Net	3.57%	10.18%	5.26%	4.57%	-
Benchmark(3)	3.18%	10.56%	5.86%	4.91%	3.57%
JP Morgan Infrastructure - Gross	0.01%	4.87%	7.79%	6.61%	-
JP Morgan Infrastructure - Net	(0.14%)	4.00%	7.04%	5.83%	-
Grosvenor Cust. Infrastructure - Net	(0.35%)	5.25%	9.72%	8.27%	-
Benchmark(1)	0.13%	0.77%	2.61%	2.27%	1.70%
Macquarie Infrs. Partners IV - Net	(0.98%)	9.21%	-	-	-
ISQ Global Infrastructure II - Net	0.00%	7.71%	-	-	-
Benchmark(2)	0.13%	0.77%	-	-	-
<b>Cash &amp; Equivalents - Net</b>					
NT Cash Account - Net	0.00%	0.74%	-	-	-
Bank of ND - Net	0.03%	0.97%	-	-	-
90 Day Treasury Bills	0.04%	1.10%	1.69%	1.20%	0.69%
<b>Total Fund</b>					
Gross	4.98%	8.48%	6.22%	8.13%	5.37%
Net	4.93%	8.27%	6.02%	7.91%	5.19%
Target*	3.95%	7.45%	5.94%	7.26%	4.48%

\* Current Quarter Target = 35.0% Blmbg Aggregate, 22.0% Russell 1000 Index, 20.0% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.0% NDLEG-Opportunistic Equity.

(1) CPI-W through 6/30/2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.

(2) 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net.

(3) Blmbg Global Inflation-Linked through 10/31/2018 and Blmbg US Govt Inflation Linked Bond Index thereafter.

# Domestic Equity

## Period Ended September 30, 2020

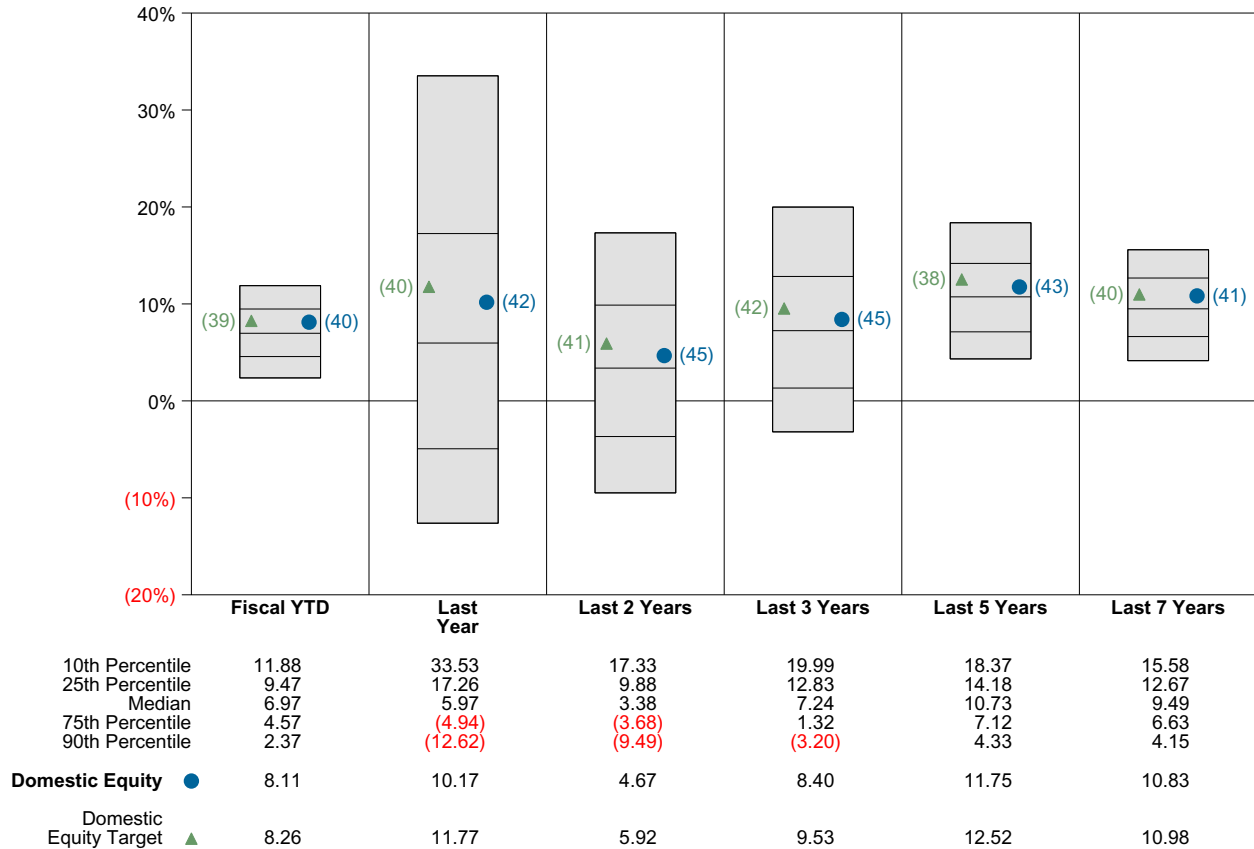
### Quarterly Summary and Highlights

- Domestic Equity's portfolio posted a 8.11% return for the quarter placing it in the 40 percentile of the Total Domestic Equity Database group for the quarter and in the 42 percentile for the last year.
- Domestic Equity's portfolio underperformed the Domestic Equity Target by 0.14% for the quarter and underperformed the Domestic Equity Target for the year by 1.59%.

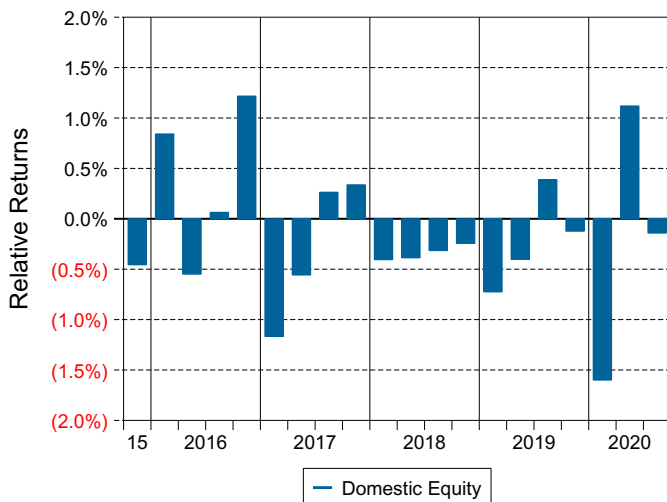
### Quarterly Asset Growth

Beginning Market Value	\$2,092,662,040
Net New Investment	\$-1,849,573
Investment Gains/(Losses)	\$169,822,032
Ending Market Value	\$2,260,634,499

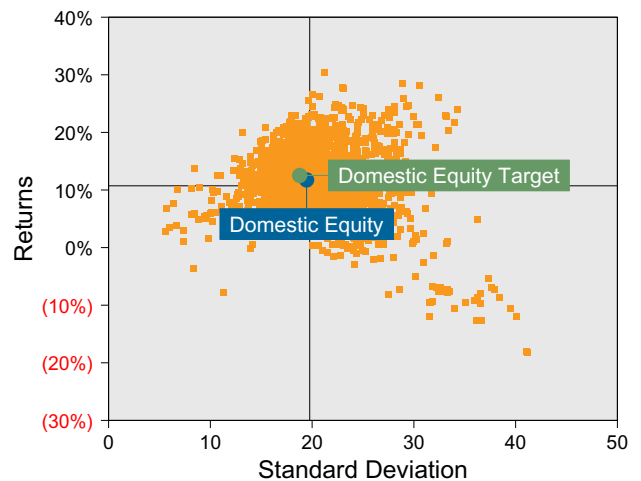
### Performance vs Total Domestic Equity Database (Gross)



### Relative Return vs Domestic Equity Target



### Total Domestic Equity Database (Gross) Annualized Five Year Risk vs Return





# Parametric Large Cap Period Ended September 30, 2020

## Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

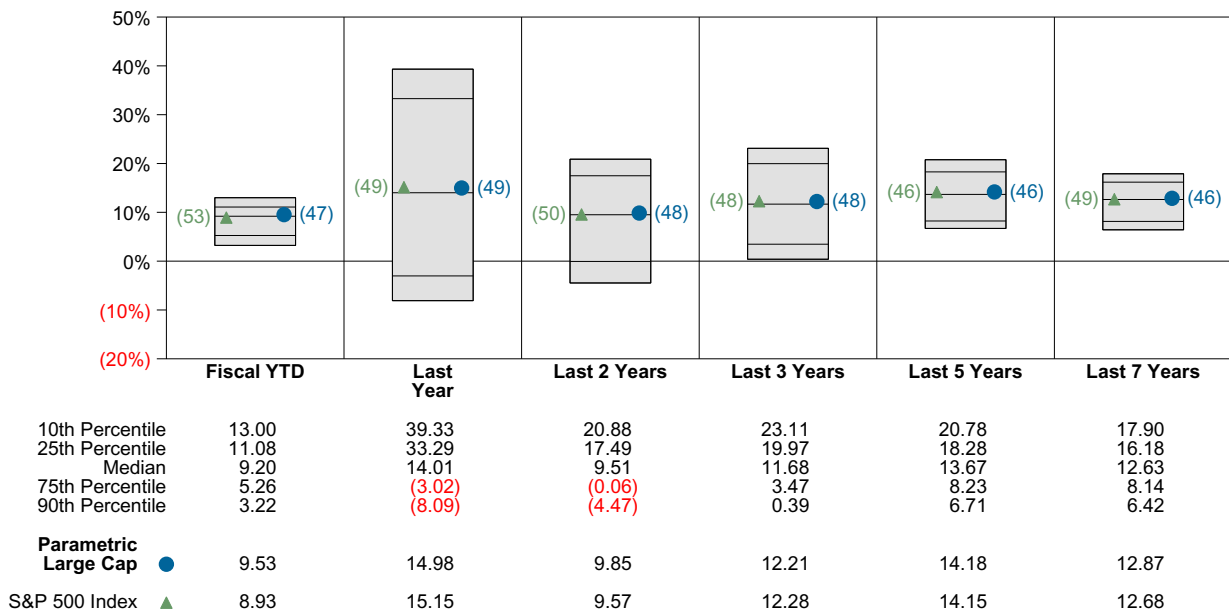
## Quarterly Summary and Highlights

- Parametric Large Cap's portfolio posted a 9.53% return for the quarter placing it in the 47 percentile of the Callan Large Capitalization group for the quarter and in the 49 percentile for the last year.
- Parametric Large Cap's portfolio outperformed the S&P 500 Index by 0.60% for the quarter and underperformed the S&P 500 Index for the year by 0.17%.

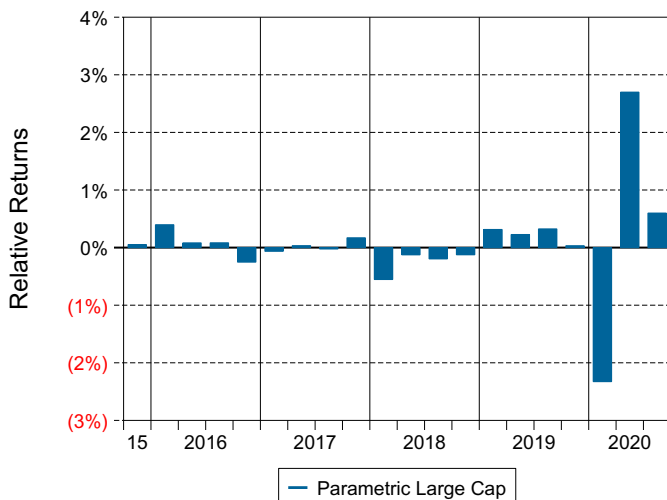
## Quarterly Asset Growth

Beginning Market Value	\$319,583,130
Net New Investment	\$667,060
Investment Gains/(Losses)	\$30,422,850
Ending Market Value	\$350,673,041

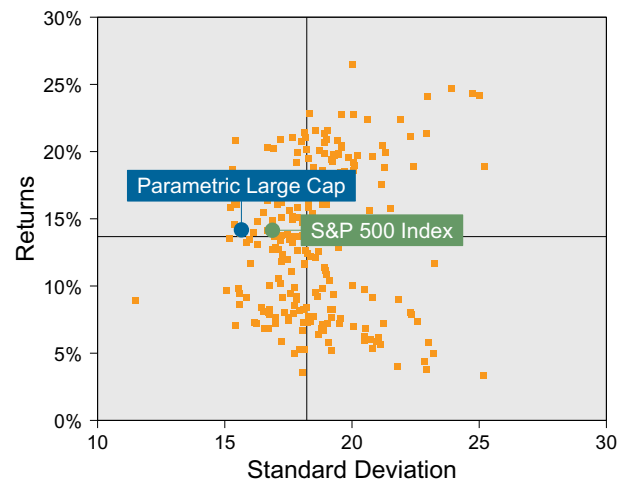
## Performance vs Callan Large Capitalization (Gross)



## Relative Return vs S&P 500 Index



## Callan Large Capitalization (Gross) Annualized Five Year Risk vs Return



# L.A. Capital Period Ended September 30, 2020

## Investment Philosophy

The LA Capital Structured portfolio is a large growth portfolio benchmarked to the Russell 1000 Growth Index. It is an active assignment meaning that it targets a 2% alpha and constrains its risk budget (tracking error) to 4% relative to the benchmark. LA Capital believes that investment results are driven by Investor Preferences and thus recognize that when preferences shift a different posture related to that factor is warranted.

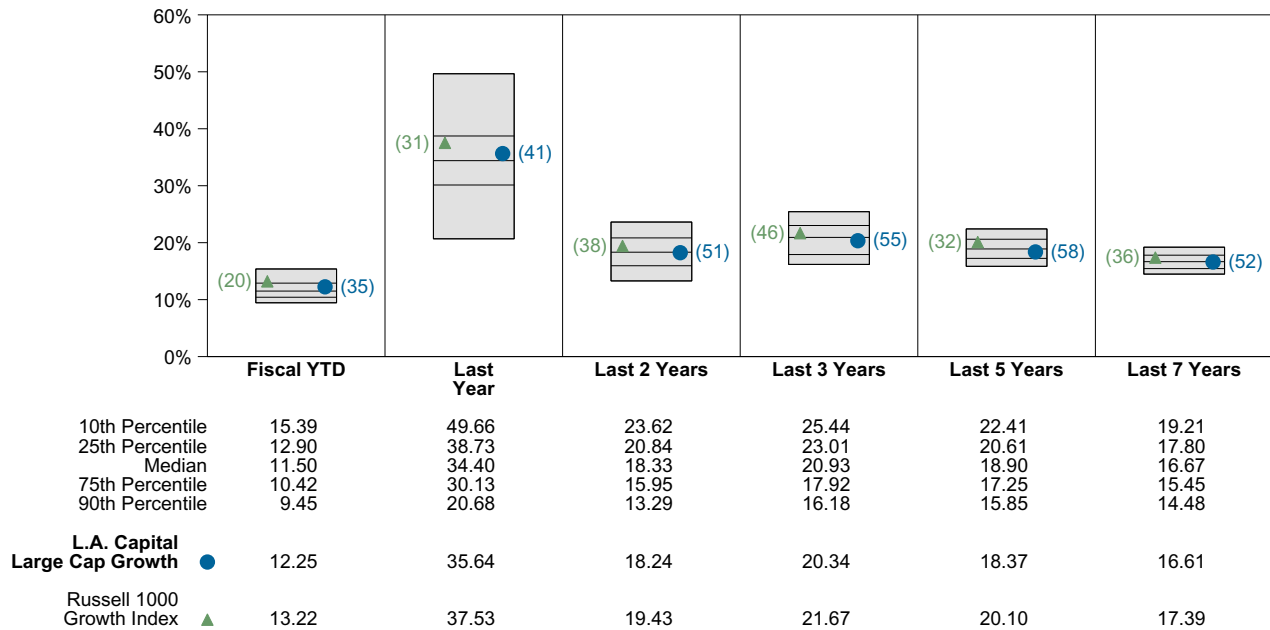
## Quarterly Summary and Highlights

- L.A. Capital Large Cap Growth's portfolio posted a 12.25% return for the quarter placing it in the 35 percentile of the Callan Large Cap Growth group for the quarter and in the 41 percentile for the last year.
- L.A. Capital Large Cap Growth's portfolio underperformed the Russell 1000 Growth Index by 0.97% for the quarter and underperformed the Russell 1000 Growth Index for the year by 1.89%.

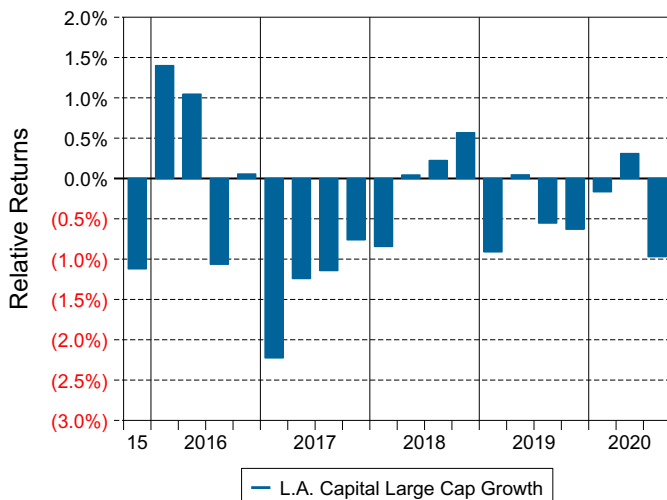
## Quarterly Asset Growth

Beginning Market Value	\$508,714,925
Net New Investment	\$-248,172
Investment Gains/(Losses)	\$62,281,545
Ending Market Value	\$570,748,297

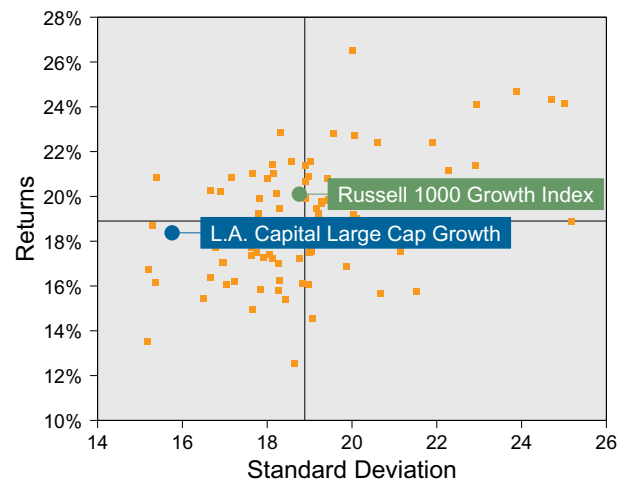
## Performance vs Callan Large Cap Growth (Gross)



## Relative Return vs Russell 1000 Growth Index



## Callan Large Cap Growth (Gross) Annualized Five Year Risk vs Return



# L.A. Capital Enhanced Period Ended September 30, 2020

## Investment Philosophy

The LA Capital Enhanced portfolio is a large core portfolio benchmarked to the Russell 1000 Index. Characterized as an enhanced index assignment, its objective is to track the benchmark with lower variability. The pension portfolio began in August of 2000 and the insurance portfolio was initiated in April of 2004. Since October of 2006 a small portion of each of the two core accounts was allocated into the Large Cap Alpha Fund with intent to add incremental alpha to the assignment given that the information ratio was expected to be higher.

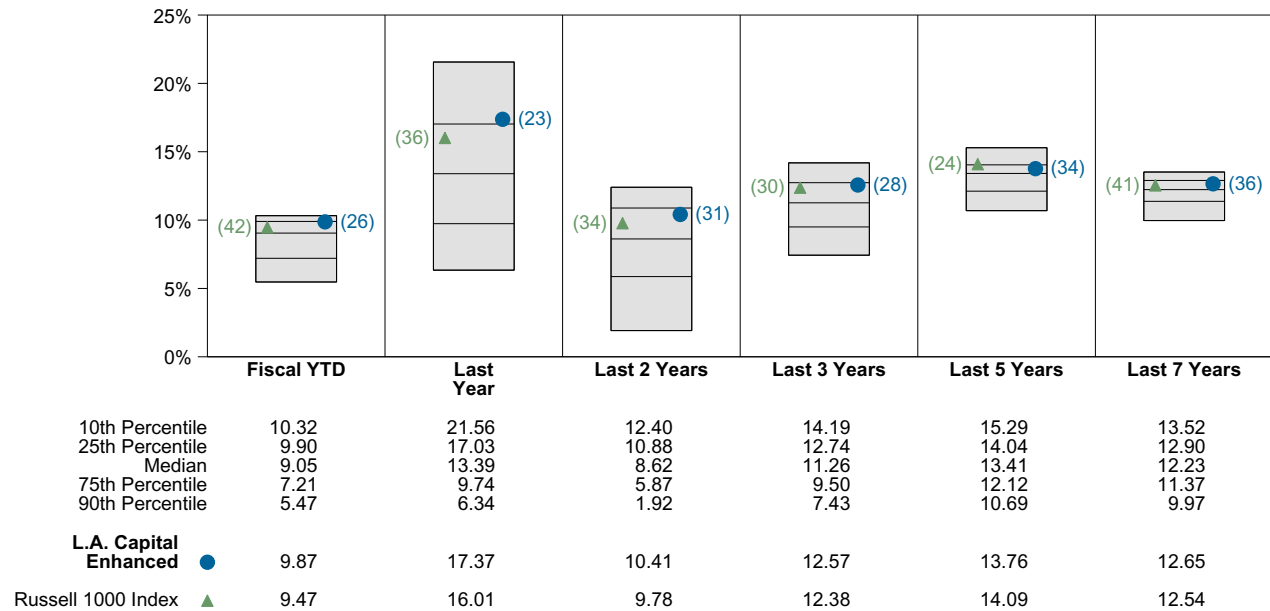
## Quarterly Summary and Highlights

- L.A. Capital Enhanced's portfolio posted a 9.87% return for the quarter placing it in the 26 percentile of the Callan Large Cap Core group for the quarter and in the 23 percentile for the last year.
- L.A. Capital Enhanced's portfolio outperformed the Russell 1000 Index by 0.40% for the quarter and outperformed the Russell 1000 Index for the year by 1.36%.

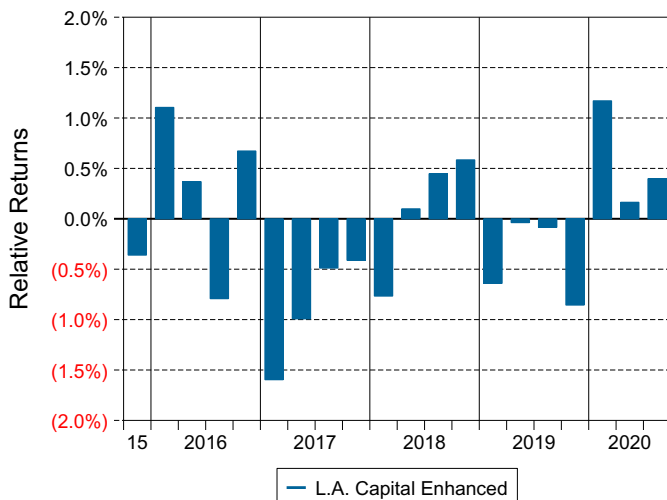
## Quarterly Asset Growth

Beginning Market Value	\$347,782,203
Net New Investment	\$-103,667
Investment Gains/(Losses)	\$34,320,598
Ending Market Value	\$381,999,134

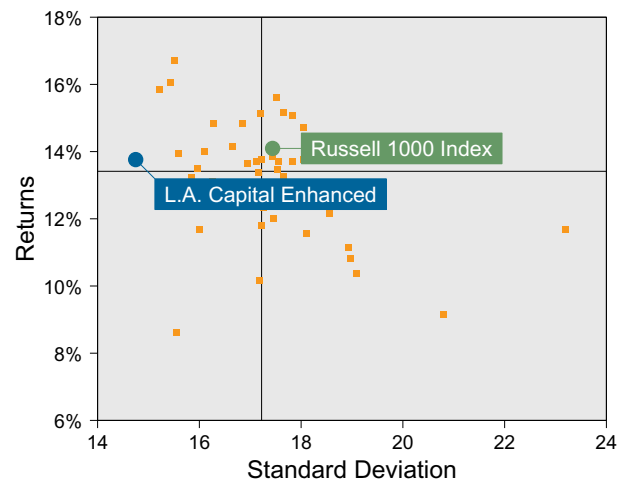
## Performance vs Callan Large Cap Core (Gross)



## Relative Return vs Russell 1000 Index



## Callan Large Cap Core (Gross) Annualized Five Year Risk vs Return



# LSV Asset Management

## Period Ended September 30, 2020

### Investment Philosophy

The objective of LSV Asset Management's Large Cap Value Equity (U.S.) strategy is to outperform the Russell 1000 Value by at least 200 basis points (gross of fees) per annum over a 3-5 year period with a tracking error of approximately 4%. Their stock selection process is a quantitative approach that ranks a broad universe of stocks on a combination of value and momentum factors and seeks to invest approximately 100 stocks in the most attractive securities possible within strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio is broadly diversified across industry groups and fully invested.

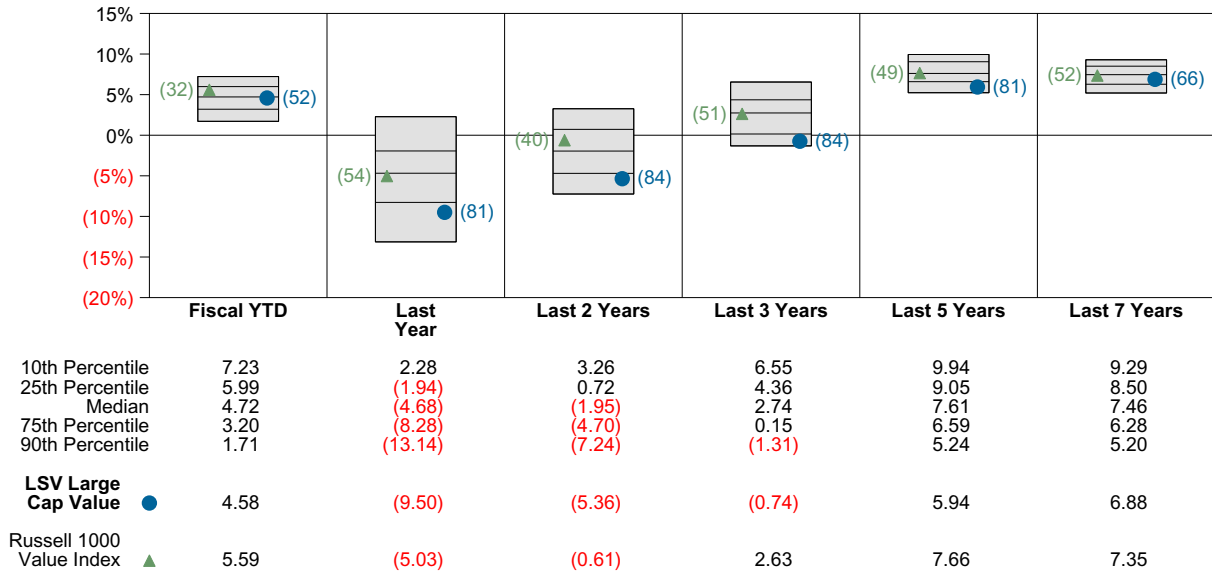
### Quarterly Summary and Highlights

- LSV Large Cap Value's portfolio posted a 4.58% return for the quarter placing it in the 52 percentile of the Callan Large Cap Value group for the quarter and in the 81 percentile for the last year.
- LSV Large Cap Value's portfolio underperformed the Russell 1000 Value Index by 1.01% for the quarter and underperformed the Russell 1000 Value Index for the year by 4.48%.

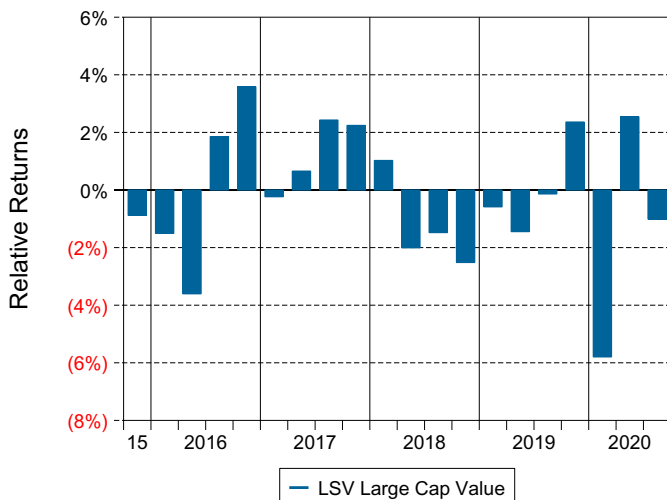
### Quarterly Asset Growth

Beginning Market Value	\$357,441,544
Net New Investment	\$-259,241
Investment Gains/(Losses)	\$16,380,407
Ending Market Value	\$373,562,710

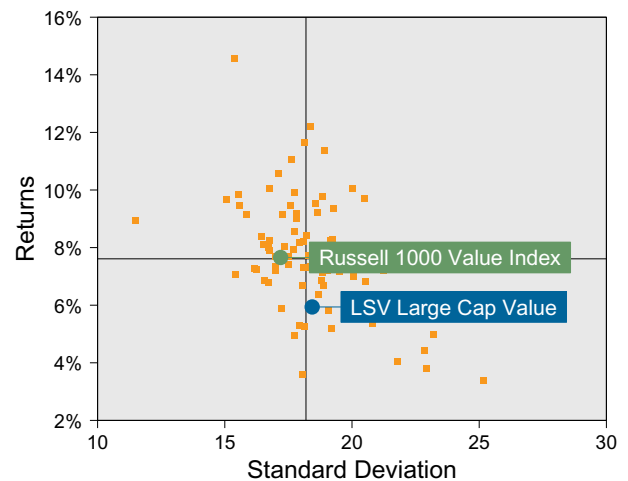
### Performance vs Callan Large Cap Value (Gross)



### Relative Return vs Russell 1000 Value Index



### Callan Large Cap Value (Gross) Annualized Five Year Risk vs Return



# Atlanta Capital

## Period Ended September 30, 2020

### Investment Philosophy

Atlanta believes that high quality companies produce consistently increasing earnings and dividends, thereby providing attractive returns with moderate risk over the long-term.

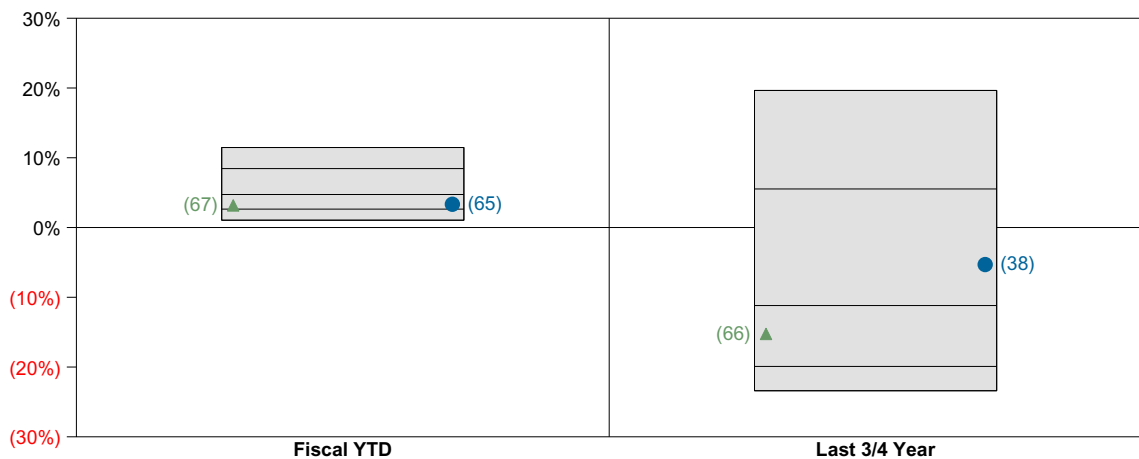
### Quarterly Summary and Highlights

- Atlanta Capital's portfolio posted a 3.33% return for the quarter placing it in the 65 percentile of the Callan Small Capitalization group for the quarter and in the 38 percentile for the last three-quarter year.
- Atlanta Capital's portfolio outperformed the S&P 600 Small Cap Index by 0.16% for the quarter and outperformed the S&P 600 Small Cap Index for the three-quarter year by 9.94%.

### Quarterly Asset Growth

Beginning Market Value	\$218,663,748
Net New Investment	\$-381,915
Investment Gains/(Losses)	\$7,295,189
Ending Market Value	\$225,577,022

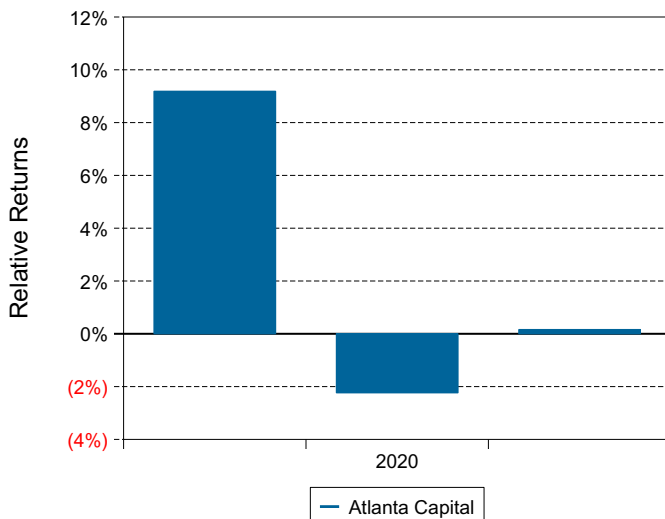
### Performance vs Callan Small Capitalization (Gross)



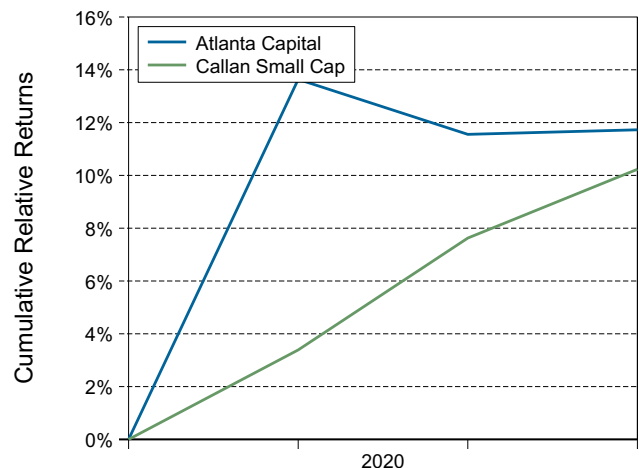
10th Percentile	11.47
25th Percentile	8.45
Median	4.73
75th Percentile	2.64
90th Percentile	1.05
<b>Atlanta Capital</b>	<b>3.33</b>
S&P 600 Small Cap Index	3.17

10th Percentile	19.65
25th Percentile	5.53
Median	(11.18)
75th Percentile	(19.91)
90th Percentile	(23.40)
<b>Atlanta Capital</b>	<b>(5.31)</b>
S&P 600 Small Cap Index	(15.25)

### Relative Return vs S&P 600 Small Cap Index



### Cumulative Returns vs S&P 600 Small Cap Index



# Parametric Small Cap Period Ended September 30, 2020

## Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

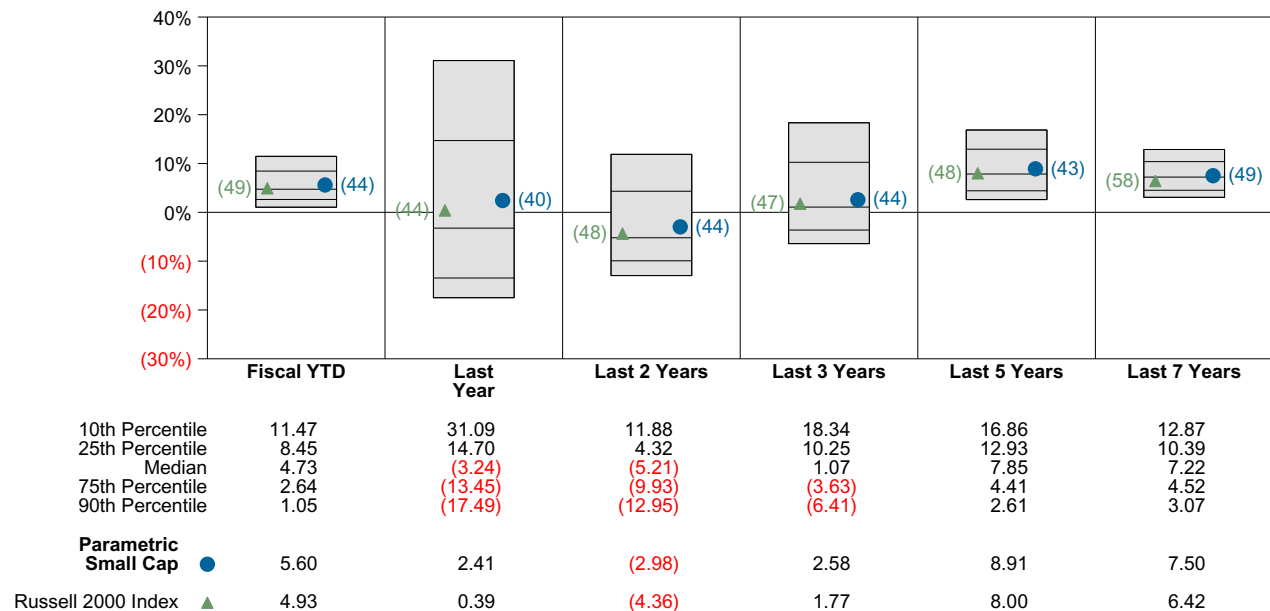
## Quarterly Summary and Highlights

- Parametric Small Cap's portfolio posted a 5.60% return for the quarter placing it in the 44 percentile of the Callan Small Capitalization group for the quarter and in the 40 percentile for the last year.
- Parametric Small Cap's portfolio outperformed the Russell 2000 Index by 0.67% for the quarter and outperformed the Russell 2000 Index for the year by 2.02%.

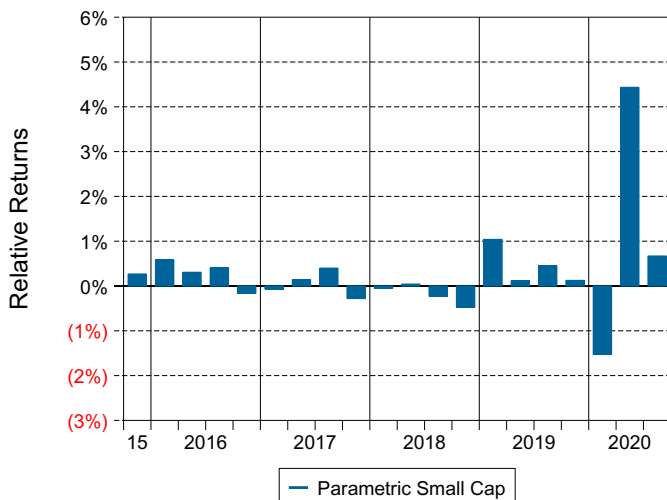
## Quarterly Asset Growth

Beginning Market Value	\$340,462,010
Net New Investment	\$-1,507,943
Investment Gains/(Losses)	\$19,120,199
Ending Market Value	\$358,074,267

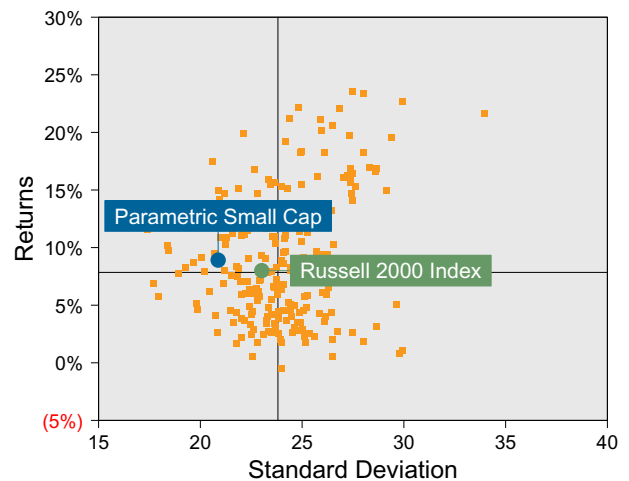
## Performance vs Callan Small Capitalization (Gross)



## Relative Return vs Russell 2000 Index



## Callan Small Capitalization (Gross) Annualized Five Year Risk vs Return



# International Equity Period Ended September 30, 2020

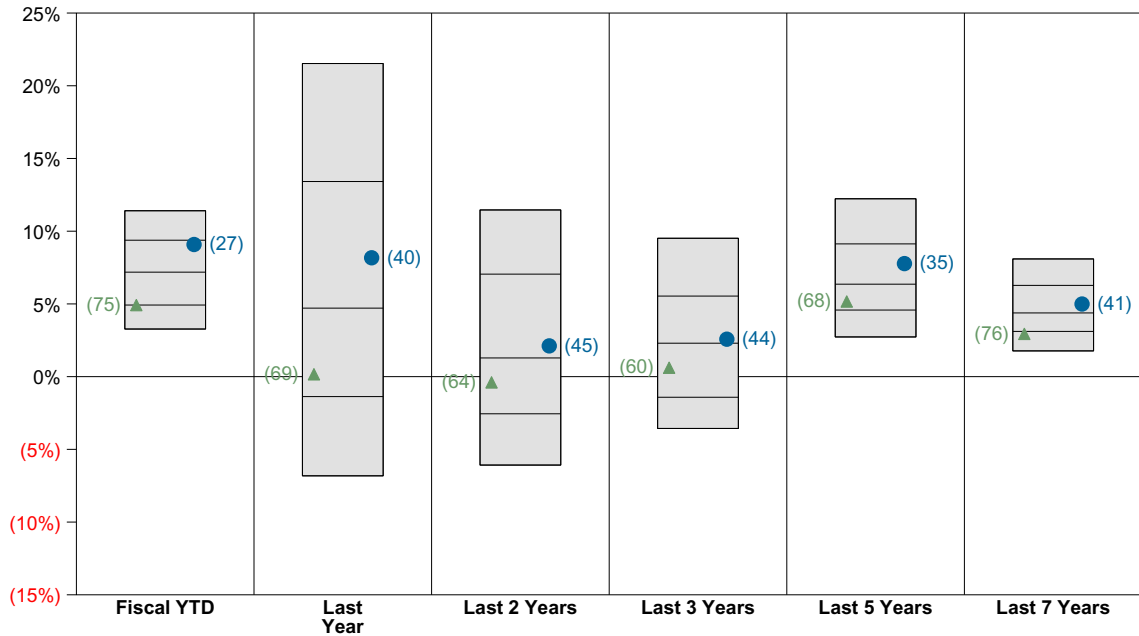
## Quarterly Summary and Highlights

- International Equity's portfolio posted a 9.09% return for the quarter placing it in the 27 percentile of the Callan Non-US Equity group for the quarter and in the 40 percentile for the last year.
- International Equity's portfolio outperformed the International Equity Target by 4.17% for the quarter and outperformed the International Equity Target for the year by 8.01%.

## Quarterly Asset Growth

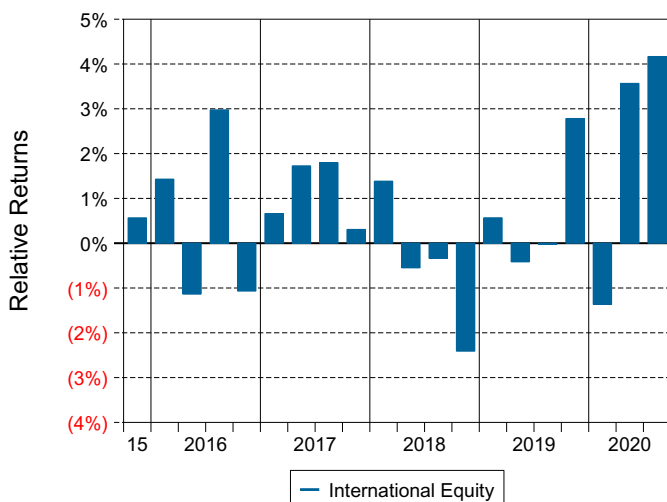
Beginning Market Value	\$1,391,840,412
Net New Investment	\$-975,103
Investment Gains/(Losses)	\$126,423,256
Ending Market Value	\$1,517,288,566

## Performance vs Callan Non-US Equity (Gross)

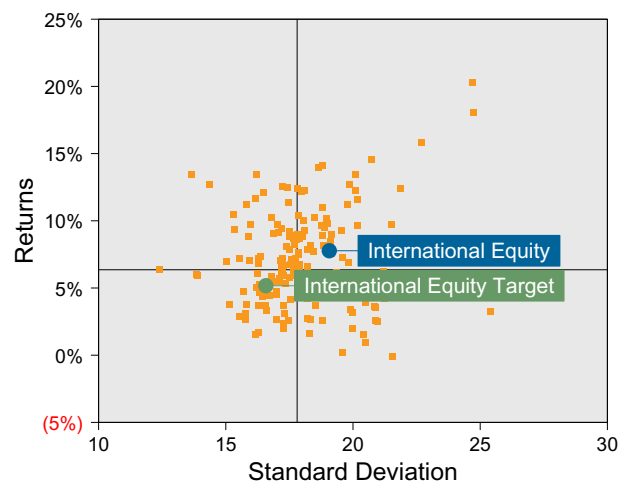


10th Percentile	11.41	21.53	11.46	9.51	12.23	8.09
25th Percentile	9.38	13.42	7.05	5.54	9.13	6.27
Median	7.18	4.71	1.28	2.30	6.36	4.38
75th Percentile	4.92	(1.37)	(2.55)	(1.42)	4.58	3.11
90th Percentile	3.27	(6.82)	(6.08)	(3.56)	2.73	1.77
<b>International Equity</b> ●	9.09	8.17	2.11	2.57	7.77	4.99
International Equity Target ▲	4.92	0.16	(0.39)	0.62	5.17	2.94

## Relative Return vs International Equity Target



## Callan Non-US Equity (Gross) Annualized Five Year Risk vs Return



# DFA Intl Small Cap Value Period Ended September 30, 2020

## Investment Philosophy

The International Small Cap Value Portfolio invests in the stocks of small, non-US developed markets companies that Dimensional believes to be value stocks at the time of purchase. Specifically, it looks at companies that fall within the smallest 8-10% of each country's market capitalization, and who's shares have a high book value in relation to their market value (BtM). It does not invest in emerging markets.

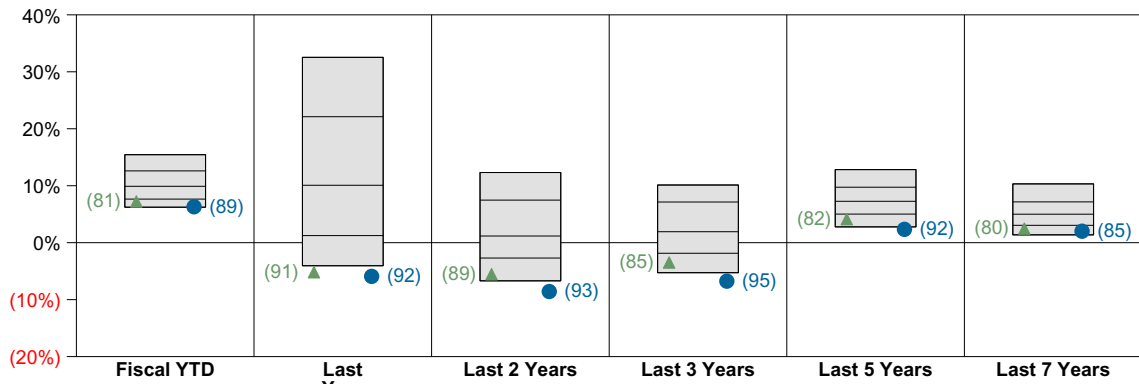
## Quarterly Summary and Highlights

- DFA Intl Small Cap Value's portfolio posted a 6.30% return for the quarter placing it in the 89 percentile of the Callan International Small Cap Mut Funds group for the quarter and in the 92 percentile for the last year.
- DFA Intl Small Cap Value's portfolio underperformed the World ex US SC Value by 0.94% for the quarter and underperformed the World ex US SC Value for the year by 0.73%.

## Quarterly Asset Growth

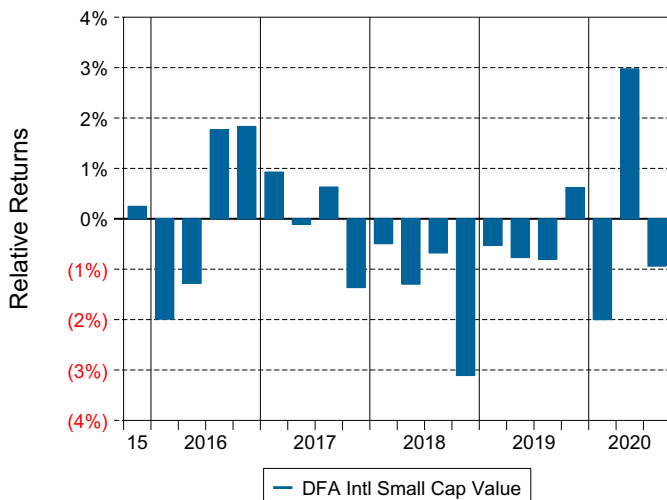
Beginning Market Value	\$138,300,887
Net New Investment	\$0
Investment Gains/(Losses)	\$8,712,649
Ending Market Value	\$147,013,535

## Performance vs Callan International Small Cap Mut Funds (Net)

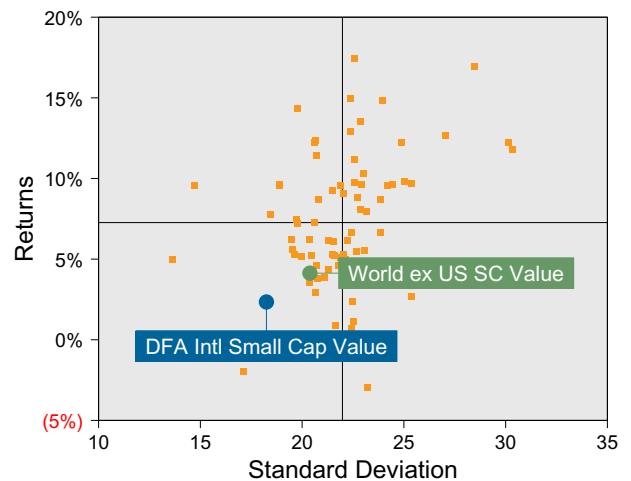


10th Percentile	15.45	32.54	12.32	10.13	12.83	10.33
25th Percentile	12.60	22.12	7.47	7.14	9.74	7.16
Median	9.90	10.08	1.17	1.92	7.27	5.00
75th Percentile	7.65	1.24	(2.70)	(1.86)	5.02	3.05
90th Percentile	6.23	(4.05)	(6.70)	(5.27)	2.77	1.37
<b>DFA Intl Small Cap Value</b>	● 6.30	(5.91)	(8.58)	(6.75)	2.34	2.01
World ex US SC Value	▲ 7.24	(5.19)	(5.54)	(3.48)	4.13	2.48

## Relative Return vs World ex US SC Value



## Callan International Small Cap Mut Funds (Net) Annualized Five Year Risk vs Return





# LSV Intl Value

## Period Ended September 30, 2020

### Investment Philosophy

The objective of LSV Asset Management's International Large Cap Value strategy is to outperform the MSCI EAFE Index by at least 250 basis points (gross of fees) per annum over an annualized 3-5 year period with a tracking error of approximately 5-6%. Their stock selection process is a quantitative approach that ranks a broad universe of stocks on a combination of value and momentum factors and seeks to invest approximately 150 stocks in the most attractive securities possible within strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio is broadly diversified across industry groups and fully invested. LSV weights countries at a neutral weight relative to the benchmark country weights. 50% of the portfolio is US dollar hedged.

### Quarterly Summary and Highlights

- LSV Intl Value's portfolio posted a 3.39% return for the quarter placing it in the 88 percentile of the Callan Non-US Equity group for the quarter and in the 95 percentile for the last year.
- LSV Intl Value's portfolio underperformed the MSCI EAFE by 1.40% for the quarter and underperformed the MSCI EAFE for the year by 8.52%.

### Quarterly Asset Growth

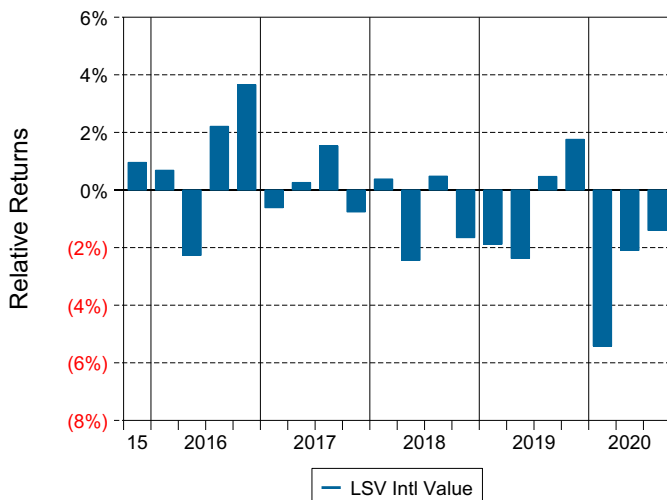
Beginning Market Value	\$426,911,340
Net New Investment	\$-413,693
Investment Gains/(Losses)	\$14,482,772
Ending Market Value	\$440,980,419

### Performance vs Callan Non-US Equity (Gross)

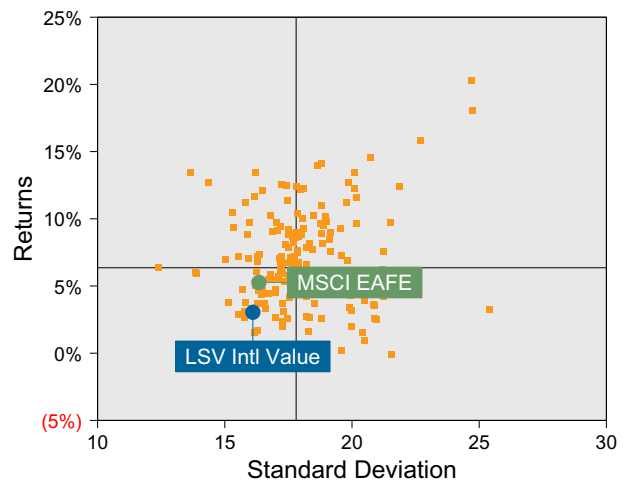


10th Percentile	11.41	21.53	11.46	9.51	12.23	8.09
25th Percentile	9.38	13.42	7.05	5.54	9.13	6.27
Median	7.18	4.71	1.28	2.30	6.36	4.38
75th Percentile	4.92	(1.37)	(2.55)	(1.42)	4.58	3.11
90th Percentile	3.27	(6.82)	(6.08)	(3.56)	2.73	1.77
<b>LSV Intl Value</b> ●	3.39	(8.02)	(7.31)	(4.83)	3.05	1.81
MSCI EAFE ▲	4.80	0.49	(0.43)	0.62	5.26	3.01

### Relative Return vs MSCI EAFE



### Callan Non-US Equity (Gross) Annualized Five Year Risk vs Return



# Vanguard Intl Explorer Fund

## Period Ended September 30, 2020

### Investment Philosophy

Vanguard International Explorer Fund invests primarily in the equity securities of small-capitalization companies located outside the United States that the advisor believes offer the potential for long-term capital appreciation. The advisor considers, among other things, whether a company is likely to have above-average earnings growth, whether the company's securities are attractively valued, and whether the company has any proprietary advantages.

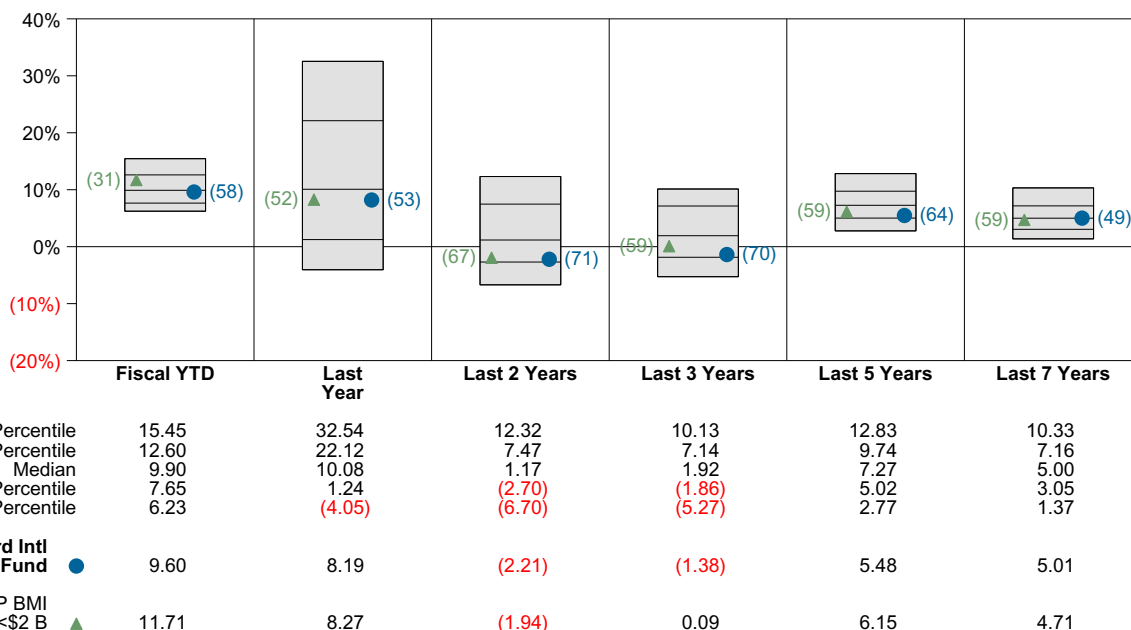
### Quarterly Summary and Highlights

- Vanguard Intl Explorer Fund's portfolio posted a 9.60% return for the quarter placing it in the 58 percentile of the Callan International Small Cap Mut Funds group for the quarter and in the 53 percentile for the last year.
- Vanguard Intl Explorer Fund's portfolio underperformed the S&P BMI EPAC <\$2 B by 2.12% for the quarter and underperformed the S&P BMI EPAC <\$2 B for the year by 0.08%.

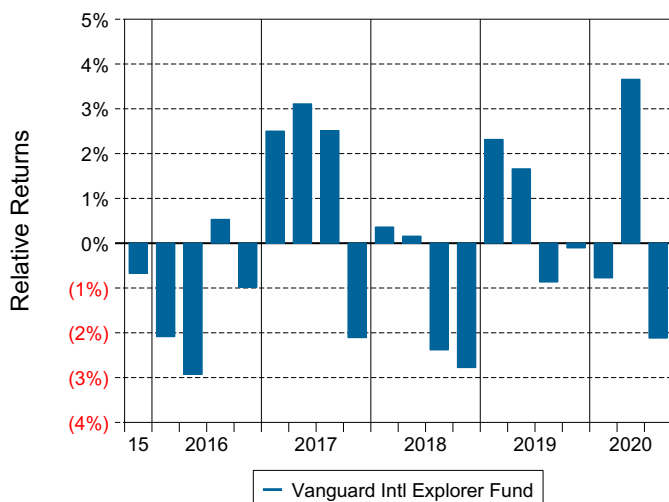
### Quarterly Asset Growth

Beginning Market Value	\$139,095,154
Net New Investment	\$0
Investment Gains/(Losses)	\$13,347,515
Ending Market Value	\$152,442,669

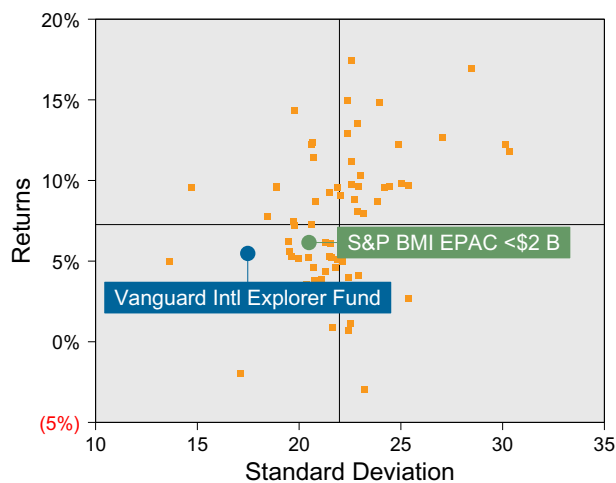
### Performance vs Callan International Small Cap Mut Funds (Net)



### Relative Return vs S&P BMI EPAC <\$2 B



### Callan International Small Cap Mut Funds (Net) Annualized Five Year Risk vs Return



# William Blair

## Period Ended September 30, 2020

### Investment Philosophy

One of the basic investment tenets of William Blair & Company has been its focus on quality growth companies. They believe that investing in quality growth companies will generate above average results with generally less risk than the market. This opportunity exists because they believe the market underestimates the durability and rate of growth in companies that have the following characteristics: strong management with a unique vision, competitive advantages that prolong the duration and size of earnings growth, and conservative financing. Internationally, they believe that this philosophy can be combined with strategic flexibility in managing geographic exposure, capitalization, sector emphasis, and relative growth and valuation at the portfolio level in order to provide an appropriate degree of adaptability to cyclical conditions.

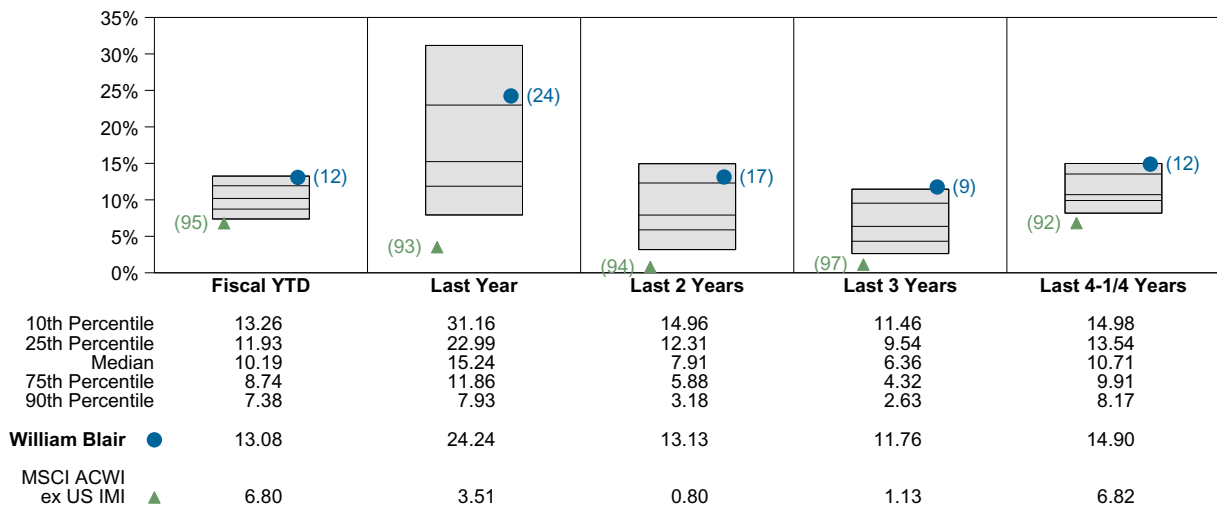
### Quarterly Summary and Highlights

- William Blair's portfolio posted a 13.08% return for the quarter placing it in the 12 percentile of the Callan Non-US All Country Growth Equity group for the quarter and in the 24 percentile for the last year.
- William Blair's portfolio outperformed the MSCI ACWI ex US IMI by 6.28% for the quarter and outperformed the MSCI ACWI ex US IMI for the year by 20.72%.

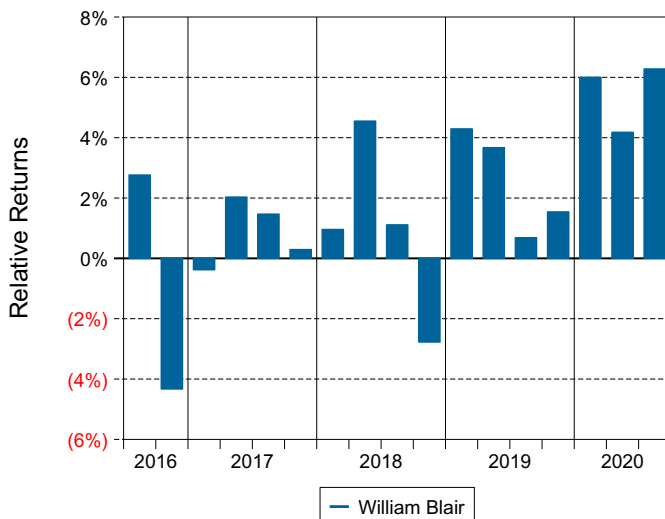
### Quarterly Asset Growth

Beginning Market Value	\$687,526,663
Net New Investment	\$-554,174
Investment Gains/(Losses)	\$89,879,454
Ending Market Value	\$776,851,943

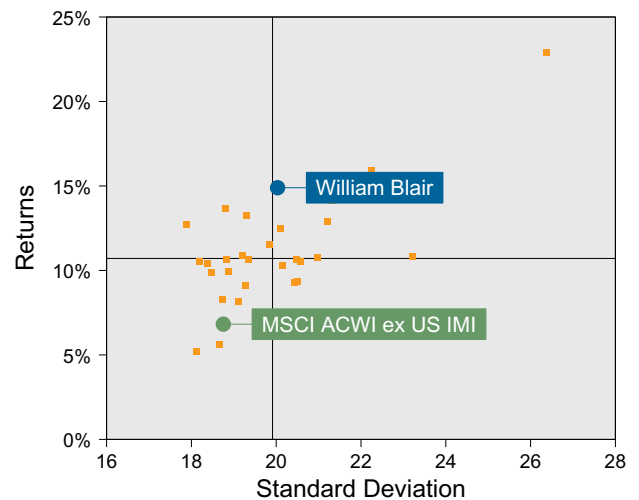
### Performance vs Callan Non-US All Country Growth Equity (Gross)



### Relative Return vs MSCI ACWI ex US IMI



### Callan Non-US All Country Growth Equity (Gross) Annualized Four and One-Quarter Year Risk vs Return



# Domestic Fixed Income Period Ended September 30, 2020

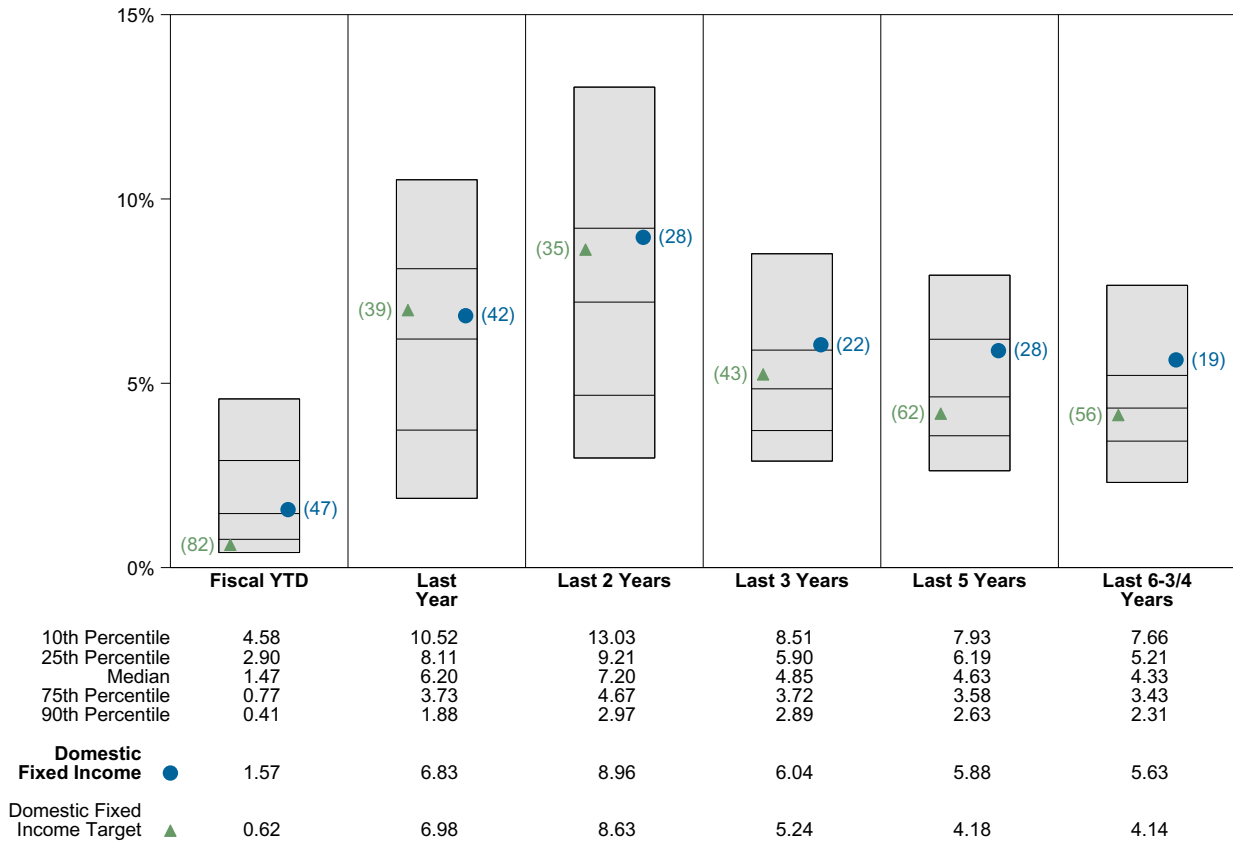
## Quarterly Summary and Highlights

- Domestic Fixed Income's portfolio posted a 1.57% return for the quarter placing it in the 47 percentile of the Total Domestic Fixed-Inc Database group for the quarter and in the 42 percentile for the last year.
- Domestic Fixed Income's portfolio outperformed the Domestic Fixed Income Target by 0.95% for the quarter and underperformed the Domestic Fixed Income Target for the year by 0.15%.

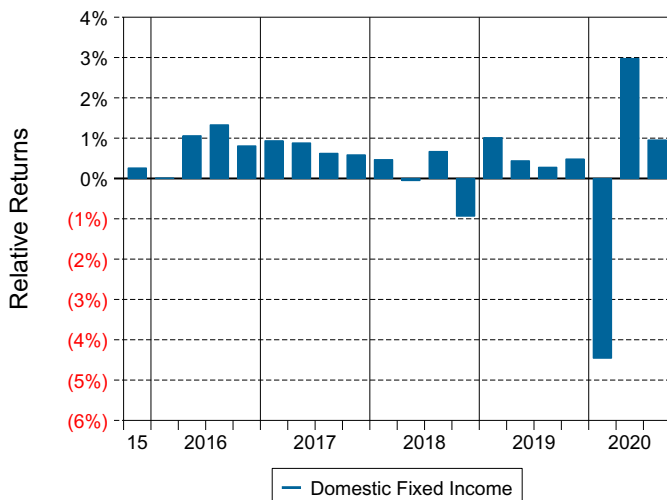
## Quarterly Asset Growth

Beginning Market Value	\$2,435,034,593
Net New Investment	\$32,464,030
Investment Gains/(Losses)	\$38,228,919
Ending Market Value	\$2,505,727,543

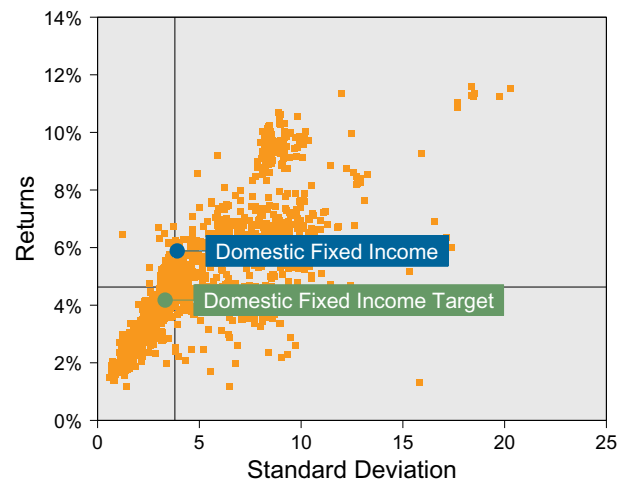
## Performance vs Total Domestic Fixed-Inc Database (Gross)



## Relative Returns vs Domestic Fixed Income Target



## Total Domestic Fixed-Inc Database (Gross) Annualized Five Year Risk vs Return



# Ares ND Credit Strategies Fd Period Ended September 30, 2020

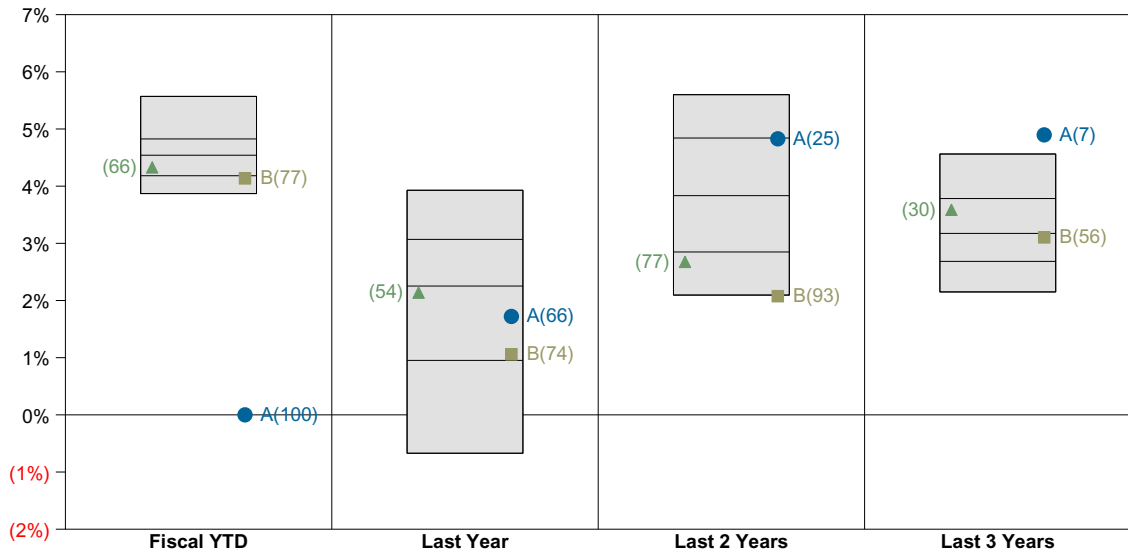
## Quarterly Summary and Highlights

- Ares ND Credit Strategies Fd's portfolio posted a 0.00% return for the quarter placing it in the 100 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 66 percentile for the last year.
- Ares ND Credit Strategies Fd's portfolio underperformed the S&P/LSTA Leveraged Loan B Index by 4.33% for the quarter and underperformed the S&P/LSTA Leveraged Loan B Index for the year by 0.42%.

## Quarterly Asset Growth

Beginning Market Value	\$78,067,158
Net New Investment	\$0
Investment Gains/(Losses)	\$0
Ending Market Value	\$78,067,158

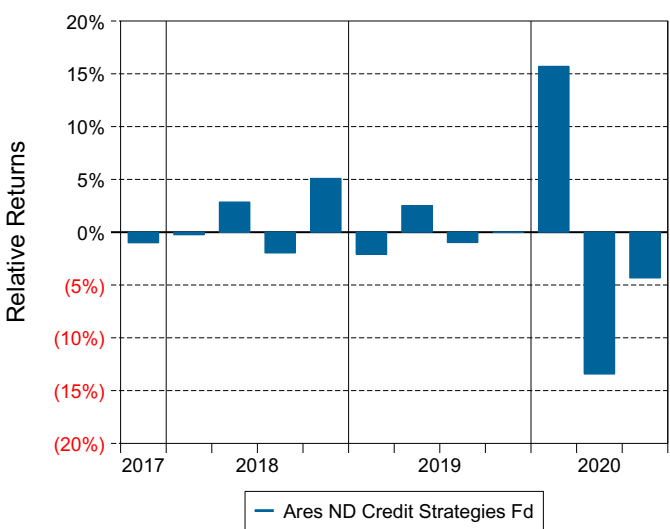
## Performance vs Callan High Yield Mutual Funds (Net)



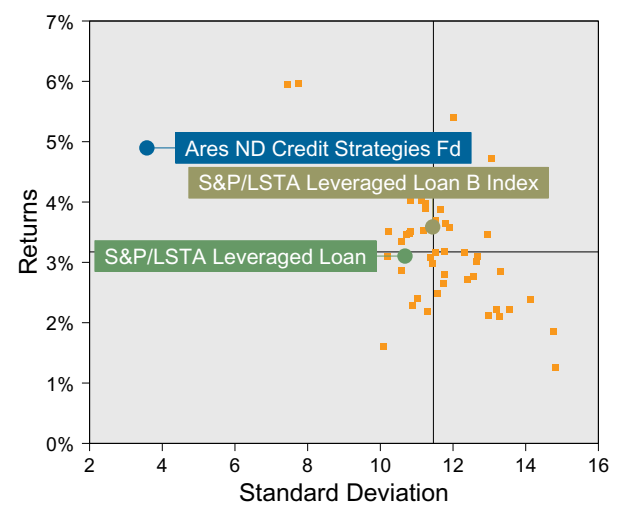
	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years
10th Percentile	5.57	3.93	5.60	4.56
25th Percentile	4.83	3.07	4.84	3.78
Median	4.54	2.25	3.83	3.17
75th Percentile	4.18	0.95	2.85	2.68
90th Percentile	3.87	(0.67)	2.09	2.15

	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years
Ares ND Credit Strategies Fd S&P/LSTA Leveraged Loan	0.00	1.72	4.83	4.90
S&P/LSTA Leveraged Loan B Index	4.14	1.06	2.08	3.10
S&P/LSTA Leveraged Loan B Index	4.33	2.14	2.68	3.59

## Relative Returns vs S&P/LSTA Leveraged Loan B Index



## Callan High Yield Mutual Funds (Net) Annualized Three Year Risk vs Return



# Cerberus ND Private Credit Fd Period Ended September 30, 2020

## Investment Philosophy

The investment objective of the LLC is to achieve superior risk-adjusted rates of return primarily through origination of, and investment in, secured debt assets consistent with the Loan Opportunities Strategy of the Cerberus Business Finance lending platform ("CBF", "Cerberus Business Finance" or the "Cerberus Lending Platform"). The Cerberus Lending Platform is a direct origination and lending business focused on providing secured debt primarily to U.S. middle-market companies. The LLC expects to generate both current income and capital appreciation.

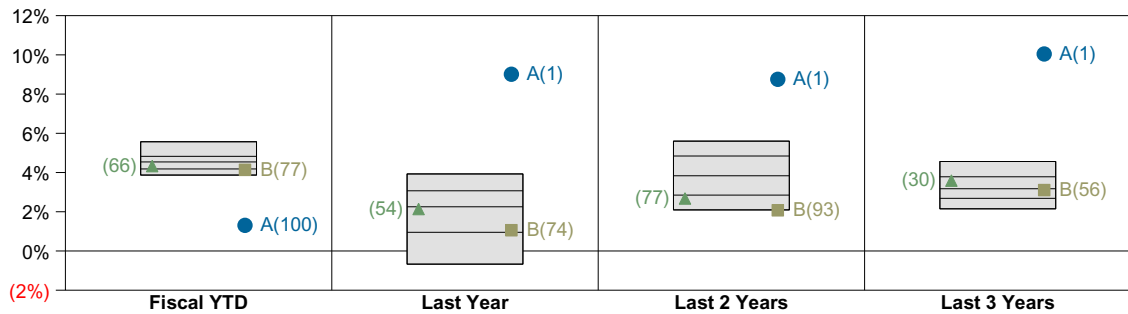
## Quarterly Summary and Highlights

- Cerberus ND Private Credit Fd's portfolio posted a 1.31% return for the quarter placing it in the 100 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 1 percentile for the last year.
- Cerberus ND Private Credit Fd's portfolio underperformed the S&P/LSTA Leveraged Loan B Index by 3.02% for the quarter and outperformed the S&P/LSTA Leveraged Loan B Index for the year by 6.87%.

## Quarterly Asset Growth

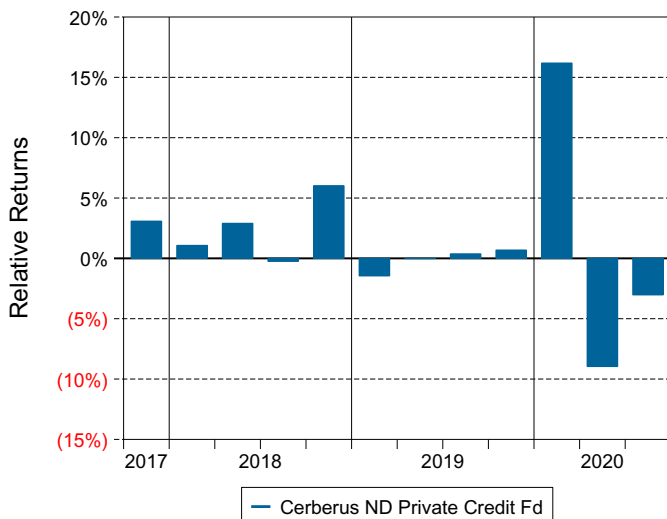
Beginning Market Value	\$97,001,312
Net New Investment	\$0
Investment Gains/(Losses)	\$1,268,089
Ending Market Value	\$98,269,401

## Performance vs Callan High Yield Mutual Funds (Net)

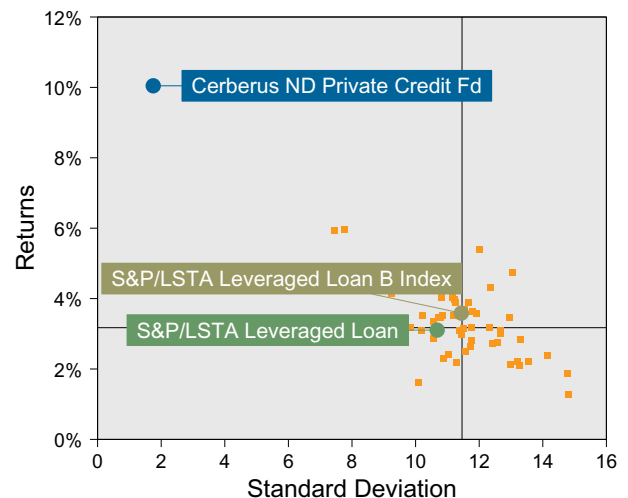


	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years
10th Percentile	5.57	3.93	5.60	4.56
25th Percentile	4.83	3.07	4.84	3.78
Median	4.54	2.25	3.83	3.17
75th Percentile	4.18	0.95	2.85	2.68
90th Percentile	3.87	(0.67)	2.09	2.15
Cerberus ND Private Credit Fd S&P/LSTA Leveraged Loan	1.31	9.01	8.75	10.05
S&P/LSTA Leveraged Loan B Index	4.14	1.06	2.08	3.10
S&P/LSTA Leveraged Loan B Index	4.33	2.14	2.68	3.59

## Relative Returns vs S&P/LSTA Leveraged Loan B Index



## Callan High Yield Mutual Funds (Net) Annualized Three Year Risk vs Return



# Declaration Total Return Period Ended September 30, 2020

## Investment Philosophy

The Fund's portfolio holdings consist primarily of RMBS issued by private sector companies (Non-Agency RMBS) and government agencies (Agency MBS) and CMBS issued by private sector companies. Agency MBS includes securities issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Government National Mortgage Association (Ginnie Mae). Portfolio holdings may range from short tenure senior classes to stressed issues or subordinated securities with substantial risk of non-payment and correspondingly higher yields. Smaller portfolio allocations may include consumer asset-backed securities (ABS), or other structured credit securities and corporate bonds. As a diversification strategy and a potential hedge to credit risk, the Fund may invest in securities which tend to benefit from slow mortgage prepayments and economic growth, such as interest only (IO) MBS.

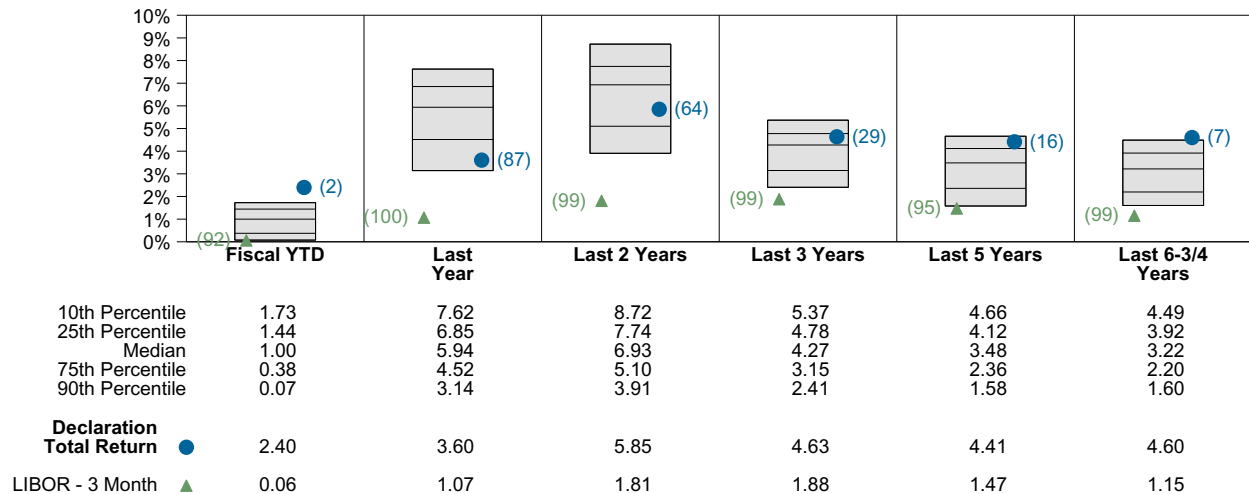
## Quarterly Summary and Highlights

- Declaration Total Return's portfolio posted a 2.40% return for the quarter placing it in the 2 percentile of the Callan Intermediate Fixed Inc Mut Funds group for the quarter and in the 87 percentile for the last year.
- Declaration Total Return's portfolio outperformed the LIBOR - 3 Month by 2.34% for the quarter and outperformed the LIBOR - 3 Month for the year by 2.54%.

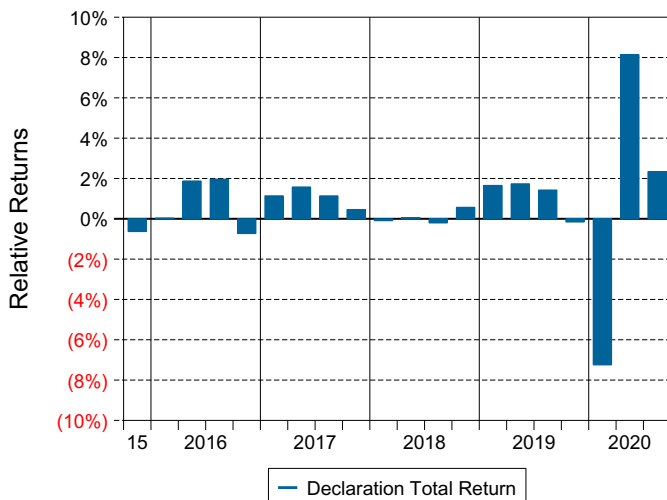
## Quarterly Asset Growth

Beginning Market Value	\$195,922,136
Net New Investment	\$-113,475
Investment Gains/(Losses)	\$4,696,242
Ending Market Value	\$200,504,903

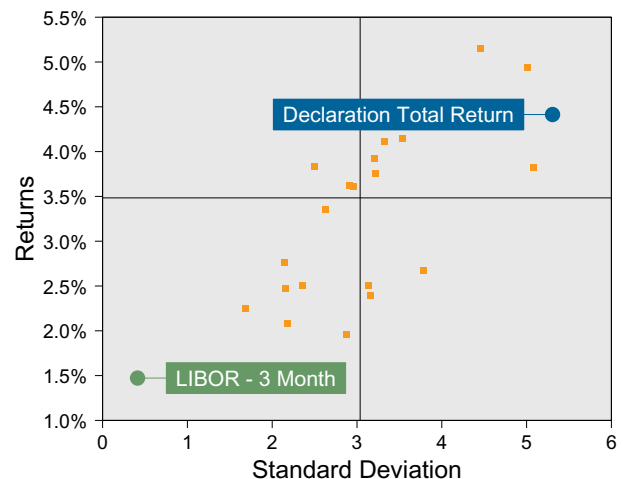
## Performance vs Callan Intermediate Fixed Inc Mut Funds (Net)



## Relative Return vs LIBOR - 3 Month



## Callan Intermediate Fixed Inc Mut Funds (Net) Annualized Five Year Risk vs Return



# PIMCO Bravo II

## Period Ended September 30, 2020

### Investment Philosophy

The BRAVO II Fund is a private equity style fund targeting an annualized IRR of 15-20% and multiple of 1.8-2x, net of fees and carried interest with an initial 5-year term. The fund will seek to capitalize on non-economic asset sale decisions by global financial institutions. The fund will have the flexibility to acquire attractively discounted, less liquid loans, structured credit and other assets tied to residential or commercial real estate markets in the U.S. and Europe. **Prior to July 1, 2019, the Legacy Fund participated in these portfolios via the Insurance Pool. Beginning July 1, 2019, its portion of the pool was segregated into its own portfolios. Returns prior to that date reflect the data from the Insurance pool.**

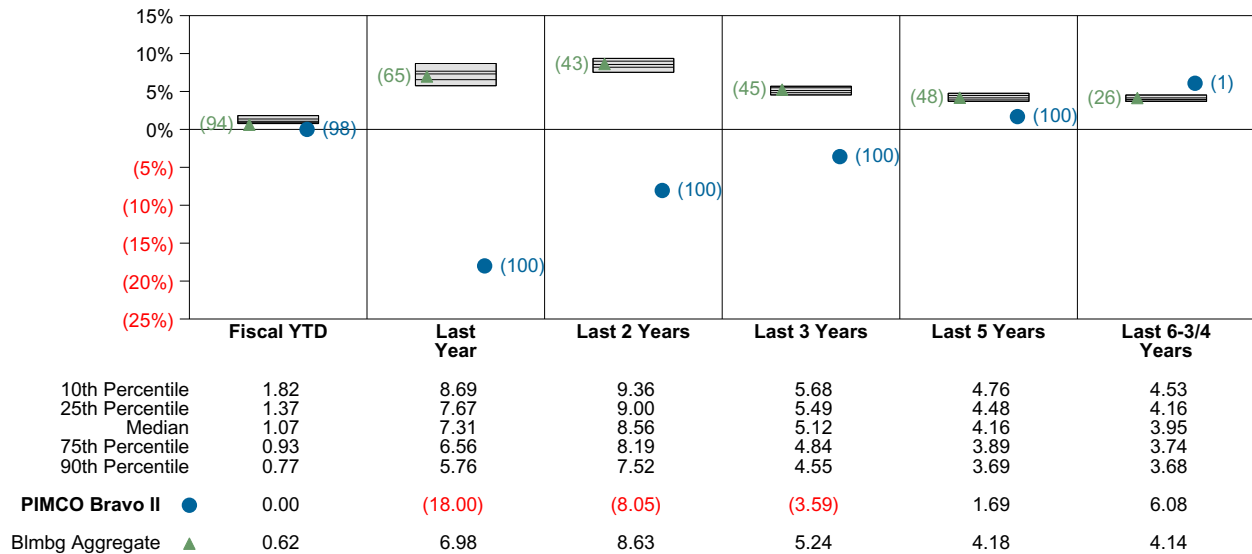
### Quarterly Summary and Highlights

- PIMCO Bravo II's portfolio posted a 0.00% return for the quarter placing it in the 98 percentile of the Callan Core Bond Mutual Funds group for the quarter and in the 100 percentile for the last year.
- PIMCO Bravo II's portfolio underperformed the Blmbg Aggregate by 0.62% for the quarter and underperformed the Blmbg Aggregate for the year by 24.99%.

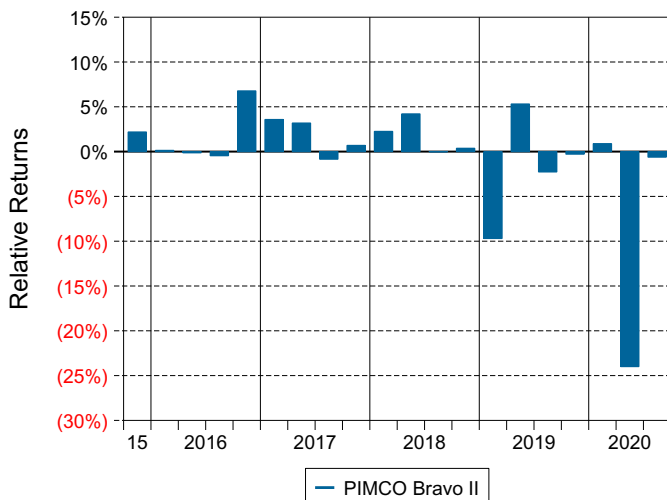
### Quarterly Asset Growth

Beginning Market Value	\$8,762,874
Net New Investment	\$-1,134,899
Investment Gains/(Losses)	\$0
Ending Market Value	\$7,627,975

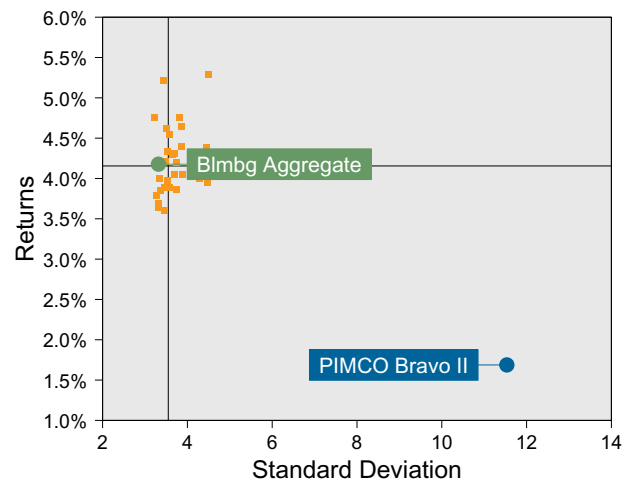
### Performance vs Callan Core Bond Mutual Funds (Net)



### Relative Return vs Blmbg Aggregate



### Callan Core Bond Mutual Funds (Net) Annualized Five Year Risk vs Return





# PIMCO DiSCO II

## Period Ended September 30, 2020

### Investment Philosophy

The PIMCO Distressed Senior Credit Opportunities Fund is an opportunistic private-equity style Fund which seeks to provide investors enhanced returns principally through long-biased investments in undervalued senior and super senior structured credit securities that are expected to produce attractive levels of current income and that may also appreciate in value over the long term. The fund will look to capitalize on forced sales by liquidity constrained investors. **Prior to July 1, 2019, the Legacy Fund participated in these portfolios via the Insurance Pool. Beginning July 1, 2019, its portion of the pool was segregated into its own portfolios. Returns prior to that date reflect the data from the Insurance pool.**

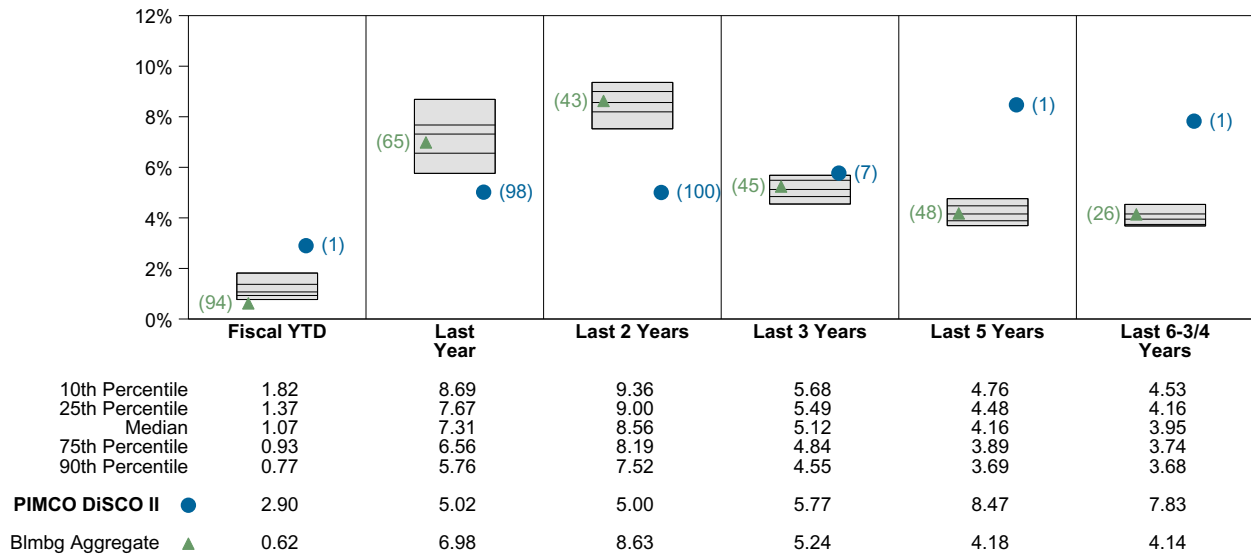
### Quarterly Summary and Highlights

- PIMCO DiSCO II's portfolio posted a 2.90% return for the quarter placing it in the 1 percentile of the Callan Core Bond Mutual Funds group for the quarter and in the 98 percentile for the last year.
- PIMCO DiSCO II's portfolio outperformed the Blmbg Aggregate by 2.28% for the quarter and underperformed the Blmbg Aggregate for the year by 1.97%.

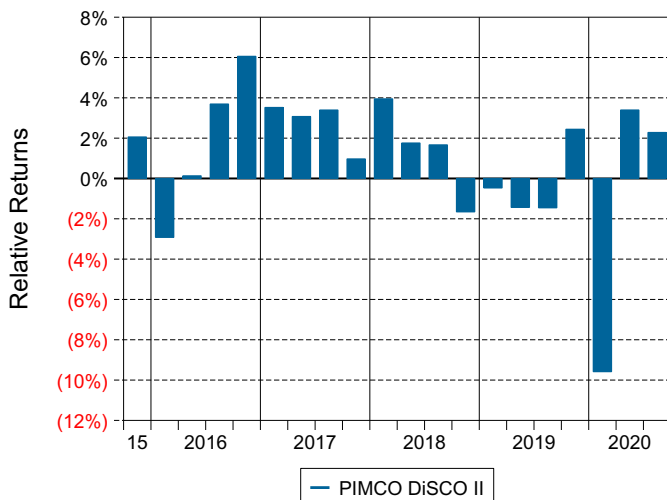
### Quarterly Asset Growth

Beginning Market Value	\$58,095,457
Net New Investment	\$0
Investment Gains/(Losses)	\$1,684,405
Ending Market Value	\$59,779,862

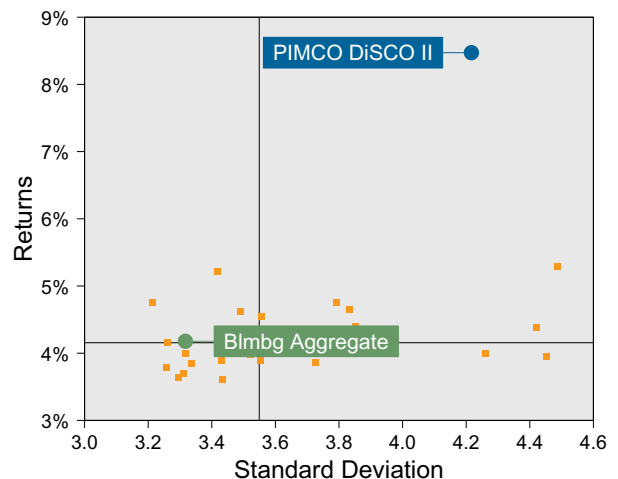
### Performance vs Callan Core Bond Mutual Funds (Net)



### Relative Return vs Blmbg Aggregate



### Callan Core Bond Mutual Funds (Net) Annualized Five Year Risk vs Return



# Prudential

## Period Ended September 30, 2020

### Investment Philosophy

PGIM Fixed Income's Core Plus Strategy is an actively-managed strategy that seeks +150 bps over the Bloomberg Barclays U.S. Aggregate Bond Index or similar benchmark annualized over a market cycle (three to five years.) The Strategy seeks about half of its excess return from active sector allocation and up to one-third each from subsector/security selection and duration/yield curve/currencies, depending on market opportunities.

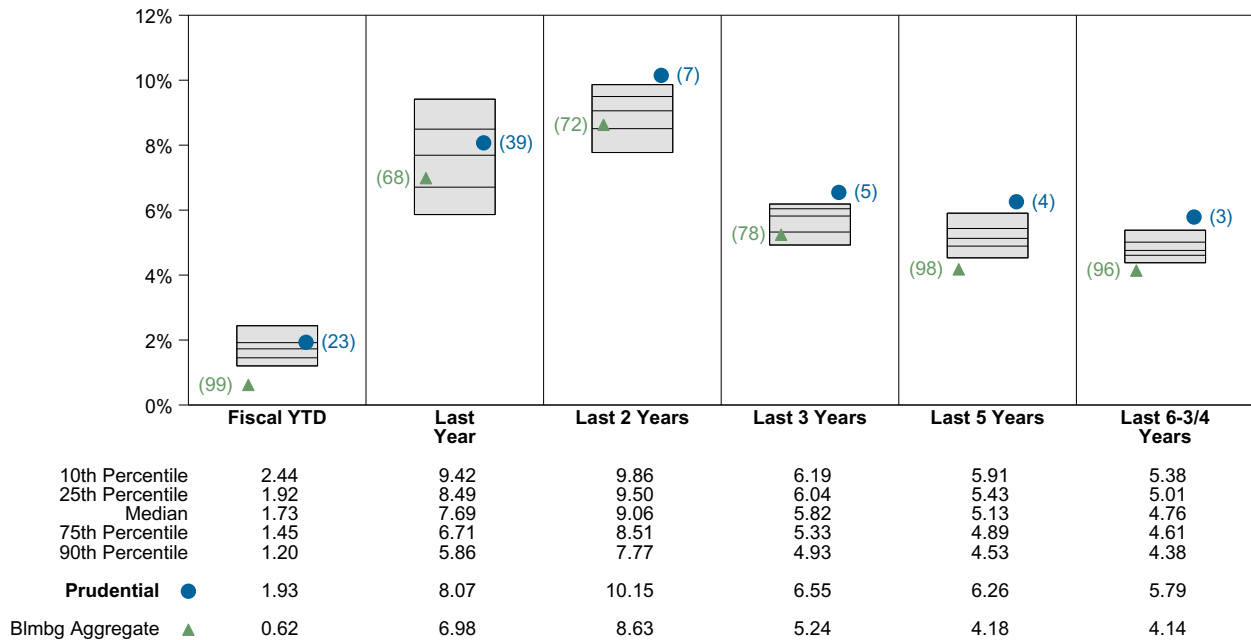
### Quarterly Summary and Highlights

- Prudential's portfolio posted a 1.93% return for the quarter placing it in the 23 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 39 percentile for the last year.
- Prudential's portfolio outperformed the Blmbg Aggregate by 1.31% for the quarter and outperformed the Blmbg Aggregate for the year by 1.09%.

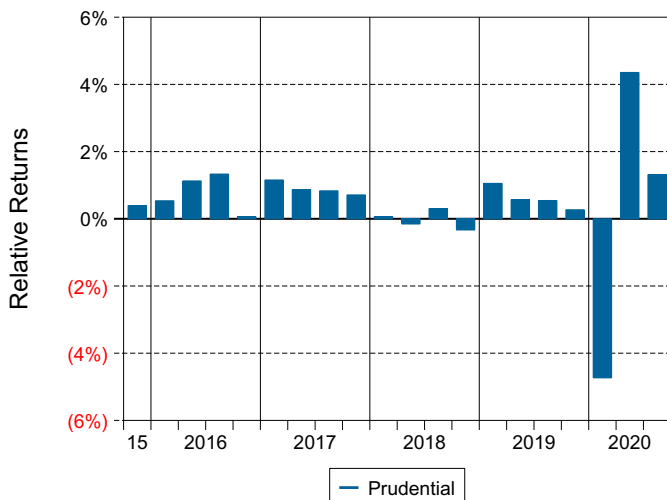
### Quarterly Asset Growth

Beginning Market Value	\$694,182,819
Net New Investment	\$9,632,898
Investment Gains/(Losses)	\$13,369,948
Ending Market Value	\$717,185,664

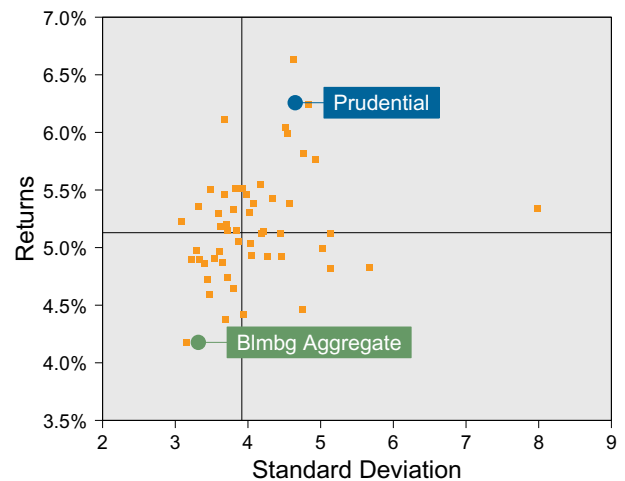
### Performance vs Callan Core Plus Fixed Income (Gross)



### Relative Return vs Blmbg Aggregate



### Callan Core Plus Fixed Income (Gross) Annualized Five Year Risk vs Return



# SSgA US Govt Credit Bd Idx Period Ended September 30, 2020

## Investment Philosophy

The Fund seeks an investment return that approximates as closely as practicable, before expenses, the performance of the Barclays Capital U.S. Government/Credit Bond Index over the long term.

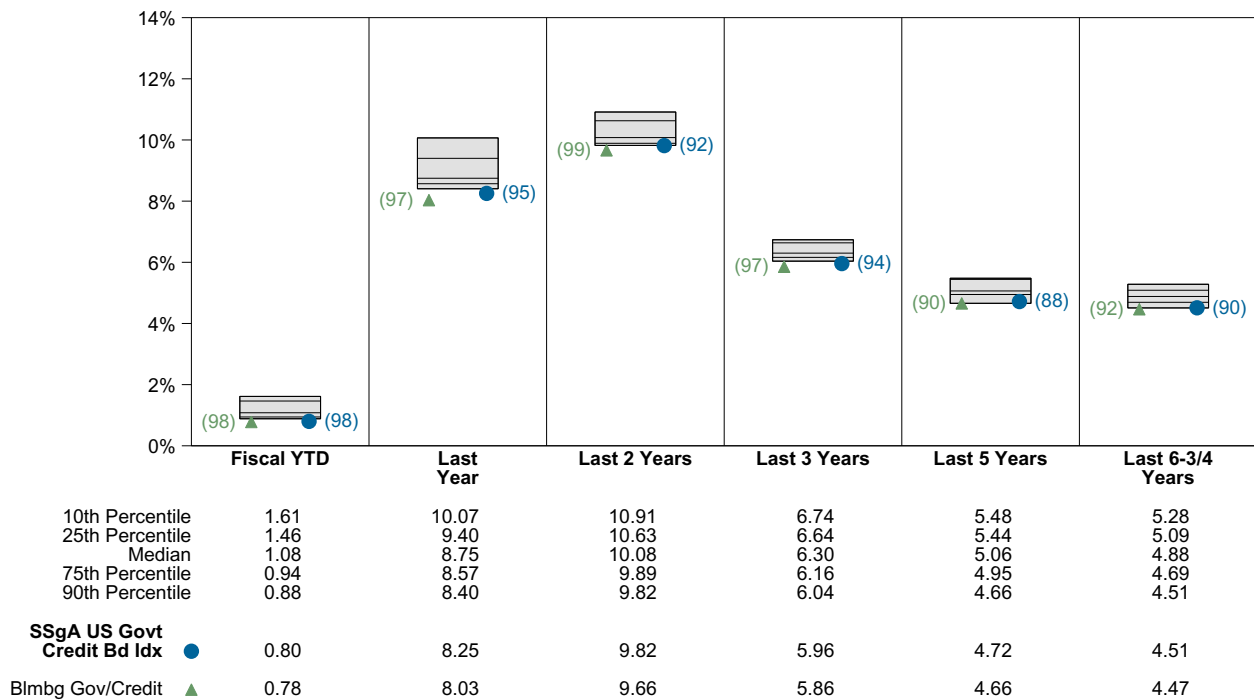
## Quarterly Summary and Highlights

- SSgA US Govt Credit Bd Idx's portfolio posted a 0.80% return for the quarter placing it in the 98 percentile of the Callan Government/Credit group for the quarter and in the 95 percentile for the last year.
- SSgA US Govt Credit Bd Idx's portfolio outperformed the Blmbg Gov/Credit by 0.02% for the quarter and outperformed the Blmbg Gov/Credit for the year by 0.22%.

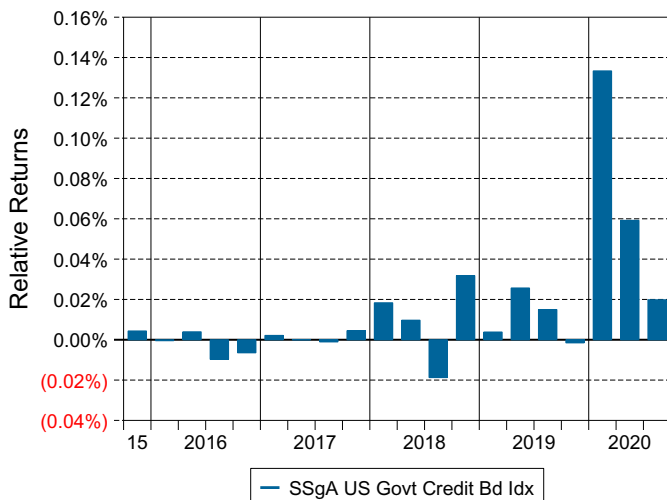
## Quarterly Asset Growth

Beginning Market Value	\$330,670,203
Net New Investment	\$9,986,976
Investment Gains/(Losses)	\$2,597,255
Ending Market Value	\$343,254,435

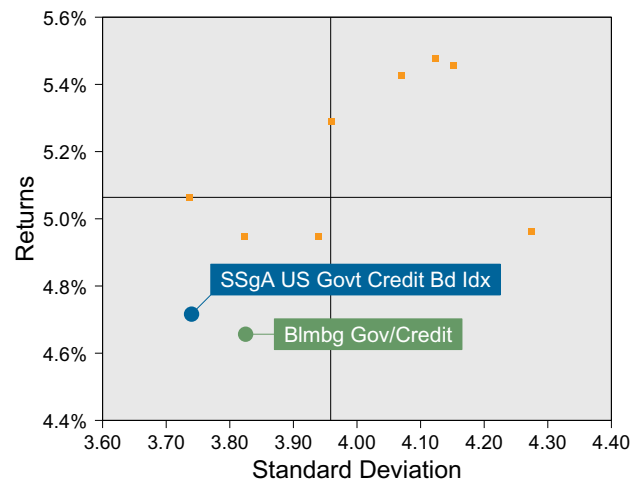
## Performance vs Callan Government/Credit (Gross)



## Relative Return vs Blmbg Gov/Credit



## Callan Government/Credit (Gross) Annualized Five Year Risk vs Return



# Wells Capital

## Period Ended September 30, 2020

### Investment Philosophy

The Medium Quality Credit fixed income strategy is designed to maximize total return from the high-grade corporate bond market while maintaining a strategic allocation to the BBB portion of the high yield market. The investment process for this fund starts with a "top-down" strategy. Security selection is determined by in-depth credit research, holding that in-depth knowledge of industries, companies, and their management teams can help identify credit trends that can lead to investment opportunities. Furthermore, a disciplined relative value framework is applied to help determine the optimal position to invest within an industry and within an individual issuer's capital structure.

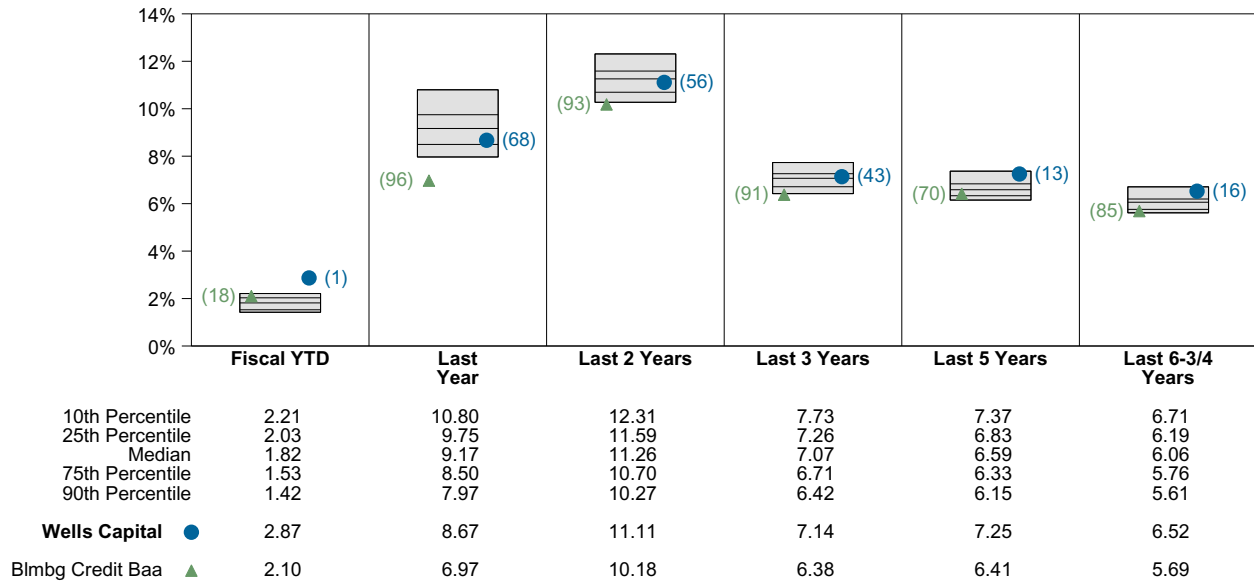
### Quarterly Summary and Highlights

- Wells Capital's portfolio posted a 2.87% return for the quarter placing it in the 1 percentile of the Callan Investment Grade Credit Fixed Inc group for the quarter and in the 68 percentile for the last year.
- Wells Capital's portfolio outperformed the Blmbg Credit Baa by 0.77% for the quarter and outperformed the Blmbg Credit Baa for the year by 1.70%.

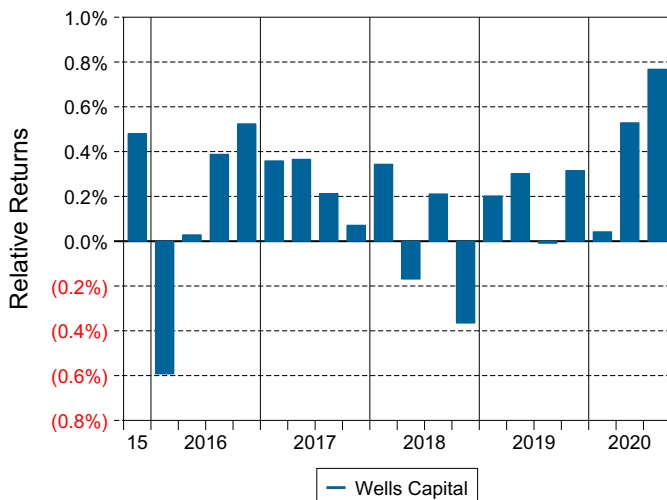
### Quarterly Asset Growth

Beginning Market Value	\$190,746,412
Net New Investment	\$-92,164
Investment Gains/(Losses)	\$5,472,872
Ending Market Value	\$196,127,120

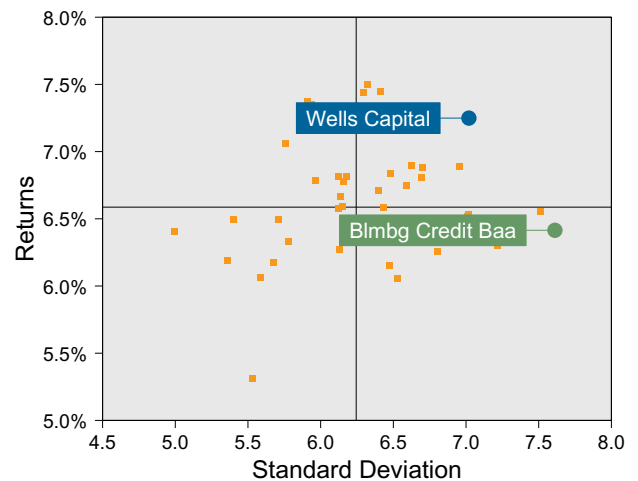
### Performance vs Callan Investment Grade Credit Fixed Inc (Gross)



### Relative Return vs Blmbg Credit Baa



### Callan Investment Grade Credit Fixed Inc (Gross) Annualized Five Year Risk vs Return



# Western Asset Management Company

## Period Ended September 30, 2020

### Investment Philosophy

Western Asset designs this portfolio using all major fixed-income sectors with a bias towards non-Treasuries, especially corporate, mortgage-backed and asset-backed securities. Value can be added through sector rotation, issue selection, duration and term structure weighting.

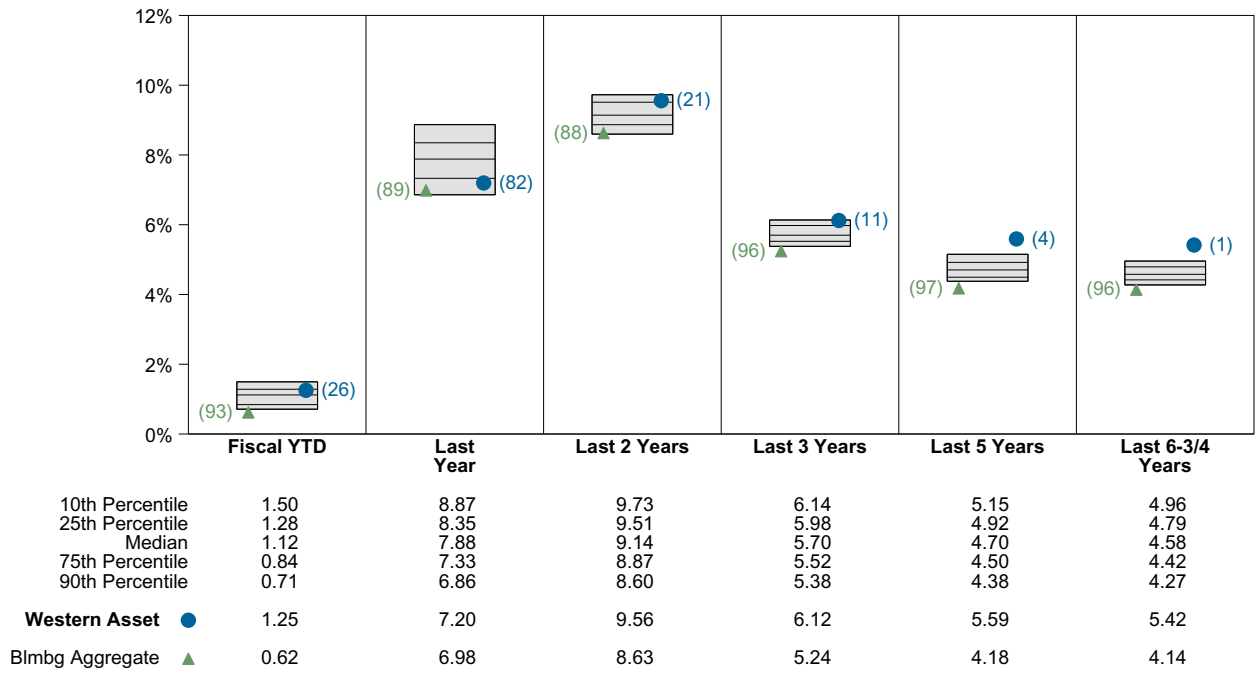
### Quarterly Summary and Highlights

- Western Asset's portfolio posted a 1.25% return for the quarter placing it in the 26 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 82 percentile for the last year.
- Western Asset's portfolio outperformed the Blmbg Aggregate by 0.63% for the quarter and outperformed the Blmbg Aggregate for the year by 0.21%.

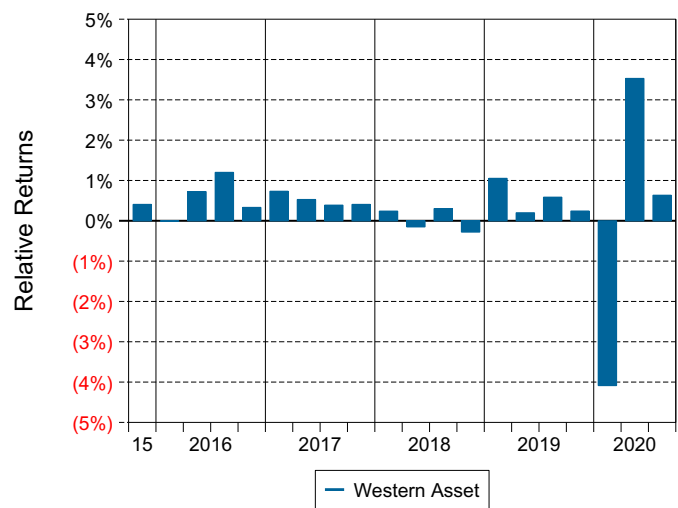
### Quarterly Asset Growth

Beginning Market Value	\$692,762,899
Net New Investment	\$16,799,229
Investment Gains/(Losses)	\$8,624,255
Ending Market Value	\$718,186,383

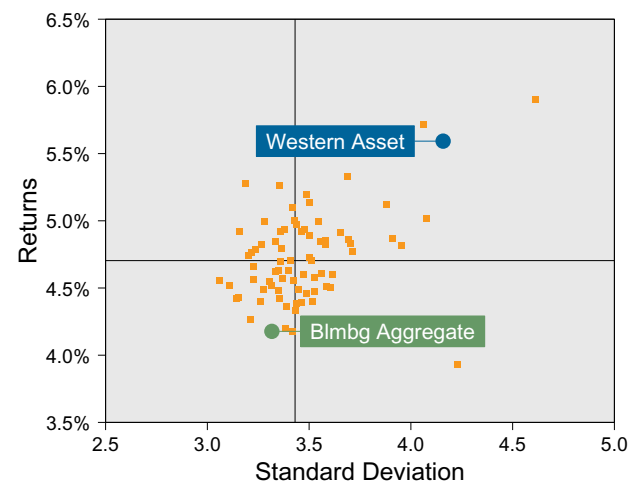
### Performance vs Callan Core Bond Fixed Income (Gross)



### Relative Return vs Blmbg Aggregate



### Callan Core Bond Fixed Income (Gross) Annualized Five Year Risk vs Return



# Invesco Core Real Estate

## Period Ended September 30, 2020

### Investment Philosophy

IRE's investment philosophy is comprised of two fundamental principles: (1) maximize the predictability and consistency of investment returns and (2) minimize the risk of capital loss. This philosophy forms the cornerstone of the company's real estate investment philosophy.

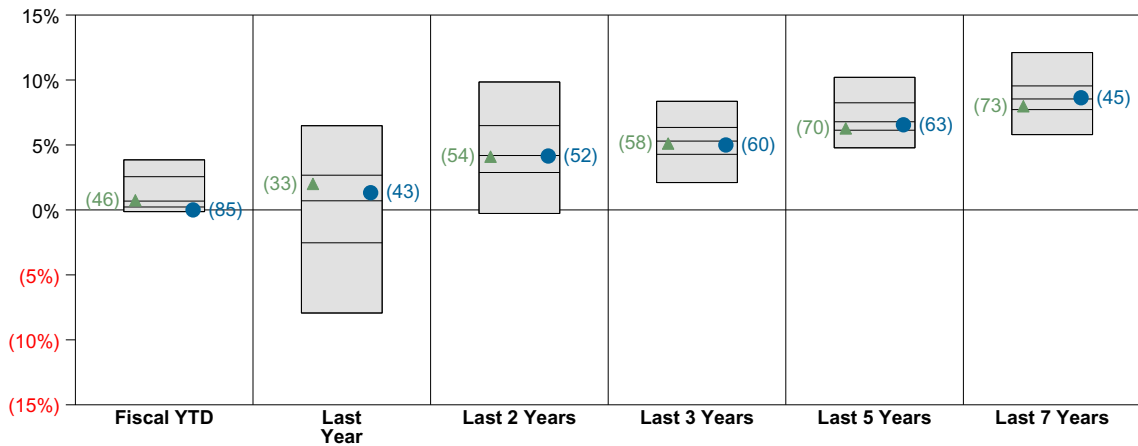
### Quarterly Summary and Highlights

- Invesco Core Real Estate's portfolio posted a (0.00)% return for the quarter placing it in the 85 percentile of the Callan Total Domestic Real Estate DB group for the quarter and in the 43 percentile for the last year.
- Invesco Core Real Estate's portfolio underperformed the NCREIF Total Index by 0.74% for the quarter and underperformed the NCREIF Total Index for the year by 0.68%.

### Quarterly Asset Growth

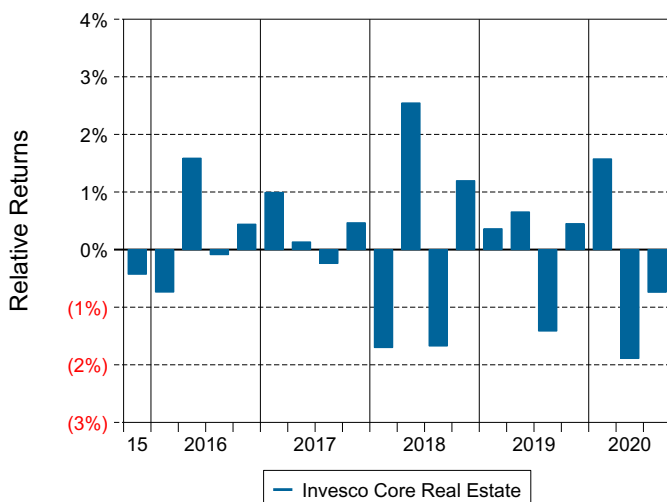
Beginning Market Value	\$147,684,308
Net New Investment	\$25,000,000
Investment Gains/(Losses)	\$-966
Ending Market Value	\$172,683,342

### Performance vs Callan Total Domestic Real Estate DB (Gross)

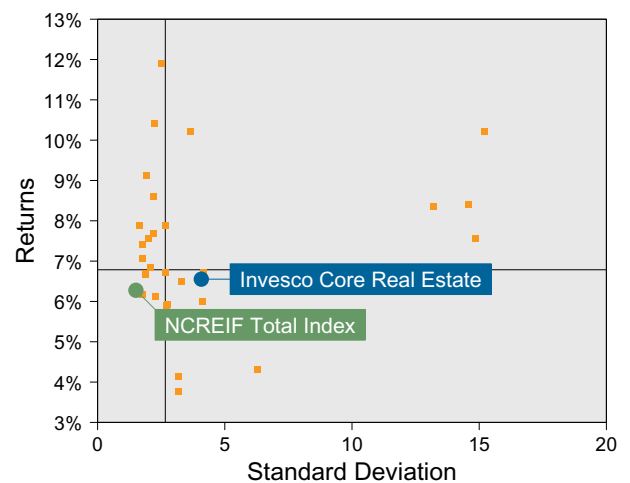


10th Percentile	3.85	6.48	9.85	8.36	10.21	12.11
25th Percentile	2.56	2.67	6.49	6.35	8.24	9.54
Median	0.68	0.70	4.19	5.30	6.79	8.54
75th Percentile	0.23	(2.53)	2.88	4.28	6.13	7.72
90th Percentile	(0.13)	(7.94)	(0.27)	2.11	4.78	5.80
<b>Invesco Core Real Estate</b>	<b>● (0.00)</b>	<b>1.32</b>	<b>4.15</b>	<b>5.00</b>	<b>6.55</b>	<b>8.63</b>
<b>NCREIF Total Index</b>	<b>▲ 0.74</b>	<b>2.00</b>	<b>4.10</b>	<b>5.11</b>	<b>6.28</b>	<b>7.98</b>

### Relative Return vs NCREIF Total Index



### Callan Total Domestic Real Estate DB (Gross) Annualized Five Year Risk vs Return



# JP Morgan RE Inc & Growth Period Ended September 30, 2020

## Investment Philosophy

The J.P. Morgan U.S. Real Estate Income and Growth Fund seeks to construct and opportunistically manage a portfolio of core direct real estate investments, complemented by other real estate and real estate-related assets. The Fund pursues a broadly diversified absolute-return strategy and pursues all property investments on an opportunistic basis. The majority of the Fund's investments will be in direct core properties in the office, industrial, retail and residential sectors.

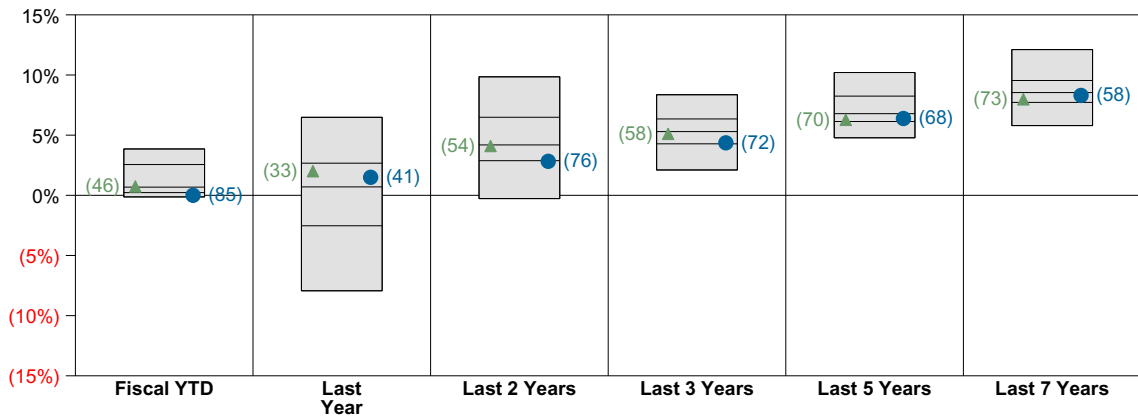
## Quarterly Summary and Highlights

- JP Morgan RE Inc & Growth's portfolio posted a 0.00% return for the quarter placing it in the 85 percentile of the Callan Total Domestic Real Estate DB group for the quarter and in the 41 percentile for the last year.
- JP Morgan RE Inc & Growth's portfolio underperformed the NCREIF Total Index by 0.74% for the quarter and underperformed the NCREIF Total Index for the year by 0.51%.

## Quarterly Asset Growth

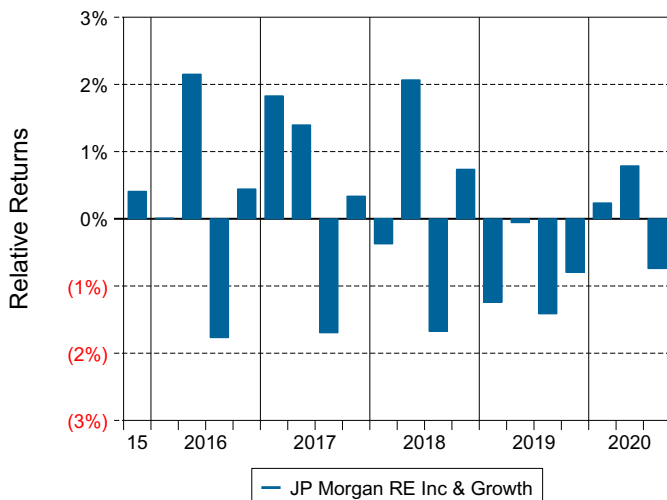
Beginning Market Value	\$152,121,893
Net New Investment	\$0
Investment Gains/(Losses)	\$0
Ending Market Value	\$152,121,893

## Performance vs Callan Total Domestic Real Estate DB (Gross)

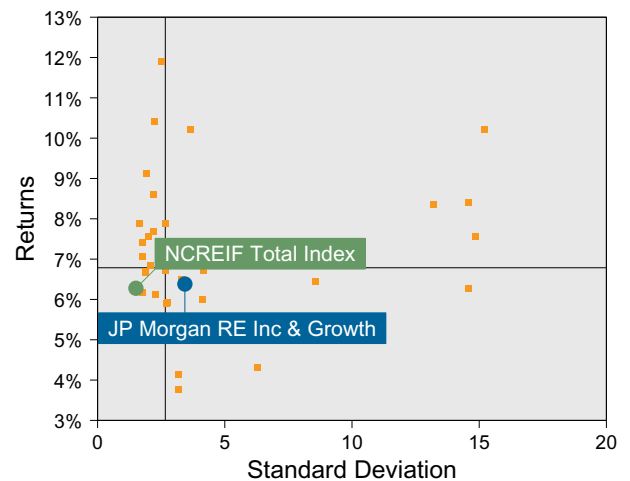


10th Percentile	3.85	6.48	9.85	8.36	10.21	12.11
25th Percentile	2.56	2.67	6.49	6.35	8.24	9.54
Median	0.68	0.70	4.19	5.30	6.79	8.54
75th Percentile	0.23	(2.53)	2.88	4.28	6.13	7.72
90th Percentile	(0.13)	(7.94)	(0.27)	2.11	4.78	5.80
JP Morgan RE Inc & Growth	0.00	1.50	2.83	4.36	6.38	8.30
NCREIF Total Index	0.74	2.00	4.10	5.11	6.28	7.98

## Relative Return vs NCREIF Total Index



## Callan Total Domestic Real Estate DB (Gross) Annualized Five Year Risk vs Return



## Western Asset TIPS Period Ended September 30, 2020

### Investment Philosophy

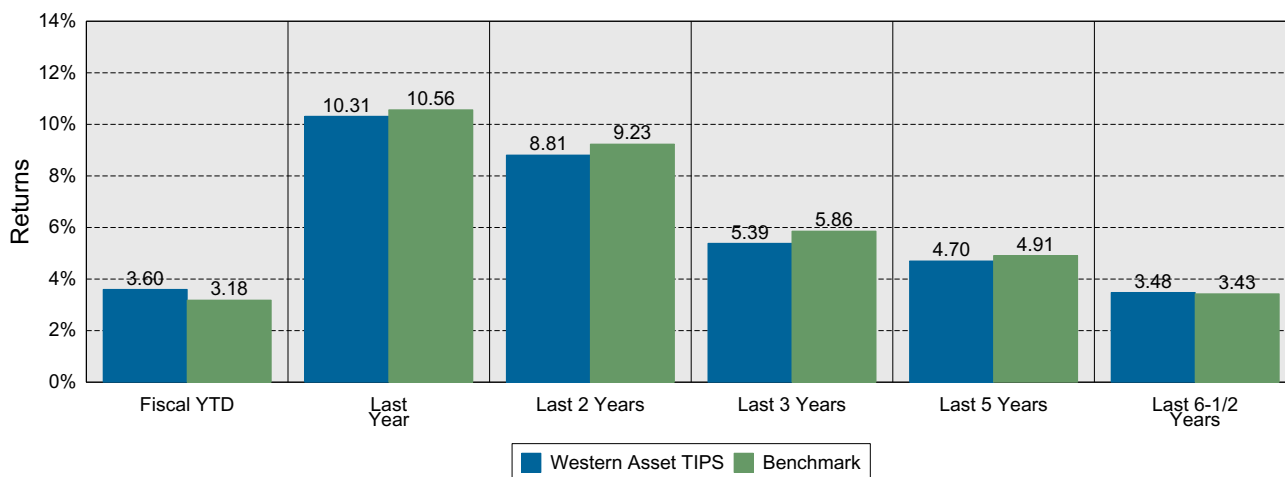
The Western Asset US TIPS Full Discretion strategy is an inflation-protected strategy that aims to maximize total return and add value through duration and curve positioning, sector allocation, and security selection, while approximating benchmark risk. The strategy invests in a diversified portfolio using higher-yielding inflation-protected instruments with a bias toward Treasury Inflation-Protected Securities (TIPS). Opportunistic investments include high-yield, emerging markets, non-dollar securities, commodities and bank loans that may also be employed using derivatives. **Benchmark: Bloomberg US TIPS through 12/31/2009; Bloomberg Global Inflation-Linked through 10/31/2018; Bloomberg US Govt Inflation Linked Bond Index thereafter.**

### Quarterly Summary and Highlights

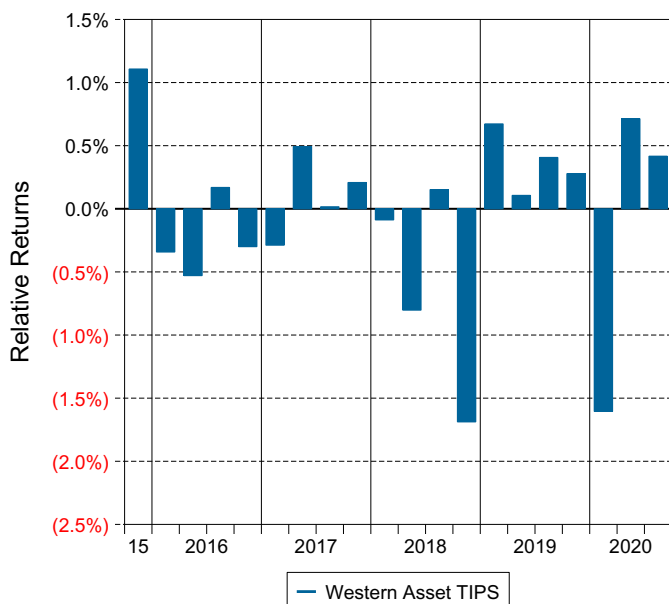
- Western Asset TIPS's portfolio outperformed the Benchmark by 0.42% for the quarter and underperformed the Benchmark for the year by 0.25%.

### Quarterly Asset Growth

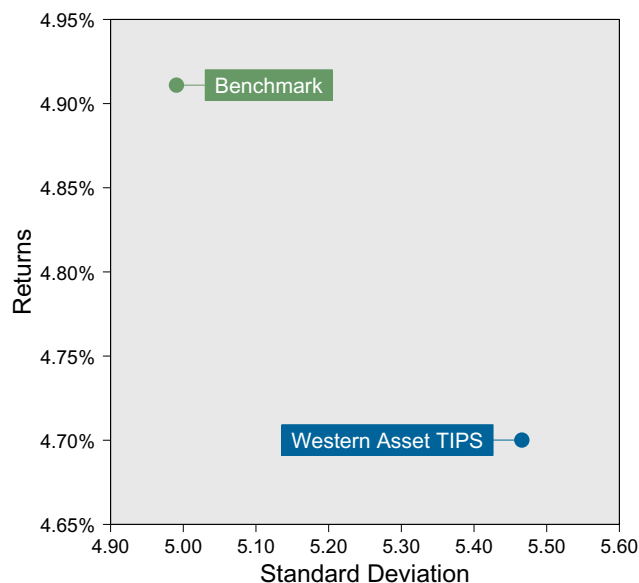
Beginning Market Value	\$427,547,289
Net New Investment	\$-123,318
Investment Gains/(Losses)	\$15,384,835
Ending Market Value	\$442,808,805



### Relative Return vs Benchmark



### Annualized Five Year Risk vs Return





# ISQ Global Infrastructure II

## Period Ended September 30, 2020

### Investment Philosophy

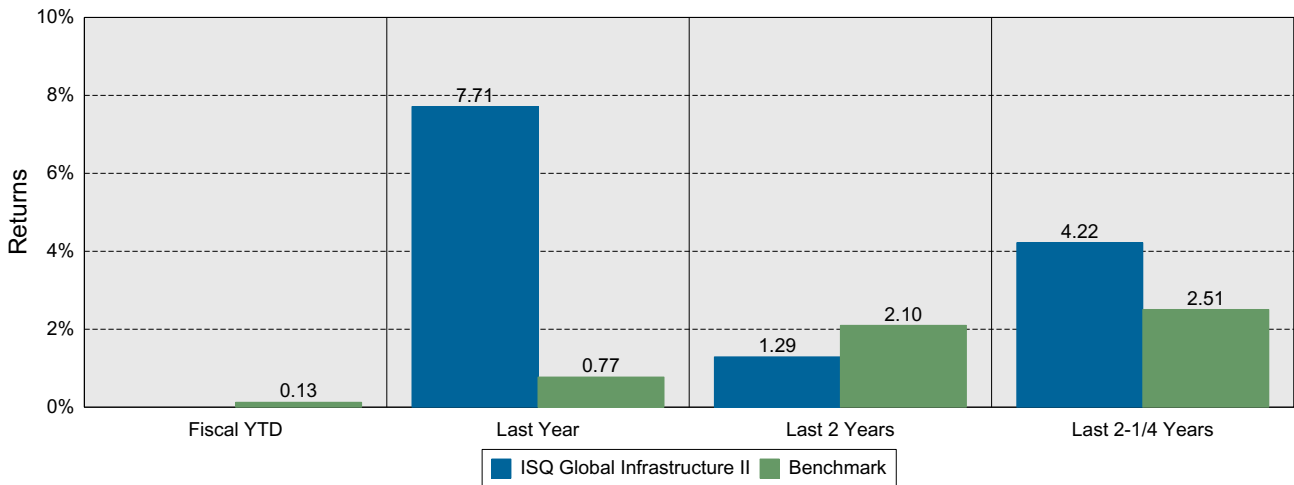
The ISQ Global Infrastructure Fund II seeks to achieve long-term capital appreciation as well as current income through equity and equity related investments in infrastructure and infrastructure related assets located globally, with a focus on North America, Europe, and selected growth economies in Asia and Latin America. The Fund may also invest in debt Securities that have equity-like returns or an equity component, or are related to its equity investments, including without limitation convertible debt, bank loans and participations and other similar instruments. **The Benchmark is comprised of 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net.**

### Quarterly Summary and Highlights

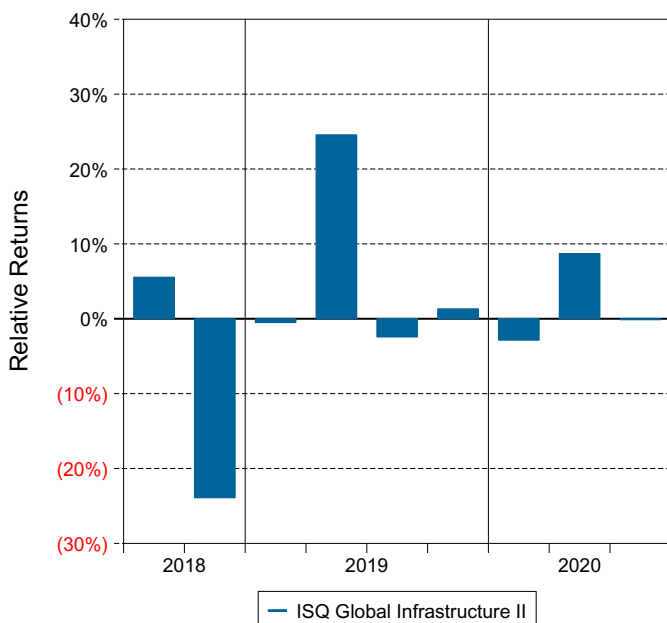
- ISQ Global Infrastructure II's portfolio underperformed the Benchmark by 0.13% for the quarter and outperformed the Benchmark for the year by 6.94%.

### Quarterly Asset Growth

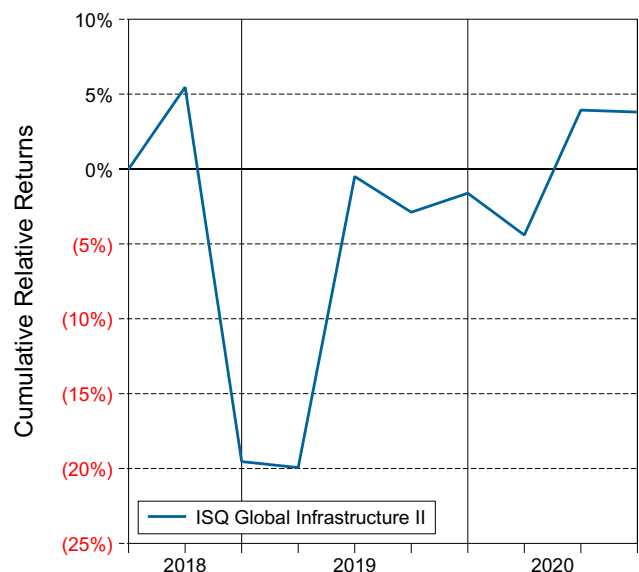
Beginning Market Value	\$49,851,839
Net New Investment	\$0
Investment Gains/(Losses)	\$0
Ending Market Value	\$49,851,839



Relative Return vs Benchmark



Cumulative Returns vs Benchmark



# JP Morgan Infrastructure Period Ended September 30, 2020

## Investment Philosophy

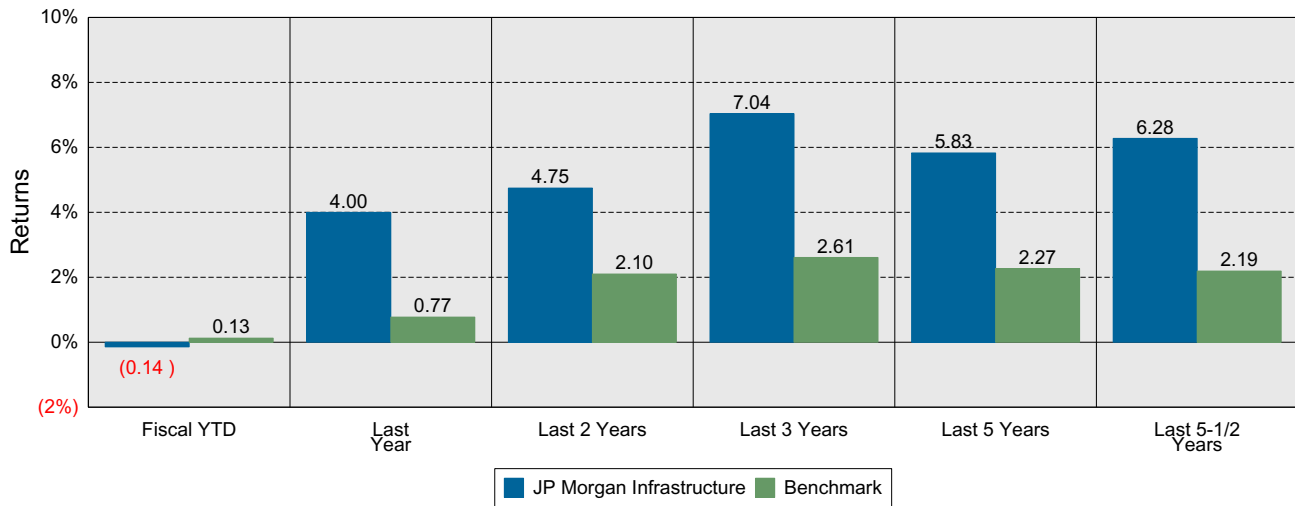
The only open-ended private commingled infrastructure fund in the U.S., the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas pipelines; electricity transmission and distribution facilities; contracted power generation assets; water distribution; waste-water collection and processing; railway lines and rapid rail links; and seaports and airports. **The Benchmark is comprised of CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.**

## Quarterly Summary and Highlights

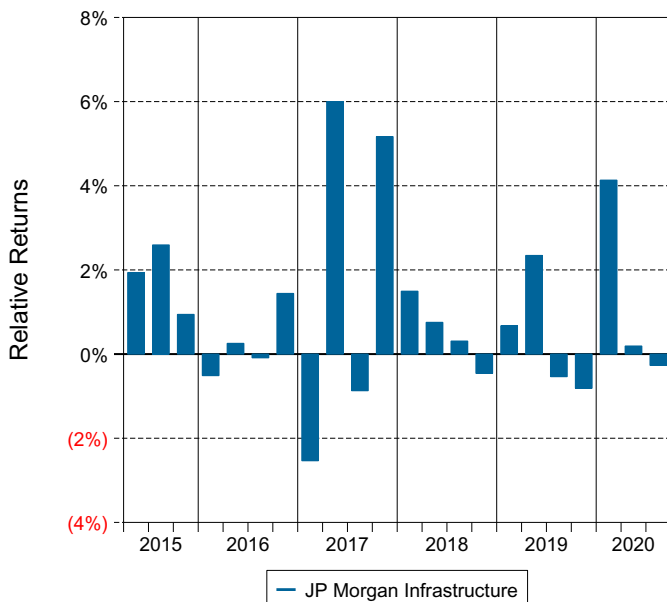
- JP Morgan Infrastructure's portfolio underperformed the Benchmark by 0.27% for the quarter and outperformed the Benchmark for the year by 3.22%.

## Quarterly Asset Growth

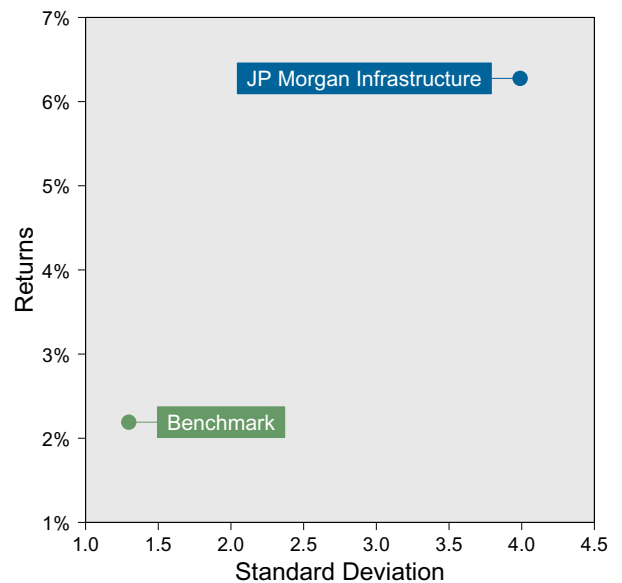
Beginning Market Value	\$111,346,576
Net Investment	\$-3,730,104
Investment Gains/(Losses)	\$-164,571
Ending Market Value	\$107,451,900



Relative Return vs Benchmark



Annualized Five and One-Half Year Risk vs Return



# Grosvenor Cust. Infrastructure Period Ended September 30, 2020

## Investment Philosophy

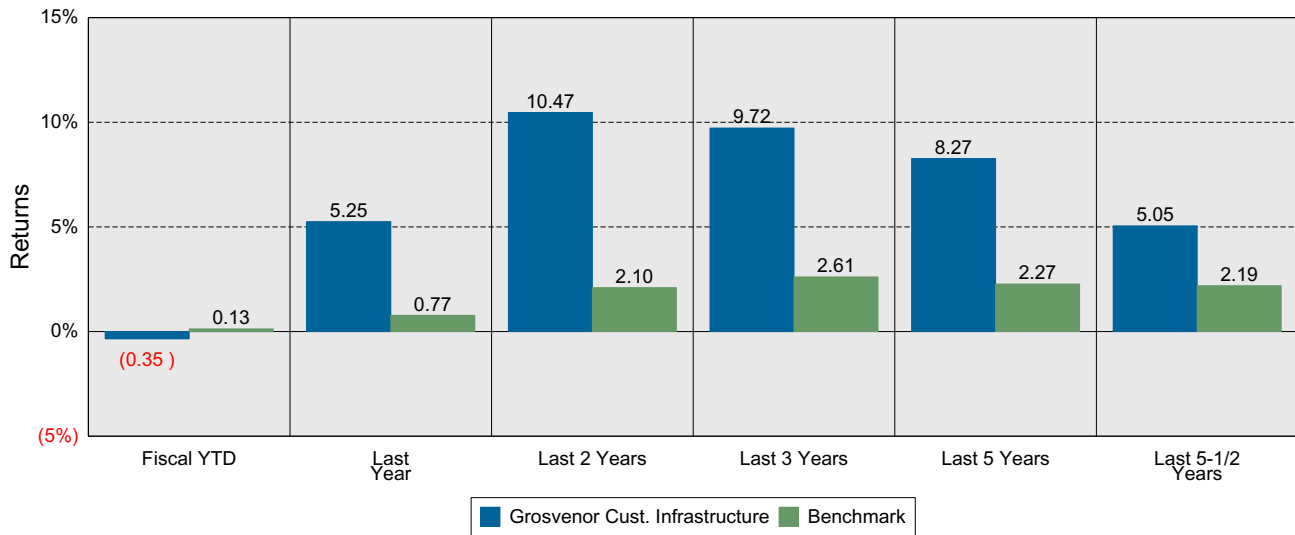
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%). **The Benchmark is comprised of CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.**

## Quarterly Summary and Highlights

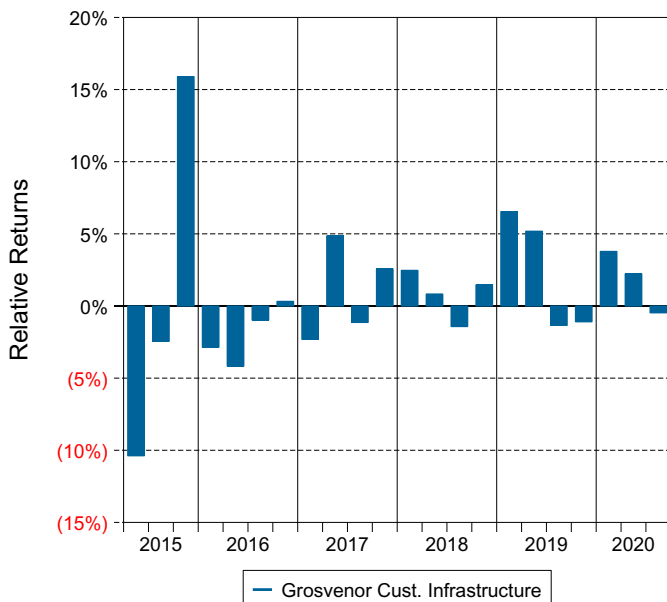
- Grosvenor Cust. Infrastructure's portfolio underperformed the Benchmark by 0.47% for the quarter and outperformed the Benchmark for the year by 4.48%.

## Quarterly Asset Growth

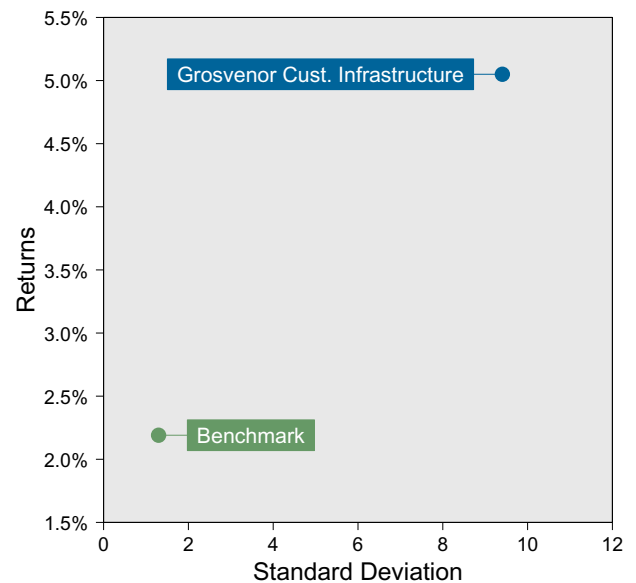
Beginning Market Value	\$45,849,593
Net New Investment	\$-712,048
Investment Gains/(Losses)	\$-159,644
Ending Market Value	\$44,977,901



Relative Return vs Benchmark



Annualized Five and One-Half Year Risk vs Return



# Macquarie Infras. Partners IV Period Ended September 30, 2020

## Investment Philosophy

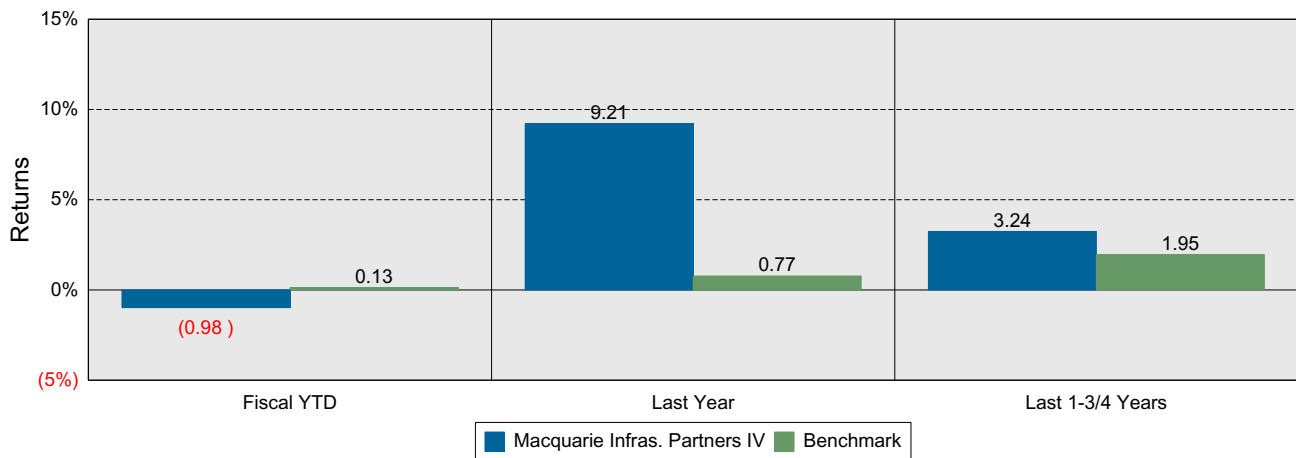
Macquarie's principal investment philosophy is to invest in infrastructure assets that exhibit monopolistic and/or contractual revenue drivers, limited substitution risk and high barriers to entry. The manager has continued to focus on investments where the team's sector expertise and operating experience will provide a competitive advantage in sourcing and due diligence. Furthermore, the manager will also continue to focus on opportunities where its active management capabilities can add value for investors in terms of enhancing returns and the substantial mitigation and/or elimination of material operational risks. **The Benchmark is comprised of 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net.**

## Quarterly Summary and Highlights

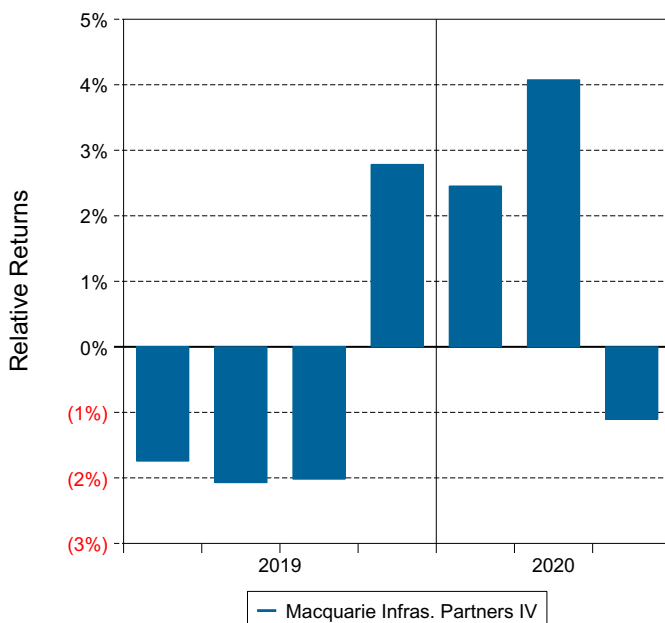
- Macquarie Infras. Partners IV's portfolio underperformed the Benchmark by 1.10% for the quarter and outperformed the Benchmark for the year by 8.44%.

## Quarterly Asset Growth

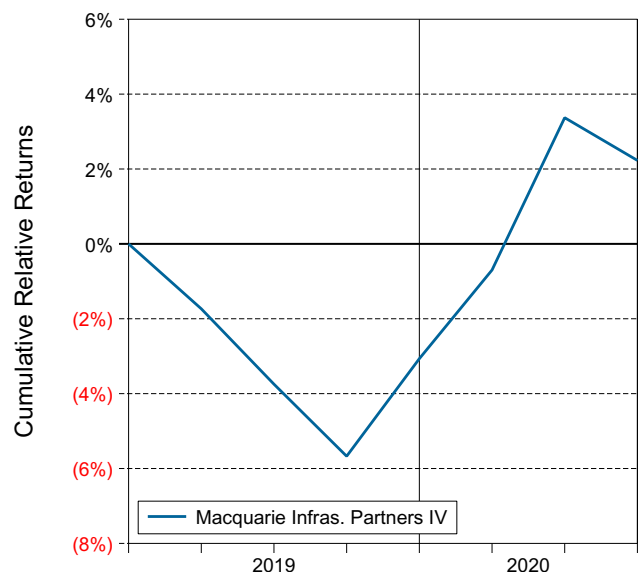
Beginning Market Value	\$71,450,029
Net New Investment	\$3,333,538
Investment Gains/(Losses)	\$-701,056
Ending Market Value	\$74,082,511



Relative Return vs Benchmark



Cumulative Returns vs Benchmark



## Research and Educational Programs

The Callan Institute provides research to update clients on the latest industry trends and carefully structured educational programs to enhance the knowledge of industry professionals. Visit [www.callan.com/library](http://www.callan.com/library) to see all of our publications, and [www.callan.com/blog](http://www.callan.com/blog) to view our blog “Perspectives.” For more information contact Barb Gerraty at 415-274-3093 / [institute@callan.com](mailto:institute@callan.com).

## New Research from Callan’s Experts

**[2020 ESG Survey](#)** | Callan’s eighth annual survey assessing the status of environmental, social, and governance (ESG) investing in the U.S. institutional investment market.

**[Coping with COVID-19: How Work Is Evolving for Investment Managers—2nd Edition](#)** | Following up on our June publication, Callan again surveyed investment managers regarding how their firms were responding to the COVID-19 pandemic, focusing on office closures and reopenings, work-from-home approaches, business travel, and meetings. Respondents reflected a variety of firms by location, employee size, ownership structure, and assets under management.

**[Private Equity Fees and Terms Study](#)** | To help institutional investors better evaluate private equity funds, Callan conducted an extensive analysis of the fees and terms for private equity partnerships. Using that data, we created this study to help investors evaluate a partnership’s terms compared to its peers.

**[Real Estate Indicators: Too Hot to Touch or Cool Enough to Handle?](#)** | Callan’s Real Assets Consulting group identifies seven indicators that, combined with an understanding of prevailing market dynamics, have helped signal when the institutional real estate market is overheated or cooled.

### Blog Highlights

**[How Investors Can Address Climate Risk in Real Estate](#)** | Climate risk, which refers to the hazards associated with climate change, can significantly threaten real estate portfolios. Institutional investors and real estate investment managers must evaluate the increasing significance of climate risk given the material financial impact that climate change can have on real estate portfolios.

**[Fine-Tuning Implementation of the CARES Act](#)** | Drafting the CARES Act was expedited, which means there is a limited congressional record to clarify provisions. The IRS has issued two notices and a FAQ to clarify how defined contribution (DC) plan sponsors should implement the provisions, touching on required notices, tax reporting, and recordkeeping.

**[DOL Proposes Tightened Proxy Voting Guidelines](#)** | The department’s new proposal dovetails with SEC guidance finalized in 2020 and would create a refined set of circumstances in which plan fiduciaries may engage in proxy voting.

### Quarterly Periodicals

**[Private Equity Trends, 2Q20](#)** | A high-level summary of private equity activity in the quarter through all the investment stages

**[Active vs. Passive Charts, 2Q20](#)** | A comparison of active managers alongside relevant benchmarks over the long term

**[Market Pulse Flipbook, 2Q20](#)** | A quarterly market reference guide covering trends in the U.S. economy, developments for institutional investors, and the latest data on the capital markets

**[Capital Market Review, 2Q20](#)** | Analysis and a broad overview of the economy and public and private market activity each quarter across a wide range of asset classes

**[Hedge Fund Quarterly, 2Q20](#)** | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

**[Real Assets Reporter, 2Q20](#)** | In this quarter’s edition, Barbara Bernard and Sally Haskins discuss how new risk-retention rules affect the CMBS market. In addition, it includes analysis of the performance of real estate and other real assets in 2Q20.

## Events

Miss out on a Callan conference or workshop? Event summaries and speakers' presentations are available on our website: [www.callan.com/library/](http://www.callan.com/library/)

Please mark your calendar and look forward to upcoming invitations:

### 2021 National Conference

June 21-23, 2021

San Francisco | Palace Hotel

For more information about events, please contact Barb Gerraty: 415-274-3093 / [gerraty@callan.com](mailto:gerraty@callan.com)

## Education: By the Numbers

50+

Unique pieces of research the Institute generates each year

525

Attendees (on average) of the Institute's annual National Conference

3,700

Total attendees of the "Callan College" since 1994

## Education

Founded in 1994, the "Callan College" offers educational sessions for industry professionals involved in the investment decision-making process.

### Introduction to Investments—Virtual

This program familiarizes institutional investor trustees and staff and asset management advisers with basic investment theory, terminology, and practices. It is held over three days with virtual modules of 2.5-3 hours. This course is designed for individuals with less than two years of experience with asset-management oversight and/or support responsibilities. Tuition is \$950 per person and includes instruction and digital materials.

**Please look for our updated schedule for 2021 in November**

Additional information including registration can be found at: [www.callan.com/cc-introduction-virtual/](http://www.callan.com/cc-introduction-virtual/)

### Introduction to Investments—In Person

This program familiarizes institutional investor trustees and staff and asset management advisers with basic investment theory, terminology, and practices. It lasts one-and-a-half days and is designed for individuals with less than two years of experience with asset-management oversight and/or support responsibilities. Tuition is \$2,350 per person and includes instruction, all materials, breakfast and lunch on each day, and dinner on the first evening with the instructors.

Additional information including dates and registration can be found at: [www.callan.com/callan-college-intro-2/](http://www.callan.com/callan-college-intro-2/)



"Research is the foundation of all we do at Callan, and sharing our best thinking with the investment community is our way of helping to foster dialogue to raise the bar across the industry."

Greg Allen, CEO and Chief Research Officer

## List of Callan's Investment Manager Clients

Confidential – For Callan Client Use Only

Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry, and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor, and disclose potential conflicts on an ongoing basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database, or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please note that if an investment manager receives a product or service on a complimentary basis (e.g., attending an educational event), they are not included in the list below. Callan is committed to ensuring that we do not consider an investment manager's business relationship with Callan, or lack thereof, in performing evaluations for or making suggestions or recommendations to its other clients. Please refer to Callan's ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group, and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance department.

Manager Name
Aberdeen Standard Investments
Acadian Asset Management LLC
AEGON USA Investment Management Inc.
AllianceBernstein
Allianz
American Century Investments
Amundi Pioneer Asset Management
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Aristotle Capital Management, LLC
Atlanta Capital Management Co., LLC
Aviva Investors Americas
AXA Investment Managers
Baillie Gifford International, LLC
Baird Advisors
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC

Manager Name
BlackRock
BMO Global Asset Management
BNP Paribas Asset Management
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
BrightSphere Investment Group
Brown Brothers Harriman & Company
Cambiar Investors, LLC
CapFinancial Partners, LLC
Capital Group
Carillon Tower Advisers
CastleArk Management, LLC
Causeway Capital Management LLC
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.

**Manager Name**

Columbia Management Investments

Columbus Circle Investors

Credit Suisse Asset Management

D.E. Shaw Investment Management, L.L.C.

DePrince, Race &amp; Zollo, Inc.

Dimensional Fund Advisors LP

Doubleline

Duff &amp; Phelps Investment Management Co.

DWS

EARNEST Partners, LLC

Eaton Vance Management

Epoch Investment Partners, Inc.

Fayez Sarofim &amp; Company

Federated Hermes, Inc.

Fidelity Institutional Asset Management

Fiera Capital Corporation

First Hawaiian Bank Wealth Management Division

First State Investments

Fisher Investments

Franklin Templeton

Fred Alger Management, Inc.

GAM (USA) Inc.

GCM Grosvenor

Glenmeade Investment Management, LP

GlobeFlex Capital, L.P.

Goldman Sachs

Green Square Capital Advisors, LLC

Guggenheim Investments

GW&amp;K Investment Management

Harbor Capital Group Trust

Hartford Investment Management Co.

Heitman LLC

Hotchkis &amp; Wiley Capital Management, LLC

Income Research + Management, Inc.

Insight Investment Management Limited

Intech Investment Management, LLC

Intercontinental Real Estate Corporation

Invesco

Investec Asset Management North America, Inc.

Ivy Investments

**Manager Name**

J.P. Morgan

Janus

Jennison Associates LLC

Jobs Peak Advisors

KeyCorp

Lazard Asset Management

Legal &amp; General Investment Management America

Lincoln National Corporation

Longview Partners

Loomis, Sayles &amp; Company, L.P.

Lord Abbett &amp; Company

Los Angeles Capital Management

LSV Asset Management

MackKay Shields LLC

Macquarie Investment Management (MIM)

Manulife Investment Management

Marathon Asset Management, L.P.

McKinley Capital Management, LLC

Mellon

MetLife Investment Management

MFS Investment Management

MidFirst Bank

Mondrian Investment Partners Limited

Montag &amp; Caldwell, LLC

Morgan Stanley Investment Management

Mountain Pacific Advisors, LLC

MUFG Union Bank, N.A.

Natixis Investment Managers

Neuberger Berman

Newton Investment Management

Nikko Asset Management Co., Ltd.

Nile Capital Group LLC

Northern Trust Asset Management

Nuveen

P/E Investments

Pacific Investment Management Company

Parametric Portfolio Associates LLC

Pathway Capital Management

Peregrine Capital Management, LLC

Perkins Investment Management



**Manager Name**

PFM Asset Management LLC

PGIM Fixed Income

PineBridge Investments

PNC Capital Advisors, LLC

Polen Capital Management

Principal Global Investors

Putnam Investments, LLC

QMA LLC

RBC Global Asset Management

Regions Financial Corporation

Robeco Institutional Asset Management, US Inc.

Rothschild &amp; Co. Asset Management US

S&amp;P Dow Jones Indices

Schroder Investment Management North America Inc.

SLC Management

Smith Graham &amp; Co. Investment Advisors, L.P.

State Street Global Advisors

Stone Harbor Investment Partners L.P.

Strategic Global Advisors

T. Rowe Price Associates, Inc.

**Manager Name**

The TCW Group, Inc.

Thompson, Siegel &amp; Walmsley LLC

Thornburg Investment Management, Inc.

Tri-Star Trust Bank

UBS Asset Management

USAA Real Estate

VanEck

Versus Capital Group

Victory Capital Management Inc.

Virtus Investment Partners, Inc.

Vontobel Asset Management, Inc.

Voya

WCM Investment Management

WEDGE Capital Management

Wellington Management Company LLP

Wells Fargo Asset Management

Western Asset Management Company LLC

Westfield Capital Management Company, LP

William Blair &amp; Company LLC

**Board Action**

**TO:** State Investment Board  
**FROM:** Dave Hunter and Darren Schulz  
**DATE:** November 18, 2020  
**SUBJECT:** **TFFR Asset Allocation Recommendation**

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RIO supports Callan's asset allocation recommendation for the TFFR pension plan including the current mix, Mix 4 or Mix 4a. **If requested to recommend one option, RIO recommends Mix 4** over the current Policy Target due to its' higher Expected Return of 6.8% and lower Expected Standard Deviation of 13.1%. RIO also recommends Mix 4 over Mix 4a due to Mix 4 having a slightly lower Expected Standard Deviation of 13.1% and a slightly lower use of likely higher cost **Alternative investments** (such as Private Equity and Private Infrastructure). **As previously noted, RIO supports either of the three options recommended by Callan.**

November 19, 2020



## **North Dakota Teachers Fund for Retirement**

2020 Asset -Liability Study

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**Alex Browning**

Fund Sponsor Consulting

**Paul Erlendson**

Fund Sponsor Consulting

**Julia Moriarty, CFA**

Capital Market Research

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# Agenda

Introduction and Process Overview

Asset Allocation

Asset-Liability Modeling

Liquidity and Stress Testing

Recommendation

Next Steps and Timeline

Appendix

Callan

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## **Introduction and Process Overview**

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## Introduction

The goal of the asset-liability study is to determine an appropriate long-term mix between return-seeking assets (e.g., equities, real assets, alternatives) and risk-mitigating assets (cash, fixed income)

- 80-90% of funded status volatility is driven by the broad asset allocation decision

Asset allocation will vary by the unique circumstances of the plan

- No “one-size-fits-all” solution exists

The asset-liability study helps the North Dakota Teachers Fund for Retirement (NDTFFR) quantify the impact that different strategies might have on relevant metrics

### **Factors to consider:**

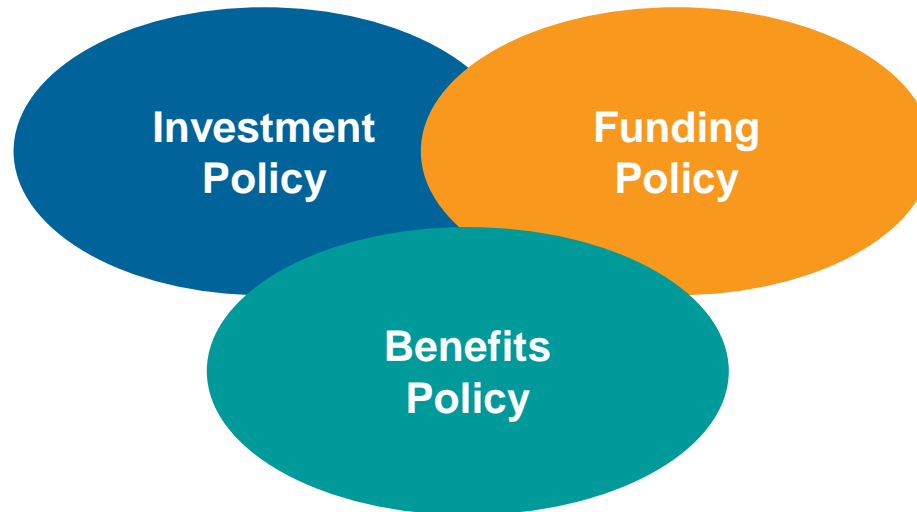
- Liability characteristics
- Funded status
- Contribution policy
- Time horizon
- Liquidity needs

# Where Does Asset Allocation Fit In?

Evaluate the interaction of three key policies to identify the optimal investment policy

## Investment Policy

- How will the assets supporting the benefits be invested?
- What risk and return objectives?
- How to manage cash flows?



## Funding Policy

- How will the benefits/deficits be paid for (funded)?
- What are the actuarial assumptions to use?

## Benefits Policy

- What type/kind of benefits?
- What level of benefit?
- When and to whom are they payable?

# Callan Asset-Liability Modeling Process

## Asset Modeling

Define Capital Market Assumptions

Create Asset Mix Alternatives

## Liability Modeling

Define Liability Assumptions

Build Actuarial Liability Model

Simulate Financial Conditions

Define Risk Tolerance

Select Appropriate Target Mix



Callan

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**Asset Allocation**

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# Callan Capital Market Process and Philosophy

Underlying beliefs guide the development of the projections

- An initial bias toward long-run averages
- An awareness of risk premiums
- A presumption that markets ultimately clear and are rational

Reflect our belief that long-term equilibrium relationships between the capital markets and lasting trends in global economic growth are key drivers to setting capital market expectations

Long-term compensated risk premiums represent “beta”—exposure to each broad market, whether traditional or “exotic,” with limited dependence on successful realization of alpha

The projection process is built around several key building blocks

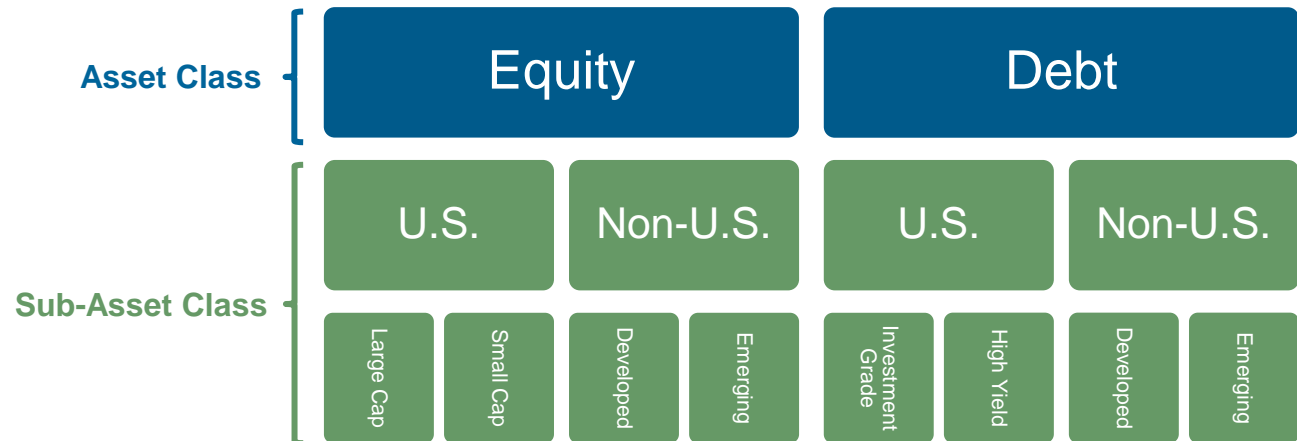
- Advanced modeling at the individual asset class level (e.g., a detailed bond model, an equity model)
- Pathways for both interest rates and inflation
- A cohesive economic outlook
- A framework that encompasses Callan’s beliefs about the long-term operation and efficiencies of the capital markets

# The Focus is on Broad Asset Classes

Breakdowns between investment styles within asset classes (growth vs. value, large cap vs. small cap) are best addressed in a manager structure analysis

Primary asset classes and important sub-asset classes include:

- U.S. Stocks
- U.S. Bonds
- Non-U.S. Stocks
- Non-U.S. Bonds
- Real Estate
- Private Equity
- Absolute Return
- Cash



# Callan Capital Market Assumptions

## Risk and return: 2020–2029

Asset Class	Index	Projected Return*	Projected Risk
<b>Equities</b>			
Broad U.S. Equity	Russell 3000	7.15%	18.10%
Large Cap U.S. Equity	S&P 500	7.00%	17.70%
Small/Mid Cap U.S. Equity	Russell 2500	7.25%	21.20%
Global ex-U.S. Equity	MSCI ACWI ex USA	7.25%	20.50%
Developed ex-U.S. Equity	MSCI World ex USA	7.00%	19.70%
Emerging Market Equity	MSCI Emerging Markets	7.25%	25.70%
<b>Fixed Income</b>			
Short Duration Govt/Credit	Bloomberg Barclays 1-3 Yr G/C	2.70%	2.10%
Core U.S. Fixed	Bloomberg Barclays Aggregate	2.75%	3.75%
Long Government/Credit	Bloomberg Barclays Long G/C	2.75%	10.60%
TIPS	Bloomberg Barclays TIPS	2.40%	5.05%
High Yield	Bloomberg Barclays High Yield	4.65%	10.25%
Global ex-U.S. Fixed	Bloomberg Barclays Gbl Agg xUSD	0.90%	9.20%
Emerging Market Sovereign Debt	EMBI Global Diversified	4.35%	9.50%
<b>Other</b>			
Core Real Estate	NCREIF ODCE	6.25%	14.00%
Timberland	NCREIF Timberland	6.05%	14.60%
Farmland	NCREIF Farmland	6.10%	15.00%
Private Infrastructure	DJB Glob Infr / FTSE Dev Core Infr 50/50	6.60%	15.20%
Private Equity	Cambridge Private Equity	8.50%	27.80%
Hedge Funds	Callan Hedge FoF Database	5.00%	8.70%
Commodities	Bloomberg Commodity	2.75%	18.00%
Cash Equivalents	90-Day T-Bill	2.25%	0.90%
<b>Inflation</b>	CPI-U	2.25%	1.50%

\* Geometric returns are derived from arithmetic returns and the associated risk (standard deviation).

- Most capital market expectations represent passive exposure (beta only); however, return expectations for private market investments reflect active management premiums
- Return expectations are net of fees

# Policy Target Allocation

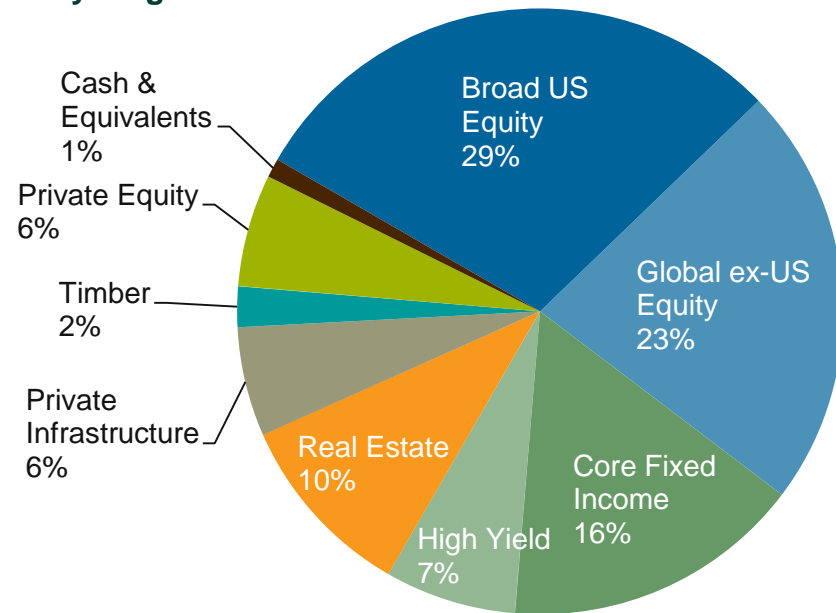
The target asset allocation consists of 52% public equity, 24% fixed income and cash, and 24% alternatives

- Alternatives include real estate, private infrastructure, timber, and private equity

While the Fund's target allocation is projected to return 6.7% over the next 10 years versus an actuarial discount rate of 7.25%, two key items should be noted

- Callan's public market return projections do not incorporate active management premiums
  - Active management premiums accrue when investment firms selected by the State Investment Board outperform their passive benchmarks
    - *It is important to note, though, that investment firms will at times underperform their passive benchmarks*
  - The Plan's public market returns have benefitted from active management by ~16 basis points net of fees (annualized) over the past five years ended 6/30/20
- Callan's 10-year projections are below longer-term expectations due to the current economic environment and the forecast for the next several years

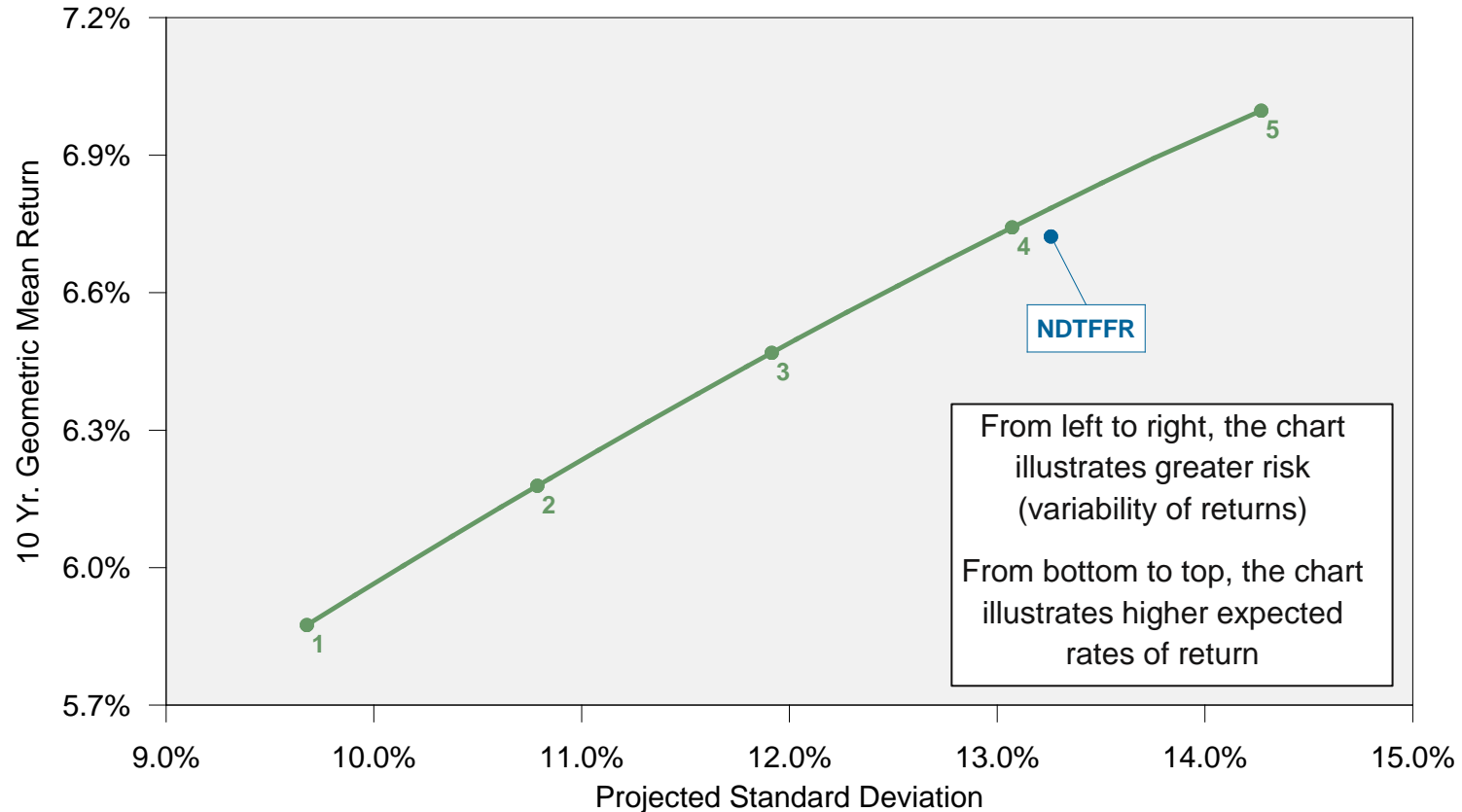
Policy Target



**Expected Geometric Mean Return = 6.7%**  
**Expected Standard Deviation = 13.3%**

# Efficient Frontier

## Efficient Frontier



- A series of optimal mixes at different levels of expected return and risk is depicted above
  - Optimal mixes generate the greatest return for a given level of risk, or conversely, the lowest risk for a given level of return
  - Five efficient mixes are numbered and described in more detail on the following page
- The current target portfolio is modestly below the efficient frontier near mix 4

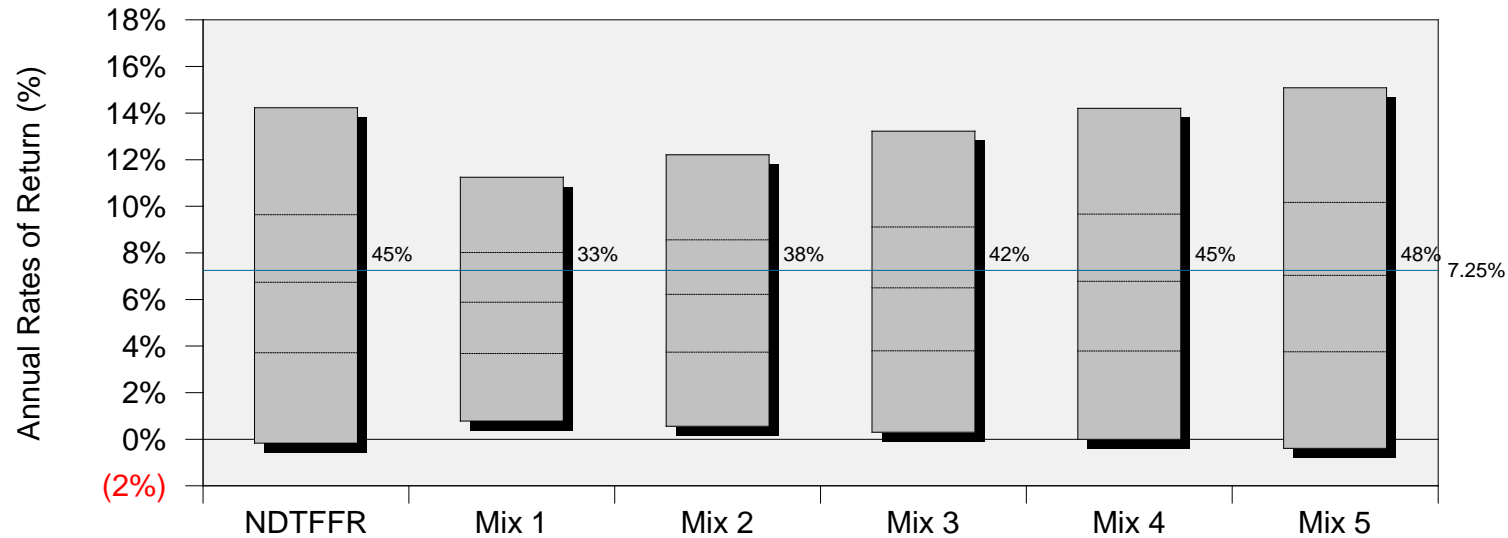
## Alternative Asset Mixes

Asset Class	Policy Target	Min	Max	Mix 1	Mix 2	Mix 3	Mix 4	Mix 5
<b>Public Equity</b>	<b>52%</b>			<b>31%</b>	<b>35%</b>	<b>39%</b>	<b>45%</b>	<b>51%</b>
Broad U.S. Equity	29%	0%	100%	19%	21%	24%	27%	30%
Global ex-U.S. Equity	23%	0%	100%	12%	14%	15%	18%	21%
<b>Fixed Income &amp; Cash</b>	<b>24%</b>			<b>49%</b>	<b>42%</b>	<b>35%</b>	<b>27%</b>	<b>19%</b>
Core Fixed Income	16%	0%	100%	34%	29%	24%	18%	13%
High Yield	7%	0%	100%	14%	12%	10%	8%	5%
Cash Equivalents	1%	1%	100%	1%	1%	1%	1%	1%
<b>Alternatives</b>	<b>24%</b>			<b>20%</b>	<b>23%</b>	<b>26%</b>	<b>28%</b>	<b>30%</b>
Real Estate	10%	0%	100%	6%	7%	8%	9%	10%
Private Infrastructure	6%	0%	100%	6%	7%	8%	9%	10%
Timber	2%	0%	0%	0%	0%	0%	0%	0%
Private Equity	6%	0%	10%	8%	9%	10%	10%	10%
<b>Expected Return</b>	<b>6.7%</b>			<b>5.9%</b>	<b>6.2%</b>	<b>6.5%</b>	<b>6.8%</b>	<b>7.0%</b>
<b>Expected Standard Deviation</b>	<b>13.3%</b>			<b>9.7%</b>	<b>10.8%</b>	<b>11.9%</b>	<b>13.1%</b>	<b>14.3%</b>
<b>Probability &gt;7.25%</b>	<b>45%</b>			<b>33%</b>	<b>38%</b>	<b>42%</b>	<b>45%</b>	<b>48%</b>

- The optimal mixes are constructed with decreasing allocations to fixed income (from 48% to 18%)
  - High yield equals 30% of total fixed income, 1% cash allocation, private equity is constrained to a maximum of 10%, equal allocations are made to real estate and private infrastructure, and timber is eliminated, as a result of discussions with SIB
    - In an unconstrained setting, allocations to real estate and private infrastructure are ~75/25, respectively
- As fixed income decreases, the expected return increases and annual portfolio risk reaches over 14%
- The policy target's risk and return profile is similar to that of mix 4
- Large allocations to alternatives will require stress-testing to determine if the amount of illiquidity is tolerable

# Projected Rates of Return (10 Years)

Range of Projected Rates of Return  
Projection Period: 10 Years



This is  
NDTFFR's  
projected  
actuarial  
return  
assumption

5th Percentile	14.2%	11.2%	12.2%	13.2%	14.2%	15.1%
25th Percentile	9.6%	8.0%	8.6%	9.1%	9.7%	10.2%
Median	6.7%	5.9%	6.2%	6.5%	6.8%	7.0%
75th Percentile	3.7%	3.7%	3.7%	3.8%	3.8%	3.8%
95th Percentile	(0.2%)	0.8%	0.6%	0.3%	0.0%	(0.4%)
Prob > 7.25%	45%	33%	38%	42%	45%	48%

- Chart reflects annualized return distribution over the next ten years
- Bar heights proportional to return volatility
  - Higher expected (median) returns associated with higher volatilities
  - Increased volatility leads to lower worse-case (95<sup>th</sup> percentile) returns
- The current policy has a 45% probability of earning 7.25% or better over the next 10 years



Callan

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**Asset-Liability Modeling**

# Current Conditions

## Build Actuarial Liability Model

Callan’s liability model is based on Segal’s July 1, 2019 actuarial valuation and the changes adopted as a result of the experience review

Model used to forecast future liabilities

Assets rolled forward using June 30, 2020 actual asset values

Additional forecast assumptions

- Open to new entrants
- 0% workforce growth

Contributions (employer and employee) are set by statute

The current employer and employee contribution rates are shown to the right along with the employer actuarial contribution requirement

Both employer and employee contribution rates drop to 7.75% when the Plan becomes 100% funded on an actuarial basis

July 1, 2019 Actuarial Valuation	All Plans
Actuarial Accrued Liability	\$3,993 mm
Market Value of Assets	\$2,616 mm
Actuarial Value of Assets	\$2,636 mm
Market Funded Status (MVA/AL)	65.5%
Actuarial Funded Status (AVA/AL)	66.0%

Key Assumptions	Actuarial Assumption*	Callan 10-year Expectation
Investment Return	7.25%	6.7%**
Price Inflation	2.3%	2.25%

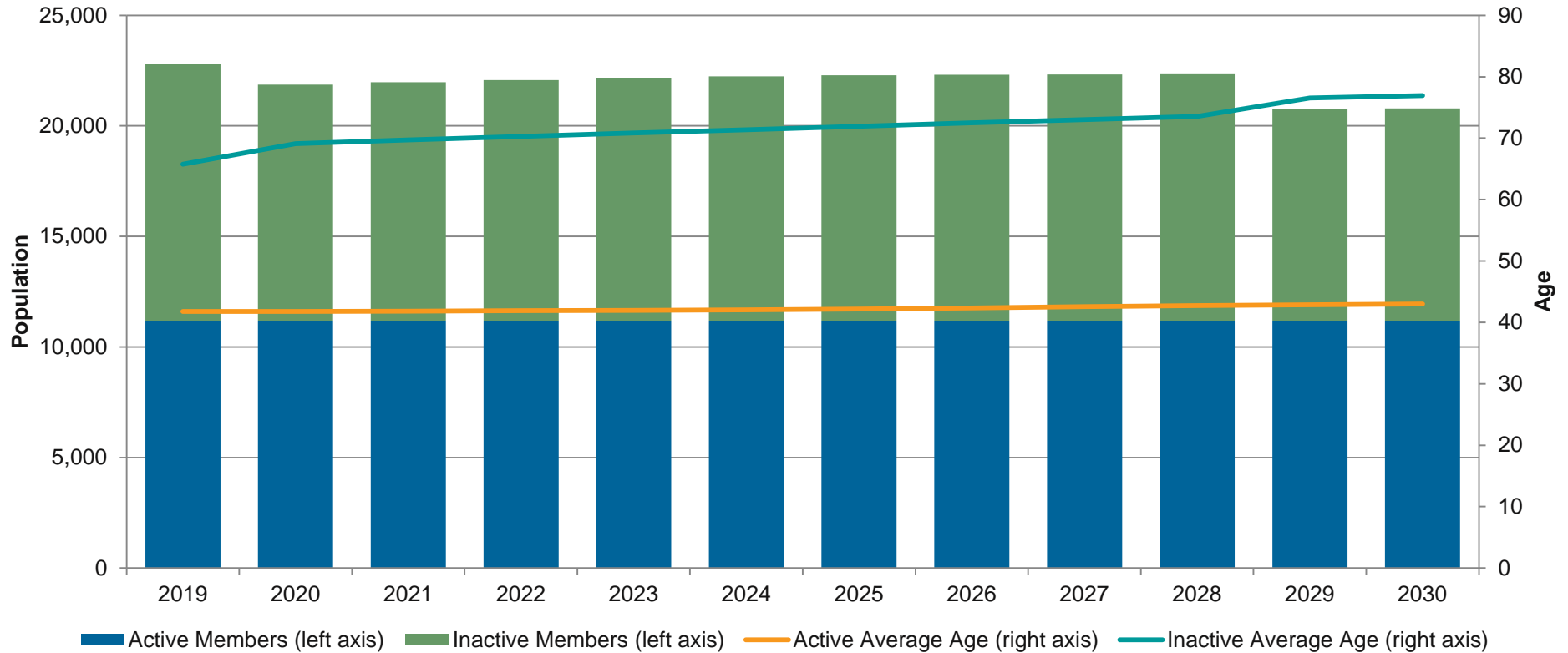
Contribution Rates	Employer	Employee
Statutory	12.75%	11.75%
Actuarial Requirement	12.84%	n/a

\*As of July 1, 2020

\*\*Based on Callan’s capital market assumptions applied to NDTFFR’s target asset allocation; used throughout the remainder of the study

# Member Numbers

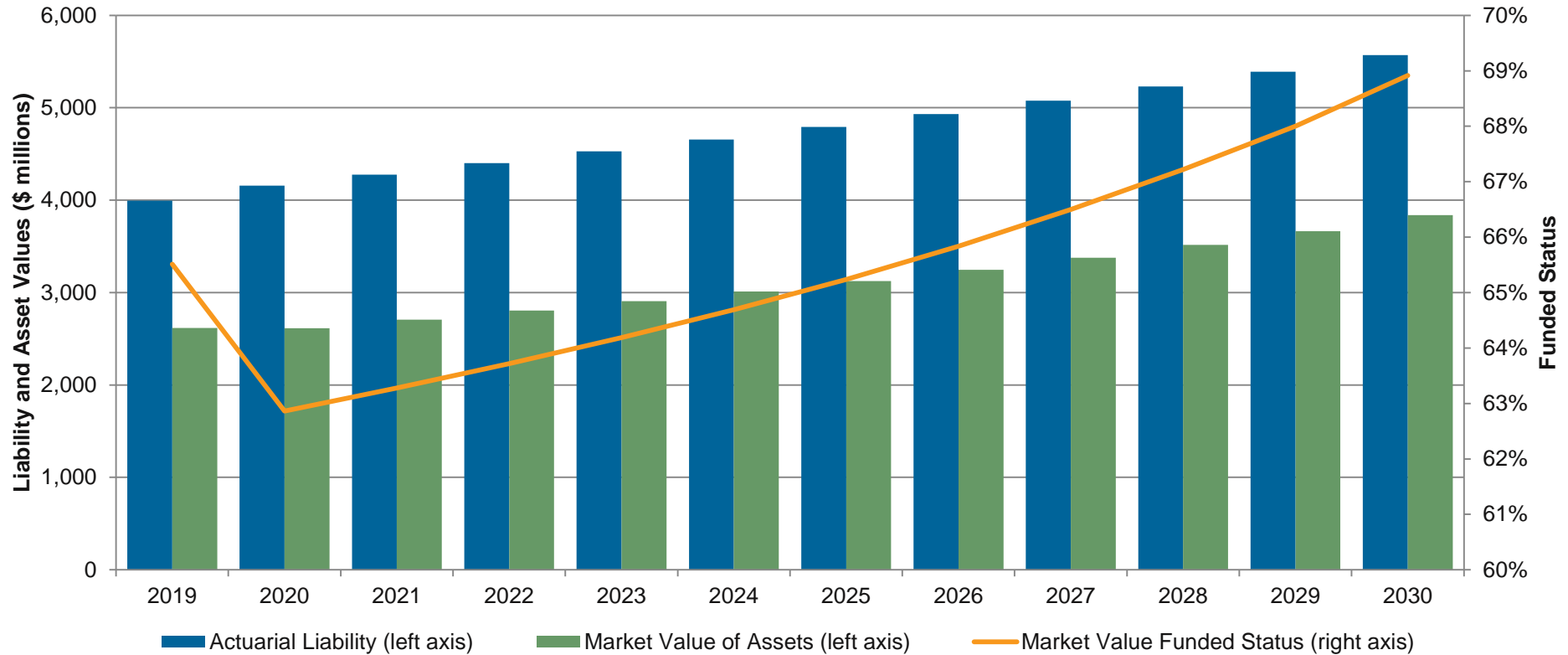
## Deterministic Forecast



- Number of active members assumed to remain constant (0% workforce growth)
  - Future new hires replace exits due to retirement, death, disability, and withdrawal
  - Stable active age reflects Plan maturity
- The drop in the number of inactive members from 2028 to 2029 is due to the lump sum refund for current terminated vested participants
  - Instead of one enormous payout in the first year, refunds were spread over ten years and fall off after 2028

# Funding

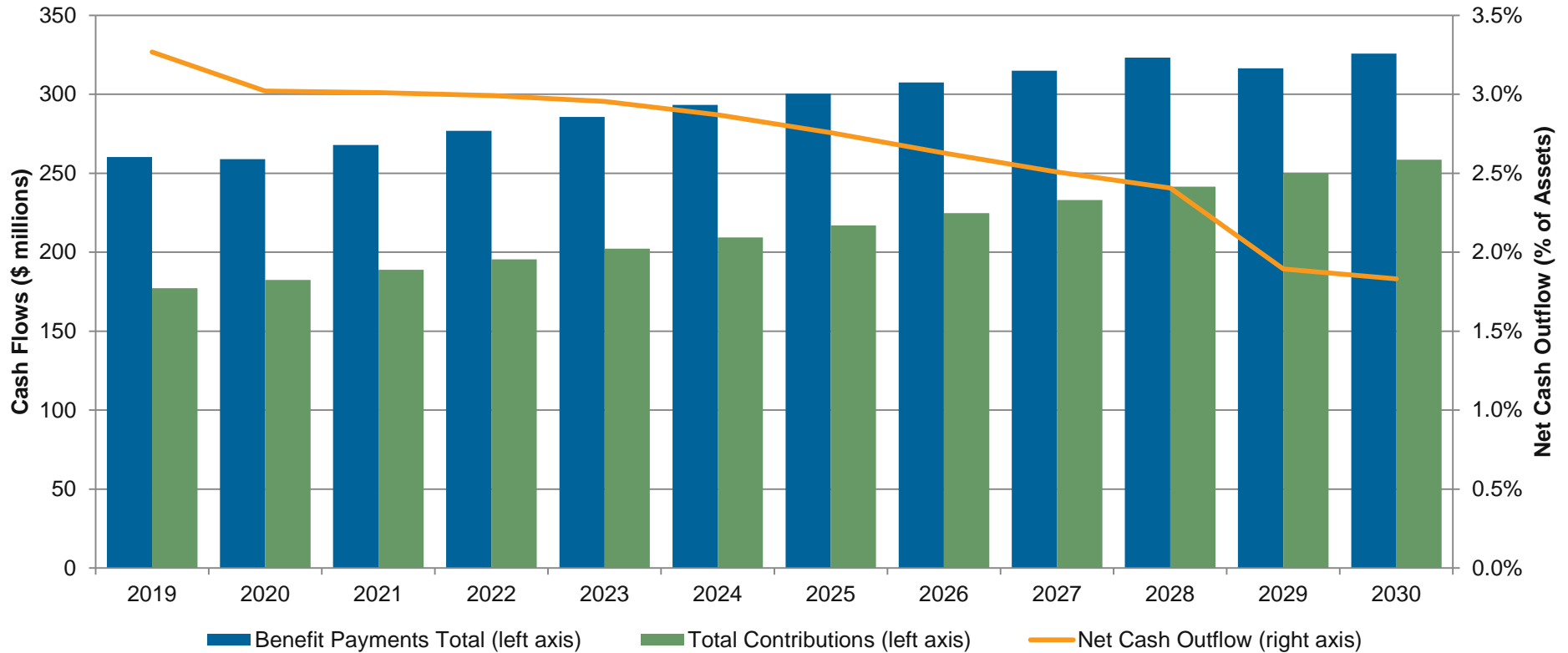
## Deterministic Forecast



- Assets increase faster than the liabilities, closing the funding gap
  - Change in assets due to both investment returns and net cash flows (contributions net of benefit payments and expenses)
  - Assumes assets earn 6.7%
- Projected funding depends on adherence to the contribution policy
- Funded status decline in 2020 is due to the changes adopted as a result of the experience review and the asset value override

# Cash Flows and Liquidity

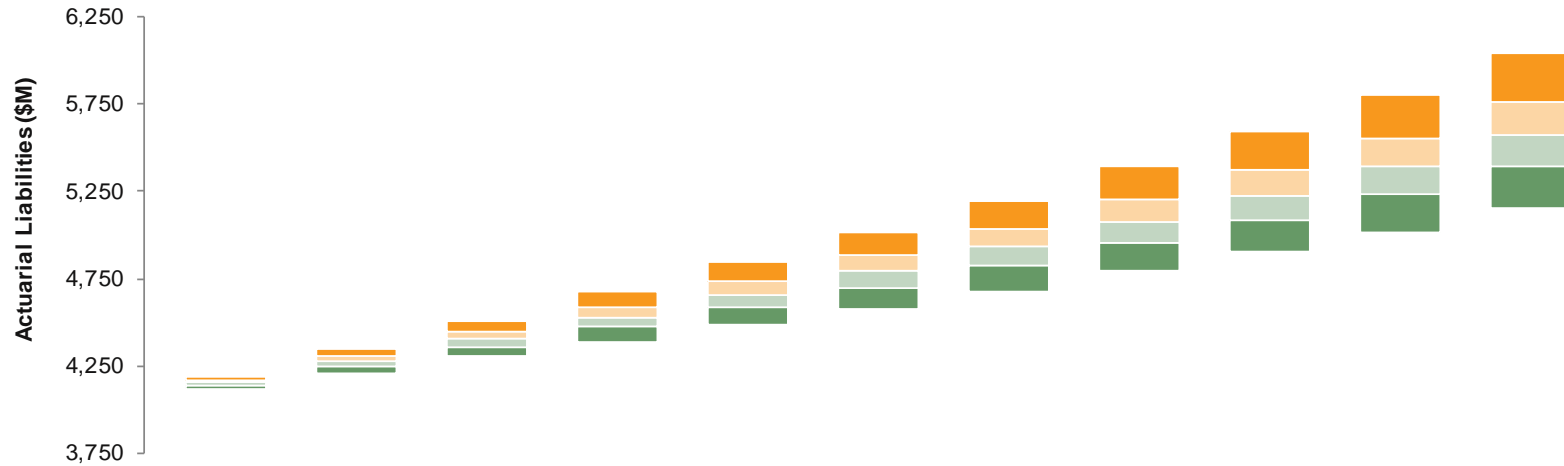
## Deterministic Forecast



- Net Cash Outflow = Benefit Payments + Expenses – Employer Contributions – Employee Contributions
- Plan is expected to have declining net outflow as a percentage of assets over the coming decade
- Cash flow is a factor used to determine a cap on the level of private investments
- Net outflow as a percentage of assets under 7% should be manageable as long as TFFR adheres to the current funding policy

# Actuarial Liability, 2020-2030

## Stochastic Forecast

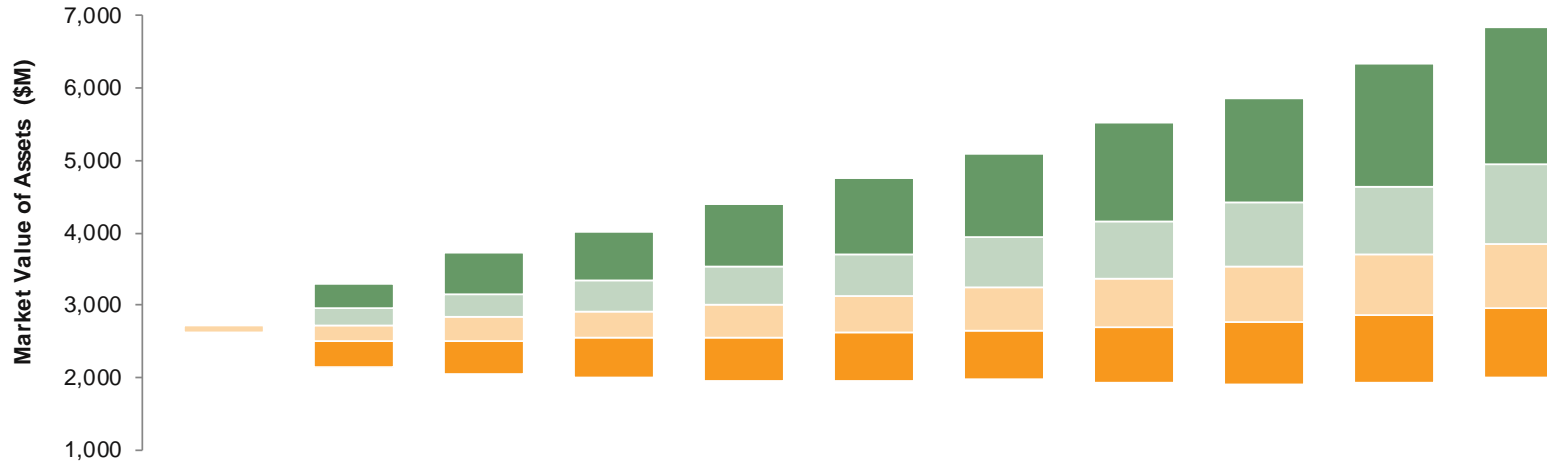


Pctl	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
95	4,190	4,348	4,506	4,674	4,843	5,015	5,197	5,392	5,594	5,808	6,042
75	4,169	4,305	4,443	4,586	4,732	4,881	5,036	5,202	5,373	5,558	5,759
50	4,156	4,276	4,402	4,528	4,655	4,792	4,933	5,080	5,229	5,389	5,571
25	4,142	4,250	4,359	4,472	4,586	4,699	4,826	4,953	5,087	5,229	5,392
5	4,120	4,208	4,302	4,390	4,482	4,579	4,678	4,793	4,905	5,016	5,154
Range	70	140	204	284	360	436	519	599	689	791	888

- Plan liabilities are increasing at a steady pace which is typical for an open plan
  - Median increasing at an annual rate of 3%
- Driver is wage growth for current employees
  - Inflation flows through to member compensation which is a component of the retirement benefit formula

# Market Value of Assets (Target), 2020-2030

## Stochastic Forecast



Pctl	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
5	2,613	3,282	3,713	4,003	4,389	4,758	5,097	5,519	5,861	6,330	6,834
25	2,613	2,947	3,148	3,331	3,532	3,709	3,947	4,166	4,409	4,642	4,938
50	2,613	2,729	2,827	2,899	3,016	3,128	3,254	3,377	3,543	3,696	3,855
75	2,613	2,500	2,496	2,541	2,563	2,622	2,644	2,693	2,769	2,872	2,969
95	2,613	2,139	2,053	2,006	1,951	1,954	1,977	1,940	1,905	1,937	1,991
Range	0	1,144	1,661	1,997	2,438	2,805	3,120	3,579	3,955	4,394	4,842

- Plan assets are expected to grow by over \$1.2 billion in the median (50<sup>th</sup> percentile) outcome
  - 4% annual growth rate
- In the 95<sup>th</sup> percentile outcome, assets are projected to decline by more than \$600 million by 2030

$$\text{Asset Change} = \text{Contributions} + \text{Investment Earnings} - \text{Benefit Payments \& Expenses}$$

# Funded Ratio in 2030 (10 Years)

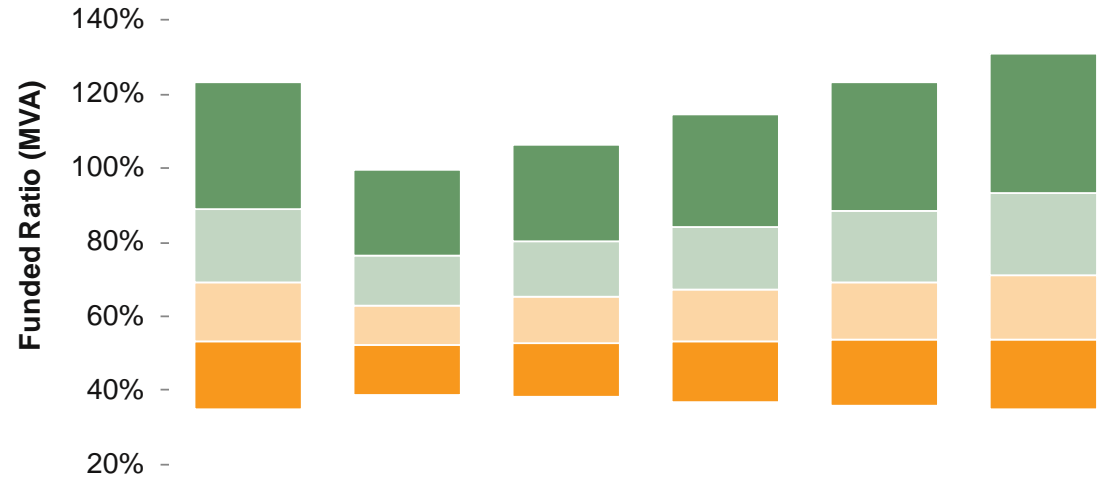
## Stochastic Forecast

Starting funded status = 65.5%

The Plan's funded status is expected (50<sup>th</sup> percentile) to decline over the next ten years under the current funding policy and target allocation

Funding ratios in worse-case scenarios are particularly low because the contribution policy is not impacted by a declining funded status

More aggressive mixes are expected to have higher funded ratios at the end of 10 years relative to more conservative mixes but have lower funded ratios in worse-case scenarios (95<sup>th</sup> percentile)



Pctl	Target	Mix 1	Mix 2	Mix 3	Mix 4	Mix 5
5	123.1%	99.2%	105.9%	114.1%	122.9%	130.7%
25	89.1%	76.3%	80.3%	84.2%	88.6%	93.0%
50	69.4%	63.2%	65.2%	67.2%	69.1%	71.3%
75	53.4%	52.4%	53.0%	53.4%	53.8%	53.9%
95	35.5%	39.2%	38.4%	37.4%	36.3%	35.2%
Range	87.6%	60.0%	67.6%	76.8%	86.6%	95.5%

**Funded Status = Market Value of Assets / Actuarial Liability**



# Cumulative Contributions through 2030 (10 Years)

## Stochastic Forecast

There is little contribution variability across the asset mixes in most scenarios due to the statutory percentage of pay policy

Only in better-case scenarios does variability emerge as the Plan has a greater probability of becoming fully funded prompting a decline in the employer contribution rate from 12.75% to 7.75%

Contribution volatility within an asset mix stems from simulated inflation which impacts salaries and the potential for a decline in the employer contribution rate as full funding is achieved



Pctl	Target	Mix 1	Mix 2	Mix 3	Mix 4	Mix 5
95	1,216	1,217	1,216	1,216	1,216	1,215
75	1,153	1,156	1,155	1,155	1,153	1,151
50	1,111	1,118	1,116	1,114	1,112	1,110
25	1,068	1,079	1,076	1,074	1,069	1,063
5	969	1,018	1,011	1,001	973	940
Range	247	199	205	215	243	275

# Ultimate Net Cost in 2030 (10 Years)

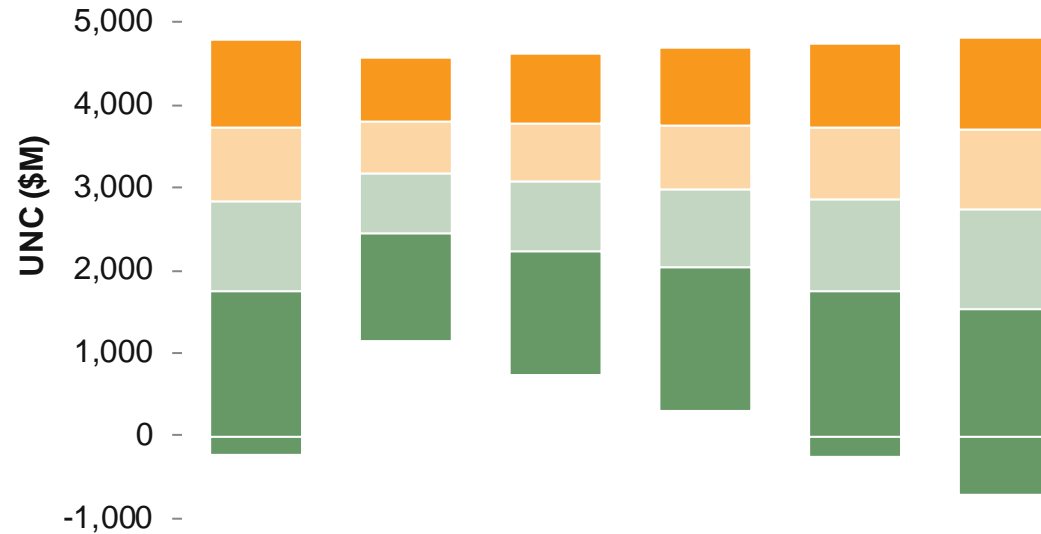
## Stochastic Forecast

Ultimate net cost (UNC) = 10-Year cumulative contributions + 7/1/2030 unfunded actuarial liability

UNC is a more complete measure of the cost to the employer since it captures what is expected to be paid over 10 years plus what is owed at the end of the 10-year period

- Negative numbers indicate the Plan is in a surplus position at 7/1/2030

More aggressive mixes lower UNC in the expected case but result in greater UNC in a worse-case scenario



Pctl	Target	Mix 1	Mix 2	Mix 3	Mix 4	Mix 5
95	4,760	4,560	4,603	4,665	4,722	4,793
75	3,718	3,782	3,749	3,729	3,702	3,685
50	2,829	3,171	3,063	2,960	2,838	2,732
25	1,739	2,443	2,227	2,025	1,759	1,523
5	-219	1,155	734	308	-240	-686
Range	4,980	3,405	3,870	4,357	4,962	5,478

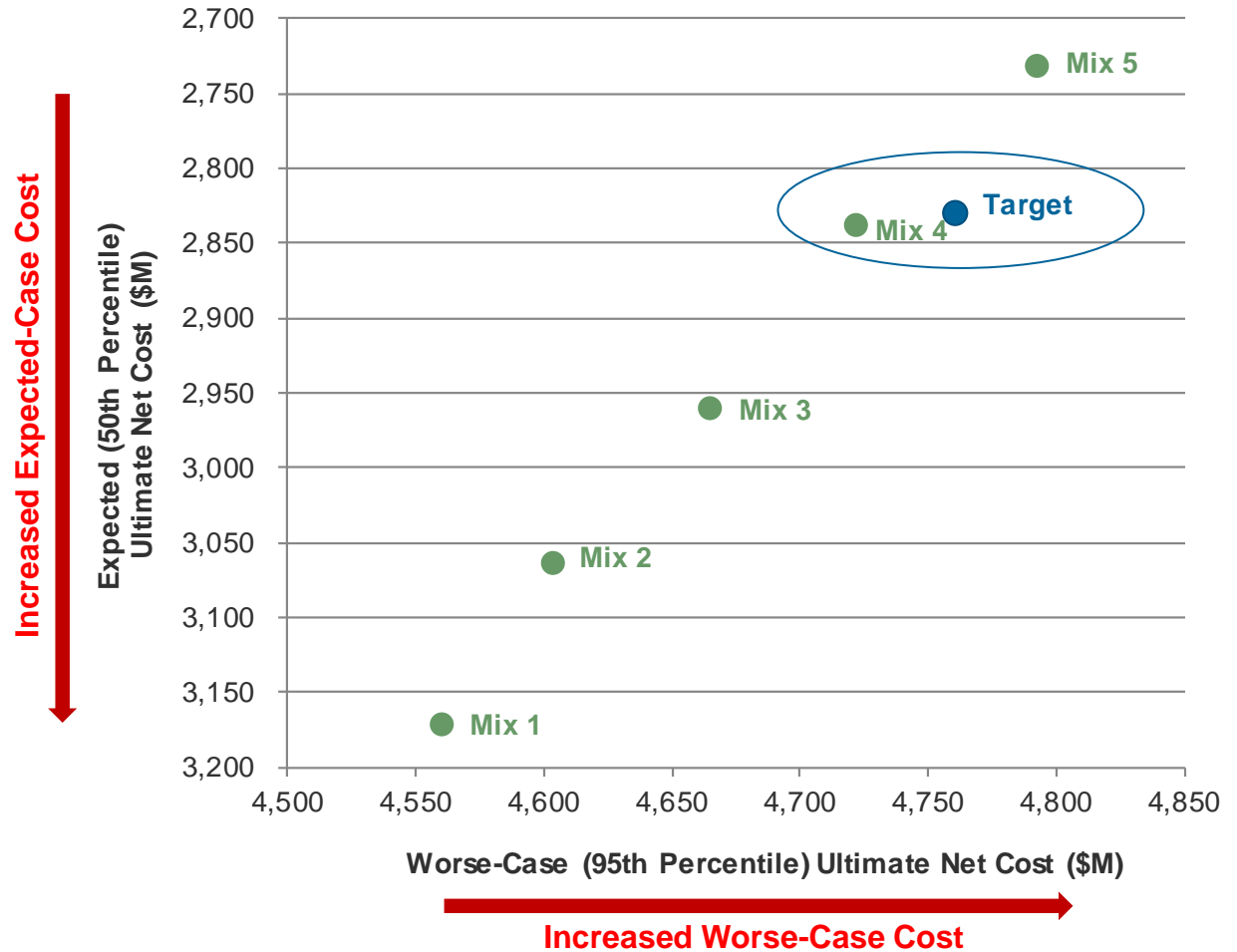
**UNC = Cumulative Contributions + Unfunded Liability**

# Ultimate Net Cost in 2030 (10 Years): Expected (50<sup>th</sup>) vs Worse Case (95<sup>th</sup>)

## Stochastic Forecast

Tradeoff is roughly linear for optimal mixes

Mix 4 reduces worse-case ultimate net cost by \$38 million relative to current target with slightly more cost in the expected case

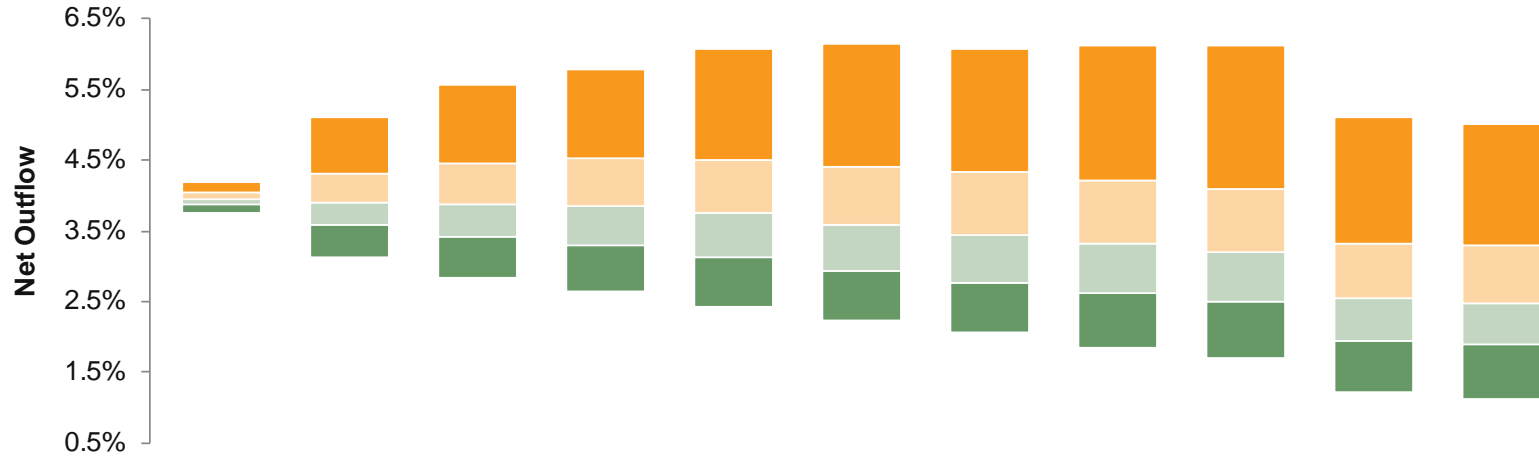


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## Liquidity and Stress Testing

# Net Outflow as a Percentage of Liquid Assets (Target), 2020-2030

## Stochastic Forecast



Pctl	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
95	4.2%	5.1%	5.5%	5.8%	6.0%	6.1%	6.1%	6.1%	6.1%	5.1%	5.0%
75	4.0%	4.3%	4.4%	4.5%	4.5%	4.4%	4.3%	4.2%	4.1%	3.3%	3.3%
50	4.0%	3.9%	3.9%	3.8%	3.8%	3.6%	3.4%	3.3%	3.2%	2.6%	2.5%
25	3.9%	3.6%	3.4%	3.3%	3.1%	2.9%	2.8%	2.6%	2.5%	2.0%	1.9%
5	3.7%	3.1%	2.8%	2.7%	2.4%	2.2%	2.1%	1.9%	1.7%	1.2%	1.1%
Range	0.4%	2.0%	2.7%	3.1%	3.6%	3.9%	4.0%	4.3%	4.4%	3.8%	3.9%

- Net Outflow = Benefit Payments & Expenses – Employee & Employer Contributions
  - A useful indicator of ongoing liquidity needs
  - Ratio < 7.0% is typically manageable; >10% presents high liquidity pressure and illiquid investments may need to be reduced
  - Based on our experience, most public funds have net outflow of 4-7% depending on funded status, funding policy, and plan maturity
- For the current target (76% liquid assets), liquidity needs are expected to be manageable even in worse-case (95<sup>th</sup> percentile) scenarios
- The liquidity analysis assumes the funding policy is adhered to

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## Stress Testing

The current target and mixes 4 and 5 were subjected to six investment scenarios to gauge the impact on investment performance, funding, and net outflow

The six scenarios include three historical and three hypothetical

- Historical

- Global Financial Crisis (GFC): October 2007 – February 2009
- Black Monday: October 1987
- U.S. Debt Ceiling Crisis and Downgrade: June – September 2011

- Hypothetical

- Equities Decline 20% for 1 Year (bear market definition)
- Perfect Storm for 1 Year (equities decline 20%, Treasuries and spreads increase 1%)
- Perfect Storm for 3 Years (equities decline 15% annually, Treasuries and spreads increase 1% annually)

### Findings

- Performance

- Mix 4 outperforms the target and mix 5, which is not surprising given it is the most conservative of the three portfolios

- Funding

- Funded status drops by ~20% in nominal terms for the GFC and ~25% for the Perfect Storm for 3 Years

- Net Outflow

- Net outflow as a percentage of liquid assets hovers between 6-7.5% under most scenarios while reaching 8.5-10% for the GFC and 10-11.5% under the Perfect Storm for 3 Years

The findings support the ability of the Fund to implement investment policies such as the current target and mixes 1 through 5 and the relatively large illiquid allocations they employ

Callan

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**Recommendation**

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## Recommendation

A modestly improving funded status in the median (50<sup>th</sup> percentile) outcome is due in large part to a combined (employer plus employee) statutory contribution rate of 24.5% of pay which leads to assets outpacing liabilities

Many factors support an asset allocation with a risk posture similar to the current target

- Pursuit of a 7.25% return; long time horizon; actuarial methodology (static contribution rate and asset smoothing)

While moving to a more aggressive asset allocation is expected to generate greater returns and a higher funded status, it also increases the risk of “bad investment outcomes” which in turn could result in further deterioration of the Plan’s funded status and the need for higher contribution rates

The statutory contribution policy combined with the relatively large illiquid allocation leads us to recommend maintaining the current risk posture (mix 4a as depicted on the following page) or moving to a slightly less aggressive asset allocation (mix 4)

- Reduces reliance on public equity markets
- Increase to alternatives which can provide a source of uncorrelated returns and potential for alpha generation and fixed income which provides downside protection in the event of a large equity drawdown
  - A high allocation to illiquid investments is suitable for a long-term investor with an actuarially sound funding policy
  - Potential sources of liquidity in a crisis include a long Treasury mandate (1.6% of the total fund at June 30, 2020), cash account (1% target allocation), the Treasury allocations within some of the other fixed income managers, and the cash flows coming from some of the real estate and infrastructure funds



## Recommendation

Finally, while the target and mixes 4 and 4a have expected returns over the next 10 years that fall short of the 7.25% return assumption, there are mitigating factors that offset the projected returns

- Callan's public market return projections are based on passive (i.e., index fund) implementation and do not incorporate active management premiums
- Callan's 10-year projections are cyclically lower than our longer-term (i.e., greater than 10 years) expectations
- The target and mixes 4 and 4a have a 45-46% probability of achieving a 7.25% return over the next 10 years

Asset Class	Policy Target	Lower Risk			Same Risk		
		Mix 4	% Change	\$M Change	Mix 4a	% Change	\$M Change
<b>Public Equity</b>	<b>52%</b>	<b>45%</b>	<b>-7%</b>	<b>(\$183)</b>	<b>45%</b>	<b>-7%</b>	<b>(\$183)</b>
Broad U.S. Equity	29%	27%	-2%	(\$52)	27%	-2%	(\$52)
Global ex-U.S. Equity	23%	18%	-5%	(\$131)	18%	-5%	(\$131)
<b>Fixed Income</b>	<b>24%</b>	<b>27%</b>	<b>3%</b>	<b>\$78</b>	<b>25%</b>	<b>1%</b>	<b>\$26</b>
Core Fixed Income	16%	18%	2%	\$52	17%	1%	\$26
High Yield	7%	8%	1%	\$26	7%	0%	\$0
Cash Equivalents	1%	1%			1%		
<b>Alternatives</b>	<b>24%</b>	<b>28%</b>	<b>4%</b>	<b>\$105</b>	<b>30%</b>	<b>6%</b>	<b>\$157</b>
Real Estate	10%	9%	-1%	(\$26)	10%	0%	\$0
Private Infrastructure	6%	9%	3%	\$78	10%	4%	\$105
Timber	2%	0%	-2%	(\$52)	0%	-2%	(\$52)
Private Equity	6%	10%	4%	\$105	10%	4%	\$105
<b>Expected Return</b>	<b>6.7%</b>	<b>6.8%</b>			<b>6.8%</b>		
<b>Expected Standard Deviation</b>	<b>13.3%</b>	<b>13.1%</b>			<b>13.3%</b>		
<b>Probability &gt;7.25%</b>	<b>45%</b>	<b>45%</b>			<b>46%</b>		

Note: Dollar changes based on June 30, 2020 asset value

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## **Next Steps and Timeline**

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## Next Steps

Incorporate feedback from today's meeting

Deliver the final study to NDTFFR in November

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## Timeline

Asset-Liability Kickoff **COMPLETED**

Meeting Date: September 24

Preliminary Asset-Liability Results **COMPLETED**

Meeting Date: October 29

Final Asset-Liability Results **IN PROGRESS**

Meeting Date: November 19

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**Appendix**

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# Stress Tests

## Six Scenarios

### Historical Scenarios

- (1) 2008 Financial Crisis (October 2007 – February 2009)
- (2) Black Monday (October 1987)
- (3) 2011 U.S. Debt Ceiling Crisis and Downgrade (June – September 2011)

### Parametric Scenarios

- (4) Equities Decline 20% for 1 Year (bear market definition)
- (5) Perfect Storm for 1 Year (equities decline 20%, Treasuries and spreads increase 1%)
- (6) Perfect Storm for 3 Years (equities decline 15% annually, Treasuries and spreads increase 1% annually)

### Asset Mixes Tested

- Current Target:
  - 52% Public equity, 24% fixed income and cash, 24% alts
- Mix 4:
  - 45% public equity, 27% fixed income and cash, 28% alts
- Mix 5:
  - 51% public equity, 19% fixed income, 30% alts

# Stress Tests

## Drawdowns

	(1)	(2)	(3)	(4)	(5)	(6)
<b>Asset Class</b>	<b>2008 Financial Crisis</b>	<b>Black Monday</b>	<b>2011 U.S. Debt Ceiling Crisis and Downgrade</b>	<b>Equities Decline 20% for 1 Year</b>	<b>Perfect Storm for 1 Year</b>	<b>Perfect Storm for 3 Years</b>
U.S. Equity	-42%	-22%	-15%	-20%	-20%	-45%
Global ex-US Equity	-48%	-15%	-20%	-20%	-20%	-45%
U.S. Fixed Income	5%	4%	4%	0%	-8%	-27%
Cash Equivalents	2%	1%	0%	0%	0%	0%
High Yield Fixed Income	-20%	-3%	-6%	-5%	-11%	-32%
Real Estate / Timber	-21%	-11%	-8%	-10%	-10%	-23%
Private Equity	-21%	-11%	-8%	-10%	-10%	-23%
Infrastructure	-21%	-11%	-8%	-10%	-10%	-23%

<b>Total Drawdown</b>	<b>2008 Financial Crisis</b>	<b>Black Monday</b>	<b>2011 U.S. Debt Ceiling Crisis and Downgrade</b>	<b>Equities Decline 20% for 1 Year</b>	<b>Perfect Storm for 1 Year</b>	<b>Perfect Storm for 3 Years</b>
Target (24% Alts)	-28.7%	-12.2%	-10.6%	-13.2%	-14.9%	-35.4%
Mix 4 (28% Alts)	-26.4%	-11.4%	-9.6%	-12.2%	-14.2%	-34.0%
Mix 5 (30% Alts)	-29.1%	-12.8%	-10.9%	-13.5%	-14.8%	-34.8%

- Returns shown represent index performance
  - Public Asset Classes: Russell 3000, MSCI ACWI ex-US IMI, Bloomberg Barclays Aggregate, Bloomberg High Yield, 90-Day T-Bill
  - Private Asset Classes: 0.5 \* Russell 3000
    - Estimate based on Cambridge PE Fund and NCREIF ODCE Index Data
- 2008 Financial Crisis and Perfect Storm for 3 Years are the most extreme stress tests
- Equities Decline 20% for 1 Year is the most similar scenario to recent events

# Stress Tests

## Additional Metrics

	(1)	(2)	(3)	(4)	(5)	(6)
	2008 Financial Crisis	Black Monday	2011 U.S. Debt Ceiling Crisis and Downgrade	Equities Decline 20% for 1 Year	Perfect Storm for 1 Year	Perfect Storm for 3 Years
<b>7/1/20 Funded Ratio</b>	62.9%	62.9%	62.9%	62.9%	62.9%	62.9%
<b>7/1/21 Funded Ratio</b>						
Target (24% Alts)	41.7%	51.7%	52.7%	51.1%	50.1%	37.6%
Mix 4 (28% Alts)	43.0%	52.2%	53.3%	51.7%	50.5%	38.4%
Mix 5 (30% Alts)	41.4%	51.3%	52.5%	51.0%	50.1%	37.9%
<b>6/30/20 Alternatives Allocation</b>						
Target (24% Alts)	45.8%	41.0%	41.0%	41.7%	42.0%	48.8%
Mix 4 (28% Alts)	51.6%	47.2%	47.1%	47.9%	48.4%	55.5%
Mix 5 (30% Alts)	53.2%	47.3%	47.3%	48.0%	48.4%	56.3%
<b>2020 Net Outflow (% Liquid)</b>						
Target (24% Alts)	8.4%	6.2%	6.1%	6.4%	6.6%	9.9%
Mix 4 (28% Alts)	9.1%	6.9%	6.8%	7.1%	7.3%	11.1%
Mix 5 (30% Alts)	9.8%	7.0%	6.9%	7.2%	7.4%	11.5%

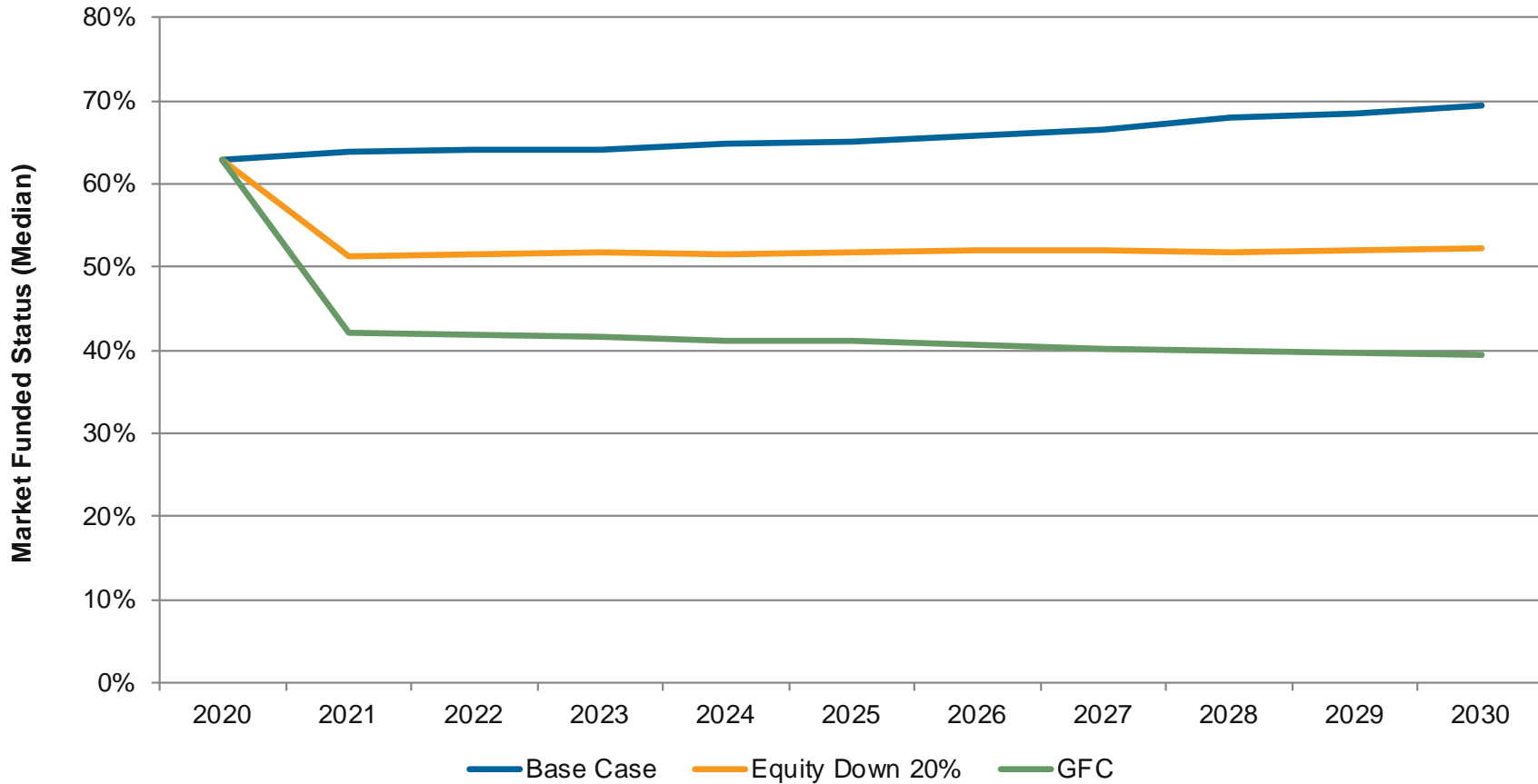
- Assuming scenarios transpire over a one-year period, funded status declines from starting point of 62.9%
  - Well below 50% for GFC and Perfect Storm for 3 Years
- Alternative allocations can reach high levels during a crisis due to a combination of the following:
  - Benefit payments funded from liquid asset classes
  - Muted losses from alternatives due to valuation smoothing
  - Capital calls for existing private asset class commitments
- Net outflow (% of liquid assets) can reach relatively high levels (>10% under the Perfect Storm for 3 Years)

Notes: 7/1/21 Funded Ratio estimate reflects \$270M in benefit payments/expenses, \$189M in total contributions, and a liability estimate of \$4.3B; High yield considered illiquid in stressed environments



# Stress Tests

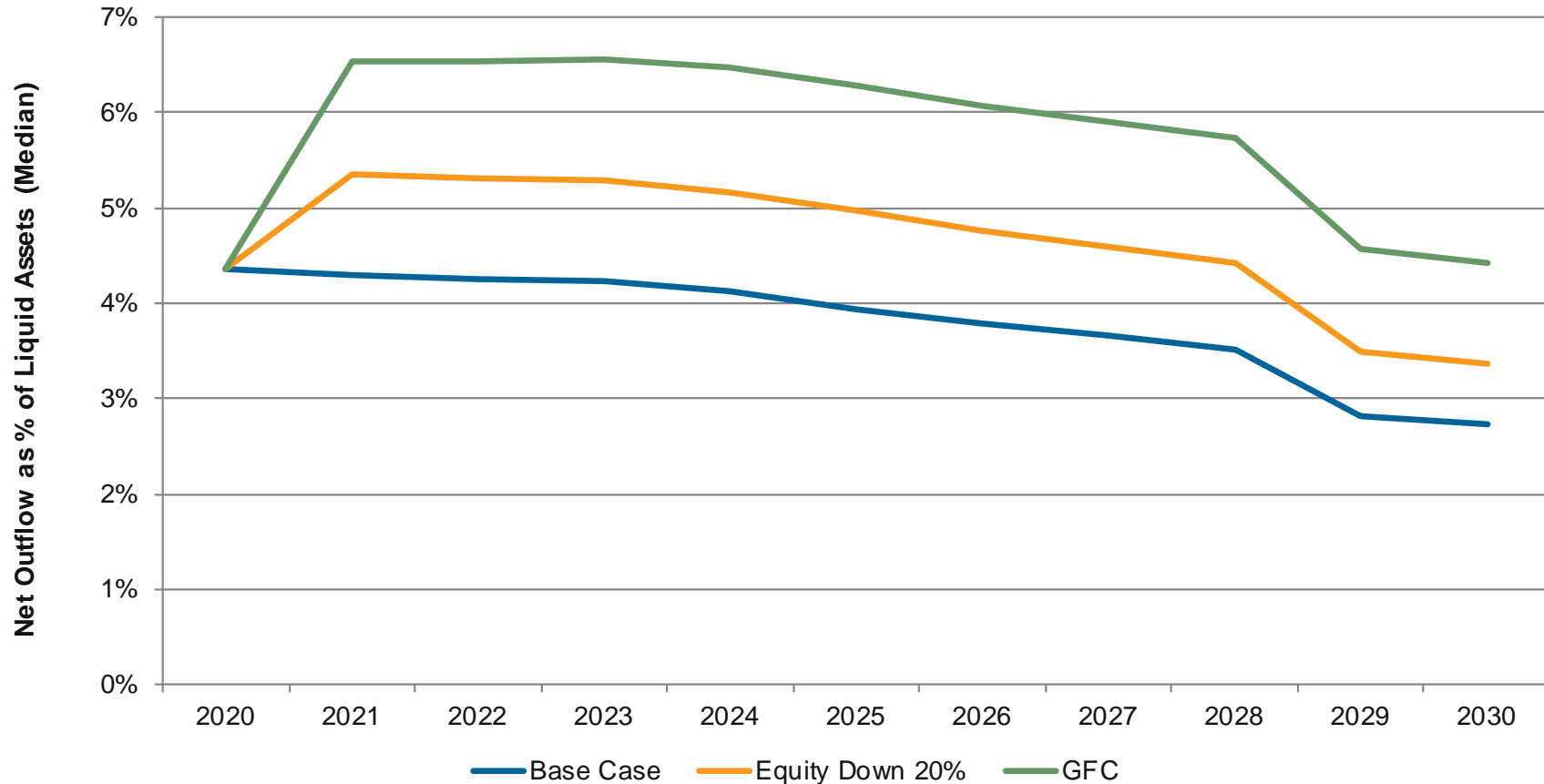
## Market Funded Status (2020 = 63%)



- Base case funded status gradually rises to almost 70% by 2030
- With equities down 20% , the funded status drops to 51% in 2021 and rises to just 52% by 2030
- In a GFC scenario, the funded status drops to 42% in 2021 and falls to just under 40% by 2030

# Stress Tests

Net Outflow as a % of Liquid Assets (2020 = 4.4%)



- Base case net outflow falls to 2.7% by 2030
- With equities down 20% , net outflow jumps 5.4% in 2021 before dropping to 3.4% by 2030
- In a GFC scenario, net outflow rises to 6.5% in 2021 before falling to 4.4% by 2030
- Outcomes are heavily contingent upon adherence to the funding policy

*Note: High yield considered illiquid in stressed environments*

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## Disclaimers

This report is for informational purposes only and should not be construed as legal or tax advice on any matter. Any decision you make on the basis of this content is your sole responsibility. You should consult with legal and tax advisers before applying any of this information to your particular situation.

This report may consist of statements of opinion, which are made as of the date they are expressed and are not statements of fact.

Reference to or inclusion in this report of any product, service or entity should not be construed as a recommendation, approval, affiliation or endorsement of such product, service or entity by Callan.

Past performance is no guarantee of future results.

The statements made herein may include forward-looking statements regarding future results. The forward-looking statements herein: (i) are best estimations consistent with the information available as of the date hereof and (ii) involve known and unknown risks and uncertainties such that actual results may differ materially from these statements. There is no obligation to update or alter any forward-looking statement, whether as a result of new information, future events or otherwise. Undue reliance should not be placed on forward-looking statements.

**Board Action**  
*Slides 4 and 14*

# **Legacy and Budget Stabilization Fund Advisory Board**

## **RIO Investment Update as of September 30, 2020**

November 12, 2020

Dave Hunter, Executive Director/CIO

Darren Schulz, Deputy Chief Investment Officer

Janilyn Murtha, Deputy Executive Director / Chief Retirement Officer

Connie Flanagan, Chief Financial Officer

Eric Chin, Chief Risk Officer

**ND Retirement & Investment Office (RIO)**

**State Investment Board (SIB)**

# Budget Stabilization Fund

## Actual Net Investment Returns versus Policy Benchmark

### As of September 30, 2020

	Qtr. Ended 9/30/2020	1 Yr Ended 9/30/2020	3 Yrs Ended 9/30/2020	5 Yrs Ended 9/30/2020	10 Yrs Ended 9/30/2020
Budget Stabilization \$738 million					
Total Fund Return - Net	1.63%	3.06%	2.80%	2.22%	2.13%
Policy Benchmark Return	0.23%	3.70%	2.83%	2.06%	1.27%
Total Relative Return	1.40%	-0.65%	-0.03%	0.16%	0.86%



- As of 9/30/2020, there was over \$738 million in the Budget Stabilization Fund (BSF) noting the target asset allocation is nearly 100% short-term, high quality fixed income.
- For the 1-Year Ended 9/30/2020, the BSF generated a **Net Investment Return of 3.06%**, which trailed the Policy Benchmark of 3.70% by **0.65%** (over the last year).
- For the 5-Years Ended 9/30/2020, the BSF earned a Net Return of 2.22% exceeding the Policy Benchmark of 2.06% by 0.16% (over the last 5-years).
- The **SIB's prudent use of active investment management generated over \$2 million of incremental income (versus passive investments) for the BSF Fund over the last 5-years** after deducting all investment fees and expenses (e.g. average balance of approximately \$300 million x Excess Return of over 0.15% = \$450,000/year x 5 years = \$2.25 million).

Policy Benchmark = 99% Bloomberg Government/Credit Index (1-3-years) and 1% U.S. T-Bills (3 months).

## Budget Stabilization Fund Schedule of Investment Expenses

	FY 2020			FY 2019		
	Average Market Value	Fees in \$	Fees in %	Average Market Value	Fees in \$	Fees in %
<b>Investment managers' fees:</b>						
Short-term fixed income managers	683,261,124	718,236	0.11%	113,365,761	151,750	0.13%
Cash & equivalents managers	8,585,969	8,747	0.10%	2,847,787	1,984	0.07%
<b>Total investment managers' fees</b>	<b>691,847,093</b>	<b>726,983</b>	<b>0.11%</b>	<b>116,213,548</b>	<b>153,734</b>	<b>0.13%</b>
Custodian fees		49,634	0.01%		10,095	0.01%
Investment consultant fees		19,757	0.00%		4,143	0.00%
Administrative fees		86,564	0.01%		17,840	0.02%
<b>Total investment expenses</b>		<b>882,938</b>	<b>0.13%</b>		<b>185,812</b>	<b>0.16%</b>
<b>Actual Investment Performance (Net of Fees)</b>			<b>2.35%</b>			<b>4.51%</b>
<b>Policy Benchmark</b>			<b>4.17%</b>			<b>4.23%</b>
<b>Outperformance</b>			<b>-1.82%</b>			<b>0.28%</b>

- Investment fees and expenses declined to **0.13% in fiscal 2020** from **0.16% in fiscal 2019** largely due to a \$575 million increase in BSF assets under management.
- **Active management adversely impacted BSF investment results by \$12.6 million in Fiscal Year 2020.**
- Despite this disappointing performance in Fiscal Year 2020, it is important to note the SIB's use of active management has been positive in Fiscal Year 2021 (e.g. **1.4%**) and for the 5-years ended September 30, 2020 (e.g. **0.16%**) after the payment of all investment fees and expenses.

**The above amounts are based on unaudited data that is deemed to be materially accurate but subject to change.**

## Board Action

The Legacy and Budget Stabilization Fund Advisory Board acknowledged the statutory cap of \$726,534,475 for the 2019-21 biennium when reviewing the Budget Stabilization Fund Investment Policy Statement on Nov. 12, 2020.

### BUDGET STABILIZATION FUND INVESTMENT POLICY STATEMENT

#### I. FUND CHARACTERISTICS AND CONSTRAINTS.

The Budget Stabilization Fund (Fund) is a special fund, created in 1987 under Chapter 54-27.2 of the North Dakota Century Code (NDCC), used to deposit general fund moneys in excess of the amounts described in that chapter. The Fund serves as a “rainy day fund” for the State of North Dakota general fund. The state investment board shall supervise investment of the budget stabilization fund in accordance with NDCC 21-10.

Any interest or other budget stabilization fund earnings must be deposited in the fund. Any amounts provided by law for deposit in the fund and any interest or earnings of the fund which would bring the balance in the fund to an amount greater than that described in NDCC 54-27.2-01 may not be deposited or retained in the fund but must be deposited instead in the state general fund. The statutory cap for the 2019-21 biennium is \$726,534,475. In the event of a budget shortfall, additional transfers may be made from the Fund only in accordance with NDCC 54-27.2-03.

#### 2. RESPONSIBILITIES AND DISCRETION OF THE STATE INVESTMENT BOARD (SIB).

The Fund is charged by law under NDCC 21-10-02.1 with the responsibility of establishing policies on investment goals and asset allocation of the Fund. The SIB is charged with implementing these policies and asset allocation and investing the assets of the Fund in a manner consistent with the prudent investor rule as provided in NDCC 21-10-07.

At the discretion of the SIB, the Fund’s assets may be pooled with other funds. In pooling funds, the SIB may establish whatever asset class pools it deems necessary with specific quality, diversification, restrictions, and performance objectives appropriate to the prudent investor rule and objectives of the funds participating in the pools.

RIO requests the SIB to formally approve this Investment Policy Statement for the Budget Stabilization Fund.

The SIB may delegate investment responsibility to professional money managers. When a money manager has been retained, the SIB's role in determining investment strategy and security selection is supervisory, not advisory. In accordance with this Investment Policy Statement, the Fund's assets may be invested directly or through collective investment vehicles.

The SIB is responsible for establishing criteria and procedures and making decisions with respect to hiring, maintaining, and terminating money managers. This responsibility includes selecting performance measurement services, consultants, and report formats and determining the frequency of meetings with managers.

The SIB will implement changes to this policy as promptly as is prudent.

### **3. INVESTMENT OBJECTIVES.**

The investment objectives of the Fund reflect the relatively unknown life-span and the moderate risk tolerance of the Fund. Operating and statutory considerations shape the Fund's policies and priorities as outlined below:

Objective: Sufficient liquidity is to be maintained to meet known or anticipated financial obligations and preserve the value of the surplus. Cash equivalent investments will be used to achieve this objective.

### **4. STANDARDS OF INVESTMENT PERFORMANCE.**

The Fund's investment objectives are expressed in terms of reward and risk expectations relative to investable, passive benchmarks. The Fund's policy benchmark is comprised of policy mix weights of appropriate asset class benchmarks as set by the SIB:

- a. The Fund's rate of return, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.
- b. The risk-adjusted performance of the Fund, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.

### **5. POLICY AND GUIDELINES.**

The asset allocation of the Budget Stabilization Fund is established by the SIB, with input from the Legacy and Budget Stabilization Advisory Board ("Advisory Board"). Asset allocation is based upon the appraisal of projected liquidity and income requirements, and estimates of the investment returns likely to be achieved by the various asset classes over the next five years.



In recognition of these factors, the following allocation is deemed appropriate for the fund:

Short-term Fixed Income	Minimum of 90%
Bank Loans with floating yields	Maximum of 5%
Absolute Return Strategies	Maximum of 5%

On June 17, 2017, the Advisory Board acknowledged the Bank of North Dakota Match Loan Certificates of Deposit Program (BND CD) was transferred to the Legacy Fund in early-2017.

Rebalancing of the Fund to this target will be done in accordance with the SIB's rebalancing policy.

While the SIB is responsible for establishing specific quality, diversification, restrictions, and performance objectives for the investment vehicles in which the Fund's assets will be invested, it is understood that:

- a. Futures and options may be used to hedge or replicate underlying index exposure, but not for speculation
- b. Derivative use will be monitored to ensure that undue risks are not taken by the money managers.
- c. All assets will be held in custody by the State Investment Board's master custodian or such other custodians as are acceptable to the State Investment Board.
- d. No funds shall be borrowed excluding a SIB approved securities lending program.
- e. No unhedged short sales or speculative margin purchases shall be made.
- f. Social investing is prohibited unless it meets the Exclusive Benefit Rule and it can be substantiated that the investment must provide an equivalent or superior rate of return for a similar investment with a similar time horizon and similar risk.

For the purpose of this document, Social Investing is defined as "*The investment or commitment of public pension fund money for the purpose of obtaining an effect other than a maximized return to the intended beneficiaries.*"

- g. Economically targeted investing is prohibited unless the investment meets the Exclusive Benefit Rule. For the purpose of this document economically targeted investment is defined as an investment designed to produce a competitive rate of return commensurate with risk involved, as well as to create collateral economic benefits for a targeted geographic area, group of people, or sector of the economy.

Also, for the purpose of this document, the Exclusive Benefit Rule is met if the following four conditions are satisfied:

- (1) The cost does not exceed the fair market value at the time of investment.
- (2) The investment provides the Fund with an equivalent or superior rate of return for a similar investment with a similar time horizon and similar risk.
- (3) Sufficient liquidity is maintained in the Fund to permit distributions in accordance with the terms of the plan.
- (4) The safeguards and diversity that a prudent investor would adhere to are present.

Where investment characteristics, including yield, risk, and liquidity are equivalent, the Fund's policy favors investments which will have a positive impact on the economy of North Dakota.

## **6. EVALUATION AND REVIEW.**

Investment management of the Fund will be evaluated against the Fund's investment objectives and investment performance standards. Evaluation will be conducted quarterly by the SIB through its review of funds participating in the Insurance Trust.

Money managers will be evaluated by the SIB quarterly. Meetings will be held with the money managers at least annually.

**Approved by:**

**LEGACY AND BUDGET STABILIZATION  
FUND ADVISORY BOARD**

\_\_\_\_\_  
**Representative Keith Kempenich  
Chairman**

**Date:** \_\_\_\_\_

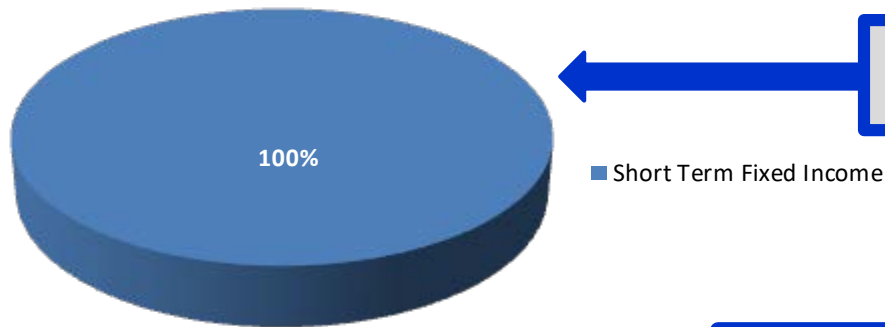
**NORTH DAKOTA  
STATE INVESTMENT BOARD**

\_\_\_\_\_  
**David Hunter  
Executive Director/CIO, RIO**

**Date:** \_\_\_\_\_

# Legacy Fund Strategic Asset Allocation

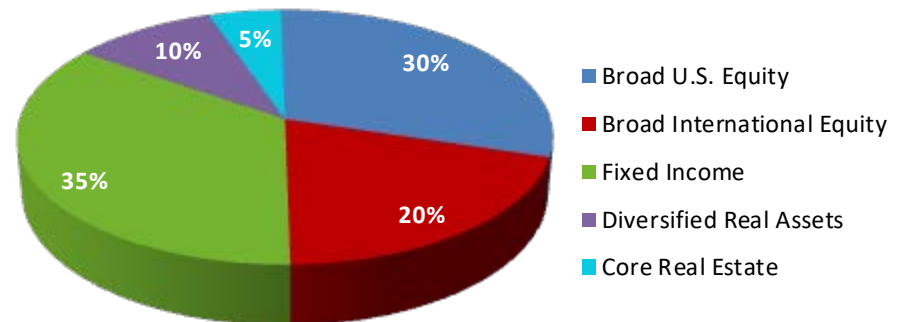
**Actual Allocation**  
8/1/2013



Asset allocation is the primary driver of long-term investment returns.

**Policy Allocation**

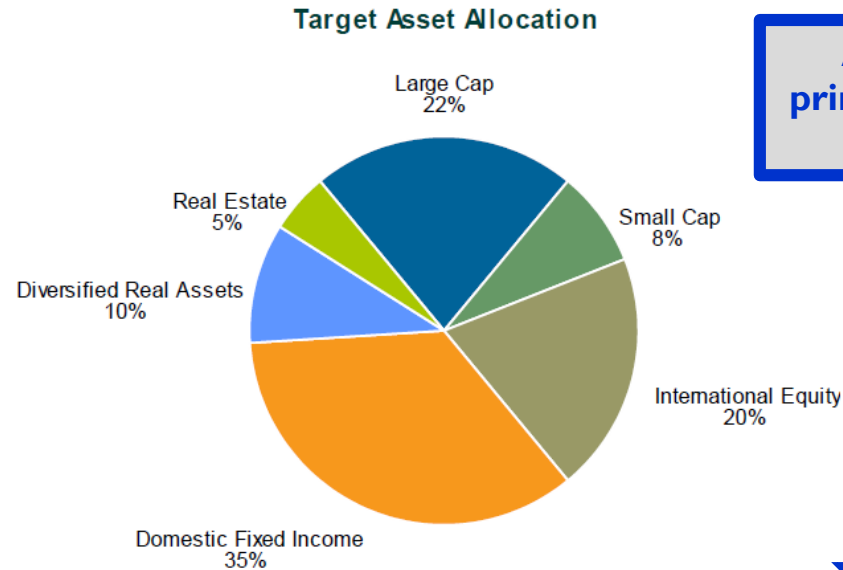
January 31, 2015 to Current



Transition completion  
January 2015

# Legacy Fund

Actual Allocations are within 1% to 2% of Target at Sep. 30, 2020







Asset allocation is the primary driver of long-term investment returns.

Asset Class	\$ millions Actual	Weight Actual	Target	Percent Difference	\$ millions Difference
U.S. Large Cap Equity	\$ 1,677	22.7%	22.0%	0.7%	\$ 49
U.S. Small Cap Equity	\$ 584	7.9%	8.0%	-0.1%	\$ (8)
International Equity	\$ 1,518	20.5%	20.0%	0.5%	\$ 38
Global Fixed Income	\$ 2,506	33.9%	35.0%	-1.1%	\$ (84)
Diversified Real Assets	\$ 719	9.7%	10.0%	-0.3%	\$ (21)
Global Real Estate	\$ 325	4.4%	5.0%	-0.6%	\$ (45)
Cash & Equivalents	\$ 72	1.0%	0.0%	1.0%	\$ 72
<b>Total</b>	<b>\$ 7,400</b>	<b>100%</b>	<b>100%</b>	<b>0.0%</b>	<b>\$ -</b>

# Legacy Fund

## Actual Net Investment Returns versus Policy Benchmark As of September 30, 2020

	Qtr. Ended 9/30/2020	1 Yr Ended 9/30/2020	3 Yrs Ended 9/30/2020	5 Yrs Ended 9/30/2020	9 Yrs Ended 9/30/2020	Risk 5 Yrs Ended 9/30/2020
Legacy Fund \$7.4 billion						
Total Fund Return - Net	4.93%	8.27%	6.02%	7.91%	5.19%	10.2%
Policy Benchmark Return	3.95%	7.46%	5.93%	7.25%	4.48%	9.0%
Total Relative Return	0.98%	0.81%	0.09%	0.65%	0.71%	113%

- As of 9/30/2020, Legacy Fund had a market value of approximately \$7.4 billion. Legacy's target asset allocation policy is 50% Global Equity, 35% Global Fixed Income and 15% Diversified Real Assets (including Global Real Estate & Infrastructure and U.S. Treasuries), as approved by the Legacy Fund Advisory Board and State Investment Board.
- For the 1-Year Ended 9/30/2020, the Legacy Fund generated a Net Investment Return of 8.27%, exceeding the Policy Benchmark of 7.46% by 0.81% over the last 1-year.
- For the 5-Years Ended 9/30/2020, the Legacy Fund earned a Net Return of 7.91% exceeding the Policy Benchmark Return of 7.25% by 0.65% over the last 5-years.
- The SIB's prudent use of active investment management generated over \$125 million of incremental income (versus passive investments) for the Legacy Fund over the last 5-years after deducting all investment fees and expenses (e.g. average balance of over \$5 billion x Excess Return of over 0.50% = \$25 million/year x 5 years = \$125 million).

## Legacy Fund Schedule of Investment Expenses

	FY 2020			FY 2019		
	Average Market Value	Fees in \$	Fees in %	Average Market Value	Fees in \$	Fees in %
<b>Investment managers' fees:</b>						
Domestic large cap equity managers	1,413,507,594	2,673,660	0.19%	1,325,183,262	2,916,154	0.22%
Domestic small cap equity managers	499,707,561	2,064,044	0.41%	462,998,204	732,353	0.16%
International equity managers	1,277,334,864	5,160,353	0.40%	1,185,852,998	4,769,488	0.40%
Domestic fixed income managers	2,357,182,137	7,071,409	0.30%	2,108,399,241	6,467,723	0.31%
Diversified real assets managers	684,910,595	4,408,615	0.64%	594,427,449	4,667,325	0.79%
Real estate managers	300,775,136	1,435,742	0.48%	290,713,673	1,605,648	0.55%
Cash & equivalents managers	62,093,357	71,072	0.11%	115,302,787	100,541	0.09%
<b>Total investment manager expenses</b>	<b>6,595,511,244</b>	<b>22,884,894</b>	<b>0.35%</b>	<b>6,082,877,614</b>	<b>21,259,232</b>	<b>0.35%</b>
Custodian fees		596,179	0.01%		550,192	0.01%
Investment consultant fees		246,200	0.00%		251,009	0.00%
Administrative fees		921,682	0.01%		928,596	0.02%
<b>Total investment expenses</b>		<b>24,648,955</b>	<b>0.37%</b>		<b>22,989,029</b>	<b>0.38%</b>
<b>Total Performance Fees Paid (included above)</b>		3,389,150	0.05%		2,975,983	0.05%
<b>Actual Investment Performance (Net of Fees)</b>			<b>4.23%</b>			<b>4.98%</b>
<b>Policy Benchmark</b>			<b>4.38%</b>			<b>6.12%</b>
			<b>-0.15%</b>			<b>-1.14%</b>

- Investment fees and expenses declined slightly to **0.37%** in Fiscal Year (FY) 2020 from **0.38%** in FY 2019.
- **Active management adversely impacted BSF investment results by \$10 million in Fiscal Year 2020.**
- Despite disappointing performance in FY 2020, it is important to note the SIB's use of active management has been positive for the 1 and 5 year periods ended Sep. 30, 2020, by **0.81%** and **0.65%**, respectively.
- Active management has generated over **\$125 million** of incremental income for the Legacy Fund over the last 5 years ended 9/30/2020 (e.g. \$5 billion x **0.50%** excess return = **\$25 million/year** x 5 years = **\$125 million**).

## **NORTH DAKOTA LEGACY FUND INVESTMENT POLICY STATEMENT**

### **I. PLAN CHARACTERISTICS AND FUND CONSTRAINTS**

The North Dakota legacy fund was created in 2010 when the voters of North Dakota approved a constitutional amendment--now Article X, Section 26, of the Constitution of North Dakota--to provide that 30 percent of oil and gas gross production and oil extraction taxes on oil and gas produced after June 30, 2011, be transferred to the legacy fund. The principal and earnings of the legacy fund may not be spent until after June 30, 2017, and any expenditure of principal after that date requires a vote of at least two-thirds of the members elected to each house of the Legislative Assembly. Not more than 15 percent of the principal of the legacy fund may be spent during a biennium. The Legislative Assembly may transfer funds from any source to the legacy fund, and such transfers become part of the principal of the fund. The State Investment Board (SIB) is responsible for investment of the principal of the legacy fund. Interest earnings accruing after June 30, 2017, are transferred to the general fund at the end of each biennium. North Dakota Century Code Section 21-10-11 provides that the goal of investment for the legacy fund is principal preservation while maximizing total return.

### **2. FUND MISSION**

The legacy fund was created, in part, due to the recognition that state revenue from the oil and gas industry will be derived over a finite timeframe. The legacy fund defers the recognition of 30 percent of this revenue for the benefit of future generations. The primary mission of the legacy fund is to preserve the real inflation-adjusted purchasing power of the money deposited into the fund while maximizing total return.

### **3. RESPONSIBILITIES AND DISCRETION OF THE STATE INVESTMENT BOARD**

The Legacy and Budget Stabilization Fund Advisory Board (the "Advisory Board") is charged by law under Section 21-10-11 with the responsibility of recommending policies on investment goals and asset allocation of the legacy fund. The SIB is charged with implementing policies and asset allocation and investing the assets of the legacy fund in the manner provided in Section 21-10-07--the prudent institutional investor rule. The fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income.

Management responsibility for the investment program not assigned to the SIB in Chapter 21-10 is hereby delegated to the SIB, which must establish written policies for the operation of the investment program consistent with this investment policy.

The SIB may delegate investment responsibility to professional money managers, which are also required to employ investment strategies consistent with the investment policy. Where a money manager has been retained, the SIB's role in determining investment strategy and security selection is supervisory not advisory.

At the discretion of the SIB, the fund's assets may be pooled with other funds. In pooling funds, the SIB may establish whatever asset class pools it deems necessary with specific quality, diversification, restrictions, and performance objectives appropriate to the prudent investor rule and the objectives of the funds participating in the pool.

The SIB is responsible for establishing criteria, procedures, and making decisions with respect to hiring, retaining, and terminating money managers. The SIB investment responsibility also includes selecting performance measurement services, consultants, report formats, and frequency of meetings with managers.

The SIB shall notify the Advisory Board within 30 days of any substantial or notable changes in money managers; performance measurement services; and consultants, including hiring or terminating a money manager, performance measurement service, or a consultant.

The SIB, after consultation with the board, will implement necessary changes to this policy in an efficient and prudent manner.

#### **4. RISK TOLERANCE**

The Advisory Board's risk tolerance with respect to the primary aspect of the legacy fund's mission is low. The Advisory Board is unwilling to undertake investment strategies that might jeopardize the ability of the legacy fund to maintain principal value over time. The Advisory Board recognizes that the plan will evolve as the legacy fund matures and economic conditions and opportunities change.

#### **5. INVESTMENT OBJECTIVES**

The Advisory Board's investment objectives are expressed in terms of reward and risk expectations relative to investable, passive benchmarks. The legacy fund's policy benchmark is comprised of policy mix weights of appropriate asset class benchmarks as set by the SIB:

- a. The legacy fund's rate of return, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.
- b. The legacy fund's risk, measured by the standard deviation of net returns, should not exceed 115 percent of the policy benchmark over a minimum evaluation period of five years.
- c. The risk-adjusted performance of the legacy fund, net of fees and expenses, should at least match that of the policy benchmark over a minimum evaluation period of five years.

#### **6. POLICY ASSET MIX**

After consideration of all the inputs and a discussion of its own collective risk tolerance, the Advisory Board approved the following policy asset mix for the Legacy Fund as of April 2, 2013. The Advisory Board and SIB re-affirmed this same asset allocation policy on May 24 and 25 of 2018. Rebalancing of the fund to these targets will be done in accordance with the SIB's rebalancing policy, but not less than annually.



## Board Action

Asset Class	Policy Target Percentage
Broad US Equity	30%
Broad International Equity	20%
Fixed Income and BND CD	35%
Core Real Estate	5%
Diversified Real Assets	10%

The SIB approved an 18-month implementation strategy which was completed in January of 2015. On June 17, 2017, the Advisory Board acknowledged the transfer of the Bank of North Dakota Match Loan Certificates of Deposit Program (“BND CD”) to the Legacy Fund in early-2017 (representing a sector allocation within Fixed Income). On August 23, 2019, the SIB increased its commitment to the BND CD investment program by \$100 million for a total commitment of \$300 million. On December 3, 2019, the Advisory Board approved this change in the Legacy Fund’s asset allocation without exception. **BND will be requested to guarantee a minimum investment return. This minimum return requirement will be periodically reviewed in connection with Legacy Fund’s overall asset allocation framework. On October 25, 2019, S&P affirmed BND’s Issuer Credit Rating as A+ (Long-Term) and A-I+ (Short-Term) with a “Stable” Outlook. On September 25, 2020, the SIB approved a \$100 million increase in the commitment to BND’s In-State Investment Program raising the total commitment up to \$400 million.**

**Board Action Requested: RIO recommends the SIB formally approve this Legacy Fund Investment Policy Statement as approved by the Legacy and Budget Stabilization Fund Advisory Board on November 12, 2020.**

## 7. RESTRICTIONS

While the SIB is responsible for establishing specific quality, diversification, restrictions, and performance objectives for the investment vehicles in which the legacy fund's assets will be invested, it is understood that:

- a. Futures and options may be used to hedge or replicate underlying index exposure, but not for speculation.
- b. Derivatives use will be monitored to ensure that undue risks are not taken by the money managers.
- c. No transaction may be made that would threaten the tax-exempt status of the legacy fund.
- d. All assets will be held in custody by the SIB's master custodian or such other custodians as are acceptable to the SIB.
- e. No unhedged short sales or speculative margin purchases may be made.
- f. Social investing is prohibited unless it meets the exclusive benefit rule, and it can be substantiated that the investment provides an equivalent or superior rate of return for a similar investment with a similar time horizon and similar risk. For the purpose of this document, social investing is defined as the consideration of socially responsible criteria in the investment or commitment of public fund money for the purpose of obtaining an effect other than a maximized return to the Fund.
- g. Economically targeted investing is prohibited unless the investment meets the exclusive benefit rule.

For the purpose of this document, economically targeted investment is defined as an investment designed to produce a competitive rate of return commensurate with risk involved as well as to create collateral economic benefits for a targeted geographic area, group of people, or sector of the economy. Also, for the purpose of this document, the exclusive benefit rule is met if the following four conditions are satisfied:

- The cost does not exceed the fair market value at the time of investment.
- The investment provides the legacy fund with an equivalent or superior rate of return for a similar investment with a similar time horizon and similar risk.
- Sufficient liquidity is maintained in the legacy fund to permit distributions in accordance with the terms of the plan.
- The safeguards and diversity that a prudent investor would adhere to are present.
- Where investment characteristics, including yield, risk, and liquidity, are equivalent, the Advisory Board's policy favors investments which will have a positive impact on the economy of North Dakota.

## 8. INTERNAL CONTROLS

A system of internal controls must be in place by the SIB to prevent losses of public funds arising from fraud or employee error. Such controls deemed most important are the separation of responsibilities for investment purchases from the recording of investment activity, custodial safekeeping, written confirmation of investment transactions, and established criteria for investment manager selection and monitoring. The annual financial audit must include a comprehensive review of the portfolio, accounting procedures for security transactions, and compliance with the investment policy.

## 9. EVALUATION AND REVIEW

Investment management of the legacy fund will be evaluated against the fund's investment objectives and investment performance standards. Emphasis will be placed on 5-year and 10-year results. Evaluation should include an assessment of the continued feasibility of achieving the investment objectives and the appropriateness of the investment policy statement for achieving those objectives.

Performance reports will be provided to the Advisory Board periodically, but not less than quarterly. Such reports will include asset returns and allocation data. Additionally, not less than annually, reports will include information regarding all significant and/or material matters and changes pertaining to the investment of the legacy fund, including:

- Changes in asset class portfolio structures, tactical approaches, and market values.
- Loss of principal, if any.
- Management costs associated with various types of investments.
- All material legal or legislative proceedings affecting the SIB.
- Compliance with this investment policy statement.
- An evaluation of the national economic climate.
- A forecast of the expected economic opportunities and dangers.
- Management of risk by the SIB.

In addition to the quarterly and annual evaluation and review process, the SIB shall notify the Advisory Board within 30 days of any substantial or notable deviation from the normal management of the legacy fund, including any anomalies, notable losses, gains, or liquidation of assets affecting the fund.

**RIO is available to assist the Advisory Board establish separate formal governance policies, if so directed.**

Memorandum

To: Jon Godfread, Insurance Commissioner and State Investment Board Member;  
Dave Hunter, Retirement and Investment Office Executive Director  
From: Dean DePountis, Assistant Attorney General  
Date: October 14, 2020  
Re: Legacy Fund vis-a-vis Economic Development

Summary

During the September 25, 2020 regular board meeting, the State Investment Board (SIB) discussed investing a portion of the Legacy Fund in economic development. At discussion's end, Insurance Commissioner and SIB Member Jon Godfread, and RIO Executive Director Dave Hunter, requested counsel comment on SIB's authority to invest a portion of the Legacy Fund in economic development.

In my view, SIB may invest a portion of the Legacy Fund in economic development provided any such investment is accomplished in accordance with: 1) recommendations from the Legacy and Budget Stabilization Fund Advisory Board; and 2) the prudent investor rule.

Analysis

North Dakota's constitution provides "[t]he state investment board shall invest the principal of the North Dakota legacy fund."<sup>1</sup> Though undefined in the constitution, "invest" generally means to apply money for profit.<sup>2</sup> For the purpose of this analysis, and as inferred from the September 25 board meeting, the presumption is that the relevant definition of economic development is applying money locally with the expectation of a return proportionate to the risk.

Like other state agencies created by statute, SIB has only such authority or powers as are granted to it or necessarily implied from the grant.<sup>3</sup> One of those powers is investing the funds enumerated in N.D.C.C. 21-10-06, including the Legacy Fund.<sup>4</sup> When investing funds under its supervision, SIB "shall apply the prudent investor rule" and consider recommendations from each fund's advisory board.<sup>5</sup> The prudent investor rule means:

that in making investments the fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the

<sup>1</sup> North Dakota Constitution, Article X, Section 26.

<sup>2</sup> See N.D. Op. Att'y Gen. L-05 (2011) (The word "invest" is not defined in N.D. Const. art. X, § 26, but its usage within the section does not imply something different than the ordinary definition for the word which could mean both the "laying out of money in a way intended to secure income or profit," and also the expenditure of funds to "purchase securities ... or to place money or property in business ventures or real estate ... so that it may produce revenue ...") (Internal citations omitted).

<sup>3</sup> N.D. Op. Att'y Gen. L-38 (1999) (citing *First Bank of Buffalo v. Conrad*, 350 N.W.2d 580, 584-585 (N.D. 1984)).

<sup>4</sup> N.D.C.C. 21-10-02, N.D.C.C. 21-10-06(l).

<sup>5</sup> N.D.C.C. 21-10-02, N.D.C.C. 21-10-07.

permanent disposition of funds, considering probable safety of capital as well as probable income.<sup>6</sup>

Additionally, "[t]he asset allocation and any subsequent allocation changes for each fund must be approved by the governing body of that fund and the state investment board."<sup>7</sup> Germane here is the Legacy and Budget Stabilization Fund Advisory Board, whose "goal of investment for the legacy fund is principal preservation while maximizing total return."<sup>8</sup>

Summarizing the aforementioned language, SIB's investment decisions must be informed by the objectives of each fund – be those objectives codified or conveyed to SIB by each fund's advisory board – and the prudent investor rule.

To move forward, the following questions, with financial advisor involvement, are worth exploring:

- 1) What will be the stipulated definition of economic development;
- 2) Once economic development is defined, are the Legacy and Budget Stabilization Fund Advisory Board and SIB interested in considering an economic development dimension within the Legacy Fund's overall investment portfolio;
- 3) If the answer to question 2 yes, what is the projected investment risk of economic development; and
- 4) What size allocation of such projected investment risk lies within the contours of the prudent investor rule.

Should the board decide to proceed, the SIB Governance Manual, page E-8, provides guidance on procuring qualified investment managers in its policy titled: Implementation – Investment Manager Selection.

Conclusion

Although there is no legal obligation to do so, SIB may invest a portion of the Legacy Fund in economic development if, however ultimately defined, economic development can return a profit on the investment commensurate with its risk and the amount of the total portfolio allocated to that magnitude of risk is consistent with the prudent investor rule.

**Investment Governance:**

**The SIB may invest a portion of the Legacy Fund in economic development if accomplished in accordance with: 1) Advisory Board recommendation; and 2) prudent investor rule.**

***Prudent investor rule means that in making investments the fiduciaries shall exercise the judgement and care, under circumstances than prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it , not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income.***

# Overview of Prudent Investor Rule



Government Finance Officers Association

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For its Comprehensive Annual  
Financial Report  
For the Fiscal Year Ended

June 30, 2019

*Christopher P. Morill*

Executive Director/CEO

## NDCC 21-10-07 Legal Investments - Prudent Investor Rule:

The **state investment board** shall apply **the prudent investor rule** in investing for funds under its supervision. The "**prudent investor rule**" means that in making investments **the fiduciaries** shall exercise the **judgment and care**, under the **circumstances then prevailing**, that an institutional investor of ordinary **prudence, discretion, and intelligence** exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, **considering probable safety of capital as well as probable income**. The retirement funds belonging to the teachers' fund for retirement and the public employees retirement system must be invested exclusively for the benefit of their members and in accordance with the respective funds' investment goals and objectives.

**The SIB does not make individual investments in securities as all client portfolios are externally managed by approved investment firms using SIB client board approved investment policies and asset allocations.**

**Economically targeted investing is prohibited unless the investment meets the "exclusive benefit rule" and the following four conditions are satisfied:**

- 1) The cost does not exceed the fair market value at time of investment;
- 2) **The investment provides the fund with an equivalent or superior rate of return for a similar investment with a similar time horizon and expected risk;**
- 3) Sufficient liquidity is maintained in the fund to permit distributions in accordance with plan terms; and
- 4) The safeguards or diversity that a **prudent investor would adhere to are present.**

RIO's website was recently updated to improve overall transparency and reporting access for our users and clients noting the Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to RIO for its CAFR for the fiscal year ended June 30, 2019 (for the 22<sup>nd</sup> consecutive year). →

- Alaska faces an unprecedented economic challenge
  - Contemporaneous shocks to multiple sectors
  - “Perfect storm” will test our strength and ingenuity
- The Permanent Fund contributes 75% of General Fund revenue
- APFC invests globally, across strategies and geographies, to maximize returns and minimize risk
  - ~\$22 million (0.04% of total AUM) is currently invested in Alaskan businesses and assets
  - ~\$490 million (0.80% of total AUM) is currently managed by Alaskan managers (excluding APFC staff)
  - \$195 million is committed but not yet invested (through recently-launched Alaskan emerging manager program)
- ➔ AS 37.13.120(c) provides the APFC shall invest in-state to the extent in-state investments have a risk level and expected return comparable to alternate investment opportunities and otherwise meet the Fund’s investment standards (such as the prudent-investor rule).
- Identifying attractive investment opportunities\* in Alaska requires focused effort and dedicated resources

## In-State Investment

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- Balancing APFC’s investment requirements with other potential contributions to Alaska’s economic fitness requires a combination of velocity, scale, skill, and fiduciary oversight
- Investment **speed** can be the enemy of investment **quality**





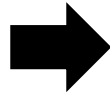
Investment Policy



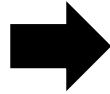
## V. ALASKA IN-STATE INVESTMENT POLICY

### A. Objective and Considerations

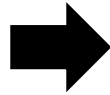
To implement the requirements of AS 37.13.120(c), the Board believes the Fund should have an in-state investment policy that maintains the investment integrity of the Fund and is both proactive and impartial. As such, any internal in-state investment decision made by APFC Staff should include the following considerations:



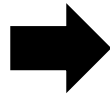
1. Honor AS 37.13.120(c): Prescribes that if an Alaskan investment has equivalent risk and expected return comparable to or better than a similar non-Alaskan investment, the Alaskan investment should be preferred.



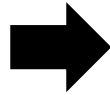
2. Require Compelling Risk-Adjusted Returns: To honor the prudent investor rule provided in AS 37.13.120(a), any Alaskan investment contemplated by APFC must be attractive on a stand-alone basis.



3. Ensure Fund Diversification: In order to provide sufficient risk diversification as required under AS 37.13.120(c), Board approval is required for any in-state investment that would exceed 1% of the Fund, at the time of investment.



4. Seek Participation by Another Institutional Investor: In order to ensure that an Alaskan investment opportunity is attractive on a stand-alone basis and satisfies the institutional quality requirements of 15 AAC 137.420, APFC should generally seek to invest into an Alaskan investment alongside of at least one of its peers (i.e., a large institutional investor, which may include endowments, foundations, sovereign wealth funds, or public or private pension funds).



### B. In-State Investment Targets

For the APFC Staff to identify and invest the Fund in additional compelling in-state investments, the following investment targets and guidelines are set to promote compliance with AS 37.13.120(c):

1. By 2021, at least 3% of the Fund should be invested in-state;
2. By 2022, at least 4% of the Fund should be invested in-state;
3. By 2023, at least 5% of the Fund should be invested in-state;

SWIB

# WISCONSIN INVESTMENTS

## **Chris Prestigiacommo, CFA**

### **Portfolio Manager- Private Markets Group**

Chris is currently a Portfolio Manager within the Private Markets Funds Alpha Division at the \$130 billion State of Wisconsin Investment Board (SWIB). In this role, Chris is responsible for all aspects of building out SWIB's private debt and venture capital portfolios. Chris has been with the State of Wisconsin Investment Board since 2001. His private debt responsibilities include the origination, negotiation, and monitoring of direct senior and mezzanine debt investments in companies across various industries. Chris is also responsible for originating, negotiating, and monitoring venture capital limited partnerships and investments in which SWIB is a direct investor in venture backed companies. Prior to arriving at SWIB, he was a vice president in the wholesale banking division of a large regional bank where he worked for over 10 years with companies in various industries. Chris holds an undergraduate degree from the University of Wisconsin–Madison and a master's in business administration with an accounting concentration from Edgewood College in Madison. Chris is a CFA charter holder.



# WISCONSIN PRIVATE DEBT

- Portfolio origins date back to the 1960s to lend money to both private and public companies in Wisconsin.
  - SWIB Investment Guidelines require the portfolio to maintain an investment grade credit quality.
- Primary portfolio objective is to generate market rate returns at an appropriate level of risk with a secondary objective to invest in Wisconsin businesses.
  - First and foremost are investment returns
- Since 1983, the private debt portfolio has invested over \$2.3 billion in over 230 loans. Over 90% of those loans have been to companies that are headquartered in Wisconsin, have operations in Wisconsin or intend to invest the proceeds in Wisconsin.
- Proceeds tend to be used for growth/capacity expansion or recapitalizations that are positives for the company, employment and the local communities.
- Average annual pacing is ~\$100 million (average loan size of \$10 million). Current loans to companies headquartered, having operations and/or investing proceeds in Wisconsin totals approximately value of approximately \$500 million (over 50 borrowers).

# WISCONSIN PRIVATE DEBT

- Types of financing offered
  - Senior Debt
  - Subordinated Debt
- Portfolio sector exposure representative of the Midwest
- Staffed by three individuals with commercial/investment banking backgrounds
  - Staff has complete investment discretion

# WISCONSIN VENTURE CAPITAL

- Portfolio launched in 1999/2000 to invest in Wisconsin early-stage funds and companies.
- Primary portfolio objective is to generate market rate returns at an appropriate level of risk with a secondary objective to support the Wisconsin early-stage ecosystem.
  - First and foremost are investment returns
- Approximately \$440 million committed/invested over 20 years (+40% specifically targeted towards in-state investing) in funds and companies.
- 12 out of 14 funds (85%) target/consider investing in Wisconsin companies.
- 23 out of 28 direct company investments (~80%) located or have connection to Wisconsin.
- From 2000-2018, Wisconsin companies have raised on average \$143 million annually in total venture capital.
- SWIB's annual investments average ~10% of the institutional venture opportunities in Wisconsin.

# WISCONSIN VENTURE CAPITAL

- Investments include
  - Venture capital funds
  - Direct investments
- Portfolio sector exposure information technology and life sciences
- Staffed by two individuals with experience in venture capital investing
  - Staff has complete investment discretion

# SWIB ECOSYSTEM PARTICIPATION

- SWIB is involved in business activities around the State working with, and investing in, both mature and start-up companies. SWIB positively impacts the Wisconsin business/start-up community in multiple ways in addition to investment activity. Examples include:
  - Participation in the annual Madison Chamber Pressure Chamber event. Assist in recruiting venture managers to judge local competition for the west coast trip.
    - SWIB has traveled to the Bay area the past six years and arranged to have SWIB's venture managers in Silicon Valley participate in the west coast pitch session leading to dozens of introductions and new relationships.
  - Participation on panels/discussion on venture capital.
  - Host venture capitalists from around the country to spend time in Madison and more broadly around Wisconsin to learn more about our start-up community and network with the early-stage ecosystem participants.
  - Connect Wisconsin companies to outside Wisconsin venture managers for capital, customers, advisory board, etc. The Wisconsin Private Debt Portfolio will also help companies with financing (whether SWIB participates or not).

November 20, 2020



## **North Dakota State Investment Board**

In-State Investment Program  
Research Project  
Phase I

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### **Pete Keliuotis, CFA**

Executive Vice President, Alternatives

### **Paul Erlendson**

Senior Vice President

### **Alex Browning**

Senior Vice President

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# In-State Investment Program Research Project

## Overview

Callan's proposal is designed to achieve three primary objectives:

1. To provide the SIB with background education regarding the history of in-state investment programs that have been implemented in other states;
2. To outline alternative investment program designs for consideration by the SIB including but not limited to investment objectives, measurement standards, and types of investments / assets to be included; and
3. To assist the SIB with policy development and the selection of a third-party to manager(s) and implementation of the program.

## Phase One

- Description of in-state programs, types of investments utilized, and characteristics
- Summary of the sample set, including states, years active, size, asset types
- Provision of detailed examples of different programs
- If available, performance of in-state programs
- Takeaways based on examples from other states
- Identify which in-state investment programs subscribe to the Prudent Investor Rule

# In-State Investment Program Research Project: Phase I

## Comprehensive List of In-State Investment Programs

State	Program
Alaska	Alaska Investment Program
California	Golden State Investment Partners
Colorado	Colorado Mile High Fund
Connecticut	Nutmeg Opportunities Fund
Florida	Sunshine State Fund
Florida	Florida Growth Fund
Illinois	Illinois Growth and Innovation Fund
Indiana	Indiana Future Fund, iNext
Indiana	Next Level Fund
Michigan	Invest Michigan!
Nevada	Silver State Opportunities Fund
New Mexico	Private Equity Investment Program

State	Program
New Mexico	New Mexico Recovery Fund
New York	Hudson River Co-Investment Fund
New York	New York Credit Co-Investment Fund
North Carolina	NC Innovation Funds
North Dakota	Innovation Loan (LIFT) Fund
Ohio	Ohio Capital Fund
Oregon	Oregon Investment Fund
Texas	Texas Growth Fund
Texas	Emerging Technology Fund
Wisconsin	Wisconsin Venture Capital Portfolio
Wisconsin	Wisconsin Private Debt Portfolio

- Callan conducted a survey of in-state investment programs across the United States
- Programs have been sponsored by states of varying sizes and economic environments
- Most of these programs continue to be active, though some have been discontinued
- Among the issues identified that result in program discontinuation:
  - Did not meet initial objectives for performance, job creation, or technology development
  - Lack of support from sponsoring entity (e.g., new administration; inconsistently provided support)
  - Change in program governance and/or turnover among program managers



# In-State Investment Program Research Project: Phase I

## Additional Detail for Selected Programs

State/Region	Program Name	Inception	Invested Capital	Asset Class(es)	Active?	Prudent Inv Rule?	State GDP (\$bn)	Implementation	Description
Alaska	Alaska Investment Program	2019	\$200m committed	Growth equity, private equity, infrastructure, private credit	Y	Y	\$54	Fund investments	Means of supporting growing businesses in the state; Alaska-based investments made with the \$200 million won't get preferential treatment: "our No. 1 and only goal is really to beat that private equity benchmark"
Connecticut	Nutmeg Opportunities Fund	2009, 2017	\$260m	Private equity, growth equity, venture capital	Y	Y	\$287	Fund commitments, direct investments	Invests in smaller or emerging managers with commitment to maintaining an office; having a significant business presence; or business plan to conduct substantial operations in CT
Nevada	Silver State Opportunities Fund	2012	\$50m committed	Private equity	Y	N	\$178	Fund commitments, co-investments	Generate attractive private equity returns for the State of Nevada Permanent School Fund by investing in Nevada companies either directly or through fund managers. A company is considered a Nevada business if it has a headquarters in the state, or in the process of planning an expansion in or relocation in the state, or significant percentage of employees residing in the state.
New Mexico	Private Equity Investment Program	1993	\$360.0m	Venture capital, growth equity, buyout	Y	N	\$105	Fund investments and co-investments	Support investments in companies located in the state; companies' headquarters need to be in New Mexico and at least 50% of its employees are required to live and work in the state
Oregon	Oregon Investment Fund	2004	\$195.7m	Venture capital, growth equity, buyout	N	Y	\$254	Fund investments and co-investments	Fund-of-fund strategy capitalized by the OIC to take advantage of the private equity opportunities in Oregon and the Pacific Northwest. Committed to funds that invest in companies located primarily in the state of Oregon and the Pacific Northwest region, and operating companies alongside the selected managers.

- The programs above are cited here due to their state economies being most closely comparable to North Dakota's in terms of size or structure (GDP range: \$54B - \$287B). In 2019, North Dakota's reported GDP was ~ \$57B
- Amounts invested within this group range from \$50m to \$360m
- Most programs invest across multiple asset classes, though the primary focus is venture capital and growth equity
  - These two strategies are expected to be most effective in driving job creation and economic development
- Implementation has been through a combination of private equity fund commitments and co-investments
- Each state uses different guidelines for which types of businesses the programs intend to target
- Most programs are designed to support businesses **in the state**, although CT and OR's program are **regional**

Source: Callan survey of in-state programs; North Dakota annual GDP = \$57 billion

Note: Prudent Investor Rule assumed to be followed even if not explicitly stated if third-party fiduciary manager hired and given discretion

# In-State Investment Program Research Project: Phase I

## Historical Returns vs. Private Equity Benchmarks

Composite Returns	1 Year	3 Years	5 Years <sup>1</sup>	Since Inception <sup>2</sup>
Median return	1.36%	9.16%	10.75%	13.17%
Venture Capital Benchmark*	11.61%	16.68%	10.74%	
US Private Equity Benchmark*	3.40%	10.66%	10.30%	
Highest return	64.41%	35.25%	26.90%	33.39%
Lowest Return	(12.49%)	(9.79%)	(17.39%)	1.10%

- While returns of in-state programs for which performance data was available have been broadly in line with Private Equity benchmarks (Venture Capital and Buyouts), the range of investment outcomes has been very wide
- Characteristics of stronger-performing programs:
  - Broad deal sourcing effort – geographic and asset class
  - Consistent governance and oversight
  - Sponsor has an “arms-length” relationship with an independent third-party fiduciary manager with discretionary authority
- Characteristics of weaker-performing programs:
  - Significant change in governance or mandate description
  - Bad timing: implementation started at the cusp of a broad economic downturn
  - Deployment of capital was too aggressive
  - Primary objective was not “competitive returns” (e.g.– main goal was economic development, innovation, job creation)

Source: Callan survey of in-state programs; annual reports, program managers

\* Refinitiv/Cambridge Benchmarks as of June 30, 2020

<sup>1</sup> Only 6 programs with 5-year returns available

<sup>2</sup> Various time periods

# In-State Investment Program Research Project: Phase I

## Lessons Learned from In-State Programs

Callan conducted interviews with several managers and senior investment officers of various in-state programs. The following are summaries of their experiences with managing these programs.

### BEST PRACTICES

#### Governance

- Transparent program set-up and oversight process
- Apolitical oversight body
- Long-term commitment to program
- Adopt Statement of Investment Policy; review annually
- Regular (quarterly/annual) evaluation of progress towards goals

#### Objectives

- Returns-oriented
- Compliance with Prudent Investor Rule
- Clearly, concisely stated in writing

#### Implementation

- Delegate implementation to third-party fiduciary sourced through a competitive process with clear accountability
- Rely on external fiduciary to establish the opportunity set
- Capital invested over time (in “tranches”) based on achievement of program milestones
- Alignment of interests (e.g., GP capital commitment; performance-based fees; appropriate time-horizon)

### THINGS TO AVOID

#### Governance

- Lack of information available on program set-up or progress
- Oversight process includes political or other influences that conflict with the primary investment objective
- Inconsistent commitment; focus on short-term results
- Infrequent or inconsistent program evaluation

#### Objectives

- Unclear or unspoken
- Difficult to measure
- Independent of returns

#### Implementation

- Fiduciary not provided with implementation authority or autonomy
- Program structure overly prescriptive before fiduciary hired
- Too much capital allocated relative to opportunity set
- Lack of accountability
- Fees unrelated to achieving program goals

# In-State Investment Program Research Project: Phase I



- Dozens of in-state investment programs have been established across the country by states of all sizes and economies. Some have worked; some not.
- Most programs focus on venture capital or growth equity investments to help spur job growth, capital formation, and technology development
- Performance has been mixed, with wide dispersion, but median results have been largely in line with private equity benchmarks
- Program managers and senior investment officers believe a transparent process with clear objectives managed by a third-party fiduciary are the best ways to achieve success.
- Phase II Next Steps:
  - Program structure and composition
  - Geographic scope
  - Initial thoughts on program size, implementation

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## Appendix

# In-State Investment Program Research Project: Phase I

## Additional Detail for All Programs in Survey

State/Region	Program Name	Inception	Invested Capital	Asset Class(es)	Active?	Prudent Inv Rule?	State GDP (\$bn)	Implementation
Alaska	Alaska Investment Program	2019	\$200m committed	Growth equity, private equity, infrastructure, private credit	Y	Y	54	Fund investments
California	Golden State Investment Partners	2006	\$793.2m	Private equity, growth equity, venture capital, mezzanine	Y	Y	3,200	Fund commitment, co-investment SMA
Colorado	Colorado Mile High Fund	2012	\$50m committed	Venture capital, growth equity, buyout, mezzanine, infrastructure, energy	N	Y	393	Co-investments
Connecticut	Nutmeg Opportunities Fund	2009, 2017	\$260m	Private equity, growth equity, venture capital	Y	Y	287	Fund commitments, direct investments
Florida	Sunshine State Fund	2018	\$125m committed	Private equity, growth equity, venture capital	Y	Y	1,106	Fund commitments, direct investments
Florida	Florida Growth Fund	2009	\$601.1m	Private equity, growth equity, venture capital, credit	Y	Y	1,106	Fund commitments, co-investments
Illinois	Illinois Growth and Innovation Fund	2015 (upsized in 2018)	\$725m committed	Venture capital, growth/buyouts, private credit	Y	N (advisory)	886	Fund commitments
Indiana	Indiana Future Fund, iNext	2003, 2009	\$131m	Venture capital	N	Y	380	Fund commitments, direct investments
Indiana	Next Level Fund	2017	\$250m committed	Private equity, growth equity, venture capital, credit	Y	Y	380	Fund commitments, co-investments
Michigan	Invest Michigan! (Growth Capital, Opportunities, Mezzanine Funds)	2014	\$300m committed	Growth equity, venture capital, mezzanine (SBIC)	Y	N/A	537	Co-investments (80%) and venture capital fund investments (20%)
Nevada	Silver State Opportunities Fund	2012	\$50m committed	Private equity	Y	N	178	Fund commitments, co-investments

Source: Callan survey of in-state programs;

Note: Prudent Investor Rule assumed to be followed even if not explicitly stated if third-party fiduciary manager hired and given discretion

# In-State Investment Program Research Project: Phase I

## Additional Detail for All Programs in Survey

State/Region	Program Name	Inception	Invested Capital	Asset Class(es)	Active?	Prudent Inv Rule?	State GDP (\$bn)	Implementation
New Mexico	Private Equity Investment Program	1993	\$360.0m	Venture capital, growth equity, buyout	Y	Y	105	Fund investments and co-investments
New Mexico	New Mexico Recovery Fund	2020	\$100m committed	Credit	Y	Y	105	Business loans
New York	In-State Private Equity Program	2002	\$601.4m	Private equity, credit	Y	Y	1,772	Fund commitments, co-investments
New York	New York Credit SBIC	N/A	\$200m committed	Credit	Y	Y	1,772	Fund commitment
North Carolina	NC Innovation Funds	2013	\$232.3m	Venture capital, growth equity, buyout, mezzanine	Y	Y	592	Fund investments and co-investments
Ohio	Ohio Capital Fund	2006	\$341.3m	Venture capital, growth equity	Y	Y	695	Co-investments and fund investments
Oregon	Oregon Investment Fund	2004	\$195.7m	Venture capital, growth equity, buyout	N	Y	254	Fund investments and co-investments
Texas	Texas Growth Fund	1988	\$575m committed	Venture capital, buyout	N	N/A	1,887	Fund investments and co-investments
Texas	Emerging Technology Fund	2005	\$500m committed	Venture capital	N	N/A	1,887	Direct and co-investments
Wisconsin	Wisconsin Venture Capital Portfolio	1999	\$345m committed across multiple tranches (1999-2014)	Venture capital	Y	Y	349	Fund investments and co-investments
Wisconsin	Wisconsin Private Debt Portfolio	1960s	N/A	Private debt (small business loans)	Y	Y	349	Direct and co-investments with local banks

Source: Callan survey of in-state programs;

Note: Prudent Investor Rule assumed to be followed even if not explicitly stated if third-party fiduciary manager hired and given discretion

## Agenda Item IV.A.

**TO:** State Investment Board

**FROM:** Dave Hunter

**DATE:** November 13, 2020

**SUBJECT:** Board Governance Education and Best Practices

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Since 2015, the SIB has invited leading experts in the fields of board governance and investment education to present at our July board meetings. Due to the COVID-19 pandemic, however, RIO did not advance a governance retreat this past July. Given the continuing importance of strong board governance, [the SIB engaged Amy McDuffee, CEO and Founder of Mosaic Governance Advisors, to provide important continuing education including a review of best practices and current trends in public fund governance for in-state investment programs.](#) Ms. Amy McDuffee last presented to the SIB in July of 2019.

*Amy McDuffee founded Mosaic Governance Advisors to provide independent, action-oriented governance consulting to the public fund community. She specializes in strategic planning, policy development, board self-assessments, executive and consultant evaluations, benchmarking reviews, program assessments, trustee education and other related matters. Over her 20-year career, she has worked with over 40 public funds in 20 states, including public retirement systems, state investment boards, and state treasuries. She also works with non-profit entities that provide health care and other post-employment benefits to state and local workers.*

*Amy's unique perspective on governance best practices comes from her experience in both the public and private sectors. Before founding Mosaic, Amy was a lead governance consultant within the Fiduciary Services Practice of Aon Hewitt Investment Consulting (AHIC) where she served its largest public fund clients. Prior to becoming affiliated with AHIC's predecessor firm in 2009, Amy held senior positions with a global asset management firm and a statewide public retirement system. Amy also served as managing director at Great-West Life & Annuity Insurance Company, now Great-West Financial. In that capacity, she was accountable to a board of directors for building and growing an innovative subsidiary company that provided behavioral finance driven investment consulting, advisory, education, and investment management services to the company's defined contribution retirement plan sponsors and participants. Launching her career at Mercer, Amy was a key member of the National Governance and Policy Practice. She was responsible for research, analyses, strategic planning and policy development for a broad range of public fund clients.*

*Amy is a graduate of the University of Wisconsin and holds the Certified Employee Benefit Specialist designation from the Wharton School of the University of Pennsylvania and the International Foundation of Employee Benefit Plans (IFEBP). She also earned a Certificate of Achievement in Public Plan Policy. Amy serves on the Public Employee Committee of the IFEBP Board of Directors and is an advisor to the Government Finance Officers Association (GFOA) Committee On Retirement and Benefits Administration (CORBA). She is the former president of the Colorado Chapter of Certified Employee Benefit Specialists and a frequent speaker on board governance matters. Her speaking events at national industry conferences have included the National Association of State Retirement Administrators, the National Council on Teacher Retirement, the Public Pension Financial Forum, and the Association of Public Pension Fund Auditors.*



# Effective Governance in Decision-Making

An Education Presentation to the North  
Dakota State Investment Board

November 20, 2020

# Topics for Discussion



Recap of Governance Basics



Good Governance Matters



Constructing Prudent Due Diligence When Considering an In-State Investment Program



Open Discussion and Questions





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# Recap of Governance Basics



# A Solid Governance Structure Effectively Addresses Authority, Responsibility, and Accountability

## Parties to Public Funds

- The Governor
- The Legislature
- The Boards
- The Executive Director/CIO and Staff
- Beneficiaries

## Governance Documentation

- Applicable laws and rules
- Bylaws, charters, policies, records of Board actions





“Fiduciary” ≠ a commonly known word.

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- “A fiduciary is a person or organization that acts on behalf of another person or persons, putting their clients' interest ahead of their own, with a duty to preserve good faith and trust. Being a fiduciary thus requires being bound both legally and ethically to act in the other's best interests.”

-Investopedia.com



# Recap of Key Fiduciary Duties

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- Based on the primary duties of loyalty, prudence, and care.
- The duty required in fiduciary relationships exceeds what is acceptable in many other business relationships because a fiduciary is in an enhanced position of trust.
- Qualified retirement plans, like TRFF and PERS, are also subject to the exclusive benefit rule.





# Discussion #1

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How well do you think others throughout the State and within your community understand the SIB's role as a fiduciary and what it requires?

How important is it that they do?



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# Good Governance Matters





# Good Governance is an Imperative

Rotman International Journal of Pension Management | Volume 1 • Issue 1 | Fall 2008

## The Pension Governance Deficit: Still With Us

Keith Ambachtsheer, Ronald Capelle, and Hubert Lum

Keith Ambachtsheer is Director of the Rotman International Centre for Pension Management, and Adjunct Professor of Finance at the Rotman School of Management, University of Toronto. Dr. Ronald Capelle is President of Capelle Associates, Toronto. Hubert Lum was Director of Research at CEM Benchmarking in Toronto at the time this study was conducted.

A 1997 investigation into the quality of pension fund governance uncovered a wide-spread board competency problem. This follow-on study analyzes the findings of a new survey on pension fund governance, to which an international group of 88 senior pension fund executives responded. Survey responses indicate that the board competency problem has not disappeared. As was the case in 1997, we found a positive correlation between governance quality and fund performance. The new results also suggest that selection processes for members of the board of governors continue to often be haphazard, self-evaluation of board effectiveness continues to be the exception rather than the rule. Weak oversight functions continue to lead to difficulties in sorting out the competing financial interests of differing stakeholder groups, and result in organization dysfunction. Examples are lack of delegation clarity between board and management responsibilities, board micro-management, and non-competitive compensation policies in pension funds. We recommend a number of specific actions to address the governance challenges that continue to face pension funds. We also recommend that regulators require pension funds to regularly report on the actions they are taking to strengthen their governance processes.

### Spotlight on Pension Governance

The well-publicized misadventures of major corporations like Adelphia, Abell, Enron, HealthSouth, Parmalat, Qwest, Tyco, and WorldCom have triggered important new empirical and more conceptual research efforts in the field of corporate governance<sup>1</sup>. To date, pension fund governance has not yet garnered the same kind of research attention<sup>2</sup>. In fact, we are aware of very few published efforts with such an empirical dimension. For example:

1. Anthropologists O'Bar and Conley caused a stir with their 1992 book *Form and Polly: The Wealth & Power of Institutional Investing*. After observing behavior at nine major pension funds in the United States over a two year period, they concluded that the aim of pension fund governance appeared to be focused more on responsibility deflection and blame management, rather than good governance and creating value for fund stakeholders.
2. Ambachtsheer, Boice, Ezra, and McLaughlin designed a survey called, *Excellence in Pension Fund Management: What is It?* during a symposium held in December 2004. Respondents were asked to estimate the excellence shortfall in their organizations, which resulted in a median response of 66 basis points by the fifty senior pension fund executives who participated in the survey. When asked to identify the sources of the excellence shortfall, respondents most frequently cited poor decision-making processes, inadequate resources and a lack of focus or clarity in mission.
3. Ambachtsheer, Capelle, and Scheibhut conducted a precursor study in 1997 (noted above) to the one detailed in this article. They found a positive correlation between pension fund governance quality and organizational performance, and identified a number of specific fund oversight and management factors that are important performance drivers. The researchers also uncovered governance difficulties similar to those documented in this article.

14 | Volume 1 • Issue 1 • Fall 2008 • 10.21301/ijpm.1.1.14

By Ambachtsheer, Capelle, and Lum. Published Fall 2008, *Rotman International Journal of Pension Management*.



## Governance Matters: Improving Pension Plan Board Effectiveness

28 | benefits magazine | january 2018

By Chris Merker, PhD. Published January 2018 in *Benefits Magazine*.



# Key Factors in Good Governance

Selection of governing board members with relevant skills and knowledge

Development of a board self-improvement culture

Clear understanding of the board's mission and its investment beliefs

Sufficient size to allow cost effective management of assets

Competitive staff compensation to permit acquisition of internal expertise

Clarity of board and staff roles about delegation of management responsibilities

Insulation from conflicting political or third-party agendas

\*Johnson, Keith L. and Frank Jan de Graf., "Modernizing Pension Fund Legal Standards for the 21st Century," Network for Sustainable Financial Markets: Consultation Paper No. 2, February 2009.

# For Fiduciaries, Good = Process

It is essential for fiduciaries to have a process that is defensible, repeatable, and documented and that provides evidence of the diligence undertaken in fulfilling their role.

The process does not guarantee a specific outcome.

Used consistently and correctly, it increases the likelihood of achieving objectives set by fiduciaries on behalf of beneficiaries.

# Contemporary Issues are Putting Pressure on Public Fund Governance

- A progressively widened scope of issues has developed.
- Public funds have matured, and assets have meaningfully increased.
- Financial markets and products have grown in complexity.
- Markets and investors are increasingly interconnected and interdependent.
- External stakeholders have become more prominent in boardrooms.
- As an asset manager within a “government wrapper,” the SIB is not alone in experiencing these issues.

# Examples of Public Fund Board Responses

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- Periodically refreshing investment philosophy and/or investment beliefs so that they remain fit for purpose.
- Adopting a consensus set of board values and holding all trustees accountable to them.
- Setting consensus expectations for due diligence by addressing key governance risks.
- Attaining a consensus future vision that defines long-term success and using it as a driver of strategy.
- Revisiting how the fund's story is being shared through strategic branding and communications.
- Proactively establishing a consensus definition of stakeholders and engaging with them.

# SIB's Stated Governance Style

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Outward vision rather than an internal preoccupation.

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Encouragement of diversity in viewpoints.

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Strategic leadership more than administrative detail.

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Clear distinction of board and executive director roles.

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Collective rather than individual decisions.

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Future rather than past or present.

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Proactivity rather than reactivity.

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## Discussion #2

In your opinion, what do you think is the best way for the SIB to respond to contemporary pressures such as the increasing influence of external stakeholders, and why?

How does your stated Governance Style support the consensus preferred response?



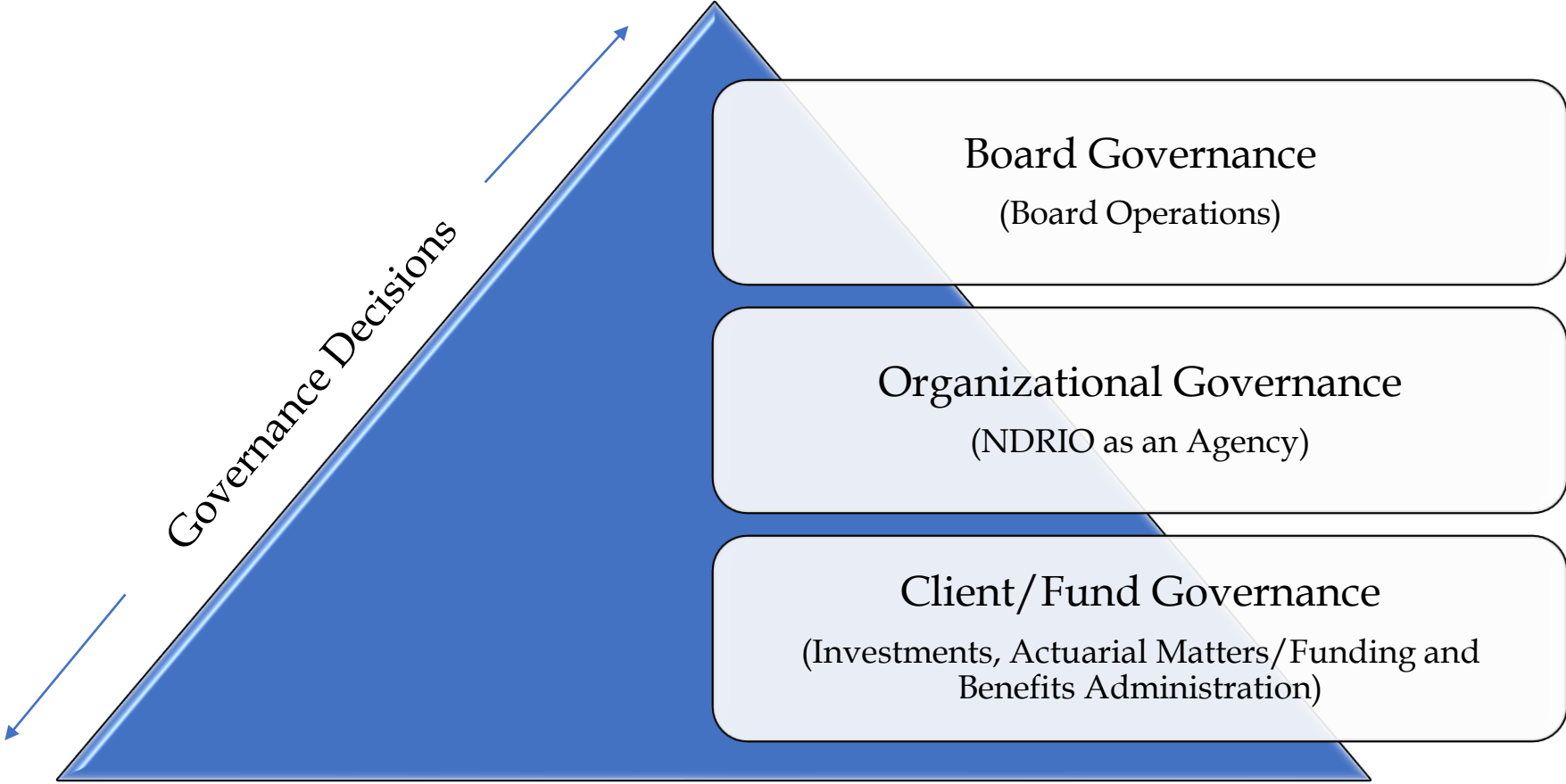
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# Constructing Prudent Due Diligence When Considering an In- State Investment Program





# Span of Governance Decision-Making



# Span of Governance Risks Inherent to an In-State Investing Program

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Examples of governance risks, among others.

- Strategic Risk
- Accountability Risk
- Ethical Conduct Risk
- Implementation/Operational Risk
- Oversight Risk
- Reputational Risk
- Transparency Risk

# Strategic Risk: Examples of Questions to Consider

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- What is the impetus for the program? Is it based on a solidly outlined investment thesis that satisfies fiduciary duties?
- How does it fit with the consensus risk appetite of the SIB?
- What is the SIB's future vision for the program?
- 10 years from now, what signals, both quantitative and qualitative, will convey to the SIB that the program has been successful?
- What have been the experiences, lessons learned, and outcomes of public fund peers that have undertaken similar in-state investment programs?

## Accountability Risk: Examples of Questions to Consider

- Is the role and authority of the Board relative to an in-state investment program, and where it starts and ends, clear?
- To whom is the SIB accountable for results?
- What is the SIB's consensus definition of stakeholders?
- How much stakeholder input constitutes “meaningful stakeholder” input and on what topics (i.e., allocation of capital, distribution of earnings)?

# Ethical Conduct Risk: Examples of Questions to Consider

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- What governance structure is appropriate for the program, in terms of SIB oversight, recommendations, and approvals?
- What are the expected ethics framework and protocols related to the program for the members of the SIB, for the RIO staff, and others that are fiduciaries?
- What governance policies need revisiting, adjustment, or enhancement to accommodate such a program?
- What new compliance procedures might be necessary?

# Implementation Risk: Examples of Questions to Consider

- What is the governance-level work to be done by the SIB? How does it want to organize itself to accomplish it?
- What authority should be delegated?
- What beliefs or values will be important at the SIB-level for implementation?
- What level of investment due diligence is most appropriate?
- What will the cost be to operate the program, including any performance fees? How does it compare to the expected benefits?
- Does the RIO have the right type and amount of staff to successfully support all aspects of the program? If not, what resources are needed?

## Reputational Risk: Examples of Questions to Consider

- What type of new partnerships or relationships should the SIB consider in order to execute the program? What existing partnerships need strengthening?
- How will interests be cost-effectively aligned?
  - With an external asset manager(s)?
  - With the in-state trade associations like the Economic Development Association?

# Oversight Risk: Key Questions to Consider

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- On what topics, how, and with what frequency will the SIB expect staff to provide updates on the program?
- What talking points will be made available for Trustees to use in speaking outside of the boardroom with constituent groups and stakeholders?
- Are there to be parameters on what can/cannot be said or shared?





# Transparency Risk: Examples of Questions to Consider

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- How will strategic communications be planned/ deployed to support the program?
- What will be reported to the public in terms of investments made, as well as those considered but not made? How, with what frequency, and by whom?
- How will unsuccessful proposals from interested parties be communicated and by whom?





## Discussion #3

- What are the SIB's early views on these various governance risks surrounding the program?
- To what degree should they be addressed before proceeding?
- What is the consensus direction to Staff?

# Key Takeaways

- External pressures will continue to impact public funds with ever widening groups seeking stakeholder status.
- Stakeholder input matters, but it must be put into appropriate context.
- Constructing and documenting a comprehensive due diligence process across the full span of governance decisions is critical for fiduciaries:
  - to mitigate risk, and
  - as a matter of good governance.





**MOSAIC**  
Governance Advisors

# Questions / Open Discussion

[www.MosaicGovernance.com](http://www.MosaicGovernance.com)

**RETIREMENT AND INVESTMENT OFFICE**  
**Internal Audit**  
**2020-2021 1<sup>st</sup> Quarter Audit Activities Report**  
**July 1, 2020 – September 30, 2020**

The audit objective of Internal Audit is twofold: first, to provide comprehensive, practical audit coverage of the Retirement and Investment Office (RIO) programs; second, to assist RIO management and the State Investment Board (SIB) by conducting special reviews or audits.

Audit coverage is based on the July 1, 2020 through June 30, 2021 work plan approved by the SIB Audit Committee. The audit activities undertaken are consistent with the Internal Audit charter and goals, and the goals of RIO. To the extent possible, our audits are being carried out in accordance with the International Standards for the Professional Practice of Internal Auditing. Audit effort is being directed to the needs of RIO and the concerns of management and the SIB Audit Committee.

**Investment and Agency Audit Activities**

• **Executive Limitation Audit**

Each year the SIB conducts a customer satisfaction survey. The purpose of this annual survey is to determine how well the SIB, through the staff of the RIO, is meeting the expectations of its clients. This survey is part of the SIB's ongoing effort to be more responsive to the needs of their clients and to continually improve the services that are provided. Internal Audit facilitated the survey in August and September 2020 and results were provided to the SIB at their October 23, 2020 meeting.

• **External Audit Support**

Internal Audit provided support to our external audit partners, CliftonLarsonAllen (CLA), during the GASB 68 Census Data Audits. Internal Audit notified twelve employers of an upcoming GASB 68 Census Data Audit in July 2020. CLA anticipated that GASB 68 Census Data Audit work would conclude in mid-October. In August 2020, Internal Audit sent out twenty-four employer confirmations as part of the financial statement audit. Since CLA was unable to come onsite, additional time was spent providing additional information on various items to complete the financial statement audit.

• **Cash Management and Rebalancing Audit**

A review of procedures for cash management and rebalancing of investment allocations was initiated. A sample of rebalancing of asset allocations, wire transactions, and bank fees will be selected and confirmed. Also, a sample of client requests will also be reviewed for timeliness and accuracy. Lastly, a review of staff access and authorization will be reviewed and confirmed.

This audit was started in March 2020; however, do to COVID-19 it was temporarily put on hold. Since then the SIB has hired Parametric to help with rebalancing the portfolio. Due to the changes, internal audit staff is working with fiscal management staff to understand the changes and re-scope the audit.

This audit is currently in progress.

• **Internal Control Assessment**

Internal audit is working on an internal control guideline assessment put forth by North Dakota Office of Management and Budget. This is an overall assessment on processes for state agencies.

This assessment is currently in progress.

**Retirement Program Audit Activities**

• **TFFR Employer Salary Reviews**

Internal Audit examines employer reporting to the Teachers' Fund for Retirement (TFFR) to determine whether retirement salaries and contributions reported for members of TFFR for accuracy with the definition of salary as it appears in the TFFR Employer Guide. Other reporting procedures reviewed during the audit process are calculation of service hours and eligibility for TFFR membership. A written report is issued after each review is completed to Retirement Services.

Status of TFFR Employer Audits as of September 30, 2020:

- One (1) employer audit was in progress.

• **Salary Verification Audit**

On an annual basis Internal Audit verifies retirement salaries and contributions reported to TFFR for the prior fiscal year for 65 randomly selected member accounts from 60 different employers. The sample has been selected, notifications for information have been requested and information has been returned by the employers. The reconciliation of salaries is scheduled to start during the third quarter.

This audit is currently in progress.

**Administrative Activities**

The Supervisor of Internal Audit attended the monthly RIO staff meetings, monthly RIO manager's meetings, divisional meetings, three SIB meetings, and one TFFR meeting. The Internal Audit staff member attended the monthly RIO staff meetings, divisional meetings, two TFFR meetings, and PAS meetings.

**Professional Development/CE/General Education**

The Supervisor of Internal Audit participated in training with the rest of the management team of RIO on strength training and how to work together. Both IA staff attended training on Fiduciary responsibility and open records.



State Investment Board  
Teachers' Fund for Retirement  
North Dakota Retirement and Investment Office  
Bismarck, North Dakota

We have audited the financial statements of the North Dakota Retirement and Investment Office (RIO) as of and for the year ended June 30, 2020, and have issued our report thereon dated November 9, 2020. We have previously communicated to you information about our responsibilities under auditing standards generally accepted in the United States of America, as well as certain information related to the planned scope and timing of our audit. Professional standards also require that we communicate to you the following information related to our audit.

### **Significant audit findings**

#### ***Qualitative aspects of accounting practices***

##### *Accounting policies*

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by RIO are described in Note 1 to the financial statements.

No new accounting policies were adopted and the application of existing policies was not changed during fiscal year 2020.

We noted no transactions entered into by RIO during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

##### *Accounting estimates*

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. There were significant estimates in the valuation of alternative investments and the calculation of the actuarial information included in the footnotes and required supplementary information.

The valuation of alternative investments, including private equity and real asset investments, are a management estimate which is primarily based upon net asset values reported by the investment managers and comprise 16% of the total investment portfolio. The values for these investments are reported based upon the most recent financial data available and are adjusted for cash flows through June 30, 2020. Our audit procedures validated this approach through the use of confirmations sent directly to a sample of investment managers and the review of the most recent audited financial statements for these sampled funds. Furthermore, we reviewed management's estimate and found it to be reasonable.

The actuarially calculated information was based on the assumptions and methods adopted by the Board, including an expected investment rate of return of 7.25% per annum compounded annually. The valuation takes into account all of the promised benefits required by the Retirement Code to which members are entitled as of July 1, 2020. Our audit procedures included reviewing the actuarial valuation and related assumptions used therein and we believe the estimate to be reasonable.

*Financial statement disclosures*

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. There were no particularly sensitive financial statement disclosures.

The financial statement disclosures are neutral, consistent, and clear.

***Difficulties encountered in performing the audit***

We encountered no significant difficulties in dealing with management in performing and completing our audit.

***Uncorrected misstatements***

Professional standards require us to accumulate all misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management did not identify and we did not notify them of any uncorrected financial statement misstatements.

***Corrected misstatements***

Management did not identify and we did not notify them of any financial statement misstatements detected as a result of audit procedures.

***Disagreements with management***

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditors' report. No such disagreements arose during our audit.

***Management representations***

We have requested certain representations from management that are included in the attached management representation letter dated November 9, 2020.

***Management consultations with other independent accountants***

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to RIO's financial statements or a determination of the type of auditors' opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.



***Significant issues discussed with management prior to engagement***

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to engagement as RIO's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our engagement.

**Other information in documents containing audited financial statements**

With respect to the required supplementary information (RSI) accompanying the financial statements, we made certain inquiries of management about the methods of preparing the RSI, including whether the RSI has been measured and presented in accordance with prescribed guidelines, whether the methods of measurement and preparation have been changed from the prior period and the reasons for any such changes, and whether there were any significant assumptions or interpretations underlying the measurement or presentation of the RSI. We compared the RSI for consistency with management's responses to the foregoing inquiries, the basic financial statements, and other knowledge obtained during the audit of the basic financial statements. Because these limited procedures do not provide sufficient evidence, we did not express an opinion or provide any assurance on the RSI.

With respect to the schedules of administrative expenses, consultant expenses, investment expenses, and appropriations – budget basis – fiduciary funds (collectively, the supplementary information) accompanying the financial statements, on which we were engaged to report in relation to the financial statements as a whole, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period or the reasons for such changes, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves. We have issued our report thereon dated November 9, 2020.

Other information is being included in documents containing the audited financial statements and the auditors' report thereon. Our responsibility for such other information does not extend beyond the financial information identified in our auditors' report. We have no responsibility for determining whether such other information is properly stated and do not have an obligation to perform any procedures to corroborate other information contained in such documents. As required by professional standards, we read the introductory, investment, actuarial and statistical sections of the comprehensive annual financial report (the other information) in order to identify material inconsistencies between the audited financial statements and the other information. We did not identify any material inconsistencies between the other information and the audited financial statements.

Our auditors' opinion, the audited financial statements, and the notes to financial statements should only be used in their entirety. Inclusion of the audited financial statements in a document you prepare, such as an annual report, should be done only with our prior approval and review of the document.

\* \* \*

This communication is intended solely for the information and use of the State Investment Board, the Board of the Teachers' Fund for Retirement and management of RIO and is not intended to be, and should not be, used by anyone other than these specified parties.

*CliftonLarsonAllen LLP*

**CliftonLarsonAllen LLP**

Baltimore, Maryland  
November 9, 2020

November 9

CliftonLarsonAllen LLP  
1966 Greenspring Drive, Suite 300  
Timonium, MD 21093

This representation letter is provided in connection with your audit of the financial statements of North Dakota Retirement and Investment Office (RIO), which comprise the fiduciary net position of the entity as of June 30, 2020, and the related changes in fiduciary net position for the year then ended, and the related notes to the financial statements, for the purpose of expressing opinions on whether the financial statements are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP).

Certain representations in this letter are described as being limited to matters that are material. Items are considered material, regardless of size, if they involve an omission or misstatement of accounting information that, in light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would be changed or influenced by the omission or misstatement.

We confirm, to the best of our knowledge and belief, as of November 9, 2020, the following representations made to you during your audit.

#### **Financial Statements**

1. We have fulfilled our responsibilities, as set out in the terms of the Contract between the State of North Dakota and CliftonLarsonAllen LLP dated March 7, 2018, for the preparation and fair presentation of the financial statements in accordance with U.S. GAAP. The financial statements include all properly classified funds and other financial information of the primary government and all component units required by generally accepted accounting principles to be included in the financial reporting entity.
2. We acknowledge and have fulfilled our responsibility for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.
3. We acknowledge our responsibility for the design, implementation, and maintenance of internal control to prevent and detect fraud.
4. All significant plan amendments, adopted during the period or subsequent to the date of the financial statements, and their effects on benefits and financial status have been disclosed in the financial statements.
5. The values of non-readily marketable investments represent good faith estimates of fair value. The methods and significant assumptions used result in a measure of fair value appropriate for financial measurement and disclosure purposes.

6. Significant estimates have been appropriately accounted for and disclosed in accordance with the requirements of U.S. GAAP. Significant estimates are estimates at the financial statement date that could change materially within the next year.
7. No events, including instances of noncompliance, have occurred subsequent to the financial statement date and through the date of this letter that would require adjustment to, or disclosure in, the financial statements.
8. We have not identified or been notified of any uncorrected financial statement misstatements.
9. The effects of all known actual or possible litigation, claims, and assessments have been accounted for and disclosed in accordance with U.S. GAAP.
10. Guarantees, whether written or oral, under which the entity is contingently liable, if any, have been properly recorded or disclosed in accordance with U.S. GAAP.
11. We have no plans or intentions that may materially affect the carrying value or classification of assets and liabilities.
12. With respect to actuarial assumptions and valuations:
  - a. Management agrees with the actuarial methods and assumptions used by the actuary for funding purposes and for determining the total pension liability and has no knowledge or belief that would make such methods or assumptions inappropriate in the circumstances. We did not give any, nor cause any, instructions to be given to RIO's actuary with respect to values or amounts derived, and we are not aware of any matters that have impacted the independence or objectivity of RIO's actuary.
  - b. There were no omissions from the participant data provided to the actuary for the purpose of determining the total pension liability and other actuarially determined amounts in the financial statements.
  - c. There have been no changes in the actuarial methods or assumptions used in calculating the amounts recorded or disclosed in the financial statements. There have been no changes in plan provisions between the actuarial valuation date and the date of this letter.
13. We believe the plan and trust established under the plan is qualified under the appropriate section of The North Dakota Century Code, and we intend to continue them as a qualified plan and trust.
14. We are not aware of any present legislative intentions to terminate the plan.

**Information Provided**

1. We have provided you with:
  - a. Access to all information, of which we are aware, that is relevant to the preparation and fair presentation of the financial statements such as records, documentation, and other matters.
  - b. Additional information that you have requested from us for the purpose of the audit.

- c. Unrestricted access to persons within the entity from whom you determined it necessary to obtain audit evidence.
  - d. Complete minutes of the meetings of the governing board and related committees, or summaries of actions of recent meetings for which minutes have not yet been prepared.
  - e. All actuarial reports prepared for the plan during the year.
2. All material transactions have been recorded in the accounting records and are reflected in the financial statements.
3. We have disclosed to you the results of our assessment of the risk that the financial statements may be materially misstated as a result of fraud.
4. We have no knowledge of any fraud or suspected fraud that affects the entity and involves:
  - a. Management;
  - b. Employees who have significant roles in internal control; or
  - c. Others when the fraud could have a material effect on the financial statements.
5. We have no knowledge of any allegations of fraud, or suspected fraud, affecting the entity's financial statements communicated by employees, former employees, regulators, or others.
6. We have no knowledge of any instances of noncompliance or suspected noncompliance with laws and regulations and provisions of contracts, or abuse whose effects should be considered when preparing financial statements.
7. We have disclosed to you all known actual or possible litigation, claims, and assessments whose effects should be considered when preparing the financial statements.
8. There are no other material liabilities or gain or loss contingencies that are required to be accrued or disclosed in accordance with U.S. GAAP.
9. We have disclosed to you the identity of the entity's related parties and all the related party relationships and transactions of which we are aware.
10. We are responsible for compliance with the laws, regulations, and provisions of contracts applicable to RIO, and we have identified and disclosed to you all laws, regulations, and provisions of contracts that we believe have a direct and material effect on the determination of financial statement amounts or other financial data significant to the audit objectives, including legal and contractual provisions for reporting specific activities in separate funds.
11. There are no violations or possible violations of budget ordinances, laws and regulations (including those pertaining to adopting, approving, and amending budgets), provisions of contracts, or any debt covenants whose effects should be considered for disclosure in the financial statements, or as a basis for recording a loss contingency, or for reporting on noncompliance.

12. The entity has complied with all aspects of contractual agreements that would have a material effect on the financial statements in the event of noncompliance.
13. We have followed all applicable laws and regulations in adopting, approving, and amending budgets.
14. Investments, derivative instruments, and land and other real estate held by RIO are properly valued.
15. Expenses have been appropriately classified the statement of changes in net position, and allocations have been made on a reasonable basis.
16. Revenues are appropriately classified in the statement of changes in net position.
17. Interfund, internal, and intra-entity activity and balances have been appropriately classified and reported.
18. Deposits and investment securities and derivative instruments are properly classified as to risk and are properly valued and disclosed.
19. Capital assets, including infrastructure and intangible assets, are properly capitalized, reported, and, if applicable, depreciated.
20. We acknowledge our responsibility for the required supplementary information (RSI). The RSI is measured and presented within prescribed guidelines and the methods of measurement and presentation have not changed from those used in the prior period. We have disclosed to you any significant assumptions and interpretations underlying the measurement and presentation of the RSI.
21. We acknowledge our responsibility for presenting the schedules (the supplementary information) in accordance with U.S. GAAP, and we believe the supplementary information, including its form and content, is fairly presented in accordance with U.S. GAAP. The methods of measurement and presentation of the supplementary information have not changed from those used in the prior period, and we have disclosed to you any significant assumptions or interpretations underlying the measurement and presentation of the supplementary information. If the supplementary information is not presented with the audited financial statements, we will make the audited financial statements readily available to the intended users of the supplementary information no later than the date we issue the supplementary information and the auditors' report thereon.

Signature:  Title: Executive Director/CIO

Signature:  Title: Chief Financial Officer

**NORTH DAKOTA RETIREMENT  
AND INVESTMENT OFFICE  
Bismarck, ND**

**FINANCIAL STATEMENTS  
June 30, 2020 and 2019**

North Dakota Retirement and Investment Office

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June 30, 2020 and 2019

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## INDEPENDENT AUDITORS' REPORT

Governor Doug Burgum  
The Legislative Assembly  
David Hunter, Executive Director/CIO  
State Investment Board  
Teachers' Fund for Retirement Board  
North Dakota Retirement and Investment Office

### **Report on the Financial Statements**

We have audited the accompanying financial statements of the North Dakota Retirement and Investment Office (RIO), a department of the State of North Dakota, which comprise the statement of net position – fiduciary funds as of June 30, 2020 and 2019, and the related statement of changes in net position – fiduciary funds for the years then ended, and the related notes to the financial statements, which collectively comprise RIO's basic financial statements, and the combining and individual fund financial statements as of and for the years ended June 30, 2020 and 2019, as listed in the table of contents.

### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditors' Responsibility***

Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

Governor Doug Burgum  
The Legislative Assembly  
David Hunter, Executive Director/CIO  
State Investment Board  
Teachers' Fund for Retirement Board  
North Dakota Retirement and Investment Office

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

### ***Opinions***

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of RIO as of June 30, 2020 and 2019, and the respective changes in financial position for the years then ended in accordance with accounting principles generally accepted in the United States of America. Also, in our opinion, the combining and individual fund financial statements referred to above present fairly, in all material respects, the financial position of each of the individual funds of RIO as of June 30, 2020 and 2019, and the results of the changes in financial position of such funds for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

### ***Emphasis of Matter***

As discussed in Note 1, the financial statements of RIO are intended to present the financial position and the changes in financial position of only that portion of the State of North Dakota that is attributable to the transactions of RIO. They do not purport to, and do not, present fairly the financial position of the State of North Dakota as of June 30, 2020 and 2019, and the changes in its financial position for the years then ended in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

### ***Other Matters***

#### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and the schedules of changes in NPL and related ratios - ND Teachers' Fund for Retirement and employer contributions - ND Teachers' Fund for Retirement, investment returns - ND Teachers' Fund for Retirement, employer's share of NPL and NOL – ND Public Employees Retirement System and employer contributions – ND Public Employees Retirement System and related notes, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### ***Other Information***

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise RIO's basic financial statements and the combining and individual fund financial statements. The schedules of administrative expenses, consultant expenses, investment expenses, and appropriations – budget basis – fiduciary funds, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

Governor Doug Burgum  
The Legislative Assembly  
David Hunter, Executive Director/CIO  
State Investment Board  
Teachers' Fund for Retirement Board  
North Dakota Retirement and Investment Office

These schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

**Other Reporting Required by *Government Auditing Standards***

In accordance with *Government Audit Standards*, we have also issued our report dated November 9, 2020, on our consideration of RIO's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of RIO's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering RIO's internal control over financial reporting.



**CliftonLarsonAllen LLP**

Baltimore, Maryland  
November 9, 2020



**INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS**

Governor Doug Burgum  
The Legislative Assembly  
David Hunter, Executive Director/CIO  
State Investment Board  
Teachers' Fund for Retirement Board  
North Dakota Retirement and Investment Office

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the basic financial statements of the North Dakota Retirement and Investment Office (RIO), a department of the State of North Dakota, which collectively comprise RIO's basic financial statements, and the combining and individual fund financial statements, as of and for the year ended June 30, 2020, and the related notes to the financial statements, and have issued our report thereon dated November 9, 2020.

**Internal Control over Financial Reporting**

Management of RIO is responsible for establishing and maintaining effective internal control over financial reporting. In planning and performing our audit, we considered RIO's internal control over financial reporting as a basis for designing our auditing procedures for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of RIO's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of RIO's internal control over financial reporting.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Governor Doug Burgum  
The Legislative Assembly  
David Hunter, Executive Director/CIO  
State Investment Board  
Teachers' Fund for Retirement Board  
North Dakota Retirement and Investment Office

### **Compliance and Other Matters**

As part of obtaining reasonable assurance about whether RIO's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

### **Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of RIO's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering RIO's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

A handwritten signature in black ink that reads "CliftonLarsonAllen LLP". The signature is written in a cursive, flowing style.

**CliftonLarsonAllen LLP**

Baltimore, Maryland  
November 9, 2020

# North Dakota Retirement and Investment Office

## Management's Discussion and Analysis

June 30, 2020 and 2019

---

Our discussion and analysis of the ND Retirement and Investment Office's (RIO) financial performance provides an overview of RIO's financial activities for the fiscal years ended June 30, 2020 and 2019. Please read it in conjunction with the basic financial statements, which follow this discussion.

RIO administers two fiduciary funds, a pension trust fund for the ND Teachers' Fund for Retirement (TFFR) and an investment trust fund for the ND State Investment Board (SIB) consisting of 26 investment clients in two investment pools and four individual investment accounts.

### **Financial Highlights**

Total net position increased from the previous fiscal year in the fiduciary funds by \$1.6 billion (11.2%) and \$885.4 million (6.4%) in FY2020 and FY2019, respectively. Approximately 53% of the FY2020 increase and 62% of the FY2019 increase is due to the growth of the Legacy Fund. The Legacy Fund was created by a constitutional amendment in 2010. The amendment provides that 30% of oil and gas gross production and oil extraction taxes on oil produced after June 30, 2011, be transferred to the Legacy Fund. Transfers into the Legacy Fund totaled \$596.6 million and \$692.6 million, and net investment income exceeded \$277 million and \$309 million in FY2020 and FY2019, respectively.

Total additions in the fiduciary funds for FY2020 increased by \$307.0 million (15.8%) and decreased by \$60.1 million (3.0%) in FY2019. Net investment income decreased in both years (by \$158.7 million and \$181.6 million respectively), due to weaker financial markets during those two years. There was an increase in new purchases of units in the investment program in both fiscal years due to strong oil and gas tax collections affecting the Legacy Fund (although the effects of the global pandemic began to reduce those collections in the last quarter of FY2020). The increase in FY2020 was also due to deposits into the Budget Stabilization Fund that brought that fund back to statutory limits. Total fiduciary fund purchases of units increased \$458.8 million (46.4%) and \$116.6 million (13.4%) in FY2020 and FY2019, respectively.

Deductions in the fiduciary funds decreased by \$448.4 million (42.3%) in FY2020 after increasing by \$511.2 million (93.3%) in FY2019. The majority of the decrease from FY2019 to FY2020 was in redemptions of units, which decreased by \$457.9 million (54.9%) due to the constitutionally mandated earnings transfer from the Legacy Fund to the General Fund in FY2019. The State Constitution requires that all earnings accrued after June 30, 2017, be transferred to the General Fund at the end of each biennium. A transfer of \$455.3 million was made in July, 2019, and accrued as of the end of FY2019.

Payments to TFFR members in the form of benefits and refunds increased by \$9.6 million (4.3%) and \$13.2 million (6.4%) in FY2020 and FY2019, respectively. These increases represented a rise in the total number of retirees drawing retirement benefits from the pension fund as well as an increase in the retirement salaries on which the benefits of new retirees are based.

As of June 30, 2020 and 2019, the TFFR pension plan had a Net Pension Liability (NPL) of \$1.53 billion and \$1.38 billion, and Plan Fiduciary Net Position as a percent of Total Pension Liability (TPL) of 63.4% and 65.5%, respectively.

### **Overview of the Financial Statements**

This report consists of four parts – management's discussion and analysis (this section), the basic financial statements, required supplementary information, and additional supplementary information that presents combining statements for the investment trust funds. The basic financial statements include fund financial statements that focus on individual parts of RIO's activities (fiduciary funds).

The financial statements also include notes that explain some of the information in the financial statements and provide more detailed data. The statements are followed by a section of required supplementary information that further explains and supports the information in the financial statements. In addition to these required elements, we have included additional supplementary information, including combining statements that provide details about our investment trust funds, each of which are added together and presented in single columns in the basic financial statements.

### **Fund Financial Statements**

The fund financial statements provide detailed information about RIO's activities. Funds are accounting devices that RIO uses to keep track of specific sources of funding and spending for particular purposes.

RIO uses fiduciary funds as RIO is the trustee, or fiduciary, for TFFR (a pension plan) and SIB (investment trust funds). RIO is responsible for ensuring that the assets reported in these funds are used for their intended purposes. All of RIO's fiduciary activities are reported in a statement of net position and a statement of changes in net position.

### **Financial Analysis**

RIO's fiduciary fund total assets as of June 30, 2020 and 2019, were \$16.4 billion and \$15.2 billion, respectively, and were comprised mainly of investments. Total assets increased by \$1.2 billion (7.9%) and \$1.3 billion (9.7%) from each prior year primarily due to on-going deposits to the Legacy Fund and Budget Stabilization Fund.

Total liabilities as of June 30, 2020 and 2019, were \$72.6 million and \$511.3 million. Over 90% of the liabilities (\$455.3 million) as of June 30, 2019, were the Legacy Fund's earnings that were due to be transferred to the General Fund at the end of the biennium. Current year-end liabilities were comprised mainly of the securities lending collateral payable.

RIO's fiduciary fund total net position was \$ 16.3 billion and \$14.7 billion at the close of fiscal years 2020 and 2019, respectively.

**North Dakota Retirement and Investment Office  
Net Position – Fiduciary Funds  
(In Millions)**

	<b>2020</b>	<b>2019</b>	<b>Total % Change</b>
<b>Assets</b>			
Investments	\$ 16,220.7	\$ 15,028.7	7.9%
Securities Lending Collateral	58.8	46.3	27.1%
Receivables	85.3	87.7	-2.7%
Cash & Other	21.4	20.5	4.1%
<b>Total Assets</b>	<b>16,386.2</b>	<b>15,183.2</b>	<b>7.9%</b>
<b>Deferred Outflows of Resources</b>			
Deferred outflows related to pensions	0.9	1.2	-23.7%
<b>Liabilities</b>			
Obligations under Securities Lending	58.8	46.3	27.1%
Accounts Payable & Accrued Expenses	13.8	465.0	-97.0%
<b>Total Liabilities</b>	<b>72.6</b>	<b>511.3</b>	<b>-85.8%</b>
<b>Deferred Inflows of Resources</b>			
Deferred inflows related to pensions	0.9	0.2	448.2%
<b>Total Net Position</b>	<b>\$ 16,313.6</b>	<b>\$ 14,672.9</b>	<b>11.2%</b>
	<b>2019</b>	<b>2018</b>	<b>Total % Change</b>
<b>Assets</b>			
Investments	\$ 15,028.7	\$ 13,696.7	9.7%
Securities Lending Collateral	46.3	48.1	-3.9%
Receivables	87.7	75.2	16.6%
Cash & Other	20.5	20.9	-1.6%
<b>Total Assets</b>	<b>15,183.2</b>	<b>13,840.9</b>	<b>9.7%</b>
<b>Deferred Outflows of Resources</b>			
Deferred outflows related to pensions	1.2	1.4	-12.9%
<b>Liabilities</b>			
Obligations under Securities Lending	46.3	48.1	-3.9%
Accounts Payable & Accrued Expenses	465.0	6.6	6990.3%
<b>Total Liabilities</b>	<b>511.3</b>	<b>54.7</b>	<b>834.8%</b>
<b>Deferred Inflows of Resources</b>			
Deferred inflows related to pensions	0.2	0.1	124.4%
<b>Total Net Position</b>	<b>\$ 14,672.9</b>	<b>\$ 13,787.5</b>	<b>6.4%</b>



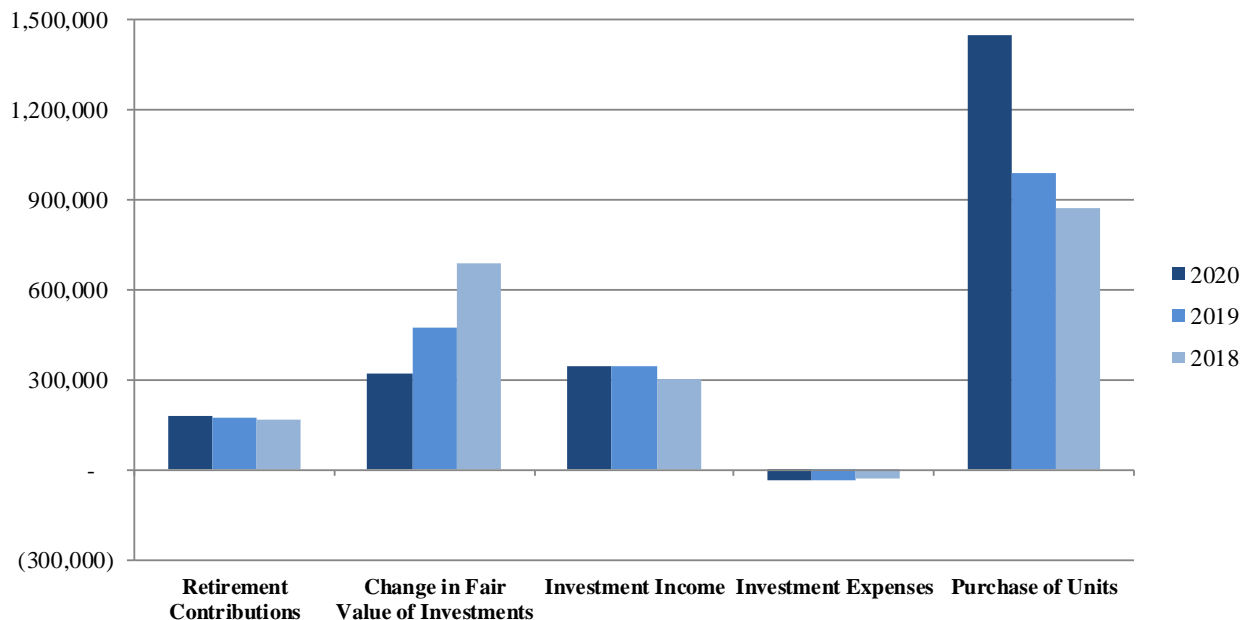
**North Dakota Retirement and Investment Office  
Changes in Net Position – Fiduciary Funds  
(In Millions)**

	<b>2020</b>	<b>2019</b>	<b>Total % Change</b>
<b>Additions</b>			
Contributions	\$ 181.1	\$ 173.9	4.1%
Net Investment Income	622.9	781.6	-20.3%
Net Securities Lending Income	0.9	1.2	-20.2%
Purchase of Units	1,446.6	987.8	46.4%
<b>Total Additions</b>	<b>2,251.5</b>	<b>1,944.5</b>	<b>15.8%</b>
<b>Deductions</b>			
Payments to TFFR members	230.8	221.2	4.3%
Administrative Expenses	3.9	4.0	-3.8%
Redemption of Units	376.1	833.9	-54.9%
<b>Total Deductions</b>	<b>610.8</b>	<b>1,059.2</b>	<b>-42.3%</b>
<b>Total Change in Net Position</b>	<b>\$ 1,640.7</b>	<b>\$ 885.4</b>	<b>85.3%</b>
	<b>2019</b>	<b>2018</b>	<b>Total % Change</b>
<b>Additions</b>			
Contributions	\$ 173.9	\$ 168.9	3.0%
Net Investment Income	781.6	963.2	-18.9%
Net Securities Lending Income	1.2	1.3	-7.3%
Purchase of Units	987.8	871.3	13.4%
<b>Total Additions</b>	<b>1,944.5</b>	<b>2,004.7</b>	<b>-3.0%</b>
<b>Deductions</b>			
Payments to TFFR members	221.2	208.0	6.4%
Administrative Expenses	4.0	3.8	6.1%
Redemption of Units	833.9	336.2	148.1%
<b>Total Deductions</b>	<b>1,059.2</b>	<b>548.0</b>	<b>93.3%</b>
<b>Total Change in Net Position</b>	<b>\$ 885.4</b>	<b>\$ 1,456.7</b>	<b>-39.2%</b>

**Statement of Changes in Net Position – Additions**

Contributions collected by the pension trust fund increased by \$7.2 million (4.1%) in FY2020 and \$5.0 million (3.0%) in FY2019 over the previous fiscal years due to both an increase in the number of active members contributing to the fund and an increase in the average salary of active members. Net investment income (including net securities lending income and net of investment expenses) decreased by \$158.9 million (20.3%) and \$181.7 million (18.9%) in FY2020 and FY2019, respectively. This was the result of weaker financial markets in both years compared to FY2018. Deposits of funds into the investment trust fund (purchase of units) continue to increase year-over-year, from \$871.3 million in FY2018 to \$1.4 billion in FY2020, mainly due to increased deposits to the Legacy Fund and Budget Stabilization Fund.

**Additions to Net Position  
(in thousands)**



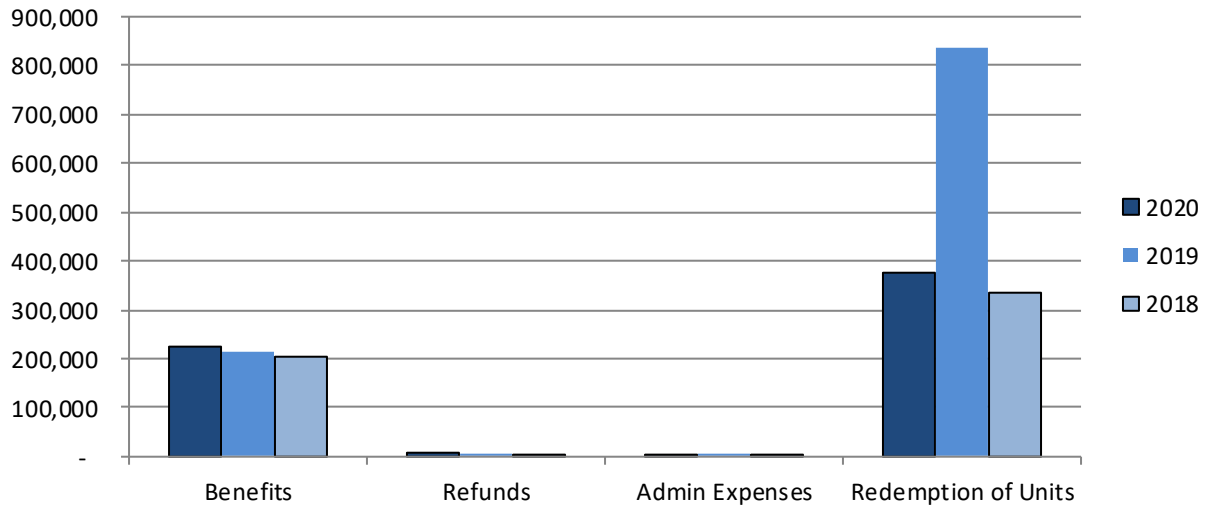
**Statement of Changes in Net Position – Deductions**

Benefits paid to TFFR plan participants, including partial lump-sum distributions, increased by \$9.0 million (4.2%) and \$13.2 million (6.4%) in FY2020 and FY2019, respectively. The increases are due to an increase in the total number of retirees in the plan as well as an increased retirement salary on which the benefits are based. Refunds increased by over \$589,000 (10.0%) and nearly \$339,000 (6.1%) in fiscal years 2020 and 2019, respectively.

Administrative expenses decreased in fiscal year 2020 by nearly \$154,000 after increasing by nearly \$233,000 in fiscal year 2019. Much of the decrease in FY2020 was related to the global pandemic that caused a halt in travel for staff and board member education and due diligence on-site visits, which were replaced with virtual on-line conferences and manager meetings. The increase in FY2019 was mainly due to an increase in IT contractual services, including the payment of the biennial retirement administration software maintenance fee as well as an increase in pension expense due to RIO’s participation in the NDPERS pension plan.

The redemption of units in the investment trust funds decreased by \$457.9 million in FY2020 after increasing by \$497.8 million in FY2019 due mainly to the first biennial earnings transfer from the Legacy Fund that occurred at the end of FY2019.

**Deductions from Net Position  
 (in thousands)**



**Conclusion**

For the fiscal year ended June 30, 2020, the pension investment pool and the TFFR pension plan generated net time weighted returns of over 3.4%, exceeding their respective policy benchmarks. The Legacy Fund and insurance investment pool achieved higher absolute returns of 4.2% and 5%, respectively, but trailed policy benchmarks this past year. Investment returns were below long-term expectations in fiscal 2020 largely due to the impact of the global pandemic in the first quarter. Investment performance in the first half of fiscal 2020 benefited from continuing favorable US income tax policy which bolstered revenues, margins and capital spending. Despite a very sharp and severe market decline in the first calendar quarter of 2020, the markets materially recovered in the second quarter to push returns into positive territory for the fiscal year ended June 30, 2020. Public equity returns were mixed as US equities earned over 8%, while international equities were flat and global equities were down over 7% within the pension pool. Fixed income results were strong, but mixed, as US investment grade debt earned over 9%, while non-investment grade debt earned less than 1% in FY20 within the pension pool. Real asset performance was also mixed with above benchmark returns for timber (up 6%) and infrastructure (up 4%), while real estate posted a 2.2% return, which trailed policy benchmarks within the pension pool last year. Private equity returns were disappointing within the pension pool earning slightly over 3% for the 1-year ended June 30, 2020, largely due to poor results in liquidating strategies, but trending favorably in recent years with our two long-term strategic partners.

For the fiscal year ended June 30, 2019, the pension investment pool (which includes the TFFR pension plan) and the Legacy Fund generated net time weighted investment returns of 5.5% and 5%, respectively, trailing their respective policy benchmarks. The insurance investment pool achieved a net time weighted return of 6.4% last year. Investment returns for global equities did not meet long-term expectations in fiscal 2019 due to the continued weakness in the international markets and significant return divergence between large and small companies, with larger companies in the United States returning over 10% last year (as referenced by the S&P 500 Index and Russell 1000 Index) while smaller US companies fell over 3.3% in fiscal 2019 (as referenced by the Russell 2000 Index). Overall investment performance was negatively impacted by escalating concerns over the global trade war between the United States and China which significantly heightened volatility. Federal Reserve Board actions in the fourth quarter of 2018, which included a 0.25% rise in the target Federal Funds Rate, also dampened investor sentiment. Equity returns varied widely with US equities in the pension investment pool earning over 8.3% in

## North Dakota Retirement and Investment Office

Management's Discussion and Analysis

June 30, 2020 and 2019

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fiscal 2019 whereas international equities fell by 0.50%. Fixed income results were strong, gaining 7.8% in FY19, while global equities only gained 4.2% last year. Real asset performance was mixed but largely in line with overall benchmarks for the pension investment pool, with real estate up 6%, infrastructure up 5.1%, and timber up 4.1% in the last year. Private equity returns improved within the pension investment pool and rose 8.6% for the 1-year ended June 30, 2019.

While cumulative returns in the post-credit crisis era remained fairly strong, albeit weakening in the past year primarily due to the impact of the global pandemic, investors today face numerous challenges that may limit the potential for future global growth rates to continue and possibly further amplify investment risk. First, one could argue that many asset classes and strategies no longer offer compelling valuations for investors particularly as the world continues to battle the immediate and potential long-term impact of the global pandemic on most sectors and industries. Second, the ever-growing debt burden from unprecedented monetary and fiscal policy intervention will likely serve to dampen future long-term economic growth potential in nearly all economies. Finally, the evolving uncertainty of global trade relations and policies between the US and China and the United Kingdom and Europe poses a challenge to certain asset classes and strategies to varying degrees. To meet this challenge, the State Investment Board will continue to research strategies and investment options that mitigate and diversify the sources of risk accepted to address funding issues in the challenging years ahead.

TFFR's funding objective is to meet long-term pension benefit obligations through contributions and investment income. To address TFFR's funding shortfall, the ND State Legislature took action in 2011 and approved legislation to increase contributions (4% member and 4% employer) and modify certain benefits for non-grandfathered members. Increased contribution rates will be in effect until TFFR reaches 100% funding on an actuarial basis. This comprehensive funding recovery plan, along with solid investment performance in the future, is expected to improve TFFR's funding level over the long term. However, the Board is continuing to closely assess plan risks and monitor funding progress.

TFFR's funding level decreased from 66.0% to 65.7% on an actuarial basis (and on a market basis from 65.5% to 63.4%) from July 1, 2019 to July 1, 2020. Once net investment losses over the past 5 years are recognized, the plan's funding level is expected to gradually improve over the long term, if all actuarial assumptions are met in the future, including the 7.25% investment return assumption.

Protecting the long term solvency of the pension plan is the TFFR Board's fiduciary responsibility. The Board will continue to proactively address TFFR funding issues so the plan will be financially strong and sustainable for past, present, and future ND educators.

### **Contacting RIO Financial Management**

This financial report is designed to provide our Boards, our membership, our clients and the general public with a general overview of RIO's finances and to demonstrate RIO's accountability for the money we receive. If you have any questions about this report or need additional information, contact the North Dakota Retirement and Investment Office, PO Box 7100, Bismarck, ND 58507-7100.

North Dakota Retirement and Investment Office  
Statement of Net Position – Fiduciary Funds  
June 30, 2020 and 2019

	Pension Trust		Investment Trust		Total	
	2020	2019	2020	2019	2020	2019
<b>Assets:</b>						
Investments, at fair value						
Global equities	\$ 1,500,306,819	1,495,354,621	\$ 6,047,922,687	\$ 5,758,237,240	\$ 7,548,229,506	\$ 7,253,591,861
Global fixed income	609,737,594	575,551,625	5,437,603,865	4,510,779,742	6,047,341,459	5,086,331,367
Global real assets	466,252,190	455,163,805	1,989,786,268	1,889,505,508	2,456,038,458	2,344,669,313
Cash equivalents	23,710,131	35,025,659	145,396,714	309,039,173	169,106,845	344,064,832
Total investments	<u>2,600,006,734</u>	<u>2,561,095,710</u>	<u>13,620,709,534</u>	<u>12,467,561,663</u>	<u>16,220,716,268</u>	<u>15,028,657,373</u>
Invested securities lending collateral	7,594,167	8,495,437	51,197,270	37,770,485	58,791,437	46,265,922
Receivables:						
Investment income	12,709,777	12,526,857	51,681,680	50,051,024	64,391,457	62,577,881
Contributions	20,919,360	25,070,538	-	-	20,919,360	25,070,538
Miscellaneous	5,683	6,394	24,662	26,379	30,345	32,773
Total receivables	<u>33,634,820</u>	<u>37,603,789</u>	<u>51,706,342</u>	<u>50,077,403</u>	<u>85,341,162</u>	<u>87,681,192</u>
Due from other state agency	-	-	-	-	-	-
Cash and cash equivalents	21,060,210	20,305,041	353,025	257,511	21,413,235	20,562,552
Equipment & Software (net of depr)	3,149	4,949	-	-	3,149	4,949
Total assets	<u>2,662,299,080</u>	<u>2,627,504,926</u>	<u>13,723,966,171</u>	<u>12,555,667,062</u>	<u>16,386,265,251</u>	<u>15,183,171,988</u>
Deferred outflows of resources						
Related to pensions	<u>549,008</u>	<u>709,618</u>	<u>352,915</u>	<u>472,668</u>	<u>901,923</u>	<u>1,182,286</u>
Liabilities:						
Accounts payable	165,186	178,293	261,446	253,814	426,632	432,107
Investment expenses payable	2,038,386	812,385	8,513,217	4,829,521	10,551,603	5,641,906
Securities lending collateral	7,594,167	8,495,437	51,197,270	37,770,485	58,791,437	46,265,922
Accrued expenses	1,973,137	2,445,348	843,730	1,193,588	2,816,867	3,638,936
Miscellaneous payable	-	-	29,597	32,115	29,597	32,115
Due to other state funds	-	-	-	455,263,216	-	455,263,216
Due to other state agencies	7,961	7,954	3,218	1,470	11,179	9,424
Total liabilities	<u>11,778,837</u>	<u>11,939,417</u>	<u>60,848,478</u>	<u>499,344,209</u>	<u>72,627,315</u>	<u>511,283,626</u>
Deferred inflows of resources						
Related to pensions	<u>536,950</u>	<u>104,071</u>	<u>403,422</u>	<u>67,473</u>	<u>940,372</u>	<u>171,544</u>
Fiduciary net position:						
Restricted for pensions	2,650,532,301	2,616,171,056	-	-	2,650,532,301	2,616,171,056
Held in trust for external investment pool participants:						
Pension pool	-	-	3,433,370,472	3,373,539,596	3,433,370,472	3,373,539,596
Insurance pool	-	-	2,987,425,838	2,318,620,683	2,987,425,838	2,318,620,683
Held in trust for individual investment accounts	-	-	7,242,270,876	6,364,567,769	7,242,270,876	6,364,567,769
Total fiduciary net position	<u>\$ 2,650,532,301</u>	<u>\$ 2,616,171,056</u>	<u>\$ 13,663,067,186</u>	<u>\$ 12,056,728,048</u>	<u>\$ 16,313,599,487</u>	<u>\$ 14,672,899,104</u>
Each participant unit is valued at \$1.00						
Participant units outstanding			<u>13,663,067,186</u>	<u>12,056,728,048</u>		

This information is an integral part of the accompanying financial statements.

North Dakota Retirement and Investment Office  
Statement of Changes in Net Position – Fiduciary Funds  
Years Ending June 30, 2020 and 2019

	Pension Trust		Investment Trust		Total	
	2020	2019	2020	2019	2020	2019
Additions:						
Contributions:						
Employer contributions	\$ 93,032,453	\$ 89,444,881	\$ -	\$ -	\$ 93,032,453	\$ 89,444,881
Member contributions	85,735,134	82,429,594	-	-	85,735,134	82,429,594
Purchased service credit	2,175,497	1,916,787	-	-	2,175,497	1,916,787
Interest, penalties and other	158,683	158,713	-	-	158,683	158,713
Total contributions	<u>181,101,767</u>	<u>173,949,975</u>	<u>-</u>	<u>-</u>	<u>181,101,767</u>	<u>173,949,975</u>
Investment income:						
Net change in fair value of investments						
	37,928,921	84,701,380	278,642,657	388,737,303	316,571,578	473,438,683
Interest, dividends and other income	54,664,894	56,434,954	286,561,726	284,507,483	341,226,620	340,942,437
	<u>92,593,815</u>	<u>141,136,334</u>	<u>565,204,383</u>	<u>673,244,786</u>	<u>657,798,198</u>	<u>814,381,120</u>
Less investment expenses	6,523,407	6,272,801	28,437,549	26,513,804	34,960,956	32,786,605
Net investment income	<u>86,070,408</u>	<u>134,863,533</u>	<u>536,766,834</u>	<u>646,730,982</u>	<u>622,837,242</u>	<u>781,594,515</u>
Securities lending activity:						
Securities lending income	169,620	224,713	988,246	1,226,258	1,157,866	1,450,971
Less securities lending expenses	(33,911)	(44,927)	(197,478)	(245,058)	(231,389)	(289,985)
Net securities lending income	<u>135,709</u>	<u>179,786</u>	<u>790,768</u>	<u>981,200</u>	<u>926,477</u>	<u>1,160,986</u>
Purchase of units (\$1 per unit)	-	-	1,446,622,465	987,842,755	1,446,622,465	987,842,755
Total additions	<u>267,307,884</u>	<u>308,993,294</u>	<u>1,984,180,067</u>	<u>1,635,554,937</u>	<u>2,251,487,951</u>	<u>1,944,548,231</u>
Deductions:						
Benefits paid to participants	223,936,233	214,091,045	-	-	223,936,233	214,091,045
Partial lump-sum distributions	425,297	1,237,129	-	-	425,297	1,237,129
Refunds	6,489,704	5,900,392	-	-	6,489,704	5,900,392
Administrative expenses	2,095,405	2,251,083	1,781,619	1,779,837	3,877,024	4,030,920
Redemption of units (\$1 per unit)	-	-	376,059,310	833,929,970	376,059,310	833,929,970
Total deductions	<u>232,946,639</u>	<u>223,479,649</u>	<u>377,840,929</u>	<u>835,709,807</u>	<u>610,787,568</u>	<u>1,059,189,456</u>
Change in fiduciary net position	34,361,245	85,513,645	1,606,339,138	799,845,130	1,640,700,383	885,358,775
Fiduciary net position:						
Beginning of year	<u>2,616,171,056</u>	<u>\$ 2,530,657,411</u>	<u>\$ 12,056,728,048</u>	<u>\$ 11,256,882,918</u>	<u>\$ 14,672,899,104</u>	<u>\$ 13,787,540,329</u>
End of Year	<u>\$ 2,650,532,301</u>	<u>\$ 2,616,171,056</u>	<u>\$ 13,663,067,186</u>	<u>\$ 12,056,728,048</u>	<u>\$ 16,313,599,487</u>	<u>\$ 14,672,899,104</u>

This information is an integral part of the accompanying financial statements.

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**Note 1 - Summary of Significant Accounting Policies**

RIO is an agency of the State of North Dakota operating through the legislative authority of North Dakota Century Code (NDCC) Chapter 54-52.5 and is considered part of the State of North Dakota financial reporting entity and included in the State of North Dakota's Comprehensive Annual Financial Report.

For financial reporting purposes, RIO has included all funds, and has considered all potential component units for which RIO is financially accountable, and other organizations for which the nature and significance of their relationship with RIO are such that exclusion would cause RIO's financial statements to be misleading or incomplete. The Governmental Accounting Standards Board has set forth criteria to be considered in determining financial accountability. These criteria include appointing a voting majority of an organization's governing body and (1) the ability of RIO to impose its will on that organization or (2) the potential for the organization to provide specific financial benefits to, or impose specific financial burdens on RIO.

Based upon these criteria, there are no component units to be included within RIO as a reporting entity and RIO is part of the State of North Dakota as a reporting entity.

**Fund Financial Statement**

All activities of RIO are accounted for within the pension and investment trust funds and are shown, by fund, in the fiduciary fund financial statements.

**Measurement Focus, Basis of Accounting and Financial Statement Presentation**

The financial statements of RIO are reported using the economic resources measurement focus and the accrual basis of accounting.

This measurement focus includes all assets and liabilities associated with the operations of the fiduciary funds on the statements of net position. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows.

**Fiduciary Fund**

A pension trust fund and investment trust funds have been established to account for the assets held by RIO in a trustee capacity for TFFR and as an agent for other governmental units or funds which have placed certain investment assets under the management of the SIB. The SIB manages two external investment pools and four individual investment accounts. The two external investment pools consist of a pension pool and insurance pool. The SIB manages the investments of the North Dakota Public Employees Retirement System, Bismarck City Employees and Police, City of Grand Forks Employees and City of Grand Forks Park District Employees pension plans in the pension pool. The investments of Workforce Safety & Insurance, State Fire and Tornado, State Bonding, Petroleum Tank Release Compensation Fund, Insurance Regulatory Trust, North Dakota Association of Counties Fund, Risk Management, Risk Management Workers Comp, PERS Group Insurance, City of Bismarck Deferred Sick Leave, City of Fargo FargoDome Permanent Fund, Cultural Endowment Fund, ND State Board of Medicine, Lewis and Clark Interpretive Center Endowment Fund, Attorney General Settlement Fund, Veterans' Cemetery Trust Fund and Budget Stabilization Fund are managed in the insurance pool. The Legacy Fund, Job Service of North Dakota, Tobacco Prevention and Control Fund, and PERS Retiree Health investments are managed by the SIB in individual investment accounts.

RIO has no statutory authority over, nor responsibility for, these investment trust funds other than the investment responsibility provided for by statute or through contracts with the individual agencies. The funds that are required to participate according to statute are: Public Employees Retirement System, Workforce Safety & Insurance, State Fire and Tornado, State Bonding, Petroleum Tank Release Compensation Fund, Insurance Regulatory Trust, Risk Management, Risk Management Workers Comp, Cultural Endowment Fund, Legacy Fund and Budget Stabilization Fund.

RIO follows the pronouncements of the Governmental Accounting Standards Board (GASB), which is the nationally accepted standard setting body for establishing accounting principles generally accepted in the United States of America for governmental entities.

Pension and Investment Trust Funds are accounted for using the accrual basis of accounting. Member contributions are recognized in the period in which they are due. Employer contributions are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the NDCC.

### **Use of Estimates**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

RIO utilizes various investment instruments. Investment securities, in general, are exposed to various risks, such as interest rate, credit, and overall market volatility. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and that such change could materially affect the amounts reported in the statements of net position.

### **Budgetary Process**

RIO operates through a biennial appropriation, which represents appropriations recommended by the Governor and presented to the General Assembly (the Assembly) at the beginning of each legislative session. The Assembly enacts RIO's budget through passage of a specific appropriation bill. The State of North Dakota's budget is prepared principally on a modified accrual basis. The Governor has line item veto power over all legislation, subject to legislative override.

Once passed and signed, the appropriation bill becomes RIO's financial plan for the next two years. Changes to the appropriation are limited to Emergency Commission authorization, initiative, or referendum action. The Emergency Commission can authorize receipt of federal or other moneys not appropriated by the Assembly if the Assembly did not indicate intent to reject the money. The Emergency Commission may authorize pass-through federal funds from one state agency to another. The Emergency Commission may authorize the transfer of expenditure authority between appropriated line items, however RIO has specific authority as a special fund to transfer between the contingency line item and other line items. Unexpended appropriations lapse at the end of each biennium, except certain capital expenditures covered under the NDCC section 54-44.1-11.

RIO does not use encumbrance accounting. The legal level of budgetary control is at the agency, appropriation and expenditure line item level. RIO does not formally budget revenues and it does not budget by fund. The statement of revenues, expenditures and changes in fund balances - budget and actual is not prepared because revenues are not budgeted.



**Capital Assets and Depreciation**

Capital asset expenditures greater than \$5,000 are capitalized at cost in accordance with Section 54-27-21 of the NDCC. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. The estimated useful lives are as follows:

	<u>Years</u>
Office equipment	5
Furniture and fixtures	5

**Investments**

NDCC Section 21-10-07 states that the SIB shall apply the prudent investor rule when investing funds under its supervision. The prudent investor rule means that in making investments, the fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation, but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income.

The pension fund belonging to TFFR and investment trust funds attributable to the City of Bismarck Employee Pension Plan, the City of Bismarck Police Pension Plan, Job Service of North Dakota, City of Grand Forks Employee Pension Plan, City of Grand Forks Park District Pension Plan and the Public Employees Retirement System (PERS) must be invested exclusively for the benefit of their members. All investments are made in accordance with the respective fund’s long-term investment objectives and performance goals.

**Pooled Investments**

Many funds whose investments are under the supervision of the SIB participate in pooled investments. The agencies transfer money into the investment pools and receive an appropriate percentage ownership of the pooled portfolio based upon fair value. All activities of the investment pools are allocated to the agencies based upon their respective ownership percentages. Each participant unit is valued at \$1.00 per unit.

**Investment Valuation and Income Recognition**

Investments are reported at fair value. Quoted market prices, when available, have been used to value investments. The fair values for securities that have no quoted market price represent estimated fair value. International securities are valued based upon quoted foreign market prices and translated into US dollars at the exchange rate in effect at June 30. In general, corporate debt securities have been valued at quoted market prices or, if not available, values are based on yields currently available on comparable securities of issuers with similar credit ratings. Mortgages have been valued on the basis of their future principal and interest payments discounted at prevailing interest rates for similar instruments. The fair value of real estate investments, including timberland, is based on appraisals plus fiscal year-to-date capital transactions. Publicly traded alternative investments are valued based on quoted market prices. When not readily available, alternative investment securities are valued using current estimates of fair value from the investment manager. Such valuations consider variables such as financial performance of the issuer, comparison of comparable companies’ earnings multiples, cash flow analysis, recent sales prices of investments, withdrawal restrictions, and other pertinent information. Because of the inherent uncertainty of the valuation for these other alternative investments, the estimated fair value may differ from the values that would have been used had a ready market existed.

The net change in fair value of investments consists of the realized gains or losses and the unrealized increase or decrease in fair value of investments during the year. Realized gains and losses on sales of investments are computed based on the difference between the sales price and the original cost of the investment sold. Realized gains and losses on investments that had been held in more than one fiscal year and sold in the current fiscal year were included as a change in the fair value of investments reported in the prior year(s) and the current year.

Unrealized gains and losses are computed based on changes in the fair value of investments between years. Security transactions are accounted for on a trade date basis. Interest income is recognized when earned. Dividend income is recorded on the ex-dividend date.

### **Pensions and Other Postemployment Benefits (OPEB)**

For purposes of measuring the net pension and OPEB liabilities, deferred outflows of resources and deferred inflows of resources related to pensions and OPEB, and pension and OPEB expenses, information about the fiduciary net position of the ND Public Employees Retirement System (NDPERS) defined benefit pension and OPEB plans, and additions to/deductions from NDPERS' fiduciary net position have been determined on the same basis as they are reported by NDPERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

## **Note 2 - Cash and Cash Equivalents**

### **Custodial Credit Risk**

State law generally requires that all state funds be deposited in the Bank of North Dakota. NDCC 21-04-01 provides that public funds belonging to or in the custody of the state shall be deposited in the Bank of North Dakota. Also, NDCC 6-09-07 states, “[a]ll state funds ... must be deposited in the Bank of North Dakota” or must be deposited in accordance with constitutional and statutory provisions.

### **Pension Trust Fund**

Deposits held by the Pension Trust Fund at June 30, 2020 were deposited in the Bank of North Dakota. At June 30, 2020 and 2019, the carrying amount of TFFR's deposits was \$21,060,210 and \$20,305,041, respectively, and the bank balance was \$21,073,623 and \$20,402,305, respectively. The difference results from checks outstanding or deposits not yet processed by the bank. These deposits are exposed to custodial credit risk as uninsured and uncollateralized. However, these deposits at the Bank of North Dakota are guaranteed by the State of North Dakota through NDCC Section 6-09-10.

### **Investment Trust Funds**

Certificates of deposit, an insurance pool cash account, a pension pool cash account and a Legacy Fund cash account are recorded as investments and have a cost and carrying value of \$136,809,065 and \$276,189,990 at June 30, 2020 and 2019, respectively. In addition, these funds carry cash and cash equivalents totaling \$353,025 and \$257,511 at June 30, 2020 and 2019, respectively. These deposits are exposed to custodial credit risk as uninsured and uncollateralized. However, these deposits held at the Bank of North Dakota are guaranteed by the State of North Dakota through NDCC Section 6-09-10.

# North Dakota Retirement and Investment Office

Notes to Combined Financial Statements

June 30, 2020 and 2019

## Note 3 - Investments

The investment policy of the SIB is governed by NDCC 21-10. The SIB shall apply the prudent investor rule in investing for funds under its supervision. The “prudent investor rule” means that in making investments, the fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income. The retirement funds belonging to the teachers’ fund for retirement and the public employees’ retirement system must be invested exclusively for the benefit of their members and in accordance with the respective funds’ investment goals and objectives.

### Interest Rate Risk

Interest rate risk is the risk that changes in interest rates of debt securities will adversely affect the fair value of an investment. The price of a debt security typically moves in the opposite direction of the change in interest rates. The SIB does not have a formal investment policy that limits investment maturities as a means of managing its exposure to potential fair value losses arising from future changes in interest rates.

At June 30, 2020 and 2019, the following tables show the investments by investment type and maturity (expressed in thousands).

2020	Total Fair Value	Less than 1 Year	1-6 Years	6-10 Years	More than 10 Years
Asset Backed Securities	\$ 459,221	\$ 104	\$ 122,916	\$ 95,116	\$ 241,085
Bank Loans	898	-	898	-	-
Collateralized Bonds	2,633	-	-	217	2,416
Commercial Mortgage-Backed	294,632	2,588	913	1,965	289,166
Commercial Paper	33,978	33,978	-	-	-
Corporate Bonds	2,230,382	77,375	1,142,807	519,710	490,490
Corporate Convertible Bonds	10,197	-	4,534	1,825	3,838
Government Agencies	38,491	1,918	16,412	14,179	5,982
Government Bonds	540,285	5,049	225,629	60,235	249,372
Gov't Mortgage Backed	882,440	6	6,682	40,851	834,901
Gov't-issued CMB	62,317	-	7,526	36,243	18,548
Index Linked Government Bonds	585,354	-	268,167	84,069	233,118
Municipal/Provincial Bonds	46,452	3,299	11,713	5,448	25,992
Non-Government Backed CMOs	115,408	-	2,745	7,555	105,108
Short Term Bills and Notes	58,648	58,648	-	-	-
Funds/Pooled Investments	1,481,985	27,098	1,018,852	184,510	251,525
<b>Total Debt Securities</b>	<b>\$ 6,843,321</b>	<b>\$ 210,063</b>	<b>\$ 2,829,794</b>	<b>\$ 1,051,923</b>	<b>\$ 2,751,541</b>

# North Dakota Retirement and Investment Office

## Notes to Combined Financial Statements

June 30, 2020 and 2019

2019	Total Fair Value	Less than 1 Year	1-6 Years	6-10 Years	More than 10 Years
Asset Backed Securities	\$ 316,024	\$ 347	\$ 71,850	\$ 69,713	\$ 174,114
Bank Deposits	10,010	10,010	-	-	-
Bank Loans	4,372	-	3,195	1,177	-
Collateralized Bonds	2,716	-	-	250	2,466
Commercial Mortgage-Backed	238,449	898	5,521	3,321	228,709
Commercial Paper	1,596	1,596	-	-	-
Corporate Bonds	1,660,145	50,523	831,926	460,176	317,520
Corporate Convertible Bonds	21,761	721	12,187	2,443	6,410
Government Agencies	75,933	2,699	43,751	20,108	9,375
Government Bonds	603,757	23,646	269,268	102,364	208,479
Gov't Mortgage Backed	662,483	12	7,010	21,930	633,531
Gov't-issued CMB	101,527	16	6,696	34,673	60,142
Index Linked Government Bonds	582,630	12,957	154,761	261,770	153,142
Municipal/Provincial Bonds	35,474	600	13,806	5,942	15,126
Non-Government Backed CMOs	72,142	29	6,677	9,251	56,185
Other Fixed Income	1,003	-	1,003	-	-
Repurchase Agreements	(20,003)	(20,003)	-	-	-
Short Term Bills and Notes	31,986	31,986	-	-	-
Funds/Pooled Investments	1,416,917	-	743,936	452,982	219,999
<b>Total Debt Securities</b>	<b>\$ 5,818,922</b>	<b>\$ 116,037</b>	<b>\$ 2,171,587</b>	<b>\$ 1,446,100</b>	<b>\$ 2,085,198</b>

In the tables above, the fair values of inflation indexed bonds are reflected in the columns based on their stated maturity dates. The principal balances of these bonds are adjusted every six months based on the inflation index for that period.

Some investments are more sensitive to interest rate changes than others. Variable and floating rate collateralized mortgage obligations (CMOs), asset-backed securities (ABS), interest-only and principal-only securities are examples of investments whose fair values may be highly sensitive to interest rate changes.

Interest-only (IO) and principal-only (PO) strips are transactions which involve the separation of the interest and principal components of a security. They are highly sensitive to prepayments by mortgagors, which may result from a decline in interest rates. The SIB held no POs and held IOs valued at \$24.4 and \$18.8 million at June 30, 2020 and 2019, respectively. The SIB has no policy regarding IO or PO strips.

### Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The State Investment Board maintains a highly diversified portfolio of debt securities encompassing a wide range of credit ratings. Although the SIB has no overall policy regarding credit risk, each debt securities manager is given a specific set of guidelines to invest within based on the mandate for which it was hired. The guidelines specify in which range of credit the manager may invest. These ranges include investment grade and below investment grade categories. The following tables present the SIB's ratings as of June 30, 2020 and 2019, (expressed in thousands).

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2020	Total Fair Value	Credit Rating*										
		AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
Asset Backed Securities	\$ 459,221	\$ 239,274	\$ 57,836	\$ 41,573	\$ 48,308	\$ 6,957	\$ 1,424	\$ 3,669	\$ 1,707	\$ -	\$ 1,102	\$ 57,371
Bank Loans	898	-	-	-	-	-	130	316	-	-	-	452
Collateralized Bond	2,633	2,633	-	-	-	-	-	-	-	-	-	-
Commercial Mortgage Backed	294,632	222,765	7,606	9,032	5,452	3,243	4,082	1,685	-	-	-	40,767
Commercial Paper	33,978	-	-	-	-	-	-	-	-	-	-	33,978
Corporate Bonds	2,230,382	14,432	102,599	654,018	1,130,019	217,674	74,429	26,995	286	1,105	485	8,340
Corporate Convertible Bonds	10,197	-	-	-	915	2,635	923	2,639	-	-	20	3,065
Gov't Agencies	35,950	9,347	4,653	6,926	13,607	-	-	1,417	-	-	-	-
Gov't Bonds	122,856	2,479	9,698	1,725	56,336	34,417	10,249	-	3,286	-	921	3,745
Gov't Mortgage Backed	723,348	-	710,210	1,023	3,399	-	7,941	-	-	-	-	775
Gov't Issued CMB	46,648	2,044	44,604	-	-	-	-	-	-	-	-	-
IndexLinked Government Bonds	-	-	-	-	-	-	-	-	-	-	-	-
Municipal/Provincial Bonds	46,452	2,522	21,104	14,331	4,206	1,866	-	-	481	-	634	1,308
Non-Gov't Backed CMOs	115,408	37,218	4,281	7,884	14,053	1,128	1,446	902	1,168	-	152	47,176
Short Term Bills & Notes	6,098	-	6,098	-	-	-	-	-	-	-	-	-
Funds/Pooled Investments	1,481,985	380,142	247,276	656,131	116,280	18,038	26,709	-	-	-	-	37,409
Total Credit Risk of Debt Securities	5,610,686	\$ 912,856	\$ 1,215,965	\$ 1,392,643	\$ 1,392,575	\$ 285,958	\$ 127,333	\$ 37,623	\$ 6,928	\$ 1,105	\$ 3,314	\$ 234,386
US Gov't & Agencies **	1,232,635											
Total Debt Securities	<u>\$ 6,843,321</u>											

2019	Total Fair Value	Credit Rating*										
		AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
Asset Backed Securities	\$ 316,024	\$ 217,426	\$ 34,170	\$ 10,085	\$ 5,356	\$ 4,202	\$ 2,391	\$ 4,876	\$ 1,876	\$ -	\$ 1,319	\$ 34,323
Bank Deposits	10,010	-	1,528	8,482	-	-	-	-	-	-	-	-
Bank Loans	4,372	-	-	-	1,077	2,091	694	510	-	-	-	-
Collateralized Bond	2,716	2,716	-	-	-	-	-	-	-	-	-	-
Commercial Mortgage Backed	238,051	209,223	7,294	1,824	2,106	4,418	2,848	306	-	387	257	9,388
Commercial Paper	1,596	-	-	1,596	-	-	-	-	-	-	-	-
Corporate Bonds	1,660,145	13,187	83,331	527,582	752,212	183,056	85,478	9,374	233	-	878	4,814
Corporate Convertible Bonds	21,761	-	-	547	1,349	7,289	1,275	3,452	-	-	-	7,849
Gov't Agencies	61,492	4,969	35,290	6,939	13,673	-	-	621	-	-	-	-
Gov't Bonds	603,757	4,969	479,780	5,775	60,556	15,590	36,281	-	-	-	-	806
Gov't Mortgage Backed	496,512	-	495,487	200	825	-	-	-	-	-	-	-
Gov't Issued CMB	45,306	-	45,306	-	-	-	-	-	-	-	-	-
IndexLinked Government Bonds	582,630	-	582,630	-	-	-	-	-	-	-	-	-
Municipal/Provincial Bonds	35,474	2,282	10,899	13,117	4,018	2,271	2,887	-	-	-	-	-
Non-Gov't Backed CMOs	72,142	26,000	4,758	3,733	1,723	515	2,128	2,830	1,395	-	207	28,853
Other Fixed Income	1,003	-	-	1,003	-	-	-	-	-	-	-	-
Repurchase Agreements	(20,003)	-	(20,003)	-	-	-	-	-	-	-	-	-
Short Term Bills & Notes	31,986	-	2,094	29,892	-	-	-	-	-	-	-	-
Funds/Pooled Investments	1,416,917	303,535	307,910	618,772	109,788	42,433	34,479	-	-	-	-	-
Total Credit Risk of Debt Securities	5,581,891	\$ 784,307	\$ 2,070,474	\$ 1,229,547	\$ 952,683	\$ 261,865	\$ 168,461	\$ 21,969	\$ 3,504	\$ 387	\$ 2,661	\$ 86,033
US Gov't & Agencies **	237,031											
Total Debt Securities	<u>\$ 5,818,922</u>											

- \* Ratings are determined in the following order:
1. S&P rating
  2. Moody's rating
  3. Fitch rating
  4. Manager-determined rating (internal rating)
  5. If no ratings available using steps 1-4, then shown as not rated.
- \*\* US government agency securities explicitly guaranteed by the US government are categorized here. Credit ratings of US government agency securities that are only implicitly guaranteed by the US government are categorized accordingly in the main body of these tables. Implicitly guaranteed agency securities included in the *Asset Backed*, *Commercial Mortgage-Backed*, *Gov't Issued Commercial & Gov't Mortgage Backed*, *Gov't Agencies*, *Gov't Bonds*, *Index Linked Gov't Bonds* and *Short Term Bills and Notes* categories are issued by FNMA, FHLB, FHLMC, and SLMA.

### **Concentration of Credit Risk**

Concentration of credit risk is the risk of loss that may be attributed to the magnitude of an investment in a single issuer. As of June 30, 2020 and 2019, the SIB's portfolio has no single issuer exposure that comprises 5% or more of the overall portfolio, excluding investments issued or explicitly guaranteed by the US government and investments in mutual funds, external investment pools, and other pooled investments. Therefore, there is no concentration of credit risk.

### **Foreign Currency Risk**

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. Although the SIB does not have a formal investment policy governing foreign currency risk, the SIB manages its exposure to fair value loss by requiring their international securities investment managers to maintain diversified portfolios to limit foreign currency and security risk. The SIB's exposure to foreign currency risk is presented in the following tables as of June 30, 2020 and 2019 (expressed in thousands).

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2020

Currency	Short-Term	Debt	Equity	Real Estate	Total
Argentine peso	\$ 205	\$ 416	\$ -	\$ -	\$ 621
Australian dollar	(453)	704	63,821	-	64,072
Brazilian real	458	-	3,903	-	4,361
British pound sterling	(25,312)	26,067	237,714	-	238,469
Canadian dollar	(690)	369	37,124	-	36,803
Chinese yuan renminbi	278	-	-	-	278
Colombian peso	452	-	-	-	452
Danish krone	64	-	72,330	-	72,394
Euro	(30,138)	32,755	459,666	613	462,896
Hong Kong dollar	1,038	-	142,692	-	143,730
Hungarian forint	243	-	2,169	-	2,412
Indonesian rupiah	55	-	-	-	55
Japanese yen	2,616	-	288,982	-	291,598
Malaysian ringgit	203	-	-	-	203
Mexican peso	(24)	-	1,189	-	1,165
New Israeli shekel	-	-	3,463	-	3,463
New Taiwan dollar	23	-	8,138	-	8,161
New Zealand dollar	101	-	17	-	118
Norwegian krone	133	-	8,613	-	8,746
Polish zloty	(47)	-	-	-	(47)
Russian ruble	(52)	-	-	-	(52)
Singapore dollar	276	-	8,120	-	8,396
South African rand	1,098	-	480	-	1,578
South Korean won	-	-	11,816	-	11,816
Swedish krona	37	-	72,201	-	72,238
Swiss franc	1,618	-	148,008	-	149,626
Thai baht	-	-	3,088	-	3,088
International commingled funds (various currencies)	-	-	980,048	35,004	1,015,052
Total international investment securities	<u>\$ (47,818)</u>	<u>\$ 60,311</u>	<u>\$ 2,553,582</u>	<u>\$ 35,617</u>	<u>\$ 2,601,692</u>

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2019

Currency	Short-Term	Debt	Equity	Real Estate	Total
Argentine peso	\$ 82	\$ 1,011	\$ -	\$ -	\$ 1,093
Australian dollar	20,277	(18,935)	83,638	-	84,980
Brazilian real	214	-	7,957	-	8,171
British pound sterling	7,752	(5,981)	236,946	-	238,717
Canadian dollar	3,374	(3,500)	72,112	-	71,986
Chilean peso	53	-	-	-	53
Chinese yuan renminbi	(3)	-	-	-	(3)
Colombian peso	195	-	-	-	195
Danish krone	108	-	38,568	-	38,676
Euro	(12,041)	13,867	479,747	5,815	487,388
Hong Kong dollar	792	-	139,204	-	139,996
Hungarian forint	172	520	3,833	-	4,525
Indonesian rupiah	56	-	-	-	56
Japanese yen	16,211	-	252,971	-	269,182
Malaysian ringgit	210	509	-	-	719
Mexican peso	37	74	1,321	-	1,432
New Israeli shekel	118	-	2,219	-	2,337
New Taiwan dollar	25	-	4,570	-	4,595
New Zealand dollar	(40)	-	211	-	171
Norwegian krone	621	495	11,845	-	12,961
Polish zloty	(50)	-	2,648	-	2,598
Singapore dollar	351	-	8,021	-	8,372
South African rand	323	-	7,843	-	8,166
South Korean won	177	-	13,080	-	13,257
Swedish krona	1,268	-	56,585	-	57,853
Swiss franc	960	-	119,456	-	120,416
Thai baht	312	-	6,086	-	6,398
Turkish lira	89	-	1,352	-	1,441
International commingled funds (various currencies)	-	-	995,814	28,930	1,024,744
Total international investment securities	\$ 41,643	\$ (11,940)	\$ 2,546,027	\$ 34,745	\$ 2,610,475

Negative amounts represent short positions.



## Derivative Securities

Derivatives are financial arrangements between two parties whose payments are based on, or “derived” from, the performance of some agreed upon benchmark. The investment policies of the SIB’s clients allow the use of derivative securities to hedge or replicate underlying exposures but not for speculation. All derivatives are considered investment derivative instruments. The fair value of all derivative securities is reported in the statement of net position. At June 30, 2020 and 2019, the SIB had four types of derivative securities: futures, options, swaps and currency forwards.

### Futures

Futures represent commitments to purchase (asset) or sell (liability) securities at a future date and at a specific price. Futures contracts are traded on organized exchanges (exchange traded) thereby minimizing the SIB’s counterparty risk. The net change in the futures contracts’ value is settled daily in cash with the exchanges. Net gains or losses resulting from the daily settlements are included in net change in fair value of investments in the statement of changes in net position and totaled \$65.4 and \$17.0 million for fiscal years 2020 and 2019, respectively. At June 30, 2020 and 2019, the SIB investment portfolio had the notional futures balances shown below (expressed in thousands).

<u>Futures</u>	Notional Value	
	<u>June 30, 2020</u>	<u>June 30, 2019</u>
Cash & Cash Equivalent Derivative Futures		
Long	\$ -	\$ 188,152
Short	(258,482)	(657,304)
Equity Derivative Futures		
Long	1,064,665	808,005
Short	-	-
Fixed Income Derivative Futures		
Long	262,374	352,611
Short	(1,703,654)	(141,400)
	<u>                    </u>	<u>                    </u>
Total Futures	<u>\$ (635,097)</u>	<u>\$ 550,064</u>

### Options

Options represent or give buyers the right, but not the obligation, to buy (call) or sell (put) an asset at a preset price over a specified period. Options are traded on organized exchanges (exchange traded) thereby minimizing the SIB’s counterparty credit risk. The option’s price is usually a small percentage of the underlying asset’s value. As a seller of a financial option, the SIB, through its investment manager, receives a premium at the beginning of the agreement and bears the risk of an unfavorable change in the price of the financial instrument underlying the option. As a buyer of a financial option, the SIB, through its investment manager, pays a premium at the beginning of the agreement and the counterparty bears the risk of an unfavorable change in the price of the financial instrument underlying the option. Gains and losses on options are determined based on fair values and recorded with the net change in fair value of investments in the statement of changes in net position and totaled \$5.3 million and \$3.3 million for fiscal years 2020 and 2019, respectively. At June 30, 2020 and 2019, the SIB investment portfolio had the following option balances (expressed in thousands).

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<u>Options</u>	Fair Value	
	June 30, 2020	June 30, 2019
Cash & Other Options		
Call	\$ 201	\$ (10)
Put	537	1
Fixed Income Options		
Call	(146)	(38)
Put	(70)	(241)
Total Options	\$ 522	\$ (288)

### Swaps

A swap is a derivative in which counterparties exchange certain benefits of one party's financial instrument for those of the other party's financial instrument. Specifically, the two counterparties agree to exchange one stream of cash flows for another stream. The SIB, through its investment managers, has entered into various swap agreements in an attempt to manage its exposure to interest rate, credit and total return risk.

Gains and losses on swaps are determined based on fair values and are recorded with the net change in fair value of investments in the statement of changes in net position and totaled \$(22.5) and \$(18.6) million for fiscal years 2020 and 2019, respectively. The maximum loss that would be recognized at June 30, 2020 and 2019, if all counterparties failed to perform as contracted is \$3.0 million and \$3.0 million, respectively. Swap fair values are determined by a third party pricing source. At June 30, 2020 and 2019, the SIB's investment portfolio had the swap fair value balances as shown below (expressed in thousands).

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## Credit Default Swaps

Credit risk represents the exposure to fair value losses arising from a credit event such as default, failure to pay, restructuring or bankruptcy. In a credit default swap (CDS) contract, the protection buyer of the CDS makes a series of payments to the protection seller and, in exchange, receives a payoff if the credit instrument experiences a credit event. CDS contracts are also used to establish exposure to a desired credit instrument.

Counterparty/Moody's Rating	Notional Amount		Expiration Date Range	Fair Value	
	June 30, 2020	June 30, 2019		June 30, 2020	June 30, 2019
Bank of America/Aa2 (2 contracts)	\$ -	\$ (430)	2021 - 2025	\$ -	\$ (32)
Bank of America/Aa2 (5 contracts)	(3,730)		2021 - 2025	(71)	
Citibank/A1 (34 contracts)		(2,535)	2019 - 2024		(172)
Citibank/Aa3 (33 contracts)	3,715		2020 - 2024	(262)	
Citigroup Global Markets/A1 (2 contracts)	(400)		2024	(9)	
Credit Suisse First Boston/A1 (8 contracts)		(43,200)	2022 - 2024		931
Credit Suisse First Boston/A1 (9 contracts)	(3,675)		2020 - 2024	(114)	
Deutsche Bank/A3 (2 contracts)		2,000	2059		(16)
Deutsche Bank/A3 (2 contracts)	2,000		2059	(15)	
Goldman Sachs/A3 (4 contracts)		(1,900)	2020 - 2024		(28)
Goldman Sachs/A3 (4 contracts)	(1,700)		2023 - 2024	(55)	
HSBC Bank/Aa3 (2 contracts)		(1,550)	2019		2
JP Morgan Chase/Aa2 (2 contracts)		(400)	2019 - 2024		1
JP Morgan Chase/Aa2 (4 contracts)	(25,515)		2025 - 2029	852	
Morgan Stanley/A3 (2 contracts)		(245)	2024		2
Morgan Stanley/A3 (5 contracts)	2,555		2024 - 2025	(35)	
<b>Total Credit Default Swaps</b>	<b>\$ (26,750)</b>	<b>\$ (48,260)</b>		<b>\$ 291</b>	<b>\$ 688</b>

The notional amount may be positive or negative, depending on whether the position is long or short, respectively.

## Interest Rate Swaps

Interest rate risk represents the exposure to fair value losses arising from future changes in prevailing market interest rates. In the most common type of interest rate swap arrangement, one party agrees to pay fixed interest payments on designated dates to a counterparty, who in turn agrees to make return interest payments that float with some reference rate.

Counterparty/Moody's Rating	Notional Amount		Expiration Date Range	Fair Value	
	June 30, 2020	June 30, 2019		June 30, 2020	June 30, 2019
Citigroup Global Markets/A1 (24 contracts)	\$ -	\$ 84,455	2020 - 2049	\$ -	\$ (3,427)
Citigroup Global Markets/A1 (16 contracts)	112,251		2020 - 2050	443	
Credit Suisse First Boston/A1 (39 contracts)		128,462	2019 - 2049		12
Credit Suisse First Boston/A1 (22 contracts)	185,220		2020 - 2050	714	
JP Morgan Chase/Aa2 (119 contracts)		447,530	2020 - 2048		(14,715)
JP Morgan Chase/Aa2 (100 contracts)	367,049		2020 - 2045	4,871	
<b>Total Interest Rate Swaps</b>	<b>\$ 664,520</b>	<b>\$ 660,447</b>		<b>\$ 6,028</b>	<b>\$ (18,130)</b>

The notional amount may be positive or negative, depending on whether the position is long (fixed rate payer) or short (floating rate payer), respectively.

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## Total Return Swaps

A total return swap is an agreement in which one party makes payments based on a set rate, either fixed or variable, while the other party makes payments based on the return of an underlying asset (income and capital gains). The underlying asset, or reference asset, is owned by the party receiving the set rate payment.

Counterparty/Moody's Rating	Notional Amount		Expiration Date Range	Fair Value	
	June 30, 2020	June 30, 2019		June 30, 2020	June 30, 2019
Credit Suisse International/A1 (2 contracts)	\$ -	\$ 4,800	2041	\$ -	\$ (23)
Credit Suisse International/A1 (2 contracts)	2,764		2041	2	
<b>Total Total Return Swaps</b>	<b>\$ 2,764</b>	<b>\$ 4,800</b>		<b>\$ 2</b>	<b>\$ (23)</b>

The notional amount may be positive or negative, depending on whether the position is long (fixed rate payer) or short (floating rate payer), respectively.

## Currency Forwards

Currency forwards represent forward exchange contracts that are entered into in order to manage the exposure to changes in currency exchange rates on the currency denominated portfolio holdings. A forward exchange contract is a commitment to purchase (positive) or sell (negative) a currency at a future date at a negotiated forward rate. The gain or loss arising from the difference between the original contracts and the closing of such contracts is included in the net change in fair value of investments in the statements of changes in net position and totaled \$2.4 million and \$1.7 million for fiscal years 2020 and 2019, respectively. At June 30, 2020 and 2019, the SIB's investment portfolio included the currency forwards balances shown below (expressed in thousands).

Currency	Cost	Purchases	Sales	Fair Value	
				6/30/2020	6/30/2019
Argentine peso	\$ -	\$ -	\$ -	\$ -	\$ 15
Australian dollar	(722)	-	(722)	(737)	(1,484)
Brazilian real	2	20	(18)	(2)	(30)
British pound sterling	(39,156)	4,970	(44,126)	(39,408)	(8,279)
Canadian dollar	(569)	-	(569)	(579)	(8,491)
Colombian peso	174	174	-	167	195
Euro	(59,294)	41,056	(100,350)	(60,502)	(62,411)
Japanese yen	-	-	-	-	(18,046)
Mexican peso	-	-	-	-	38
Russian ruble	(136)	1,216	(1,352)	(52)	-
United States dollar	99,701	147,137	(47,436)	99,701	97,228
<b>Total forwards subject to currency risk</b>				<b>\$ (1,412)</b>	<b>\$ (1,265)</b>

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**Derivative Interest Rate Risk**

Derivative interest rate risk is the risk that changes in interest rates will adversely affect the value of an interest rate-based derivative investment. The SIB does not have a formal investment policy regarding such derivative investments. At June 30, 2020 and 2019, the tables below show the SIB's derivative investments subject to interest rate risk (expressed in thousands).

**2020**

	Total Notional						Greater than 10 years
	Value	3 months or less	3 to 6 months	6 to 12 months	1-5 years	5-10 years	
Futures-interest rate contracts	\$ (1,699,762)	\$ (265,954)	\$ (1,175,326)	\$ (86,077)	\$ (172,405)	\$ -	\$ -
Margined Options-interest rate contracts	(3)	(3)	-	-	-	-	-
<b>Total</b>	<b>\$ (1,699,765)</b>	<b>\$ (265,957)</b>	<b>\$ (1,175,326)</b>	<b>\$ (86,077)</b>	<b>\$ (172,405)</b>	<b>\$ -</b>	<b>\$ -</b>

	Total Fair						Greater than 10 years
	Value	3 months or less	3 to 6 months	6 to 12 months	1-5 years	5-10 years	
Options - interest rate contracts	\$ 731	\$ (7)	\$ -	\$ -	\$ -	\$ -	\$ 738
Options on futures	(209)	(209)	-	-	-	-	-
Swaps - interest rate contracts	6,028	7	(2)	472	5,826	250	(525)
Swaps - credit contracts	291	-	(3)	-	396	(87)	(15)
<b>Total</b>	<b>\$ 6,841</b>	<b>\$ (209)</b>	<b>\$ (5)</b>	<b>\$ 472</b>	<b>\$ 6,222</b>	<b>\$ 163</b>	<b>\$ 198</b>

**2019**

	Total Notional					Greater than 5 years
	Value	3 months or less	3 to 6 months	6 to 12 months	1-5 years	
Futures-interest rate contracts	\$ (257,941)	\$ 162,528	\$ (525,813)	\$ 105,344	\$ -	\$ -
Margined Options-interest rate contracts	-	-	-	-	-	-
<b>Total</b>	<b>\$ (257,941)</b>	<b>\$ 162,528</b>	<b>\$ (525,813)</b>	<b>\$ 105,344</b>	<b>\$ -</b>	<b>\$ -</b>

	Total Fair					Greater than 5 years
	Value	3 months or less	3 to 6 months	6 to 12 months	1-5 years	
Options on futures	\$ (279)	\$ (279)	\$ -	\$ -	\$ -	\$ -
Swaps - interest rate contracts	(18,130)	-	5	293	(536)	(17,892)
Swaps - credit contracts	688	(1)	2	5	776	(94)
<b>Total</b>	<b>\$ (17,721)</b>	<b>\$ (280)</b>	<b>\$ 7</b>	<b>\$ 298</b>	<b>\$ 240</b>	<b>\$ (17,986)</b>

**Fair Value Measurement**

The SIB categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements).

Level 1 Unadjusted quoted prices for identical instruments in active markets.

Level 2 Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.

Level 3 Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy.

The following tables show the fair value leveling of the SIB's investment portfolio at June 30, 2020 and 2019 (expressed in thousands).

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2020	Dollars in (000)			
	Fair Value 6/30/20	Fair Value Measures Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Investments by Fair Value Level</b>				
<i>Short Term Securities</i>				
Commercial Paper	\$ 33,978	\$ -	\$ 33,978	\$ -
Short Term Bills and Notes	58,648	-	58,648	-
<b>Total Short Term Securities</b>	<b>92,626</b>	<b>-</b>	<b>92,626</b>	<b>-</b>
<i>Fixed Income Investments</i>				
Asset Backed Securities	458,001	-	458,001	-
Bank Loans	898	-	898	-
Collateralized Bonds	2,633	-	2,633	-
Commercial Mortgage-Backed	294,632	-	294,632	-
Corporate Bonds	2,228,985	-	2,226,656	2,329
Corporate Convertible Bonds	10,197	-	10,197	-
Funds - Fixed Income ETF	24,430	24,430	-	-
Government Agencies	38,491	-	35,309	3,182
Government Bonds	540,285	-	540,285	-
Government Mortgage Backed Securities	866,696	-	866,696	-
Gov't-issued Commercial Mortgage-Backed	62,317	-	62,317	-
Index Linked Government Bonds	585,354	-	585,354	-
Municipal/Provincial Bonds	41,223	-	41,223	-
Non-Government Backed C.M.O.s	110,132	-	110,132	-
Other Fixed Income	76	67	9	-
<b>Total Fixed Income Investments</b>	<b>5,264,350</b>	<b>24,497</b>	<b>5,234,342</b>	<b>5,511</b>
<i>Equity Investments</i>				
Common Stock	4,689,513	4,689,513	-	-
Convertible Equity	15,417	15,417	-	-
Funds - Equities ETF	86,628	86,628	-	-
Preferred Stock	2,262	2,262	-	-
Rights/Warrants	257	257	-	-
Stapled Securities	2,666	2,666	-	-
<b>Total Equity Investments</b>	<b>4,796,743</b>	<b>4,796,743</b>	<b>-</b>	<b>-</b>
<i>Derivative Investments</i>				
Exchange Cleared Swaps	6,806	-	6,806	-
Options	522	(209)	731	-
Swaps	(485)	-	(485)	-
<b>Total Derivative Investments</b>	<b>6,843</b>	<b>(209)</b>	<b>7,052</b>	<b>-</b>
<b>Total Investments by Fair Value Level</b>	<b>\$ 10,160,562</b>	<b>\$ 4,821,031</b>	<b>\$ 5,334,020</b>	<b>\$ 5,511</b>

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		Dollars in (000)			
<b>Investments Measured at the Net Asset Value (NAV)</b>			Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Commingled Funds-Debt	\$ 1,457,557	\$	-	Daily, monthly	1-15 days
Commingled Funds-Equities	1,086,970		-	Daily, monthly	1-15 days
Distressed Debt	245,445		90,604	Quarterly, Not eligible	60 days
Long/Short	263,941		-	Monthly	15 days
Mezzanine Debt	229		8,499	Not eligible	Not eligible
Private Credit	413,775		191,200	Not eligible	Not eligible
Private Equity	290,360		332,373	Not eligible	Not eligible
Real Assets	1,886,206		246,371	Quarterly, Not eligible	30-90 days
<b>Total Investments Measured at the NAV</b>	<b>\$ 5,644,483</b>	<b>\$</b>	<b>869,047</b>		
<b>Investments at Other Than Fair Value</b>					
Cash and adjustments to cash	\$ 298,319				
Bank Certificates of Deposit	88,433				
Other miscellaneous securities	28,919				
<b>Total Investments at Other Than Fair Value</b>	<b>\$ 415,671</b>				
<b>Total Investments</b>	<b>\$ 16,220,716</b>				



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2019	Dollars in (000)			
	Fair Value 6/30/19	Fair Value Measures Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Investments by Fair Value Level</b>				
<i>Short Term Securities</i>				
Commercial Paper	\$ 1,596	\$ -	\$ 1,596	\$ -
Short Term Bills and Notes	31,986	-	31,986	-
<b>Total Short Term Securities</b>	<b>33,582</b>	<b>-</b>	<b>33,582</b>	<b>-</b>
<i>Fixed income investments</i>				
Asset Backed Securities	310,664	-	303,159	7,505
Bank Loans	4,372	-	4,372	-
Collateralized Bonds	2,716	-	2,716	-
Commercial Mortgage-Backed	238,449	-	238,449	-
Corporate Bonds	1,660,145	-	1,656,435	3,710
Corporate Convertible Bonds	21,761	-	20,995	766
Funds - Fixed Income ETF	23,735	23,735	-	-
Government Agencies	73,034	-	73,034	-
Government Bonds	603,757	-	603,757	-
Government Mortgage Backed Securities	662,483	-	662,483	-
Gov't-issued Commercial Mortgage-Backed	101,527	-	101,527	-
Index Linked Government Bonds	582,630	-	582,630	-
Municipal/Provincial Bonds	35,474	-	35,474	-
Non-Government Backed C.M.O.s	63,752	-	57,495	6,257
Other Fixed Income	1,003	-	1,003	-
<b>Total Fixed Income Investments</b>	<b>4,385,502</b>	<b>23,735</b>	<b>4,343,529</b>	<b>18,238</b>
<i>Equity investments</i>				
Common Stock	4,648,105	4,648,050	-	55
Convertible Equity	2,816	-	2,816	-
Funds - Equities ETF	173,072	173,072	-	-
Preferred Stock	4,561	4,561	-	-
Rights/Warrants	776	776	-	-
Stapled Securities	4,520	4,520	-	-
<b>Total equity investments</b>	<b>4,833,850</b>	<b>4,830,979</b>	<b>2,816</b>	<b>55</b>
<i>Derivative investments</i>				
Exchange Cleared Swaps	(17,168)	-	(17,168)	-
Options	(288)	(279)	(9)	-
Swaps	(297)	-	(297)	-
<b>Total Derivative Investments</b>	<b>(17,753)</b>	<b>(279)</b>	<b>(17,474)</b>	<b>-</b>
<b>Total Investments by Fair Value Level</b>	<b>\$ 9,235,181</b>	<b>\$ 4,854,435</b>	<b>\$ 4,362,453</b>	<b>\$ 18,293</b>

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	Dollars in (000)			
<b>Investments Measured at the Net Asset Value (NAV)</b>		Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Commingled Funds-Debt	\$ 1,393,182	\$ -	Daily, monthly	1-15 days
Commingled Funds-Equities	1,109,757	-	Daily, monthly	1-15 days
Distressed Debt	235,686	76,921	Quarterly, Not eligible	60 days
Long/Short	223,575	-	Monthly	15 days
Mezzanine Debt	496	8,499	Not eligible	Not eligible
Private Credit	290,157	146,200	Not eligible	Not eligible
Private Equity	229,364	339,869	Not eligible	Not eligible
Real Assets	1,798,987	358,278	Quarterly, Not eligible	30-90 days
<b>Total Investments Measured at the NAV</b>	<b>\$ 5,281,204</b>	<b>\$ 929,767</b>		
<b>Investments at Other Than Fair Value</b>				
Cash and adjustments to cash	\$ 478,322			
Bank Certificates of Deposit	37,300			
Other miscellaneous securities	16,653			
Repurchase Agreements	(20,003)			
<b>Total Investments at Other Than Fair Value</b>	<b>\$ 512,272</b>			
<b>Total Investments</b>	<b><u>\$ 15,028,657</u></b>			

Securities classified in Level 1 are valued using quoted prices in active markets for those securities. Securities classified in Level 2 and Level 3 are valued using methodologies such as various bid evaluations, market averages and other matrix pricing techniques as well as values derived from associated traded securities or last trade data. In instances where inputs used to measure fair value fall into different levels, the fair value is categorized based on the lowest level input that is significant to the valuation.

Investments valued at the net asset value (NAV) per share (or its equivalent) have been classified separately in the tables above and include investments considered to be *alternative investments* as defined by the AICPA. The definition includes investments for which a readily determinable fair value does not exist (that is, investments not listed on national exchanges or over-the-counter markets, or for which quoted market prices are not available from sources such as financial publications, the exchanges, or NASDAQ). These types of investments can be held within any of the asset classes used by the SIB based on underlying portfolio holdings and analysis of risk and return relationships. These investments can be structured in different ways, including limited partnerships, limited liability companies, common trusts and mutual funds. Some are closed-ended with a specific life and capital commitment while others are open-ended with opportunity for ad hoc contributions or withdrawals and termination upon proper notice.

**Commingled/Mutual Funds** — These types of funds are open-ended funds and may be utilized in equity or fixed income asset classes. They are funds made up of underlying securities that have readily available fair values (publicly traded stocks or bonds). The SIB owns units of these funds rather than the individual securities. Contributions or withdrawals from these funds can be made as needed, generally with daily or monthly liquidity, with a notice period of one to fifteen days. Because they are liquid funds, there are no unfunded commitments for these types of investments.

**Distressed Debt** — these include investments in the debt instruments of companies which may be publicly traded or privately held that are financially distressed and are either in bankruptcy or likely candidates for bankruptcy. Typical holdings are senior and subordinated debt instruments, mortgages and bank loans. The SIB is including these types of investments in its global fixed income allocations. As of June 30, 2020 and 2019, unfunded commitments in one of its two distressed debt funds totaled \$90.6 million and \$76.9 million, respectively. This fund is not eligible for redemptions. The other fund is eligible for redemptions with quarterly liquidity and 60 days notice, and has no unfunded commitment.

**Equity Long/Short** — This strategy is a combination of long and short positions, primarily in publicly traded equities. The SIB utilizes this strategy, through a limited partnership structure, within its global equity allocations. This is an open-ended fund with monthly liquidity with a notice period of 15 days. There was no unfunded commitment as of June 30, 2020 and 2019.

**Mezzanine Debt** — This strategy is a hybrid of debt and equity financing. It is essentially debt capital that gives the lender the rights to convert to an ownership or equity interest in the company if the loan is not paid back in time and in full. It is generally subordinated to senior debt. The SIB utilizes this strategy, through a limited partnership structure, in its global fixed income allocation. The two funds in this category are not eligible for redemptions, have remaining lives of 1-4 years, and unfunded commitments of \$8.5 million as of June 30, 2020 and 2019.

**Private Credit** — These investments include loans to private companies, privately placed debt of public companies, or loans backed by real assets. Loan repayment can be derived from either cash flows from an operating company or cash flows generated by a physical or esoteric asset. Private debt is typically secured and has various protections/covenants in place. The debt is customized to the borrower's requirement, thus rendering it illiquid. The SIB includes these strategies within its global fixed income allocation through limited partnership-type structures. Private credit issuers may be investment grade but are typically below-investment grade and similar in some respect to the syndicated bank loan and high yield markets. The SIB employs two senior private credit funds, commonly referred to as direct lenders, which are structured as custom managed accounts that are not eligible for redemptions during remaining investment lives of 1 to 2 years, and the unfunded commitments totaled \$191.2 million and \$146.2 million as of June 30, 2020 and 2019, respectively.

**Private Equity** — Private Equity investments are typically private interests in corporations across different areas of the capital structure and in different stages of the corporations' development via limited partnership vehicles. Private Equity investments are illiquid and long term in nature (10-12 years), typically held until maturity. Private Equity portfolios generally have a "J-Curve Effect" whereby there are low to negative returns in the initial years due to the payment of investment management fees and initial funding of investments made by the General Partner during a period when investments are typically carried at cost and returns have not been realized. To diversify the program, Private Equity investments are made across business cycles, vintage years, and different strategies. The SIB has a dedicated sub-asset class for private equity investments within its global equity allocation in the pension pool. The SIB does not have the option to request redemptions from its private equity funds. The General Partner distributes earnings and proceeds from the sale of the underlying investments as transactions occur. The SIB has \$333.3 million and \$339.9 million in unfunded private equity commitments as of June 30, 2020 and 2019, respectively.

**Venture Capital** — these include investments in companies in a range of stages of development from start-up/seed stage, early stage, and later/expansion stage. Investments are typically made in years one through six and returns typically occur in years four through ten.

**Buyouts** — these include investments in funds that seek out and purchase underperforming or undervalued companies in order to improve them and sell them or take them public many years later. These funds are also often involved in management buyouts, which are buyouts conducted by the management of the company being purchased, and they often play key roles in leveraged buyouts, which are buyouts that are funded with borrowed money.

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**Real Assets** — These investments are intended to provide allocations to tangible assets that are expected to be inflation protected and provide performance above the inflation rate as indicated by the CPI. Investments are generally structured as limited partnerships or limited liability companies. Investments in Real Assets include:

**Real Estate** — includes investments in private vehicles through limited partnerships or commingled vehicles that have an ownership interest in direct real estate properties. The investment strategies may include “value added” strategies, which derive their return from both income and appreciation, “opportunistic”, which derive their return primarily through appreciation, and “alternative” which invest in less traditional types of property. Both domestic and international real estate funds are utilized. The SIB has a dedicated sub-asset class for these types of investments within global real assets. There are currently nine different real estate funds in the portfolio. Four of those funds are open-ended vehicles that accept redemption requests quarterly with a 30-90 day notification period. Two of the four open-ended funds had unfunded commitments totaling \$45 million as of June 30, 2020; and there were no unfunded commitments in the open-ended funds as of June 30, 2019. The remaining five funds are closed-ended limited partnerships that are not eligible for redemptions. Those five funds have a combined unfunded commitment of \$85.1 million and \$114.4 million as of June 30, 2020 and 2019, respectively.

**Timberland** — includes investments in limited liability companies that have an ownership interest in properties where the value of the property is derived mainly from income-producing timber but also from the “higher and better use” value of the underlying land. The SIB includes these assets within its global real assets allocations. There are three funds in the portfolio and they have no unfunded commitments. The funds are not eligible for redemption other than distributions of income and/or proceeds as determined by the investment manager. The funds have remaining lives of 1-6 years.

**Infrastructure** — includes investments in limited partnerships that have an ownership interest in transportation assets such as toll roads, tunnels and bridges; and regulated assets such as electricity transmission, gas and oil distribution and wastewater collection. Other possible investments would include communication assets and social infrastructure. The SIB includes these assets within its global real assets allocations. The infrastructure investments in the portfolio as of June 30, 2020 and 2019, include both open and closed-ended funds. The open-ended funds have no unfunded commitments and are eligible for redemptions quarterly with 90 days notice. There may be a 3-12 month queue for receiving redemptions. The closed-ended funds have unfunded commitments of \$116.3 million and \$243.9 million at June 30, 2020 and 2019, respectively, and are not eligible for redemptions.

## Securities Lending

State statutes permit and the SIB has authorized the use of securities lending – loans of securities to broker-dealers and other entities for collateral with a simultaneous agreement to return the collateral for the same securities in the future. Northern Trust is the securities lending agent for the SIB. Securities are loaned versus collateral that may include cash, US government securities and irrevocable letters of credit. US securities are loaned versus collateral valued at 102% of the fair value of the securities plus any accrued interest. Non-US securities are loaned versus collateral valued at 105% of the fair value of the securities plus any accrued interest.

Non-cash collateral cannot be pledged or sold unless the borrower defaults. All securities loans can be terminated on demand by either the lender or the borrower, although the average term of SIB loans was approximately 232 and 71 days as of June 30, 2020 and 2019, respectively. Cash open collateral is invested in a short term investment pool, which had an interest sensitivity of 1 day and 3 days as of June 30, 2020 and 2019, respectively. This pool is valued based on amortized cost. There were no violations of legal or contractual provisions, no borrower or lending agent default losses known to the securities lending agent. There are no dividends or coupon payments

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owing on the securities lent. Securities lending earnings are credited to participating clients on approximately the fifteenth day of the following month.

Indemnification deals with the situation in which a client's securities are not returned due to the insolvency of a borrower and Northern Trust has failed to live up to its contractual responsibilities relating to the lending of those securities. Northern Trust's responsibilities include performing appropriate borrower and collateral investment credit analyses, demanding adequate types and levels of collateral, and complying with applicable Department of Labor and Federal Financial Institutions Examination Council regulations concerning securities lending.

For securities loaned at fiscal year end, the SIB has no credit risk exposure to borrowers because the amounts the SIB owes the borrowers exceeds the amounts the borrowers owe the SIB.

The following represents the balances relating to the securities lending transactions at June 30, 2020 and 2019 (expressed in thousands).

2020	<u>Securities Lent</u>	<u>Non-Cash Collateral Value</u>	<u>Cash Collateral Investment Value</u>
Lent for cash collateral:			
US agency securities	\$ 634	\$ -	\$ 646
US government securities	1,471	-	1,487
US corporate fixed income securities	16,468	-	16,744
Global government securities	827	-	875
Global corporate fixed income securities	205	-	214
US equities	7,717	-	7,815
Global equities	29,051	-	31,010
Lent for non-cash collateral:			
US government securities	1,316	1,343	-
US corporate fixed income securities	17,204	17,555	-
US equities	87,966	89,262	-
Global equities	12,630	13,519	-
Total	<u>\$ 175,489</u>	<u>\$ 121,679</u>	<u>\$ 58,791</u>

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2019	<u>Securities Lent</u>	<u>Non-Cash Collateral Value</u>	<u>Cash Collateral Investment Value</u>
Lent for cash collateral:			
US agency securities	\$ 528	\$ -	\$ 541
US government securities	4,387	-	4,481
US corporate fixed income securities	20,637	-	21,047
Global agency securities	1,559		1,636
Global government securities	100		107
Global corporate fixed income securities	1,565	-	1,667
US equities	14,560	-	14,762
Global equities	1,934	-	2,025
Lent for non-cash collateral:			
US agency securities	200	202	-
US government securities	17,679	17,968	-
US corporate fixed income securities	64,979	65,750	-
US equities	211,061	213,840	-
Global equities	17,900	18,960	-
Total	<u>\$ 357,089</u>	<u>\$ 316,720</u>	<u>\$ 46,266</u>

**Note 4 - Capital Assets**

	<u>June 30, 2018</u>	<u>Additions</u>	<u>Retirements</u>	<u>June 30, 2019</u>	<u>Additions</u>	<u>Retirements</u>	<u>June 30, 2020</u>
Office equipment	\$16,879	\$ -	\$ -	\$16,879	\$ -	\$ -	\$16,879
Less accumulated depreciation on office equipment	(10,130)	(1,800)	-	(11,930)	(1,800)	-	(13,730)
Software	1,213,500	-	-	1,213,500	-	-	1,213,500
Less accumulated depreciation on software	(1,213,500)	-	-	(1,213,500)	-	-	(1,213,500)
	<u>\$ 6,749</u>	<u>\$ (1,800)</u>	<u>\$ -</u>	<u>\$ 4,949</u>	<u>\$ (1,800)</u>	<u>\$ -</u>	<u>\$ 3,149</u>

**Note 5 - State Agency Transactions**

**Due To/From Other State Agencies and Other State Funds**

Amounts due from/to other state agencies and other state funds are as follows as of June 30, 2020 and 2019:

	<u>2020</u>	<u>2019</u>
Due To Other State Agencies		
Information Technology Department	\$ 7,831	\$ 7,848
Office of Attorney General	3,011	1,288
Office of Management and Budget	337	150
Rough Rider Industries	-	137
Total due to other state agencies	<u>\$ 11,179</u>	<u>\$ 9,424</u>
Due To Other State Funds		
General Fund	<u>\$ -</u>	<u>\$ 455,263,216</u>

Due to other state agencies balances are a result of a time lag between the dates that services are provided, the payments are made, and the transactions are entered into the accounting system. Due to other state funds represents the statutorily defined earnings of the Legacy Fund for the 2017-19 biennium that is required by the State Constitution to be transferred to the general fund at the end of the biennium.

**Note 6 - Operating Leases**

RIO leased office space under an operating lease effective July 1, 2017 through June 30, 2023. RIO also incurs rent expense at other locations on a temporary basis to sponsor retirement education for TFFR members. Rent expense totaled \$89,924 and \$87,766 for fiscal years 2020 and 2019, respectively. Minimum payments under the lease for fiscal 2021 are \$88,365.

**Note 7 - Changes in Noncurrent Liabilities**

Changes in noncurrent liabilities are included in accrued expenses in the statements of changes in net position. The changes for the years ended June 30, 2020 and 2019 are summarized as follows:

	Beginning Balance <u>7/1/2019</u>	Additions	Reductions	Ending Balance <u>6/30/2020</u>	Amounts Due Within One Year
Accrued Leave	<u>\$194,227</u>	<u>\$149,970</u>	<u>(\$138,367)</u>	<u>\$205,830</u>	<u>\$135,440</u>
	Beginning Balance <u>7/1/2018</u>	Additions	Reductions	Ending Balance <u>6/30/2019</u>	Amounts Due Within One Year
Accrued Leave	<u>\$196,079</u>	<u>\$149,667</u>	<u>(\$151,519)</u>	<u>\$194,227</u>	<u>\$126,078</u>

Pension and Investment Trust Funds liquidate the accrued annual leave.

**Note 8 - North Dakota Teachers' Fund for Retirement**

**Administration**

The following brief description of TFFR is provided for general information purposes only. Participants should refer to NDCC Chapter 15-39.1 for more complete information.

TFFR is a cost-sharing multiple-employer defined benefit pension plan covering all North Dakota public teachers and certain other teachers who meet various membership requirements. TFFR provides for pension, death and disability benefits. The cost to administer the TFFR plan is financed by investment income and contributions.

Responsibility for administration of the TFFR benefits program is assigned to a seven-member Board of Trustees (Board). The Board consists of the State Treasurer, the Superintendent of Public Instruction, and five members appointed by the Governor. The appointed members serve five-year terms which end on June 30 of alternate years. The appointed Board members must include two active teachers, one active school administrator, and two retired members. The TFFR Board submits any necessary or desirable changes in statutes relating to the administration of the fund, including benefit terms, to the Legislative Assembly for consideration. The Legislative Assembly has final authority for changes to benefit terms and contribution rates.

**Membership**

As of June 30, 2020 and 2019, the number of participating employer units was 213, consisting of the following:

	June 30, 2020	June 30, 2019
Public School Districts	174	175
County Superintendents	6	6
Special Education Units	20	19
Vocational Education Units	4	4
Other	9	9
Total	213	213

TFFR's membership consisted of the following:

	2020	2019
Retirees and beneficiaries currently receiving benefits	9,036	8,918
Terminated employees - vested	1,715	1,657
Terminated employees - nonvested	1,132	1,035
Total	11,883	11,610
Current employees		
Vested	8,216	7,936
Nonvested	3,131	3,239
Total	11,347	11,175



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**Member and Employer Contributions**

Member and employer contributions paid to TFFR are set by NDCC Section 15-39.1-09. Every eligible teacher in the State of North Dakota is required to be a member of TFFR and is assessed at a rate of 11.75% of salary as defined by NDCC Section 15-39.1-04. Every governmental body employing a teacher must also pay into TFFR a sum equal to 12.75% of the teacher's salary. Member and employer contributions will be reduced to 7.75% each when the fund reaches 100% funded ratio on an actuarial basis.

A vested member who terminates covered employment may elect a refund of contributions paid plus 6% interest or defer payment until eligible for pension benefits. A non-vested member who terminates covered employment must claim a refund of contributions paid before age 70½. Refunded members forfeit all service credits under TFFR. These service credits may be repurchased upon return to covered employment under certain circumstances, as defined by the NDCC.

**Pension Benefits**

For purposes of determining pension benefits, members are classified within one of three categories. Tier 1 grandfathered and Tier 1 non-grandfathered members are those with service credit on file as of July 1, 2008. Tier 2 members are those newly employed and returning refunded members on or after July 1, 2008.

***Tier 1 Grandfathered***

A Tier 1 grandfathered member is entitled to receive unreduced benefits when three or more years of credited service as a teacher in North Dakota have accumulated, the member is no longer employed as a teacher and the member has reached age 65, or the sum of age and years of service credit equals or exceeds 85. TFFR permits early retirement from ages 55 to 64, with benefits actuarially reduced by 6% per year for every year the member's retirement age is less than 65 years or the date as of which age plus service equal 85. In either case, benefits may not exceed the maximum benefits specified in Section 415 of the Internal Revenue Code.

Pension benefits paid by TFFR are determined by NDCC Section 15-39.1-10. Monthly benefits under TFFR are equal to the three highest annual salaries earned divided by 36 months and multiplied by 2.00% times the number of service credits earned. Retirees may elect payment of benefits in the form of a single life annuity, 100% or 50% joint and survivor annuity, ten or twenty-year term certain annuity, partial lump-sum option or level income with Social Security benefits. Members may also qualify for benefits calculated under other formulas.

***Tier 1 Non-grandfathered***

A Tier 1 non-grandfathered member is entitled to receive unreduced benefits when three or more years of credited service as a teacher in North Dakota have accumulated, the member is no longer employed as a teacher and the member has reached age 65, or has reached age 60 and the sum of age and years of service credit equals or exceeds 90. TFFR permits early retirement from ages 55 to 64, with benefits actuarially reduced by 8% per year from the earlier of age 60/Rule of 90 or age 65. In either case, benefits may not exceed the maximum benefits specified in Section 415 of the Internal Revenue Code.

Pension benefits paid by TFFR are determined by NDCC Section 15-39.1-10. Monthly benefits under TFFR are equal to the three highest annual salaries earned divided by 36 months and multiplied by 2.00% times the number of service credits earned. Retirees may elect payment of benefits in the form of a single life annuity, 100% or 50% joint and survivor annuity, ten or twenty-year term certain annuity, partial lump-sum option or level income with Social Security benefits. Members may also qualify for benefits calculated under other formulas.

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**Tier 2**

A Tier 2 member is entitled to receive unreduced benefits when five or more years of credited service as a teacher in North Dakota have accumulated, the member is no longer employed as a teacher and the member has reached age 65, or has reached age 60 and the sum of age and years of service credit equals or exceeds 90. TFFR permits early retirement from ages 55 to 64, with benefits actuarially reduced by 8% per year from the earlier of age 60/Rule of 90 or age 65. In either case, benefits may not exceed the maximum benefits specified in Section 415 of the Internal Revenue Code.

Pension benefits paid by TFFR are determined by NDCC Section 15-39.1-10. Monthly benefits under TFFR are equal to the five highest annual salaries earned divided by 60 months and multiplied by 2.00% times the number of service credits earned. Retirees may elect payment of benefits in the form of a single life annuity, 100% or 50% joint and survivor annuity, ten or twenty-year term certain annuity, partial lump-sum option or level income with Social Security benefits. Members may also qualify for benefits calculated under other formulas.

**Death and Disability Benefits**

Death benefits may be paid to a member's designated beneficiary. If a member's death occurs before retirement, the benefit options available are determined by the member's vesting status prior to death. If a member's death occurs after retirement, the death benefit received by the beneficiary (if any) is based on the retirement plan the member selected at retirement.

An active member is eligible to receive disability benefits when: (a) a total disability lasting 12 months or more does not allow the continuation of teaching, (b) the member has accumulated five years of credited service in North Dakota, and (c) the Board of Trustees of TFFR has determined eligibility based upon medical evidence. The amount of the disability benefit is computed by the retirement formula in NDCC Section 15-39.1-10 without consideration of age and uses the member's actual years of credited service. There is no actuarial reduction for reason of disability retirement.

**Investment Rate of Return**

The annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 3.37% and 5.46% for the years ended June 30, 2020 and 2019, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

**Realized Gains and Losses**

Realized gains and losses on sales of investments are components of net change in fair value of investments and are computed as described in Note 1. For the years ended June 30, 2020 and 2019, TFFR had net realized gains of \$50,611,877 and \$66,548,800, respectively.

**Net Pension Liability**

The components of the net pension liability of TFFR at June 30, 2020 and 2019 (expressed in thousands), were as follows:

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	June 30, 2020	June 30, 2019
Total pension liability	\$ 4,181,036	\$ 3,993,424
Plan fiduciary net position	<u>(2,650,532)</u>	<u>(2,616,171)</u>
Net pension liability (NPL)	<u>\$ 1,530,504</u>	<u>\$ 1,377,253</u>
Plan fiduciary net position as a percentage of the total pension liability	63.4%	65.5%

## Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of July 1, 2020 and 2019, using the following actuarial assumptions:

Valuation date	July 1, 2020	July 1, 2019
Inflation	2.30%	2.75%
Salary increases	3.80% to 14.80%; varying by service, including inflation and productivity	4.25% to 14.50%; varying by service, including inflation and productivity
Cost of living adjustments	None	None
Investment rate of return	7.25% net of investment expenses, including inflation	7.75% net of investment expenses, including inflation

For the July 1, 2020, valuation, the post-retirement healthy mortality table was updated to 104% of the PubT-2010 Retiree table for retirees and to 95% of the PubT-2010 Contingent Survivor table for beneficiaries, both projected with generational improvement using Scale MP-2019. The disabled mortality was updated to the PubNS-2010 Non-Safety Disabled Mortality table projected with generational improvement using Scale MP-2019.

The pre-retirement mortality table was updated to the Pub T-2010 Employee table projected with generational improvement using Scale MP-2019. The actuarial assumptions used were based on the results of an experience study dated March 19, 2020.

For the July 1, 2019, valuation, active and inactive members' mortality rates were based on the RP-2014 Employee Mortality Table projected generationally using Scale MP-2014. For healthy retirees, mortality rates were based on the RP-2014 Healthy Annuitant Mortality Table set back one year, multiplied by 50% for ages under 75 and grading up to 100% by age 80, projected generationally using Scale MP-2014. For disabled retirees, mortality rates were based on the RP-2014 Disabled Mortality Table set forward four years.

The actuarial assumptions used in the July 1, 2019, valuation were based on the results of an actuarial experience study dated April 30, 2015, for the period July 1, 2009 – June 30, 2014. An actuarial experience study is generally conducted every five years.

The TFFR Board is responsible for establishing investment policy for the fund assets under NDCC 15-39.1-05.2. Benefit payments are projected to occur over a long period of time. This allows TFFR to adopt a long-term investment horizon and asset allocation policy for the management of fund assets. Asset allocation policy is critical because it defines the basic risk and return characteristics of the investment portfolio. Asset allocation targets are established using an asset-liability analysis designed to assist the Board in determining an acceptable volatility target for the fund and an optimal asset allocation policy mix. This asset-liability analysis considers both sides of the plan balance sheet, utilizing both quantitative and qualitative inputs, in order to estimate the potential impact

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of various asset class mixes on key measures of total plan risk, including the resulting estimated impact of funded status and contribution rates.

The long-term expected rate of return on TFFR investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the TFFR target asset allocation as of July 1, 2020 and 2019 are summarized in the following tables:

2020	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity	58.0%	6.9%
Global Fixed Income	23.0%	1.3%
Global Real Assets	18.0%	5.0%
Cash Equivalents	1.0%	0.0%
2019	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity	58.0%	6.9%
Global Fixed Income	23.0%	2.1%
Global Real Assets	18.0%	5.4%
Cash Equivalents	1.0%	0.0%

As part of the most recent asset/liability study, the total fund real rate of return was upwardly adjusted by 0.50% to reflect a longer investment time horizon than is assumed in the investment consultant's expected returns and to account for above benchmark returns achieved through active management. In order to estimate the nominal rate of return, the real rate of return was adjusted upward by 2.75% for expected inflation.

### Discount Rate

The discount rate used to measure the total pension liability was 7.25% and 7.75% as of June 30, 2020 and 2019, respectively. The projection of cash flows used to determine the discount rate assumed that member and employer contributions will be made at rates equal to those based on the July 1, 2020 and 2019 Actuarial Valuation Report. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, TFFR's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members as of July 1, 2020 and 2019. Therefore, the long-term expected rate of return on TFFR investments was applied to all periods of projected benefit payments to determine the total pension liability as of June 30, 2020 and 2019.

**Sensitivity of Net Pension Liability**

The following presents the net pension liability of the TFFR employers calculated using the discount rate of 7.75% as of June 30, 2020 and 2019, as well as what the employers' net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
2020			
Employers' net pension liability	\$ 2,038,548,355	\$ 1,530,503,462	\$ 1,108,292,065
2019			
Employers' net pension liability	\$ 1,859,994,289	\$ 1,377,253,104	\$ 976,082,834

**Note 9 - ND Public Employees Retirement System (NDPERS)**

Permanent employees of RIO participate in the pension and other post-employment benefit (OPEB) plans of NDPERS, which is also an agency of the State of North Dakota financial reporting entity and is included in the State of North Dakota's Comprehensive Annual Financial Report. The following brief description of NDPERS is provided for general information purposes only. Participants should refer to NDCC Chapter 54-52 for more complete information.

NDPERS pension (Main System) and OPEB plans are cost-sharing multiple-employer defined benefit plans that cover employees/retirees of the State of North Dakota, its agencies and various participating political subdivisions. NDPERS pension plan provides for pension, death and disability benefits. NDPERS OPEB plan provides a credit toward the monthly health insurance premium of members receiving retirement benefits from the PERS, HPRS and Judges retirement under Chapter 27-17 of the North Dakota Century Code. Effective July 1, 2015, the credit is also available to apply towards monthly premiums under the state dental, vision and long-term care plan and any other health insurance plan. Effective August 1, 2019, the credit is expanded to also include any dental, vision, and long-term care plan. The cost to administer the pension plan is financed through the contributions and investment earnings of the plan. The Retiree Health Insurance Credit Fund is advance-funded on an actuarially determined basis.

Responsibility for administration of the NDPERS defined benefit pension and OPEB plans is assigned to a Board comprised of nine members. The Board consists of a Chairman, who is appointed by the Governor, one member appointed by the Attorney General, one member appointed by the State Health Officer, three members elected by the active membership of the NDPERS system, one member elected by the retired public employees and two members of the legislative assembly appointed by the chairman of the legislative management.

**Pension Benefits**

Benefits are set by statute. NDPERS has no provisions or policies with respect to automatic and ad hoc post-retirement benefit increases. Members of the Main System are entitled to unreduced monthly pension benefits beginning when the sum of age and years of credited service equal or exceed 85 (Rule of 85), or at normal retirement age (65). For members hired on or after January 1, 2016 the Rule of 85 is replaced with the Rule of 90

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with a minimum age of 60. The monthly pension benefit is equal to 2.00% of their average monthly salary, using the highest 36 months out of the last 180 months of service, for each year of service. The plan permits early retirement at ages 55-64 with three or more years of service.

Members may elect to receive the pension benefits in the form of a single life, joint and survivor, term-certain annuity, or partial lump sum with ongoing annuity. Members may elect to receive the value of their accumulated contributions, plus interest, as a lump sum distribution upon retirement or termination, or they may elect to receive their benefits in the form of an annuity. For each member electing an annuity, total payment will not be less than the members' accumulated contributions plus interest.

## Death and Disability Benefits

Death and disability benefits are set by statute. If an active member dies with less than three years of service, a death benefit equal to the value of the member's accumulated contributions, plus interest, is paid to the member's beneficiary. If the member has earned more than three years of credited service, the surviving spouse will be entitled to a single payment refund, life-time monthly payment in an amount equal to 50% of the member's accrued normal retirement benefit, or monthly payments in an amount equal to the member's accrued 100% Joint and Survivor retirement benefit if the member had reached normal retirement age prior to date of death. If the surviving spouse dies before the member's accumulated pension benefits are paid, the balance will be payable to the surviving spouse's beneficiary.

Eligible members, who become totally disabled after a minimum of 180 days of service, receive monthly disability benefits equal to 25% of their final average salary with a minimum benefit of \$100. To qualify under this section, the member has to become disabled during the period of eligible employment and apply for benefits within one year of termination. The definition for disabled is set by the System in the North Dakota Administrative Code.

## Refunds of Member Contributions

Upon termination, if a member is not vested (is not 65 or does not have three years of service credited for the NDPERS) they will receive the accumulated member contributions plus interest, or may elect to receive this amount at a later date. If a member has vested, they have the option of applying for a refund or can remain as a terminated vested participant. If a member terminated and withdrew their accumulated member contributions and is subsequently reemployed, they have the option of repurchasing their previous service.

## Member and Employer Contributions

Member contributions are set by statute. During the 1983-1985 biennium the State of North Dakota implemented the employer pickup provision of the IRS code whereby a portion or all of the required member contributions are made by the employer. RIO, as the employer, is paying 4% of the member contribution. Employer contributions are set by statute.

Contribution rates are established as a percent of covered compensation as follows:

	Member	Employer
Members first enrolled prior to January 1, 2020	7.00%	7.12%
Members first enrolled after January 1, 2020	7.00%	8.26%
Members returning to the DB Plan as a result of Senate Bill 2015	9.00%	7.12%

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The member's account balance includes the vested employer contributions equal to the member's contributions to an eligible deferred compensation plan. The minimum member contribution is \$25 and the maximum may not exceed the following:

- 1 to 12 months of service – Greater of one percent of monthly salary or \$25
- 13 to 24 months of service – Greater of two percent of monthly salary or \$25
- 25 to 36 months of service – Greater of three percent of monthly salary or \$25
- Longer than 36 months of service – Greater of four percent of monthly salary or \$25

### **OPEB Benefits**

The employer contribution is set by statute at 1.14% of covered compensation. Employees participating in the retirement plan as part-time/temporary members are required to contribute 1.14% of their covered compensation to the Retiree Health Insurance Credit Fund. Employees purchasing previous service credit are also required to make an employee contribution to the Fund. The benefit amount applied each year is shown as "prefunded credit applied" on the Statement of Changes in Plan Net Position for the OPEB trust funds.

Retiree health insurance credit benefits and death and disability benefits are set by statute. There are no provisions or policies with respect to automatic and ad hoc post-retirement benefit increases. Employees who are receiving monthly retirement benefits, or the spouse of a deceased annuitant receiving a surviving spouse benefit or if the member selected a joint and survivor option are eligible to receive a credit toward their monthly health insurance premium under the state health plan.

The benefits are equal to \$5.00 for each of the employee's, or deceased employee's years of credited service not to exceed the premium in effect for selected coverage. The retiree health insurance credit is also available for early retirement with reduced benefits.

### **Pension & OPEB Liabilities, Pension & OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions & OPEB**

At June 30, 2020 and 2019, RIO reported a liability of \$1,889,405 and \$2,704,103, respectively, for its proportionate share of the net pension and OPEB liability. These amounts are included in the accrued liabilities in the statements of net position. The net pension and OPEB liability was measured as of June 30, 2019 and 2018, and the total pension and OPEB liability used to calculate the net pension and OPEB liability was determined by an actuarial valuation as of that date. RIO's proportion of the net pension liability was based on RIO's share of covered payroll in the pension and OPEB plans relative to the covered payroll of all participating NDPERS Main System and OPEB employers. At June 30, 2019, RIO's pension plan proportion was 0.151523 percent and as of June 30, 2018, was 0.153507 percent. RIO's OPEB plan proportion was 0.141245 percent as of June 30, 2019 and was 0.144121 percent as of June 30, 2018.

RIO recognized pension and OPEB expense of \$234,757 and \$345,458 for the years ended June 30, 2020 and 2019, respectively. At June 30, 2020 and 2019, RIO reported deferred outflows of resources and deferred inflows of resources related to pensions and OPEB from the following sources:

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	Deferred Outflows of Resources		Deferred Inflows of Resources	
	2020	2019	2020	2019
Differences between expected and actual experience	\$ 3,853	\$ 10,258	\$ 325,848	\$ 90,482
Changes in assumptions	677,150	944,466	569,784	36,976
Net differences between projected and actual earnings on plan investments	31,068	-	-	15,046
Changes in proportion and differences between employer contributions and proportionate share of contributions	55,138	96,731	44,740	29,040
Employer contributions subsequent to the measurement date	134,714	130,831	-	-
Total	\$ 901,923	\$ 1,182,286	\$ 940,372	\$ 171,544

Deferred outflows of resources related to pensions and OPEB resulting from employer contributions subsequent to the measurement date in the amount of \$134,714 will be recognized as a reduction of the net pension liability in the year ended June 30, 2021.

Other amounts reported as deferred outflows of resources and (deferred inflows of resources) related to pensions and OPEB will be recognized in pension expense as follows:

Year Ended June 30	
2021	91,327
2022	22,877
2023	(69,189)
2024	(167,521)
2025	(51,149)
Thereafter	492
	\$ (173,163)



**Actuarial assumptions**

The total pension and OPEB liabilities in the July 1, 2019 and 2018 actuarial valuation were determined using the following actuarial assumptions, applied to all periods included in the measurement:

**2019 – Pension Plan**

Inflation	2.50%
Salary Increase (Payroll Growth)	4.00% to 20%, including inflation
Investment Rate of Return	7.50%, net of investment expense, including inflation
Cost-of-living Adjustments	None

**2018 – Pension Plan**

Inflation	2.50%		
Salary Increases	Service at Beginning of Year:	State Employee	Non-State Employee
	0	12.00%	15.00%
	1	9.50%	10.00%
	2	7.25%	8.00%
	Age*		
	Under 30	7.25%	10.00%
	30 - 39	6.50%	7.50%
	40 - 49	6.25%	6.75%
	50 - 59	5.75%	6.50%
	60+	5.00%	5.25%

\*Age-based salary increase rates apply for employees with three or more years of service

Investment Rate of Return	7.75%, net of investment expenses
Cost-of-living Adjustments	None

For active members, inactive members and healthy retirees, mortality rates were based on the RP-2000 Combined Healthy Mortality Table set back two years for males and three years for females, projected generationally using the SSA 2014 Intermediate Cost scale from 2014. For disabled retirees, mortality rates were based on the RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125%.

The actuarial assumptions used were based on the results of an actuarial experience study completed in 2015. They are the same as the assumptions used in the July 1, 2019 and 2018, funding actuarial valuation for NDPERS.

As a result of the 2015 actuarial experience study, the NDPERS Board adopted several changes to the actuarial assumptions effective July 1, 2015. This includes changes to the mortality tables, disability incidence rates, retirement rates, administrative expenses, salary scale, and percent married assumption.

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**2019 - OPEB Plan**

Inflation	2.50%
Salary increase	Not applicable
Investment Rate of Return	7.25%, net of investment expenses, including inflation
Cost of Living Adjustment	None

**2018 - OPEB Plan**

Inflation	2.50%
Salary increase	Not applicable
Investment Rate of Return	7.50%, net of investment expenses
Cost of Living Adjustment	None

For active members, inactive members and healthy retirees, mortality rates were based on the RP-2000 Combined Healthy Mortality Table set back two years for males and three years for females, projected generationally using the SSA 2014 Intermediate Cost scale from 2014. For disabled retirees, mortality rates were based on the RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125%.

There were no benefit changes during the year. Beginning January 1, 2020, members first enrolled in the NDPERS Main System and the Defined Contribution Plan on our after that date will not be eligible to participate in the OPEB Plan. Therefore, the OPEB Plan will become for the most part a closed plan. There were no other benefit changes during the year. The economic assumptions (excluding salary increases) and the asset smoothing method were updated beginning with the actuarial valuation as of July 1, 2017, based on a review performed by the actuary. The investment return assumption was decreased from 7.5% to 7.25% beginning with the actuarial valuation as of July 1, 2019. All other actuarial assumptions were adopted by the PERS Board based on an experience study covering the period July 1, 2009, through June 30, 2014. The employer rate to the System is the statutory contribution rate of 1.14% of payroll.

The long-term expected rate of return on pension and OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the plans' target asset allocations are summarized in the following table:

**2020 - Pension Plan**

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Global Equity	57%	7.0%
Global Fixed Income	23%	2.1%
Global Real Assets	20%	5.4%

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**2019 - Pension Plan**

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity	57%	6.8%
Global Fixed Income	23%	1.5%
Global Real Assets	20%	5.1%

**2020 - OPEB Plan**

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Large Cap Domestic Equity	37%	6.0%
Small Cap Domestic Equity	9%	7.3%
International Equity	14%	7.0%
Core-Plus Fixed Income	40%	2.1%

**2019 - OPEB Plan**

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Large Cap Domestic Equity	37%	5.8%
Small Cap Domestic Equity	9%	7.1%
International Equity	14%	6.2%
Core-Plus Fixed Income	40%	1.5%

**Discount rate**

For pension plans, GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the System to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The current employer and employee fixed rate contributions are assumed to be made in each future year. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years.

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Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate (SDR) that reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) a tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For 2019, the expected return on pension plan investments is 7.50%; the municipal bond rate is 3.13% (based on the most recent date available on or before the measurement date of the “20-year Municipal Go Index” from Fidelity); and the resulting Single Discount Rate is 7.50%.

For 2018, the expected return on pension plan investments is 7.75%; the municipal bond rate is 3.62% (based on the most recent date available on or before the measurement date of the “20-year Municipal Go Index” from Fidelity); and the resulting Single Discount Rate is 6.32%.

The discount rate used to measure the total OPEB liability for 2019 was 7.25% and for 2018 was 7.5%. The projection of cash flows used to determine the discount rate assumed plan member and statutory/Board approved employer contributions will be made at rates equal to those based on the July 1, 2019 and 2018 OPEB actuarial valuation reports. For this purpose, only employer contributions that are intended to fund benefits of current OPEB members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries are not included. Based on those assumptions, the OPEB fiduciary net position was projected to be sufficient to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB investments was applied to all periods of projected benefit payments to determine the total OPEB liability for both years.

**Sensitivity of the Employer's proportionate share of the net pension and OPEB liability to changes in the discount rate**

The following presents RIO’s proportionate share of the net pension and OPEB liability calculated using the current discount rate, as well as what the RIO’s proportionate share of the net pension and OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

<b>2020</b>			
	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
RIO's net pension liability	\$ 2,546,343	\$ 1,775,959	\$ 1,128,702
	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
RIO's net OPEB liability	144,799	113,446	86,608

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2019	1% Decrease (5.32%)	Current Discount Rate (6.32%)	1% Increase (7.32%)
RIO's net pension liability	\$ 3,520,141	\$ 2,590,598	\$ 1,814,924
2019	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
RIO's net OPEB liability	143,611	113,505	87,696

**Sensitivity for Healthcare Cost Trend Rates**

The benefit provided by the North Dakota retiree health insurance credit fund is a fixed dollar subsidy and is not affected by the healthcare cost trend. Therefore, a sensitivity analysis was not performed.

**Pension and OPEB plan fiduciary net position**

Detailed information about the pension and OPEB plans' fiduciary net position is available in the separately issued NDPERS Comprehensive Annual Financial Report. This report can be accessed on the NDPERS website at <https://ndpers.nd.gov/about/financial/annual-report-archive/>.

**Note 10 - Related Parties**

As stated in Note 1, RIO is an agency of the State of North Dakota; as such, other agencies of the state are related parties.

**Note 11 - Contingencies/Litigation**

The State Investment Board has been named as a defendant in a case arising out of the Tribune bankruptcy proceedings, relating to securities that were purchased by external investment managers in one or more portfolios held by the SIB on behalf of its investment client funds. Outside counsel has been retained, in addition to assistance received from the ND Office of Attorney General. On July 15, 2019, the Litigation Trustee filed a Notice of Appeal to the Second Circuit, appealing the various judgments of the US District Court that dismissed his claims against defendants in the Action and denying leave to amend his complaint to add a constructive fraudulent transfer claim. The Second Circuit held oral argument on August 24, 2020, and took the matter under advisement. No liability has been recorded for this case.

**REQUIRED SUPPLEMENTARY INFORMATION**

**Schedule of Changes in Net Pension Liability and Related Ratios**  
**North Dakota Teachers' Fund for Retirement**  
**Last 10 Fiscal Years\***  
**(Dollars in thousands)**

	2020	2019	2018	2017	2016	2015	2014
<b>Total pension liability</b>							
Service cost	\$ 80,591	\$ 77,756	\$ 78,041	\$ 75,476	\$ 68,239	\$ 60,618	\$ 56,752
Interest	306,791	296,876	287,375	276,412	265,440	249,064	237,821
Changes of benefit terms	-	-	-	-	-	-	-
Differences between expected and actual experience	(20,732)	(23,495)	(27,939)	(10,749)	(8,093)	2,209	9,347
Changes of assumptions	51,813	-	-	-	-	171,325	-
Benefit payments, including refunds of member contributions	(230,851)	(221,228)	(207,979)	(196,516)	(185,969)	(172,239)	(162,259)
<b>Net change in total pension liability</b>	<b>187,612</b>	<b>129,909</b>	<b>129,498</b>	<b>144,623</b>	<b>139,617</b>	<b>310,977</b>	<b>141,661</b>
<b>Total pension liability - beginning</b>	<b>3,993,424</b>	<b>3,863,515</b>	<b>3,734,017</b>	<b>3,589,394</b>	<b>3,449,777</b>	<b>3,138,800</b>	<b>2,997,139</b>
<b>Total pension liability - ending (a)</b>	<b>\$ 4,181,036</b>	<b>\$ 3,993,424</b>	<b>\$3,863,515</b>	<b>\$3,734,017</b>	<b>\$3,589,394</b>	<b>\$3,449,777</b>	<b>\$ 3,138,800</b>
<b>Plan fiduciary net position</b>							
Contributions - employer	\$ 93,032	\$ 89,445	\$ 86,676	\$ 86,059	\$ 82,840	\$ 78,422	\$ 62,355
Contributions - member	85,735	82,429	79,878	79,309	76,343	72,268	56,555
Contributions - purchased service credit	2,175	1,917	2,181	2,553	2,768	1,601	2,034
Contributions - other	159	159	194	236	45	172	48
Net investment income	86,206	135,043	211,345	266,688	8,239	73,205	294,246
Benefit payments, including refunds of member contributions	(230,851)	(221,228)	(207,979)	(196,516)	(185,969)	(172,239)	(162,259)
Administrative expenses	(2,095)	(2,251)	(2,129)	(2,173)	(1,852)	(1,923)	(1,586)
<b>Net change in plan fiduciary net position</b>	<b>34,361</b>	<b>85,514</b>	<b>170,166</b>	<b>236,156</b>	<b>(17,586)</b>	<b>51,506</b>	<b>251,393</b>
<b>Plan fiduciary net position - beginning **</b>	<b>2,616,171</b>	<b>2,530,657</b>	<b>2,360,491</b>	<b>2,124,335</b>	<b>2,141,921</b>	<b>2,090,415</b>	<b>1,839,584</b>
<b>Plan fiduciary net position - ending (b)</b>	<b>\$ 2,650,532</b>	<b>\$ 2,616,171</b>	<b>\$2,530,657</b>	<b>\$2,360,491</b>	<b>\$2,124,335</b>	<b>\$2,141,921</b>	<b>\$ 2,090,977</b>
<b>Plan's net pension liability - ending (a) - (b)</b>	<b>\$ 1,530,504</b>	<b>\$ 1,377,253</b>	<b>\$1,332,858</b>	<b>\$1,373,526</b>	<b>\$1,465,059</b>	<b>\$1,307,856</b>	<b>\$ 1,047,823</b>
<b>Plan fiduciary net position as a percentage of the total pension liability</b>	63.4%	65.5%	65.5%	63.2%	59.2%	62.1%	66.6%
<b>Covered payroll</b>	729,661	701,528	679,809	674,971	649,725	615,105	580,053
<b>Plan's net pension liability as a percentage of covered payroll</b>	209.8%	196.3%	196.1%	203.5%	225.5%	212.6%	180.6%

**Notes to Schedule:**

\* Complete data for this schedule is not available prior to 2014.

\*\* Restated in 2015 due to GASB 68 implementation.

*Changes of assumptions:*

In 2020, amounts reported as changes of assumptions resulted primarily from a decrease in the investment return assumption from 7.75% to 7.25%, the inflation assumption lowered from 2.75% to 2.30%, lower individual salary increases, and an updated mortality improvement scale.

In 2015, amounts reported as changes of assumptions resulted primarily from a decrease in the investment return assumption from 8% to 7.75% and an updated mortality improvement scale.

**Schedule of Employer Contributions  
North Dakota Teachers' Fund for Retirement  
Last 10 Fiscal Years  
(Dollars in thousands)**

Fiscal Year	Actuarially determined contribution	Contributions in relation to the actuarially determined contribution	Contribution deficiency (excess)	Covered payroll	Contributions as a percentage of covered payroll
2011	\$ 65,113	\$ 44,545	\$ 20,568	\$ 509,091	8.75%
2012	69,374	46,126	23,248	527,156	8.75%
2013	52,396	59,301	(6,905)	551,656	10.75%
2014	59,513	62,355	(2,842)	580,053	10.75%
2015	71,168	78,422	(7,254)	615,105	12.75%
2016	84,724	82,840	1,884	649,725	12.75%
2017	89,231	86,059	3,172	674,971	12.75%
2018	88,307	86,676	1,631	679,809	12.75%
2019	90,778	89,445	1,333	701,528	12.75%
2020	93,688	93,032	656	729,661	12.75%

**Notes to Schedule**

*Valuation Date:* Actuarially determined contributions for each fiscal year are based on the actuarial valuation as of the beginning of the year in which contributions are reported.

*Methods and assumptions used to determine contribution rates:*

Actuarial cost method	Entry age
Amortization method	Level percentage of payroll, closed
Remaining amortization period	23 years
Asset valuation method	5-year smoothed market
Inflation	2.30%; decreased from 2.75% prior to 7/1/2020 and from 3% prior to 7/1/2015.
Salary increases	3.80% - 14.80% including inflation and productivity; 4.25% - 14.5% prior to 7/1/2020; 4.5% - 14.75% prior to 7/1/2015.
Investment rate of return	7.25%, net of investment expenses, including inflation; rate was decreased from 7.75% beginning 7/1/2020 and decreased from 8% beginning 7/1/2015.
Retirement age	In the 2020 and 2015 valuations, rates of retirement were changed to better reflect anticipated future experience.
Mortality	In the 2020 valuation, the PubT-2010 pre-retirement, retiree and contingent survivor tables were adopted and for disabled members, PubNS-2010 tables were adopted; all with generational improvement.  In the 2015 valuation, assumed life expectancies were adjusted as a result of adopting the RP-2014 mortality tables with generational improvement. In prior years, those assumptions were based on percentages of GRS post termination non-disabled tables and RP-2000 disabled-life tables.



**Schedule of Investment Returns**  
**North Dakota Teachers' Fund for Retirement**  
**Last 10 Fiscal Years\***

**ANNUAL MONEY-WEIGHTED RATE OF RETURN, NET OF INVESTMENT EXPENSES**

<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
3.37%	5.46%	9.15%	12.81%	0.39%	3.56%	16.35%	13.60%

\*Note: Annual money-weighted rates of return not available prior to 2013.

**Schedule of Employer's Share of Net Pension and OPEB Liability**  
**ND Public Employees Retirement System**  
**Last 10 Fiscal Years\***  
**(Dollars in thousands)**

	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
RIO's proportion of NDPERS net pension liability (asset)	0.151523%	0.153507%	0.156317%	0.152969%	0.145546%	0.121849%
RIO's proportion of NDPERS net OPEB liability (asset)	<u>0.141245%</u>	<u>0.144121%</u>	<u>0.147503%</u>	<u>                    </u>	<u>                    </u>	<u>                    </u>
RIO's proportionate share of NDPERS net pension liability (asset)	\$ 1,776	\$ 2,591	\$ 2,513	\$ 1,491	\$ 990	\$ 773
RIO's proportionate share of NDPERS net OPEB liability (asset)	<u>113</u>	<u>114</u>	<u>117</u>	<u>                    </u>	<u>                    </u>	<u>                    </u>
RIO's covered payroll	<u>\$ 1,584</u>	<u>\$ 1,567</u>	<u>\$ 1,596</u>	<u>\$ 1,507</u>	<u>\$ 1,377</u>	<u>\$ 1,026</u>
RIO's proportionate share of NDPERS net pension liability (asset) as a percentage of its covered payroll	112.12%	165.35%	157.46%	98.94%	71.90%	75.34%
RIO's proportionate share of NDPERS net OPEB liability (asset) as a percentage of its covered payroll	<u>7.16%</u>	<u>7.28%</u>	<u>7.31%</u>	<u>                    </u>	<u>                    </u>	<u>                    </u>
NDPERS Plan fiduciary net position as a percentage of the total pension liability	71.66%	62.80%	61.98%	70.46%	77.15%	77.70%
NDPERS Plan fiduciary net position as a percentage of the total OPEB liability	<u>63.13%</u>	<u>61.89%</u>	<u>59.78%</u>	<u>                    </u>	<u>                    </u>	<u>                    </u>

\*Complete data for this schedule is not available prior to 2015 for pension liability and prior to 2018 for OPEB liability. Amounts presented for each fiscal year have a measurement date of the previous fiscal year end.

**Schedule of Employer Pension and OPEB Contributions**  
**ND Public Employees Retirement System**  
**Last 10 Years\***  
**(Dollars in thousands)**

	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
RIO's Statutorily required pension contributions	\$ 116	\$ 113	\$ 112	\$ 114	\$ 107	\$ 98	\$ 73
RIO's Statutorily required OPEB contributions	19	18	18	18			
RIO's pension contributions in relation to the statutory required contribution	116	113	112	114	107	98	73
RIO's OPEB contributions in relation to the statutory required contribution	<u>19</u>	<u>18</u>	<u>18</u>	<u>18</u>			
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
RIO's Covered payroll	\$1,631	\$1,584	\$1,567	\$1,596	\$1,507	\$1,377	\$1,026
RIO's pension contributions as a percentage of covered payroll	7.12%	7.12%	7.12%	7.12%	7.12%	7.12%	7.12%
RIO's OPEB contributions as a percentage of covered payroll	1.14%	1.14%	1.14%	1.14%			

\*Complete data for this schedule is not available prior to 2014 for pension contributions and 2017 for OPEB contributions.

	Pension Pool Participants					Insurance Pool Participants							
	Public	Bismarck	Bismarck	City of					Petroleum	Insurance			Risk
	Employees	City	City	Grand Forks	City of	Workforce	State	State	Tank	Regulatory	Cultural		Mgmt
	Retirement System	Employee Pension Plan	Police Pension Plan	Employee Pension Plan	Grand Forks Park District	Safety & Insurance	Fire & Tornado	Bonding	Release Comp. Fund	Trust Fund	Endowment Fund	Risk Mgmt	Workers' Comp
Assets:													
Investments													
Global equities	\$ 1,845,599,025	\$ 48,982,380	\$ 21,615,244	\$ 40,309,634	\$ 4,019,784	\$ 463,600,269	\$ 7,934,558	\$ 0	\$ 0	\$ 1,714,400	\$ 270,860	\$ 1,358,949	\$ 1,880,916
Global fixed income	735,144,204	36,634,135	12,436,455	16,314,757	1,890,302	1,277,855,340	12,482,646	2,064,721	3,040,316	1,998,953	183,900	2,927,255	3,077,201
Global real assets	602,436,549	20,433,096	8,130,001	9,898,398	1,423,026	346,432,420	-	-	-	-	23,407	-	-
Cash equivalents	18,725,420	582,442	247,426	785,212	50,237	27,443,101	2,272,830	1,699,313	3,073,254	1,994,988	15,111	226,433	153,312
Total investments	3,201,905,198	106,632,053	42,429,126	67,308,001	7,383,349	2,115,331,130	22,690,034	3,764,034	6,113,570	5,708,341	493,278	4,512,637	5,111,429
Invested sec lending collateral	9,188,775	281,059	112,117	197,228	20,619	6,492,798	74,266	5,807	8,466	15,700	1,404	8,382	8,956
Investment income receivable	10,208,300	314,814	122,878	150,579	22,865	10,550,093	135,522	23,492	5,185	6,279	123	48,537	4,789
Operating Cash	74,910	-	-	-	-	60,673	1,238	1,110	1,366	1,270	246	1,165	1,121
Miscellaneous receivable	6,088	-	-	-	-	4,150	43	8	13	3	1	9	10
Due from other state agencies	-	-	-	-	-	-	-	-	-	-	-	-	-
Total assets	3,221,383,271	107,227,926	42,664,121	67,655,808	7,426,833	2,132,438,844	22,901,103	3,794,451	6,175,270	5,731,593	495,052	4,570,730	5,126,305
Deferred outflows of resources													
Related to pensions	107,188	-	-	-	-	72,043	898	128	265	68	17	233	226
Liabilities:													
Investment expenses payable	2,644,373	95,672	40,511	54,149	6,948	933,458	11,112	1,112	1,654	1,900	230	2,013	2,286
Securities lending collateral	9,188,775	281,059	112,117	197,228	20,619	6,492,798	74,266	5,807	8,466	15,700	1,404	8,382	8,956
Accounts payable	66,754	-	-	-	-	42,746	447	79	132	35	9	90	100
Accrued expenses	271,956	-	-	-	-	188,111	2,716	346	743	171	43	644	595
Miscellaneous payable	-	5,611	2,235	3,321	373	-	-	-	-	-	-	-	-
Due to other state funds	-	-	-	-	-	-	-	-	-	-	-	-	-
Due to other state agencies	794	-	-	-	-	541	6	1	2	1	1	1	1
Total liabilities	12,172,652	382,342	154,863	254,698	27,940	7,657,654	88,547	7,345	10,997	17,807	1,687	11,130	11,938
Deferred inflows of resources													
Related to pensions	\$ 102,180	\$ 0	\$ 0	\$ 0	\$ 0	\$ 70,126	\$ 773	\$ 130	\$ 223	\$ 54	\$ 15	\$ 164	\$ 174
Fiduciary net position held in trust for external investment pool participants	\$ 3,209,215,627	\$ 106,845,584	\$ 42,509,258	\$ 67,401,110	\$ 7,398,893	\$ 2,124,783,107	\$ 22,812,681	\$ 3,787,104	\$ 6,164,315	\$ 5,713,800	\$ 493,367	\$ 4,559,669	\$ 5,114,419
Each participant unit is valued at \$100													
Participant units outstanding	3,209,215,627	106,845,584	42,509,258	67,401,110	7,398,893	2,124,783,107	22,812,681	3,787,104	6,164,315	5,713,800	493,367	4,559,669	5,114,419

**North Dakota Retirement and Investment Office**  
**Combining Statement of Net Position – Investment Trust Funds – Fiduciary Funds**  
**June 30, 2020 (with Comparative Totals for 2019)**

Insurance Pool Participants													Individual Investment Accounts			
ND Veterans' Cemetery Trust Fund	ND Ass'n. of Counties Fund	PERS Group Insurance	Budget Stabilization Fund	City of Bismarck Deferred Sick Leave	City of Fargo Fargo Dome Fund	State Board of Medicine	Lewis & Clark Interpretive Center Endowment	Attorney General Settlement Fund	Legacy Fund	Job Service of North Dakota	Tobacco Prevention and Control Fund	PERS Retiree Health Credit Fund	Totals			
													2020	2019		
\$ 156,425	\$ 2,333,077	\$ 0	\$ 0	\$ 229,639	\$ 21,684,203	\$ 666,547	\$ 276,926	\$ 0	\$ 3,478,368,132	\$ 18,153,248	\$ 0	\$ 88,768,471	\$ 6,047,922,687	\$ 5,758,237,240		
100,074	4,158,311	28,651,685	716,197,767	501,419	17,059,331	1,658,416	509,180	1,045,858	2,423,741,193	76,766,803	6,477,228	54,676,415	5,437,603,865	4,510,779,742		
44,456	-	-	-	-	4,308,452	19,082	-	-	996,517,381	-	-	-	1,989,786,268	1,889,505,508		
1,777	199,407	2,727,932	7,984,000	38,182	437,170	6,774	7,640	10,809	74,391,282	418,439	1,112,039	792,184	145,396,714	309,039,173		
312,732	6,690,795	31,379,617	724,181,767	769,240	43,489,156	2,470,819	793,746	1,056,667	6,973,017,988	95,338,490	7,589,267	144,237,070	13,620,709,534	12,467,561,663		
(820)	23,481	109,309	2,731,116	2,706	160,247	9,440	3,255	3,973	31,738,986	-	-	-	51,197,270	37,770,485		
50	2,397	116,370	3,093,297	1,553	61,712	(30)	62	481	26,765,280	43	87	252	51,681,680	50,051,024		
-	-	-	31,367	-	-	-	-	-	178,559	-	-	-	353,025	257,511		
-	-	-	1,458	-	-	-	-	-	12,879	-	-	-	24,662	26,379		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
311,962	6,716,673	31,605,296	730,039,005	773,499	43,711,115	2,480,229	797,063	1,061,121	7,031,713,692	95,338,533	7,589,354	144,237,322	13,723,966,171	12,555,667,062		
-	-	-	1,347	-	-	-	-	-	170,502	-	-	-	352,915	472,668		
140	3,311	14,671	347,719	395	25,549	1,247	434	510	4,133,132	84,088	2,438	104,165	8,513,217	4,829,521		
(820)	23,481	109,309	2,731,116	2,706	160,247	9,440	3,255	3,973	31,738,986	-	-	-	51,197,270	37,770,485		
-	-	-	14,973	-	-	-	-	-	136,081	-	-	-	261,446	253,814		
-	-	-	19,263	-	-	-	-	-	359,142	-	-	-	843,730	1,193,588		
105	340	1,704	-	250	2,196	250	250	250	-	5,346	421	6,945	29,597	32,115		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	455,263,216		
-	-	-	190	-	-	-	-	-	1,680	-	-	-	3,218	1,470		
(575)	27,132	125,684	3,113,261	3,351	187,992	10,937	3,939	4,733	36,369,021	89,434	2,859	111,110	60,848,478	499,344,209		
\$ 0	\$ 0	\$ 0	\$ 23,480	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 206,103	\$ 0	\$ 0	-	403,422	67,473		
\$ 312,537	\$ 6,689,541	\$ 31,479,612	\$ 726,903,611	\$ 770,148	\$ 43,523,123	\$ 2,469,292	\$ 793,124	\$ 1,056,388	\$ 6,995,309,070	\$ 95,249,099	\$ 7,586,495	\$ 144,126,212	\$ 13,663,067,186	\$ 12,056,728,048		
312,537	6,689,541	31,479,612	726,903,611	770,148	43,523,123	2,469,292	793,124	1,056,388	6,995,309,070	95,249,099	7,586,495	144,126,212	13,663,067,186	12,056,728,048		

	Pension Pool Participants					Insurance Pool Participants							Risk Mgmt Workers' Comp
	Public Employees Retirement System	Bismarck City Employee Pension Plan	Bismarck City Police Pension Plan	City of Grand Forks Employee Pension Plan	City of Grand Forks Park District Pension Plan	Workforce Safety & Insurance	State Fire & Tornado	State Bonding	Petroleum Tank Release Comp. Fund	Insurance Regulatory Trust Fund	Cultural Endowment Fund	Risk Mgmt	
<b>Additions:</b>													
<b>Investment income:</b>													
Net change in fair value of investments	\$ 44,741,951	\$ 1,826,538	\$ 637,666	\$ 1,027,301	\$ 107,635	\$ 77,621,108	\$ 624,250	\$ 114,953	\$ 170,176	\$ 225,107	\$ 9,624	\$ 172,210	\$ 190,845
Interest, dividends and other income	67,495,427	2,335,114	893,700	1,368,354	178,522	47,479,431	444,343	66,240	106,406	60,326	9,929	85,016	93,400
	112,237,378	4,161,652	1,531,366	2,395,655	286,157	125,100,539	1,068,593	181,193	276,582	285,433	19,553	257,226	284,245
Less investment expenses	8,227,685	286,083	116,264	169,943	22,064	3,843,479	36,334	3,018	4,497	3,572	956	6,437	7,259
Net investment income	104,009,693	3,875,569	1,415,102	2,225,712	264,093	121,257,060	1,032,259	178,175	272,085	281,861	18,597	250,789	276,986
<b>Securities lending activity:</b>													
Securities lending income	207,980	6,787	2,712	4,768	536	128,225	1,811	96	142	234	54	389	482
Less Securities lending expenses	(41,579)	(1,356)	(543)	(953)	(108)	(25,602)	(361)	(21)	(28)	(45)	(12)	(78)	(96)
Net securities lending income	166,401	5,431	2,169	3,815	428	102,623	1,450	75	114	189	42	311	386
Purchase of units (\$1 per unit)	-	-	-	3,799,733	423,980	2,000,000	4,327,187	-	-	5,201,869	-	250,000	1,000,000
Total Additions	104,176,094	3,881,000	1,417,271	6,029,260	688,501	123,359,683	5,360,896	178,250	272,199	5,483,949	18,639	501,100	1,277,372
<b>Deductions:</b>													
Administrative Expenses	469,933	-	-	-	-	294,160	3,267	1,005	1,183	1,001	710	1,041	1,073
Redemption of units (\$1 per unit)	46,150,000	1,500,000	750,000	7,028,039	463,278	63,000,000	5,300,000	-	100,000	5,988,231	-	850,000	1,350,000
Total Deductions	46,619,933	1,500,000	750,000	7,028,039	463,278	63,294,160	5,303,267	1,005	1,1183	5,989,232	710	851,041	1,351,073
Change in fiduciary net position	57,556,161	2,381,000	667,271	(998,779)	225,223	60,065,523	57,629	177,245	171,016	(505,313)	17,929	(349,941)	(73,701)
<b>Fiduciary net position:</b>													
Beginning of year	3,151,659,466	104,464,584	41,841,987	68,399,889	7,173,670	2,064,717,584	22,755,052	3,609,859	5,993,299	6,219,113	475,438	4,909,610	5,188,120
End of year	\$ 3,209,215,627	\$ 106,845,584	\$ 42,509,258	\$ 67,401,110	\$ 7,398,893	\$ 2,124,783,107	\$ 22,812,681	\$ 3,787,104	\$ 6,164,315	\$ 5,713,800	\$ 493,367	\$ 4,559,669	\$ 5,114,419

**North Dakota Retirement and Investment Office**  
**Combining Statement of Changes in Net Position – Investment Trust Funds – Fiduciary Funds**  
**Year Ended June 30, 2020 (with Comparative Totals for 2019)**

Insurance Pool Participants				Individual Investment Accounts										Totals	
ND Veterans' Cemetery Trust Fund	ND Ass'n of Counties Fund	PERS Group Insurance	Budget Stabilization Fund	City of Bismarck Deferred Sick Leave	City of Fargo Fargo Dome Fund	State Board of Medicine	Lewis & Clark Interpretive Center Endowment	Attorney General Settlement Fund	Legacy Fund	Job Service of North Dakota	Tobacco Prevention and Control Fund	PERS Retiree Health Credit Fund	2020	2019	
\$ 31,431	\$ 235,639	\$ (218,883)	\$ (4,511,372)	\$ 27,520	\$ 673,479	\$ 57,481	\$ 27,707	\$ (10,306)	\$ 150,636,769	\$ 149,250	\$ 282,644	\$ 3,791,934	\$ 278,642,657	\$ 388,737,303	
1,484	134,353	946,534	17,188,196	15,694	908,396	55,665	16,467	23,305	140,318,920	2,792,754	16,454	3,527,296	286,561,726	284,507,483	
32,915	369,992	727,651	12,676,824	43,214	1,581,875	113,146	44,174	12,999	290,955,689	2,942,004	299,098	7,319,230	565,204,383	673,244,786	
383	12,175	30,879	787,627	2,258	90,931	5,331	2,398	1,952	14,033,044	320,937	4,447	417,596	28,437,549	26,513,804	
32,532	357,817	696,772	11,889,197	40,956	1,490,944	107,815	41,776	11,047	276,922,645	2,621,067	294,651	6,901,634	536,766,834	646,730,982	
6	545	871	13,945	59	4,498	156	64	18	613,868	-	-	-	988,246	1,226,258	
(1)	(109)	(173)	(2,783)	(13)	(897)	(32)	(13)	(2)	(122,673)	-	-	-	(197,478)	(245,058)	
5	436	698	11,162	46	3,601	124	51	16	491,195	-	-	-	790,768	981,200	
280,000	-	231,645,900	596,442,112	-	-	-	-	1,130,443	596,589,041	-	-	3,532,200	1,446,622,465	987,842,755	
312,537	358,253	232,343,370	608,342,471	41,002	1,494,545	107,939	41,827	1,141,506	874,002,881	2,621,067	294,651	10,433,834	1,984,180,067	1,635,554,937	
-	-	-	86,564	-	-	-	-	-	921,682	-	-	-	1,781,619	1,779,837	
-	-	231,917,000	-	50,000	2,800,000	-	-	85,118	-	4,567,644	2,000,000	2,160,000	376,059,310	833,929,970	
-	-	231,917,000	86,564	50,000	2,800,000	-	-	85,118	921,682	4,567,644	2,000,000	2,160,000	377,840,929	835,709,807	
312,537	358,253	426,370	608,255,907	(8,998)	(1,305,455)	107,939	41,827	1,056,388	873,081,199	(1,946,577)	(1,705,349)	8,273,834	1,606,339,138	799,845,130	
-	6,331,288	31,053,242	118,647,704	779,146	44,828,578	2,361,353	751,297	-	6,122,227,871	97,195,676	9,291,844	135,852,378	12,056,728,048	11,256,882,918	
\$ 312,537	\$ 6,689,541	\$ 31,479,612	\$ 726,903,611	\$ 770,148	\$ 43,523,123	\$ 2,469,292	\$ 793,124	\$ 1,056,388	\$ 6,995,309,070	\$ 95,249,099	\$ 7,586,495	\$ 144,126,212	\$ 13,663,067,186	\$ 12,056,728,048	

North Dakota Retirement and Investment Office  
Pension and Investment Trust Funds – Schedule of Administrative Expenses  
Years Ended June 30, 2020 and 2019

	Pension Trust		Investment Trust	
	2020	2019	2020	2019
Salaries and wages:				
Salaries and wages	\$ 835,872	\$ 832,908	\$ 872,424	\$ 836,638
Fringe benefits	441,279	508,007	419,286	409,387
Total salaries and wages	<u>1,277,151</u>	<u>1,340,915</u>	<u>1,291,710</u>	<u>1,246,025</u>
Operating expenses:				
Travel	21,478	24,162	25,641	30,646
Supplies	2,799	3,167	1,465	1,563
Postage and Mailing Services	36,604	35,178	15,868	14,833
Printing	13,676	12,426	4,097	3,470
Small Office Equipment and Furniture	3,360	14,910	1,898	11,744
Insurance	546	398	373	228
Rent/Lease of Building Space	53,354	55,396	36,570	32,370
Repairs	1,266	917	898	536
Information Technology and Communications	73,166	74,217	22,959	17,519
IT Contractual Services	99,205	156,553	466,295	447,097
Professional Development	13,528	20,808	5,673	12,693
Operating Fees and Services	18,969	16,807	22,508	20,655
Professional Fees and Services	9,737	10,763	13,982	6,339
Consultant Services	253,576	263,269	86,872	153,516
Total operating expenses	<u>601,264</u>	<u>688,971</u>	<u>705,099</u>	<u>753,209</u>
Pension trust portion of investment program expenses	215,190	219,397	(215,190)	(219,397)
Depreciation	1,800	1,800	-	-
Total administrative expenses	<u>2,095,405</u>	<u>2,251,083</u>	<u>1,781,619</u>	<u>1,779,837</u>
Less - nonappropriated items:				
Consultant Services	253,576	263,269	86,872	153,516
Other operating fees paid under continuing appropriation	110,071	132,871	522,515	498,969
Depreciation	1,800	1,800	-	-
Accrual adjustments to employee benefits	117,513	196,388	128,847	147,218
Total nonappropriated items	<u>482,960</u>	<u>594,328</u>	<u>738,234</u>	<u>799,703</u>
Total appropriated administrative expenses	<u>\$ 1,612,445</u>	<u>\$ 1,656,755</u>	<u>\$ 1,043,385</u>	<u>\$ 980,134</u>

The accompanying notes are an integral part of these statements.



North Dakota Retirement and Investment Office  
Pension and Investment Trust Funds – Schedule of Consultant Expenses  
Years Ended June 30, 2020 and 2019

	Pension Trust		Investment Trust	
	2020	2019	2020	2019
Actuary fees:				
Segal Consulting	\$ 152,873	\$ 108,000	\$ -	\$ -
Auditing/Accounting fees:				
CliftonLarsonAllen LLP	71,986	97,514	49,494	30,587
Disability consulting fees:				
Sanford Health	150	350	-	-
Legal fees:				
Office of Administrative Hearings	2,100	3,383	-	-
K&L Gates LLP	10,363	12,880	13,841	17,066
Kasowitz, Benson, Torres & Friedman	125	239	163	313
Jackson Walker LLP	3,594	3,105	10,781	54,804
ND Attorney General	12,385	37,798	12,593	50,746
Total legal fees:	<u>28,567</u>	<u>57,405</u>	<u>37,378</u>	<u>122,929</u>
Total consultant expenses	<u>\$ 253,576</u>	<u>\$ 263,269</u>	<u>\$ 86,872</u>	<u>\$ 153,516</u>

North Dakota Retirement and Investment Office  
Pension and Investment Trust Funds – Schedule of Investment Expenses  
Years Ended June 30, 2020 and 2019

	Pension Trust		Investment Trust	
	2020	2019	2020	2019
Investment managers' fees:				
Global equity managers	\$ 1,373,171	\$ 1,367,498	\$ 1,848,580	\$ 1,802,596
Domestic large cap equity managers	717,445	626,227	4,078,287	4,181,083
Domestic small cap equity managers	602,625	445,360	3,091,577	1,465,370
International equity managers	865,295	888,364	6,910,433	6,526,839
Emerging markets equity managers	769,333	607,541	1,290,364	987,011
Domestic fixed income managers	1,091,995	1,137,802	10,733,934	10,833,676
Below investment grade fixed income managers	2,064,617	2,446,530	2,999,775	3,346,917
Diversified real assets managers	-	-	5,413,236	5,770,890
International fixed income managers	-	-	-	-
Real estate managers	2,034,014	2,258,800	4,859,416	5,412,650
Infrastructure managers	1,852,956	1,920,619	2,414,217	2,521,180
Timber managers	358,278	380,628	435,437	462,600
Private equity managers	2,585,827	1,667,745	3,011,436	1,953,934
Short term fixed income managers	-	-	743,318	194,551
Cash & equivalents managers	28,516	30,119	131,914	175,858
Balanced account managers	-	-	1,022,362	979,322
Total investment managers' fees	<u>\$ 14,344,072</u>	<u>\$ 13,777,233</u>	<u>\$ 48,984,286</u>	<u>\$ 46,614,477</u>
Custodian fees	231,579	235,778	1,202,295	1,076,406
Investment consultant fees	108,804	129,878	487,468	482,208
SIB Service Fees	-	-	73,461	81,815
Total investment expenses	<u>\$ 14,684,455</u>	<u>\$ 14,142,889</u>	<u>\$ 50,747,510</u>	<u>\$ 48,254,906</u>

**Reconciliation of investment expenses to financial statements**

	2020	2019	2020	2019
Investment expenses as reflected in the financial statements	\$ 6,523,407	\$ 6,272,801	\$ 28,437,549	\$ 26,513,804
Plus investment management fees included in investment income				
Domestic large cap equity managers	256,402	13,216	1,144,803	231,616
Domestic small cap equity managers	-	16,233	-	(352,236)
International equity managers	207,075	240,154	1,777,070	1,664,052
Emerging markets equity managers	417,764	607,541	701,047	987,011
Domestic fixed income managers	680,670	749,012	5,765,868	6,550,173
Below investment grade fixed income managers	1,681,382	1,986,029	2,544,213	2,782,655
Diversified real assets managers	-	-	3,813,479	3,989,293
Real estate managers	594,427	829,250	866,687	1,174,455
Infrastructure managers	1,379,223	1,380,280	1,798,221	1,811,371
Timber managers	358,278	380,628	435,437	462,600
Private equity managers	2,585,827	1,667,745	3,011,435	1,953,932
Cash equivalents managers	-	-	119,383	160,065
Balanced account managers	-	-	332,318	326,115
Investment expenses per schedule	<u>\$ 14,684,455</u>	<u>\$ 14,142,889</u>	<u>\$ 50,747,510</u>	<u>\$ 48,254,906</u>

North Dakota Retirement and Investment Office  
 Schedule of Appropriations – Budget Basis – Fiduciary Funds  
 July 1, 2019 to June 30, 2021 Biennium

	Approved 2019-2021 Appropriation	2019-2021 Appropriation Adjustment	Adjusted 2019-2021 Appropriation	Fiscal 2020 Expenses	Unexpended Appropriations
All Fund Types:					
Salaries and wages	\$ 4,978,230	\$ -	\$ 4,978,230	\$ 2,322,501	\$ 2,655,729
Operating expenses	3,538,934	-	3,538,934	333,329	3,205,605
Capital Assets	6,300,000	-	6,300,000	-	6,300,000
Contingency	52,000	-	52,000	-	52,000
<b>Total</b>	<b>\$ 14,869,164</b>	<b>\$ -</b>	<b>\$ 14,869,164</b>	<b>\$ 2,655,830</b>	<b>\$ 12,213,334</b>

*NOTE: Only those expenses for which there are appropriations are included in this statement.*

Reconciliation of Administrative Expenses to Appropriated Expenditures

	<u>2020</u>
Administrative expenses as reflected in the financial statements	\$ 3,877,024
Less:	
Consulting Services*	(340,448)
Other operating fees paid under continuing appropriations*	(632,586)
Depreciation expense	(1,800)
Changes in benefit accrual amounts	<u>(246,360)</u>
<b>Total appropriated expenses</b>	<b><u>\$ 2,655,830</u></b>

\* North Dakota Century Code 21-10-06.2 and 15-39.1-05.2 provide authorization for the continuing appropriation.

**Special Comments Requested by the Legislative Audit  
and Fiscal Review Committee  
Year Ended June 30, 2020**

The Legislative Audit and Fiscal Review Committee requires that certain items be addressed by auditors performing audits of state agencies. These items and our responses are as follows:

**Audit Report Communications**

1. What type of opinion was issued on the financial statements?

Unmodified

2. Was there compliance with statutes, laws, rules, regulations under which the agency was created and is functioning?

Yes

3. Was internal control adequate and functioning effectively?

Yes

4. Were there any indications of lack of efficiency in financial operations and management of the agency?

No

5. Has action been taken on findings and recommendations included in prior year reports?

There were no prior year findings or recommendations.

6. Was a management letter issued? If so, provide a summary below, including any recommendations and the management response.

No

## Audit Committee Communications

1. Identify any significant changes in accounting policies, any management conflicts of interest, any contingent liabilities, or any significant unusual transactions.

For the year ended June 30, 2020, no new accounting policies were adopted and the application of existing policies was not changed.

2. Identify any significant accounting estimates, the process used by management to formulate the accounting estimates, and the basis for the auditor's conclusions regarding the reasonableness of those estimates.

The valuation of alternative investments, including private equity and real asset investments, are a management estimate which is primarily based upon net asset values reported by the investment managers and comprise 16% of the total investment portfolio. The values for these investments are reported based upon the most recent financial data available and are adjusted for cash flows through June 30, 2020. Our audit procedures validated this approach through the use of confirmations sent directly to a sample of investment managers and the review of the most recent audited financial statements for these funds. Furthermore, we reviewed management's estimate and found it to be reasonable.

The actuarial valuation was based on the actuarial assumptions and methods adopted by the Board, including an actuarial expected investment rate of return of 7.25% per annum compounded annually. The valuation takes into account all of the promised benefits to which members are entitled as of July 1, 2020 as required by the North Dakota Century Code. The valuation provides certain information required by GASB to be disclosed in the financial statements. Additionally, the valuation is used to determine the adequacy of the current employer contribution rate. Our audit procedures included reviewing the actuarial valuation and related assumptions used therein and we believe the estimate to be reasonable.

3. Identify any significant audit adjustments.

None

4. Identify any disagreements with management, whether or not resolved to the auditor's satisfaction, relating to financial accounting, reporting, or auditing matters that could be significant to the financial statements.

None

5. Identify any significant difficulties encountered in performing the audit.

None

6. Identify any major issues discussed with management prior to retention.

None

7. Identify any management consultations with other accounts about auditing and accounting matters.

None

8. Identify any high-risk information technology systems critical to operations based on the auditor's overall assessment of the importance of the system to the agency and its mission or whether any exceptions identified in the six audit report questions addressed above are directly related to the operations of an information technology system.

Based on the audit procedures performed, the Retirement and Investment Office's critical information technology system is the CPAS system. There were no exceptions identified that were directly related to this application.

This report is intended solely for the information and use of the audit committee, management, the Legislative Audit and Fiscal Review Committee, and other state officials, and is not intended to be and should not be used by anyone other than these specified parties.



**CliftonLarsonAllen LLP**

Baltimore, Maryland  
November 9, 2020

INFORMATIONAL

TO: State Investment Board (“SIB”)  
 FROM: Dave Hunter  
 DATE: November 13, 2020  
 SUBJECT: **Investment Fee Reviews – Summary Memo**

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**Background:**

SIB Governance Policy D-1 on Ends states that “SIB clients receive investment returns ... in a cost effective manner ...” and Policy E-1 on Fiduciary Duties states that “investment expenses must be controlled”. As consistent with prior biennia, the SIB engaged Callan to conduct a comprehensive review of investment fee and expense levels earlier this year.

**RIO Summary Commentary:**

RIO believes SIB client investment expenses are reasonable overall noting that management fees have generally been trending downward on a % basis from 0.65% in fiscal year 2013 to less than 0.50% in fiscal years 2019 and 2020. More importantly, RIO notes that SIB client return on investment fees has been meaningfully positive and exceeded 50 bps per annum (or \$300 million in aggregate) for the 5-years ended September 30, 2020.

As example, the Legacy Fund investment management fees have averaged less than 0.40% per annum since inception, while net returns have exceeded agreed upon policy benchmarks (largely based on passive investment indices) by 0.65% per annum over the last 5 years and 0.71% per annum over the last 9 years (since inception).

	1 Yr Ended 9/30/2020	3 Yrs Ended 9/30/2020	5 Yrs Ended 9/30/2020	9 Yrs Ended 9/30/2020
Legacy Fund \$7.4 billion				
Total Fund Return - Net	8.27%	6.02%	7.91%	5.19%
Policy Benchmark Return	7.46%	5.93%	7.25%	4.48%
Excess Return	0.81%	0.09%	0.65%	0.71%

Based on the Legacy Fund average balance exceeding \$5 billion the last 5 years and Net Excess Return exceeding 0.50% per annum during this same period, RIO conservatively estimates the Legacy Fund has earned \$125 million of incremental income (via the SIB’s prudent use of active management) during the last 5-years (e.g. \$5 billion x 0.50% = \$25 million/year x 5 years = \$125 million of incremental income).

RIO’s review of Callan’s investment fee study confirms our opinion that overall investment expenses are reasonable noting there are instances in which some investment fees are higher than market medians. This most frequently occurs under performance fee structures when the manager has generated returns which materially exceed agreed upon policy benchmarks for an extended period.

November 20, 2020



## **NDSIB Fee Study: Fiscal Year 2020**

Pension Trust, Insurance Trust,  
and Legacy Fund

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**Paul Erlendson**  
Senior Vice President

**Alex Browning**  
Senior Vice President

**Perry Hopper**  
Assistant Vice President



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# Summary Comments on 2020 Fee Study

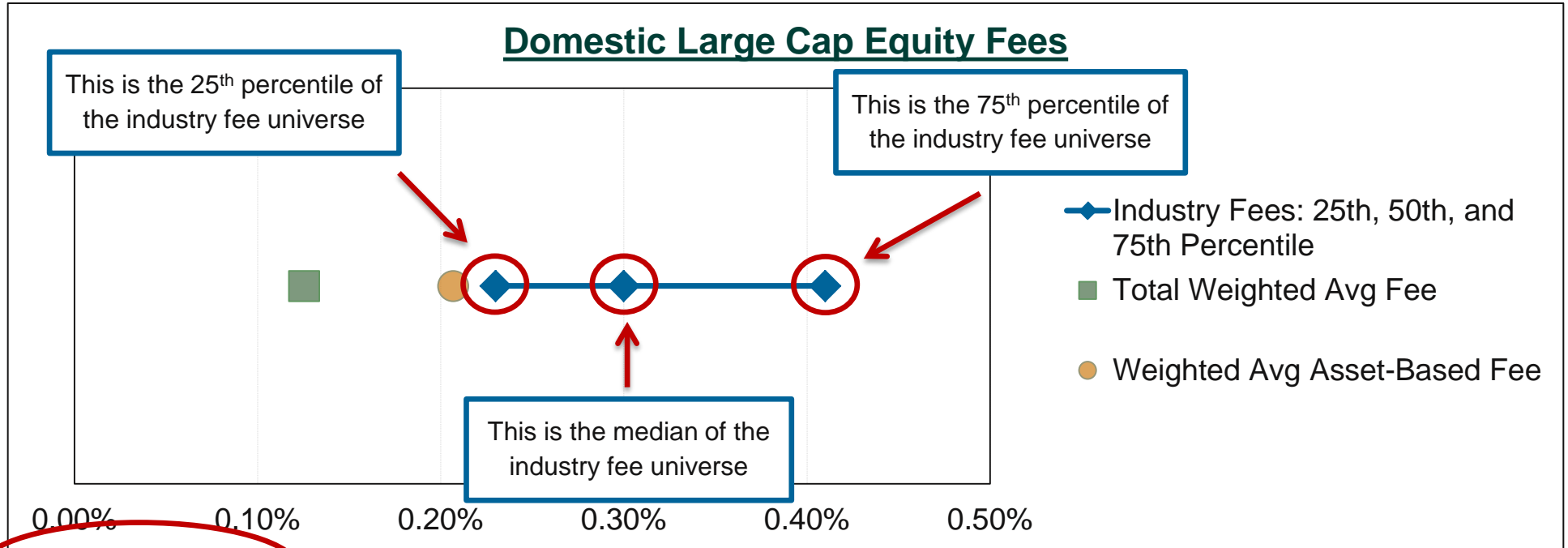
## NDSIB – Pension Trust, Insurance Trust, and Legacy Fund

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- All market values and fee data are as of fiscal year end June 30, 2020.
- Investment managers employ three primary fee calculation methods to charge for their services;
  - **Asset-Based Fees:** fees are calculated as a percentage of assets under management.
  - **Performance-Based Fees:** fees are calculated on outperformance relative to a pre-specified benchmark during a contracted measurement period.
  - **Hybrid Fees:** A combination of an asset-based fee and a performance-based fee schedule.
- Three different techniques are used to calculate fees as weighted averages:
  - **Weighted Average Asset-based Fee:** applied to managers employing asset-based fees. This technique applies to most managers.
  - **Weighted Average Performance / Hybrid Fee:** applied only to those managers that employ either a performance or hybrid fee.
  - **Total Weighted Average Fee:** a weighted average based on account size when there are multiple managers within an asset class.
- In all cases, fees were calculated as a percentage of average quarterly assets under management for the purposes of comparison to reduce the impact of those accounts experiencing asset flows during the fiscal year.
- In many instances, fees paid by the individual trusts benefit from fee schedules that account for the aggregate level of assets invested across all three plans.
- Fee universes used in the study reflect peer management fees and are represented by either:
  - **Actual Fees** paid by Callan survey respondents who invest in similar mandates,
  - **Published Fees** calculated using a universe of manager fee schedules for similar mandates, or;
  - An **Average of Actual and Published Fee** universes. This method was employed where the Actual Fee universe was smaller than 30.
- All fee universes are explicitly noted beneath each chart where “n=” will denote the applicable sample size.
- Greater detail on fee measurements and data are available on the last page of the report.

# Sample Chart

## Explanatory Slide



*N=61, Actual Fee Universe*

This illustrates the number of constituents and the type of fee that was surveyed to create the sample universe

# Sample Table

## Explanatory Slide

Domestic Large Cap Equity			
Managers with asset-based fees	{	<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
		L.A. Capital Growth	0.21%
		<b>Weighted Average Asset-Based Fee</b>	<b>0.21%</b>
Managers with performance and hybrid Fees	{	<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
		L.A. Capital Enhanced Index	0.21%
		Northern Trust Enhanced S&P 500	0.00%
		Clifton Enhanced S&P 500	0.00%
		<b>Weighted Average Performance and Hybrid Fee</b>	<b>0.07%</b>
		<b>Total Weighted Average U.S. Lg Cap Fee</b>	<b>0.13%</b>
Industry fee distribution	{	Industry Fee - 25th Percentile	0.23%
		Industry Fee - Median	0.30%
		Industry Fee - 75th Percentile	0.41%

*N=61, Actual Fee Universe*

This is the weighted average fee rate paid to managers with an asset-based fee

This is the weighted average fee rate paid to managers with a performance / hybrid based fee

This is the weighted average fee rate paid to all managers

Callan

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**Pension Trust**

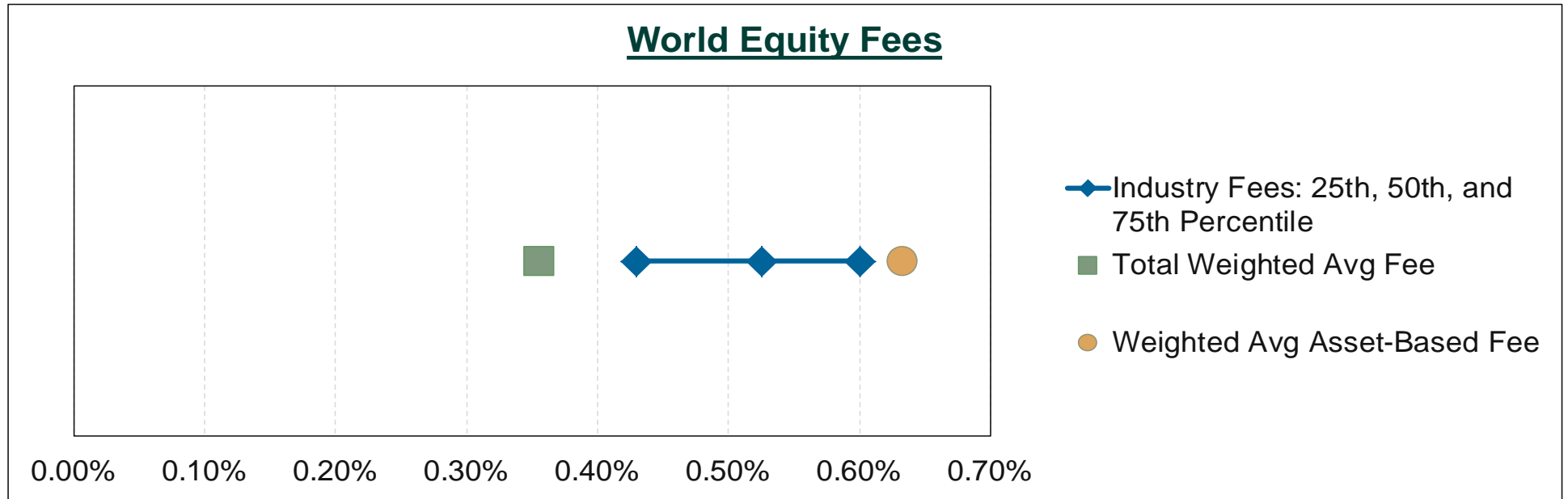
# Pension Trust

## NDSIB Pension Trust Fee Study Fiscal Year 2020 Executive Summary

- The Total Pension Trust's Equity manager fees paid represented a mix of asset-based and performance and hybrid fee strategies.
  - Total World Equity fees were below the 25<sup>th</sup> percentile of the industry universe, helped by performance and hybrid fee structures.
  - Total Domestic Large Cap Equity asset-based and performance and hybrid fee strategies were below the 25<sup>th</sup> percentile of the industry universe.
  - Total Small Cap Equity fees were below the 25<sup>th</sup> percentile of the industry universe, with asset-based fees being closer to the median.
  - Developed International Equity fees were below the 25<sup>th</sup> percentile and represented only asset-based fee strategies.
  - Emerging Market Equity fees were above the 75<sup>th</sup> percentile, largely due to performance and hybrid based fee structures.
- The Total Pension Trust's Fixed Income manager fees paid represent a mix of asset-based and performance and hybrid fee strategies.
  - Total Investment Grade Fixed Income fees paid were above the 75<sup>th</sup> percentile, driven largely by performance and hybrid fee based strategies.
  - Total Below Investment Grade Fixed Income fees paid were above the 75<sup>th</sup> percentile, driven largely by performance and hybrid fee based strategies.
- The Total Pension Trust's Real Estate manager fees paid represented a mix of asset-based and performance and hybrid fee strategies. Both asset-based fee strategies and performance and hybrid strategies fell below the 25<sup>th</sup> percentile of the peer universe.
- The Total Pension Trust's Real Assets represents a variety of inflation-sensitive strategies including Timber and Infrastructure. Due to the custom nature of these strategies, no applicable manager fee distribution is available.
  - Fee structures do however appear to follow industry norms and standards.
- The Total Pension Trust's Private Equity represents a variety of strategies and investment vehicles that cannot produce a reasonable industry fee universe for comparison.
  - Fee structures do however appear to follow industry norms and standards.

# World Equity

## Pension Trust



*N=224, Average of Actual Fee Universe (N=12) and Published Fee Universe (N=212)*

- North Dakota Pension Trust's World equity managers invest in stocks traded in both U.S. and non-U.S. markets.
- North Dakota Pension Trust's average World Equity account size for FY 2020 was \$454mm.
- The orange circle represents North Dakota Pension Trust's World Equity weighted average asset-based management fee of 0.63%.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.36%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$300mm and \$600mm.

# World Equity

## Pension Trust

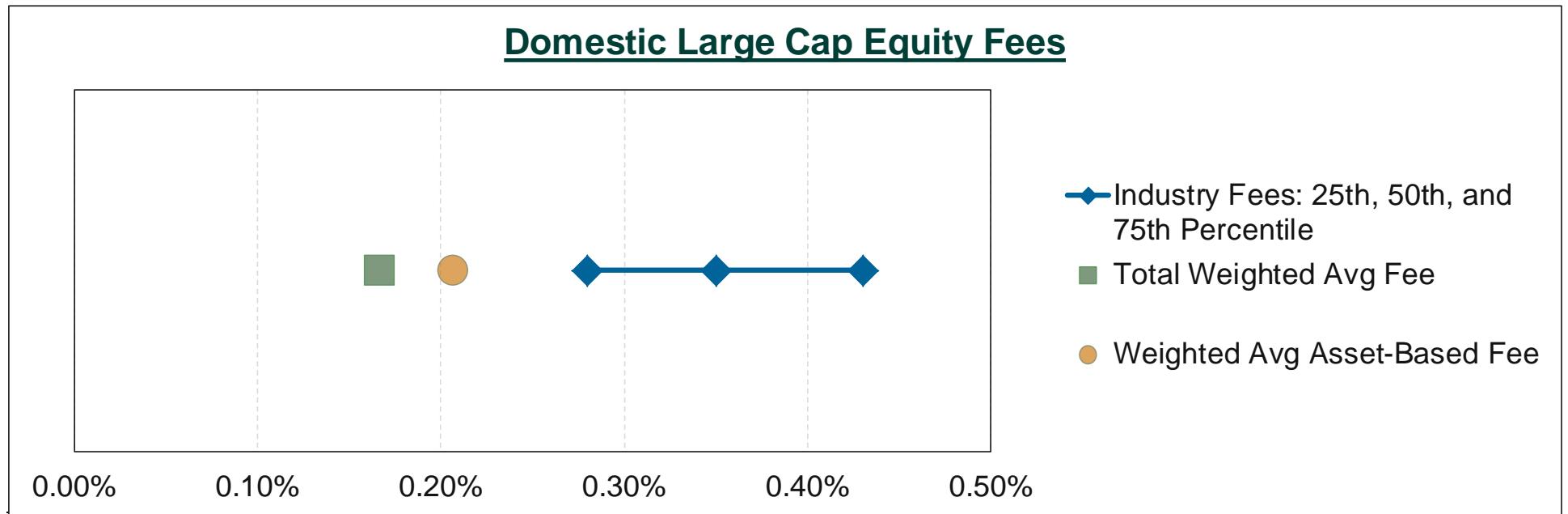
<b>World Equity</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
EPOCH Inv. Partners	0.63%
<b>Weighted Average Asset-Based Fee</b>	<b>0.63%</b>
<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
LSV Asset Management	0.10%
<b>Weighted Average Performance &amp; Hybrid Fee</b>	<b>0.10%</b>
<b>Total Weighted Average World Equity Fee</b>	<b>0.36%</b>
Industry Fee - 25th Percentile	0.43%
Industry Fee - Median	0.53%
Industry Fee - 75th Percentile	0.60%

*N=224, Average of Actual Fee Universe (N=12) and Published Fee Universe (N=212)*

- During the 2020 FY, the World Equity portfolio fees were below those of industry peers. This is largely attributable to the hybrid fee structure of LSV Asset Management.
  - Performance fees are paid to the fund on excess return against the index; however, LSV underperformed the MSCI ACWI by over 10 percentage points on a gross basis in FY 2020.

# Domestic Large Cap Equity

Pension Trust



*N=43, Actual Fee Universe*

- North Dakota Pension Trust's Domestic Large Cap Equity managers invest in large company stocks that are typically listed and traded within the U.S.
- North Dakota Pension Trust's average Domestic Large Cap Equity account size for FY 2020 was \$252mm.
- The orange circle represents North Dakota Pension Trust's Domestic Large Cap Equity weighted average asset-based management fee of 0.21%.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.17%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$150mm and \$300mm.



## Domestic Large Cap Equity

### Pension Trust

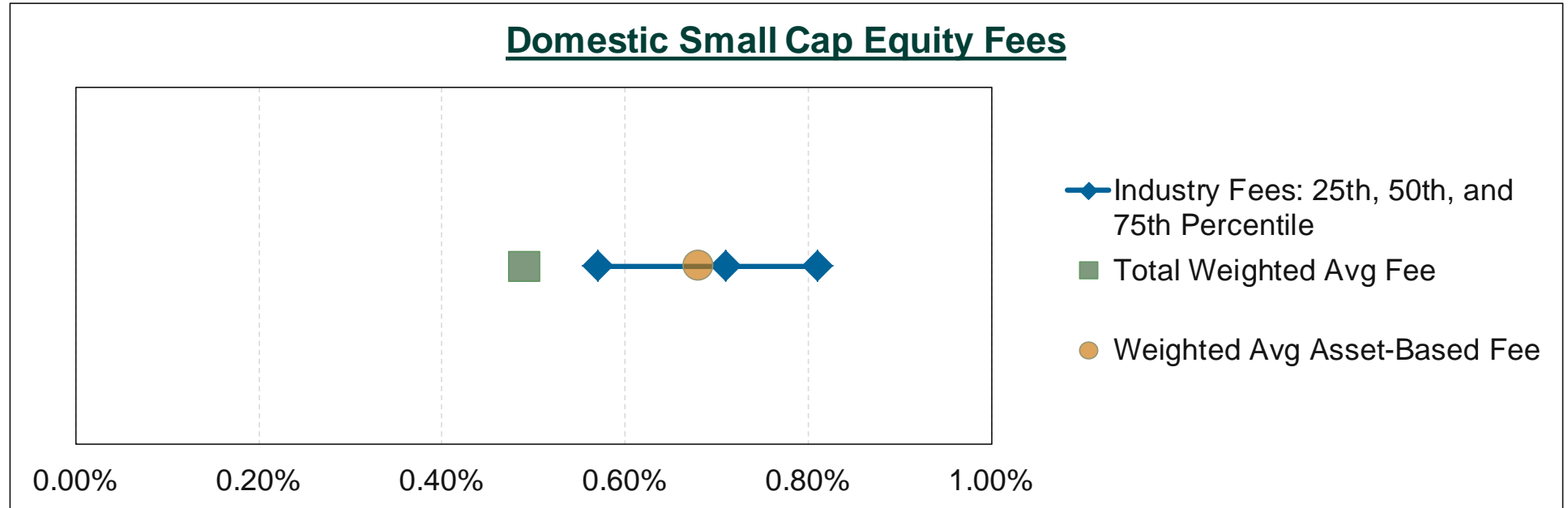
Domestic Large Cap Equity	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
L.A. Capital Growth	0.21%
<b>Weighted Average Asset-Based Fee</b>	<b>0.21%</b>
<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
L.A. Capital Enhanced Index	0.41%
Northern Trust Enhanced S&P 500	0.00%
Parametric Large Cap	0.00%
<b>Weighted Average Performance and Hybrid Fee</b>	<b>0.14%</b>
<b>Total Weighted Average U.S. Lg Cap Fee</b>	<b>0.17%</b>
Industry Fee - 25th Percentile	0.28%
Industry Fee - Median	0.35%
Industry Fee - 75th Percentile	0.43%

*N=43, Actual Fee Universe*

- The North Dakota Pension Trust's Domestic Large Cap Equity portfolio employs several managers with performance and hybrid fee structures and is therefore difficult to compare directly to industry averages.
  - Northern Trust Enhanced Index charges no base management fee. The only fee charged is on excess performance relative the benchmark and the manager underperformed the S&P 500 in the 2020 fiscal year.
  - Parametric Clifton Enhanced Index charges no base management fee. The only fee charged is on the excess return generated. Fees are paid once a year for performance through June 30.
  - L.A. Capital Enhanced Index charges a base management fee on all assets under management in addition to a performance based fee on a portion of the assets.

# Domestic Small Cap Equity

Pension Trust



*N=69, Actual Fee Universe*

- North Dakota Pension Trust Small Cap Equity managers invest in smaller company stocks that are typically listed and traded within the U.S.
- North Dakota Pension Trust's average Domestic Small Cap Equity account size for FY 2020 was \$145mm.
- The orange circle represents North Dakota Pension Trust's Domestic Small Cap Equity weighted average asset-based management fee of 0.68%.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.49%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$50mm and \$150mm.

# Domestic Small Cap Equity

Pension Trust

<b>Domestic Small Cap Equity</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
Atlanta Capital	0.68%
<b>Weighted Average Asset-Based Fee</b>	<b>0.68%</b>
<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
Parametric Small Cap	0.30%
<b>Weighted Average Performance &amp; Hybrid Fee</b>	<b>0.30%</b>
<b>Total Weighted Average U.S. Sm Cap Fee</b>	<b>0.49%</b>
Industry Fee - 25th Percentile	0.57%
Industry Fee - Median	0.71%
Industry Fee - 75th Percentile	0.81%

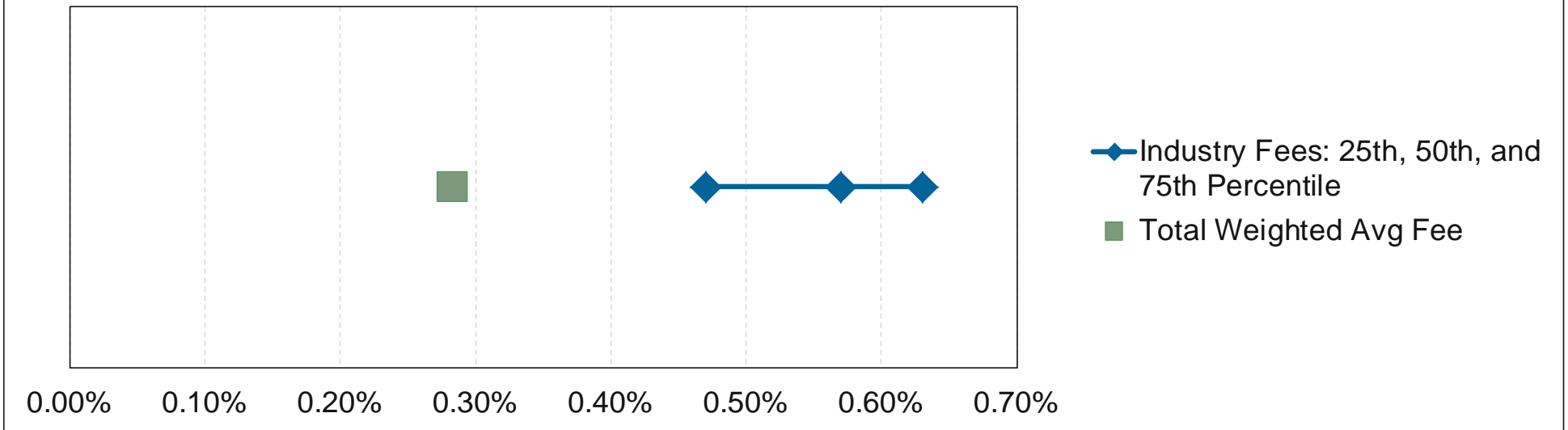
*N=69, Actual Fee Universe*

- Due to the fee structure of the funds in the Performance and Hybrid Fee Strategies category, the total weighted average fees are not comparable to industry fees from Callan's 2019 Investment Management Fee Survey.
  - Parametric Clifton Enhanced Small Cap charges no base management fee. The only fee charged is on the excess return generated over the index. Fees are paid once a year for performance through June 30.

# Developed International Equity

## Pension Trust

### Developed International Equity Fees



*N=48, Actual Fee Universe*

- North Dakota Pension Trust's Developed International Equity managers invest in stocks that trade and gain exposure to developed markets and economies outside of the U.S.
- North Dakota Pension Trust's average Developed International Equity account size for FY 2020 was \$170mm.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.28%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$100mm and \$300mm.

# Developed International Equity

## Pension Trust

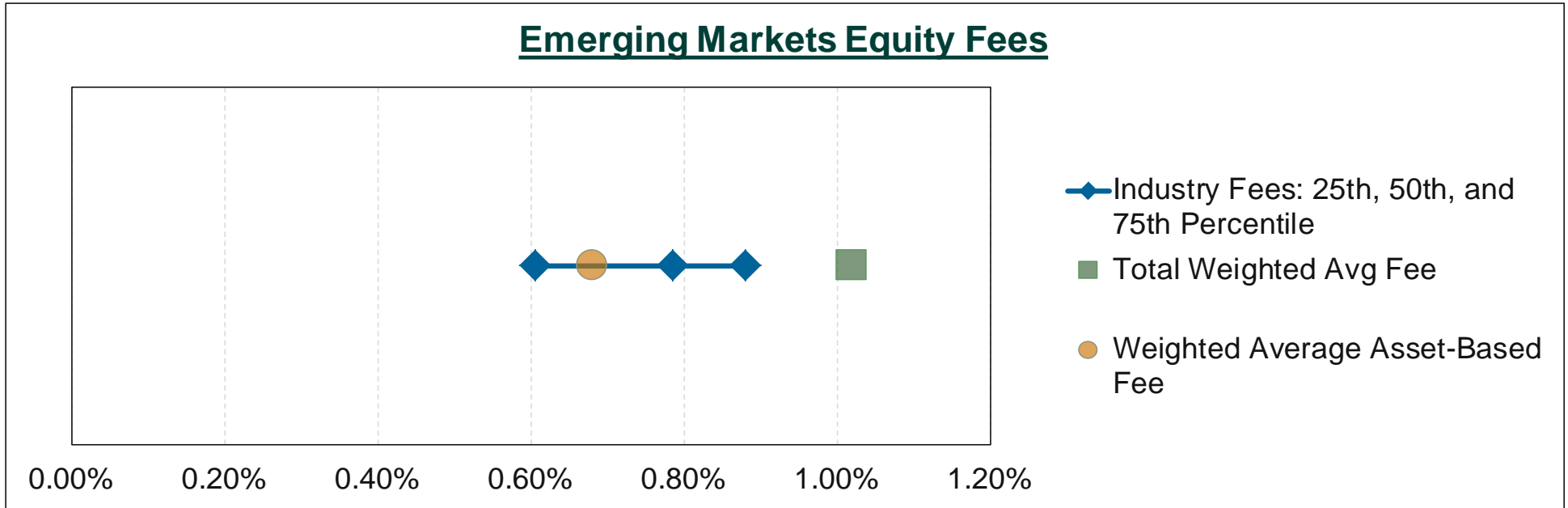
Developed International Equity	
Asset-Based Fee Strategies	Fee %
DFA International Small Cap Value	0.68%
Northern Trust World ex-US	0.03%
Wellington Intl SC Opp	0.87%
William Blair	0.35%
<b>Total Weighted Average Dev. Intl Equity Fee</b>	<b>0.28%</b>
<hr/>	
Industry Fee - 25th Percentile	0.47%
Industry Fee - Median	0.57%
Industry Fee - 75th Percentile	0.63%

*N=48, Actual Fee Universe*

- All managers for this asset class fall into the asset-based fee category.
- The total weighted average fee for the asset class falls below the industry average for active managers.
  - However, note that Northern Trust is a passive manager and passive strategies tend to charge lower fees than active ones do. The inclusion of Northern Trust therefore skews the total weighted average fee below what the total weighted average fee would be if the fund was excluded from the group.

# Emerging Markets Equity

## Pension Trust



*N=102, Average of Actual Fee Universe (N=19) and Published Fee Universe (N=83)*

- North Dakota Pension Trust's Emerging Markets Equity managers invest in stocks that gain exposure to emerging market economies.
- North Dakota Pension Trust's average Emerging Markets Equity account size for FY 2020 was \$101mm.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 1.02%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$100mm and \$300mm.

## Emerging Markets Equity

### Pension Trust

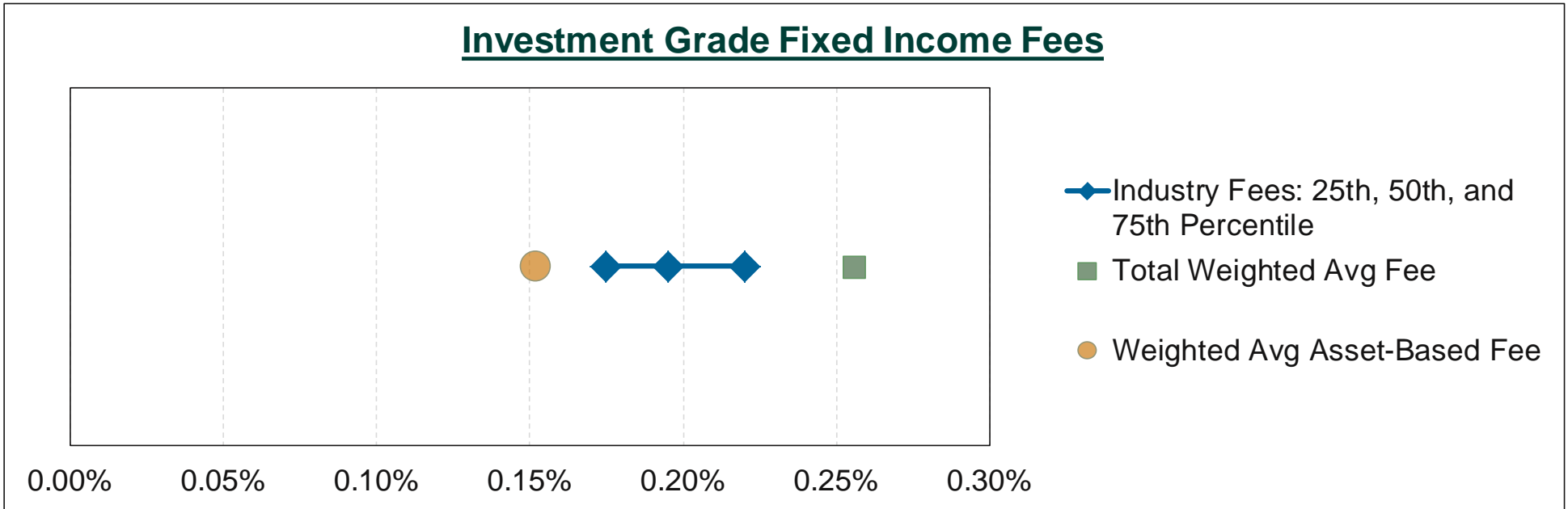
<b>Emerging Markets Equity</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
DFA Emerging	0.70%
<b>Weighted Average Asset-Based Fee</b>	<b>0.70%</b>
<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
Axiom	1.13%
<b>Weighted Average Performance &amp; Hybrid Fee</b>	<b>1.13%</b>
<b>Total Weighted Average EM Equity Fee</b>	<b>1.02%</b>
Industry Fee - 25th Percentile	0.61%
Industry Fee - Median	0.79%
Industry Fee - 75th Percentile	0.88%

*N=102, Average of Actual Fee Universe (N=19) and Published Fee Universe (N=83)*

- North Dakota Pension Trust's Emerging Markets Equity portfolio employs one manager with a performance and hybrid fee structure and one with an asset-based fee structure.
- North Dakota' Pension Trust's asset-based fee strategies are below the peer universe median. The total weighted average fee for the asset class is above the 75<sup>th</sup> percentile, due to the performance and hybrid fee structure.
- Axiom's performance fee alone accounted for roughly 46% of the total fees paid to Emerging Markets Equity strategies.

# Investment Grade Fixed Income

## Pension Trust



*N=106, Average of Actual Fee Universe (N=25) and Published Fee Universe (N=81)*

- North Dakota Pension Trust's Investment Grade Fixed Income managers invest in bonds and other debt instruments that are rated "investment grade" by rating agencies and/or investment analysts.
- North Dakota Pension Trust's average Investment Grade Fixed Income account size for FY 2020 was \$199mm.
- The orange circle represents North Dakota Pension Trust's Investment Grade Fixed Income weighted average asset-based management fee of 0.15%.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.26%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$150mm and \$300mm.



# Investment Grade Fixed Income

## Pension Trust

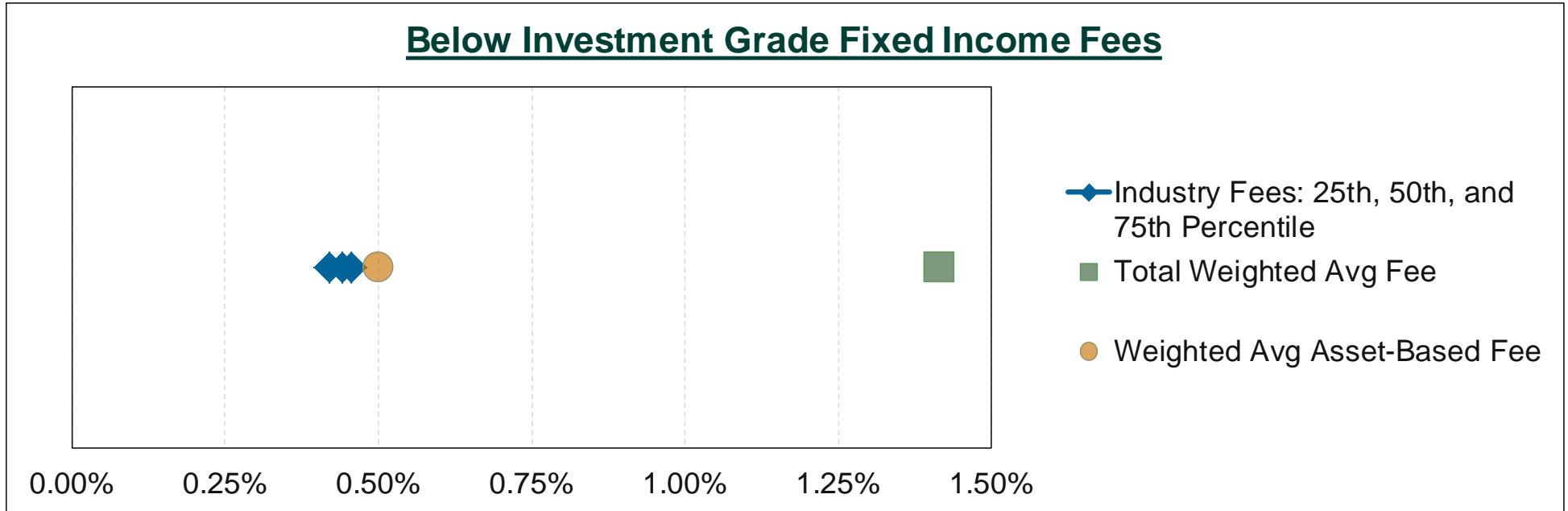
<b>Investment Grade Fixed Income</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
Declaration Total Return	0.37%
Prudential	0.12%
SSgA Long U.S. Treasury Index	0.02%
<b>Weighted Average Asset-Based Fee</b>	<b>0.15%</b>
<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
PIMCO DiSCO II	1.17%
PIMCO Core Plus Constrained	0.16%
<b>Weighted Average Performance &amp; Hybrid Fee</b>	<b>0.38%</b>
<b>Total Weighted Average IG Fixed Income Fee</b>	<b>0.26%</b>
Industry Fee - 25th Percentile	0.18%
Industry Fee - Median	0.20%
Industry Fee - 75th Percentile	0.22%

*N=106, Average of Actual Fee Universe (N=25) and Published Fee Universe (N=81)*

- North Dakota Pension Trust's Investment Grade Fixed Income portfolio employs both asset-based fee strategies and performance and hybrid fee structures.
- The weighted average asset-based fee falls in the bottom quartile among peers, while the performance and hybrid strategies pushes the total weighted average fee into the top quartile among peers.

# Below Investment Grade Fixed Income

Pension Trust



*N=113, Average of Actual Fee Universe (N=13) and Published Fee Universe (N=100)*

- North Dakota Pension Trust's Below Investment Grade (I.G.) Fixed Income managers invest in bonds and other debt instruments that are rated below "investment grade" by rating agencies and/or investment analysts.
- North Dakota Pension Trust's average Below I.G. Fixed Income account size for FY 2020 was \$69mm.
- The orange circle represents North Dakota Pension Trust's Below IG Fixed Income weighted average asset-based management fee of 0.5%.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 1.41%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes below \$200mm.

## Below Investment Grade Fixed Income

Pension Trust

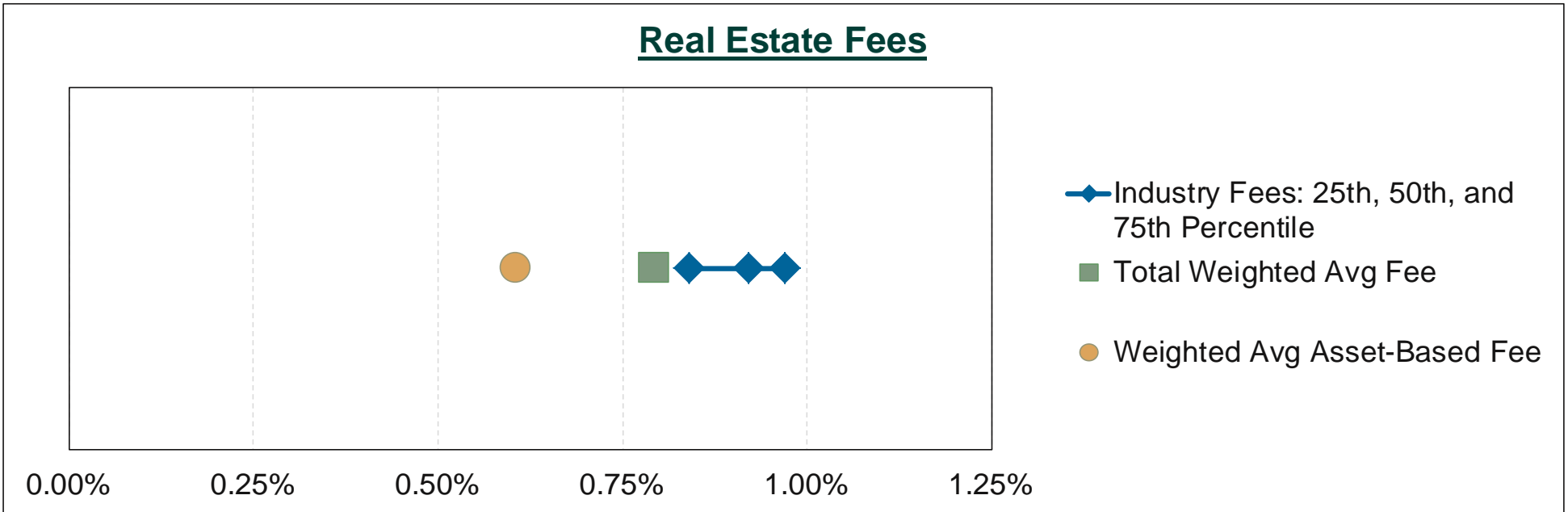
<b>Below Investment Grade Fixed Income</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
Loomis Sayles	0.50%
<b>Weighted Average Asset-Based Fee</b>	<b>0.50%</b>
<b>Performance &amp; Hybrid Fee Strategies</b>	<b>Fee %</b>
Ares Credit Strategies	1.60%
Cerberus Private Credit	2.83%
Goldman Sachs 2006 Offshore	14.07%
Goldman Sachs V Offshore	12.14%
PIMCO Bravo II	0.00%
<b>Weighted Average Performance &amp; Hybrid Fee</b>	<b>2.04%</b>
<b>Total Weighted Average Below-IG FI Fee</b>	<b>1.41%</b>
Industry Fee - 25th Percentile	0.42%
Industry Fee - Median	0.44%
Industry Fee - 75th Percentile	0.46%

*N=113, Average of Actual Fee Universe (N=13) and Published Fee Universe (N=100)*

- Due to the fee structure of the funds in the performance and hybrid fee strategies category, the total weighted average fees are not comparable to industry fees from Callan’s 2019 Investment Management Fee Survey.
  - Goldman Sachs 2006 Offshore and V Offshore both have a hybrid fee structure. Both funds also experienced a declining asset base throughout the fiscal year and only account for 0.007% of the total average asset value of the Pension Trust for the fiscal year.
  - PIMCO Bravo II charges both a management fee and a performance fee of excess returns over a specified “hurdle” rate. During the fiscal year, the manager underperformed this hurdle rate and provided performance fee “credits” in excess of the total fees charged.

# Real Estate

## Pension Trust



*N=66, Average of Actual Fee Universe (N=29) and Published Fee Universe (N=37)*

- North Dakota Pension Trust's Real Estate managers invest directly in real properties (e.g. offices, multi-family, retail, and other physical properties) and securities that gain access to such economic interests.
- North Dakota Pension Trust's average Real Estate account size for FY 2020 was \$95mm.
- The orange circle represents North Dakota Pension Trust's Real Estate weighted average asset-based management fee of 0.61%.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.79%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$50mm and \$150mm.

# Real Estate

## Pension Trust

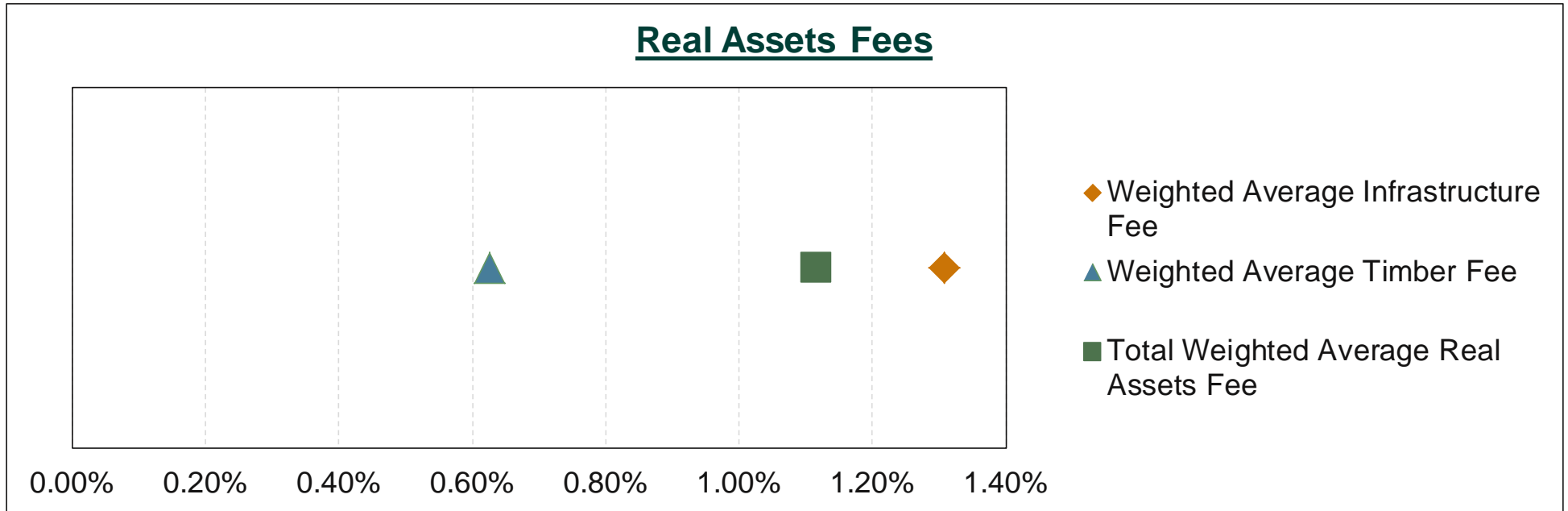
<b>Real Estate</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
INVESCO Core Real Estate	0.34%
JP Morgan Special & Strategic	0.95%
<b>Weighted Average Asset-Based Fee</b>	<b>0.61%</b>
<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
INVESCO Asia RE Fund III	5.56%
INVESCO Real Estate Fund III	0.00%
INVESCO Value Added Fund IV	0.74%
INVESCO Value Added Fund V	1.07%
JP Morgan Greater European Opp	0.30%
<b>Weighted Average Performance and Hybrid Fee</b>	<b>2.07%</b>
<b>Total Weighted Average Real Estate Fee</b>	<b>0.79%</b>
Industry Fee - 25th Percentile	0.84%
Industry Fee - Median	0.92%
Industry Fee - 75th Percentile	0.97%

*N=66, Average of Actual Fee Universe (N=29) and Published Fee Universe (N=37)*

- Due to the fee structure of the funds in the performance and hybrid fee strategies category, the total weighted average fees are not comparable to industry fees from Callan's 2019 Investment Management Fee Survey.

# Real Assets

## Pension Trust



- North Dakota Pension Trust's Real Assets encompass asset classes that typically provide some measure of inflation protection, often times including investments in tangible goods or resources.
- North Dakota Pension Trust's average Real Assets account size for FY 2020 was \$57mm.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 1.12%.
- The blue triangle represents the weighted average fee for all Timber assets: 0.63%.
- The orange diamond represents the weighted average fee for all Infrastructure assets: 1.12%.

## Real Assets

### Pension Trust

<b>Real Assets</b>	
<b>Timber</b>	<b>Fee %</b>
TIR - Teredo	0.56%
TIR - Springbank	0.65%
<b>Weighted Average Timber Fee</b>	<b>0.63%</b>
<b>Infrastructure</b>	<b>Fee %</b>
ISQ Global Infrastructure II	4.18%
JP Morgan Asian Infrastructure / Rohatyn	1.94%
JP Morgan Infrastructure Inv. Fund	0.78%
Grosvenor Infrastructure Fund I	0.58%
Grosvenor Infrastructure Fund II	1.12%
Macquarie Infrastructure Partners IV	1.46%
<b>Weighted Average Infrastructure Fee</b>	<b>1.31%</b>
<b>Total Weighted Average Real Assets Fee</b>	<b>1.12%</b>

- All managers in the North Dakota Pension Trust's Real Assets asset class charge an asset-based fee and charge a performance fee for performance exceeding a "preferred" return set by each fund.

# Private Equity

## Pension Trust

Private Equity	
<b>Total Weighted Average Private Equity Fee</b>	<b>2.11%</b>

- Due to a number of factors, such as maturity of the portfolio, point in the business cycle, and the highly varied and customized approach of Private Equity strategies, Callan cannot produce an informationally viable industry fee universe for comparison.
- At the end of fiscal year 2020 Private Equity accounted for 4.8% of Total Fund assets.
- The average Private Equity fund in the North Dakota Pension Trust had a net asset value of \$12mm during FY 2020, with total assets allocated to private equity of \$290mm as of June 30, 2020.
- Total asset class weighted average fee for FY 2020: 2.11%.
- Similar to the fiscal 2018 fee study, the management fees for NDSIB's private equity portfolio are at levels for similar strategies and are in line with industry norms.
- Note that the Adam's Street Direct Co-Investment only charged fees for the second quarter of the 2020 Fiscal Year. During the other quarters the Trust accrued a performance fee credit against future fees. For the purposes of this calculation, the fee charged by Adam's Street Direct Co-Investment was valued at zero.



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# Cash

## Pension Trust

<b>Cash &amp; Equivalents</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
Bank of North Dakota Cash Account	0.00%
Northern Trust Cash Account	0.13%
<b>Total Weighted Average Cash Equivalents Fee</b>	<b>0.10%</b>

- The managers for this asset class fall into the asset-based fee category.
- Fees for cash management are typically below 20 basis points (0.20%) per annum. Fees paid by the North Dakota State Investment Board's Pension Trust for cash management are within industry norms.
- North Dakota's average Cash account size for FY 2020 was \$41mm.

Callan

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**Insurance Trust**

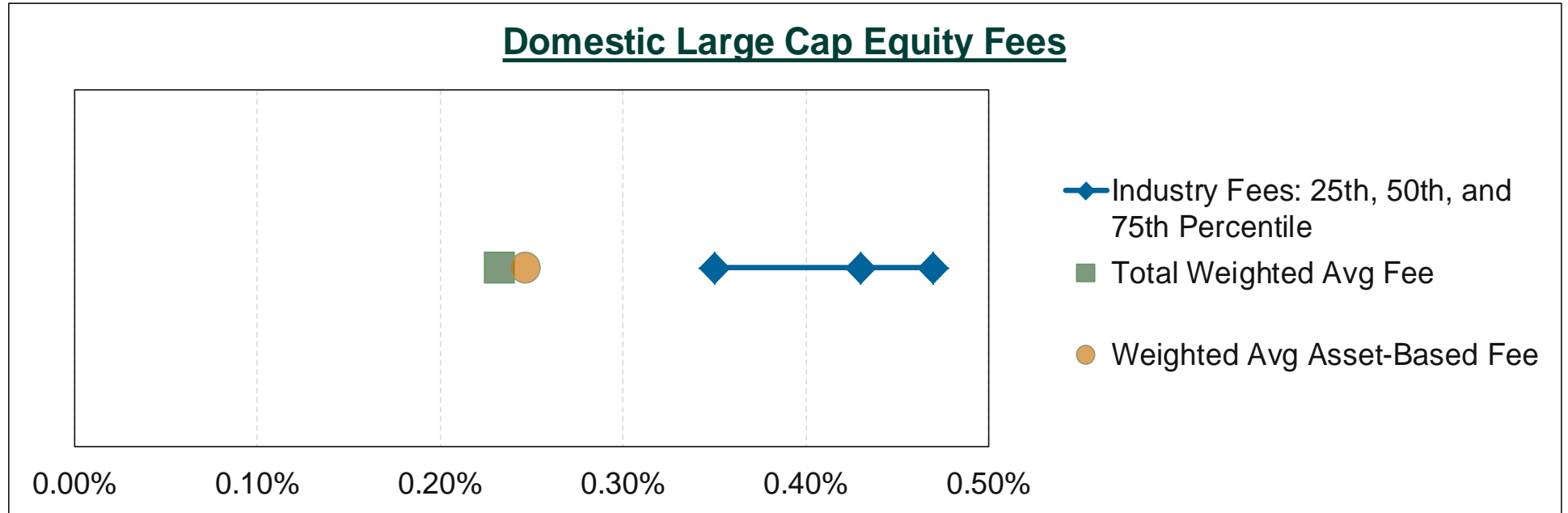
# Insurance Trust

## NDSIB Insurance Trust Fee Study Fiscal Year 2020 Executive Summary

- Total Insurance Trust Equity Manager fees paid represented a mix of asset-based and performance and hybrid fee strategies. In aggregate all equity strategy composites had fees below their respective 25<sup>th</sup> percentiles.
  - Total Domestic Large Cap Equity fees were below the 25<sup>th</sup> percentile of the industry fee universe.
  - Total Small Cap Equity fees were below the 25<sup>th</sup> percentile.
  - Total Developed International Equity fees were below the 25<sup>th</sup> percentile and represented only asset-based fee strategies.
- Total Insurance Trust Domestic Fixed Income manager fees paid represented a mix of asset-based and performance and hybrid fee strategies.
  - Total Domestic Fixed Income fees paid were at median, driven higher by performance and hybrid fee based strategies, while total asset-based fee strategies were below the 25<sup>th</sup> percentile.
- The Insurance Trust's Diversified Real Assets manager fees paid represented a mix of asset-based and performance and hybrid fee strategies spanning public and private markets. Total weighted average fees fell below the 25<sup>th</sup> percentile.
  - Due to the custom nature of non-core public strategies and their closed-end fund structures, the manager fee distribution may not be particularly applicable.
- The Insurance Trust's Total Real Estate manager fees paid represented asset-based fee strategies only.
  - Total Real Estate manager fees paid were below the 25<sup>th</sup> percentile.
- The Insurance Trust's Short-term Fixed Income manager fees paid represented asset-based fee strategies only.
  - Fees paid fell below the 25<sup>th</sup> percentile of the strategy universe.

# Domestic Large Cap Equity

Insurance Trust



*N=48, Actual Fee Universe*

- North Dakota Insurance Trust's Domestic Large Cap Equity managers invest in large company stocks that are typically listed and traded within the U.S.
- North Dakota Insurance Trust's average Domestic Large Cap Equity account size for FY 2020 was \$60mm.
- The orange circle represents North Dakota Insurance Trust's Domestic Large Cap Equity weighted average asset-based management fee of 0.25%.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.23%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$50mm and \$150mm.

# Domestic Large Cap Equity

## Insurance Trust

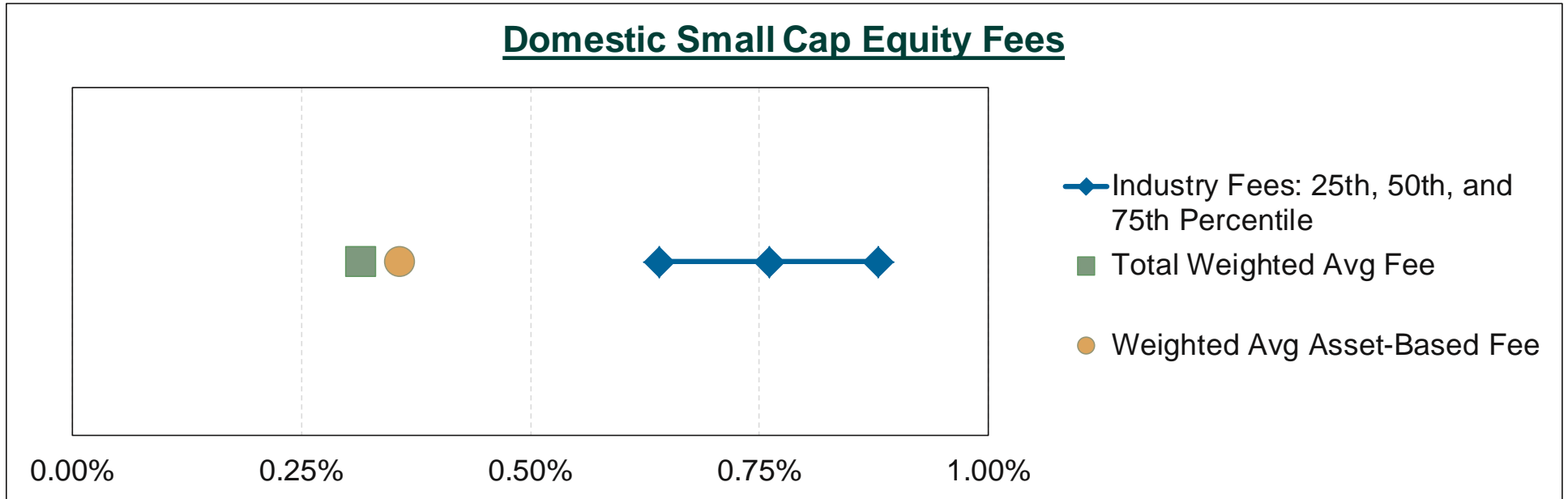
Domestic Large Cap Equity	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
L.A. Capital Growth	0.21%
LSV Large Cap Value	0.29%
<b>Weighted Average Asset-Based Fee</b>	<b>0.25%</b>
<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
L.A. Capital Enhanced Index	0.42%
Parametric Large Cap	0.00%
<b>Weighted Average Performance and Hybrid Fee</b>	<b>0.21%</b>
<b>Total Weighted Average U.S. Lg Cap Fee</b>	<b>0.23%</b>
Industry Fee - 25th Percentile	0.35%
Industry Fee - Median	0.43%
Industry Fee - 75th Percentile	0.47%

*N=48, Actual Fee Universe*

- North Dakota Insurance Trust's Domestic Large Cap Equity Portfolio employs several managers with performance and hybrid fee structures and is therefore difficult to compare directly to industry averages.
  - L.A. Capital Enhanced Index charges a base management fee on all assets under management in addition to a performance based fee on a portion of the assets.
  - Parametric Clifton Enhanced Index charges no base management fee. The only fee charged is on the excess return generated. Fees are paid once a year for performance through June 30.

# Domestic Small Cap Equity

## Insurance Trust



*N=119, Actual Fee Universe*

- North Dakota Insurance Trust's Domestic Small Cap Equity managers invest in smaller company stocks that are typically listed and traded within the U.S.
- North Dakota Insurance Trust's average Domestic Small Cap Equity account size for FY 2020 was \$22mm.
- The orange circle represents North Dakota Insurance Trust's Domestic Small Cap Equity weighted average asset-based management fee of 0.36%.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.31%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes below \$50mm.

# Domestic Small Cap Equity

## Insurance Trust

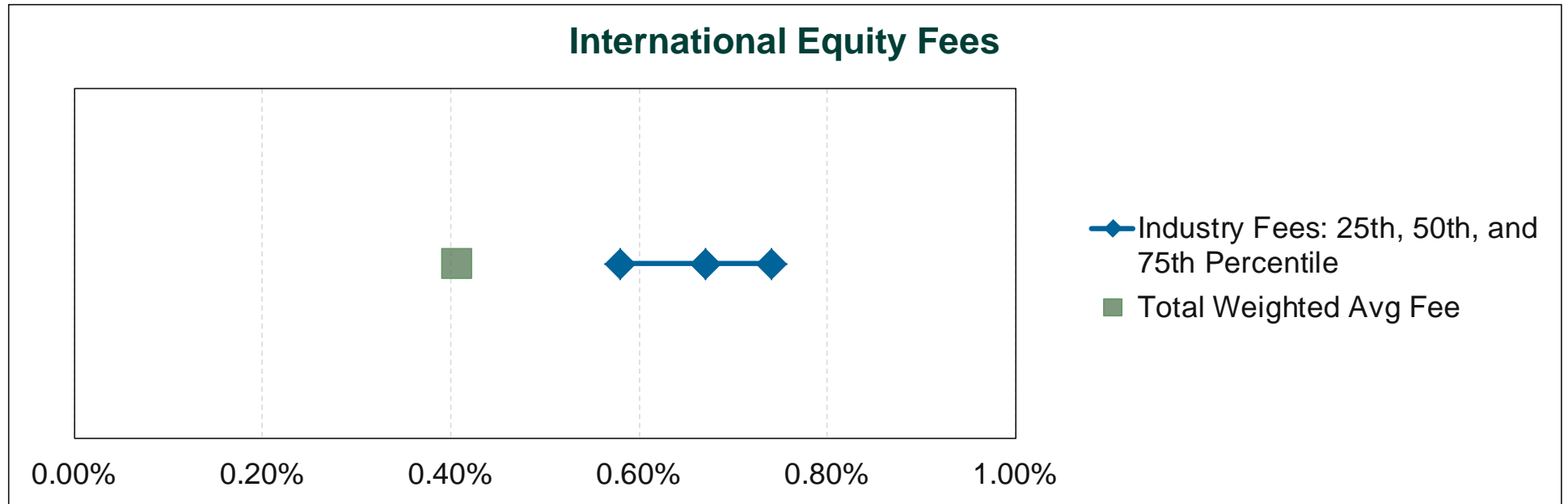
<b>Domestic Small Cap Equity</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
PIMCO (Research Affiliates)	0.32%
Atlanta Capital	0.42%
<b>Weighted Average Asset-Based Fee</b>	<b>0.36%</b>
<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
Parametric Small Cap	0.27%
<b>Weighted Average Performance and Hybrid Fee</b>	<b>0.27%</b>
<b>Total Weighted Average U.S. Sm Cap Fee</b>	<b>0.31%</b>
Industry Fee - 25th Percentile	0.64%
Industry Fee - Median	0.76%
Industry Fee - 75th Percentile	0.88%

*N=119, Actual Fee Universe*

- Due to the fee structure of the funds in the performance and hybrid fee strategies category, the total weighted average fees are not comparable to industry fees from Callan's 2019 Investment Management Fee Survey.
  - Parametric Clifton Small Cap Enhanced Index charges no base management fee. The only fee charged is on the excess return generated over the benchmark. Fees are paid once a year for performance through June 30.

# International Equity

## Insurance Trust



*N=112, Actual Fee Universe*

- North Dakota Insurance Trust's International Equity managers invest in stocks that trade and gain exposure to equity markets and economies outside of the U.S.
- North Dakota Insurance Trust's average International Equity account size for FY 2020 was \$43mm.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.41%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes below \$100mm.



# International Equity

## Insurance Trust

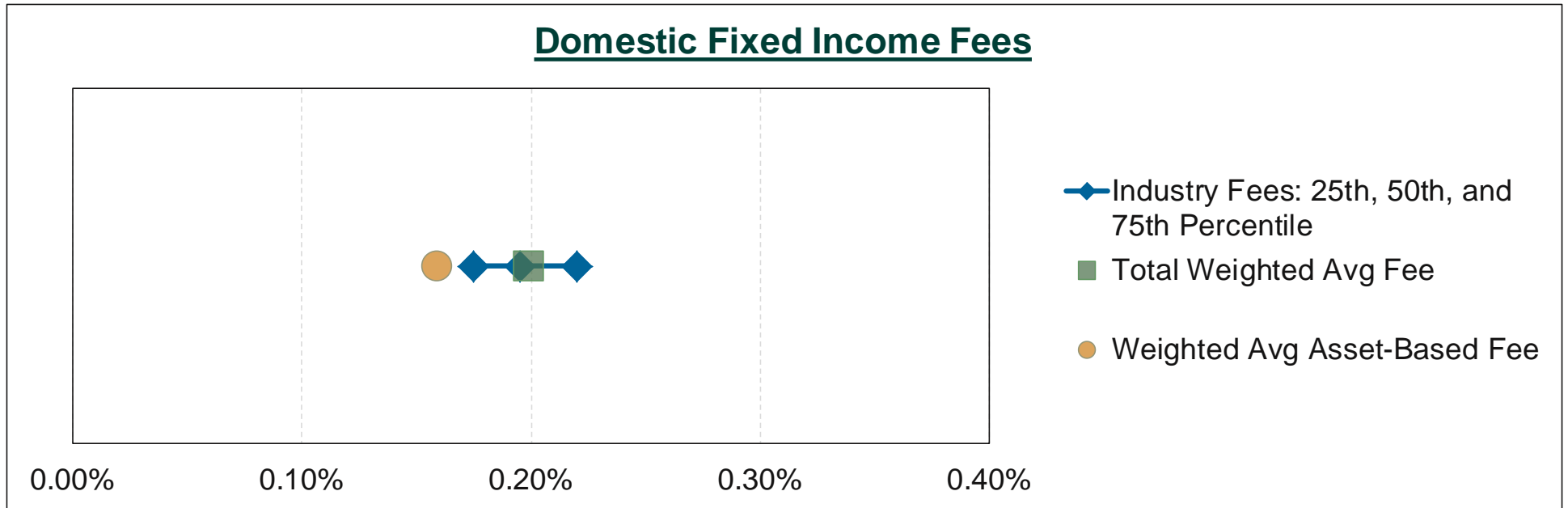
<b>International Equity</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
DFA Int'l Small Cap	0.67%
LSV International Value	0.39%
Vanguard Int'l Explorer Fund	0.40%
William Blair	0.36%
<b>Total Weighted Average Intl Equity Fee</b>	<b>0.41%</b>
<hr/>	
Industry Fee - 25th Percentile	0.58%
Industry Fee - Median	0.67%
Industry Fee - 75th Percentile	0.74%

*N=112, Actual Fee Universe*

- All managers for this asset class fall into the asset-based fee category.

# Domestic Fixed Income

## Insurance Trust



*N=106, Average of Actual Fee Universe (N=25) and Published Fee Universe (N=81)*

- North Dakota Insurance Trust's Domestic Fixed Income managers invest in bonds and other debt instruments.
- North Dakota Insurance Trust's average Domestic Fixed Income account size for FY 2020 was \$164mm.
- The orange circle represents North Dakota Insurance Trust's Domestic Fixed Income weighted average asset-based management fee of 0.16%.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.2%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$150mm and \$300mm.

## Domestic Fixed Income

### Insurance Trust

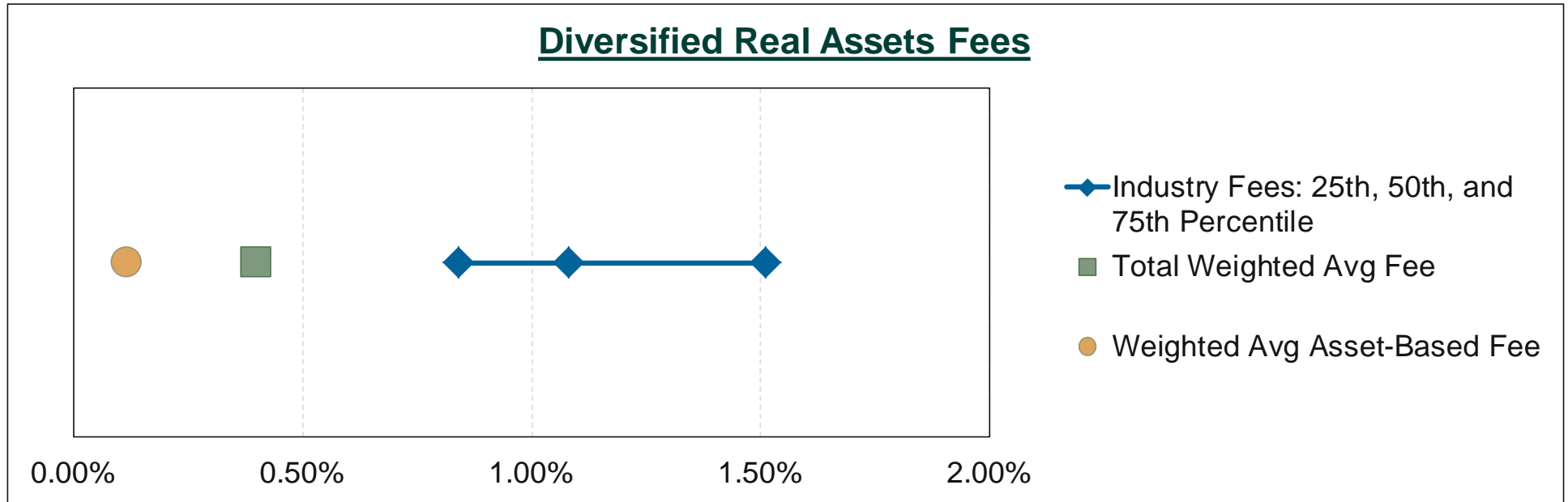
<b>Domestic Fixed Income</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
Declaration Total Return	0.37%
Prudential	0.21%
SSgA U.S. Govt Credit Bond Index	0.01%
Wells Capital	0.19%
Western Asset Management	0.12%
<b>Weighted Average Asset-Based Fee</b>	<b>0.16%</b>
<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
PIMCO Core Plus Constrained	0.21%
PIMCO DiSCO II	1.19%
PIMCO Bravo II	0.00%
<b>Weighted Average Performance and Hybrid Fee</b>	<b>0.39%</b>
<b>Total Weighted Average U.S. Fixed Income Fee</b>	<b>0.20%</b>
Industry Fee - 25th Percentile	0.18%
Industry Fee - Median	0.20%
Industry Fee - 75th Percentile	0.22%

*N=106, Average of Actual Fee Universe (N=25) and Published Fee Universe (N=81)*

- North Dakota Insurance Trust's Domestic Fixed Income portfolio employs both asset-based fee strategies and performance and hybrid strategies.
- The portfolio's total weighted average fees are at the peer median.

# Diversified Real Assets

## Insurance Trust



*N=96, Published: Callan's Diversified Real Assets Peer Group*

- North Dakota Insurance Trust's Diversified Real Assets managers invest in assets that are expected to perform well during periods of inflation.
- North Dakota Insurance Trust's average Diversified Real Assets account size for FY 2020 was \$63mm.
- The orange circle represents North Dakota Insurance Trust's Diversified Real Assets weighted average asset-based management fee of 0.12%.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.4%.
- Fee universe was constructed using Callan's Diversified Real Assets Peer Group of 96 investment manager constituents.

## Diversified Real Assets

### Insurance Trust

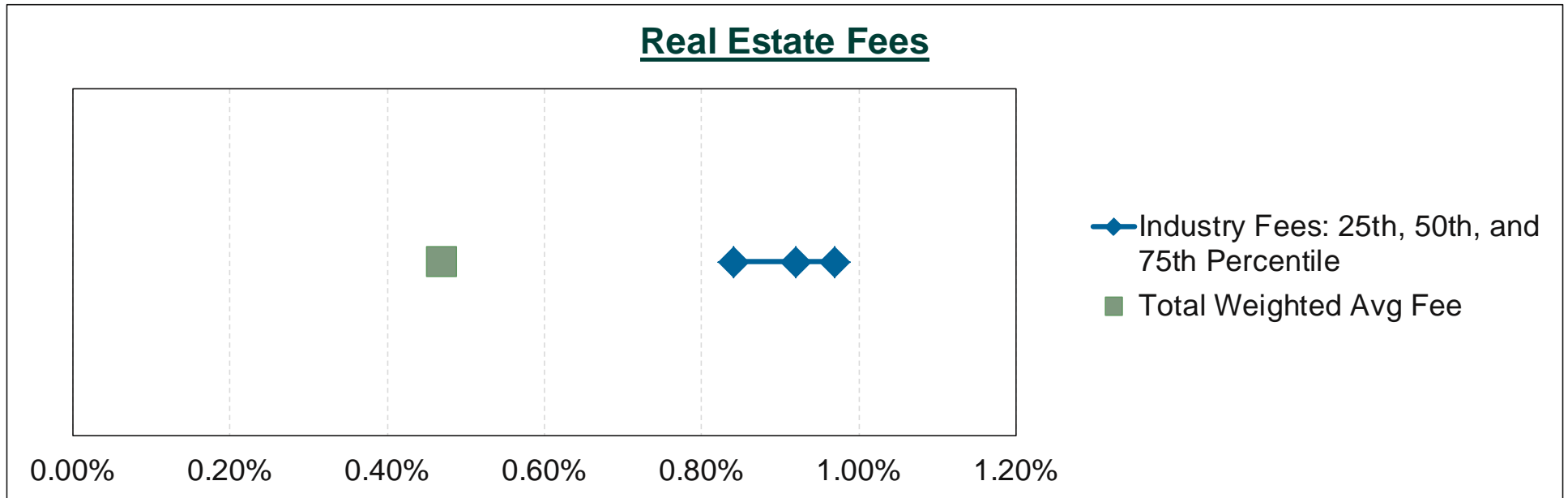
<b>Diversified Real Assets</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
Western Asset Management TIPS	0.12%
<b>Weighted Average Asset-Based Fee</b>	<b>0.12%</b>
<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
JP Morgan Infrastructure Inv. Fund	0.76%
TIR - Eastern Timber Opportunities	0.83%
Grosvenor Infrastructure Fund I	0.58%
<b>Weighted Average Performance and Hybrid Fee</b>	<b>0.77%</b>
<b>Total Weighted Average Real Assets Fee</b>	<b>0.40%</b>
Industry Fee - 25th Percentile	0.84%
Industry Fee - Median	1.08%
Industry Fee - 75th Percentile	1.51%

*N=96, Published: Callan's Diversified Real Assets Peer Group*

- JP Morgan Infrastructure Fund, Grosvenor Infrastructure Fund I, and TIR Eastern Timber Opportunities Fund all charge a base management fee on assets and a performance fee for performance exceeding a “preferred” return set by each fund.
- Note that the Callan Diversified Real Assets Peer Group is a universe of 96 managers that invest in publicly traded securities and is not reflective of the private infrastructure and timber peer universes.

# Real Estate

## Insurance Trust



*N=66, Average of Actual Fee Universe (N=29) and Published Fee Universe (N=37)*

- North Dakota Insurance Trust's Real Estate managers invest directly in real properties (e.g. offices, multi-family, retail, and other physical properties) and securities that gain access to such economic interests.
- North Dakota Insurance Trust's average Real Estate account size for FY 2020 was \$50mm.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.47%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$50mm and \$150mm.

# Real Estate

## Insurance Trust

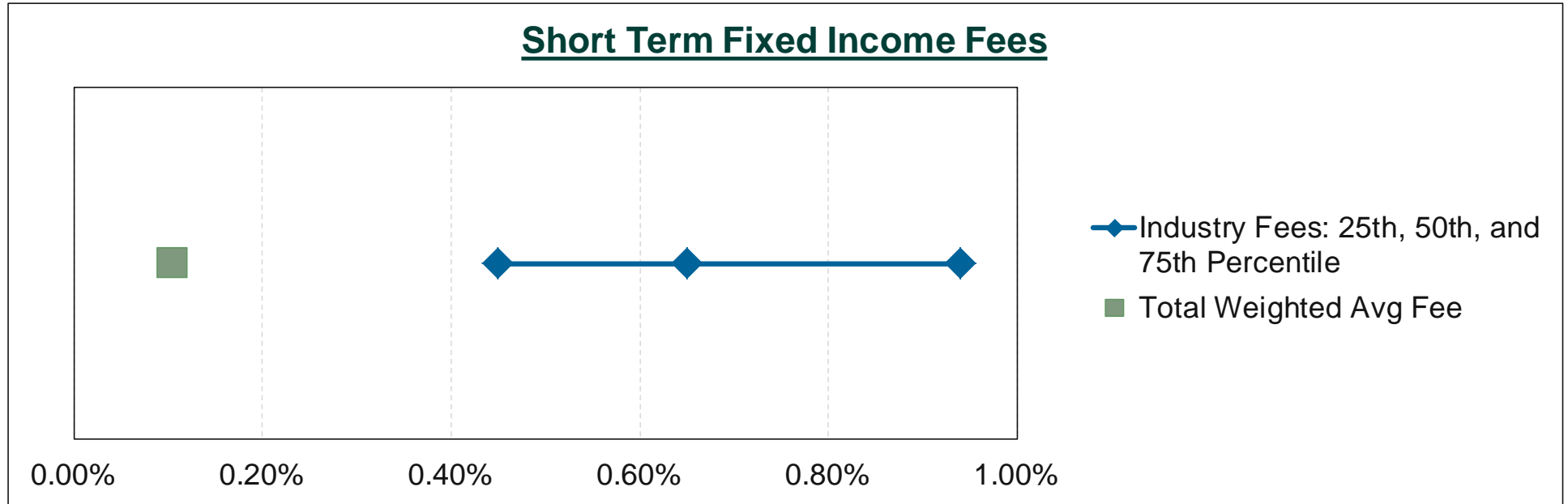
<b>Real Estate</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
Invesco Core Real Estate	0.34%
JP Morgan RE Income & Growth	0.61%
<b>Total Weighted Average Real Estate Fee</b>	<b>0.47%</b>
<hr/>	
Industry Fee - 25th Percentile	0.84%
Industry Fee - Median	0.92%
Industry Fee - 75th Percentile	0.97%

*N=66, Average of Actual Fee Universe (N=29) and Published Fee Universe (N=37)*

- All managers for this asset class fall into the asset-based fee category.

# Short Term Fixed Income

Insurance Trust



*N=557, Published: Callan's Short Investment Grade Bond Mutual Funds Peer Group*

- North Dakota Insurance Trust's Short Term Fixed Income managers invest in bonds that have short maturity dates.
- North Dakota Insurance Trust's average Short Term Fixed Income account size for FY 2020 was \$357mm.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.1%.
- The fee universe was constructed using Callan's Short Investment Grade Bond Mutual Funds Peer Group of 557 investment manager constituents.



# Short Term Fixed Income and Cash

## Insurance Trust

<b>Short Term Fixed Income</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
Barings Active Short Duration	0.11%
JPM Short Term Bonds	0.10%
<b>Total Weighted Average ST Fixed Income Fee</b>	<b>0.10%</b>
<hr/>	
Industry Fee - 25th Percentile	0.45%
Industry Fee - Median	0.65%
Industry Fee - 75th Percentile	0.94%

*N=557, Published: Callan's Short Investment Grade Bond Mutual Funds Peer Group*

<b>Cash &amp; Equivalents</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
Bank of North Dakota Cash Account	0.00%
Northern Trust Cash Account	0.19%
<b>Total Weighted Average Cash Equivalents Fee</b>	<b>0.10%</b>

- All managers for these asset classes fall into the asset-based fee category.
- North Dakota Insurance Trust's average Cash account size for FY 2020 was \$22mm.
- Fees for cash management are typically below 20 basis points (0.20%). Fees paid by the North Dakota State Investment Board's Insurance Trust cash and short-term fixed income management are within industry norms.

Callan

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**Legacy Fund**

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# Legacy Fund

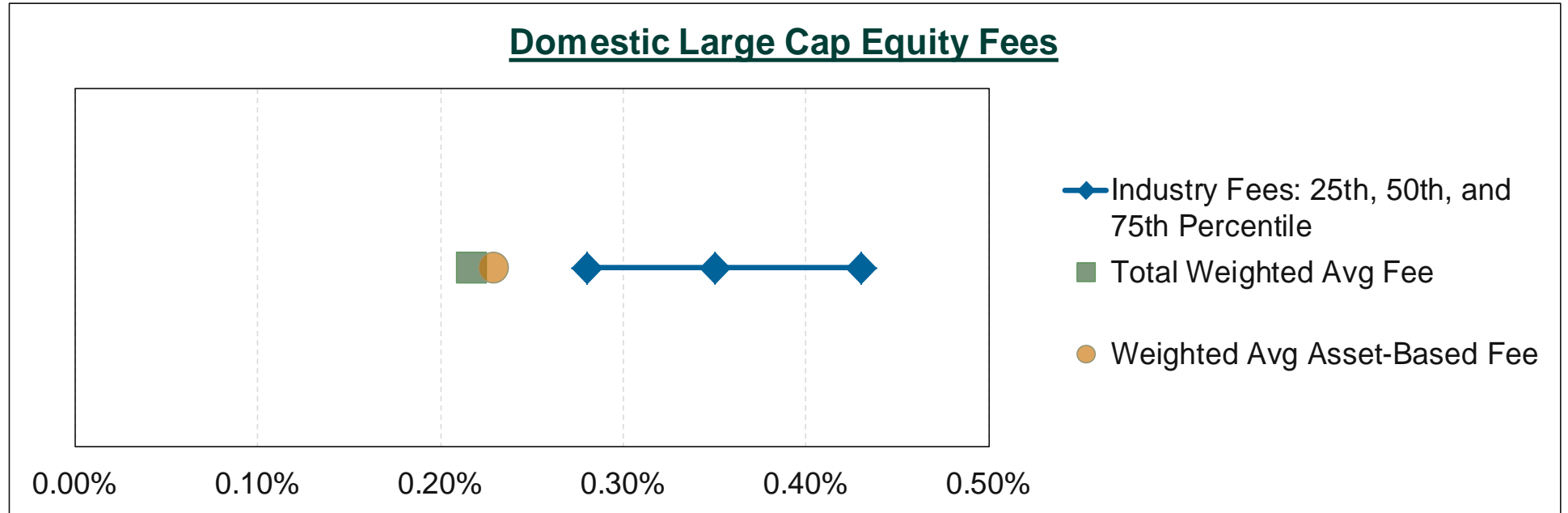
## NDSIB Legacy Fund Fee Study Fiscal Year 2020 Executive Summary

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- The Legacy Fund's Total Equity manager fees paid represented a mix of asset-based and performance and hybrid fee strategies.
  - Total Domestic Large Cap Equity fees were below the 25<sup>th</sup> percentile of industry fees.
  - Total Small Cap Equity fees were below the 25<sup>th</sup> percentile.
  - International Equity fees fell within second quartile among peers and represented only asset-based fee strategies.
- The Legacy Fund's Total Domestic Fixed Income manager fees paid represented both asset-based and performance and hybrid fee strategies.
  - Total Domestic Fixed Income fees paid were above the 75<sup>th</sup> percentile of industry fees. This was largely due to the impact of performance-based fee schedules. Asset based fees paid by the trust were below the 25<sup>th</sup> percentile of industry fees.
- The Legacy Fund's Diversified Real Assets manager fees paid represented a mix of asset-based and performance and hybrid fee strategies spanning public and private markets. Asset based fee strategies fell below the 25<sup>th</sup> percentile, with performance and hybrid fee strategies pushing the total fees paid higher, but still below the 25<sup>th</sup> percentile.
  - Due to the custom nature of the private strategies and their closed-end fund structures, there is no applicable manager fee distribution and so it presents a skew to the asset-based fee universe for the comparison.
- The Legacy Fund's Total Real Estate manager fees paid represented asset-based fee strategies only.
  - Total Real Estate manager fees paid were below the 25<sup>th</sup> percentile.

# Domestic Large Cap Equity

## Legacy Fund



*N=43, Actual Fee Universe*

- North Dakota Legacy Fund's Domestic Large Cap Equity managers invest in large company stocks that are typically listed and traded within the U.S.
- North Dakota's average Domestic Large Cap Equity account size for FY 2020 was \$353mm.
- The orange circle represents North Dakota's Domestic Large Cap Equity weighted average asset-based management fee of 0.23%.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.22%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$150mm and \$300mm.

## Domestic Large Cap Equity

Legacy Fund

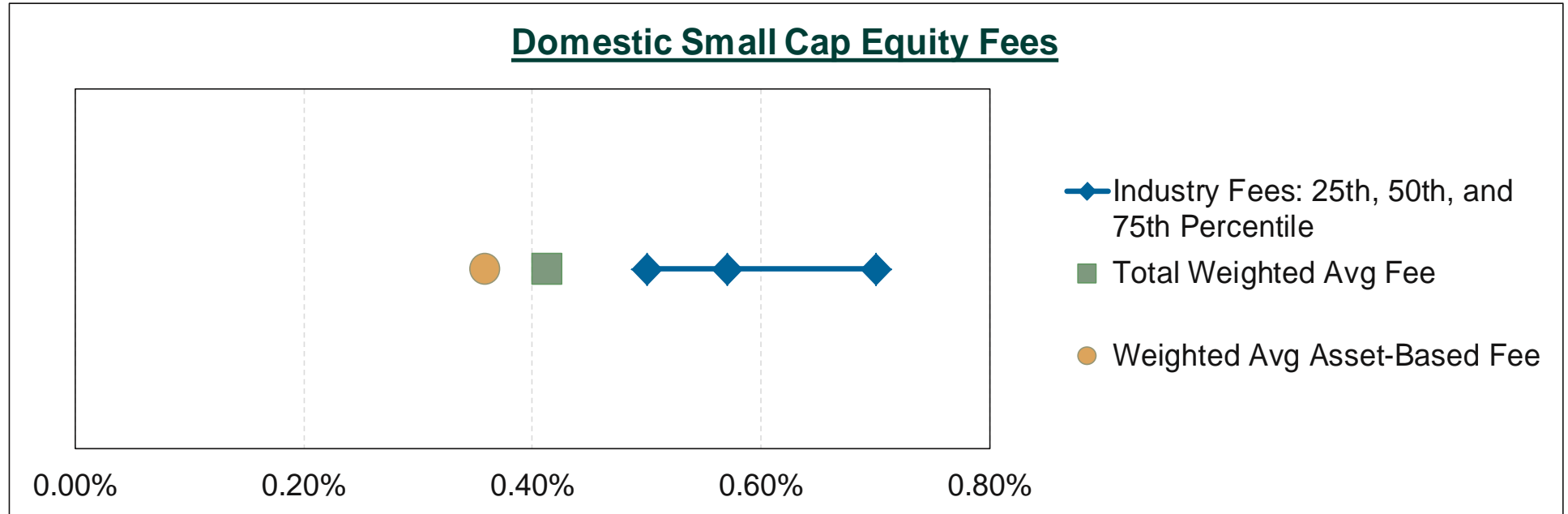
Domestic Large Cap Equity	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
L.A. Capital Growth	0.18%
LSV Large Cap Value	0.29%
<b>Weighted Average Asset-Based Fee</b>	<b>0.23%</b>
<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
L.A. Capital Enhanced Index	0.39%
Parametric Large Cap	0.00%
<b>Weighted Average Performance and Hybrid Fee</b>	<b>0.20%</b>
<b>Total Weighted Average U.S. Lg Cap Fee</b>	<b>0.22%</b>
Industry Fee - 25th Percentile	0.28%
Industry Fee - Median	0.35%
Industry Fee - 75th Percentile	0.43%

*N=43, Actual Fee Universe*

- The Domestic Large Cap Equity Portfolio employs several managers with performance and hybrid fee structures and is therefore difficult to compare directly to industry averages.
  - L.A. Capital Enhanced Index charges a base management fee on all assets under management in addition to a performance based fee on a portion of the assets.
  - Parametric Clifton Enhanced Index charges no base management fee. The only fee charged is on the excess return generated. Fees are paid once a year for performance through June 30.

# Domestic Small Cap Equity

## Legacy Fund



*N=46, Actual Fee Universe*

- North Dakota Legacy Fund's Domestic Small Cap Equity managers invest in smaller company stocks that are typically listed and traded within the U.S..
- North Dakota Legacy Fund's average Domestic Small Cap Equity account size for FY 2020 was \$167mm.
- The orange circle represents North Dakota Legacy Fund's Domestic Small Cap Equity weighted average asset-based management fee of 0.36%.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.41%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$150mm and \$300mm.

# Domestic Small Cap Equity

## Legacy Fund

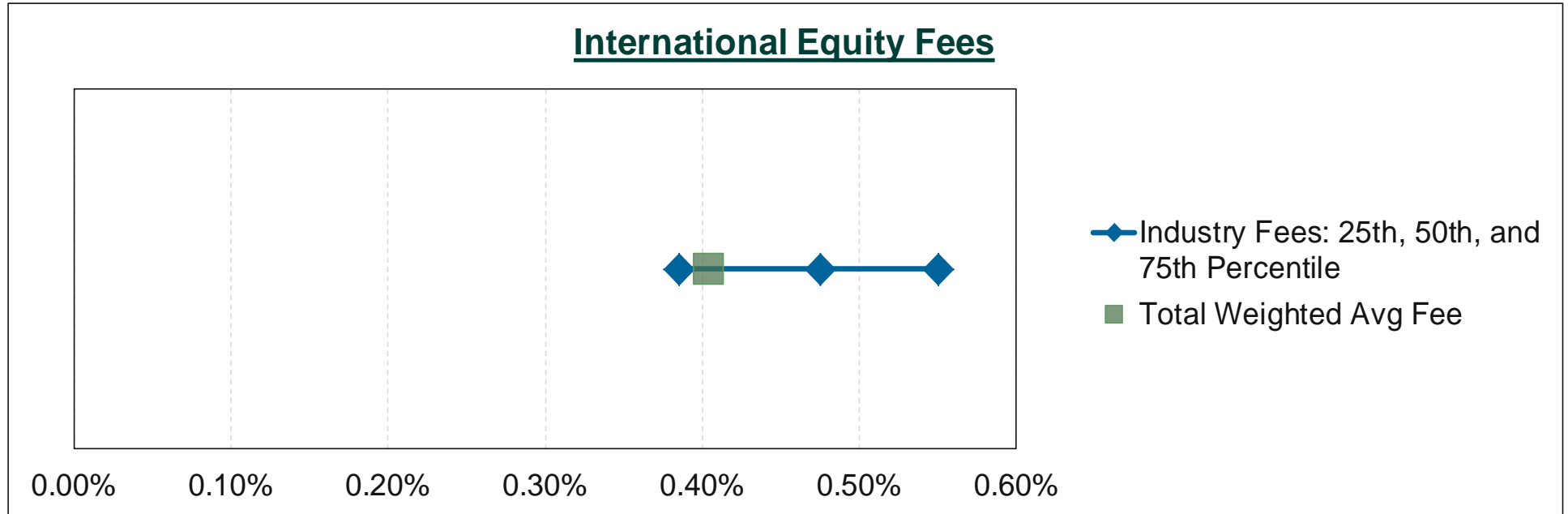
Domestic Small Cap Equity	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
Atlanta Capital	0.43%
PIMCO (Research Affiliates)	0.31%
<b>Weighted Average Asset-Based Fee</b>	<b>0.36%</b>
<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
Parametric Small Cap	0.46%
<b>Weighted Average Performance and Hybrid Fee</b>	<b>0.46%</b>
<b>Total Weighted Average U.S. Sm Cap Fee</b>	<b>0.41%</b>
Industry Fee - 25th Percentile	0.50%
Industry Fee - Median	0.57%
Industry Fee - 75th Percentile	0.70%

*N=46, Actual Fee Universe*

- Due to the fee structure of the funds in the performance and hybrid fee strategies category, the total weighted average fees are not comparable to industry fees from Callan's 2019 Investment Management Fee Survey.
  - Parametric Clifton Small Cap Enhanced Index charges no base management fee. The only fee charged is on the excess return generated over the benchmark. Fees are paid once a year for performance through June 30.

# International Equity

## Legacy Fund



*N=203, Average of Actual Fee Universe (N=27) & Published Fee Universe (N=176)*

- North Dakota Legacy Fund's International Equity managers invest in stocks that trade and gain exposure to developed markets and economies outside of the U.S.
- North Dakota Legacy Fund's average International Equity account size for FY 2020 was \$319mm.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.4%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$300mm and \$600mm.



# International Equity

## Legacy Fund

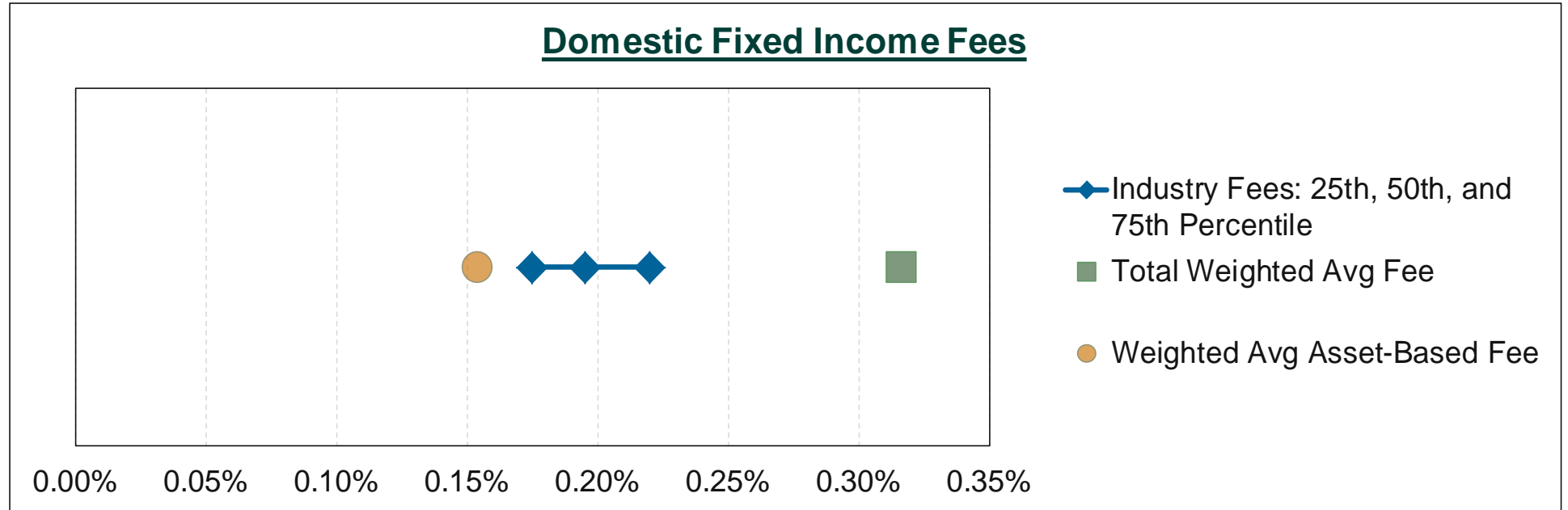
<b>International Equity</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
LSV International Value	0.39%
DFA Int'l Small Cap	0.66%
William Blair	0.36%
Vanguard Int'l Explorer Fund	0.39%
<b>Total Weighted Average Intl Equity Fee</b>	<b>0.40%</b>
<hr/>	
Industry Fee - 25th Percentile	0.39%
Industry Fee - Median	0.48%
Industry Fee - 75th Percentile	0.55%

*N=203, Average of Actual Fee Universe (N=27) & Published Fee Universe (N=176)*

- All managers for this asset class fall into the asset-based fee category.

# Domestic Fixed Income

## Legacy Fund



*N=106, Average of Actual Fee Universe (N=25) & Published Fee Universe (N=81)*

- North Dakota Legacy Fund's Domestic Fixed Income managers invest in bonds and other debt instruments.
- North Dakota Legacy Fund's average Domestic Fixed Income account size for FY 2020 was \$236mm.
- The orange circle represents North Dakota Legacy Fund's Domestic Fixed Income weighted average asset-based management fee of 0.15%.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.32%.
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$150mm and \$300mm.

# Domestic Fixed Income

## Legacy Fund

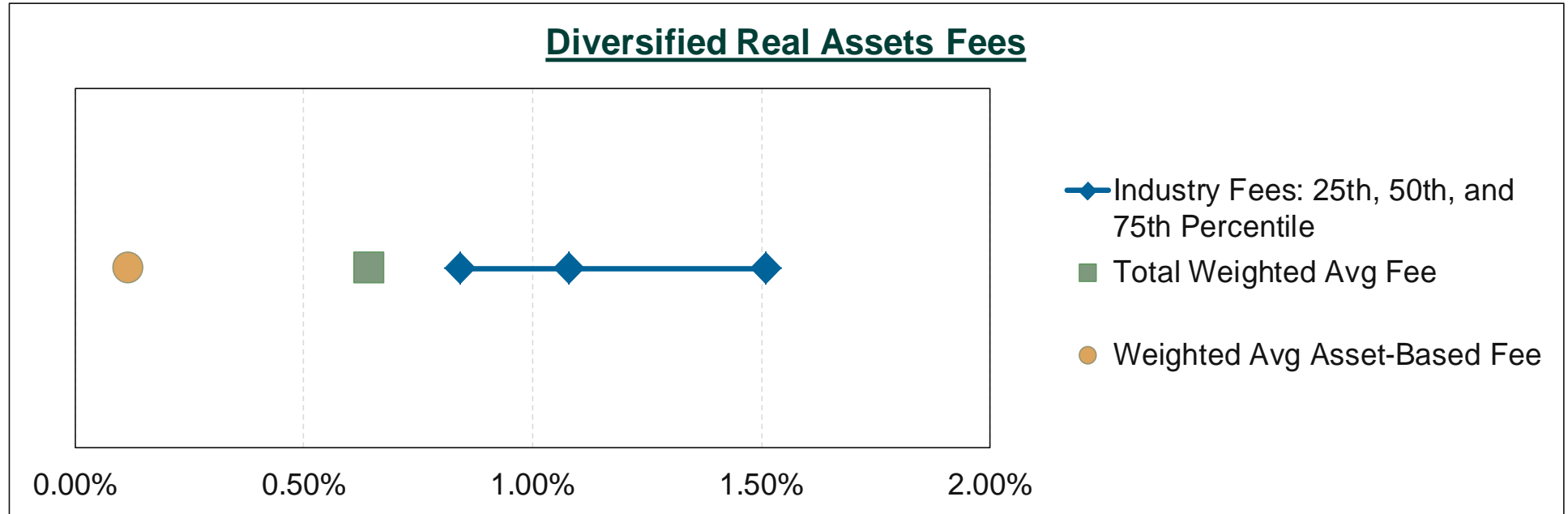
<b>Domestic Fixed Income</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
Declaration Total Return	0.37%
Prudential	0.21%
SSgA U.S. Govt Credit Bond Index	0.01%
Wells Capital	0.19%
Western Asset Management	0.12%
Bank of North Dakota CDs	0.00%
<b>Weighted Average Asset-Based Fee</b>	<b>0.15%</b>
<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
Cerberus Private Credit	2.79%
PIMCO DiSCO II	1.18%
PIMCO Bravo II	0.00%
Ares Credit Strategies	1.60%
<b>Weighted Average Performance and Hybrid Fee</b>	<b>1.91%</b>
<b>Total Weighted Average U.S. Fixed Income Fee</b>	<b>0.32%</b>
Industry Fee - 25th Percentile	0.18%
Industry Fee - Median	0.20%
Industry Fee - 75th Percentile	0.22%

*N=106, Average of Actual Fee Universe (N=25) & Published Fee Universe (N=81)*

- Asset-based fee strategies fall below the 25<sup>th</sup> percentile of the peer universe, while performance and hybrid fee structures push the total weighted average fee above the 75<sup>th</sup> percentile.

# Diversified Real Assets

## Legacy Fund



*N=96, Published: Callan's Diversified Real Assets Peer Group*

- North Dakota Legacy Fund's Diversified Real Assets managers invest in assets that are expected to perform well during periods of inflation.
- North Dakota Legacy Fund's average Diversified Real Assets account size for FY 2020 was \$137mm.
- The orange circle represents North Dakota Legacy Fund's Diversified Real Assets weighted average asset-based management fee of 0.12%.
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.64%.
- Fee universe was constructed using Callan's Diversified Real Assets Peer Group of 96 investment manager constituents.

## Diversified Real Assets

### Legacy Fund

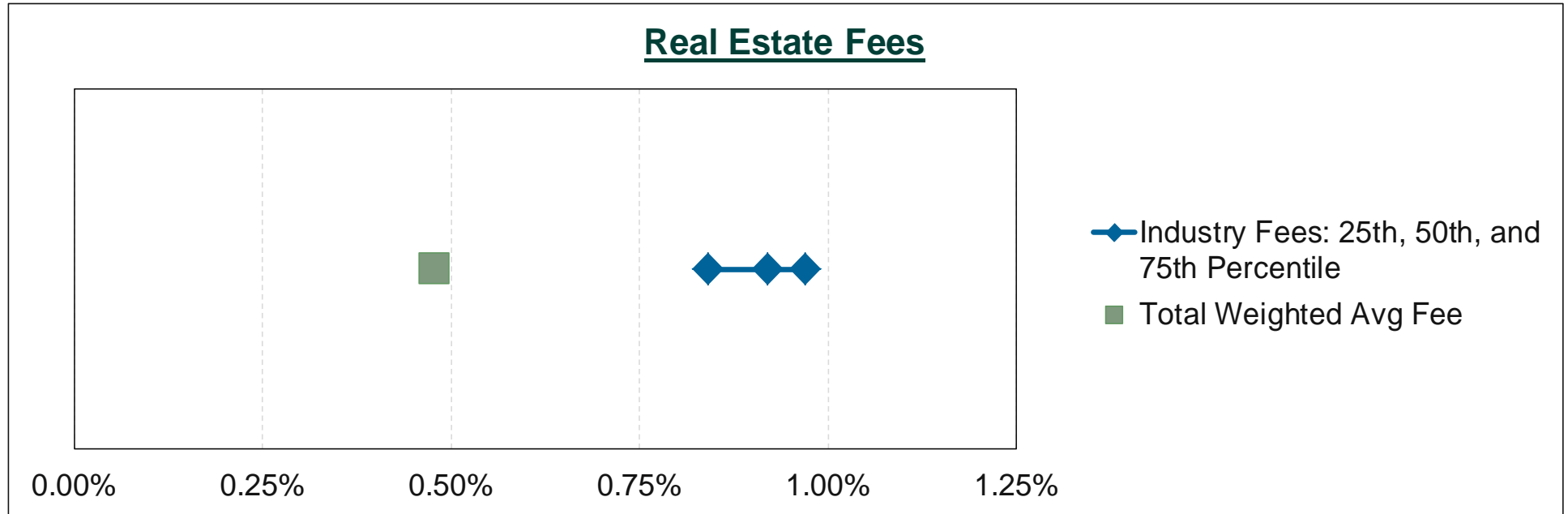
<b>Diversified Real Assets</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
Western Asset Management TIPS	0.12%
<b>Weighted Average Asset-Based Fee</b>	<b>0.12%</b>
<b>Performance and Hybrid Fee Strategies</b>	<b>Fee %</b>
ISQ Global Infrastructure II	4.18%
JP Morgan Infrastructure Inv. Fund	0.80%
Grosvenor Infrastructure Fund II	1.05%
Macquarie Infrastructure Partners IV	1.46%
<b>Weighted Average Performance and Hybrid Fee</b>	<b>1.50%</b>
<b>Total Weighted Average Real Assets Fee</b>	<b>0.64%</b>
Industry Fee - 25th Percentile	0.84%
Industry Fee - Median	1.08%
Industry Fee - 75th Percentile	1.51%

*N=96, Published: Callan's Diversified Real Assets Peer Group*

- The North Dakota Legacy Fund's Diversified Real Assets portfolio is comprised of one Treasury Inflation-Protected Securities manager and four infrastructure funds.
- Collectively, the portfolio's total weighted average fee is in the top quartile among the peer universe.
- Note that the Callan Diversified Real Assets Peer Group is a universe of 96 managers that invest in publicly traded securities and is not reflective of the private infrastructure peer universe.

# Real Estate

## Legacy Fund



*N=66, Average of Actual Fee Universe (N=29) & Published Fee Universe (N=37)*

- North Dakota Legacy Fund's Real Estate managers invest directly in real properties (e.g. offices, multi-family, retail, and other physical properties) and securities that gain access to such economic interests.
- North Dakota Legacy Fund's average Real Estate account size for FY 2020 was \$150mm
- The green box represents total asset class weighted average fee (asset based & performance and hybrid fees) in FY 2020: 0.48%
- Fee universe was constructed using Callan's 2019 Investment Management Fee Survey for mandate sizes between \$50mm and \$150mm

# Real Estate

## Legacy Fund

Real Estate	
Asset-Based Fee Strategies	Fee %
Invesco Core Real Estate	0.34%
JP Morgan RE Income & Growth	0.61%
<b>Total Weighted Average Real Estate Fee</b>	<b>0.48%</b>
<hr/>	
Industry Fee - 25th Percentile	0.84%
Industry Fee - Median	0.92%
Industry Fee - 75th Percentile	0.97%

*N=66, Average of Actual Fee Universe (N=29) & Published Fee Universe (N=37)*

- All managers for this asset class fall into the asset-based fee category.

# Cash

## Legacy Fund

<b>Cash &amp; Equivalents</b>	
<b>Asset-Based Fee Strategies</b>	<b>Fee %</b>
Bank of North Dakota Cash Account	0.00%
Northern Trust Cash Account	0.18%
<b>Total Weighted Average Cash Equivalents Fee</b>	<b>0.11%</b>

- The managers for this asset class fall into the asset-based fee category.
- North Dakota Legacy Fund's average Cash account size for FY 2020 was \$31mm.
- Fees for cash management are typically below 20 basis points (0.20%). Fees paid by the North Dakota State Investment Board's Legacy Fund cash management are within industry norms.



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# Notes and Comments Regarding Report Measurements

## NDSIB – Pension Trust, Insurance Trust, and Legacy Fund

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- All market values, fee data and other information is as of the fiscal year ending June 30, 2020.
- Fee data was provided by NDSIB; no audit of the fees paid by NDSIB was conducted.
- Average account sizes are measured by using the balances at quarter-end for each quarter in the fiscal year 2020. To calculate the average value during the course of the fiscal year, the quarter-end assets for all four quarters were added together and divided by four.
  - In some cases, an account’s value changed significantly during the fiscal year due to external capital flows. These flows, especially when occurring intra-quarter, can skew some calculations.
- Fees charged by investment managers who did not have assets under management for the entire fiscal year are included in this study.
- Investment managers employ three primary fee calculation methods to charge for their services; **Asset-based fees**, **Performance-based fees**, or **Hybrid fees**. Regardless of the method used by a particular manager, Callan has calculated fees as a percentage of assets under management for each manager for the purposes of comparison.
- There are instances where managers provide fee credits (due to underperformance within a performance-based fee structure or due to unique fee structures). In some scenarios, a manager may provide more credits in a given year than it collects in total fees. In these instances where a manager’s total fee (combining both management and performance) was below zero for the fiscal year, a floor of zero was set for the purposes of these calculations.
  - In the 2020 fiscal year the following managers provided a net fee credit: Parametric Large Cap (Pension Trust, Insurance Trust, and Legacy Fund), Adam’s Street Direct Co-Investment (Pension Trust), PIMCO Bravo II (Pension Trust, Insurance Trust, and Legacy Fund), and Invesco Real Estate Fund III (Pension Trust).
- In many instances, fees paid by the individual trusts benefit from fee schedules that account for the aggregate level of assets invested with a particular manager or in a specific strategy.

## Notes and Comments Regarding Report Measurements (continued)

### NDSIB – Pension Trust, Insurance Trust, and Legacy Fund

- Fee universes used in the study reflect either **Actual Fees** paid by Callan clients in similar mandates, fees calculated using a universe of **Published Fees** representing manager fee schedules for similar mandates, or an Average of **Actual and Published Fee** universes where the actual fee universe was smaller than 30. All fee universes are explicitly noted beneath each chart where “n=” will denote the applicable sample size.
- Note: All three plans (Pension Trust, Insurance Trust, and Legacy Fund) employed Parametric to deploy a tactical overlay strategy in the fourth fiscal quarter of the year. Each plan had exposure in the U.S. Large Cap Equity, International Equity, and Fixed Income asset class sleeves. This manager is not explicitly presented in each of the asset class tables in the report due to its short tenure and low asset levels, but the fees paid to the manager are included in the total weighted average fee calculation of each asset class. Below is a breakout of the total fees paid to parametric in each asset class, for each Plan, as a percentage of total fees paid for each asset class:

#### **Pension Trust:**

– U.S. Large Cap Equity:	0.46%
– Developed International Equity:	0.68%
– Investment Grade Fixed Income:	0.74%

#### **Insurance Trust:**

– U.S. Large Cap Equity:	0.81%
– International Equity:	0.38%
– U.S. Fixed Income:	0.25%

#### **Legacy Fund:**

– U.S. Large Cap Equity:	0.66%
– International Equity:	0.28%
– U.S. Fixed Income:	0.42%

## BOARD ACTION

**TO:** State Investment Board  
**FROM:** Dave Hunter  
**DATE:** November 20, 2020  
**SUBJECT:** Annual Review of Governance Manual – Cover Memo

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In accordance with Section B-7 of the SIB Governance Manual, the Board Planning Cycle should include an “Annual Review of the Governance Manual”. In order to facilitate a meaningful review, **RIO intends to divide our review process over four months as follows:**

### **November 20, 2020 (Second Reading)**

Section A – Executive Limitations (13 pages)  
Section B – Governance Process (15 pages)  
Section C – Board Staff Relationship (6 pages)  
Section D – Ends (10 pages)

### **December 18, 2020 or January 22, 2021 (First Reading)**

Section E - Investments (30 pages)  
Section F – TFFR Ends (TFFR Board Reviewed in early-2020)  
Section G – By-Laws (9 pages)  
Section H – Century Code (5 pages)

**RIO encourages board members and RIO staff to review the relevant sections of our SIB Governance Manual prior to each of the above scheduled board meetings.**

**At the conclusion of our monthly board discussions, the SIB may make a motion to accept the recommended “**First Reading**” or “**Second Reading**” changes, if any, to the Governance Manual.** Alternatively, the Board may motion to recommend additional and/or different changes. All SIB recommended changes will be brought forward for further discussion and formally approved at our next regularly scheduled board meeting, assuming no additional changes are recommended.

<http://www.nd.gov/rio/SIB/Board/GovernanceManual/default.htm>

**A. EXECUTIVE LIMITATIONS**

	<u>PAGE</u>
General Executive Constraint .....	A-1
Staff Relations .....	A-2
Relating to Public and Government.....	A-3
Budgeting .....	A-4
Financial Condition.....	A-5
Communication and Counsel to the Board .....	A-6
Asset Protection .....	A-7
Compensation and Benefits .....	A-8
Conflict of Interest .....	A-9
Code of Conduct .....	A-10
Unrelated Business Interests .....	A-11

**EXHIBITS**

<i>Annual Affirmation of Conflict of Interest Policy</i> .....	<i>A-I</i>
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## POLICY TYPE: EXECUTIVE LIMITATIONS

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### **POLICY TITLE: *GENERAL EXECUTIVE CONSTRAINT***

The executive director shall not knowingly cause or allow any practice, activity, decision, or organizational circumstance which is either imprudent or in violation of commonly accepted business and professional ethics, state law, rules, and policies.

1. With respect to treatment of staff, the executive director shall not knowingly cause or allow any condition or any communication which is unfair, undignified, or disrespectful.
2. In relating to the public and other governmental entities, the executive director may not knowingly cause or allow any action which is unfair, undignified, or disrespectful. In addition, the executive director may not allow any communications from the staff which are inaccurate or fail to distinguish between fact and personal opinion.
3. Budgeting for any fiscal year or the remaining part of any fiscal year shall not knowingly deviate materially from board *Ends* priorities, or create fiscal jeopardy, or fail to be derived from the biennial planning calendar.
4. With respect to the actual, ongoing condition of the organization's financial health, the executive director may not cause or allow the development of fiscal jeopardy or a material deviation of actual expenditures from board priorities established in *Ends* policies.
5. With respect to providing information and counsel to the board, the executive director may not permit the board to be uninformed.
6. The executive director may not allow assets to be unprotected, inadequately maintained, nor unnecessarily risked.
7. Compensation and benefits for staff shall not deviate from applicable state and federal law, including N.D. Administrative Code, Chapter 4-07-02.
8. In order to protect the board from sudden loss of executive services, the executive director may not have fewer than three other executives familiar with board and chief executive issues and processes. The executive director shall not fail to inform the Deputy Executive Director, the Deputy Chief Investment Officer, and the Chief Financial Officer of executive and board issues and processes.
9. The executive director will not allow a conflict of interest in the procurement of goods and services.
10. The executive director will not operate the office without a code of conduct for all RIO Employees. This code of conduct will be a part of the office Administrative Policy Manual.

**Policy Implemented:** July 23, 1995.

**Amended:** January 22, 1999; November 19, 1999; September 26, 2014.

**POLICY TYPE: EXECUTIVE LIMITATIONS**

**POLICY TITLE: *STAFF RELATIONS***

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With respect to treatment of staff, the executive director shall not cause or allow any condition or any communication which is unfair, undignified, or disrespectful.

Accordingly, the executive director may not:

1. Operate without personnel procedures which clarify personnel rules for staff, provide for effective handling of grievances, and protect against wrongful conditions or violate any state or federal law.
2. Fail to provide staff with the opportunity to complete an employment termination questionnaire and an exit interview with the Supervisor of Audit Services.

**Policy Implemented:** June 23, 1995.

**Amended:** May 31, 1996; September 26, 2014.

**POLICY TYPE: EXECUTIVE LIMITATIONS**

**POLICY TITLE: *RELATING TO PUBLIC AND GOVERNMENT***

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In relating to the public and other governmental entities, the executive director may not cause or allow any action which is unfair, undignified, or disrespectful. In addition, the executive director may not allow any communications from the staff which is inaccurate or fails to distinguish between fact and personal opinion.

**Policy Implemented:** June 23, 1995.

**POLICY TYPE: EXECUTIVE LIMITATIONS**

**POLICY TITLE: *BUDGETING***

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Budgeting for any fiscal year or the remaining part of any fiscal year shall not deviate materially from board *Ends* priorities, or create fiscal jeopardy.

Accordingly, the executive director may not cause or allow budgeting which:

1. Contains too little information to enable credible projection of expenses, cash flow, and disclosure of planning assumptions.
2. Plans the expenditure in any fiscal year of more funds than are authorized by legislative appropriation.
3. Reduces the level of service, or anticipates a reduction in the level of service, of any Retirement and Investment Office program without the prior approval of the State Investment Board.

**Policy Implemented:** June 23, 1995.

**Amended:** November 2, 1997; June 26, 1998.



**POLICY TYPE: EXECUTIVE LIMITATIONS**

**POLICY TITLE: *FINANCIAL CONDITION***

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With respect to the actual, ongoing condition of the organization's financial health, the executive director may not cause or allow the development of fiscal jeopardy or a material deviation of actual expenditures from board priorities established in *Ends* policies.

Accordingly, the executive director may not:

1. Make any expenditure that exceeds the appropriation authority authorized by the North Dakota legislature.
2. Create policies for payment of administrative obligations that are in conflict with the policies of the Office of Management and Budget.
3. Initiate a transfer of appropriation authority between budget line items without board and Emergency Commission approval.
4. Allow appropriation expenditures to be made unless reported on PeopleSoft.

**Policy Implemented:** June 23, 1995.

**Amended:** September 26, 2014.

## **POLICY TYPE: EXECUTIVE LIMITATIONS**

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### **POLICY TITLE: COMMUNICATION AND COUNSEL TO THE BOARD**

With respect to providing information and counsel to the board, the executive director may not permit the board to be uninformed.

Accordingly, the executive director may not:

1. Neglect to submit monitoring data required by the board (see policy on Monitoring Executive Performance) in a timely, accurate, and understandable fashion, directly addressing provisions of the board policies being monitored.
2. Let the board be unaware of relevant trends, anticipated adverse media coverage, material external and internal changes, and particularly changes in the assumptions upon which any board policy has previously been established.
3. Fail to advise the board if, in the executive director's opinion, the board is not in compliance with its own policies on *Governance Process* and *Board-Staff Relationship*, particularly in the case of board behavior which is detrimental to the work relationship between the board and the executive director.
4. Fail to marshal for the board as many staff and external points of view, issues, and options as needed for fully informed board choices.
5. Present information in unnecessarily complex or lengthy form.
6. Fail to provide a mechanism for official board, officer, or committee communications.
7. Fail to deal with the board as a whole except when (a) fulfilling individual requests for information or (b) responding to officers or committees duly charged by the board.
8. Fail to report in a timely manner an actual or anticipated noncompliance with any policy of the board, particularly *Ends* and *Executive Limitations*.
9. Fail to inform the board in a timely manner of any intention to hire or dismiss the Deputy Executive Director, the Deputy Chief Investment Officer, or the Chief Financial Officer.
10. Fail to keep the board informed concerning the delegation of fiduciary authority to any staff member. Every person to whom such fiduciary responsibility is delegated is ultimately accountable to the board as to the exercise and execution of the delegated authority.

**Policy Implemented:** June 23, 1995; November 19, 1999.

**Amended:** September 26, 2014.

**POLICY TYPE: EXECUTIVE LIMITATIONS**

**POLICY TITLE: *ASSET PROTECTION***

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The executive director may not allow assets to be unprotected, inadequately maintained, nor unnecessarily risked.

Accordingly, the executive director may not:

1. Fail to insure against theft and casualty losses to at least 80 percent replacement value and against liability losses to board members, staff, or the organization itself in an amount greater than the average for comparable organizations.
2. Allow non-bonded personnel access to funds.
3. Subject plant and equipment to improper wear and tear or insufficient maintenance.
4. Unnecessarily expose the organization, its board, or staff to claims of liability.
5. Fail to protect intellectual property, information, and files from loss or significant damage.
6. Receive, process, or disburse funds under controls which are insufficient to meet the state auditor's standards.
7. Invest or hold operating capital in a manner that is inconsistent with state law or board policy.
8. Acquire, encumber, or dispose of real property.
9. Endanger the organization's public image or credibility, particularly in ways that would hinder its accomplishment of mission.
10. Deviate from the investment process set by the State Investment Board (SIB) as contained in the board's policy on investments.

**Policy Implemented:** June 23, 1995.

**POLICY TYPE: EXECUTIVE LIMITATIONS**

**POLICY TITLE: *COMPENSATION AND BENEFITS***

---

Compensation and benefits for staff shall not deviate from applicable state and federal law, including N.D. Administrative Code, Chapter 4-07-02.

Accordingly, the executive director may not:

1. Change the compensation and benefits of any program officer reporting directly to the SIB.
2. Promise or imply permanent or guaranteed employment.

**Policy Implemented:** June 23, 1995.

**Amended:** January 22, 1999; November 19, 1999.

**POLICY TYPE: EXECUTIVE LIMITATIONS**

**POLICY TITLE: *CONFLICT OF INTEREST***

---

Conflicts of interest and the appearance of impropriety shall be avoided by the executive director. The executive director must not allow family, social, professional, or other relationships to influence their judgment in discharging their responsibilities. The executive director must refrain from financial and business dealings that tend to reflect adversely on their duties. If a conflict of interest unavoidably arises, the executive director shall immediately disclose the conflict to the SIB. Conflicts of interest to be avoided include, but are not limited to: receiving consideration for advice given to a person concerning any matter over which the executive director has any direct or indirect control, acting as an agent or attorney for a person in a transaction involving the board, and participation in any transaction for which the executive director has acquired information unavailable to the general public, through their position.

"Conflict of Interest" means a situation in which a board member or staff member has a direct and substantial personal or financial interest in a matter which also involves the member's fiduciary responsibility.

The executive director will be required to affirm their understanding of this policy annually, in writing, and must disclose any conflicts of interest that may arise (See Exhibit A-I).

**Policy Implemented:** June 23, 1995.

**Amended:** January 22, 1999; February 25, 2011.

**POLICY TYPE: EXECUTIVE LIMITATIONS**

**POLICY TITLE: *CODE OF CONDUCT***

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The executive director will not operate the office without a code of conduct for all RIO employees. This code of conduct shall be a part of the office Administrative Policy Manual.

**Policy Implemented:** June 27, 1997.

**POLICY TYPE: EXECUTIVE LIMITATIONS**

**POLICY TITLE: UNRELATED BUSINESS INTERESTS**

In the pursuit of personal business interests, the Executive Director will not allow a situation to exist that presents a conflict of interest to the SIB investment program, nor shall such activity be in violation of RIO Administrative Policy, Use of Office Facilities and Equipment.

**Policy Implemented:** August 18, 2000

**Memorandum**

**To: RIO Executive Director/CIO**

**From: RIO Compliance Officer**

**Date: July 1, 20--**

**RE: Annual Affirmation of Conflict of Interest Policy**

Executive Limitations Policy A-9, *Conflict of Interest*, which is attached to this memorandum, details the conflict of interest policy for the executive director. This policy also indicates that the executive director is required to reaffirm their understanding of this policy annually and disclose any conflicts of interest. Therefore, please read and sign the statement below to comply with this requirement.

“I have read and understand SIB Executive Limitations Policy A-9, *Conflict of Interest*. I have disclosed any conflicts of interest as required by this policy.”

Name (printed) \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

Detail of any conflicts of interest (if any):



**B. GOVERNANCE PROCESS**

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*EXHIBITS*

<i>Annual Affirmation of Code of Conduct Policy.....</i>	<i>B-1</i>
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**POLICY TYPE: GOVERNANCE PROCESS**

**POLICY TITLE: *GOVERNANCE COMMITMENT***

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The board, on behalf of benefit recipients and the other clients, who have entrusted their funds to us, will:

- Lead the North Dakota Retirement and Investment Office (RIO) with a strategic perspective.
- Rigorously attend to its investment and oversight role.
- Continually improve its capability as a body to define values and vision.

**Policy Implemented:** June 23, 1995.

The board will strive to govern with an emphasis on:

- Outward vision rather than an internal preoccupation.
- Encouragement of diversity in viewpoints.
- Strategic leadership more than administrative detail.
- Clear distinction of board and executive director roles.
- Collective rather than individual decisions.
- Future rather than past or present.
- Proactivity rather than reactivity.

The board will:

1. Cultivate a sense of group responsibility. The board, not the staff, will be responsible for excellence in governing. The board will strive to be an initiator of policy, not merely a reactor to staff initiatives. The board will strive to use the expertise of individual members to enhance the ability of the board as a body, rather than to substitute the individual judgments for the board's values.
2. Direct, control, and inspire the organization through the careful establishment of the broadest written policies reflecting the board's values and perspectives. The board's major focus will be on the intended long-term impacts outside the operating organization (*Ends*), not on the administrative or programmatic means of attaining those effects.
3. Enforce upon itself whatever discipline is needed to govern with excellence. Discipline will apply to matters such as attendance, policy-making principles, respect of roles, and ensuring the continuity of governance capability.
4. After speaking with one voice, self-police any tendency to stray from adopted board governance policies. The board will not allow any officer, member, or committee of the board to hinder or be an excuse for not fulfilling its commitments. The board respects the right of any member, as an individual, to publicly disagree with an adopted board policy. Board members will accurately portray board policies and decisions.
5. Promote continual board development through orientation and mentoring of new members in the board's governance process and through periodic board discussion of process improvement. The board shall not delegate new member governance orientation to the executive director or any staff member.
  - A. Board mentors are encouraged to assist new members to understand their fiduciary duty and role.

**POLICY TYPE: GOVERNANCE PROCESS**

**POLICY TITLE: GOVERNING STYLE**

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- B. The new board member should read and study Chapter 21-10, North Dakota Century Code (Section J of the SIB Policy Governance Manual which governs the activities of the boards represented on the SIB: Teachers' Fund for Retirement Board, Public Employees Retirement Systems Board, and the State Investment Board).
- C. The board should receive a glossary of terms used by the retirement and pension fund industry; i.e. Callan Associates Inc. - Glossary of Terms.
- D. Newly appointed or elected board members should become familiar with the Carver Model of Governance, since the SIB directs its activities by this model. They should read Boards That Make a Difference and study the policy manuals that have been developed by the SIB and TFFR Board.
- E. The board members must understand their roles as trustees and fiduciaries, the Prudent Investor Rule, and Procedural Prudence.

A "new trustee book bag" containing the Retirement and Investment Office's Comprehensive Annual Financial Report (CAFR) and reference materials relating to board governance, fiduciary conduct, and investment management concepts and terminology and other appropriate materials will be made available to new trustees.

- F. The executive director will provide the SIB with a list of periodicals available which would provide current information on pension issues. The board members will review and request subscriptions to appropriate periodicals.
- 6. Monitor and regularly discuss the board's process and performance. Self-monitoring will include comparison of board activity and discipline to policies in the *Governance Process* and *Board-Staff Relationship* categories.
  - 7. Observe Robert's Rules except where the board has superseded them.

**Policy Implemented:** June 23, 1995.

**Amended:** June 28, 1996; November 19, 1999, January 26, 2001, February 27, 2015, October 26, 2018.

**POLICY TYPE: GOVERNANCE PROCESS**

**POLICY TITLE: BOARD JOB DESCRIPTION**

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The function of the board is to make certain contributions that lead RIO toward the desired performance and ensure that it occurs. The board's specific contributions are unique to its trusteeship role and necessary for proper governance and management.

Consequently, the "products" or contributions of the board shall be:

1. The link between the SIB, its investment clients, and benefit recipients.
2. Written governing policies that, at the broadest levels, address:
  - A. *Ends*: Organizational products, impacts, benefits, outcomes, recipients, and their relative worth (what good for which needs at what cost).
  - B. *Executive Limitations*: Constraints on executive authority which establish the prudence and ethics boundaries within which all executive activity and decisions must take place.
  - C. *Governance Process*: Specification of how the board conceives, carries out, and monitors its own task.
  - D. *Board-Executive Director Relationship*: How authority is delegated and its proper use monitored: the executive director's role, authority, and accountability.
3. The assurance of executive director performance against above policies 2a and 2b.
4. Legislation necessary to achieve the board's *Ends*.

**Policy Implemented:** June 23, 1995.

**POLICY TYPE: GOVERNANCE PROCESS**

**POLICY TITLE: CHAIRPERSON'S ROLE**

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The chairperson's primary responsibility is to insure the integrity of the board's process. The chairperson is the only board member authorized to speak for the board other than in specifically authorized instances.

1. The duty of the chairperson is to see that the board operates consistent with state law, administrative rules, and its own policies.
  - A. The board agenda will be the responsibility and be coordinated by the chairperson.
  - B. Meeting discussion content will only be those issues which, according to board policy, clearly belong to the board and not the executive director, or in a board member's opinion, may deal with fiduciary responsibilities.
  - C. Deliberation will be fair, open, and thorough, but also efficient, timely, orderly, and brief.
  - D. The chairperson shall appoint a parliamentarian.
2. The authority of the chairperson consists in making decisions that fall within the topics covered by board policies on *Governance Process* and *Board-Executive Director Relationship*, except where the board specifically delegates portions of this authority to others. The chairperson is authorized to use any reasonable interpretation of the provisions in these policies.
  - A. The chairperson is empowered to chair board meetings with all the commonly accepted authority of that position (e.g., ruling, recognizing).
  - B. The chairperson has no authority to make decisions about policies created by the board within *Ends* and *Executive Limitations* policy areas. Therefore, the chairperson has no authority to supervise or direct the executive director.
  - C. The chairperson may represent the board to outside parties in announcing board-stated positions and in stating chairperson decisions and interpretations within the area delegated to the chairperson.
  - D. The chairperson is authorized, in consultation with the RIO Executive Director, to grant approval for international travel by SIB members and to keep the board informed on travel requests.
  - E. The chairperson is authorized, in consultation with the RIO Executive Director, to grant approval for domestic due diligence visits by SIB members and it shall be the responsibility of the traveling board member to report to the SIB on the results of the due diligence visit.

**Policy Implemented:** June 23, 1995.

**Amended:** August 17, 2001; September 25, 2009

**POLICY TYPE: GOVERNANCE PROCESS**

**POLICY TITLE: BOARD COMMITTEE PRINCIPLES**

Unless specifically provided by governance policy, board committees will be assigned so as to minimally interfere with the wholeness of the board's job and so as never to interfere with delegation from board to executive director. Board committees will be used sparingly.

1. Board committees are to help the board do its job, not to help the staff do its job. Committees ordinarily will assist the board by preparing policy alternatives and implications for board deliberation. Board committees are created to advise the board, not the staff.
2. Board committees may not speak or act for the board except when formally given such authority for specific and time-limited purposes. Expectations and authority will be carefully stated in order not to conflict with authority delegated to the executive director.
3. Board committees cannot exercise authority over staff however committees will make requests of staff through the executive director unless staff is assigned to the committee. Because the executive director works for the full board, he or she will not be required to obtain approval of a board committee before an executive action. In keeping with the board's broader focus, board committees will normally not have direct dealings with current staff operations.
4. Board committees are to avoid over-identification with the committee's assignment. Therefore, a board committee which has helped the board create policy will not be used to monitor organizational performance on that policy.
5. This policy applies only to committees which are formed by board action, whether or not the committees include non-board members. It does not apply to committees formed under the authority of the executive director.
6. The chairperson will appoint board committees authorized by the board. The operational life span of a board committee will be defined at the time of appointment.

**Policy Implemented:** June 23, 1995.

**Amended:** November 22, 1996, February 27, 2015

**POLICY TYPE: GOVERNANCE PROCESS**

***POLICY TITLE: STANDING COMMITTEES***

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The board's standing committees are set forth in this policy as follows:

1. Audit Committee
2. Securities Litigation Committee
3. Executive Review Committee

- A. The Audit Committee, Securities Litigation Committee, and Executive Review Committee shall operate under the terms of a charter approved by the board.

INTRODUCTION – Audit Committee

An Audit Committee has been established as a standing committee of the State Investment Board (SIB). The Audit Committee will assist the SIB in carrying out its oversight responsibilities as they relate to the Retirement and Investment Office (RIO) internal and external audit programs, including financial and other reporting practices, internal controls, and compliance with laws, regulations, and ethics.

The primary objective of the internal audit function is to assist the SIB and management in the effective discharge of their responsibilities. To this end, internal auditing will furnish them with analyses, appraisals, recommendations, and pertinent information concerning the activities reviewed.

Functions and units within RIO will be reviewed at appropriate intervals to determine whether they are effectively carrying out their responsibilities of planning, organizing, directing, and controlling in accordance with SIB and management instructions, applicable laws, policies, and procedures, and in a manner consistent with both the RIO objectives and high standards of administrative practice.

POLICY OF THE STATE INVESTMENT BOARD – Audit Committee

The audit staff shall have full, free, and unrestricted access to all RIO activities, records, property, and personnel relative to the subject under review. The audit function will be conducted in a manner consistent with acceptable professional standards and coordinated with others to best achieve the audit objectives and the RIO objectives.

The Internal Audit Services Unit is responsible for developing and directing a broad, comprehensive program of internal auditing within RIO. The Internal Audit Services Unit will report administratively to management and functionally to the Audit Committee of the SIB.

The RIO unit supervisors are responsible for seeing that corrective action on reported weaknesses is either planned or taken within 30 days from the receipt of a report disclosing those weaknesses if known or applicable. The unit supervisors are also responsible for seeing that a written report of action planned or completed is sent to the executive director. If a plan for action is reported, a second report shall be made promptly upon completion of the plan.

INTRODUCTION – Securities Litigation Committee

A Securities Litigation Committee (SLC) has been established as a standing committee of the State Investment Board (SIB). The SLC will assist the SIB in fulfilling its fiduciary oversight responsibilities of monitoring the investment assets entrusted to it by the various statutory and contracted funds, and to serve as a communications link for the SIB, RIO's management and staff, third party securities litigation firms, and others.



**POLICY TYPE: GOVERNANCE PROCESS**

**POLICY TITLE: STANDING COMMITTEES**

The SLC will determine when an active role should be pursued in regards to securities litigation affecting investments within the SIB's portfolios based on the SIB approved Securities Litigation Policy and approved SIB Securities Litigation Committee Charter.

**POLICY OF THE STATE INVESTMENT BOARD – Securities Litigation Committee**

The SLC is authorized to:

- Draft policy (to be formally approved by SIB) regarding dollar and/or risk thresholds for determining when to opt-out of class actions and/or seek direct litigation or lead plaintiff status;
- Based on SIB approved policy make decisions on the level of participation the SIB will take in direct litigation, opt-in or group litigation, anti-trust and other class actions; and
- Approve the selection of special assistant attorneys (in conjunction with the approval of the Office of the Attorney General) in cases of direct litigation.

RIO's management is responsible for ongoing monitoring of securities litigation and claims filing. RIO management and staff will enable the SLC to provide a periodic update to the SIB on the SLC's activities and related recommendations.

The SLC has the responsibility to provide oversight in the areas of:

- policy development;
- determination on direct litigation and/or lead plaintiff status; and
- approval of special assistant attorneys (outside counsel) with concurrence of the Attorney General.

**INTRODUCTION – Executive Review Committee**

An Executive Review Committee (ERC) has been established as a standing committee of the SIB. The ERC will assist the SIB in fulfilling its fiduciary oversight responsibilities of “monitoring executive performance (which) is synonymous with monitoring organizational performance against board policies on *Ends* and *Executive Limitations*”. Internal audit will be responsible for preparing an annual summary of the required reports submitted to the SIB by the Executive Director in connection with its review of policy adherence to *Ends* and *Executive Limitations*. Internal audit will also assist the ERC in completing annual surveys of the Executive Director with the SIB, SIB clients, and RIO team members.

The ERC will conduct a formal evaluation of the Executive Director during the first half of every calendar year. This formal evaluation by the ERC will serve as the basis for an annual compensation recommendation to be reviewed and approved by the SIB on or before June 30<sup>th</sup> each year. Internal audit will also assist the SIB and ERC in administering the annual board self-assessment process.

**POLICY TYPE: GOVERNANCE PROCESS**

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**POLICY TITLE: *STANDING COMMITTEES***

**POLICY OF THE STATE INVESTMENT BOARD – Executive Review Committee**

The ERC is authorized to:

- Conduct a formal evaluation of the Executive Director annually;
- Obtain SIB approval of the annual performance evaluation of the Executive Director;
- Make a compensation recommendation to the SIB on or before June 30<sup>th</sup> of each year; and
- Administer a formal self-assessment of the SIB periodically (unless instructed otherwise).

The ERC and/or RIO will seek SIB approval prior to formally engaging any third party assistance in conducting the annual executive review process or board self-assessment.

**Policy Implemented:** June 23, 1995.

**Policy Amended:** April 27, 2018, September 27, 2019.

**POLICY TYPE: GOVERNANCE PROCESS**

**POLICY TITLE: ANNUAL BOARD PLANNING CYCLE**

To accomplish its job outputs with a governance style consistent with board policies, the board will strive to follow a biennial agenda which (a) completes a re-exploration of *Ends* policies annually and (b) continually improves its performance through attention to board education and to enriched input and deliberation.

1. A biennial calendar will be developed.
2. The cycle will conclude each year on the last day of June in order that administrative budgeting can be based on accomplishing a one-year segment of the most recent board long-range vision.
  - A. In the first three months of the new cycle, the board will strive to develop its agenda for the ensuing one-year period.
  - B. Scheduled monitoring will be used to evaluate and adjust the annual agenda as needed.
3. Education, input, and deliberation will receive paramount attention in structuring the series of meetings and other board activities during the year.
  - A. To the extent feasible, the board will strive to identify those areas of education and input needed to increase the level of wisdom and forethought it can give to subsequent choices.
  - B. A board education plan will be developed during July and August of each year.
4. The sequence derived from this process for the board planning year ending June 30 is as follows:
  - A. July: Election of officers, appoints audit committee, plan annual agenda, begin to develop board education plan, and new board member orientation.
  - B. August: Investment Director review of investment results, establish investment work plan, add investment education to education plan, and continue new board member orientation.
  - C. September: Annual Review of Governance Manual.
  - D. October: Annual meeting for evaluation of RIO vs. *Ends* policies and annual board evaluation.
  - E. November: Investment Director report on investment work plan.
  - F. January: During second year of the biennium, begin to develop *Ends* policies for the coming biennium for budget purposes.
  - G. February: Investment Director report on investment work plan. Evaluation of Executive Director.
  - H. March: During first year of biennium, set budget guidelines for budget development.
  - I. May: Investment Director report on investment work plan.

**Policy Implemented:** June 23, 1995; November 19, 1999.

**Amended:** September 26, 2014, February 27, 2015.

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**POLICY TYPE: GOVERNANCE PROCESS**

**POLICY TITLE: BOARD MEMBERS' CODE OF CONDUCT**

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The following will be the Code of Ethical Responsibility for the SIB:

1. SIB members owe a duty to conduct themselves so as to inspire the confidence, respect, and trust of the SIB members and to strive to avoid not only professional impropriety but also the appearance of impropriety.
2. SIB members should perform the duties of their offices impartially and diligently. SIB members are expected to fulfill their responsibilities in accord with the intent of all applicable laws and regulations and to refrain from any form of dishonest or unethical conduct. Board members should be unswayed by partisan interest, public sentiment, or fear of criticism.
3. Conflicts of interest and the appearance of impropriety shall be avoided by SIB members. Board members must not allow their family, social, professional, or other relationships to influence their judgment in discharging their responsibilities. Board members must refrain from financial and business dealings that tend to reflect adversely on their duties. If a conflict of interest unavoidably arises, the board member shall immediately disclose the conflict to the SIB. A board member must abstain in those situations where the board member is faced with taking some official action regarding property or a contract in which the board member has a personal interest. Conflicts of interest to be avoided include, but are not limited to: receiving consideration for advice given to a person concerning any matter over which the board member has any direct or indirect control, acting as an agent or attorney for a person in a transaction involving the board, and participation in any transaction involving for which the board member has acquire information unavailable to the general public, through participation on the board.

“Conflict of Interest” means a situation in which a board member or staff member has a direct and substantial personal or financial interest in a matter which also involves the member’s fiduciary responsibility.

4. The board should not unnecessarily retain consultants. The hiring of consultants shall be based on merit, avoiding nepotism and preference based upon considerations other than merit that may occur for any reason, including prior working relationships. The compensation of such consultants shall not exceed the fair value of services rendered.
5. Board members must abide by North Dakota Century code 21-10-09, which reads: “No member, officer, agent, or employee of the state investment board shall profit in any manner from transactions on behalf of the funds. Any person violating any of the provisions of this section shall be guilty of a Class A misdemeanor.”
6. Board members shall perform their respective duties in a manner that satisfies their fiduciary responsibilities.
7. All activities and transactions performed on behalf of the public funds must be for the exclusive purpose of providing benefits to plan participants and defraying reasonable expenses of administering the plan.

**POLICY TYPE: GOVERNANCE PROCESS**

**POLICY TITLE: BOARD MEMBERS' CODE OF CONDUCT**

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8. Prohibited transactions. Prohibited transactions are those involving self-dealing. Self-dealing refers to the fiduciary's use of plan assets or material, non-public information for personal gain; engaging in transactions on behalf of parties whose interests are adverse to the plan; or receiving personal consideration in connection with any planned transaction.
9. Violation of these rules may result in an official reprimand from the SIB. No reprimand may be issued until the board member or employee has had the opportunity to be heard by the board.
10. Board Members are required to affirm their understanding of this policy annually, in writing, and must disclose any conflicts of interest that may arise (See Exhibit B-I).

**Policy Implemented:** June 23, 1995.

**Amended:** January 22, 1999, February 25, 2011, January 27, 2012, February 27, 2015.

**POLICY TYPE: GOVERNANCE PROCESS**

***POLICY TITLE: ADMINISTRATION OF FIDUCIARY AUTHORITY***

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The board is responsible for:

1. Proper exercise of fiduciary investment authority by RIO.
2. The determination of policies.
3. The investment and disposition of property held in a fiduciary capacity.
4. The direction and review of the actions of all officers, employees, and committees in the exercise of the board's delegated fiduciary authority.

**Policy Implemented:** June 23, 1995.

**POLICY TYPE: GOVERNANCE PROCESS**

**POLICY TYPE: POLICY INTRODUCTION / AMENDMENT/ PASSAGE**

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New policies or policy amendments may be proposed by the Executive Director or a Board member. All new policies or amendments may be submitted to the Board's Legal Counsel for drafting in the approved style.

Upon request of the Executive Director or a Board member a new policy or amendment shall be placed on the Board's agenda for action as follows:

1. Introduction and first reading. A brief explanation or summary of the new policy or amendment shall be presented to the Board. Upon approval of introduction and first reading, the measure shall be placed on the agenda of the next scheduled meeting of the Board for second reading and adoption. When appropriate, the measure shall be distributed to interested parties.
2. *Second reading and adoption. Interested parties and the public shall be allowed an opportunity to comment on the policy or amendment before final action by the Board. The measure shall take effect immediately following second reading and adoption by the Board, unless a different effective date is stated.*
3. Amendments. Amendments may be proposed at any time before final adoption of the measure. Upon determination by the Board that adoption of an amendment constitutes a substantive change that significantly changes the meaning or effect of the measure, the Board shall continue consideration of second reading and adoption to the next meeting to permit further review and comment.

Emergency measures. The Board may, upon determination that an emergency or other circumstances calling for expeditious action exists, waive the requirement of a second reading and immediately approve the new policy or amendment following introduction and first reading.

**Policy Implemented:** February 27, 2009

**Policy Revised:** November 18, 2016

**Memorandum**

**To: State Investment Board**

**From: RIO Compliance Officer**

**Date: July 1, 20--**

**RE: Annual Affirmation of Code of Conduct Policy**

Governance Process Policy B-8, *Board Members' Code of Conduct*, which is attached to this memorandum, details the Code of Ethical Responsibility for the SIB. Item #10 of this policy indicates that each Board Member is required to reaffirm their understanding of this policy annually and disclose any conflicts of interest. Therefore, please read and sign the statement below to comply with this requirement.

"I have read and understand SIB Governance Process Policy B-8 *Board Members' Code of Conduct*. I have disclosed any conflicts of interest as required by this policy."

Name (printed) \_\_\_\_\_

Signature\_\_\_\_\_

Date\_\_\_\_\_

Detail of any conflicts of interest (if any):



**C. BOARD-STAFF RELATIONSHIP**

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**POLICY TYPE: BOARD-STAFF RELATIONSHIP**

**POLICY TITLE: *CHIEF EXECUTIVE ROLE***

---

The executive director, as chief executive officer, is accountable to the board acting as a body. The board will instruct the executive director through these written policies, delegating to the executive director the implementation and administration of these policies.

**Policy Implemented:** June 23, 1995.

**POLICY TYPE: BOARD-STAFF RELATIONSHIP**

**POLICY TITLE: *DELEGATION TO THE EXECUTIVE DIRECTOR***

---

All board authority delegated to staff is delegated through the executive director.

1. The board authority will direct the executive director to achieve specified results, for specified recipients, at a specified cost through the establishment of *Ends* policies. The board will limit the latitude the Executive Director may exercise in practices, methods, conduct, and other “means” to the *Ends* through establishment of *Executive Limitations* policies.
2. The Executive Director must use reasonable judgment in the implementation or administration of the board’s *Ends* and *Executive Limitations* policies; the executive director is authorized to establish practices, and develop activities.
3. The board may change its *Ends* and *Executive Limitations* policies. By so doing, the board changes the latitude of choice given to the Executive Director. If any particular delegation is in place, the board and its members will respect and support the Executive Director’s choices, provided that the Executive Director’s choice is consistent with the board’s fiduciary responsibility.
4. Only decisions of the board acting as the body are binding upon the Executive Director.
  - a. Decisions or instructions of individual board members, officers, or committees are not binding on the Executive Director except in rare instances when the board has specifically authorized such exercise of authority.
  - b. In the case of board members or committees requesting information, other than a public record, or assistance without board authorization, the Executive Director may refuse such requests that require a material amount of staff time or funds or is disruptive.
5. The Executive Director will be responsible for the hiring, termination, and annual evaluation of all employees of the Retirement and Investment Office.

**Policy Implemented:** June 23, 1995.

**Amended:** November 22, 1996; November 19, 1999.

**POLICY TYPE: BOARD-STAFF RELATIONSHIP**

**POLICY TITLE: EXECUTIVE DIRECTOR JOB DESCRIPTION**

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As the board's single official link to the operating organization, the executive director's performance will be considered to be synonymous with the RIO's total performance.

Consequently, the executive director's job contributions can be stated as performance in the following areas:

1. Organizational accomplishment of the provisions of board policies on *Ends*.
2. Organizational operation within the boundaries of prudence and ethics established in board policies on *Executive Limitations*.
3. Maintain accurate records of the proceedings of the SIB and TFFR Board.

**Policy Implemented:** June 23, 1995.

**POLICY TYPE: BOARD-STAFF RELATIONSHIP**

**POLICY TITLE: *MONITORING EXECUTIVE PERFORMANCE***

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Monitoring executive performance is synonymous with monitoring organizational performance against board policies on *Ends* and on *Executive Limitations*. Any evaluation of the executive director's performance, formal or informal, may be derived only from these monitoring data.

1. The purpose of monitoring is simply to determine the degree to which board policies are being fulfilled. Information which does not do this will not be considered to be monitoring. Only a minimum amount of board time as necessary will be devoted toward monitoring so that meetings can best be used to create the future rather than to review the past.
2. A given policy may be monitored in one or more of three ways:
  - A. Internal report: Disclosure of compliance information to the board from the executive director.
  - B. External report: Discovery of compliance information by a disinterested, external auditor, inspector or judge who is selected by and reports directly to the board. Such reports must assess executive performance only against policies of the board, not those of the external party unless the board has previously indicated that party's opinion to be the standard.
  - C. Direct board inspection: Discovery of compliance information by a board member, a committee, or the board as a whole. This is a board inspection of documents, activities, or circumstances directed by the board which allows a "prudent person" test of policy compliance.
3. The board will monitor each *Ends* and *Executive Limitations* policy according to the following frequency and method:

Quarterly internal reports for policies:

- A-2 Staff Relations
- A-4 Budgeting
- A-5 Financial Condition
- D-3 Investment Services
- D-4 Investment Performance

Annual external reports for policies:

- A-2 Staff Relations
- A-4 Budgeting
- A-7 Asset Protection
- D-3 Investment Services
- D-4 Investment Performance

**POLICY TYPE: BOARD-STAFF RELATIONSHIP**

**POLICY TITLE: *MONITORING EXECUTIVE PERFORMANCE***

---

Annual internal reports for policies:

- A-1 General Executive Constraint
- A-3 Relating to Public and Government
- A-8 Compensation and Benefits
- A-9 Conflict of Interest

4. The Executive Director will submit required monitoring reports at regular meetings of the board. The board will act on those reports by voting on one of the following motions:
  - A. A motion to accept the report.
  - B. A motion to conditionally accept the report, with a statement of the revisions or additional information that is necessary for the report to be accepted without condition.

The internal audit staff will be responsible for preparing an annual summary of the board's action concerning required reports submitted by the Executive Director, and the summary will be made available as a part of the formal evaluation of the Executive Director.

5. Each March the board will conduct a formal evaluation of the executive director/investment officer. This evaluation will be based on accomplishments of *Ends* and *Compliance with Executive Limitations*.
6. At the February board meeting, the chairperson will appoint a three-member committee to review the board's evaluation and make a recommendation to the full board concerning salary for the executive director/investment officer.

In making its recommendation, the committee will consider job performance as evidenced by the annual summary of the periodic monitoring reports, the Retirement and Investment Office budget status, the annual Public Pension System's Compensation Survey, the annual National Association of State Investment Officer's survey, the legislature's approved salary increases for state employees, the North Dakota market compensation for comparable positions, and other data or information considered relevant by the committee.

The committee's recommendation will be placed on the May board meeting agenda for possible action by the board. Final action by the board will be accomplished no later than the June board meeting.

**Policy Implemented:** June 23, 1995

**Amended:** November 21, 1997; June 25, 1999; November 19, 1999; January 28, 2000; February 25, 2000; February 23, 2001; September 26, 2014.

**D. ENDS**

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Organizational Beneficiaries.....	D-2
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*EXHIBITS*

<i>Organizational Beneficiaries.....</i>	<i>D-I</i>
<i>Monitoring Summary.....</i>	<i>D-II</i>

The Retirement and Investment Office exists in order that:

- SIB clients receive investment returns, consistent with their written investment policies and market variables, in a cost effective manner and under the Prudent Investor Rule.
- Potential SIB clients have access to information regarding the investment services provided by the SIB.
- TFFR benefit recipients receive their retirement benefits in a cost effective and timely manner.
- TFFR members have access to information which will allow them to become knowledgeable about the issues and process of retirement.
- SIB clients and TFFR benefit recipients receive satisfactory services from the boards and staff of the office.

**Policy Implemented:** October 27, 1995.

**Amended:** January 27, 2012.



**POLICY TYPE: ENDS**

**POLICY TITLE: *ORGANIZATIONAL BENEFICIARIES***

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RIO beneficiaries (clients) are those which are statutorily defined and those which have contracted for services under statutory authority. Exhibit D-I lists the organizational beneficiaries.

**Policy Implemented:** October 27, 1995.

The Retirement and Investment Office exists in order that:

1. SIB clients receive investment returns, consistent with their written investment policies and market variables, in a cost-effective manner and under the Prudent Investor Rule.
  - A. This “End” will be evaluated based on the following:
    1. Comparison of client fund’s rate of return NET of fees and expenses, to that of the client’s policy benchmark over a minimum evaluation period of 5 years.
    2. Comparison of the client fund’s risk, measured by standard deviation of NET returns, to that of the client’s policy benchmark over a minimum evaluation period of 5 years.
    3. Comparison of the risk adjusted performance of the client fund, NET of fees and expenses, to that of the client’s policy benchmark over a minimum evaluation period of 5 years.

**Policy Implemented:** October 27, 1995.

**Amended:** November 22, 1996; January 27, 2012.

**POLICY TYPE: ENDS**

**POLICY TITLE: *INFORMATION ON AVAILABLE SERVICES***

---

The Retirement and Investment Office exists in order that:

1. Potential SIB clients have access to information regarding the investment services provided by the SIB.

**Policy Implemented:** October 27, 1995.

**POLICY TYPE: ENDS**

**POLICY TITLE: *RETIREMENT SERVICES***

---

The Retirement and Investment Office exists in order that:

1. TFFR benefit recipients receive their retirement benefits in a cost-effective and timely manner.
  - A. Retirement program performance quality will be measured against the *Ends* and retirement policies and administrative rules adopted by the Teachers' Fund for Retirement Board.

**Policy Implemented:** October 27, 1995.

**POLICY TYPE: ENDS**

**POLICY TITLE: *INFORMATION ON RETIREMENT SERVICES***

---

The Retirement and Investment Office exists in order that:

1. TFFR members have access to information which will allow them to become knowledgeable about the issues and process of retirement.

**Policy Implemented:** October 27, 1995.

**POLICY TYPE: ENDS**

**POLICY TITLE: *CUSTOMER SATISFACTION***

---

The Retirement and Investment Office exists in order that:

1. SIB clients and TFR benefit recipients receive satisfactory services from the boards and staff of the office.
  - A. The quality of services will be assured by direct board contact and by surveying clients and beneficiaries at least annually and promptly addressing identified client/beneficiary concerns.

**Policy Implemented:** December 1, 1995.

**ORGANIZATIONAL BENEFICIARIES**

**INVESTMENT CLIENTS:**

Statutory:

1. Budget Stabilization Fund
2. Cultural Endowment Fund
3. Insurance Regulatory Trust Fund
4. Petroleum Tank Release Compensation Fund
5. Public Employees Retirement System Fund
6. Risk Management Fund
7. State Bonding Fund
8. State Fire and Tornado Fund
9. Teachers' Fund for Retirement
10. The Legacy Fund
11. Workforce Safety & Insurance Fund

Contractual:

1. City of Bismarck Deferred Sick Leave Fund
2. City of Bismarck Employees Retirement Fund
3. City of Bismarck Police Retirement Fund
4. City of Fargo Dome Permanent Fund
5. City of Grand Forks Park District Pension Fund
6. City of Grand Forks Pension Fund
7. ND Association of Counties Fund
8. ND Job Service Retirement Fund
9. Public Employees Retirement System Group Health Insurance Fund
10. Public Employees Retirement System Retiree Health Insurance Fund
11. ND State Board of Medicine
12. Tobacco Prevention and Control Fund
13. ND Parks and Recreation
14. ND Office of the Attorney General
15. Veterans' Cemetery Trust Fund

**ADMINISTRATIVE CLIENTS:**

Statutory:

1. Teachers' Fund for Retirement Beneficiaries

Amended: July 24, 2020

**EXHIBIT D-II**

<b>GOVERNANCE POLICY MONITORING SUMMARY</b>				
<b>POLICY</b>	<b>METHOD</b>	<b>RESPONSIBILITY</b>	<b>FREQUENCY</b>	<b>BOARD ACTION</b>
<b>ENDS</b>				
Investment Services	External	Investment Consultant	Annual - FYE	N/A
	Internal	Investment Officer	Quarterly	Accept or Follow-Up
Retirement Services	External	Actuary	Annual - FYE	N/A
	Internal	Retirement Officer	Quarterly	Accept or Follow-Up
<b>EXECUTIVE DIRECTOR LIMITATIONS</b>				
Executive Constraint	Internal	Executive Director	Annual - CYE	Accept or Follow-Up
	Internal	Audit Supervisor	Quarterly	Accept or Follow-Up
Staff Relations	Internal	Executive Director	Quarterly	Accept or Follow-Up
	Internal (External)	Audit Supervisor (SIB)	Annual - CYE	Accept or Follow-Up
Public Relations	Internal	Executive Director	Annual - CYE	Accept or Follow-Up
	Internal	Audit Supervisor	Annual - CYE	Accept or Follow-Up
Budgeting	Direct	Board Review	Biennial	Accept or Follow-Up
	External	Governor (State Auditor)	Annual - FYE	N/A
	Internal	Executive Director	Quarterly	Accept or Follow-Up
Financial Condition	External	External Auditor	Annual - FYE	Accept or Follow-Up
	Internal	Executive Director	Quarterly	Accept or Follow-Up
Board Communication	Direct Board Participation	State Investment Board	Annual - CYE	Accept or Follow-Up
Asset Protection	External	External Auditor	Annual - FYE	N/A
	Internal	Executive Director	Annual - CYE	Accept or Follow-Up
Compensation and Benefits	Internal	Executive Director	Annual - CYE	Accept or Follow-Up
	Internal	Audit Supervisor	Annual - CYE	Accept or Follow-Up
Conflict of Interest	Internal	Executive Director	Annual - CYE	Accept or Follow-Up
	Internal	Audit Supervisor	Annual - CYE	Accept or Follow-Up
Code of Conduct	Internal	Executive Director	Annual - CYE	Accept or Follow-Up
	Internal	Audit Supervisor	Annual - CYE	Accept or Follow-Up
Unrelated Business Interests	Internal	Executive Director	Annual - CYE	Accept or Follow-Up
	Internal	Audit Supervisor	Annual - CYE	Accept or Follow-Up

Audit Supervisor = Report to State Investment Board Audit Committee with a Summary Report to the SIB

FYE = Fiscal Year End    CYE = Calendar Year End    N/A = Not Applicable    *Amended September 26, 2014*



**E. INVESTMENTS**

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*EXHIBITS*

<i>Listing of Trust Funds.....</i>	<i>E-I</i>
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## **POLICY TYPE: INVESTMENTS**

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### ***POLICY TITLE: FIDUCIARY DUTIES***

By virtue of the responsibilities assigned to the SIB by North Dakota Century Code Chapter 21-10, the members of the SIB are fiduciaries for eleven statutory funds. Through contractual obligations, fiduciary responsibility extends to twelve additional funds.

A fiduciary is a person who has discretionary authority or management responsibility for assets held in trust to which another has beneficial title or interest. The fiduciary is responsible for knowing the "prudent requirements" for the investment of trust assets. Remedial actions may be assessed against fiduciaries for violations of fiduciary duty.

North Dakota state law provides broad fiduciary guidelines for the SIB members. NDCC 21-10-07 specifies that "the state investment board shall apply the prudent investor rule in investing for funds under its supervision. The "prudent investor rule" means that in making investments, the fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income."

Procedural prudence is a term that has evolved to describe the appropriate activities of a person (or persons) who act in a fiduciary role. Court decisions to date indicate that procedural prudence is more important in assessing fiduciary activities than actual portfolio performance. A fiduciary cannot be faulted for making the "wrong" decision provided that proper due diligence was performed.

The key to successfully discharging the SIB's fiduciary duties is the establishment of and adherence to proper due diligence procedures. While not bound by ERISA (Employee Retirement and Income Security Act of 1974), the SIB will use the procedural prudence outlined by ERISA as guidance in developing its procedures:

1. An investment policy must be established for each fund and must be in writing.
2. Plan assets must be diversified, unless under the circumstances it would be prudent not to do so.
3. Investment decisions must be made with the skill and care of a prudent expert.
4. Investment performance must be monitored.
5. Investment expenses must be controlled.
6. Prohibited transactions must be avoided.

**Policy Implemented:** September 20, 1995.

**Amended:** May 30, 1997, January 22, 1999, February 27, 2009, October 26, 2018.

## **POLICY TYPE: INVESTMENTS**

### **POLICY TITLE: *INVESTMENT PROCESS***

---

The SIB believes that an investment program must be built and managed like any good business, with a clear statement of mission, overall objectives, roles and responsibilities, and policies and guidelines. Major issues to be faced by the SIB will revolve around:

Asset allocation targets:

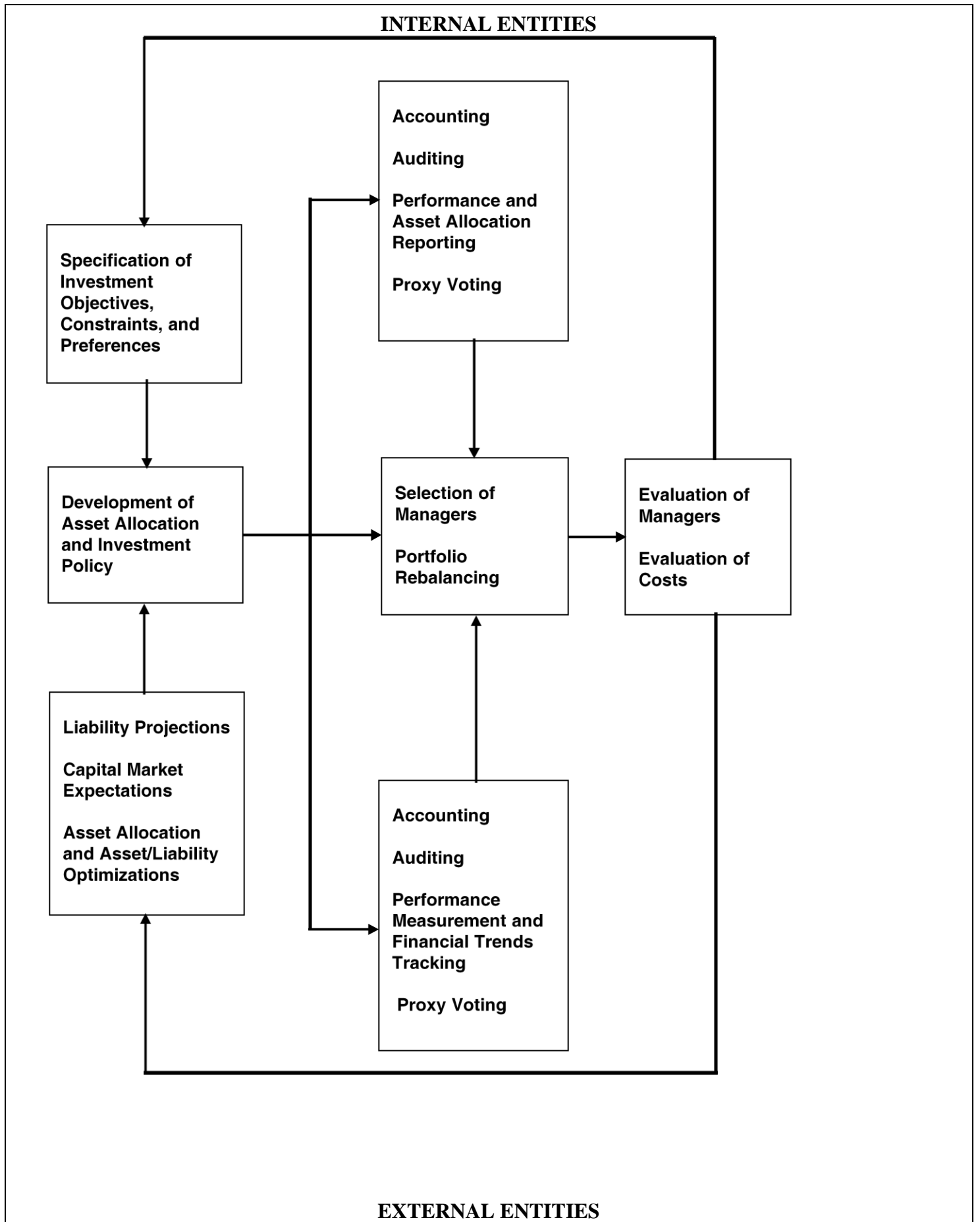
- Setting appropriate benchmarks.
- Finding the right managers.
- Monitoring the program.
- Searching for appropriate new opportunities.

To ensure rigorous attention to all aspects of the investment program, the SIB follows an established investment process. This process, described by the diagram on the following page, involves three phases:

- Investment policy development/modification.
- Implementation/monitoring.
- Evaluation.

The first column of boxes describes the policy development phase, the middle column implementation/monitoring, and the last box on right evaluation. Activities associated with internal entities are shown along the top. Those associated with external entities are shown along the bottom. The middle shows activities that internal and external entities work on together.

**Policy Implemented:** September 20, 1995.



## **POLICY TYPE: INVESTMENTS**

### **POLICY TITLE: KEY PROGRAM ENTITIES AND RESPONSIBILITIES**

The key responsibilities of the entities involved in the investment program are:

#### **Fund Governing Bodies**

1. Establish policy on investment goals and objectives.
2. Establish asset allocation.
3. Hire actuary when required.

#### **SIB**

1. Invest funds entrusted by statute and contracted entities.
2. Set policies on appropriate investments and investment practices for entrusted funds.
3. Approve asset allocation and investment policies of participating trust funds.
4. Report the investment performance of the funds to each fund's governing authority.
5. Hire and terminate money managers, custodians, and consultants.

#### **Investment Officer and RIO Staff**

1. Implement investment policies approved by the SIB.
2. Provide research and administrative support for SIB projects.
3. Recommend investment regulations appropriate for governing the investment of entrusted funds.
4. Assist fund governing bodies in developing asset allocation and investment policies.
5. Evaluate money manager adherence to investment objectives.
6. Provide performance reports to the SIB and boards of participating funds.
7. Recommend hiring or terminating money managers, custodians, consultants, and other outside services needed to effectively manage the investment funds.
8. Develop and maintain appropriate accounting policies and systems for the funds entrusted to the SIB.

**POLICY TYPE: INVESTMENTS**

***POLICY TITLE: KEY PROGRAM ENTITIES AND RESPONSIBILITIES***

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Investment Consultant

1. Measure money manager performance and monitor adherence to investment goals, objectives, and policies.
2. Conduct annual evaluation of program policies and results, and assist in development of annual work plan.
3. Assist in implementation of annual work plan.
4. Conduct asset allocation or asset/liability studies.
5. Conduct requested money manager searches.
6. Assist in development of investment policies and manager structure and rebalancing guidelines.
7. Extension of staff for special projects.

Actuary

1. Assist fund governing bodies in developing benefit and funding policies.
2. Measure actuarial soundness of plan.
3. Perform experience studies as requested by plan sponsor.
4. Provide liability projections as needed.
5. Conduct annual evaluation of program policies and results, and assist in developmental of annual work plan.
6. Assist in implementation of annual work plan.

Auditor

1. Measure, validate, and offer an opinion on agency financial statements and management.
2. Assist in developing appropriate accounting policies and procedures.
3. Bring technical competence, sound business judgment, integrity, and objectivity to the financial reporting process.

## **POLICY TYPE: INVESTMENTS**

### ***POLICY TITLE: KEY PROGRAM ENTITIES AND RESPONSIBILITIES***

---

#### Master Custodian

1. Provide safekeeping of all securities purchased by managers on behalf of the SIB.
2. Provide global custody services.
3. Collect interest, dividend, and principal payments in a timely manner.
4. Provide for timely settlement of securities.
5. Price all securities and post transactions daily.
6. Maintain short-term investment vehicles for investment of cash not invested by SIB managers. Sweep all manager accounts daily to ensure all available cash is invested.
7. Provide monthly, quarterly, and annual accounting reports for posting to RIO's general ledger.
8. May manage a securities lending program to enhance income.
9. Provide electronic access to accounting reports.
10. Provide other services that assist with the monitoring of managers and investments.

#### Portfolio Managers

1. Manage portfolios as assigned by the SIB.
2. Provide liquidity, as required, in a timely and cost-efficient manner.
3. Vote proxies.
4. Provide educational assistance to board.

**Policy Implemented:** September 20, 1995.

**Amended:** February 27, 2009

## **POLICY TYPE: INVESTMENTS**

### ***POLICY TITLE: INVESTMENT POLICY DEVELOPMENT – TRUST FUNDS***

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All funds under SIB management must have a written investment policy. Investment policy forms the cornerstone of the management of any investment program. A sound investment policy ensures that fund assets are managed in a disciplined process, based on long-term fundamental investment principles.

For the larger, more complex trust funds, consultants are used to assist in policy and asset allocation development. Their specialized skills are needed to model and analyze the many variables that go into determining a proper asset allocation.

Policy development starts with the specification of investment objectives, constraints, and preferences. Fund trustees must address a number of factors:

- What is the fund's objective(s)?
- What is the board's tolerance for risk or threshold for under-performance?
- What are the fund's liquidity needs and cash flow characteristics?
- What are the board's asset class preferences and constraints?
- What is the actuarial earnings assumption?
- What are the legal or political considerations?
- What is the investment time horizon?

Since the ultimate objective of fund investments is to provide for the payment of future capital needs, claims, or other monetary requirements, it is essential that the investment policy be developed within the context of fund liabilities or spending policy. The development of investment policy, therefore, is always unique to the circumstances of each fund.

Complex actuarial models are used to quantify the liabilities of the pension plans and Workforce Safety and Insurance. Internal entities develop cash flow forecasts for the smaller funds based on past claims or anticipated expenditures.

Asset allocation optimizations are used to quantify the range of future investment outcomes. Investment consultants contribute needed expertise on capital market expectations and in identifying the risks associated with a particular asset allocation.

For some funds, the risk/return tradeoffs of alternative portfolios are not well represented by expected returns and standard deviation. More important are the expected results for required sponsor and participant contributions and funded ratios over time. Asset/liability modeling is the tool that allows the governing boards to examine and assess the tradeoffs leading to an appropriate investment policy.

The results of the optimizations are a description of the range of financial results that might realistically be expected to occur. These results provide the basis for determining an asset allocation.



## **POLICY TYPE: INVESTMENTS**

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### **POLICY TITLE: *INVESTMENT POLICY DEVELOPMENT – TRUST FUNDS***

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In accordance with NDCC 21-10-02.1, RIO staff works with each fund's governing authority, and consultants as needed, to develop an investment policy, which includes an appropriate asset allocation, for each of the statutory funds. Contracted entities are responsible for their own policy development.

Each policy, as a minimum, will include the following information:

1. Fund characteristics and constraints.
  - a. An explanation as to the purpose of the portfolio and its legal structure.
  - b. Size of portfolio and the likelihood and amount of future contributions and disbursements
  - c. Participant demographics when applicable.
  - d. Fiscal health of fund.
  - e. Constraints.
  - f. Unique circumstances.
2. Responsibilities of SIB.
3. Investment objectives.
4. Standards of investment performance.
5. Asset allocation policy and guidelines.
6. Evaluation and review.

**Policy Implemented:** September 20, 1995.

**Amended:** February 27, 2009

## **POLICY TYPE: INVESTMENTS**

### ***POLICY TITLE: INVESTMENT POLICY DEVELOPMENT – INVESTMENT POOLS***

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The SIB does no in-house investment of funds. All investment activity is delegated to outside money managers. Within each asset class there are numerous manager styles (i.e. market sector specializations) that may be employed by the SIB to affect exposure to the various asset classes.

SIB investment pool policy statements will define the following for each asset class:

1. Strategic objectives.
2. Performance objectives.
  - a. Appropriate capital market benchmarks.
  - b. Excess return targets, after payment of investment management fees.
  - c. Peer-group ranking.
  - d. Risk characteristics.
  - e. Termination factors.
3. Portfolio constraints.
  - a. Quality of securities/portfolio (security – BAA/portfolio – AA).
  - b. Quality held (maximum in company/industry/economic sector).
  - c. Other specific restrictions if applicable (ADRs, 144A securities, prohibited transactions, etc.).
4. Investment structure.
  - a. Percent of assets per manager cycle.
  - b. Ranges for rebalancing.
5. Control Procedures
  - a. Duties and responsibilities of the SIB
  - b. Duties and responsibilities of money managers.
  - c. Reporting requirements.

**Policy Implemented:** September 20, 1995.

**Amended:** February 27, 2009

The SIB will ensure that appropriate monitoring mechanisms are in place at all times. The three basic mechanisms are:

- Accounting
- Auditing
- Performance Measurement

The primary objective of these functions is to provide useful information to decision makers (fiduciaries and legislators). These monitoring functions are needed to keep track of assets and manager activity and to control the asset mix. Different aspects of these activities will be conducted internally by RIO staff and externally by the master custodian, auditors, and investment consultants.

#### Accounting

The master custodian will provide RIO staff with such accounting detail and at such frequency as the staff deems necessary to fulfill the SIB's reporting requirements.

From this information, RIO accounting staff will generate monthly and annual financial statements for each of the trust funds managed by the SIB.

RIO management is responsible to ensure the proper valuation of all assets. Formal valuation policies must be developed and implemented utilizing industry best practices and GAAP accounting requirements.

#### Compliance

RIO management is responsible for developing and implementing compliance procedures utilizing industry best practices. A summary of compliance procedures and results will be presented to the SIB annually.

#### Auditing

The North Dakota State Auditor is responsible for the external audit of RIO. They may assign this responsibility to an outside firm which they select by way of the RFP process. The SIB Audit Committee may make recommendations to the State Auditor concerning the selection, evaluation, and termination of this firm. This firm conducts an extensive financial and management audit for each fiscal year. The audited financial statements are filed with the Legislative Audit and Fiscal Review Committee.

RIO has a dedicated internal audit function that reports to the SIB Audit Committee. The internal audit function encompasses both the investment and retirement divisions of RIO. The SIB Audit Committee has oversight responsibilities as outlined in the SIB Audit Committee charter.

#### Performance Measurement and Reporting

The third element of monitoring entails measuring the performance of the individual investment managers and the total fund performance of each of the funds under the SIB. The SIB will retain reputable investment consultants or performance measurement services to provide comprehensive quarterly performance measurement information. This information will include data on the capital markets, other plan sponsors, and other investment managers.

**POLICY TYPE: INVESTMENTS**

**POLICY TITLE: *MONITORING***

---

Performance results for SIB accounts will be calculated from data provided by the master custodian and compared to relevant capital market benchmarks, other public funds, manager peer groups, and investment goals specified in the asset class investment policy. Time periods covered by the report may vary but generally will include the most recent quarter, last 12 months, last three years, five years, and longer time periods (as data is available).

RIO staff will use appropriate sources to compile monthly performance reports for each of the funds under the SIB that show recent performance and asset mix.

**Policy Implemented:** September 20, 1995.

**Amended:** February 27, 2009; February 25, 2011.

**STATEMENT OF POLICY**

It shall be the policy of the State Investment Board (SIB) to vote all proxies appurtenant to shares held in the various plans administered by the Board, and to vote said shares in a manner that best serves the system's interests. Specifically, all shares are to be voted with the interest of preserving or enhancing share value. The Board endorses the Department of Labor opinion that proxies have economic power which shareholders are obligated to exercise to improve corporate performance. The Board further recognized that proxy issues are frequently complex, requiring expert guidance; accordingly, it has adopted procedures that employ such experts.

The objectives of these policies are as follows:

1. Exercise the value empowered in proxies.
2. Maintain or improve share value for the exclusive benefit of the participants.
3. Achieve changes for the common good whenever these do not conflict with the exclusive benefit objective.

**PROCEDURES**

**DISTINCTION OF RESPONSIBILITIES**

**Master Custodian**

The system's master custodian shall be responsible for timely receipt and distribution of proxy ballots to the appropriate investment management institutions.

**Managers**

The managers shall be responsible for promptly voting all proxies pursuant to the Board's policies, and in keeping with the managers' best judgments.

**Staff**

Staff, in concert with the master custodian and the managers, shall be responsible for monitoring the receipt and voting of all proxies.

**Board**

The Board shall administer and enforce its policies. This administration and enforcement requires reporting from responsible persons, as discussed in the following.

**REPORTING**

**Master Custodian**

The master custodian shall report quarterly in writing on all pertinent proxy issues, including (1) receipt of proxy material; (2) nature of issues; (3) due date; (4) names of managers and dates forwarded; and (5) deficiency reports covering proxies that should have been received but were not.

**Managers**

Managers shall report quarterly in writing on how proxies have been voted, with explanations given whenever the Board's guidelines have not been followed.

**Staff**

Internal compliance staff shall report annually on the efficiency of the process, the portion of total proxies that have actually been voted, and compliance with Board directives.

**GUIDELINES**

The Board believes that good corporate investment decisions require good corporate governance, and that social responsibilities cannot be ignored in these decision processes. Accordingly, the practice of faithfully voting with management will *not* be tolerated, nor will the "Wall Street Rule" which advocates the sale of shares if there is disagreement with management.

In keeping with the Board's philosophy, the managers are encouraged to vote *for* proposals that *increase* or enhance the following, and against those that decrease or diminish the same:

- Health of the population
- Environmental conditions
- Management and Board accountability
- Abolition of management entrenchment
- Control of executive compensation
- Shareholder rights and ownership
- Fair labor practices

Guidelines may be altered periodically by the Board as situations warrant.

**Policy Implemented:** September 20, 1995.

**Amended:** February 27, 2009, October 26, 2018.

## **POLICY TYPE: INVESTMENTS**

### ***POLICY TITLE: IMPLEMENTATION – INVESTMENT MANAGER SELECTION***

---

The SIB hires investment managers with the intention of maintaining long-standing relationships. Care is taken to select managers for defined roles based on their strengths in designated areas. The hiring process is done in accordance with all applicable state and federal laws.

Some manager selections are conducted by the consultant while others may be directed by the staff in coordination with the SIB. Ultimately, the selection process is often a team effort involving the investment consultants, SIB members, and RIO staff. A consultant may be invaluable in this activity due to the large volume of data that needs to be collected, verified, and summarized. Also, their ongoing dialogue with money management firms provides useful qualitative input.

The investment management business has rapidly evolved since the 1990's. It is recognized that many viable firms have been formed as the result of spin-offs or start-ups and may not have a traditional long-term investment performance history in accordance with the following guidelines. There has also been a tremendous increase in the types of strategies available to institutional investors resulting in the need for flexibility in the establishment of investment criteria. Subject to the case-by-case acceptance of deviation by the SIB members, money managers must meet the following minimum selection criteria for inclusion in a manager search:

- Must be a registered investment adviser, bank, insurance company, or investment company (mutual fund). Should provide ADV Part II (registered investment adviser) prospectus (investment company) or comparable information (bank or insurance company).
- Provide at least five years of actual quarterly performance data that is time weighted, a representative composite of accounts, and meets Global Investment Performance Standards (GIPS).
- Provide information that illustrates the key investment personnel have been together for at least five years and the capabilities of the firm can handle the current level of investment activity.
- Able to articulate the firm's investment strategies and philosophy in a manner understandable by the Board, and provide a statement that the strategy has been followed for at least five years.
- Disclose any pending or past litigation or censure.
- Be willing to acknowledge their fiduciary status in writing (mutual funds are exempted from this requirement).

The following steps will be followed in the selection process, subject to modification relative to investment strategy and manager search circumstances:

- Develop a profile of the type of manager needed. This is based on the investment goals and asset allocations. Included in the profile are such things as:

Quantitative characteristics, such as GIPS-compliant composite return data, risk-adjusted rates of return and relevant portfolio characteristics.

## **POLICY TYPE: INVESTMENTS**

### ***POLICY TITLE: IMPLEMENTATION – INVESTMENT MANAGER SELECTION***

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Qualitative characteristics, such as key personnel, investment philosophy, investment strategy, research orientation, decision making process, and risk controls.

Organizational factors, such as type and size of firm, ownership structure, client servicing capabilities, ability to obtain and retain clients, and fees.

- The Investment Officer will give a written report to the SIB on the due diligence process conducted by the Investment Officer, RIO staff, and the SIB in the manager selection process. This report will include selection steps followed and process steps excluded.
- Consultant and/or staff use the profile to screen their data base for managers that meet SIB criteria.
- Consultant and/or staff reduce the group to the top candidates and prepare a summary report. The report will contain pertinent data on each of the candidates.
- When appropriate, on-site visits may be made by staff and board members to the candidates' home offices. Visits by board members to potential manager sites must have board approval.
- When appropriate the Investment Officer will conduct fact-finding pre-interviews. SIB trustees and RIO staff will receive notice of these pre-interviews.

Interviews are conducted with each of the finalists in Bismarck. All are required to bring the potential portfolio manager to the interview. Particular attention is paid to gaining an understanding of the investment process and determining the manager's compatibility with the SIB's guidelines and objectives.

The Investment Officer will schedule manager interviews with the SIB. Following these interviews, the Investment Officer, with the advice of RIO staff and consultants, will make recommendations to the SIB on manager selection.

- The SIB will select the investment manager by majority vote.
- Manager(s) selected by the SIB are notified immediately by RIO staff. Unsuccessful candidates are notified by consultant.
- Investment management contracts are reviewed and finalized, sent to the Attorney General for approval, and executed.
- Accounts are set up at the master custodian and on the internal general ledger.
- Consultant is notified when to begin the measurement of the investment performance of the manager(s).

**Policy Implemented:** September 20, 1995

**Amended:** February 27, 2009



**POLICY TYPE: INVESTMENTS**

**POLICY TITLE: IMPLEMENTATION – PORTFOLIO REBALANCING**

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Portfolio Rebalancing

The need to rebalance the portfolio can arise due to a new asset allocation or because market activity has driven the actual distribution of assets away from the desired mix. To minimize transaction costs due to rebalancing, RIO works with the investment consultants to determine appropriate ranges around the target mix (which are specified in the policy statement). Rigidly adhered to, such a policy is a valuable risk control tool. By maintaining asset mix within reasonably tight ranges, the SIB avoids making unintentional "bets" in the asset mix and avoids market-timing decisions.

All of the funds the SIB oversees have an asset allocation with minimum and maximum limits assigned. RIO's rebalancing policy requires the asset mix to be determined at the end of each month. At the end of each quarter, all portfolios deviating from the target beyond the acceptable limits are rebalanced to target.

**Policy Implemented:** September 20, 1995.

The SIB will follow an annual evaluation cycle for the investment program to ensure systematic review of investment policies and performance results and the development and implementation of corrective action plans. Evaluation of the program seeks to answer such questions as:

- Are all investment goals being met?
- What has worked and what has not?
- Have changes occurred in the capital markets, plan design, or board philosophy to warrant changes in investment policy?
- Are money managers meeting our expectations?
- Is continued confidence in the money managers warranted?
- Are accounting practices sound and fair to participating funds?
- Is service delivered in the most cost-effective manner?

The SIB's consultants play a key role in helping to answer some of these questions. The external auditor's report provides insight on accounting practices and cost effectiveness.

#### Evaluation of Money Managers

Achievement of the SIB's performance goals hinges on the success of the investment strategies and money managers it employs. Evaluation of each money manager must consider the following:

- Has the manager achieved the SIB's performance objectives?
- Has the firm adhered to the investment philosophy for which it was hired?
- Have there been any organizational or personnel changes that may negatively affect future performance?
- Are areas of concern being adequately addressed?
- Can the manager perform well in the future, regardless of whether extraordinary events, long-term performance, and/or short-term performance argue for termination?

These criteria are assessed by quantitative and qualitative means:

- Analyses provided by the investment consultant.
- Annual meetings with each manager in Bismarck to discuss performance, investment philosophy, organizational changes, economic outlook, and areas of concern.

Longer periods of time are better than shorter time periods when assessing a manager's performance. Ideally, performance should be assessed over a market cycle. Market cycles have varying lengths but have historically averaged 5-7 years. The SIB will use a minimum five-year period to evaluate manager performance against long-term performance standards. Long-term performance standards will be a market index that the manager has previously agreed to be measured against.

Shorter-term performance standards will also be established for each money manager. These standards will incorporate a minimum three-year measurement period and measure the manager against a previously agreed-upon peer group or style market index.

Long-term performance standards, short-term performance standards, extraordinary events, and termination factors will be incorporated in the written asset class investment policies.

#### Evaluation of Program Costs

Costs will be broken out by internal administration, investment consultants, master custodian, and external manager fees. Reports will detail this information by investment pool, managers, and by fund.

These costs will be compared to other funds on an annual basis and generally include a fee study conducted by an experienced investment consultant every two years. Staff is encouraged to identify other cost-comparison sources which may include the engagement of specialized fee consultants to conduct in-depth fee reviews on a periodic basis, subject to board review and approval.

**Policy Implemented:** September 20, 1995.

**Amended:** October 26, 2018

## **POLICY TYPE: INVESTMENTS**

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### **POLICY TITLE: *PERFORMANCE RELATED INVESTMENT MANAGER REVIEW***

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The North Dakota State Investment Board (SIB) recognizes the inherent importance of assessing an investment manager because of performance. Thus, the following process of evaluation includes quantitative *and* qualitative input. This procedure is structured to assist the SIB in recognizing potentially distressed investment managers, initiating a formal review process, and providing guidelines for termination if necessary. Note: The “Manager Review” terminology or concept is not meant to cause the manager to make substantive changes in investment philosophy, style, or strategies. Rather, it is intended to define a period of close scrutiny of the manager’s activities, circumstances, and investment results.

#### **Factors which may result in a Manager Review:**

Significant changes in organizational structure

Significant changes in investment philosophy

Significant deviation in portfolio management from stated philosophy (style drift)

Substandard investment performance

Diminished confidence in manager

#### **Manager Review Procedures:**

Information is submitted to, or generated by, the Board which initiates consideration of a Manager Review.

If warranted, the Board takes action to initiate a Manager Review.

Based on the situation and with input from the Investment Director, the SIB suggests appropriate action to facilitate the Review. Action may include telephone conferencing, local or on-site visits with manager, investigation by consultants, appearance of manager before a select committee of the SIB, or appearance of the manager before the SIB. Investment Director initiates investigation of situation based on direction from SIB.

The Investment Director reports findings to SIB at a subsequent meeting.

After considering findings of the Manager Review, SIB may:

- Remove manager from Review status
- Suggest additional action to facilitate Manager Review
- Relieve manager of duties

## **POLICY TYPE: INVESTMENTS**

### **POLICY TITLE: PERFORMANCE RELATED INVESTMENT MANAGER REVIEW**

In the case where continued investigation is warranted, the Investment Director will report new information and/or recommendations to the SIB as appropriate. It will be considered the responsibility of the Investment Director to maintain awareness and consideration of the Review until the situation is resolved.

It is important to recognize that situations occasionally arise of such a serious nature that a Manager Review process must be immediately initiated. In such cases, the Investment Director is granted the authority to place an investment manager under Review, including the freezing of assets if necessary, and report on such action at the next meeting of the State Investment Board.

In every case, the Investment Director is responsible for documenting the Manager Review process including recognition of:

- Reason of Manager Review
- Action taken to investigate the situation
- Report on results of investigation
- Report on resultant action taken by SIB
- Notification of investigation and conclusions to manager and consultants

A complete record of Manager Review activities and history shall be maintained at the ND Retirement and Investment Office.

**Policy Implemented:** June 27, 1997.

**POLICY TYPE: INVESTMENTS**

**POLICY TITLE: *BANK OF NORTH DAKOTA MATCH LOAN PROGRAM***

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The SIB has a commitment to the Bank of North Dakota Match Loan Program. The purpose of the program is to encourage and attract financially strong companies to North Dakota. The program is targeted to manufacturing, processing and value-added industries.

The SIB provides capital to the program by purchasing Certificates of Deposit (CD's) from the Bank of North Dakota. The CD's are guaranteed by the state, typically have seven to fifteen year maturities and pay interest pegged to US Treasury notes.

The source of funding for CD's shall be determined by the Investment Director; that funding to be from the most appropriate source consistent with liquidity and relative yield and return objectives and constraints.

**Policy Implemented:** April 24, 1998.

**Amended:** February 27, 2009

## **POLICY TYPE: INVESTMENTS**

### **POLICY TITLE: ACCEPTING NEW CLIENTS**

NDCC 21-10-06 states *“The state investment board may provide investment services to, and manage the money of, any agency, institution, or political subdivision of the state, subject to agreement with the industrial commission. The scope of services to be provided by the state investment board to the agency, institution, or political subdivision must be specified in a written contract. The state investment board may charge a fee for providing investment services and any revenue collected must be deposited in the state retirement and investment fund.”*

When a request is received by staff from a potential new investor requesting investment services from the State Investment (SIB), the following steps shall be followed.

1. Staff will conduct initial discussions with the potential client regarding type of fund, risk tolerance, size of fund, services to be provided, costs, etc.
2. Staff will recommend that an Asset/Liability study be conducted by the potential client if one has not been done recently. This discussion will include a description of the asset classes available for investment with the SIB to be included in their study.
3. If the potential client is still interested in participating in the SIB program, staff will bring the preliminary request to the SIB for acceptance. It shall be the policy of the SIB to take the following into consideration when determining if a new investor request will be accepted.
  - a. Internal staff administrative capacity.
  - b. Compatibility of new investor’s goals and risk tolerances with the existing SIB program structure.
  - c. Whatever other factors the SIB determines to be appropriate to the decision.
4. If the SIB chooses to accept the preliminary request, staff will provide the necessary template documents to the potential client for review and completion. These documents include a contract for services and investment guidelines.
5. Once documentation is completed, staff will request to have the issue included on the Industrial Commission’s agenda for their approval. Copies of all documentation will be provided for their review.
6. If approved by the Industrial Commission, final documentation will be presented to the SIB for final acceptance.
7. If accepted, staff will work with the new client to set up transfer of funds and implementation of asset allocation as directed. All new clients will be brought in as of the last day of a calendar quarter.
8. Fees will be charged with the intention of covering all associated costs as described in RIO Fiscal Management procedure “Investment Fee Allocations”.

**Policy Implemented:** November 20, 2009

## **POLICY TYPE: INVESTMENTS**

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### **POLICY TITLE: SECURITIES MONITORING AND LITIGATION**

#### **General Purpose**

1. The North Dakota State Investment Board (“SIB”) is a fiduciary for assets held in trust for the benefit of SIB clients, including their beneficiaries.
2. In order to carry out its fiduciary duty to prudently invest and diversify the assets of the various investment funds, the SIB invests considerable assets in global public securities markets.
3. The efficient and effective deployment of plan assets requires that in seeking returns market risks must be prudently assumed and managed. Investing in publicly-traded securities in regulated markets under accounting, disclosure and business practice laws and regulations provides general, but not perfect assurance that the information forming the basis for investments is accurate, conforms with accepted accounting practices, and is not distorted due to misfeasance, malfeasance or nonfeasance, or the timing of information disclosures by persons or entities with the ability to affect market prices of the investment securities.
4. Legal action is sometimes necessary to attempt to recover all or part of losses the funds may incur due to alleged improper action or inaction w h i c h results in the impairment of the value of the funds’ security holdings.
5. Most such actions will be prosecuted through class action litigation whether or not the SIB takes an active role as a plaintiff or a passive role as a member of a certified class of plaintiffs. Any ultimate award or settlement from a class action will be ratably allocated among legitimate claimants.
6. The SIB will generally only consider pursuing active participation in securities actions when such a role is expected to add value by enhancing the prospect for recovery, increasing the amount of recovery, assuring more efficient and effective prosecution of the case, or identifying and addressing corporate governance issues through litigation.

For purposes of this Policy, “active participation” means seeking status as lead plaintiff, co-lead plaintiff, or filing separate legal action.

#### **Non-Active Recovery and Filing**

1. SIB will require as part of its agreement with its custodial bank or other designated agent, that adequate securities class action monitoring is maintained on an ongoing basis, sufficient to assure that most of the actual awards and settlements for such cases are tracked and identified and that proof of claim forms, including supporting documentation, will be properly and timely filed.
2. SIB may engage one or more legal firms that specialize in prosecuting security class-action cases; any such engagement is subject to the special appointment requirements of N.D.C.C. § 54-12-08. For these purposes only, such firm(s) may be granted ongoing access to security holdings information through the custodian bank or other designated agent.



## POLICY TYPE: INVESTMENTS

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### POLICY TITLE: *SECURITIES MONITORING AND LITIGATION*

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3. An agreement with any law firm for non-litigation services will not commit SIB to employing said firm in the event that it seeks to represent SIB as an active participant in any securities related litigation. Such representation must be effected by a separate retainer agreement between the SIB and said firm, or another, depending on such factors as the potential monetary scope, the nature of the case and industry specialty that may be required, the allocation of current or past cases among candidate firms, the likely duration and cost of prosecuting such a case, retainer fees or contingency splits, the venue in which the case is to be filed, and other considerations.
4. The custodial bank or other designated agent will be required to provide the Retirement and Investment Office (“RIO”) with periodic reports that detail class action cases monitored, claims filed, and award or settlement distributions received. RIO will maintain these records and provide an update to the SIB or Securities Litigation Committee (Committee) with regards to accounting information on distributions received on claims filed by the custodian bank or other designated agent on our behalf.

#### Active Participation in Cases

1. The Executive Director will initiate active participation in securities cases only upon prior review and approval of the SIB or Committee. Before bringing any recommendations to the SIB or Committee, the Executive Director, with significant assistance from legal counsel from the Office of the Attorney General, will assess the merits and prospects for active participation by reference to the criteria and factors outlined in this section.
2. Decision Criteria and Factors:
  - a. The decision to participate in an active capacity in security litigation should be based on the totality of the circumstances. Dollar loss amounts are important, but not the sole or overriding factor to consider in making such recommendations by the Executive Director, or determinations by the SIB or Committee.
  - b. Potential losses to SIB clients must be significant in order to warrant participation as a lead plaintiff, co-lead plaintiff, or separate litigant in U.S. or Canadian cases. Generally, in cases where the potential loss does not exceed the \$5 million, the SIB will generally avoid active participation.
  - c. The *prima facie* merits of the claim for loss, and the factual basis for the action, recognizing that the full discovery process will not commence until the class has been certified by the court in which such case is to be filed.
  - d. The availability of witnesses, and possible support that may be obtained from investment managers, consultants, and the custodial bank through discovery.
  - e. The potential that any defendants or insurers will be able to pay an adequate recovery to the class, without impairing the value of any current security holdings SIB may yet hold in the issuer in the portfolio.

## **POLICY TYPE: INVESTMENTS**

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### **POLICY TITLE: SECURITIES MONITORING AND LITIGATION**

- f. The ability of the law firm recommending action on the part of SIB to prosecute the case effectively, in the venue where such case is likely to be filed, and the experience of the firm in managing such cases individually or in partnership with other firms.
  - g. Potential long-term benefits from corporate governance changes from pursuing litigation.
  - h. The ability of SIB to serve as a fiduciary on behalf of all class members in the case, especially in relative terms to other institutional investors that may be considering the same case.
  - i. Potential costs that may be incurred. Special consideration must be given to any case that must be filed in a non-U.S. venue under the “Morrison” criteria established by the U. S. Supreme Court in a 2010 decision, since costs of litigation and potential liabilities of unsuccessful claims may be significant.
  - j. Current workload and staffing resources required for the fulfillment of SIB’s primary member service functions, and whether participation might displace time and staff resources needed for core business functions.
3. Decision Criteria and Factors for cases filed in a non-U.S. venue: In addition to the Criteria and Factors set forth in Subsection 2, the SIB or Committee may consider the following:
- a. The proposed funding arrangements for the action.
  - b. Evaluate the merits and risks of the case in light of the law of the jurisdiction in which the action would be brought. Generally, in cases where the potential loss does not exceed the Jurisdictional Thresholds referenced in Exhibit A, the SIB will avoid opt-in or group litigation participation.

#### **Roles in Managing & Monitoring Litigation**

1. The SIB or Committee will make the final determination of whether it is in the SIB’s best interest to pursue active participation in any case and whether to engage any law firm and the terms of such engagement.
2. Decisions regarding the conduct and implementation of the SIB’s or Committee’s decision to participate will be the responsibility of the Executive Director, or an approved member of the management staff if he so delegates. When feasible and advisable, the Executive Director shall seek advice and direction from the SIB or Committee on strategic and legal issues that may arise in prosecuting the action on behalf of the SIB and its clients. The Executive Director shall timely report to the SIB or Committee on the progress of the litigation.
3. The Executive Director shall be responsible for management of the relationship with any portfolio monitoring law firm or organization for such purpose. Based on the need for additional coverage, the Executive Director and Committee will determine whether one or several firms are needed to fulfill the goals of this Policy and may terminate such monitoring agreements as judgment advises.

**POLICY TYPE: INVESTMENTS**

**POLICY TITLE: SECURITIES MONITORING AND LITIGATION**

4. Any agreement for portfolio monitoring services that includes a fee or subscription cost must first be approved by the SIB or Committee before execution by the Executive Director.

Policy Review

1. The Committee and SIB shall review this policy annually to ensure that it remains relevant and appropriate.

Exhibit A  
Non-US Opt-In and Group Litigation  
Jurisdictional Thresholds

Jurisdictional Description	Threshold
Passive/very low risk jurisdictions, simple registration or claim filing (no participation in litigation required, strong anonymity, very low costs) including, but potentially not limited to: Australia, Israel, Netherlands (including Dutch Foundations), regulatory funds (e.g. Compensation Schemes in UK)	None
Low risk jurisdictions (no discovery, low cost) including, but potentially not limited to: Japan	\$1 million
Moderate risk jurisdictions (moderate cost, funded/insured to protect from cost shifting, some restricted discovery, not fully public) including but potentially not limited to: Germany, Austria, Belgium, Switzerland, Denmark, Spain, Finland, France, Hong Kong, Indonesia, Ireland, Italy, Korea, Luxembourg, Malaysia, Norway, New Zealand, Portugal, Sweden, and Thailand	\$5 million
High risk jurisdictions (potential in-person discovery, no anonymity, uncapped fees) including, but potentially not limited to: Taiwan, United Kingdom, Singapore, Brazil	\$10 million

Jurisdictional Thresholds are developed in consultation with legal counsel including other designated agents which are experts in global securities litigation matters.

**Policy Implemented:** November 20, 2015

**Policy Amended:** April 27, 2018, May 24, 2019

**EXHIBIT E-1**

## State Investment Board (SIB) Members 2020-2021:

<b>Position</b>	<b>Incumbent</b>	<b>Designation</b>	<b>Term Expiration</b>
Lt. Governor	Brent Sanford	Statutory	12/31/20
State Treasurer	Kelly Schmidt	Statutory	12/31/20
State Insurance Commissioner	Jon Godfread	Statutory	12/31/20
Commissioner University & School Lands	Jodi Smith	Statutory	open
Executive Director Workforce Safety & Insurance	Bryan Klipfel	Statutory	open
Trustee, TFFR	Toni Gumeringer	Appointed by TFFR Board	6/30/24
Trustee, TFFR	Rob Lech	Appointed by TFFR Board	6/30/25
Trustee, TFFR	Mel Olson	Appointed by TFFR Board	6/30/23
Trustee, PERS	Adam Miller	Appointed by PERS Board	6/30/22
Trustee, PERS	Troy Seibel	Appointed by PERS Board	6/30/21
Trustee, PERS	Yvonne Smith	Appointed by PERS Board	6/30/24

## Retirement and Investment Office (RIO) Staff:

<b>Position</b>	<b>Incumbent</b>	<b>Education</b>
Executive Director/ Chief Investment Officer	David Hunter	BS, Accounting, Northern Illinois University MBA, Finance, University of Chicago
Deputy Executive Director/ Chief Retirement Officer	Jan Murtha	B.A. Economics & Management, Albion College J.D. Marquette University Law School
Deputy Chief Investment Officer	Darren Schulz	BBA, Finance, Georgia State University, CFA , CAIA
Chief Financial Officer	Connie Flanagan	BS, Accounting, University of Mary

External

<b>Function</b>	<b>Firm</b>	<b>Date Hired</b>
Investment Consultant	Callan Associates Inc.	4/84
Actuary (TFFR)	Segal	7/11
Auditor	CliftonLarsonAllen	4/12
Master/Global Custodian	The Northern Trust Company	12/83

## **F. TFFR PROGRAM**

Reference: Teachers' Fund for Retirement Program Manual

<http://www.nd.gov/rio/tffr/Board/TFFRProgMan/default.htm>

**G. BY-LAWS**

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## **CHAPTER 1 - AUTHORITY**

- Section 1-1. The State Investment Board (SIB) has the authority to maintain an administrative office under Chapter 54-52.5, North Dakota Century Code.
- Section 1-2. The SIB has the authority and responsibility for providing administrative services to the North Dakota Teachers' Fund for Retirement (TFFR) and the North Dakota State Investment Board. This includes organizing, staffing, and maintaining an administrative office.
- Section 1-3. The SIB has the authority and responsibility for developing and monitoring the agency budget.
- Section 1-4. The SIB has the authority and responsibility to maintain office records, an accounting system, and data processing support services.
- Section 1-5. The SIB has the authority to pay all claims and investment expenses filed with TFFR and the SIB.

**Policy Implemented:** June 23, 1995.



## **CHAPTER 2 - BOARD**

- Section 2-1. Members of the State Investment Board (SIB) are the Governor, State Treasurer, Commissioner of University and School Lands, director of Workforce Safety & Insurance, Commissioner of Insurance, three members of the Teachers' Fund for Retirement (TFFR) Board, two of the elected members, and one member of the Public Employees Retirement System (PERS) Board as selected by those boards. The PERS and TFFR Boards may appoint an alternate designee with full voting privileges to attend meetings of the SIB when a selected member is unable to attend. The director of Workforce Safety and Insurance may appoint a designee, subject to approval by the Workforce Safety and Insurance board of directors, to attend the meetings, participate, and vote when the director is unable to attend.
- Section 2-2. The SIB will have general charge and management of the business of TFFR and the SIB, subject to law, administrative rules and regulations, and governance policies. The SIB will make such policy as necessary to fulfill this obligation.
- Section 2-3. When the statutes allow a Deputy to represent a member of the SIB or an alternate to represent the TFFR or PERS Board, the Chair will recognize the individual for the record, and the individual(s) will then have the right to vote on matters before the SIB.
- Section 2-4. The SIB will be responsible for the operation of an administrative office that will provide support services to TFFR and the SIB.

**Policy Implemented:** June 23, 1995.

**Amended:** July 22, 2011.

### **CHAPTER 3 - OFFICERS AND DUTIES**

Section 3-1. The officers of the SIB are a Chair and Vice Chair, one of which must be an appointed or elected member of the TFFR or PERS Board. The officers will be elected by the SIB to a one-year term at the first regularly scheduled meeting following July 1 of each year. Vacancies will be filled by the SIB at the first scheduled meeting following the vacancy.

Section 3-2. Chair. The Chair will preside at all meetings of the SIB.

Section 3-3. Vice Chair. In the absence of the Chair, the Vice Chair will perform the duties of the Chair.

Section 3-4. Executive Director. An Executive Director will be retained by the SIB. The Executive Director will serve at the SIB's pleasure, be responsible for keeping the records of the SIB and TFFR Board actions, and perform such duties as the SIB prescribes. The Executive Director will make out and give out all notices required to be given by law, procedures, or rules and regulations of the two boards.

**Policy Implemented:** June 23, 1995.

## **CHAPTER 4 - MEETINGS**

- Section 4-1. Regular meetings of the SIB to conduct business are to be held as often as necessary. The SIB will meet at least once each quarter. Notice of all meetings will be made in accordance with North Dakota Century Code, Section 44-04-20.
- Section 4-2. Meetings of the SIB may be called by the Chair or two members of the SIB upon reasonable notice in writing to the other members of the Board. (NDCC 21-10-04)
- Section 4-3. A quorum will be six (6) members of the SIB.
- Section 4-4. Voting on matters before the SIB will be contained in the minutes which will show the recorded vote of each SIB member.
- Section 4-5. All meetings of the SIB are open to the public.
- Section 4-6. A record of procedures will be kept by the Executive Director on all meetings of the SIB. The records of these proceedings are public documents, and copies will be distributed to the TFFR, SIB, and PERS Boards and upon request.
- Section 4-7. Public participation during meetings of the SIB may be allowed at the discretion of the Chair.
- Section 4-8. SIB members, except elected and appointed officials, will be paid the amount specified in NDCC 21-10-01 per SIB meeting attended.

Expenses will be paid according to state law and OMB policies.

**Policy Implemented:** June 23, 1995.

**Amended:** July 22, 2011.

## **CHAPTER 5 - COMMITTEES**

Section 5-1. The SIB has two standing committees: Audit Committee and Securities Litigation.

Section 5-1-1. Audit Committee. The Audit Committee will consist of five members. They will be selected by the SIB. Three members of the committee will represent the three groups on the SIB (TFFR Board, PERS Board, and elected and appointed officials). The other two members will be selected from outside of the SIB and be auditors with at least a Certified Public Accountant (CPA) or Certified Internal Auditor (CIA) designation.

The Audit Committee will have responsibility for oversight of financial reporting, auditing, and internal control. The Audit Committee will be responsible for developing a written charter, to be approved by the SIB, which puts forth the authority, responsibilities, and structure of the Audit Committee. It will also be the responsibility of the Audit Committee to supervise the audit activities of the internal audit staff, work with the State Auditor/external auditors, and develop reports for the SIB.

The Executive Director shall supervise the administrative activities of the internal/external audit programs such as travel, securing contracts, paying fees, maintaining official reports, etc.

The supervisor of the internal audit function will be the staff member directly responsible to the Audit Committee.

Membership on the Audit Committee will be for one year or termination of term on the SIB. Vacancies will be filled by the SIB at the first scheduled meeting following the vacancy. There will be no limit to the number of terms served on the Audit Committee.

Section 5-2. No member of the SIB will be paid, other than expenses, for attending seminars, conferences, or other such educational meetings.

Section 5-3 Securities Litigation Committee. The Securities Litigation Committee will consist of five members. They will be selected by the SIB and include two SIB members, RIO's legal counsel, RIO's chief financial officer and RIO's executive director.

The Securities Litigation Committee will assist the SIB in fulfilling its oversight responsibilities with regards to monitoring securities litigation. The Committee helps to determine when an active role should be pursued in regards to securities litigation affecting SIB client investments. This Committee also serves as a communication link for the SIB, RIO, third party securities litigation firms and others.

The Executive Director shall supervise the administrative activities of the Securities Litigation Committee with the assistance of RIO's legal counsel and Chief Financial Officer.

Membership on the Securities Litigation Committee will be for an unlimited term but subject to annual review and acceptance by the SIB every year. Vacancies will be filled by the SIB at the first scheduled meeting following the vacancy.

**Policy Implemented:** June 23, 1995.

**Amended:** October 26, 2018

## **CHAPTER 6 - RULES OF ORDER**

Section 6-1. All SIB meetings will be conducted in accordance with Robert's Rules of Order Newly Revised except as superseded by these by-laws and board governance policies.

**Policy Implemented:** June 23, 1995.

## **CHAPTER 7 - ADMINISTRATIVE OFFICE**

Section 7-1. For the purpose of carrying out the day-to-day business of TFFR and the SIB, an administrative office will be maintained in Bismarck, North Dakota. This office is called the Retirement and Investment Office (RIO).

Section 7-2. The Executive Director will be the administrator of the office.

**Policy Implemented:** June 23, 1995.

## **CHAPTER 8 - AMENDMENTS**

Section 8-1. These by-laws may be amended by a two-thirds vote of SIB members. All amendments must be mailed to SIB members at least thirty (30) days prior to the meeting at which they are considered.

Section 8-2. All amendments must include an effective date.

**Policy Implemented:** June 23, 1995.

## H. CENTURY CODE

### SECTION

### PAGE

#### STATE INVESTMENT BOARD

[Link to Century Code Chapter 21-10](#)

21-10-01.	State investment board—Membership—Term—Compensation—Advisory council.	1
21-10-02.	Board—Powers and duties.	1
21-10-02.1.	Board—Policies on investment goals and objectives and asset allocation.	1
21-10-03.	Cooperation with Bank of North Dakota.	2
21-10-04.	Board—Meetings.	2
21-10-05.	Investment director—Powers and duties.	2
21-10-06.	Funds under management of board—Accounts.	2
21-10-06.1.	Board—Investment reports.	3
21-10-06.2.	Investment costs.	3
21-10-07.	Legal investments.	3
21-10-08.	Reserves—Percentage limitations.	3
21-10-09.	Personal profit prohibited—Penalty.	3
21-10-10.	State investment board fund—Cost of operation of board—Repealed.	3
21-10-11.	Legacy and budget stabilization fund advisory board.	3
21-10-12.	Legacy fund—Earnings defined.	4

#### STATE RETIREMENT AND INVESTMENT OFFICE

[Link to Century Code Chapter 54-52.5](#)

54-52.5-01.	North Dakota State Retirement and Investment Office.	1
54-52.5-02.	Governing authority.	1
54-52.5-03.	State retirement and investment fund—Cost of operation of agency.	1





**ND STATE INVESTMENT BOARD  
SECURITIES LITIGATION COMMITTEE MEETING**

**Thursday, November 5, 2020, 1:00 p.m.  
North Dakota Retirement and Investment Office (RIO)  
RIO Conference Room (Virtual)  
3442 East Century Avenue, Bismarck, ND**

**Teleconference 701-328-0950, Conference ID: 859 348 519#**

**AGENDA**

1. Call to Order and Approval of Agenda – Chief Deputy Attorney General Seibel **Committee Action**
2. Minutes (August 11, 2020) **Committee Action**
3. Securities Litigation Committee Meeting Schedule – Mr. Hunter (10 minutes) **Committee Action**
4. Securities Litigation Recoveries (10-Year History) – Ms. Flanagan (10 minutes) *Informational*
5. RIO Financial Statement Contingency Disclosure – Mr. Hunter (10 minutes) *Informational*
6. International Securities Fraud Cases (30 minutes) (to be distributed separately via secure email)  
*Grant & Eisenhofer – Mr. Marc Weinberg and Mr. Olav Haazen  
Executive Session for confidential and privileged attorney client consultation  
pursuant to NDCC 44-04-17.1(4), NDCC 44-04-19.1, and NDCC 44-04-19.2.*
7. Other - Next Proposed SIB Securities Litigation Committee Meeting  
North Dakota Retirement and Investment Office  
3442 E Century Ave, Bismarck, ND 58503  
Thursday, February 4, 2021 at 2:00 PM (subject to Committee approval)
8. Adjournment

Any individual requiring an auxiliary aid or service should contact the Retirement and Investment Office at (701) 328-9885 at least (3) days prior to the scheduled meeting.

**NORTH DAKOTA STATE INVESTMENT BOARD  
SECURITIES LITIGATION COMMITTEE  
MINUTES OF THE AUGUST 11, 2020, MEETING**

**MEMBERS PRESENT:** Troy Seibel, Chair  
Jodi Smith, Vice Chair  
Dean DePountis, Attorney General's Office  
Connie Flanagan, Chief Financial Officer  
David Hunter, Executive Director/CIO

**STAFF PRESENT:** Missy Kopp, Retirement Asst  
Jan Murtha, Dep Exec Dir/Chief Retirement Officer

**GUESTS:** John Blessington, K&L Gates  
Ron Sparkes, K&L Gates  
Ryan Tosi, K&L Gates

**CALL TO ORDER:**

Mr. Seibel, Chair, called the State Investment Board (SIB) Securities Litigation Committee (SLC) regular meeting (virtual) to order at 2:05 p.m. on Tuesday, August 11, 2020, at the Retirement and Investment Office (RIO) (virtual host), 3442 E Century Ave, Bismarck, ND.

**AGENDA:**

IT WAS MOVED BY COMMISSIONER SMITH AND SECONDED BY MS. FLANAGAN AND CARRIED BY A VOICE VOTE TO APPROVE THE AGENDA FOR THE AUGUST 11, 2020, MEETING.

AYES: COMMISSIONER SMITH, MS. FLANAGAN, MR. DEPOUNTIS, MR. HUNTER, AND MR. SEIBEL  
NAYS: NONE  
MOTION CARRIED

**MINUTES:**

IT WAS MOVED BY MR. HUNTER AND SECONDED BY MS. FLANAGAN AND CARRIED BY A VOICE VOTE TO ACCEPT THE MINUTES OF THE APRIL 30, 2020, MEETING AS DISTRIBUTED.

AYES: MS. FLANAGAN, MR. DEPOUNTIS, MR. HUNTER, COMMISSIONER SMITH, AND MR. SEIBEL  
NAYS: NONE  
MOTION CARRIED

**CHARTER:**

Mr. Hunter reviewed the SLC charter, authority, and policy.

Election of officers of the SLC took place for the period of July 1, 2020 - June 30, 2021.

IT WAS MOVED BY MR. HUNTER AND SECONDED BY MS. FLANAGAN AND CARRIED BY A VOICE VOTE TO NOMINATE MR. SEIBEL AS CHAIR AND COMMISSIONER SMITH AS VICE CHAIR OF THE SIB SECURITIES LITIGATION COMMITTEE FOR THE PERIOD OF JULY 1, 2020 - JUNE 30, 2021.

AYES: MR. DEPOUNTIS, MR. HUNTER, COMMISSIONER SMITH, MS. FLANAGAN, AND MR. SEIBEL

NAYS: NONE

MOTION CARRIED

**SECURITIES LITIGATION FIRMS:**

Mr. Hunter reviewed Securities Litigation firms the SIB and SLC has engaged since 2009.

- K&L Gates - 2009 WG Trading (plaintiff's attorney)
- K&L Gates - 2012 Tribune
- Kasowitz Benson Torres - 2015 General Motors
- Grant & Eisenhofer - 2016 Volkswagen (plaintiff's attorney)
- Grant & Eisenhofer - 2019 Danske Bank (plaintiff's attorney)
- Kessler, Topaz, Meltzer, Check, LLP - 2020 Nissan Motor Co., Ltd.

Financial Recovery Technologies (FRT) was hired in 2018 to recover investment losses in the U.S. and international securities litigation cases.

Since 2011, annual cash recoveries have ranged from a low of \$153,480 in fiscal 2014 to a high of \$692,958 in fiscal 2012, noting the annual recoveries are often materially impacted by the occurrence (or absence) of one or two major cases in any year.

Securities litigation recoveries approximated \$345,000 in the fiscal year ended June 30, 2019 and \$644,000 in the fiscal year ended June 30, 2020.

On November 5, 2019, the SLC identified Bernstein Litowitz Berger & Grossman, Grant & Eisenhofer, and Labaton Sucharow as pre-approved law firms to be utilized on a case by case basis to provide legal counsel when new securities litigation related cases are raised for further consideration by FRT.

**CASE UPDATES:**

K&L Gates representatives updated the SLC on the WG Trading and Tribune cases.

WG Trading - The SIB's initial investment with Westridge Capital Management was \$75,269,880.

There were 17 SIB client funds impacted by the case; Public Employees Retirement System, Teachers' Fund for Retirement, Bismarck City Employee and Police Pension Plans, Job Service, City of Fargo Employee Pension Plan, WSI, State Fire & Tornado, State Bonding, Risk Management, Risk Management Workers Compensation, Insurance Regulatory Trust Fund, Petroleum Tank Release Compensation Fund, ND Association of Counties, City of Bismarck Deferred Sick Leave, Fargo Dome Permanent Fund and Cultural Endowment Fund.

To date, the Receiver has made three distributions of funds to investors. The distributions to SIB were as followed:

1. On March 21, 2011, SIB recovered a total of \$63,930,633.62, distributed as follows:
  - a. ND Pension Trust: \$19,912,957.02
  - b. ND Insurance Trust: \$12,294,359.53
  - c. ND Enhanced Lehman: \$31,723,317.07
  
2. On December 28, 2012, SIB recovered a total of \$3,137,614.23, distributed as follows:
  - a. ND Pension Trust: \$ 977,294.52
  - b. ND Insurance Trust: \$ 603,375.62
  - c. ND Enhanced Lehman: \$1,556,944.00
  
3. On October 14, 2015, SIB recovered a total of \$5,944,067.48, distributed as follows:
  - a. ND Pension Trust: \$1,851,443.74
  - b. ND Insurance Trust: \$1,143,091.73
  - c. ND Enhanced Lehman: \$2,949,532.01

On June 29, 2020, the Receiver sought court approval for a final distribution of assets. Under the plan submitted by the Receiver, SIB is scheduled to receive the following additional funds:

4. Final Distribution: A total distribution of \$2,257,404.67, to be distributed as follows:
  - a. ND Pension Trust: \$ 703,124.72
  - b. ND Insurance Trust: \$ 439,113.12
  - c. ND Enhanced Lehman: \$1,120,146.83

The SIB will have recovered all of the \$75,269,880 it invested in the Westridge entities once the final distribution is received.

Tribune - The SIB was named as a defendant arising out of the Tribune bankruptcy proceedings which related to securities that were purchased by external investment managers in one or more portfolios held by the SIB on behalf of its clients. In 2007, all of the stockholders of the Tribune Company engaged in a buyout. The creditors allege that as a result of that buyout, the Tribune company filed for bankruptcy. On July 15, 2019, the Litigation Trustee filed a Notice of Appeal to the Second Circuit, appealing the various judgments of the U.S. District Court that dismissed the claims against defendants in the action and denying leave to amend the complaint to add a constructive fraudulent transfer claim. Briefing of the legal issues before the Second Circuit is complete, and oral argument is set for August 24, 2020.

**OTHER:**

The next Securities Litigation meeting is scheduled for Thursday, November 5, 2020, at 1:00 p.m. at the Retirement and Investment Office, 3442 East Century Avenue, Bismarck, ND.

**ADJOURNMENT:**

With no further business to come before the SLC, Mr. Seibel adjourned the meeting at 2:31 p.m.

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Mr. Seibel, Chair

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Bonnie Heit  
Recorder

***Committee Action***

**TO:** SIB Securities Litigation Committee (SLC)  
**FROM:** Dave Hunter  
**DATE:** November 5, 2020  
**SUBJECT:** **Proposed Meeting Schedule for 2021**

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Proposed meeting dates for the SIB Securities Litigation Committee are as follows for 2021:

**February 4, 2021** (Thursday from 2:00 to 3:30 p.m.)  
**May 6, 2021** (Thursday from 2:00 to 3:30 p.m.)  
**August 5, 2021** (Thursday from 2:00 to 3:30 p.m.)  
**November 4, 2021** (Thursday from 2:00 to 3:30 p.m.)

RIO will seek to review the proposed 2021 meeting schedule and seek Committee member input at our SLC meeting on November 5, 2020.

*Informational*

**TO:** SIB Securities Litigation Committee (SLC)  
**FROM:** Connie Flanagan  
**DATE:** November 5, 2020  
**SUBJECT:** Securities Litigation Recoveries -  
Fiscal Years Ended June 30, 2011 to June 30, 2020

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**Securities Litigation Recoveries  
By Fiscal Year**

<u>Fiscal Year</u>	<u>\$ Recovered</u>	<u># Cases</u>
2011	405,676	54
<b>2012</b>	<b>692,958</b>	<b>47</b>
2013	185,789	59
2014	153,480	55
<b>2015</b>	<b>645,943</b>	<b>55</b>
2016	457,616	42
2017	424,362	51
2018	189,006	54
2019	344,684	60
<b>2020</b>	<b>638,661</b>	<b>37</b>

Annual Securities Litigation Activity Report  
For the Fiscal Year Ended June 30, 2020

NDSIB Securities Litigation Committee  
November 5, 2020



## Claims Status Report for ND State Investment Board For Fiscal Year Ended June 30, 2020

**Total Recoveries for FY2020** **\$638,661.40**

### Class Action Claims



Status	# Cases	# Claims	Total Recognized Loss	Net \$ Recovered
Newly Filed	37	127	\$1,578,179.43	
Newly Paid	14	17	2,066,589.35	363,285.83
Previously Filed	14	43	530,866.88	
<b>Total</b>	<b>65</b>	<b>187</b>	<b>\$4,175,635.66</b>	<b>\$363,285.83</b>

### Northern Trust

Status	# Cases	# Claims	Total Recognized Loss	Net \$ Recovered
Newly Paid	22	57		264,699.81
Previously Filed	9	19		
<b>Total</b>	<b>65</b>	<b>187</b>		<b>\$264,699.81</b>

**Total Class Action Recoveries FY2020** **\$ 627,985.64**

## Anti-trust Claims



Status	# Cases	Settlement Fund	# Claims	Net \$ Recovered
Newly Filed	3	\$569,000,000.00	52	
Newly Paid	1	\$96,000,000.00	10	10,675.76
Previously Filed	6	\$3,377,775,000.00	121	
<b>Total</b>	<b>9</b>	<b>\$4,042,775,000.00</b>	<b>183</b>	<b>\$10,675.76</b>

## Non-US Group Recovery



Status	# Cases	# Claims	FRT Damages	Damaged Shares	\$ Recovered
Newly Filed	1	4	\$43,429.57		
Previously Filed	1	1		18,900	
<b>Total</b>	<b>2</b>	<b>5</b>	<b>\$43,429.57</b>	<b>18,900</b>	

## Non-US Opt-In Monitoring



Status	# Cases	# Claims	FRT Damages	Damaged Shares	\$ Recovered
Newly Filed	1	6	\$1,541,037.45		
<b>Total</b>	<b>1</b>	<b>6</b>	<b>\$1,541,037.45</b>		

## NORTH DAKOTA RETIREMENT AND INVESTMENT OFFICE

### QUARTERLY MONITORING REPORT Executive Limitations / Staff Relations

Quarter Ended September 30, 2020

The Executive Limitation “Staff Relations” deals with the treatment of staff at RIO. The executive director “shall not cause or allow any condition or any communication which is unfair, undignified, or disrespectful.” This Executive Limitation lists six specific limitations that range from personnel policies to exit interviews. All the limitations are intended to protect staff from unfair, undignified, or disrespectful treatment by management.

**There were no exceptions to this Executive Limitation during the past quarter.**

The Executive Director/CIO held at least three full office meetings and three manager meetings during the third calendar quarter of 2020 in order to promote an open and collaborative work environment while enhancing team member communication, awareness and engagement.

RIO also participated in a Strengths Finder Teams Assessment in September (and onsite Conflict Management course in October). These HRMS led leadership and development courses were well received and proved to be a fun team building exercise. RIO team member participation and engagement was excellent.

I sincerely thank all of our RIO team members who have done an outstanding job of handling an increased workload since last July when we elected to restructure agency operations to become more technologically efficient particularly while transitioning to a remote work enabled office environment in early-2020 and in anticipation of our long awaited TFFR pension administration system modernization project.

**BUDGETING / FINANCIAL CONDITION**

**AS OF SEPTEMBER 30, 2020**

	2019-2021 BUDGET	ADJUSTED APPROPRIATION	BIENNIUM TO DATE ACTUAL	EXPENDITURES		
				BUDGET AVAILABLE	% BUDGET AVAILABLE	% OF BIENNIUM REMAINING
SALARIES AND BENEFITS	\$ 4,978,230.00	\$ 4,978,230.00	\$ 2,947,847.00	\$ 2,030,383.00	40.79%	37.50%
OPERATING EXPENDITURES	3,538,934.00 *	3,538,934.00	389,291.76	3,149,642.24	89.00%	37.50%
CAPITAL ASSETS	6,300,000.00	6,300,000.00	0.00	6,300,000.00	100.00%	37.50%
CONTINGENCY	52,000.00	52,000.00	0.00	52,000.00	100.00%	37.50%
<b>TOTAL</b>	<b>\$ 14,869,164.00</b>	<b>\$ 14,869,164.00</b>	<b>\$ 3,337,138.76</b>	<b>11,532,025.24</b>	<b>77.56%</b>	<b>37.50%</b>

\* In addition to the Capital Assets line, the operating expenditure budget includes \$2,650,000 for the TFFR Pension Administration System Project.

## EXPENDITURE REPORT

**QUARTER ENDED SEPTEMBER 30, 2020**

	<u>INVESTMENT</u>	<u>RETIREMENT</u>	<u>QUARTERLY TOTALS</u>	<u>FISCAL YEAR TO - DATE</u>	<u>BIENNIUM TO - DATE</u>
<u>CONTINUING APPROPRIATIONS</u>					
INVESTMENT EXPENDITURES*	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 33,563,239.92
MEMBER CLAIMS					
1. ANNUITY PAYMENTS	0.00	58,593,828.87	58,593,828.87	58,593,828.87	282,955,358.20
2. REFUND PAYMENTS	0.00	1,780,583.17	1,780,583.17	1,780,583.17	8,270,288.20
TOTAL MEMBER CLAIMS	0.00	60,374,412.04	60,374,412.04	60,374,412.04	291,304,591.25
OTHER CONTINUING APPROPRIATIONS	44,573.09	2,089.90	46,662.99	46,662.99	1,151,627.03
TOTAL CONTINUING APPROPRIATIONS	44,573.09	60,376,501.94	60,421,075.03	60,421,075.03	326,019,458.20
<u>BUDGETED EXPENDITURES</u>					
1. SALARIES & BENEFITS					
SALARIES	249,912.00	210,691.00	460,603.00	460,603.00	2,168,843.76
OVERTIME/TEMPORARY	0.00	0.00	0.00	0.00	55.28
TERMINATION SALARY & BENEFITS	0.00	0.00	0.00	0.00	0.00
FRINGE BENEFITS	80,735.97	84,006.94	164,742.91	164,742.91	778,947.96
TOTAL SALARY & BENEFITS	330,647.97	294,697.94	625,345.91	625,345.91	2,947,847.00
2. OPERATING EXPENDITURES					
DATA PROCESSING	3,444.20	12,342.80	15,787.00	15,787.00	100,148.12
TELECOMMUNICATIONS - ISD	706.74	1,017.60	1,724.34	1,724.34	13,488.34
TRAVEL	0.00	0.00	0.00	0.00	28,733.27
IT - SOFTWARE/SUPPLIES	0.00	0.00	0.00	0.00	296.24
POSTAGE SERVICES	385.42	1,236.25	1,621.67	1,621.67	34,528.09
IT - CONTRACTUAL SERVICES	95.03	133.97	229.00	229.00	4,195.95
BUILDING/LAND RENT & LEASES	12,078.48	17,376.40	29,454.88	29,454.88	119,379.52
DUES & PROF. DEVELOPMENT	388.75	631.25	1,020.00	1,020.00	16,471.00
OPERATING FEES & SERVICES	83.09	277.47	360.56	360.56	25,399.22
REPAIR SERVICE	0.00	0.00	0.00	0.00	2,164.50
PROFESSIONAL SERVICES	717.62	3,278.71	3,996.33	3,996.33	18,599.30
INSURANCE	370.81	522.72	893.53	893.53	1,812.48
OFFICE SUPPLIES	42.17	85.44	127.61	127.61	1,597.85
PRINTING	213.58	489.97	703.55	703.55	14,678.60
PROFESSIONAL SUPPLIES & MATERIALS	12.45	17.55	30.00	30.00	1,471.60
MISCELLANEOUS SUPPLIES	11.68	29.79	41.47	41.47	1,097.33
IT EQUIPMENT UNDER \$5000	(27.60)	0.00	(27.60)	(27.60)	1,690.50
OTHER EQUIP. UNDER \$5000	0.00	0.00	0.00	0.00	0.00
OFFICE EQUIP. & FURNITURE UNDER \$5000	0.00	0.00	0.00	0.00	3,539.85
TOTAL OPERATING EXPENDITURES	18,522.42	37,439.92	55,962.34	55,962.34	389,291.76
3. CAPITAL ASSETS	0.00	0.00	0.00	0.00	0.00
4. CONTINGENCY	0.00	0.00	0.00	0.00	0.00
TOTAL BUDGETED EXPENDITURES	349,170.39	332,137.86	681,308.25	681,308.25	3,337,138.76
TOTAL EXPENDITURES	\$ 349,170.39	\$ 60,706,549.90	\$ 61,102,383.28	\$ 61,102,383.28	\$ 329,356,596.96

\* Beginning with the quarter ended September 30, 2020, investment expenses will be reported on a quarter lag until the end of the fiscal year. Since investment fees are generally based on the investment value as of the end of the quarter, very few investment fee amounts for the quarter will be available when this monitoring report is issued. This will result in the fees for the September quarter being reported on the December monitoring report, December fees on the March report and March and June fees on the final June report. As such, no investment fees will show on the September report.

**Quarterly Report on Ends  
Q1:FY21**

Investment Program

**Manager Research and Monitoring Highlights**

At the beginning of the quarter, Staff was focused on completing the second of two small-cap searches. In July, Staff held virtual meetings to conduct final due diligence on candidate small-cap (core/value) managers. Following the completion of the small cap search, Staff turned its attention to private equity, infrastructure and optimizing other parts of the public equity portfolio.

**Portfolio Changes & Investment Consultant**

At the July 24<sup>th</sup> board meeting, the Board approved Staff's recommendation to replace the Parametric Clifton Russell 2000 mandate with the Sycamore Small Cap Value Equity Strategy. This strategy is a bottom up, quality small cap value strategy that serves as an attractive complement to the SIB's mandates with Atlanta Capital and Riverbridge.

At the August 28<sup>th</sup> board meeting, Staff recommended and the Board approved up to a \$60 million commitment to the Adams Street Partners 2020 Global Equity Fund and up to a \$250 million commitment (over four years) to the NDSIB Private Opportunities Fund, L.P.—North Dakota's customized private equity mandate managed by BlackRock Private Equity Partners.

At the September 25<sup>th</sup> board meeting, BND requested and the Board approved a \$100 million increase to the existing \$300 million Match Loan CD program. The total overall commitment now stands at \$400 million.

**Other**

Staff continues to conduct preliminary due diligence on prospect managers/products for future consideration.

Staff continues to monitor each client's asset allocation monthly and makes rebalancing decisions based on rebalancing policy and cash flow requirements.

Staff attended meetings with many SIB client boards, sub-committees and/or legislative committees or representatives including TFFR, PERS, Legacy and Budget Stabilization Advisory Fund.

LSV and Epoch remain on the Watch List.

## NDRIO Investment Due Diligence Quarterly Monitoring Report Jul-01-2020 to Sep-30-2020

Date	Firm	Reason For Call	Key Takeaways	Location	RIO Attendees	Manager Attendees
7/1/2020	Oak Hill	Prospect Call		Video Call	Darren Schulz	Glenn August
7/1/2020	GCM Infrastructure	Discuss infrastructure pacing schedule	<i>GCM will produce an infrastructure pacing schedule for us</i>	Conference Call	Eric Chin	Mike Rose
7/2/2020	Victory Sycamore	Small Cap Overview	<i>Finalist small cap call, Q&amp;A with team</i>	Video Call	Matt Posch, Eric Chin, Darren Schulz, David Hunter	Gary Miller, Dan Dy
7/6/2020	Northern Trust	Biannual Portfolio Review		Conference Call		
7/7/2020	Overlay best practices with Parametric			Video Call		
7/8/2020	River Road Small Cap Value	Small Cap Overview	<i>Finalist small cap call, Q&amp;A with team</i>	Video Call	Darren Schulz, Eric Chin, Matt Posch	Ben Brady, Andrew Beck, Justin Atkin
7/9/2020	DFA	Perspective on Value	<i>Interesting take on value</i>	Conference Call	Eric Chin	Joe Young, Weiding He, Wes Crill
7/9/2020	T. Rowe Price	Small Cap Overview	<i>Finalist small cap call, Q&amp;A with team</i>	Video Call	Darren Schulz, Eric Chin, Matt Posch	David Wagner, Michele Ward, John Masdea
7/9/2020	Burgundy U.S. Small Cap	Small Cap Overview	<i>Finalist small cap call, Q&amp;A with team</i>	Video Call	Darren Schulz, Eric Chin, Matt Posch	Steve Boutin, Oliver Cardoso, Donald Gawel, Roz McLean
7/13/2020	PIMCO	BRAVO 2 and DiSCO 2 update		Conference Call		
7/14/2020	Goldman Sachs	Small Cap Overview	<i>Finalist small cap call, Q&amp;A with team</i>	Video Call	Darren Schulz, Eric Chin, Matt Posch	Fowler, Mary W G; Evans, Todd;
7/16/2020	Follow Up Chat - NDRIO & Burgundy	Catch up with Burgundy	<i>Finalist in small cap search</i>	Conference Call	Eric Chin, Matt Posch	Roz Mclean
7/27/2020	Contrarian	Prospect DD	<i>Interesting Prospect</i>	Conference Call	Eric Chin	Andy Frieman
7/28/2020	Murano	Third party marketer		Conference Call	Eric Chin	Suniro
7/28/2020	Gotham	Prospect DD	<i>Interesting prospect</i>	Conference Call	Eric Chin	Clinton Kugler; Michael Sartiano;
7/31/2020	EQT	Prospect DD	<i>High quality infrastructure prospect</i>	Conference Call	Eric Chin	Molly Wilson
8/5/2020	North Dakota SIB / Brookfield catch up call	Prospect DD	<i>Brookfield is a solid prospect for Real Estate and Infrastructure</i>	Conference Call	Eric Chin	Chris Harris Adam Kertzer, Matt Schrage, Charles Hannigan, Jack Crowell, Eitan Arbeter, Greg Leveto
8/11/2020	Oak Hill	Firm Overview	<i>Invest in private credit, stressed/distressed, real assets. Looking for quality opportunities in the markets that have been left behind.</i>	Video Call	Darren Schulz, Matt Posch	
8/11/2020	Eric/Mike - Infrastructure/CIS III/Pacing Study	Review pacing model	<i>GCM is kind enough to work on a pacing study for us</i>	Conference Call	Eric Chin	Mike Rose
8/12/2020	Axiom	Emerging markets update	<i>EM has had good performance, China now largest weight in the EM index</i>	Conference Call	Eric Chin, Darren Schulz, Matt Posch	Steve Hanson, Don Elfson
8/12/2020	EQT	Prospect diligence	<i>EQT is a premier infrastructure manager. Should continue dialogue.</i>	Conference Call	Eric Chin	Molly Wilson
8/13/2020	PEP SLS Catch-up w/ ND Team	Chat with new secondaries team	<i>PEP is segregating secondaries to a commingled fund</i>	Conference Call	Darren Schulz, Eric Chin, Matt Posch	Simon Dwyer
8/14/2020	Cerberus	Credit Strategy Update	<i>US corp debt is at a high and credit quality has deteriorated. Credit markets were already showing strains before COVID.</i>	Conference Call	Darren Schulz, Eric Chin, Matt Posch	Bob Davenport

8/19/2020	Contrarian	Prospect DD	<i>Interesting prospect for opportunistic credit</i>	Conference Call	Eric Chin	Andy Frieman
8/20/2020	Baillie Gifford	Prospect DD	<i>Baillie Gifford is a solid prospect for international or global equities</i>	Conference Call	Eric Chin	Ryan Fitzpatrick
8/20/2020	Global equity search planning call with Callan	Discussion on how to move forward on Global Equity optimization		Conference Call	David Hunter, Darren Schulz, Eric Chin, Matt Posch	Paul Erlandson Alex Browning
8/24/2020	EQT Partners	Prospect diligence	<i>EQT is a premier infrastructure manager. Should continue dialogue.</i>	Conference Call	Eric Chin	Molly Wilson
8/25/2020	DFA	Review of holdings/leverage	<i>Everything checks out</i>	Dial in	Eric Chin	Joe Young, Weiding He
8/26/2020	EQT Partners	Prospect diligence	<i>EQT is a premier infrastructure manager. Should continue dialogue.</i>	Conference Call	Eric Chin	Molly Wilson
8/27/2020	10 Minute Video Call with Acadian Asset Management (Pension Bridge Annual 2020)	Quick reintroduction to firm	<i>Quick intro</i>	Pension Bridge Virtual Platform	Eric Chin	
8/27/2020	10 Minute Video Call with Westwood Holdings Group (Pension Bridge Annual 2020)	Touching base	<i>Quick chat</i>	Pension Bridge Virtual Platform	Eric Chin	
8/28/2020	Mike Rose GCM	Discussion on Infrastructure Pacing Study Model	<i>Need to determine if we will re-up in their next fund.</i>	Conference Call	Eric Chin	Mike Rose
9/2/2020	FMI	Strategy Update	<i>Strategies have outperformed the value index. Value continues to lag growth.</i>	Video Call	Matt Posch	Michael Stanley
9/14/2020	Mike/Eric	Discussion on Infrastructure Pacing Study Model	<i>Need to decide if we will reup.</i>	Conference Call	Eric Chin	Mike Rose
9/16/2020	NDRIO/FTSER call	Discussion on indices		Conference Call	Eric Chin	Sara Wilson
9/17/2020	Epoch	Strategy Update		NDRIO	David Hunter	
9/17/2020	Goldman Sachs	Quant universe analysis and discussion	<i>Quant managers on average have not generated meaningful alpha in US Large Cap, more promising in Global &amp; EM</i>	Conference Call	David Hunter, Darren Schulz, Eric Chin, Matt Posch	TOUO Evans, Mary Power, Sam Shapiro, Kai Sikorski, Andrew Hyer, Jared Klyman
9/18/2020	BlackRock	SAE Discussion	<i>Alternative data has helped navigate COVID</i>	Conference Call	David Hunter, Darren Schulz, Eric Chin, Matt Posch	
9/21/2020	ETG Catch Up w/NDSIB (E. Chin)	Update on strategies	<i>Portfolio and market update</i>	Lunch	Eric Chin	Michelle Riffelmacher



## Quarterly Monitoring Report on TFFR Ends Quarter Ended September 30, 2020

### Retirement Program

This report highlights **exceptions** to normal business operations.

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- Governor Burgum re-appointed Dr. Rob Lech of Jamestown to represent active administrators on the TFFR Board for a 5-year term from 7/1/20 – 6/30/25.
- RIO launched a new website in July 2020! The new modern site utilizes the state's template and is user-friendly for TFFR members and employers, SIB clients and the public.
- TFFR Governance and Policy Review Committee reviewed the first part of the TFFR Board Governance Policy Manual at the July 2020 board meeting. The committee will continue to work on finalizing the manual.
- Denise Weeks, Stephanie Starr and Jayme Heick attended the National Pension Education Association (NPEA) conference. The conference highlighted virtual learning, how other pension systems reacted to the pandemic and cybersecurity.
- TFFR Member Online activity continues to increase. To date, over 5,600 active, inactive, and retired members have registered for this service. This is up from 4,500 members in March of 2020.
- Based on member and employer customer satisfaction surveys, 2019-20 customer satisfaction remains high at 3.9 (4.0 scale).
- Approximately 200 retirees are reported as back to teaching in some capacity for 2020-21.
- There have been 148 retirements processed in the quarter ending 9/30/20. This is an increase over the same time period last year. The increase is due to a decrease in the number of retirement applications sent in to our office in a timely manner for a June 1, 2020, payment date.



## MEMORANDUM

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**TO:** TFFR Board  
**FROM:** Jan Murtha  
**DATE:** November 12, 2020  
**RE:** PAS Project Update

The following summarizes the efforts of RIO agency staff to prepare for and initiate Phase 1 of the PAS project thus far:

- An RFP for Consultant Services relating to the Pension Administration System was issued on June 2, 2020 and closed June 30, 2020.
- A PAS procurement committee comprised of staff members from Procurement, ITD, and RIO reviewed and scored all responses. The review was presented to the ESC.
- In July, 2020, Retirement Services and Administrative Services participated in a Task List project to prepare for business process discussions.
- On August 10, 2020, RIO Agency engaged in an All Staff Training on: Agency Goals, Fiduciary Obligations, and Open Records in preparation for the start of the project.
- The Executive Steering Committee for the PAS project met on September 14, 2020 and voted to issue a Notice of Award to the Segal Company.
- Beginning in September and through October, staff members from Retirement Services, Administrative Services, Audit Services, Fiscal Services, and Information Systems participated in small group sessions to review, discuss, and identify areas of improvement in current processes to prepare for the Business Process Interviews to be scheduled with the consultant.
- In September and October all RIO managers participated in strengths and conflict resolution trainings provided by HRMS in preparation for the PAS Project.
- In September, procurement and RIO participated in post bid debriefs with unsuccessful bidders.
- The contract with Segal was signed in September.
- A Kickoff meeting between Segal and RIO agency staff was held in October.

- Beginning in October, in addition to monthly division meetings, Retirement Services will have monthly training sessions on topics of interest.
- RIO agency staff and Segal participated in 14 separate Business Process Interviews during October and November, each lasting approximately 2 hours.
- In November, the Retirement Programs Manager, Information Systems Supervisor, and the Deputy ED – CRO participated in a 3 day Prosci Change Agent certification course, and were successfully certified.
- In November, the Administrative Services Supervisor participated in the Prosci Change Management training for Supervisors, and the Internal Audit Supervisor is scheduled to participate in future Prosci training.
- The Deputy ED-CRO will also participate in the Prosci Sponsor training.
- Segal is in the process of scheduling the Communication and Cyber Risk Assessment interviews.
- Presentation of Phase 1 findings may occur at either the January or February Board meetings.

All RIO agency team members have exceeded expectations regarding their willingness to participate in and dedicate time to this project.

# Annual Investment Compliance Report

## Fiscal Year Ended 06/30/2020

### Adams Street Partners

Document	Dated	Received	Notes
ADV	3/31/2020	8/4/2020	Parts 2a,2b
Annual Certification of Guidelines	6/30/2020	8/4/2020	DDQ notes they have not violated any guidelines
Audited Financials	12/31/2019	8/4/2020	Financials received for all funds. Clean opinions.
DDQ	6/30/2020	8/4/2020	SEC exam resulted in a single comment
SOC/Internal Controls	9/30/2019	8/4/2020	Controls are effective

Additional Comments: DDQ SEC comment was pertaining to more prominently disclosing in their marking the use of capital call lines in their investment vehicles. ASP modified their confidentiality statement to include an additional paragraph noting the capital call lines and potential effect on IRR calculations.

### Ares Management

Document	Dated	Received	Notes
ADV	3/31/2020	9/1/2020	Part 2A
Annual Certification of Guidelines	9/1/2020	9/1/2020	In compliance
Audited Financials	12/31/2019	9/1/2020	Clean opinion
DDQ	6/30/2020	9/1/2020	Reviewed
SOC/Internal Controls	6/30/2020	9/1/2020	No material changes in internal controls

Additional Comments:

ADV Disclosures:

THE SEC ALLEGED THAT, IN 2016, REGISTRANT'S WRITTEN POLICIES AND PROCEDURES REGARDING THE PREVENTION OF MISUSE OF POTENTIALLY MATERIAL NONPUBLIC INFORMATION WERE NOT SUFFICIENTLY IMPLEMENTED AND ENFORCED IN CERTAIN CIRCUMSTANCES WHEN REGISTRANT HAD AN EMPLOYEE SERVING ON THE BOARD OF DIRECTORS OF A PUBLIC COMPANY IN WHICH ONE OF REGISTRANT'S FUNDS WAS INVESTED. PURSUANT TO AN OFFER OF SETTLEMENT, THE SEC FOUND, AND THE REGISTRANT NEITHER ADMITTED NOR DENIED, THAT THE REGISTRANT VIOLATED SECTIONS 204A AND 206(4) OF THE INVESTMENT ADVISERS ACT OF 1940 AND RULE 206(4)-7 THEREUNDER.

### Atlanta Capital

Document	Dated	Received	Notes
ADV	1/30/2020	9/1/2020	Parts 1&2
Annual Certification of Guidelines	8/31/2020	9/1/2020	In compliance
Audited Financials	10/31/2019	9/1/2020	Clean opinion
DDQ	6/30/2020	9/1/2020	Reviewed, adopted Eaton Vance code of ethics July 2019.

Additional Comments:

### Axiom International

Document	Dated	Received	Notes
ADV	3/27/2020	8/31/2020	Parts 1&2
Annual Certification of Guidelines	6/30/2020	8/31/2020	In compliance
Audited Financials	12/31/2019	8/31/2020	Clean opinion
DDQ	6/30/2020	8/31/2020	Reviewed
SOC/Internal Controls	9/30/2019	8/31/2020	Effective controls

Additional Comments: Lead PM is leaving and transferring responsibilities in 2021

## Barings

Document	Dated	Received	Notes
ADV	3/31/2020	8/31/2020	Parts 2a,2b
Annual Certification of Guidelines	8/31/2020	8/31/2020	In compliance
Audited Financials	12/31/2019	8/31/2020	Clean opinion
DDQ	6/30/2020	8/31/2020	Reviewed
SOC/Internal Controls	9/30/2019	8/31/2020	Controls audited and found effective
Additional Comments: On May 11, 2020, Financial Industry Regulatory Authority (FINRA) began a routine exam of BSL. BSL has to date received a number of requests from FINRA and the exam is ongoing.			

## Blackrock PEP

Document	Dated	Received	Notes
ADV	10/19/2020	10/26/2020	Reviewed
Annual Certification of Guidelines	8/31/2020	8/31/2020	In compliance
Audited Financials	12/31/2019	8/31/2020	Clean opinion
DDQ	6/30/2020	8/31/2020	Reviewed
Additional Comments:			

## Capital International

Document	Dated	Received	Notes
ADV	6/30/2020	8/10/2020	2A
Annual Certification of Guidelines	6/30/2020	8/10/2020	See firm note*
Audited Financials	12/31/2019	8/10/2020	Clean opinion
Additional Comments: As the investment manager of CIPEF V and CIPEF VI, we are required to manage the funds in accordance with the terms of the funds' limited partnership agreements ('LPA'). We have processes and controls to monitor compliance with each fund's applicable investment restrictions, but instead of providing compliance certifications to limited partners, we ask that limited partners rely on our standard reporting as specified per the funds' LPAs for information as to such matters. To the extent there is a known breach of an investment guideline, Capital Group Private Markets would take remedial steps, which may include seeking consent of the Advisory Committee (if allowed under the LPA) or a waiver and amendment to the LPA from the limited partners.			

## Cerberus Capital Management

Document	Dated	Received	Notes
ADV	3/25/2020	4/6/2020	Part 2a
Annual Certification of Guidelines			In process
Audited Financials	12/31/2019	12/31/2019	Clean opinion
DDQ			In process
Additional Comments:			

**Corsair Capital**

Document	Dated	Received	Notes
ADV	3/30/2020	7/13/2020	Received
Annual Certification of Guidelines	7/13/2020	7/13/2020	In compliance with guidelines
Audited Financials	12/31/2019	7/13/2020	Clean opinion
Additional Comments:			

**Dimensional Fund Advisors**

Document	Dated	Received	Notes
ADV	3/30/2020	8/31/2020	Parts 1&2
Annual Certification of Guidelines	6/30/2020	8/31/2020	In compliance
Audited Financials	10/31/2019	8/31/2020	Clean opinion
DDQ	6/30/2020	8/31/2020	Reviewed
SOC/Internal Controls	9/30/2019	8/31/2020	Controls effective
Additional Comments:			

**EIG Management Company**

Document	Dated	Received	Notes
ADV	3/31/2020	7/24/2020	Parts 2a&2b
Annual Certification of Guidelines	7/24/2020	7/24/2020	In compliance
Audited Financials	12/31/2019	7/24/2020	Clean opinion
DDQ	1/23/2020	7/24/2020	Reviewed
Additional Comments:			

**Epoch Investment Partners**

Document	Dated	Received	Notes
ADV	1/27/2020	8/28/2020	Parts 1&2
Annual Certification of Guidelines	7/16/2020	8/28/2020	In compliance
Audited Financials	10/31/2019	8/28/2020	Clean opinion
DDQ	6/30/2020	8/28/2020	Reviewed
SOC/Internal Controls	12/31/2019	8/28/2020	Controls found effective
Additional Comments:			

**Goldman Sachs**

Document	Dated	Received	Notes
ADV	3/30/2020	7/22/2020	Received
Annual Certification of Guidelines	7/20/2020	7/22/2020	In compliance
Audited Financials	12/31/2019	7/22/2020	Clean opinion

## Additional Comments:

### ADV Disclosures:

ON JUNE 15, 2020, A LETTER OF ACCEPTANCE, WAIVER AND CONSENT ("AWC") FROM NYSE ARCA, INC. ("NYSE ARCA") DIRECTED AT GOLDMAN SACHS & CO. LLC ("GOLDMAN") WAS FINALIZED. WITHOUT ADMITTING OR DENYING THE FINDINGS, GOLDMAN CONSENTED TO THE SANCTIONS AND TO THE ENTRY OF FINDINGS. THE AWC STATES THAT GOLDMAN VIOLATED NYSE ARCA RULE 6.49-O(B) BY EFFECTING EQUITY TRANSACTIONS AFTER GAINING KNOWLEDGE OF UNDISCLOSED TERMS AND CONDITIONS OF A CUSTOMER ORDER IN THE SAME OPTIONS SERIES. THE FINDINGS STATE THAT A GOLDMAN TRADER RELAYED FACILITATED CROSS ORDERS FOR 800 CALL OPTIONS OF A CERTAIN OPTIONS SERIES TO AN NYSE ARCA FLOOR BROKER THAT WERE SYSTEMATIZED IN SIX SEPARATE PIECES AT SIX DIFFERENT TIMES, FOUR 100 QUANTITIES AND THEN TWO 200 QUANTITIES. THE FINDINGS ADDITIONALLY STATE THAT THE GOLDMAN TRADER SOLD A TOTAL OF 49,000 EQUITY SHARES OF THE OPTIONS SERIES AS HEDGES, AND WHEN DOING SO, HOWEVER, GOLDMAN SOLD MORE SHARES THAN NEEDED TO HEDGE THE DISCLOSED (OR SYSTEMIZED) PORTIONS OF THE SECOND THROUGH SIXTH FACILITATED OPTIONS ORDERS, THEREFORE RESULTING IN OVERHEDGES.

ON JUNE 15, 2020, AN AWC FROM NYSE ARCA DIRECTED AT GOLDMAN WAS FINALIZED. IN THE AWC, NYSE ARCA IMPOSES THE SANCTIONS CENSURE AND A FINE OF \$30,000 FOR A VIOLATION OF NYSE ARCA RULE 6.49-O(B). THE FINE WAS PAID BY GOLDMAN BY WIRE ON JUNE 22, 2020.

ON MAY 8, 2020, THE ICE FUTURES U.S. ("IFUS" OR "EXCHANGE") MARKET REGULATION DEPARTMENT NOTIFIED GOLDMAN SACHS & CO. LLC ("GSCO") THAT IT WAS ISSUED A SUMMARY FINE IN THE AMOUNT OF \$10,000 PURSUANT TO IFUS RULE 21.02. THE EXCHANGE ALLEGES THAT IN SEVEN INSTANCES, GSCO APPEARED TO HAVE BEEN IN VIOLATION OF IFUS RULE 6.15(A) WHEN IT FAILED TO ACCURATELY SUBMIT REPORTABLE POSITIONS TO THE EXCHANGE.

ON MARCH 31, 2020, THE CME GROUP MARKET REGULATION DEPARTMENT NOTIFIED GOLDMAN SACHS & CO. LLC ("GSCO") THAT IT HAD COMPLETED ITS INVESTIGATION INTO ALLEGATIONS THAT GSCO VIOLATED EXCHANGE RULE 562. GSCO HELD A PRO-RATA SHARE OF MELLON INVESTMENT CORPORATION'S POSITION EXCESS FOR THREE BUSINESS DAYS ON SEPTEMBER 11, 2019, SEPTEMBER 12, 2019, AND SEPTEMBER 13, 2019, BEFORE IT WAS LIQUIDATED ON SEPTEMBER 16, 2019. THE CME GROUP MARKET REGULATION DEPARTMENT ALLEGES THAT GSCO FAILED TO LIQUIDATE ITS PRO-RATA SHARE IN EXCESS OF LIMITS OR OTHERWISE FAILED TO ENSURE THAT ITS CUSTOMER WAS IN COMPLIANCE WITH LIMITS WITHIN A REASONABLE PERIOD OF TIME. THE ABOVE MATTER HAS NOW BEEN REFERRED TO THE CME GROUP MARKET REGULATION'S ENFORCEMENT DIVISION. ON JUNE 15, 2020, A PANEL OF THE CBOT BUSINESS CONDUCT COMMITTEE ("PANEL") CONCLUDED THAT GSCO HAD VIOLATED CBOT RULE 562. IN ACCORDANCE WITH A SETTLEMENT OFFER THAT BECAME EFFECTIVE ON JUNE 17, 2020, THE PANEL ORDERED GSCO TO PAY A FINE IN THE AMOUNT OF \$15,000. GSCO NEITHER ADMITTED NOR DENIED THE RULE VIOLATION UPON WHICH THE PENALTY IS BASED. THE FINE WAS PAID IN BY GSCO BY WIRE ON JUNE 26, 2020.

ON APRIL 1, 2020, THE SWEDISH FINANCIAL SUPERVISORY AUTHORITY (FINANSINSPEKTIONEN - "SFSA") IMPOSED A FINE ON GOLDMAN SACHS & CO. LLC ("GSCO") IN THE AMOUNT OF 315,000 SWEDISH KRONA (SEK). SFSA ALLEGES A VIOLATION OF CHAPTER 4 OF THE FINANCIAL INSTRUMENTS TRADING ACT (SFS 1991:1980), IN RELATION TO A LATE DISCLOSURE OF CHANGES IN MAJOR HOLDINGS OF SHARES IN MICRONIC AB BETWEEN JUNE AND SEPTEMBER OF 2017.

ON DECEMBER 19, 2019, THE FINANCIAL INDUSTRY REGULATORY AUTHORITY ("FINRA") ACCEPTED A LETTER OF ACCEPTANCE, WAIVER AND CONSENT ("AWC") IN WHICH WITHOUT ADMITTING OR DENYING THE FINDINGS, GOLDMAN SACHS & CO. LLC ("GOLDMAN") CONSENTED TO THE SANCTIONS AND TO THE ENTRY OF FINDINGS. THE FINDINGS ISSUED BY FINRA NAME A VIOLATION OF MUNICIPAL SECURITIES RULEMAKING BOARD ("MSRB") RULE G-15(F) AND STATE THAT GOLDMAN EFFECTED ON A DISCRETIONARY BASIS CUSTOMER SALE TRANSACTIONS OF MUNICIPAL BONDS IN AMOUNTS LOWER THAN THE MINIMUM DENOMINATIONS OF THE RESPECTIVE ISSUES. GOLDMAN GENERALLY RELIED ON DATA IT RECEIVED FROM THIRD-PARTY VENDORS TO DETERMINE WHETHER A TRANSACTION WAS BELOW AN ISSUE'S MINIMUM DENOMINATION, AND THE VIOLATIVE TRANSACTIONS ARE PRIMARILY ATTRIBUTABLE TO INACCURACIES IN THAT VENDOR DATA. GOLDMAN HAS ALREADY VOLUNTARILY RESCINDED THE VIOLATIVE TRANSACTIONS OR OTHERWISE REIMBURSED AFFECTED CUSTOMERS.

ON DECEMBER 19, 2019 FINRA ACCEPTED AN AWC IN WHICH FINRA IMPOSES THE SANCTIONS CENSURE AND A FINE OF \$130,000 FOR A VIOLATION OF MSRB RULE G-15(F). THE FINE WAS PAID BY GOLDMAN BY WIRE ON DECEMBER 26, 2019.

THE CHICAGO BOARD OF TRADE ("CBOT") IMPOSED A FINE ON GOLDMAN SACHS & CO. ("GOLDMAN") IN THE AMOUNT OF \$15,000. CBOT CITED VIOLATIONS OF CBOT RULE 538.C. IN RELATION TO AN EXCHANGE FOR RELATED POSITION ("EFRP") PACKAGE EXECUTED IN THE TEN -YEAR TREASURY NOTE FUTURES AND OPTIONS MARKETS ON JULY 19, 2018, WHERE THE RELATED POSITION COMPONENTS OF THE EXCHANGE FOR RISK ("EFR") TRANSACTION DID NOT HAVE A REASONABLE DEGREE OF PRICE CORRELATION AND DID NOT HAVE OPPOSING MARKET BIAS TO THE EXCHANGE COMPONENT. FURTHER, THE RELATED COMPONENT OF THE EXCHANGE OF OPTION FOR OPTION ("EEO") TRANSACTION WAS NOT REASONABLY EQUIVALENT TO THE EXCHANGE COMPONENT. THE EFRP PACKAGE WAS THEREFORE NON-BONA FIDE AND IN VIOLATION OF CBOT RULE 538.C.

WITHOUT ADMITTING OR DENYING THE RULE VIOLATION OR THE FACTUAL ALLEGATIONS UPON WHICH THE PENALTY IS BASED, GOLDMAN SUBMITTED AN OFFER OF SETTLEMENT, WHICH WAS ACCEPTED, AND IT BECAME EFFECTIVE ON NOVEMBER 27, 2019. THE FINE IMPOSED BY CBOT WAS IN THE AMOUNT OF \$15,000, WHICH WAS PAID BY GOLDMAN BY WIRE ON DECEMBER 4, 2019.

THE MARKET REGULATION DEPARTMENT OF ICE FUTURES U.S., INC. ("ICE") DETERMINED THAT GOLDMAN SACHS & CO. LLC ("THE FIRM") VIOLATED ICE RULE 2.22 BY REPORTING INACCURATE OPEN INTEREST FOR THE SEPTEMBER 2019 FCOJ-A FUTURES CONTRACT FOR THE TRADE DATES OF AUGUST 29, 2019, AUGUST 30, 2019 AND SEPTEMBER 2, 2019. ICE IMPOSED A FINE ON THE FIRM IN THE AMOUNT OF \$10,000, WHICH WAS PAID BY SUBMISSION OF A WIRE ON SEPTEMBER 18, 2019.

ICE IMPOSED A FINE ON THE FIRM IN THE AMOUNT OF \$10,000, WHICH WAS PAID BY SUBMISSION OF A WIRE ON SEPTEMBER 18, 2019.

THE ICE FUTURES EUROPE ("THE EXCHANGE") CONDUCTED AN INVESTIGATION OF THE FIRM'S PRE- AND POST-TRADE CONTROLS. AS A RESULT OF ITS FINDINGS IN THE INVESTIGATION, THE EXCHANGE ALLEGES THAT THE TIMING AND NATURE OF CERTAIN ORDERS WAS MANIPULATIVE, VIOLATING EXCHANGE RULES A.11.1 (D), E.2.1(B), E.2.2 (A)(VI), (XIII) AND (XIV), E.2.2A AND G.20.

GSCO PAID A TOTAL SETTLEMENT AMOUNT OF £125,000, INCLUSIVE OF A DISCRETIONARY 1/3 DISCOUNT FROM £187,500. GSCO PAID THE £125,000 BY SUBMISSION OF A WIRE ON OCTOBER 2, 2019.

ON NOVEMBER 26, 2019, THE COMMODITY FUTURES TRADING COMMISSION ("CFTC") ISSUED AN ORDER REQUIRING GOLDMAN SACHS & CO. LLC ("GOLDMAN") TO PAY A \$1,000,000 CIVIL MONETARY PENALTY AND TO CEASE AND DESIST FROM FURTHER VIOLATIONS OF CERTAIN CFTC REGULATIONS. DURING AN INVESTIGATION BY THE CFTC'S DIVISION OF ENFORCEMENT ("DIVISION"), THE DIVISION REQUESTED THAT GOLDMAN PRODUCE CERTAIN AUDIO RECORDINGS FROM JANUARY 2014. GOLDMAN WAS UNABLE TO PRODUCE MANY OF THE RECORDINGS REQUESTED DUE TO A MALFUNCTION WHICH OCCURRED DURING THE COURSE OF A SYSTEM UPGRADE WHICH AFFECTED RECORDINGS OF THE PHONE LINES OF A TRADING AND SALES DESK IN ONE OF GOLDMAN'S OFFICES FOR TWENTY CALENDAR DAYS IN JANUARY AND FEBRUARY 2014. GOLDMAN'S INABILITY TO PRODUCE THESE RECORDINGS IMPEDED THE DIVISION'S ONGOING INVESTIGATION, BECAUSE THE DIVISION WAS UNABLE TO OBTAIN THE INFORMATION THAT SHOULD HAVE BEEN CAPTURED IN MANY OF THE RECORDINGS THROUGH ANY OTHER MEANS. BASED ON THE FOREGOING, THE CFTC FOUND THAT GOLDMAN VIOLATED REGULATIONS 23.202(A)(1), (B)(1), AND 23.203(B)(2), 17 C.F.R. §§ 23.202(A)(1), (B)(1) (2018), 23.203(B)(2) (2017).

## Grosvenor

Document	Dated	Received	Notes
ADV	7/21/2020	8/31/2020	Parts 2a&2b
Annual Certification of Guidelines	10/22/2020	10/23/2020	In compliance
Audited Financials	12/31/2019	6/30/2020	Clean opinion
SOC/Internal Controls	9/30/2019	6/30/2020	Controls are effective

Additional Comments:

## Hearthstone

Document	Dated	Received	Notes
ADV	3/31/2020	7/13/2020	Received
Annual Certification of Guidelines	7/13/2020	7/13/2020	In compliance



Audited Financials 12/31/2019 7/13/2020 Clean opinion

Additional Comments:

### I Squared Capital

Document	Dated	Received	Notes
ADV	3/22/2019	10/26/2020	Part 2a
Annual Certification of Guidelines	6/30/2020	8/24/2020	In compliance
Audited Financials	12/31/2019	8/24/2020	Clean opinion
SOC/Internal Controls	9/30/2019	8/24/2020	Controls found effective

Additional Comments:

### Invesco Advisers

Document	Dated	Received	Notes
ADV	6/29/2020	8/31/2020	Part 2a
Annual Certification of Guidelines	6/30/2020	8/31/2020	In compliance
Audited Financials	12/31/2019	8/31/2020	Clean opinion
DDQ	8/31/2020	8/31/2020	Reviewed for Asia & Core
SOC/Internal Controls	9/30/2020	8/31/2020	Controls are effective

Additional Comments:

### Invest America

Document	Dated	Received	Notes
ADV			NA
Annual Certification of Guidelines	6/30/2020	7/30/2020	In compliance
Audited Financials	12/31/2019	6/15/2020	Qualified opinion*

Additional Comments: Basis for qualified opinion: As discussed in Note 1, the investments have been valued on a basis of accounting prescribed by the U.S. Small Business Administration (SBA) which differs from accounting principles generally accepted in the United States of America. Accordingly, the accompanying investment values are not intended to be a presentation in conformity With accounting principles generally accepted in the United States of America. The investment valuations of L&C Private Equities II, L P. were prepared in accordance with its approved valuation policy established in accordance With Section 310(d)(2) of the Small Business Investment Act of 195B, as amended. In addition, disclosures associated with fair value measurements as required by accounts principles generally accepted in the United States of America have not been included in the financial statements Accordingly, the accompanying investment values are not intended to be a presentation in conformity with accounting principles generally accepted In the United States of America. Quantification of the effects of that departure from accounting principles generally accepted in the United States of America on the financial statements of Private Equities II, L.P. is not practicable.

### JP Morgan

Document	Dated	Received	Notes
ADV	3/30/2020	8/14/2020	Part 2a
Annual Certification of Guidelines	7/6/2020	7/10/2020	In compliance with guidelines
Audited Financials	12/31/2019	8/14/2020	Clean opinion
DDQ	8/14/2020	8/14/2020	Reviewed

SOC/Internal Controls 12/31/2019 8/14/2020 Internal controls audited and found effective

Additional Comments:

## LA Capital

Document	Dated	Received	Notes
ADV	3/26/2020	8/31/2020	Parts 1A, 2A, 2B
Annual Certification of Guidelines	8/24/2020	8/31/2020	In compliance
Audited Financials	12/31/2019	4/24/2020	Clean opinion
DDQ	6/30/2020	8/31/2020	Reviewed
SOC/Internal Controls	10/31/2019	8/31/2020	Audited controls are suitable

Additional Comments:

## Loomis Sayles

Document	Dated	Received	Notes
ADV	12/12/2019	7/10/2020	Parts 2a&2b
Annual Certification of Guidelines	6/30/2020	7/10/2020	In compliance
Audited Financials	10/31/2020	7/10/2020	Clean opinion
SOC/Internal Controls	8/31/2019	7/10/2020	Controls are effective

Additional Comments:

ADV Disclosures:

IN JUNE 2019, NATIXIS ("NATIXIS"), THE FRENCH BANK THAT OWNS OUR PARENT COMPANY, WAS REFERRED FOR TRIAL IN FRANCE IN CONNECTION WITH A PRESS RELEASE ISSUED BY NATIXIS IN NOVEMBER 2007 AT THE START OF THE FINANCIAL CRISIS. THE PRESS RELEASE IN QUESTION RELATED TO RISKS TO WHICH NATIXIS, A PUBLICLY TRADED COMPANY, WAS SUBJECT, AND DID NOT RELATE TO ANY OF NATIXIS' SUBSIDIARY BUSINESSES ENGAGED IN ADVISORY OR BROKER-DEALER ACTIVITIES. THE INVESTIGATING MAGISTRATE FOUND THAT THERE WAS SUFFICIENT EVIDENCE THAT THIS PRESS RELEASE CONTAINED FALSE OR MISLEADING INFORMATION IN RELATION TO NATIXIS' EXPOSURE TO SUBPRIME RISK. THE REFERRAL RESULTS FROM AN INVESTIGATION LAUNCHED IN 2009 BY THE PARIS PUBLIC PROSECUTOR'S OFFICE INTO A COMPLAINT FILED BY CERTAIN MINORITY SHAREHOLDERS OF NATIXIS COORDINATED BY THE ASSOCIATION TO DEFEND MINORITY SHAREHOLDERS RIGHTS (ASSOCIATION DE DÉFENSE DES ACTIONNAIRES MINORITAIRES - ADAM). NATIXIS BELIEVES THAT IT INFORMED THE MARKET AND THE PUBLIC IN DUE COURSE WITH AN APPROPRIATE DEGREE OF DETAIL GIVEN THE INFORMATION IT HAD AT THE TIME. NATIXIS BELIEVES THAT IT HAS NOT COMMITTED ANY CRIMINAL VIOLATION AND WILL VIGOROUSLY DEFEND ITSELF AGAINST THIS CHARGE. NATIXIS ALSO NOTES THAT THE ASPECTS OF THE PRESS RELEASE COVERED BY THE REFERRAL WERE ALREADY ASSESSED BY THE FRENCH FINANCIAL MARKETS AUTHORITY, THE AUTORITÉ DES MARCHÉS FINANCIERS ("AMF"), AND THE AMF DECLINED TO TAKE ANY ACTION AGAINST NATIXIS. NO OFFICERS, DIRECTORS OR EMPLOYEES OF NATIXIS HAVE BEEN CHARGED IN CONNECTION WITH THIS PROCEEDING. IF NATIXIS IS CONVICTED ON THIS CHARGE, IT COULD BE SUBJECT TO A FINE UP TO EUR 7,500,000. UNDER FRENCH LAW, THERE ARE NO OTHER LEGAL CONSEQUENCES TO NATIXIS FOR A GUILTY VERDICT IN THIS CASE.

## LSV Asset Management

Document	Dated	Received	Notes
ADV	3/30/2020	10/26/2020	Reviewed
Annual Certification of Guidelines	6/30/2020	10/26/2020	In compliance
Audited Financials	12/31/2019	10/26/2020	Clean opinion
DDQ	6/30/2020	10/26/2020	Reviewed
SOC/Internal Controls	10/31/2019	10/26/2020	Audited controls found effective

Additional Comments:

### Macquarie Infrastructure Partners

Document	Dated	Received	Notes
ADV	6/30/2020	6/30/2020	Part 2a
Audited Financials	12/31/2019	6/30/2020	Clean opinion

Additional Comments:

### Manulife Investment Management

Document	Dated	Received	Notes
ADV	3/27/2020	8/20/2020	Parts 1&2
Annual Certification of Guidelines	6/30/2020	8/20/2020	In compliance
Audited Financials	12/31/2019	8/20/2020	Clean opinion
DDQ	3/30/2020	8/20/2020	Reviewed
SOC/Internal Controls	9/30/2020	8/20/2020	Controls effective

Additional Comments:

### MatlinPatterson Global Advisers

Document	Dated	Received	Notes
ADV	3/30/2020	10/26/2020	Reviewed part 2a
Audited Financials	12/31/2019	4/29/2020	Clean opinions

Additional Comments:

### Northern Trust Investments

Document	Dated	Received	Notes
ADV	6/4/2020	10/26/2020	Reviewed part 2a
Annual Certification of Guidelines	6/30/2020	11/13/2020	DDQ notes no significant compliance events
Audited Financials	12/31/2019	10/26/2020	Clean opinion
DDQ	6/30/2020	11/13/2020	Reviewed
SOC/Internal Controls	6/30/2020	11/13/2020	Controls effective

Additional Comments:

ADV Disclosures:

WITHOUT ADMITTING OR DENYING THE FINDINGS OR CONCLUSIONS OF THE COMMODITY FUTURES TRADING COMMISSION ("CFTC"), THE NORTHERN TRUST COMPANY ("TNTC") CONSENTED TO ENTRY OF AN ORDER ISSUED ON SEPTEMBER 30, 2019 FINDING THAT FROM 2013 THROUGH AT LEAST 2018 TNTC FAILED TO REPORT CERTAIN SWAPS TO A SWAP DATA REPOSITORY CONSISTENT WITH THE REQUIREMENTS OF THE COMMODITY EXCHANGE ACT AND CFTC REGULATIONS, AND THAT THOSE SWAP REPORTING FAILURES WERE A DIRECT RESULT OF TNTC'S FAILURE TO ADEQUATELY SUPERVISE ITS SWAP DEALER, INCLUDING FAILING TO HIRE QUALIFIED SUBJECT MATTER EXPERTS TO ENSURE SWAP DEALER COMPLIANCE. THE CFTC'S ORDER REQUIRES THAT TNTC PAY A CIVIL MONETARY PENALTY OF \$1 MILLION, AND THAT IT ENHANCE ITS SUPERVISORY PROGRAM, POLICIES, PROCEDURES AND CONTROLS, AND PROVIDE ADDITIONAL TRAINING TO RELEVANT PERSONNEL. TNTC WILL PROVIDE STATUS REPORTS TO THE CFTC CONCERNING ITS REMEDIATION PROGRESS. ADDITIONALLY, TNTC HAS RETAINED OUTSIDE CONSULTANTS TO REVIEW ITS SWAP DEALER PROCESSES AND PROCEDURES, HAS HIRED NEW PERSONNEL TO OVERSEE COMPLIANCE AT ITS SWAP DEALER AND HAS TAKEN SUBSTANTIAL STEPS TO IMPROVE ITS PROCESSES FOR SWAP REPORTING GOING FORWARD.

**Parametric**

Document	Dated	Received	Notes
ADV	11/4/2020	11/11/2020	Part 2a
Audited Financials	12/31/2019	11/11/2020	Clean opinion
DDQ	6/30/2020	11/11/2020	Reviewed

Additional Comments: Parametric's parent company Eaton Vance is expected to be acquired by Morgan Stanley.

**PIMCO**

Document	Dated	Received	Notes
ADV	3/30/2020	8/27/2020	Part 2A
Annual Certification of Guidelines	6/30/2020	8/27/2020	In compliance
Audited Financials	12/31/2019	8/27/2020	Clean opinion
DDQ	8/31/2020	8/27/2020	Reviewed
SOC/Internal Controls	9/30/2020	8/27/2020	Controls are effective

Additional Comments:

**Prudential**

Document	Dated	Received	Notes
ADV	3/30/2020	8/25/2020	Parts 1&2
Annual Certification of Guidelines	6/30/2020	8/25/2020	In compliance
Audited Financials	12/31/2019	8/25/2020	Clean opinion
DDQ	6/30/2020	8/25/2020	Reviewed
SOC/Internal Controls	9/30/2019	8/25/2020	Effective controls

Additional Comments:

**Quantum Energy Partners**

Document	Dated	Received	Notes
ADV	3/30/2020	6/30/2020	Part 2a
Annual Certification of Guidelines			Fund is winding down, only two positions
Audited Financials	12/31/2019	6/30/2020	Clean opinion

Additional Comments:

**Rohatyn Group**

Document	Dated	Received	Notes
ADV	3/30/2020	9/1/2020	Part 2a
Annual Certification of Guidelines	6/30/2020	9/1/2020	DDQ indicates no client guidelines have been violated
Audited Financials	12/31/2019	9/1/2020	Clean opinion
DDQ	6/30/2020	9/1/2020	Reviewed

Additional Comments:

**SEI**

Document	Dated	Received	Notes
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ADV	6/30/2020	11/12/2020	Part 2a
Audited Financials	5/31/2020	11/12/2020	Clean opinion
SOC/Internal Controls	3/30/2020	11/12/2020	Controls effective

Additional Comments:

### State Street

Document	Dated	Received	Notes
ADV			NA
Annual Certification of Guidelines	7/20/2020	8/31/2020	In compliance with guidelines
Audited Financials	12/31/2019	8/31/2020	Clean opinion
DDQ	6/30/2020	8/31/2020	Reviewed
SOC/Internal Controls	3/31/2020	8/31/2020	Audited controls were effective

Additional Comments:

### TIR

Document	Dated	Received	Notes
ADV	3/30/2020	8/27/2020	Part 2a
Annual Certification of Guidelines	6/30/2020	8/27/2020	In compliance
Audited Financials	12/31/2019	8/27/2020	Clean opinion
DDQ	6/30/2020	8/27/2020	Reviewed

Additional Comments:

### Vanguard

Document	Dated	Received	Notes
ADV	3/30/2020	8/28/2020	Parts I,II
Annual Certification of Guidelines	6/30/2020	8/28/2020	DDQ indicates no client guidelines have been violated
Audited Financials	10/31/2019	8/28/2020	Clean opinion
DDQ	6/30/2020	8/28/2020	Reviewed

Additional Comments:

### Wellington

Document	Dated	Received	Notes
ADV	3/27/2020	8/31/2020	2A
Annual Certification of Guidelines	8/31/2020	8/31/2020	In compliance with guidelines
Audited Financials	12/31/2019	8/31/2020	Clean opinion
DDQ	3/27/2020	8/31/2020	Reviewed
SOC/Internal Controls	12/31/2020	8/31/2019	Audit found no issues with controls or compliance

Additional Comments:

### Wells Capital

Document	Dated	Received	Notes
ADV	3/30/2020	10/22/2020	Part 2a

Annual Certification of Guidelines	8/31/2020	10/22/2020	Noted in DDQ no portfolio guidelines have been in violation
Audited Financials	12/31/2019	10/22/2020	Clean opinion on financials. Auditor notes internal controls on financial reporting also found effective.
DDQ	3/30/2020	10/22/2020	Reviewed
SOC/Internal Controls	8/31/2020	10/22/2020	SOC1 found controls effective with no exceptions

Additional Comments:

ADV Disclosures:

WITHOUT ADMITTING OR DENYING LIABILITY, WELLS FARGO & COMPANY (WF&CO) ENTERED INTO A CONSENT ORDER IN WHICH WF&CO WAS ALLEGED TO HAVE VIOLATED §11-301(2) OF THE MARYLAND SECURITIES ACT, RELATED TO THE CREATION, POOLING, STRUCTURING, SPONSORSHIP, PACKAGING, MARKETING, UNDERWRITING, SALE OR ISSUANCE OF RESIDENTIAL MORTGAGE-BACKED SECURITIES ("RMBS") BETWEEN JANUARY 1, 2005 AND JANUARY 1, 2009. WF&CO AGREED TO PAY RESTITUTION OF \$20,000,000 TO THE STATE OF MARYLAND WITHIN THIRTY (30) BUSINESS DAYS.

WELLS FARGO & COMPANY ("WFC") VIOLATED SECTION 10(B) OF THE EXCHANGE ACT OF 1934 (THE "EXCHANGE ACT") AND RULE 10B-5 THEREUNDER WITH RESPECT TO ITS HISTORICAL COMMUNITY BANK SALES PRACTICES AND RELATED DISCLOSURES.

WFC CONSENTED TO THE ENTRY OF THE SEC ORDER AND AGREED TO PAY A CIVIL PENALTY OF \$500 MILLION AND TO BE ENJOINED FROM FUTURE VIOLATIONS OF SECTION 10(B) OF THE EXCHANGE ACT AND RULE 10B-5 THEREUNDER. WFC ALSO AGREED TO ENGAGE OUTSIDE EXPERIENCED SECURITIES COUNSEL TO CONDUCT AN ASSESSMENT OF THE REGULATION D POLICIES AND PROCEDURES OF WFC AND CERTAIN OF ITS SUBSIDIARIES AND TO PRESENT TO THE SEC ON THE IMPLEMENTATION OF RECOMMENDATIONS MADE BY OUTSIDE COUNSEL.

#### Western Asset Management

Document	Dated	Received	Notes
ADV	6/30/2020	8/31/2020	Parts 1, 2A, 2B received
Annual Certification of Guidelines	7/2/2020	8/31/2020	In compliance with guidelines
Audited Financials	12/31/2019	8/31/2020	Received for both Legg Mason and Franklin Templeton. Clean opinions.
DDQ	8/31/2020	8/31/2020	Received
SOC/Internal Controls	10/31/2020	8/31/2020	SOC1 audit report found controls suitable

Additional Comments: Parent company Legg Mason was acquired by Franklin Templeton.

#### William Blair

Document	Dated	Received	Notes
ADV	3/25/2020	8/25/2020	Part 2a
Annual Certification of Guidelines	8/25/2020	8/25/2020	In compliance
Audited Financials	12/31/2019	8/25/2020	Clean opinion
DDQ	3/30/2020	8/25/2020	Reviewed
SOC/Internal Controls	10/31/2019	8/25/2020	Controls are effective

Additional Comments:

**Investment Guideline Exceptions Log  
For Fiscal Year Ended June 30, 2020**

Date Received	Manager	Guideline Exception	Cusip	Description	Manager Recommendation	Action Taken	Maturity Date	Par/Shares	Cost	Fair Value	Acct #
2/20/2020	Barings	Security rated below investment grade - No Rating	032359AE1	Amtrust Financial Services Inc	Continue to hold Contribution notice was sent to wrong contact.	concur	8/15/2023	800,000	802,920	753,749	ND14
2/26/2020	Wells Capital	Futures position breached 5%			Position has been corrected	none	NA	NA	NA	NA	26-48000
5/28/2020	Loomis Sayles	Company in bankruptcy	51818KAB6	Latam Finance LTD	Continue to hold	concur	4/11/2024	595,000		108,885	NDK09
5/28/2020	Loomis Sayles	Company in bankruptcy	51818KAC4	Latam Finance LTD	Continue to hold	concur	3/1/2026	253,200		43,200	NDK09
6/30/2020	Loomis Sayles	Company in bankruptcy	165167CY1	Chesapeake Energy Corp.	Continue to hold	concur	9/15/2026	575,000	547,049	15,169	NDK09
6/30/2020	Loomis Sayles	Company in bankruptcy	165167768	Chesapeake Energy Corp.	Continue to hold	concur		1,196	802,875	-	NDK09
6/30/2020	Loomis Sayles	Company in bankruptcy	165167750	Chesapeake Energy Corp.	Continue to hold	concur		166	90,395	-	NDK09
6/30/2020	Loomis Sayles	Company in bankruptcy	165167776	Chesapeake Energy Corp.	Continue to hold	concur		25	18,392	-	NDK09

**NORTH DAKOTA STATE INVESTMENT BOARD**

**DUE DILIGENCE QUESTIONNAIRE**

**FOR PERIOD ENDING 6/30/20**

Please read the following instructions before completing this questionnaire:

1. All questions must be completed.
2. Type or select answers to each question.
3. If any questions are not applicable, please answer as “N/A”.
4. If any answer is larger than the space available, please include it in an attachment that references the page and section number.
5. Responses are due no later than August 31, 2020.



**GENERAL INFORMATION**

**Firm Name:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**City:** \_\_\_\_\_ **State:** \_\_\_\_\_ **Zip:** \_\_\_\_\_  
**Contact Name:** \_\_\_\_\_ **Phone:** \_\_\_\_\_  
**Title:** \_\_\_\_\_ **Fax:** \_\_\_\_\_  
**E-mail:** \_\_\_\_\_

**FIRM INFORMATION**

1. Describe the history of your firm including a timeline of key dates/events (i.e. new products, acquisitions, personnel lift-outs, etc.).
2. Describe your firm’s ownership structure. List all entities/individuals with 5% ownership or more. Note any recent (within the past five years) or pending changes in ownership structure.
3. Explain owners’ relationship to firm.
4. List all related companies and explain related companies’ relationship to firm.
5. Is the firm a Registered SEC Investment Advisor? If so, please provide SEC registration name and file number.
6. Is the organization involved in any other business other than investment management? If yes, please explain.
7. Please list your firm’s lines of business and the approximate contributions of each business to your organization’s total revenue. If you are an affiliate or subsidiary of an organization, what percentage of the parent firm’s total revenue does your subsidiary or affiliate generate?
8. Please describe whether investment management capabilities were developed in-house or derived through acquisition of talent from another firm. If the latter, indicate when this occurred.
9. Which of your firm’s offices service this account? Which specific services are provided by which offices?
10. List the locations where the firm has other offices.
11. How would you describe the culture of the firm? How would you illustrate this culture to someone outside the firm?
12. Provide information pertaining to any organizational changes that have occurred during the past five years that a prudent investment professional would consider material. Are there any changes anticipated in the coming year?
13. Has your firm been the subject of an audit, censure (fine), inquiry or administrative action by the SEC, IRS, or DOL in the past five years? If so, please explain findings and provide a copy, as well as evidence of any changes in procedures implemented as a result of such audit.
14. Please indicate your firm’s fiduciary classification. Please check all that apply:

- Registered Investment Advisor (registered under the Investment Advisors Act of 1940)
- Bank (as defined in the Investment Advisors Act of 1940)

15. Indicate the name of your insurance carrier and the dollar amount of your coverage:

Errors & Omissions:	Coverage: \$
Fiduciary Liability:	Coverage: \$
Fidelity Bond:	Coverage: \$

## **PERSONNEL**

1. Please list the individuals involved in portfolio management and research for this strategy. For each individual, please provide the following information:
  - a. Tenure at company and with this strategy
  - b. Industry experience
  - c. Education and credentials
  - d. Office location
  - e. Area(s) of specialization
  - f. If applicable, other responsibilities beyond those associated with this strategy
2. Please indicate when and why any investment professionals involved with the subject product departed or joined the firm in the last five years. For personnel who have left, please indicate job titles and years with the firm. Please include all additions and departures, regardless of seniority.
3. Does your firm have a succession plan in place for key personnel on the subject product? Please describe.
4. Discuss your organization's compensation and incentive program for investment professionals. How are professionals evaluated and rewarded? What incentives are provided to attract and retain superior individuals? If equity ownership is possible, on what basis is it determined and distributed? How is the departure of a shareholder treated?
5. Provide information regarding the expiration date of current employment contracts with key personnel. Please include a discussion of long term incentives, options or performance clauses.
6. Provide an organizational chart diagramming the relationships between the professional staff as well as the parent-subsidiary, affiliate, or joint venture entities. You may attach this chart to the end of the DDQ.
7. Has any employee, director, officer or other Representative been party to any investigations, litigation (including any settled out of court), or regulatory action during the past five years while at this or any other firm? If so, provide a detailed explanation and indicate the current status. Specify whether the employee is involved in any pending litigation or investigations.
8. Have any allegations of sexual harassment been made against any director, officer, or employee in a managerial role during the past five years that has resulted in a settlement or formal complaint, charge or litigation? If so, provide a detailed explanation and indicate the current status.

**ASSETS AND BREAKDOWN**

1. Please provide assets managed and number of accounts *as of 6/30/20*.

	Firm		Product	
	Assets (\$mil)	# Accounts	Assets (\$mil)	# Accounts
Total Assets				
Total Institutional Assets				
US Tax Exempt				
US Taxable				
<b>By Client Type</b>				
Public Fund				
Corporate				
Union/Multi-Employer				
Endowment & Foundation				
Healthcare				
Insurance				
High Net Worth				
Wrap Accounts				
Sub-Advisor				
Other				

Describe "other":

2. Complete the following tables indicating accounts and market value of assets gained and lost for each of the last three years *ending June 30*.

**Firmwide**

	2020			2019			2018		
	Total	Gain	Loss	Total	Gain	Loss	Total	Gain	Loss
Total accounts									
Total assets									
Total public fund accounts									
Public fund assets									

**Subject Product**

	2020			2019			2018		
	Total	Gain	Loss	Total	Gain	Loss	Total	Gain	Loss
Total accounts									
Total assets									
Total public fund accounts									
Public fund assets									

3. Please provide an explanation of account departures and additions and for any meaningful changes in firm wide and/or product assets.
4. What is the minimum, average, and maximum account size for the subject strategy?
5. You may include additional detail or explanation of firm assets under management below to demonstrate firm capabilities.
6. Please list clients representing more than 10% of total firm assets under management or total firm revenue. It is adequate to describe the client without identifying them (e.g., public pension plan). Please comment on business risk related to client concentration.

**INVESTMENT STRATEGY**

1. Describe your investment philosophy for the subject strategy.
2. Describe the drivers of return. What has been your historical experience on return drivers?
3. Have you made or are you planning any modifications to your overall investment philosophy or process? If so, describe the process used to identify and effect the change.
4. Address the following as it relates to your investment strategy and the portfolio construction process you use to implement your philosophy:
  - a. Role of top-down, thematic and/or sector allocation decisions in your process, and how these decisions are made and implemented.
  - b. What is the firm’s research process as it relates to the subject strategy? How is the research process organized (i.e. regional, country and/or sector)?

- c. Comment on security selection, including the initial universe, decision making factors, and analysis by market segment. Include use of model portfolios or recommended lists. Describe the process by which an investment idea is originated and implemented.
  - d. Describe your portfolio construction process. What specific factors are integral to the portfolio construction process? Specify the portfolio guidelines and rules, such as maximum issue and sector weights. Describe any quantitative techniques or optimization tools used to construct portfolios.
  - e. How is portfolio risk measured, monitored and controlled? Describe any risk management models used and how this analysis is incorporated in the portfolio management process.
  - f. Describe your sell discipline. Under what conditions can the manager/investment committee deviate from your stated discipline?
  - g. If subject strategy is a passive mandate, does your strategy attempt full index replication or are sampling techniques utilized when constructing the portfolio? If sampling is utilized, please describe your sampling process.
5. Please list the relative importance of each of the following decisions:

	<u>Fixed Income</u>		<u>Equity</u>
Allocation		Allocation	
Selection		Selection	
Duration		Currency	
Curve		Other (list and explain below)	
Currency		Totals	100%
Other (list and explain below)			
Totals	100%		

- 6. What unique attributes or competitive advantage does your firm or subject strategy have, which distinguishes it from its competitors? Why do you believe this advantage is sustainable?
- 7. Describe what circumstances or market conditions would favor the subject strategy? When can it be expected to be out of phase or be unrewarded?
- 8. If applicable, please describe your currency decision and hedging policy.
- 9. Does this strategy utilize leverage in any way? If so, please describe. What is the expected and maximum leverage employed in the strategy?
- 10. Describe the firm's use of derivatives in the management of the strategy. If applicable, please list any procedures that serve as guidelines for your firm's management of the collateral.

## **TRADING**

1. Please describe your policies and procedures concerning trading and execution, including those relating to the following:
  - a. How your firm seeks to achieve best execution;
  - b. How your firm measures and minimizes trading costs;
  - c. How your traders interact with portfolio managers and analysts.
2. Describe your trading practices, including the trading systems and strategies you use, and indicate any enhancements your firm is contemplating.
3. What guidelines and practices does your firm employ in managing its counterparty risk?
4. How many broker relationships does your firm have? Please describe how the broker/dealers your firm uses are selected.
5. Does your firm trade client accounts through any related or affiliated broker/dealer? If yes, describe the nature of the relationship and the percentage of trades directed through such affiliate(s).
6. Does your firm use soft dollars? If so, for what purpose?

## **RISK MANAGEMENT**

1. Please describe the risk management process within your organization and the degree of independence from your portfolio management process. Please describe how the firm assures the independence of risk management.
2. How is portfolio risk measured, monitored and controlled? Describe any risk management models used and how this analysis is incorporated in the portfolio management process.

## **ENVIROMENTAL, SOCIAL & GOVERNANCE**

1. Does the firm have a policy addressing its approach to incorporating sustainable and responsible investment factors into its investment process? If so, please provide a copy of the policy and the extent of its use in current investment strategies. If not, please explain the rationale.
2. Please indicate the methods of internal investment manager oversight (e.g. oversight by committee, firm, management, board of directors, etc.) including reporting practices.
3. Please describe what ESG data, research, consultants, tools and practices are used and how they are incorporated into the investment and risk management process.
4. Have there been any changes in the firm's ESG practices, policies, applications or reporting in the past year. If so, please explain the changes.

5. Please explain how active investment ownership practices are integrated into investment decisions including any impact on voting shares/rights.
6. Please describe what metrics are used to measure the impact of ESG investing practices.
7. Does the firm include climate related factors into its investment process including the measurement and monitoring of the carbon footprint of its investment portfolio? If yes, please explain the assessment process. If not, please explain the rationale.
8. Please list the various types of sustainable and responsible investing themes considered in the past and if any have been excluded because they were non investible (i.e. eliminate poverty, disease eradication, zero waste, healthy living, etc.).

### **COMPLIANCE/INTERNAL CONTROLS**

1. What compliance system does your firm employ? How is compliance implemented in your firm's operations?
2. Provide a detailed summary of your firm's internal control structure. Who serves as your firm's compliance officer? Who does he/she report to? Does the firm conduct periodic risk assessment?
3. What systems are in place for ensuring that portfolios are in compliance with client guidelines?
4. Has your firm ever violated a client guideline in the subject strategy? If so, please describe the violation and resolution. It is acceptable if this information is grouped by some method of categorization that allows for easier reporting.
5. Describe valuation policies and procedures by security type, list pricing sources and personnel responsible for valuation. Describe any special systems, valuation services, or other unique issues relating to the pricing of less liquid securities in the portfolio.
6. Is your firm registered with the CFA Institute as compliant with the CFA Institute's Asset Manager Code (AMC) of Professional Conduct? If not, would your firm consider registering as compliant in the future?
7. Please state your firm's ethics policy. How do you ensure that employees follow this ethics policy? How are violations of the firm's ethics policy handled?

### **FEES**

1. Please provide a fee schedule for the subject strategy, including any breakpoints.
2. Under what circumstances are your fees negotiable?
3. Do all clients pay the same fee? Please explain any discrepancies.

4. Is there a minimum annual fee?
5. Do you offer a performance-based fee? If so, please provide a performance-based fee schedule. Over what period is performance evaluated and against what benchmark? What is the base fee? Is there a maximum fee (a cap)?
6. Do you offer a Most Favored Nations (MFN) clause? If not, please provide an explanation of why not.

**CLIENT SERVICES**

1. Describe your firm’s approach to client service.
2. What policies are in effect to control the workload as it relates to the number of clients serviced by each account manager? Is there a limit on the number of accounts that an account manager may handle?
3. Provide a breakdown for each key investment person’s time dedicated to each listed function (add more rows for additional key persons if necessary):

<b>Key Persons</b>	<b>Portfolio Management</b>	<b>Research</b>	<b>Management / Supervision</b>	<b>Marketing / Client Service</b>	<b>Other</b>
1.					
2.					
3.					
4.					

Describe other:



## **BUSINESS PLANS**

1. Please discuss the overall business objectives of your firm with respect to future growth. Comment on any present or planned areas of emphasis over the near future. Be sure to include in your response the following:
  - a. Total assets or client relationships that will be accepted;
  - b. Maximum amount of clients or assets per portfolio manager;
  - c. Plans to develop and expand resources.
2. Indicate the details of any new investment services you plan to introduce.
3. Do you have any plans to cap or limit your growth in terms of total assets and total number of accounts? If so, please describe.

## **CYBERSECURITY**

1. What IT systems, data sets, and business processes are most vulnerable to cyber threats? Explain how the company protects itself against such threats. What cybersecurity controls and crisis management plans are in place?
2. Please describe the firm's third party exposure. Does the firm have a formal vendor risk management program? If so, please describe.

## **DISASTER RECOVERY**

1. Describe your emergency and disaster recovery plans. Do you have plans/arrangements in place for an alternative work site should your facilities become inoperative?

## **ADDITIONAL INFORMATION**

1. Please provide a current list of references, including other public fund clients.

**Board Action**

**TO:** State Investment Board

**FROM:** Dave Hunter

**DATE:** November 13, 2020

**SUBJECT: Joint Resolution of TFFR & SIB in Appreciation of Treasurer Schmidt**

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At the request of President Lech and Chairman Sanford the enclosed Joint Resolution of the TFFR **Board and State Investment Board has been prepared in recognition of State Treasurer Kelly Schmidt** and her many years of dedicated service to these Boards and her support of the TFFR and SIB programs.

An informal reception in her honor will follow each scheduled meeting.

**Board motion to approve proposed Joint Resolution.**

ND TFFR and ND SIB Joint Board Resolution  
In Appreciation of  
State Treasurer Kelly Schmidt

WHEREAS, State Treasurer Kelly Schmidt has served as a member of the TFFR and SIB Boards for the past 16 years; and

WHEREAS, State Treasurer Kelly Schmidt has diligently carried out her duties and responsibilities as a member of these Boards and fiduciary of the TFFR and SIB Programs; and

WHEREAS, State Treasurer Kelly Schmidt has been a valued and dedicated member of these Boards in helping maintain the integrity and stability of the TFFR and SIB Programs.

NOW THEREFORE, BE IT RESOLVED that State Treasurer Kelly Schmidt be duly recognized by these Boards for her years of unselfish dedication to the State of North Dakota through her service on the Teachers' Fund for Retirement Board of Trustees and State Investment Board.

On Behalf of the TFFR Board

On Behalf of the SIB

\_\_\_\_\_  
Dr. Rob Lech, President

\_\_\_\_\_  
Lt. Governor Brent Sanford, Chair

\_\_\_\_\_  
Votes

\_\_\_\_\_  
Votes

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date