NORTH Dakota | State Investment Board
Be Legendary. RETIREMENT & INVESTMENT

Friday, August 27, 2021, 8:30 a.m.(CST)
WSI Conference Room
(Virtual Meeting Host) Teleconferencing - 701.328.0950 Participant Code – 262856308#
1600 East Century Avenue, Bismarck, ND

AGENDA

I. CALL TO ORDER AND ACCEPTANCE OF AGENDA

A. **Executive Summary**

II. ACCEPTANCE OF MINUTES (July 23, 2021 & July 27, 2021)

III. BOARD EDUCATION (45 minutes)

A. Board Education - "Meaning in the Numbers"– Mr. Erlendson and Mr. Browning, Callan LLC
B. Board Education – ND Growth Fund Investment Process – Mr. Morgan and Mr. Hart, 50 South Capital

IV. INVESTMENTS (80-90 minutes)

A. In State Investment Update* – Mr. Hart and Mr. Morgan
B. Preliminary Fiscal Year End Results/Investment Update – Mr. Chin
C. International Equity Overview – Mr. Chin
D. Arrowstreet Capital Presentation – Mr. Forde and Mr. Liodakis
E. Staff Recommendation – Mr. Chin

V. GOVERNANCE (45 minutes)

A. Executive Limitations/Staff Relations Update – Ms. Murtha
B. Executive Search Committee Update – Dr. Lech
   1) Presentation by EFL Associates – Mr. Cummings, Mr. Davis
   2) ED/CIO position discussion
C. Audit Committee Update – Ms. Yvonne Smith

VI. Other Business (5 minutes)
A. GFOA Award – Ms. Flanagan
B. Resolution – Service Recognition for Bonnie Heit
C. Resolution – Service Recognition for Darren Schulz
D. Introduction – Missy Kopp

Next Meetings: Securities Litigation Committee – Sept. 9, 2021
Audit Committee - Special Meeting to be scheduled in September
SIB – September 24, 2021
Executive Search Committee - TBD

VII. ADJOURNMENT

* Executive Session Possible pursuant to N.D.C.C. 44-04-18.4(1) to discuss confidential commercial and financial information.

EXECUTIVE SUMMARY

SIB Regular Meeting

August 27, 2021 – 8:30am CT

I. **Agenda:** The **August Board Meeting will be held at the WSI Conference room to accommodate in person attendance, however, a link will also be provided so that Board members and other attendees may join via video conference.** The board member video link is included in the email with the Board materials. There will be a call in number for the public.

II. **Minutes:** The July 23, 2021 and July 27, 2021 Board meeting minutes are included for review and approval.

III. **A. Board Education:** Callan will provide a summary of the process by which performance reports are created and a brief explanation of how the performance reports can help SIB members fulfill their fiduciary responsibilities.

B. Board Education: 50 South will provide an overview of the North Dakota Growth Fund investment process.

IV. **A. In State Investment Update:** This update will be provided by 50 South in executive session to discuss confidential commercial and financial information.

B. Preliminary Fiscal Year End Results/Investment Update: Staff will provide an update on preliminary fiscal year end returns for all clients and provide a brief primer on investment risk management.

C. – E: **RIO will request the SIB to approve a new International Equity manager noting that RIO staff and Callan has conducted extensive due diligence on this search beginning 2020.** RIO will publicly disclose its manager recommendation to the SIB early next week.

V. **A. Executive Limitations/Staff Relations:** Ms. Murtha will provide an update on agency needs, outline how the agency is addressing these needs during the interim, and present strategic planning solutions to address future needs.

B. Executive Search Committee Update: Committee Chair Dr. Lech will provide the Board with an update on the status of the ED/CIO search efforts and committee work. EFL will present information related to the search process and job description. The Board will discuss parameters of the dual ED/CIO role and how that role may best serve the needs of the agency.

C. Audit Committee Update: Committee Chair Yvonne Smith will provide an update on the recent Audit committee activities and discussion.

Adjournment.

NORTH DAKOTA STATE INVESTMENT BOARD
MINUTES OF THE
JULY 23, 2021, BOARD MEETING

MEMBERS PRESENT:	Brent Sanford, Lt. Governor, Chair Rob Lech, TFFR Board, Vice Chair Troy Seibel, PERS Board, Parliamentarian Thomas Beadle, State Treasurer Jon Godfread, Insurance Commissioner Keith Kempenich, Legacy/Budget Stab. Adv. Board Bryan Klipfel, Director of WSI Cody Mickelson, TFFR Board Adam Miller, PERS Board Mel Olson, TFFR Board
MEMBERS ABSENT:	Jodi Smith, Commissioner of Unv & School Lands Yvonne Smith, PERS Board
STAFF PRESENT:	Eric Chin, Chief Risk Officer/Senior CIO Connie Flanagan, Chief Financial Officer Jayme Heick, Retirement Programs Specialist Bonnie Heit, Admin Svs Supvr Missy Kopp, Retirement Asst Jan Murtha, Interim Exec Dir Matt Posch, Investment/Compliance Officer Ann Nagel, Investment Accountant Sara Sauter, Internal Audit Supvr Dottie Thorsen, Internal Auditor Tami Volkert, Employer Svs Coordinator Len Wall, Data Processing Coordinator
GUESTS:	Nick Archuleta, ND United Jeff Baumgartner, First Intl Bank & Trust Jace Beehler, Governor's Office Alex Browning, Callan LLC Dean DePountis, Attorney General's Office Tamara Doi Beck, Northern Trust/50 South Karlene Fine, Industrial Commission Trey Hart, Northern Trust/50 South Laura Helbling, Insurance Dept. Kathy Hogan, LBSFAB Candace Johnson, Securities Dept. Rachel Kriege, Insurance Dept. Adam Mathiak, Legislative Council Scott Miller, PERS Tricia Opp, Procurement Bryan Reinhardt, PERS Karen Tyler, Securities Dept. Commissioner Rich Wardner, Legislative Assembly

CALL TO ORDER:

Lt. Governor Sanford, Chair, called the State Investment Board (SIB) regular meeting to order at 8:30 a.m. on Friday, July 23, 2021. The meeting was held at Workforce Safety & Insurance, 1600 E Century Ave., Bismarck, ND.

AGENDA:

The Board considered the agenda for the July 23, 2021, meeting,

IT WAS MOVED BY DR. LECH AND SECONDED BY TREASURER BEADLE AND CARRIED BY A VOICE VOTE TO ACCEPT THE AGENDA FOR THE JULY 23, 2021, MEETING.

AYES: MR. OLSON, TREASURER BEADLE, MR. SEIBEL, DR. LECH, MR. MILLER, MR. MICKELSON, AND LT. GOVERNOR SANFORD
NAYS: NONE
MOTION CARRIED
ABSENT: MR. KLIPFEL, COMMISSIONER GODFREAD, COMMISSIONER SMITH, MS. SMITH

MINUTES:

IT WAS MOVED BY MR. OLSON AND SECONDED BY DR. LECH AND CARRIED BY A VOICE VOTE TO APPROVE THE MAY 21, 2021, AND JUNE 15, 2021, MINUTES AS DISTRIBUTED.

AYES: MR. OLSON, MR. MILLER, TREASURER BEADLE, MS. MICKELSON, DR. LECH, MR. SEIBEL, AND LT. GOVERNOR SANFORD
NAYS: NONE
MOTION CARRIED
ABSENT: MR. KLIPFEL, COMMISSIONER GODFREAD, MS. SMITH, COMMISSIONER SMITH

ELECTION OF OFFICERS/APPTS:

New Trustee - The Board welcomed Mr. Cody Mickelson. Mr. Mickelson replaces Ms. Toni Gumeringer as a representative of Teachers' Fund for Retirement (TFFR) on the SIB.

At the first meeting of each fiscal year, the SIB is to elect a Chair, Vice Chair, and appoint a parliamentarian per By-Laws and Governance Policy.

IT WAS MOVED BY DR. LECH AND SECONDED BY TREASURER BEADLE TO NOMINATE LT. GOVERNOR SANFORD AS CHAIR OF THE SIB FOR THE PERIOD OF JULY 1, 2021 – JUNE 30, 2022.

IT WAS MOVED BY DR. LECH AND SECONDED BY MR. OLSON AND CARRIED BY A ROLL CALL VOTE TO CEASE NOMINATIONS AND ELECT LT. GOVERNOR SANFORD AS CHAIR OF THE SIB FOR THE PERIOD OF JULY 1, 2021 – JUNE 30, 2022.

AYES: DR. LECH, TREASURER BEADLE, MR. OLSON, MR. SEIBEL, MR. MILLER, MR. MICKELSON, AND LT. GOVERNOR SANFORD
NAYS: NONE
MOTION CARRIED
ABSENT: COMMISSIONER SMITH, COMMISSIONER GODFREAD, MS. SMITH, AND MR. KLIPFEL

IT WAS MOVED BY TREASURER BEADLE AND SECONDED BY LT. GOVERNOR SANFORD TO NOMINATE DR. LECH AS VICE CHAIR OF THE SIB FOR THE PERIOD OF JULY 1, 2021 – JUNE 30, 2022.

IT WAS MOVED BY MR. OLSON AND SECONDED BY LT. GOVERNOR SANFORD TO CEASE NOMINATIONS AND ELECT DR. LECH AS VICE CHAIR OF THE SIB FOR THE PERIOD OF JULY 1, 2021 – JUNE 30, 2022.

AYES: MR. MICKELSON, MR. SEIBEL, MR. MILLER, DR. LECH, MR. OLSON, TREASURER BEADLE, AND LT. GOVERNOR SANFORD
NAYS: NONE
MOTION CARRIED
ABSENT: COMMISSIONER GODFREAD, MR. KLIPFEL, COMMISSIONER SMITH, AND MS. SMITH

Appointment of Parliamentarian - Lt. Governor Sanford appointed Mr. Seibel as parliamentarian to the SIB for the period of July 1, 2021 – June 30, 2022.

Audit Committee – The Audit Committee is a standing committee of the SIB. The Audit Committee is to assist the SIB in carrying out its oversight responsibilities as they relate to RIO's internal and external audit programs, including financial and other reporting practices, internal controls, and compliance with laws, regulations, and ethics.

Current Audit Committee members are Ms. Smith, Dr. Lech, Commissioner Smith, Mr. Jon Griffin, and Ms. Julie Dahle.

Lt. Governor Sanford reappointed the current Audit Committee members for the period of July 1, 2021 – June 30, 2022.

Securities Litigation Committee (SLC) – The SLC is a standing committee of the SIB. The SLC is to 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.

Current SLC members are Mr. Seibel, Commissioner Smith, Mr. Dean DePountis, Ms. Flanagan, and RIO's Executive Director.

Lt. Governor Sanford reappointed the current SLC members for the period of July 1, 2021 – June 30, 2022. Ms. Murtha will serve until an Executive Director is on board.

Executive Review Committee (ERC) - The ERC is a standing committee of the SIB. The ERC is to 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".

Current ERC members are Ms. Smith, Mr. Olson, and Mr. Miller.

Lt. Governor Sanford reappointed the current ERC members for the period of July 1, 2021 – June 30, 2022. Mr. Olson will serve as Chair.

INVESTMENTS:

50 South Capitol – Mr. Trey Hart and Ms. Murtha provided an update on the progress of 50 South Capital since the closing of the North Dakota Growth Fund. The firm has launched its website www.ndgrowthfund.com. The firm has been active in the sourcing and evaluation of potential investment opportunities across the State. The firm is making progress in establishing its team and physical presence throughout the State. The firm will provide more details and a demo of its website at the August 27, 2021, SIB meeting.

Discussion followed on the roles of the Retirement and Investment Office (RIO), the SIB, and 50 South Capitol as the program is implemented.

Investment Update – Mr. Chin provided an investment update as of June 30, 2021. He highlighted performance of the SIB’s five largest clients.

	Date	TFFR	PERS	WSI	Legacy	Budget Stabilization
Market Value	**May 31**	**$ 3,154,294,333**	**$ 3,931,731,142**	**$ 2,291,280,975**	**$ 8,843,879,496**	**$ 754,864,657**
Net Investment Return - Actual through	**May 31**	**23.42%**	**24.10%**	**10.22%**	**21.27%**	**3.87%**
Total Fund Policy through	May 31	22.87%	22.97%	8.21%	19.49%	0.59%
Excess Return for 11 month period	***May 31***	***0.56%***	***1.13%***	***2.01%***	***1.78%***	***3.28%***
Estimated Month-to-Date	June 30	0.74%	0.77%	0.69%	0.75%	-0.16%
Estimated 2021 FYTD Return	**June 30**	**24.3%**	**26.0%**	**11.7%**	**23.1%**	**3.5%**

(Actual returns are net of fees; estimates are based on index returns)

RIO investment personnel have been working to bring the Invesco Real Estate U.S. Fund VI, ND 1889 Growth Fund, Macquarie Infrastructure Partners V, and ISQ Global Infrastructure Fund III on board.

RIO investment personnel have been working with 50 South Capitol on the ND 1889 Growth Fund which has been launched.

Work continues on optimizing the public equity allocations across the three pools. The comprehensive search for a quantitative international equity manager is nearly complete. An allocation to a quantitative strategy will add a diversifying alpha engine and RIO investment personnel will be recommending a manager at the August 27, 2021, meeting.

RIO investment personnel have been reviewing and considering rebalancing the real estate portfolio to not only mitigate risk but also capitalize on opportunities given the uncertainty over the longer term impact of COVID on real estate assets. The pandemic has had significate repercussions on the real estate markets, from vacant office buildings, to empty shopping malls, and closed restaurants.

RIO investment personnel are currently working on generating a new private equity pacing analysis and will likely recommend increasing allocations to existing managers and/or begin a search for another manager. The Pension Pool has been underweight in private equity since TFFR increased its policy target to private equity from 6% to 10%.

The underperformance of the Pension Pool’s world equity allocation continues to be monitored. LSV Global Value and Epoch Global Choice have underperformed the policy benchmark. Additional analysis will be conducted with recommendations coming back to the Board in the near future.

GOVERNANCE:

Executive Search Committee (ESC) - Dr. Lech, Chair of the ESC, updated the Board on activities of the ESC since its appointment at the June 15, 2021, SIB meeting. ESC members are Dr. Lech, Treasurer Beadle, Mr. Klipfel, Mr. Seibel, and Commissioner Smith. Staff worked with State Procurement to develop and issue a Request for Proposal (RFP) for an executive search firm. The RFP was issued on June 24, 2021, with responses due July 16, 2021. The SIB was provided a copy of the RFP.

The ESC discussed the process for evaluating and selecting the successful bidder in a manner compliant with state procurement and open meeting laws. A subcommittee of the ESC consisting of one to two committee members and four RIO personnel would provide an initial evaluation of the proposals and then would bring those results back to the full ESC for review and discussion. The next meeting is scheduled for July 26, 2021.

The ESC requested direction from the SIB on issuance of the Notice to Award. ESC requested clarification on whether the SIB would prefer to grant the ESC authority to issue the Notice of Award or have the ESC bring their evaluation back to the SIB for review and approval.

The SIB directed the ESC to issue the Notice of Award to keep the process moving ahead as efficiently as possible.

Meeting Schedule – A combined meeting schedule for the SIB and TFFR Board for the period of July 1, 2021 – June 30, 2022 was presented for the Board's consideration.

IT WAS MOVED BY DR. LECH AND SECONDED BY COMMISSIONER GODFREAD AND CARRIED BY A VOICE VOTE TO APPROVE THE SIB/TFFR MEETING SCHEDULES FOR THE PERIOD OF JULY 1, 2021 – JUNE 30, 2022.

AYES: MR. MICKELSON, TREASURER BEADLE, DR. LECH, COMMISSIONER GODFREAD, MR. OLSON, MR. SEIBEL, MR. MILLER, MR. KLIPFEL, AND LT. GOVERNOR SANFORD
NAYS: NONE
MOTION CARRIED
ABSENT: COMMISSIONER SMITH, MS. SMITH

Contingency Funds **–** Ms. Flanagan requested approval to use the contingency line for payment of the executive search firm once selected. The cost is not known at this time but is expected to exceed the $100,000 currently in RIO's contingency line.

IT WAS MOVED BY DR. LECH AND SECONDED BY COMMISSIONER GODFREAD AND CARRIED BY A ROLL CALL VOTE TO PAY FOR THE EXECUTIVE SEARCH FIRM WITH THE CONTINGENCY FUNDS.

AYES: MR. OLSON, MS. MICKELSON, MR. MILLER, MR. SEIBEL, MR. KLIPFEL, COMMISSIONER GODFREAD, DR. LECH, TREASURER BEADLE, AND LT. GOVERNOR SANFORD
NAYS: NONE
MOTION CARRIED
ABSENT: MS. SMITH, COMMISSIONER SMITH

Ms. Flanagan also updated the Board on the relocation of RIO to Workforce Safety & Insurance. The move is expected to occur late September 2021.

Code of Conduct **-** SIB Governance Policy/Board Members' Code of Conduct requires the SIB members reaffirm their understanding of the policy on an annual basis and disclose any conflicts of interest. Mr. Posch requested the Board members to acknowledge the affirmation by signing and dating the form and returning to him by August 13, 2021.

Investment Manager Catalog **–** In the Board's meeting materials was a catalog of investment managers which includes a brief description of existing investment strategies and firms, the date in which the SIB engaged the firms for a specific mandate, the asset class (or classes) for which they offer their services and the major investment pools (or trusts) in which these strategies are utilized. A listing of closed investment strategies was also included.

MONITORING:

The following monitoring reports for the quarter ending June 30, 2021, were presented to the Board for their consideration and approval - Executive Limitations/Staff Relations, Budget/Financial Conditions, and Investment Ends/Due Diligence. The TFFR Ends/PAS Project as of March 31, 2021 was also included.

IT WAS MOVED BY COMMISSIONER GODFREAD AND SECONDED BY MR. SEIBEL AND CARRIED BY A VOICE VOTE TO ACCEPT THE QUARTERLY MONITORING REPORTS AS PRESENTED.

AYES: TREASURER BEADLE, MR. MILLER, COMMISSIONER GODFREAD, MR. OLSON, MR. KLIPFEL, MR. MICKELSON, MR. SEIBEL, DR. LECH, AND LT. GOVERNOR SANFORD
NAYS: NONE
MOTION CARRIED
ABSENT: COMMISSIONER SMITH, MS. SMITH

OTHER:

The next regular meeting of the SIB has been scheduled for August 27, 2021, at 8:30 a.m. at Workforce Safety & Insurance.

ADJOURNMENT:

With no further business to come before the SIB, Lt. Governor Sanford adjourned the meeting at 9:30 a.m.

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Lt. Governor Sanford, Chair
State Investment Board

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Bonnie Heit
Recorder

NORTH DAKOTA STATE INVESTMENT BOARD
MINUTES OF THE
JULY 27, 2021, BOARD MEETING

MEMBERS PRESENT:	Brent Sanford, Lt. Governor, Chair Rob Lech, TFFR Board, Vice Chair Troy Seibel, PERS Board, Parliamentarian Thomas Beadle, State Treasurer Bryan Klipfel, Director of WSI Cody Mickelson, TFFR Board Adam Miller, PERS Board Mel Olson, TFFR Board Jodi Smith, Commissioner of Unv & School Lands Yvonne Smith, PERS Board
MEMBERS ABSENT:	Jon Godfread, Insurance Commissioner Keith Kempenich, Legacy/Budget Stab. Adv. Board
STAFF PRESENT:	Eric Chin, Chief Risk Officer/Senior CIO Connie Flanagan, Chief Financial Officer Bonnie Heit, Admin Svs Supvr Missy Kopp, Retirement Asst Jan Murtha, Interim Exec Dir Matt Posch, Investment/Compliance Officer Ann Nagel, Investment Accountant Sara Sauter, Internal Audit Supvr Dottie Thorsen, Internal Auditor
GUESTS:	Dean DePountis, Attorney General's Office Adam Mathiak, Legislative Council Tricia Opp, Procurement

CALL TO ORDER:

Lt. Governor Sanford, Chair, called the State Investment Board (SIB) special meeting to order at 12:00 p.m. on Tuesday, July 27, 2021. All attendees participated virtually.

The following members were present – Treasurer Beadle, Mr. Mickelson, Mr. Klipfel, Commissioner Smith, Ms. Smith, Dr. Lech, Mr. Miller, Mr. Seibel, Mr. Olson, and Lt. Governor Sanford

AGENDA:

The Board considered the agenda for the July 27, 2021, meeting,

IT WAS MOVED BY DR. LECH AND SECONDED BY MS. SMITH AND CARRIED BY A VOICE VOTE TO ACCEPT THE AGENDA FOR THE JULY 27, 2021, MEETING.

AYES: MS. SMITH, MR. MILLER, MR. OLSON, MR. MICKELSON, DR. LECH, MR. SEIBEL, MR. KLIPFEL, COMMISSIONER SMITH, TREASURER BEADLE, AND LT. GOVERNOR SANFORD
NAYS: NONE
MOTION CARRIED
ABSENT: COMMISSIONER GODFREAD

GOVERNANCE:

The special meeting was called to review proposed amendments to the job descriptions of the Executive Director and Chief Investment Officer of the Retirement and Investment Office (RIO).

Ms. Murtha reviewed the amendments which would provide clarity in the reporting structure and responsibilities of the positions to the SIB by providing continuity in responsibilities, reduce redundancy and inefficiencies in communication to and on behalf of the SIB, and provide the necessary authority to adjust workload distributions within RIO. With the exception of interim periods during a vacancy of the Executive Director/CIO role, one individual occupies both positions under RIO's organization chart even though the job descriptions are separate.

The changes do not change the current organizational structure of RIO, but seek to enhance clarification of the roles and responsibilities during the interim period, and would not impact filling the positions with one person in the future.

Discussion followed on the amendments.

IT WAS MOVED BY DR. LECH AND SECONDED BY TREASURER BEADLE AND CARRIED BY A ROLL CALL VOTE TO APPROVE THE AMENDMENTS TO RIO'S EXECUTIVE DIRECTOR AND CHIEF INVESTMENT OFFICER JOB DESCRIPTIONS.

AYES: COMMISSIONER SMITH, TREASURER BEADLE, MR. MILLER, MR. OLSON, MR. KLIPFEL, MR. MICKELSON, MR. SEIBEL, DR. LECH, MS. SMITH, AND LT. GOVERNOR SANFORD
NAYS: NONE
MOTION CARRIED
ABSENT: COMMISSIONER GODFREAD

ADJOURNMENT:

With no further business to come before the SIB, Lt. Governor Sanford adjourned the meeting at 12:09 p.m.

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Lt. Governor Sanford, Chair
State Investment Board

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Bonnie Heit
Recorder

Callan

August 27, 2021

North Dakota State Investment Board

Meaning in the Numbers: Performance Monitoring

Paul Erlendson
Senior Vice President

Alex Browning
Senior Vice President

Framing the Discussion

A recommended fiduciary process for all types of funds

Step 1
Conduct Fiduciary Review

Step 2
Design Optimal Portfolio

Step 3
Formalize Investment Policy

Step 4
Implement Policy

Step 5
Monitor and Supervise

- Review performance measurement and reporting procedures
- Monitor trading costs
- Monitor ongoing manager performance
- Refine program as needed

Review

Agenda: How Can Trustees Make Use of Performance Evaluation Data?

Five primary questions Trustees should be able to answer with a performance evaluation report:

1. Are the Plan's assets invested as outlined in its Investment Policy Statement?
2. Are the Plan's cash flows being managed consistent with its strategic asset allocation policy?
3. Do the Plan's performance outcomes meet its strategic return objectives?
   - If not, which asset class(es) cause the underperformance?
   - Within the underperforming asset class, is it the structure or the individual manager(s) that is falling short?
4. Are the fees paid to managers reasonable given the competitive landscape and value delivered?
5. Are any corrective steps necessary to bring the Plan back into compliance with long-term objectives?

Performance Evaluation is a Mix of Science and Art

Science

Performance Measurement

– Collect and categorize raw transaction data and market value information
– Calculate time-weighted returns* over various periods
– Calculate measures of risk and risk/reward tradeoffs
– Compare rate of return with benchmarks and appropriate style groups
– Calculate characteristics (P/E, beta, etc.) and attribution

Art

Performance Evaluation

– Analyze and interpret quantitative information
– Form judgments and make recommendations
– Educate to foster reasonable expectations
– Consider qualitative factors
  – Client policies
  – Client needs and tolerances
  – Market trends
  – Changes at firm
  – Manager strategies

* Certain investments (e.g., private equity) are most fairly evaluated through the use of internal rate of return (IRR) or dollar-weighted return.

Three Types of Benchmarks

- **A discount rate** is established by an actuary for the ***long-term*** return objective for an asset pool. The discount rate (AKA "assumed rate of return") is one of three key financial assumptions: funding & liabilities are the others.
  - A discount rate is not investible – you cannot (typically) buy an asset to match the discounted rate of return.

- **An index** is a rules-based construct of securities used to represent an asset class (e.g.– Russell 3000) or sub-asset class (e.g. – Russell 3000 Growth Index). Indexes are used as benchmarks for individual asset classes but can also be blended to create a custom benchmark for a multi-asset pool of capital.
  - An index should be investible, meaning an investor can own the securities in the index.
  - Index *funds* are investment products that mirror the characteristics and return patterns of the relevant index.
  - Index funds are generally created in one of two ways:
    1. Full replication – each security in the index is owned at the same weighting it has in the index.
    2. Stratified sampling – short of full replication, a subset of securities that collectively exhibit the index's key characteristics.

- **A peer group** is a collection of funds (e.g. – Public Plan Sponsors Greater than $1 billion; or Small Cap Value managers). Although members of a single peer group share similar characteristics, risk profiles and investment objectives, the funds within a peer group may take different approaches to achieve their investment goal.
  - A peer group is not investible
  - Although the members of style groups share common characteristics, they also exhibit a range of portfolio characteristics and return patterns. The multiple members in a peer group allow an investor to evaluate the effectiveness of one's own portfolio compared to the characteristics of similarly managed Plans or managers

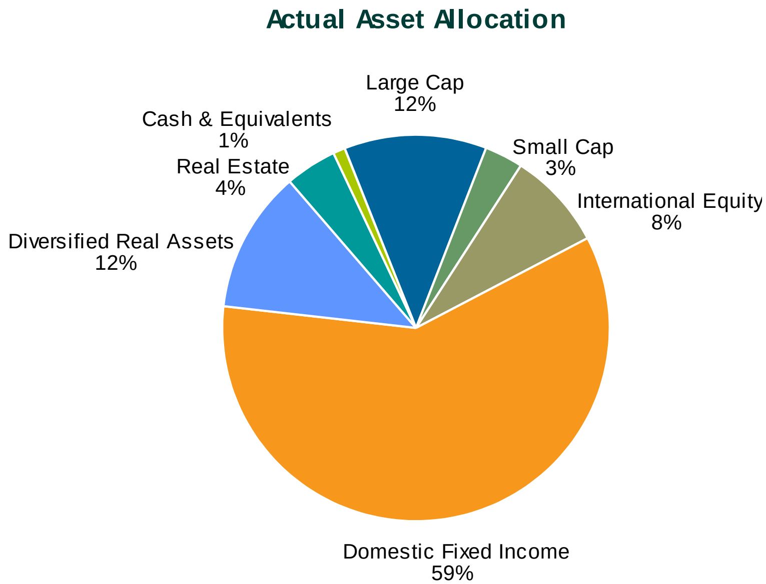
- **Both indexes and peer groups** can be useful in understanding performance over short- to intermediate periods.

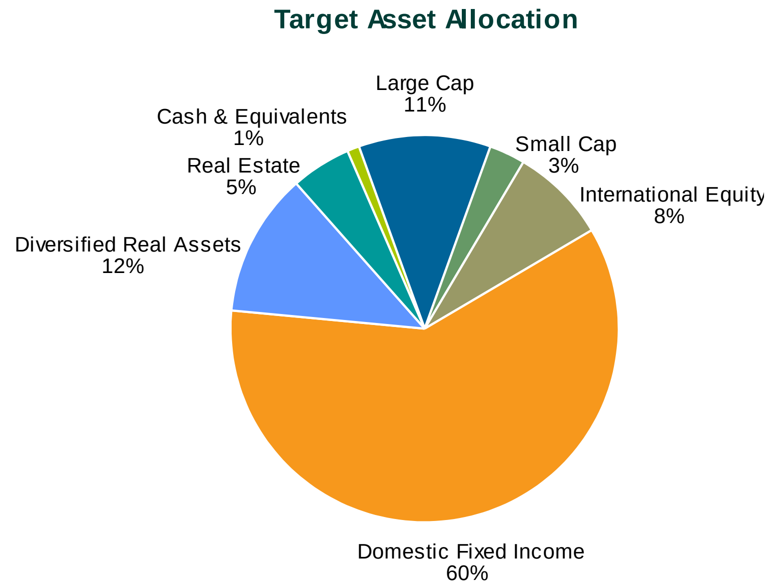
- **Discount rates** help decision makers allocate capital to achieve the target return with an acceptable level of risk.

WSI Total Fund Asset Allocation & Returns

WSI Allocation: Are WSI's assets invested in accordance within its policy limits?

As of March 31, 2021





Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Large Cap	265,668	11.9%	11.0%	0.9%	19,534
Small Cap	72,261	3.2%	3.0%	0.2%	5,133
International Equity	183,301	8.2%	8.0%	0.2%	4,294
Domestic Fixed Income	1,331,342	59.5%	60.0%	(0.5%)	(11,210)
Diversified Real Assets	266,265	11.9%	12.0%	(0.1%)	(2,245)
Real Estate	96,292	4.3%	5.0%	(0.7%)	(15,587)
Cash & Equivalents	22,457	1.0%	1.0%	0.0%	81
Total	2,237,586	100.0%	100.0%		

- Variations of "Actual" versus "Target" asset class weights cause both returns and risk to deviate from target.
- Research shows that an investor's *choice of asset classes* and *target weights* explain the majority of returns.
- The exhibits above illustrate that asset allocations are within the ranges contained in WSI's investment policy.

Asset Allocation and Flows: Are WSI's Cash Flows Managed Effectively?

Cash Flow as a rebalancing tool

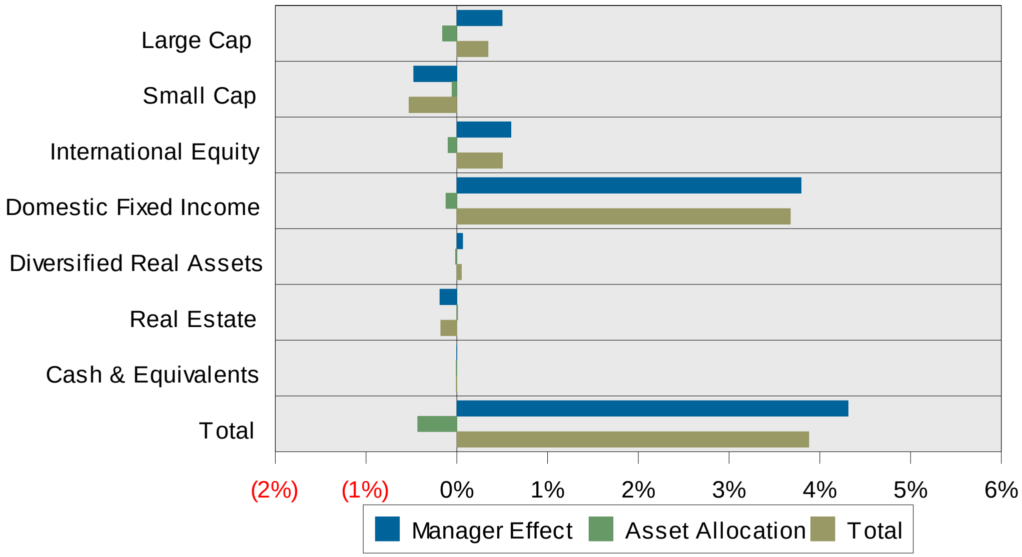
	March 31, 2021				December 31, 2020	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Global Equity	**$521,229,955**	**23.29%**	**$(43,190,658)**	**$33,201,895**	**$531,218,719**	**23.47%**
Domestic Equity	**$337,929,134**	**15.10%**	**$(30,636,023)**	**$26,445,593**	**$342,119,564**	**15.12%**
Large Cap	265,668,479	11.87%	(18,244,899)	20,319,454	263,593,924	11.65%
Small Cap	72,260,655	3.23%	(12,391,124)	6,126,139	78,525,640	3.47%
International Equity	**$183,300,822**	**8.19%**	**$(12,554,635)**	**$6,756,302**	**$189,099,155**	**8.36%**
Domestic Fixed Income	**$1,331,341,804**	**59.50%**	**$23,788,184**	**$(47,596,673)**	**$1,355,150,293**	**59.88%**
Global Real Assets	**$362,557,002**	**16.20%**	**$6,370,893**	**$(1,569,515)**	**$357,755,625**	**15.81%**
Real Estate	96,292,180	4.30%	(832,858)	403,016	96,722,022	4.27%
Diversified	266,264,823	11.90%	7,203,751	(1,972,532)	261,033,604	11.53%
Cash	**$22,456,889**	**1.00%**	**$3,541,593**	**$2,844**	**$18,912,452**	**0.84%**
Total Fund	**$2,237,585,651**	**100.0%**	**$(9,489,989)**	**$(15,961,449)**	**$2,263,037,089**	**100.0%**

- At the end of December 2020, Global Equities was above its target weight: 23.47% versus target of 22.0%.
  - Large Cap Equity: 11.65% actual versus target of 11.0%
  - Small Cap Equity: 3.47% versus 3.0%
  - International Equity: 8.36% versus 8.0%
- During the quarter, RIO staff withdrew over $43 million from equities to reduce the over-weights.
  - $23.788 million of the withdrawal from equities was reallocated to Fixed Income to correct an asset allocation imbalance. The "rebalancing" transfer to Fixed Income move the allocation closer to target weight.
  - The remaining amount of the equity withdrawal ($9.489 million) met WSI's claims and expenses obligations.
- The table above indicates that cash flow is being managed effectively to generate liquidity and control risk.

WSI Performance and Attribution: Is the Total Fund meeting its return objective?

Gross and Net of Fee Returns as of March 31, 2021

One Year Relative Attribution Effects



Returns for 1 Year Ended 03/31/2021

Return Type	Return (%)
Gross	16.32%
Net of fees	16.12%
Target	12.44%
Net added	3.68%

NET of Investment Management Fees

One Year Relative Attribution Effects

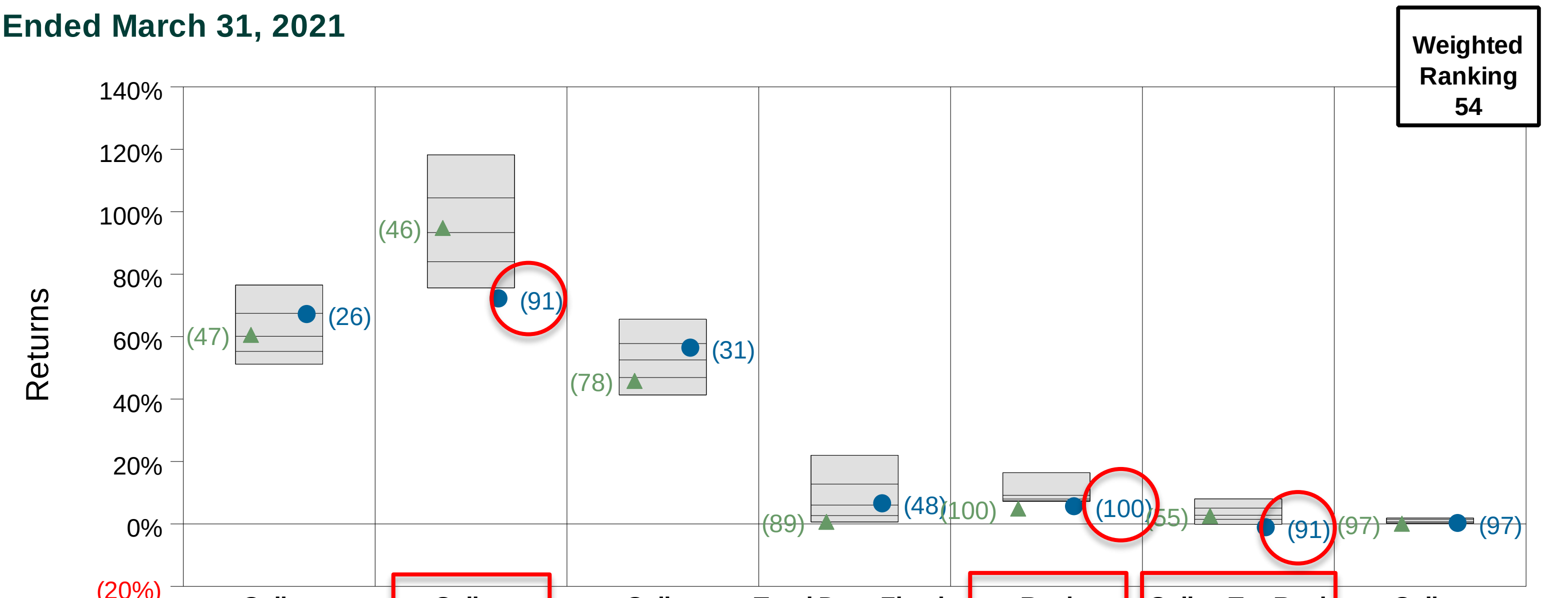
GROSS of Investment Management Fees

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	11%	11%	67.03%	60.59%	0.50%	(0.16%)	0.34%
Small Cap	3%	3%	72.02%	94.85%	(0.47%)	(0.05%)	(0.52%)
International Equity	8%	8%	56.26%	45.86%	0.60%	(0.09%)	0.50%
Domestic Fixed Income	61%	60%	6.40%	0.71%	3.80%	(0.12%)	3.68%
Diversified Real Assets	12%	12%	5.45%	4.91%	0.07%	(0.01%)	0.05%
Real Estate	5%	5%	(1.27%)	2.61%	(0.19%)	0.01%	(0.18%)
Cash & Equivalents	1%	1%	0.11%	0.12%	(0.00%)	(0.01%)	(0.01%)
Total			**16.32%**	**= 12.44%**	**+ 4.31%**	**+ (0.43%)**	**3.88%**

- On a one-year basis, WSI exceeds its index-based return objective both before (Gross) and after (Net) fees.

WSI asset class results versus indices and peer groups

Total Asset Class Performance
One Year Ended March 31, 2021



	Callan Large Cap	Callan Small Cap	Callan NonUS Eq	Total Dom Fixed-Inc DB	Real Returns	Callan Tot Real Est DB	Callan Cash
10th Percentile	76.55	118.27	65.61	22.02	16.42	8.03	1.92
25th Percentile	67.46	104.49	57.80	12.79	9.21	5.09	1.47
Median	60.12	93.33	52.59	6.06	7.98	2.80	0.73
75th Percentile	55.31	83.99	46.91	2.68	7.45	1.52	0.32
90th Percentile	51.22	75.65	41.36	0.64	7.27	(0.10)	0.22
Asset Class Composite ●	67.03	72.02	56.26	6.40	5.45	(1.27)	0.11
Composite Benchmark ▲	60.59	94.85	45.86	0.71	4.91	2.61	0.12

- Over the one-year period ended March 31, 2021, four asset classes are underperforming their benchmarks:

1. Small cap trails its composite benchmark (index) and is below median of the small cap peer group;
2. Real assets (TIPS, timber, and infrastructure) is ahead of index but below median of the peer group;
3. Real estate trails both index and peer group median; and
4. WSI's high quality cash pool lags the peer median and index. The magnitude of underperformance is small.

Performance: Are WSI's asset classes meeting their respective target returns?

As of March 31, 2021

One Year Relative Attribution Effects

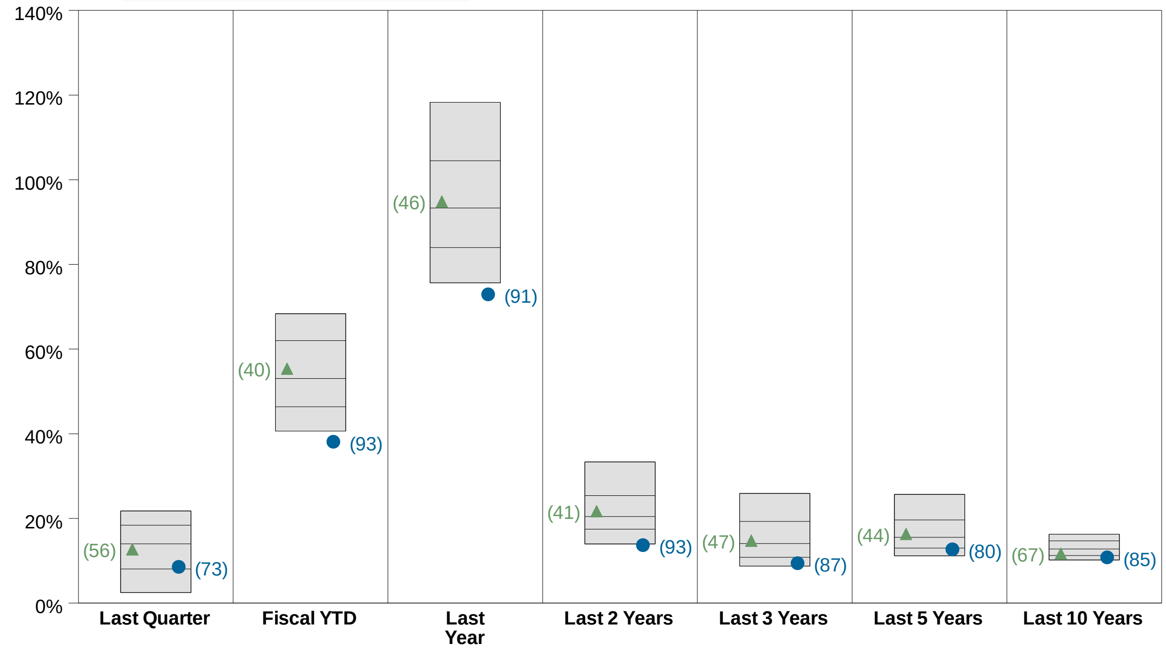
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	1 Manager Effect	2 Asset Allocation	Total Relative Return
Large Cap	11%	11%	67.03%	60.59%	0.50%	(0.16%)	0.34%
Small Cap	3%	3%	72.02%	94.85%	(0.47%)	(0.05%)	(0.52%)
International Equity	8%	8%	56.26%	45.86%	0.60%	(0.09%)	0.50%
Domestic Fixed Income	61%	60%	6.40%	0.71%	3.80%	(0.12%)	3.68%
Diversified Real Assets	12%	12%	5.45%	4.91%	0.07%	(0.01%)	0.05%
Real Estate	5%	5%	(1.27%)	2.61%	(0.19%)	0.01%	(0.18%)
Cash & Equivalents	1%	1%	0.11%	0.12%	(0.00%)	(0.01%)	(0.01%)
Total			**16.32% =**	**12.44% +**	**4.31% +**	**(0.43%)**	**3.88%**

- The two main sources that cause a Fund's performance to deviate from that of its Target are based on:
  1. "Manager Effect": Did the managers beat, match, or lag the ***index*** used for each asset class; and
  2. "Asset Allocation": How far from the strategic asset class target weights is the Fund's actual allocation.
- This exhibit indicates that the Total Fund and most asset classes are doing as well or better than benchmarks.
- The most impactful exception is Small Cap with a trailing one-year return lower than benchmark. **WHY?**

WSI Small Cap Performance Over Cumulative Periods

Periods Ending March 31, 2021

Performance vs Callan Small Capitalization (Gross)



	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	21.76	68.35	118.27	33.34	25.89	25.67	16.28
25th Percentile	18.39	62.02	104.49	25.38	19.31	19.65	14.71
Median	14.00	53.06	93.33	20.45	14.05	15.56	12.77
75th Percentile	8.08	46.37	83.99	17.47	10.82	13.00	11.25
90th Percentile	2.49	40.65	75.65	13.96	8.75	11.18	10.18
Small Cap ●	8.42	37.96	72.79	13.57	9.28	12.57	10.67
Small Cap Equity Target ▲	12.70	55.36	94.85	21.70	14.76	16.35	11.68

- The floating bar chart that shows the range of returns for managers' within the ***peer group*** (see title over chart).
- The triangle represents the benchmark ***index*** for the asset class.
- The circle represents the return of WSI's small cap composite. It includes three managers.
- **Question**: why is the combined allocation among the small cap managers below the index and peer median?

A Deeper Dive into Small Cap Results

Cumulative Net~ and Gross-of-Fee Returns

Returns for Periods Ended March 31, 2021

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Small Cap					
Gross	8.42%	72.79%	9.28%	12.57%	10.67%
Net	8.28%	71.90%	9.00%	12.26%	10.29%
Russell 2000 Index	12.70%	94.85%	14.76%	16.35%	11.68%
Atlanta Capital - Gross	8.86%	62.57%	-	-	-
Atlanta Capital - Net	8.68%	61.78%	-	-	-
S&P 600 Small Cap Index	18.24%	95.33%	13.71%	15.60%	12.97%
Riverbridge Small Cap Growth - Gross	0.84%	-	-	-	-
Riverbridge Small Cap Growth - Net	0.70%	-	-	-	-
Russell 2000 Growth Index	4.88%	90.20%	17.16%	18.61%	13.02%
Sycamore Small Cap Value - Gross	15.85%	-	-	-	-
Sycamore Small Cap Value - Net	15.73%	-	-	-	-
Russell 2000 Value Index	21.17%	97.05%	11.57%	13.56%	10.06%

- WSI's small cap structure includes three managers, two of which have been in place for less than one year.
- Riverbridge and Sycamore replaced two legacy managers during 2020: ***PIMCO RAE*** and ***Parametric Clifton***.
  - The two managers were replaced because they had trailed benchmarks from 2017 through 2020
- Only Atlanta Capital has a one-year record, trailing its benchmark index: 62.57% (61.78% net) vs 95.33%.
- Because they were hired so recently, the two new managers are showing one calendar quarter of returns.
  - All three small cap managers trailed benchmark during the "Last Quarter" – far too short a period to evaluate actively managed strategies. The minimum period to evaluate active management is at least three years.

Overview and Summary

- Performance monitoring is a very important element of a Trustee's overall fiduciary responsibilities.
- The five key issues in performance evaluation:
  1. Are a Plan's assets invested as outlined in its Investment Policy Statement?
     - o The performance evaluation documented that each of WSI's asset classes were well within the approved allocation ranges.
  2. Are the Plan's cash flows being managed consistent with its strategic asset allocation policy?
     - o The performance evaluation showed that the Fund delivered cash as needed and used the opportunity to rebalance.
  3. Do the Plan's Total Fund, asset class, and manager performance outcomes meet strategic return objectives?
     - o The performance evaluation shows that Total Fund results exceed benchmarks and identified areas of concern.
  4. Are the fees paid to managers reasonable given the competitive landscape and value delivered?
     - o The performance reports on both gross and net returns for the Total Fund.
     - o Callan delivers a bi-annual detailed assessment of manager and asset class fees to the SIB.
  5. Are any corrective steps necessary to bring the Plan back into compliance with long-term objectives?
     - o SIB replaced two small cap managers. Recent results have improved since the SIB took action.
- In support of the SIB's performance evaluation obligation, Callan delivers each quarter:
  - A. Three summary Board reports (278 pages total) reporting Pension, Insurance, and Legacy Fund results;
  - B. Three detailed staff reports (730 pages) on each trust's Total Fund, asset class and manager results; and
  - C. Responses to RIO staff inquiries regarding managers, asset classes, and investment-related topics.

RIO and Callan Reporting Timeline

Manager Data

- T+3BD managers begin submitting monthly statements

RIO Staff Data Review

- T+9BD RIO staff compares month-end portfolio values from custodian and managers

Custodian Finalizes Data

- T+11BD Custodian must have all portfolios reviewed and finalized so RIO staff can prepare monthly financial statements

Accounts are Closed

- Callan calculates manager and composite returns for Pension, Legacy, and Insurance.
- Meanwhile, RIO staff prepares the allocation reports for PERS, TFFR, WSI and Budget Stabilization Fund
- Once the allocation reports are finalized, Callan computes the manager and composite returns

Callan Posts Data

- When Callan has completed all return calculations, the data is uploaded into PEP, a proprietary performance evaluation software program that is used by RIO, Callan and other clients of the firm

Reports Finalized

- RIO Staff completes a reasonability check on Callan's data
- Following this check, performance reports are prepared, reviewed, and posted for distribution

For quarter-end months, Staff compares the Callan data against the returns on the internal reports to ensure consistency. At fiscal year end, comparisons are also completed for one-, three- and five-year return periods.
Private Equity data is typically lagged one quarter, except for fiscal year-end where the accounting period is held open for 45 calendar days to accommodate the current period data.

TAKEAWAYS

- Take a holistic view of the portfolio – Interplay of various statistics over a full market cycle.
- Risk and Return profiles should be evaluated in unison
- Portfolio returns and characteristics should be compared relative to a benchmark.
  – Indexes are useful for public market asset classes but are more challenging for private market asset classes.
  – Peer groups can be useful for both public and private assets
- Special considerations are necessary for private market investments (e.g., private equity and private real estate) given the longer time horizons the strategies require; the infrequency of asset valuation; and the appraisal-nature of valuations,

NORTH DAKOTA
Growth Fund

NDGF Investment Overview

August 27, 2021

Photo attributed to 2019 North Dakota Governor's Best of Show and Decade's Best "Stormy Sunset" by Zachary Hargrove of Bismarck, North Dakota. Copyright free.

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PRIVATE EQUITY STRATEGIES

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The private equity asset class encompasses several different strategies that have disparate risk/return characteristics.

Infrastructure
Purchase of either equity or debt used to fund the construction of new assets or acquisition of existing, stabilized assets.

Buyout
Purchase of stock or assets of a company, generally involving leverage and controlling interest by the private equity firm. Company is generally cash flow positive.

PRIVATE EQUITY:
Investing in companies that are not listed on a public exchange

Direct Investments
Investments into companies directly alongside our buyout, real assets and venture capital managers

Venture Capital
Investments in young, early stage companies that generally do not have positive cash flow (or even revenues) but are expected to grow quickly.

PRIVATE EQUITY CAPITAL SOURCES BY COMPANY LIFECYCLE

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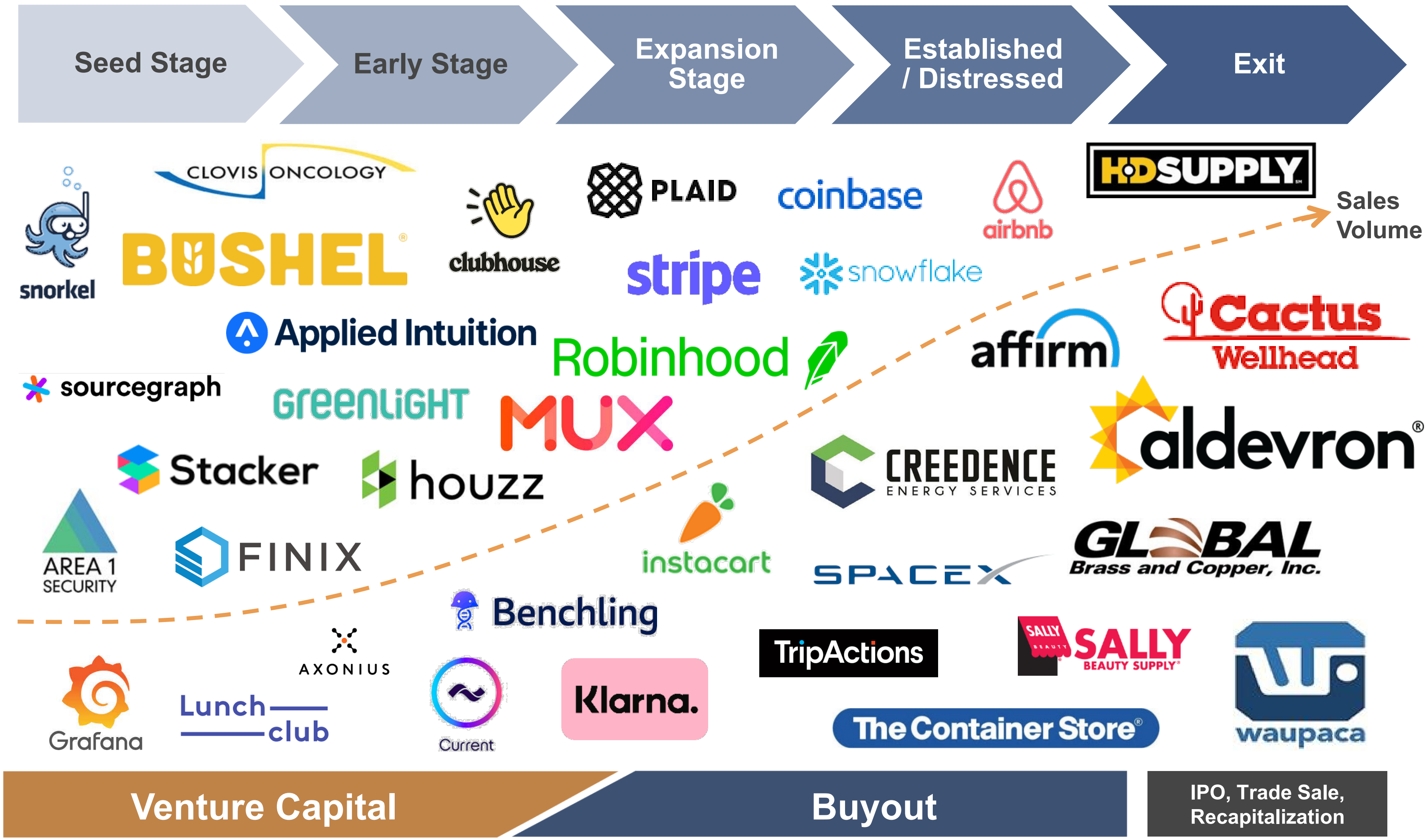

For illustrative purposes only.

INVESTMENT SELECTION IS CRITICAL

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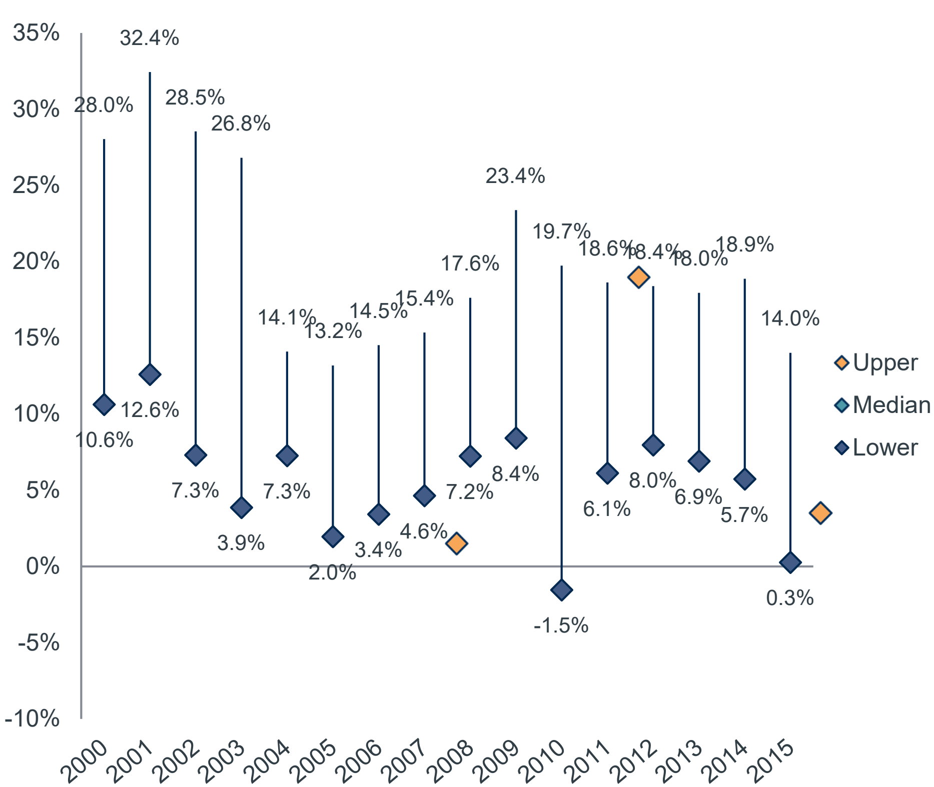
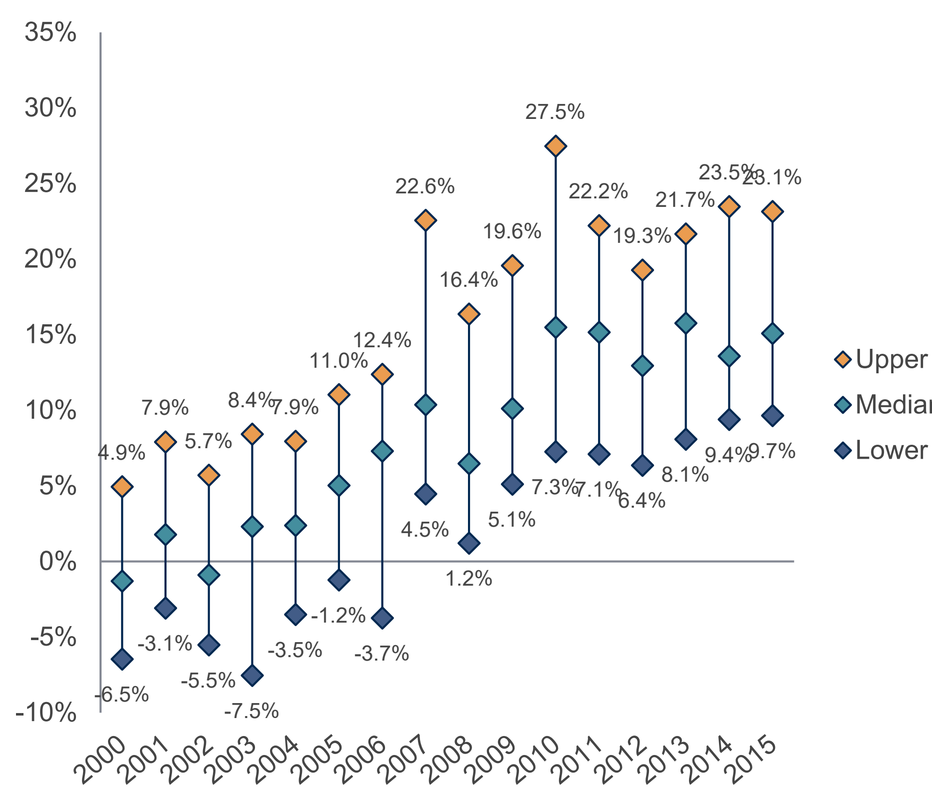
Return dispersion is high, requiring access to elite managers and identification skills

Global Buyout

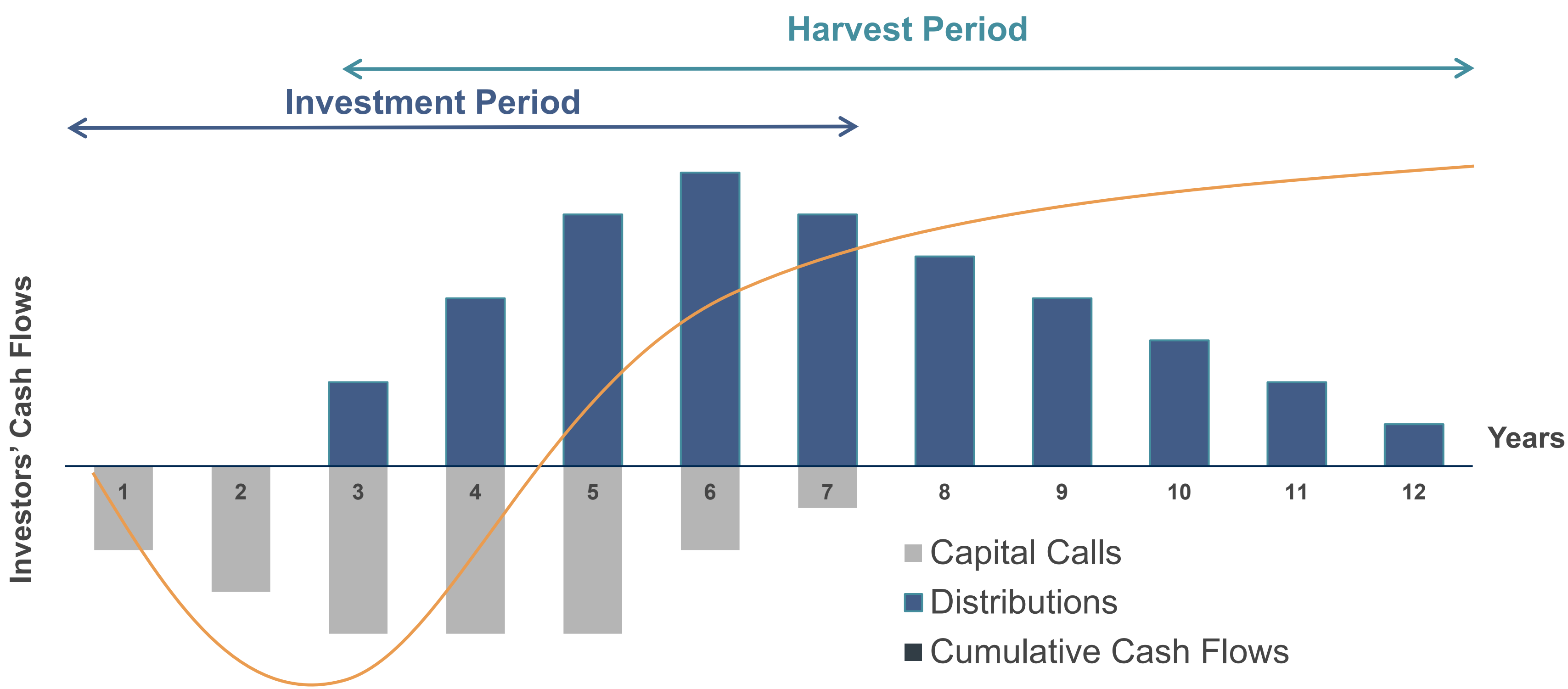


Global Venture Capital



Source: Cambridge Associates as of 3/31/20. Internal Rates of Return net of underlying manager fees and carried interest.

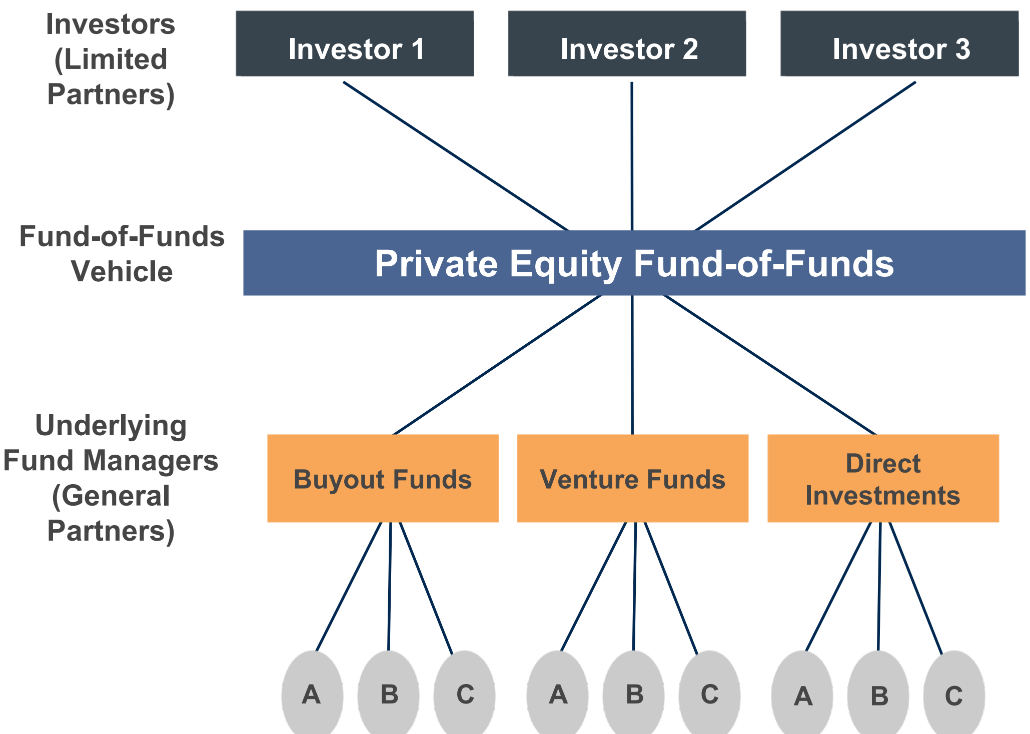
ILLUSTRATIVE FUND LEVEL CASH FLOWS

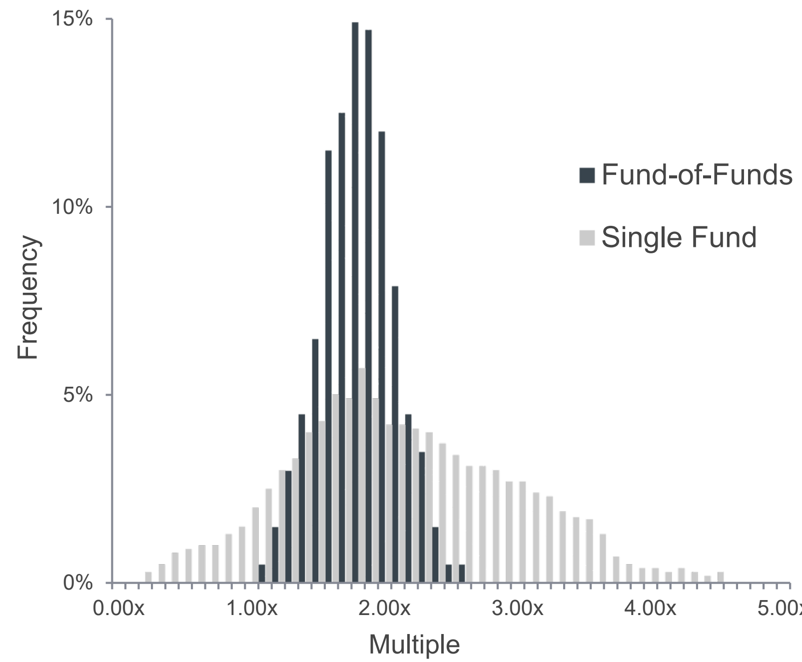


For illustrative purposes only. Assumes $1.0 million commitment.

PRIVATE EQUITY FUND-OF-FUNDS OVERVIEW

Fund-of-Funds Structure





For illustrative purposes only. 50 South Capital estimate.

RIGOROUS INVESTMENT PROCESS

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Deal Sourcing

- Meetings with 750+ funds and companies per year
- “Open door” policy
- Leverage multiple networks: Private Equity Team & Northern Trust

Portfolio Construction

- Bottom-up approach
- Broad diversification guidelines
- Thoughtful combination of smaller niche managers with select larger established funds

Due Diligence

- Deep quantitative and qualitative assessments
- Firsthand research supplemented with perspectives of trusted third parties (*e.g.*, legal documentation review, background checks, reference calls)

Investment Committee Approval

- Detailed investment memorandum
- Oversight committee must approve all investments

Portfolio Monitoring

- Focus on consistency of strategy & quality of returns
- Regular updates through quarterly conference calls and annual meetings
- Advisory board participation
- Portfolio review meetings
- Constant monitoring results in better investment decisions

Note that all steps of the analysis may not be taken for each fund investment. The analysis completed may occur at different points in the process than stated above. For illustrative purposes only.

INTERNAL DUE DILIGENCE PROCESS

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Preliminary Due Diligence

Initial Introduction Made Via:
- 50SC calling program
- Private equity team or Northern Trust network

Introductory Meeting:
- In person at 50SC office or fund headquarters
- Focus on the team, strategy, and track record

Fund Presented in Weekly Team Meeting:
- Decision made to pass, track, or pursue

Initial Fund Analysis:
- Create key statistics spreadsheet (analysis of cash flows, returns, deal sources, loss ratio, etc.)
- Deeper review of private placement memorandum

Active Due Diligence

On-Site Due Diligence:
- Day-long meeting reviewing all portfolio reviews, prior funds, broader team, and in-depth discussion of strategy
- Multiple meetings are typical, based on multi-city office setup

Team Follow-Up Discussion:
- Discuss manger merits, risks, and fit within the portfolio
- Preparation of detailed follow-up questions

Reference Calls:
- On and off list references made with portfolio company CEOs, LPs, former team, lenders, and other

Follow-Up Discussion with Fund:
- Majority of questions and concerns typically addressed
- Additional in-person meetings for other team members if needed

Confirmatory Due Diligence and Underwriting

Legal Review :
- All concerns addressed
- Side letter and LPA terms negotiated
- Performed with assistance from outside counsel

Investment Memorandum Prepared:
- Contains multiple sections detailing investment rationale, risks/mitigants, fund overview, investment strategy, historical performance, return distribution, and team retention

Background Checks Completed On Key Partners:
- Investment contingent on no concerns

Presentation To Investment Committee:
- Unanimous approval required

Note that all steps of the analysis may not be taken for each fund investment. The analysis completed may occur at different points in the process than stated above.

50 SOUTH CAPITAL INVESTMENT PROCESS

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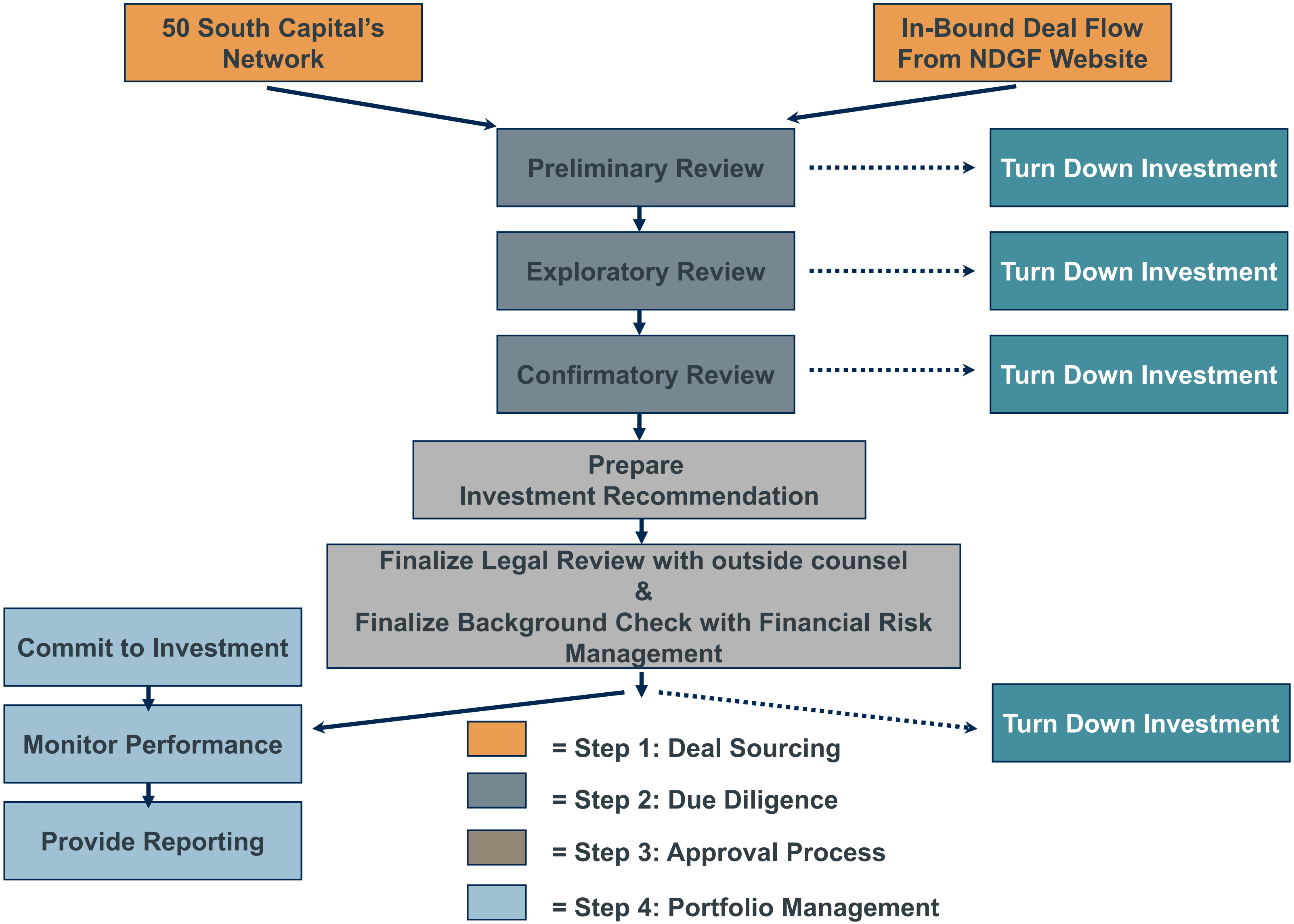

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OPTIMIZING PORTFOLIO DESIGN

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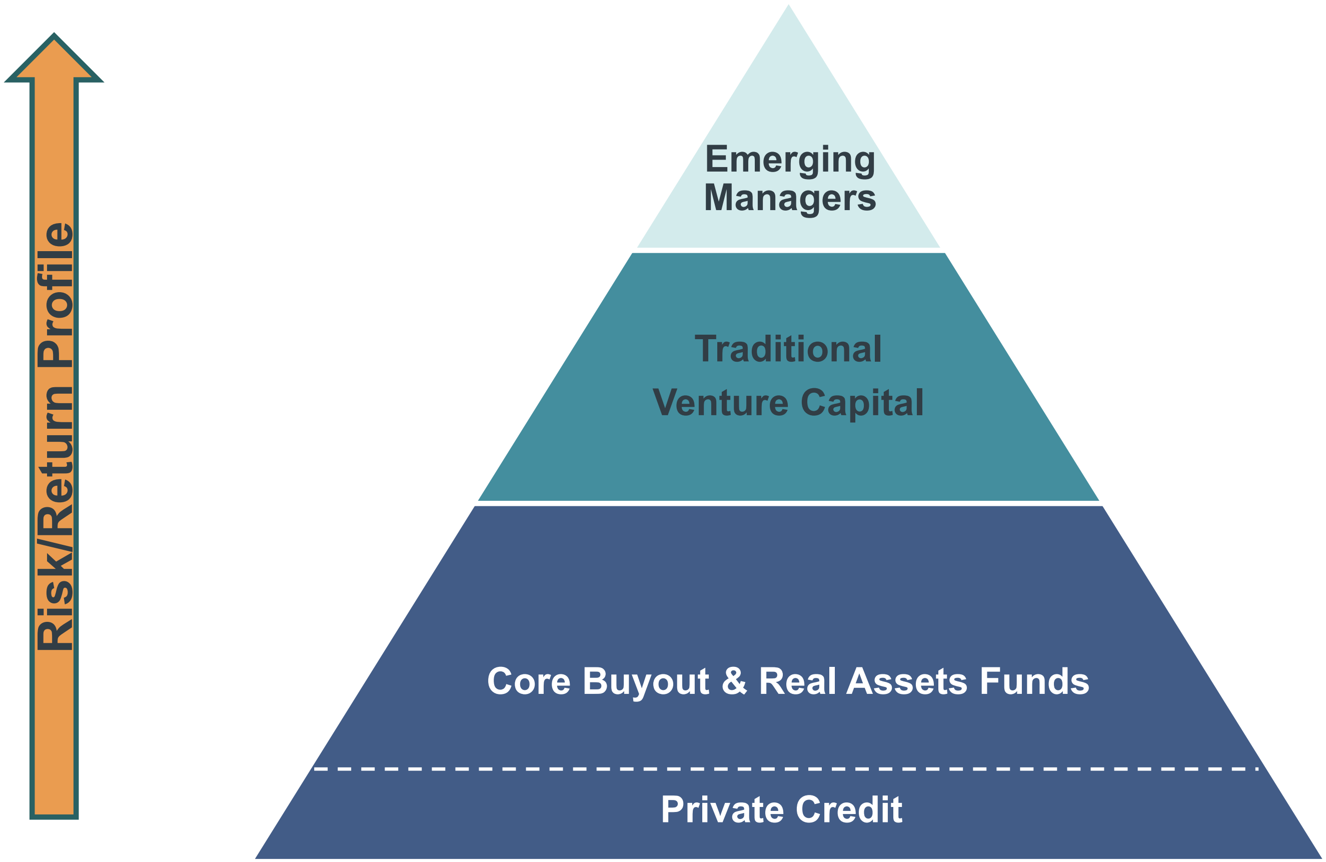

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MODEL PORTFOLIO DESIGN

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Investment Strategy:
Diversified portfolio across vintage, industry, geography, strategy, primaries and direct investments

Venture & Growth Capital

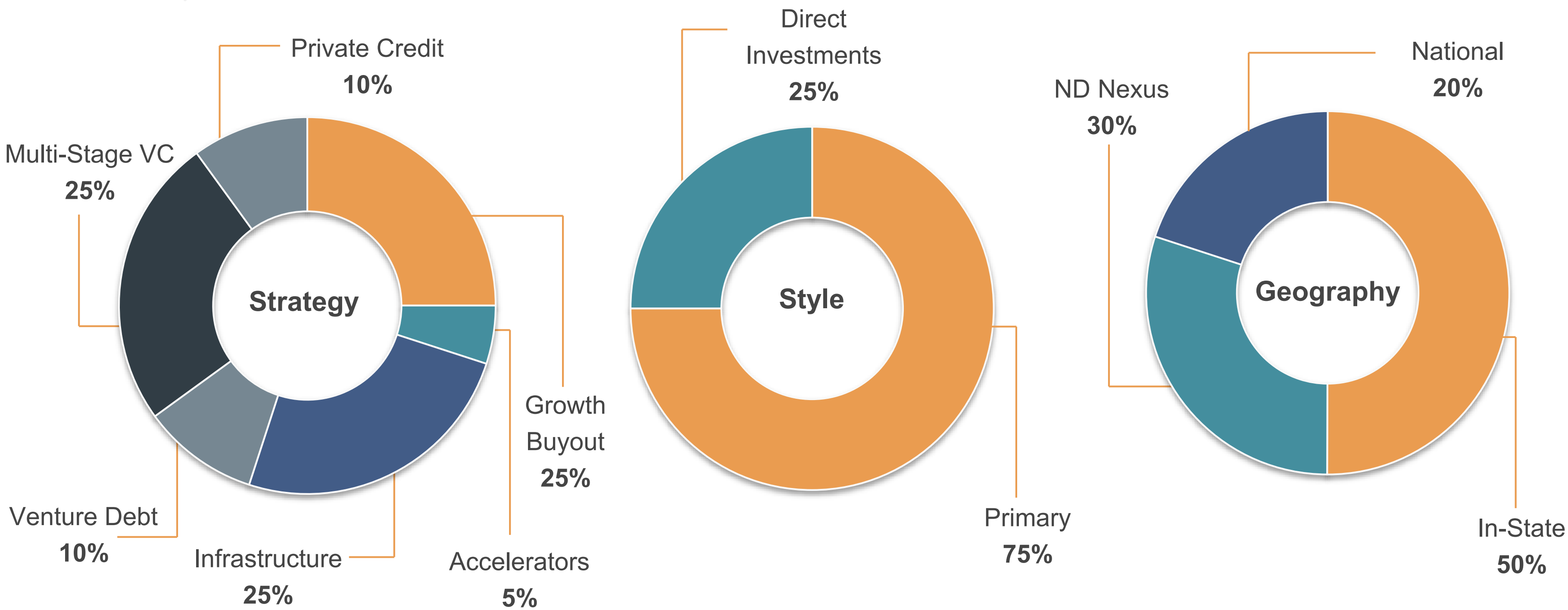
- Pre-seed to early growth stage
- Venture Debt & Accelerators
- Focus on in-State investments
- 14 to 16 managers

Growth Private Equity & Private Credit

- Lower middle market focus
- Energy & Infrastructure focus
- Focus on in-State investments
- 7 to 10 managers

Direct Investments

- Early growth stage venture capital
- LMM control buyout & credit
- Focus on in-State investments
- 20-25 co-investments



Actual Fund may differ from projected allocation based on available investment opportunities. Ranges are approximate only. For illustrative purposes only.

RISKS AND DISCLOSURES

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Each Fund is a fund of funds that invests substantially all of its assets in underlying funds. Investors will bear the fees and expenses of the Fund as well as the fees and expenses of the underlying funds, and as a result overall fees an investor pays may be higher than those an investor would pay if investing directly in the underlying funds. Most, if not all, underlying funds pay incentive fees. Private equity fund of funds performance is net of fees and expenses. Past performance is not indicative of or a guarantee of future results which will fluctuate as market conditions change. This information should not be regarded as providing any assurance that any Fund will continue to have the features and attributes described herein. Information relating to performance and strategy exposures has been obtained from sources believed to be reliable, but its accuracy and completeness are not guaranteed.

Risk disclosure: All securities investing and trading activities risk the loss of capital. Each Fund is subject to substantial risks including market risks, strategy risks, adviser risk and risks with respect to its investment in other structures. Each Fund primarily invests in alternative investment funds advised by third-party managers for which the Fund will not have the ability to direct or influence the management of their investments. As a result, the returns of the Fund will primarily depend on the performance of the managers and could suffer substantial adverse effects by the unfavorable performance of such managers. Third-party managers may experience financial difficulties that may never be overcome. An investor could lose all or a substantial amount of their investment. Each Fund is suitable only for a limited portion of an investment portfolio and is not a complete investment program. There can be no assurance that any Fund’s investment objectives will be achieved, or that any Fund will achieve profits or avoid incurring substantial losses. See “Risk Factors and Conflicts of Interest” in the Fund’s Confidential Private Offering Memorandum for additional information about these and other risks associated with an investment in the Fund.

Certain information contained herein represents or is based on forward-looking statements or information, including descriptions of anticipated market changes and expectations of future activity. Forward-looking statements and information are inherently uncertain and actual events or results may differ from those projected.

Comparative indices shown are provided as an indication of the performance of a particular segment of the capital markets and/or alternative strategies in general. Comparisons to indices are for illustrative purposes only and are not meant to imply that any Fund’s returns or volatility will be similar to the indices. Each Fund is compared to the indices because they are widely used performance benchmarks. It is generally not possible to invest directly in an index. Each Fund will not directly track any index and the Fund will differ from indices in important ways. Each Fund is actively managed and its portfolio will not include all components of any index and may include securities not included, and not eligible for inclusion, in any index. The performance of the Fund may differ materially from that of any index. An index is un-managed and the returns generally do not reflect the deduction of fees or expenses. Each index herein is comprised of different securities and asset classes.

Index Information: The S&P 500 Index is comprised of 500 publicly traded stocks representing all major U.S. industries. The MSCI World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets.

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RISKS AND DISCLOSURES

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This information is intended for purposes of Northern Trust marketing of itself as a provider of the products and services described herein and not to provide any investment recommendations or advice within the meaning of the Department of Labor's Final Fiduciary Rule (29 CFR §2510.3-21). Northern Trust is not undertaking to provide impartial investment advice or give advice in a fiduciary capacity to the recipient of these materials. Further, Northern Trust and its affiliates receive fees and other compensation in connection with the products and services described herein as well as for custody, fund administration, transfer agent, investment operations out-sourcing and other services rendered to various proprietary and third-party investment products and firms that may be the subject of or become associated with the services described herein.

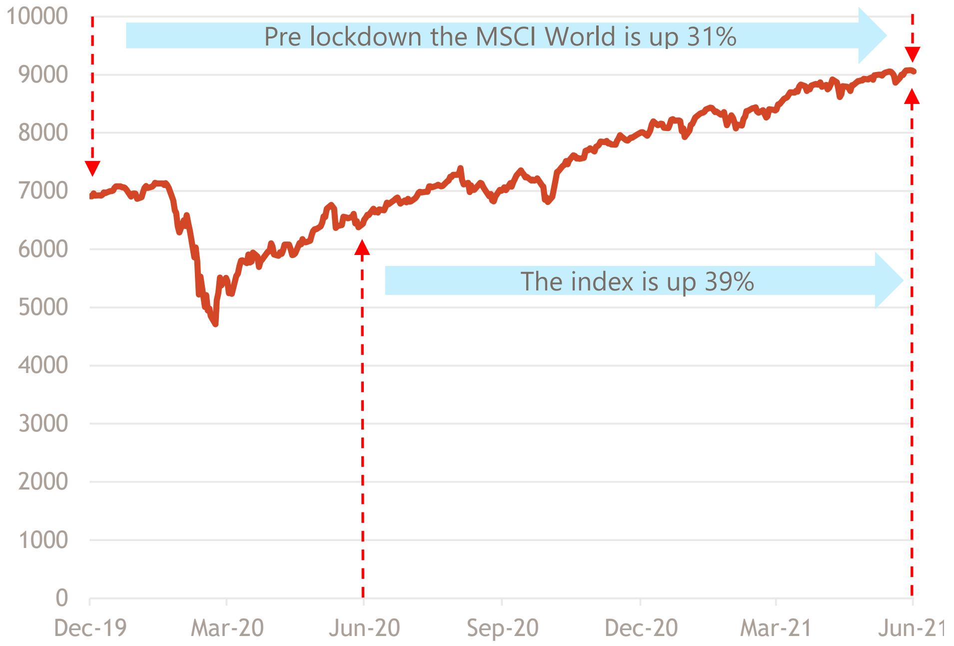
Northern Trust Asset Management is composed of Northern Trust Investments, Inc., Northern Trust Global Investments Limited, Northern Trust Fund Managers (Ireland) Limited, Northern Trust Global Investments Japan, K.K., NT Global Advisors, Inc., 50 South Capital Advisors, LLC, Belvedere Advisors LLC and investment personnel of The Northern Trust Company of Hong Kong Limited and The Northern Trust Company.

INVESTMENT AND PERFORMANCE UPDATE
AS OF JUNE 30, 2021

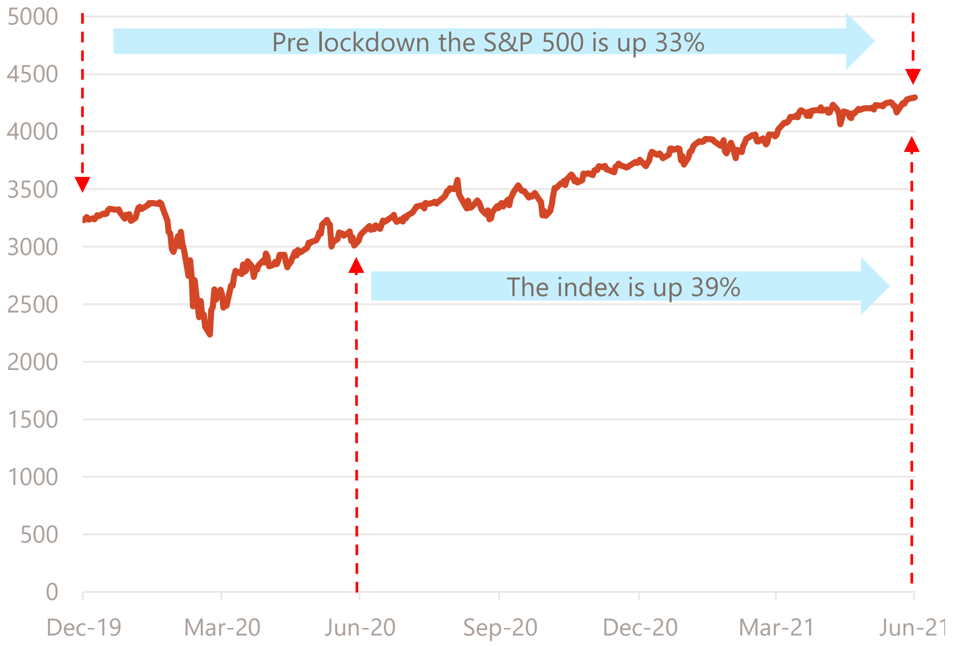
NORTH Dakota
Be Legendary.™

STRONG PERFORMANCE ACROSS EQUITIES

MSCI World Net Total Return Index

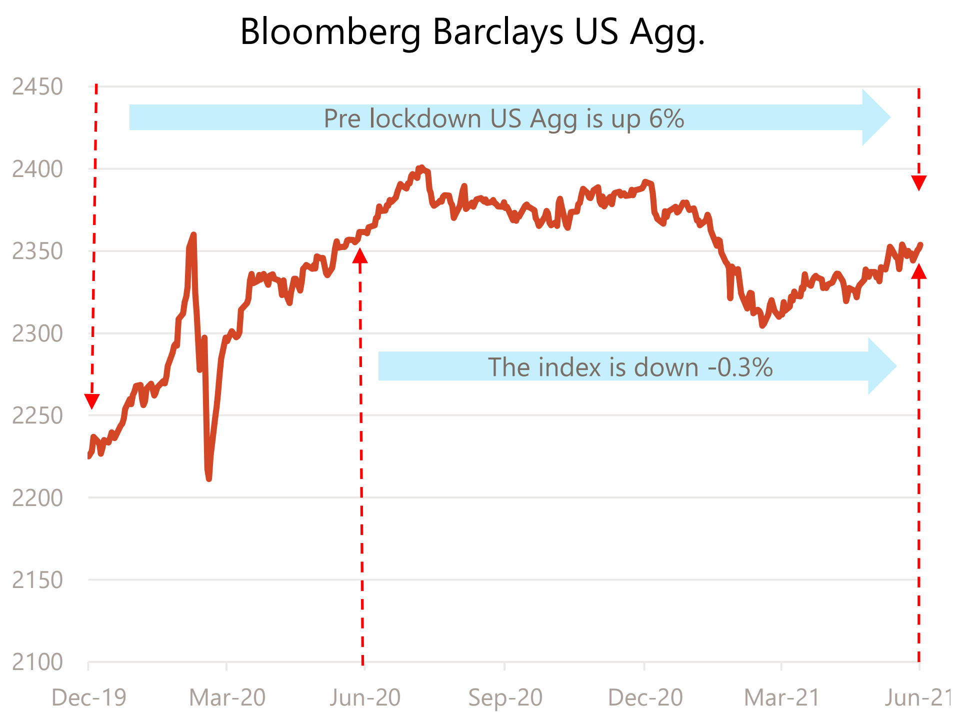


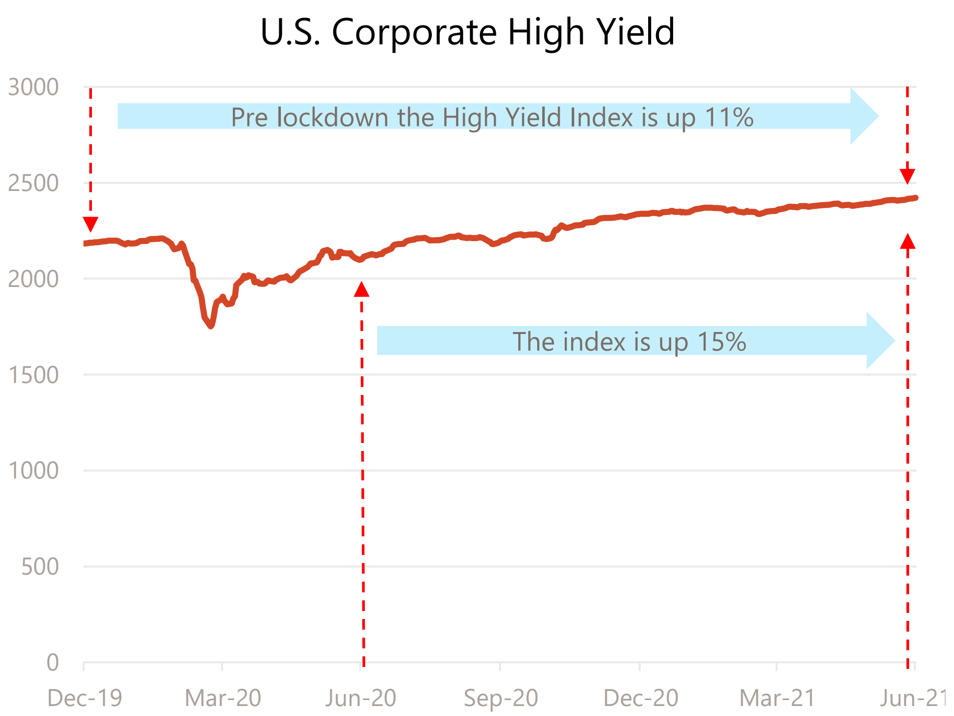
S&P 500



- Pandemic drawdown for both the MSCI World Index and the S&P 500 was -34%
- Despite the correction, equities have been strong reaching new highs
- From the low point of the correction, from March 23, 2020 to June 30, 2021 the S&P 500 is up 92%

FIXED INCOME PERFORMANCE





Surprisingly both equities and fixed income have generated positive returns despite the pandemic

PERFORMANCE UPDATE

- PERS and TFFR earned a net investment return of 27.15% and 26.55% respectively for the year ending June 30, 2021
- For the 5-year period ending June 30, 2021, PERS and TFFR earned a net investment return of 11.36% and 11.23% respectively
- Job Service, a de-risked pension plan, failed to exceed policy benchmark returns for the 1, 3 and 5 year periods ending June 30, 2021. Staff will reach out to SEI to better understand the underperformance.

	1 Yr Ended 6/30/2021	3 Yrs Ended 6/30/2021	5 Yrs Ended 6/30/2021	Risk 5 Yrs Ended 6/30/2021
PERS $4.0 billion				
Total Fund Return - Net	27.15%	11.53%	11.36%	10.4%
Policy Benchmark Return	25.84%	11.39%	10.77%	10.1%
Total Relative Return	1.31%	0.15%	0.59%	
TFFR $3.2 billion				
Total Fund Return - Net	26.55%	11.38%	11.23%	10.4%
Policy Benchmark Return	26.26%	11.49%	10.79%	10.3%
Total Relative Return	0.28%	-0.10%	0.44%	
Bismarck Employees $128.4 million				
Total Fund Return - Net	21.89%	10.24%	10.03%	8.6%
Policy Benchmark Return	20.55%	9.96%	9.29%	8.5%
Total Relative Return	1.35%	0.28%	0.73%	
Bismarck Police $51.9 million				
Total Fund Return - Net	23.97%	10.68%	10.52%	9.3%
Policy Benchmark Return	22.80%	10.42%	9.88%	9.3%
Total Relative Return	1.18%	0.26%	0.65%	
Grand Forks Pension $81.8 million				
Total Fund Return - Net	27.55%	12.10%	11.72%	10.9%
Policy Benchmark Return	26.91%	11.89%	11.21%	10.9%
Total Relative Return	0.63%	0.21%	0.51%	
Grand Forks Parks $9.4 million				
Total Fund Return - Net	26.46%	11.65%	11.40%	10.0%
Policy Benchmark Return	24.54%	11.21%	10.69%	9.5%
Total Relative Return	1.92%	0.43%	0.71%	
Job Service $96.7 million				
Total Fund Return - Net	6.48%	5.37%	4.97%	4.2%
Policy Benchmark Return	7.97%	6.58%	6.34%	3.9%
Total Relative Return	-1.49%	-1.21%	-1.37%	

Note: Amounts are unaudited and subject to change.

PERFORMANCE UPDATE

CONTINUED…

- WSI and Legacy Fund earned a net investment return of 11.57% and 22.68% respectively for the year ended June 30, 2021
- For the 5-year period ended June 30, 2021, WSI and Legacy Fund earned a net investment return of 7.59% and 10.10% respectively
- Budget Stabilization's relative performance has materially improved from the prior fiscal year, outperforming in each the 1 year, 3 year and 5 year periods

	1 Yr Ended 6/30/2021	3 Yrs Ended 6/30/2021	5 Yrs Ended 6/30/2021	Risk 5 Yrs Ended 6/30/2021
WSI $2.3 billion				
Total Fund Return - Net	11.57%	8.12%	7.59%	6.2%
Policy Benchmark Return	9.19%	7.62%	6.35%	4.6%
Total Relative Return	2.38%	0.50%	1.24%	
Legacy Fund $9.0 billion				
Total Fund Return - Net	22.68%	10.31%	10.10%	10.7%
Policy Benchmark Return	20.64%	10.15%	9.36%	9.6%
Total Relative Return	2.04%	0.17%	0.74%	
Budget Stabilization $749.6 million				
Total Fund Return - Net	3.92%	3.59%	2.37%	2.8%
Policy Benchmark Return	0.44%	2.94%	1.87%	1.1%
Total Relative Return	3.48%	0.65%	0.49%	
Fire & Tornado $22.8 million				
Total Fund Return - Net	15.64%	8.91%	8.26%	8.5%
Policy Benchmark Return	13.71%	8.76%	7.41%	6.8%
Total Relative Return	1.93%	0.15%	0.85%	
State Bonding $3.9 million				
Total Fund Return - Net	1.64%	4.13%	3.16%	2.5%
Policy Benchmark Return	-0.13%	3.54%	2.21%	2.1%
Total Relative Return	1.77%	0.59%	0.95%	
Insur. Reg. Trust $7.1 million				
Total Fund Return - Net	12.75%	7.91%	7.13%	6.1%
Policy Benchmark Return	11.59%	7.07%	6.18%	5.7%
Total Relative Return	1.16%	0.84%	0.94%	

Note: Amounts are unaudited and subject to change.

PERFORMANCE UPDATE

CONTINUED…

- Over 98% of the SIB Pension clients earned net returns which exceeded their respective policy benchmarks for the 5 year period ending June 30, 2021 (based on AUM)

- All of our SIB Non-Pension clients earned net returns which exceeded their respective policy benchmarks for the 5 year period ending June 30, 2021 (based on AUM)

	1 Yr Ended	3 Yrs Ended	5 Yrs Ended	Risk 5 Yrs Ended
Petrol. Tank Release $6.3 million				
Total Fund Return - Net	1.56%	3.85%	2.97%	2.2%
Policy Benchmark Return	-0.11%	3.34%	2.11%	1.9%
Total Relative Return	1.67%	0.51%	0.86%	
State Risk Mgmt $4.4 million				
Total Fund Return - Net	14.48%	9.28%	8.24%	7.8%
Policy Benchmark Return	12.56%	9.23%	7.47%	6.2%
Total Relative Return	1.92%	0.05%	0.77%	
State Risk W/C $4.3 million				
Total Fund Return - Net	17.28%	10.08%	9.12%	9.1%
Policy Benchmark Return	15.74%	10.23%	8.55%	7.5%
Total Relative Return	1.54%	-0.16%	0.57%	
NDACo $7.7 million				
Total Fund Return - Net	15.72%	9.42%	8.19%	8.7%
Policy Benchmark Return	13.49%	9.10%	7.28%	6.8%
Total Relative Return	2.23%	0.32%	0.91%	
Bismarck Def. Sick $0.8 million				
Total Fund Return - Net	13.81%	8.65%	7.88%	7.8%
Policy Benchmark Return	11.44%	8.31%	6.76%	6.0%
Total Relative Return	2.37%	0.34%	1.12%	
FargoDome $49.8 million				
Total Fund Return - Net	22.07%	10.03%	9.99%	11.2%
Policy Benchmark Return	21.23%	10.44%	9.51%	9.9%
Total Relative Return	0.84%	-0.41%	0.48%	
Cultural Endowment $0.6 million				
Total Fund Return - Net	24.21%	11.02%	10.80%	11.9%
Policy Benchmark Return	23.49%	11.60%	10.66%	10.6%
Total Relative Return	0.73%	-0.58%	0.14%	

Note: Amounts are unaudited and subject to change.

PERFORMANCE UPDATE

CONTINUED…

- Strong absolute returns were primarily driven by public equities. Excess returns were driven by active managers in international equities and domestic fixed income

	1 Yr Ended 6/30/2021	3 Yrs Ended 6/30/2021	5 Yrs Ended 6/30/2021	Risk 5 Yrs Ended 6/30/2021
Board of Medicine $2.8 million				
Total Fund Return - Net	12.58%	7.65%	6.26%	6.6%
Policy Benchmark Return	10.46%	7.08%	5.60%	4.9%
Total Relative Return	2.12%	0.57%	0.65%	
PERS Group Insurance $34.6 million				
Total Fund Return - Net	3.63%	3.39%	2.12%	2.6%
Policy Benchmark Return	0.41%	2.78%	1.80%	1.1%
Total Relative Return	3.22%	0.61%	0.32%	
Lewis & Clark $0.9 million				
Total Fund Return - Net	15.45%	9.30%	N/A	
Policy Benchmark Return	13.24%	8.88%	N/A	
Total Relative Return	2.21%	0.42%	N/A	
AG Settlement $0.9 million				
Total Fund Return - Net	2.25%	N/A	N/A	
Policy Benchmark Return	0.21%	N/A	N/A	
Total Relative Return	2.04%	N/A	N/A	
Veterans' Cemetary $0.4 million				
Total Fund Return - Net	21.96%	N/A	N/A	
Policy Benchmark Return	20.72%	N/A	N/A	
Total Relative Return	1.24%	N/A	N/A	
PERS Retiree Health $180.2 million				
Total Fund Return - Net	25.67%	12.03%	10.99%	12.3%
Policy Benchmark Return	23.83%	11.63%	10.66%	11.2%
Total Relative Return	1.84%	0.40%	0.33%	
Tobacco Prev $0.0 million				
Total Fund Return - Net	0.17%	2.76%	2.31%	1.5%
Policy Benchmark Return	0.07%	2.71%	2.29%	1.4%
Total Relative Return	0.10%	0.05%	0.02%	

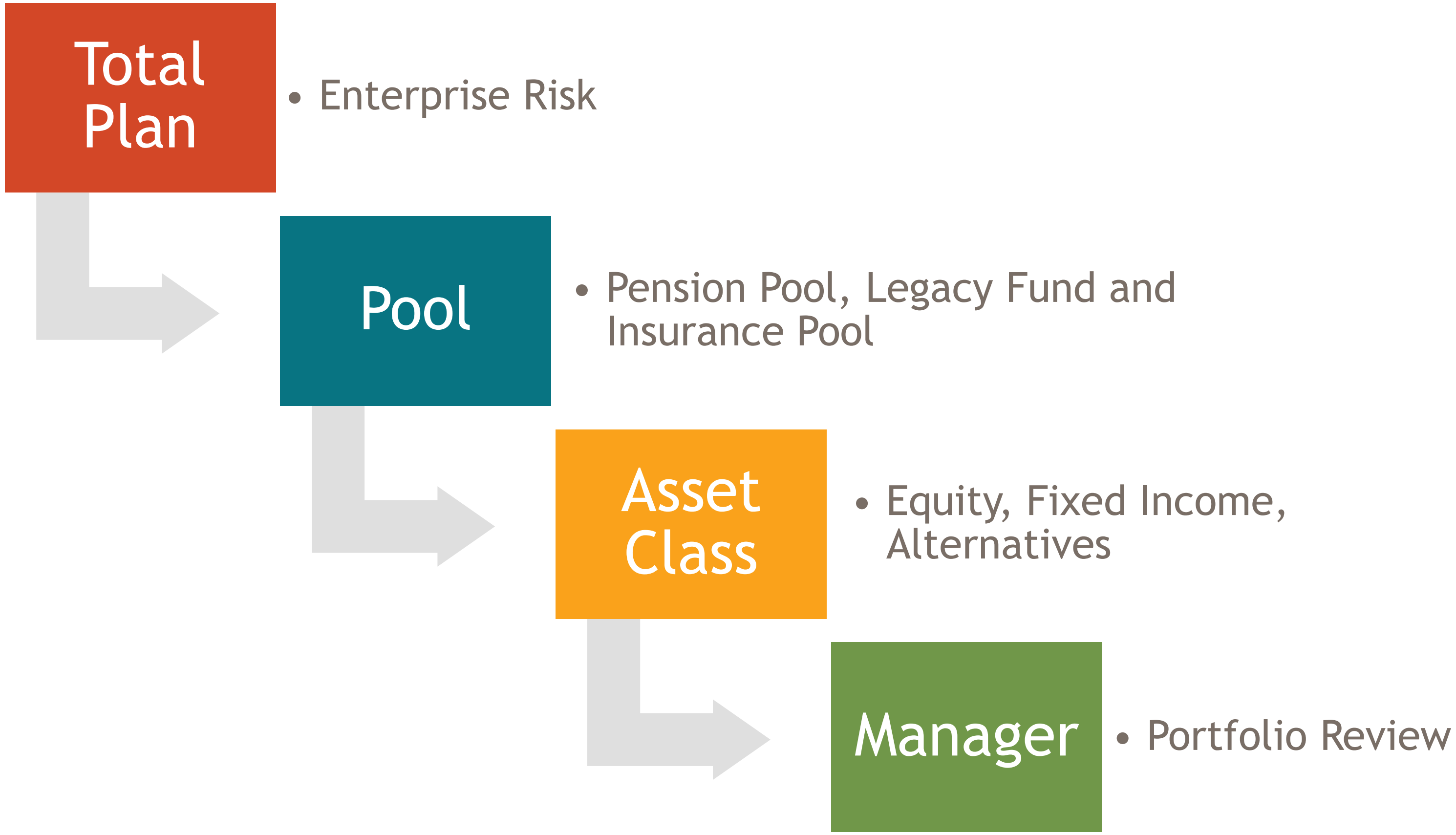
Note: Amounts are unaudited and subject to change.

DIFFERENT LENSES OF RISK

Concentration/ Exposures	• Value at Risk, geographic exposures, strategy exposures, issuer concentration, market cap etc.
Benchmark/Attribution	• Tracking error, return analyses, exposures vs benchmark etc.
Factor Exposures	• Fundamental factors: value, growth, yield, duration, convexity • Macro factors: economic growth, real rates, inflation, EM
Stress & Scenario Analysis/Risk Decomposition	• Stress tests with historic data and scenario analyses with hypothetical scenarios • Decompose risk by sector, asset class, vs benchmark etc.
Liquidity	• Evaluate liquidity at the position level

- Use different lenses, models and tools to measure and evaluate risk in the portfolio
- There is no single quintessential or comprehensive risk metric

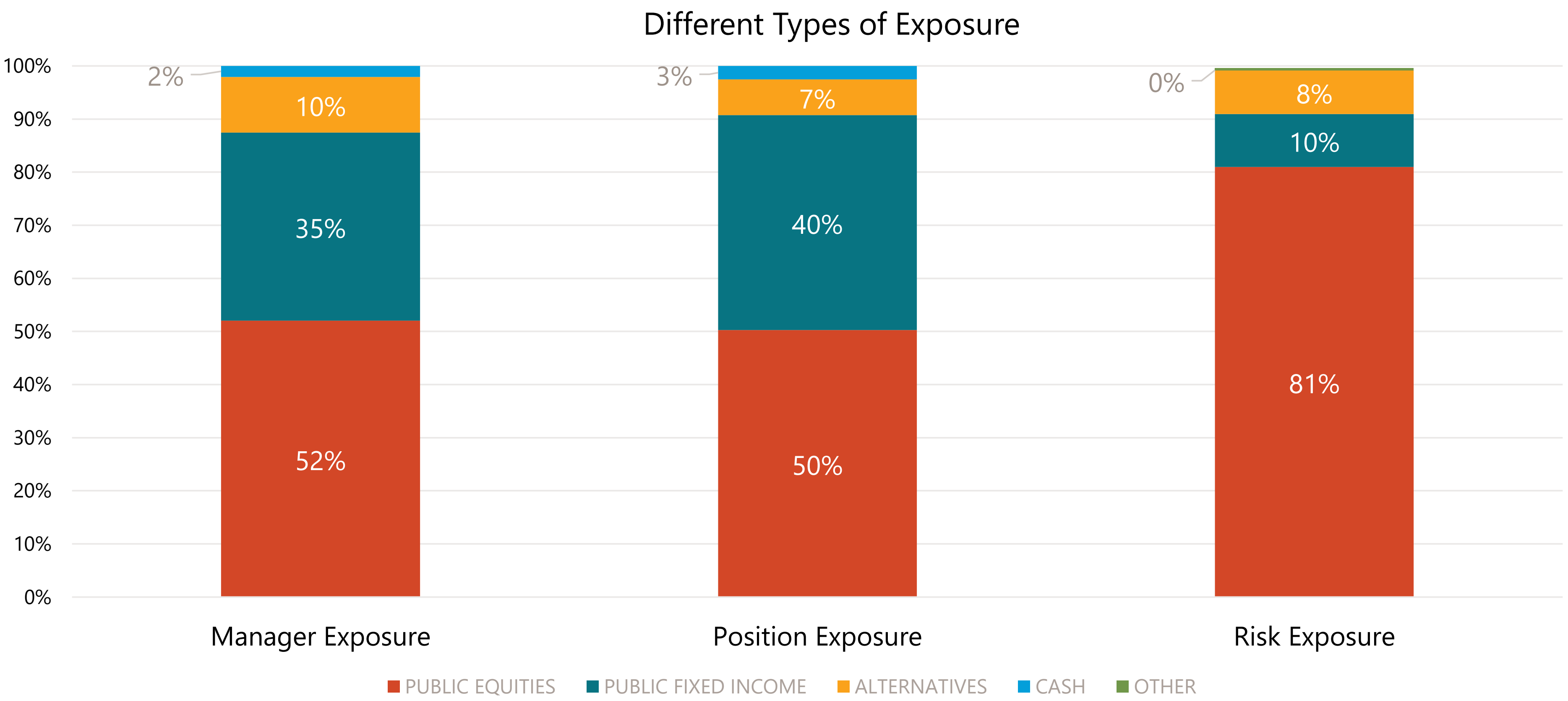
EVALUATE RISK AT MULTIPLE LEVELS



Examining the portfolio at different levels offers distinct and valuable insights

DISSECT MANAGER PORTFOLIOS

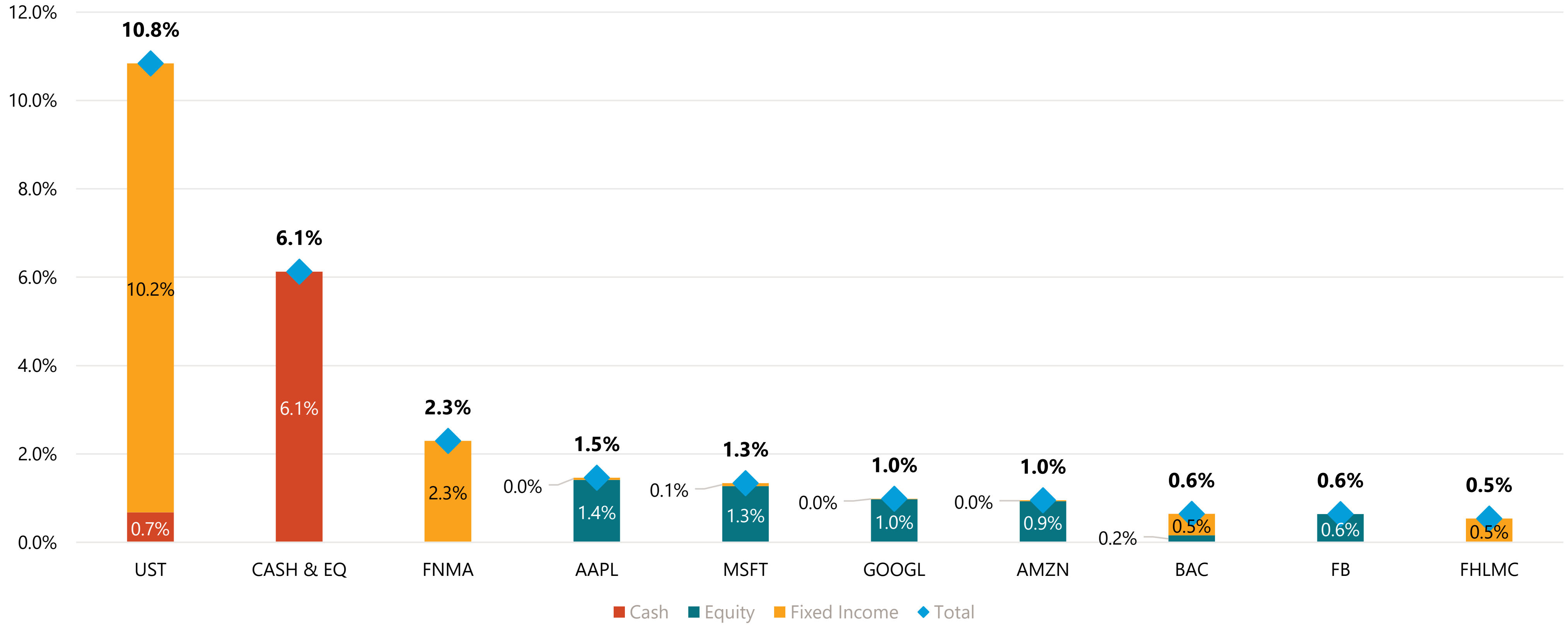
LEGACY FUND AS OF JUNE 30, 2021



33 investment strategies → 10,000+ positions → Evaluate with different lenses

ISSUER CONCENTRATION: TOP TEN

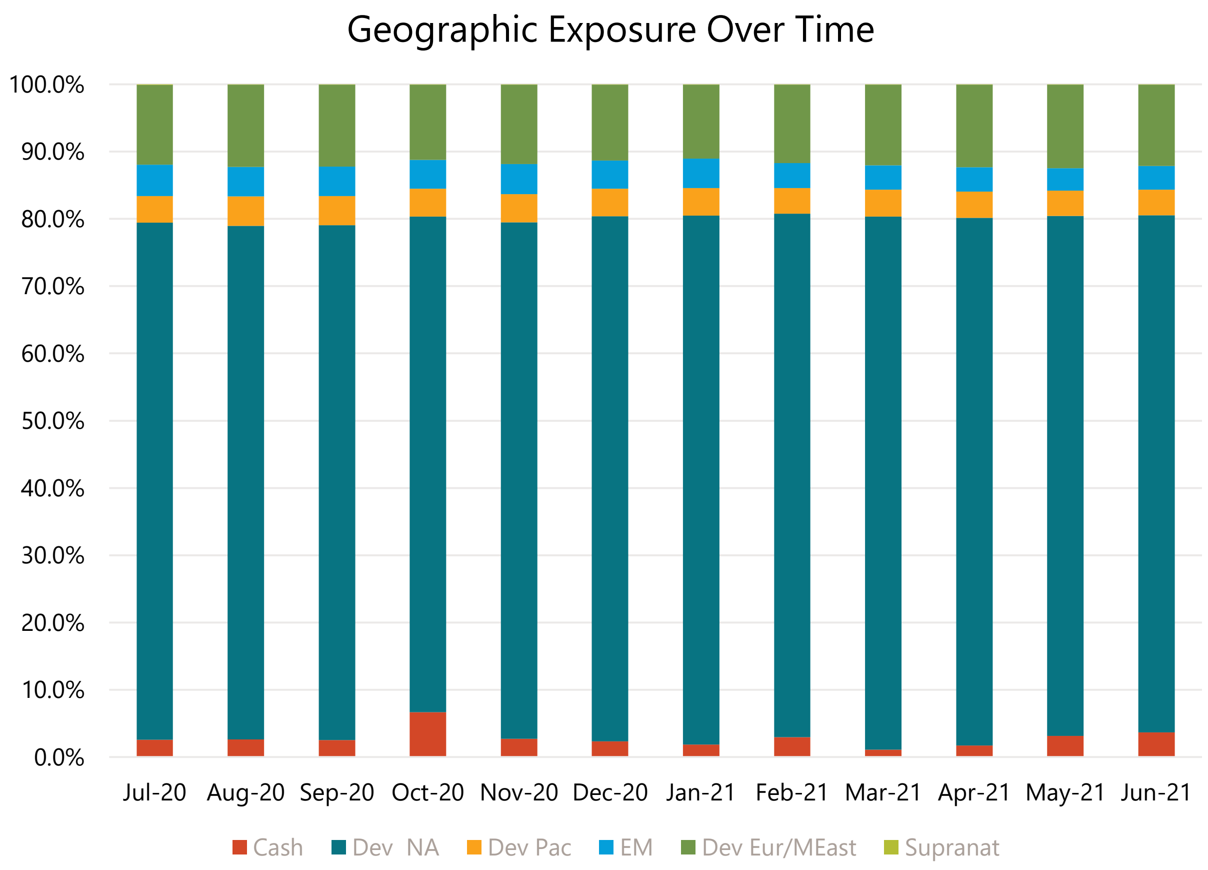
LEGACY FUND AS OF JUNE 30, 2021

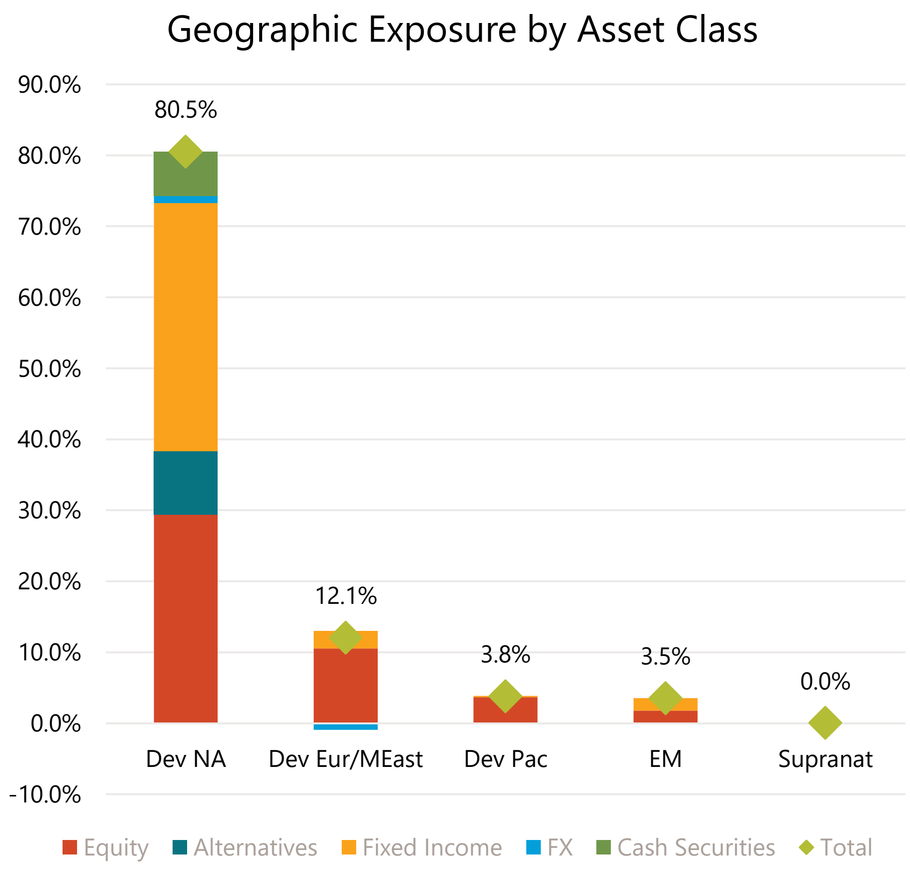


Analyze each manager's portfolio to calculate the Legacy Fund's total exposure to single a company (debt and equity)

GEOGRAPHIC EXPOSURE

LEGACY FUND AS OF JUNE 30, 2021





- Monitor exposures over time to understand trends in geographic allocations
- Utilize point-in-time analyses to understand how securities are allocated across regions

INFLATION SCENARIOS

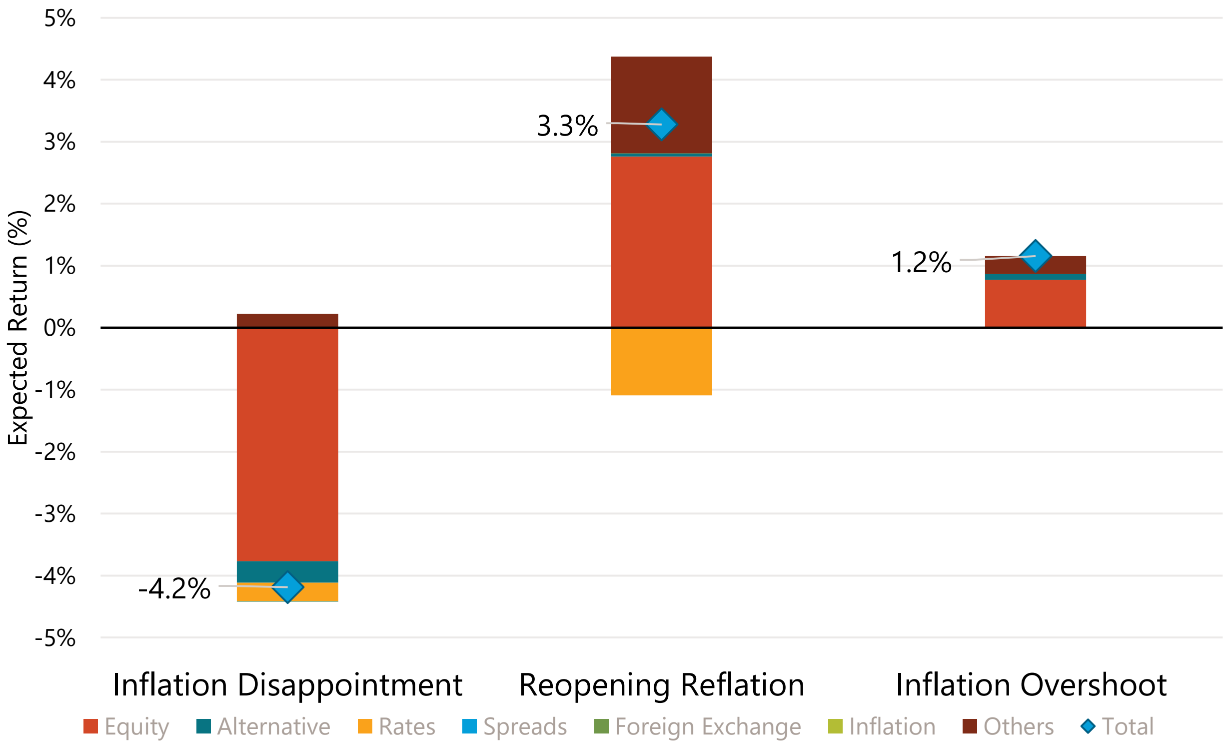
2021 INFLATION EXPECTATIONS: SUMMARY OF SCENARIOS

	1 Inflation Disappointment	2 Reopening Reflation	3 Inflation Overshoot
Description	• Inflation fails to materialize across regions, driven by COVID-19 related setbacks.	• Reopening of economies and easy financial conditions drive inflation expectations toward target levels, while nominal interest rates remain anchored by central bank asset purchases.	• Economic recovery, pent-up demand, supply chain bottlenecks, and fiscal stimulus cause a surge in inflation, prompting higher interest rates in a taper tantrum-style sell-off.
Catalysts	• As restrictions on economic activity and social mobility persist, inflation continues to be absent despite accommodative policy. • Both short-term fiscal stimulus and monetary policy measures fall short of the spending required to support economies during the ongoing pandemic.	• As vaccinated economies reopen, consumer spending increases suddenly, particularly on services. With supply unable to respond to the surge in demand, inflation ensues. • Central banks, with their higher tolerance for above-target inflation, reaffirm their commitment to keeping interest rates low, quelling fears of tapering.	• As consumers and businesses spend down accumulated savings, broad-based price increases lead to an expectation of sustained inflation going forward. • Markets begin to price in higher interest rates as central bank language pivots towards having to take action to contain inflation.
Calibration	• Inflation break-evens reverse post-vaccine announcement gains. • Equities sell-off, with cyclicals underperforming due to weak consumer demand. • High yield spreads widen, consistent with the risk-off environment. • US Treasury yield curve bull flattens, given deflationary expectations.	• Inflation rises moderately, but nominal yields fall. • Equity and credit markets rally slightly in a risk-on environment. • Consumer discretionary stocks outperform on increased spending, while financials underperform given the fall in rates. • Oil price rises on increased demand. • Risk-on tone and lower US rates lead to further US dollar weakening.	• Interest rates rise sharply in anticipation of central bank action. • Equity and credit markets fall due to tighter monetary conditions. • Consumer discretionary and transportation stocks outperform on higher demand, while tech falls modestly from higher rates. • EM countries that are heavily reliant on US dollar funding underperform with a more hawkish Fed.

The hypothetical scenarios represent an assessment of the market environment at a specific time and are not intended to be a forecast of future events or a guarantee of future results. This information should not be relied upon by the reader as research or investment advice regarding any funds or security in particular. Individual portfolio managers for BlackRock may have opinions and / or make investment decisions that may, in certain respects, not be consistent with the information contained in this presentation. Source: BlackRock 27 January, 2021.

INFLATION SCENARIOS

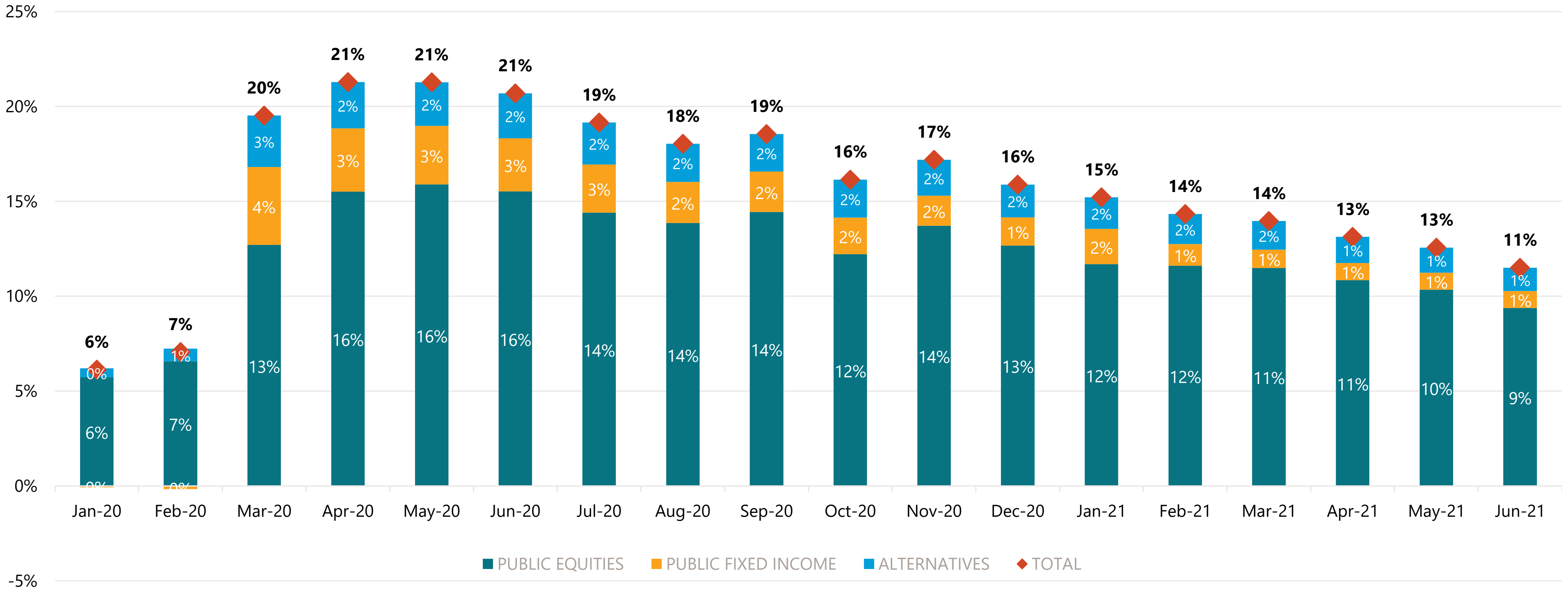
LEGACY FUND AS OF JUNE 30, 2021



- Inflation Disappointment: Inflation fails to materialize across regions, driven by COVID-19 related setbacks.
- Reopening Reflation: Reopening of economies and easy financial conditions drive inflation expectations toward target levels, while nominal interest rates remain anchored by central bank asset purchases.
- Inflation Overshoot: Economic recovery, pent-up demand, supply chain bottlenecks and fiscal stimulus cause a surge in inflation, prompting higher interest rates in a taper tantrum-style sell-off.

RISK CONTRIBUTION OVER TIME

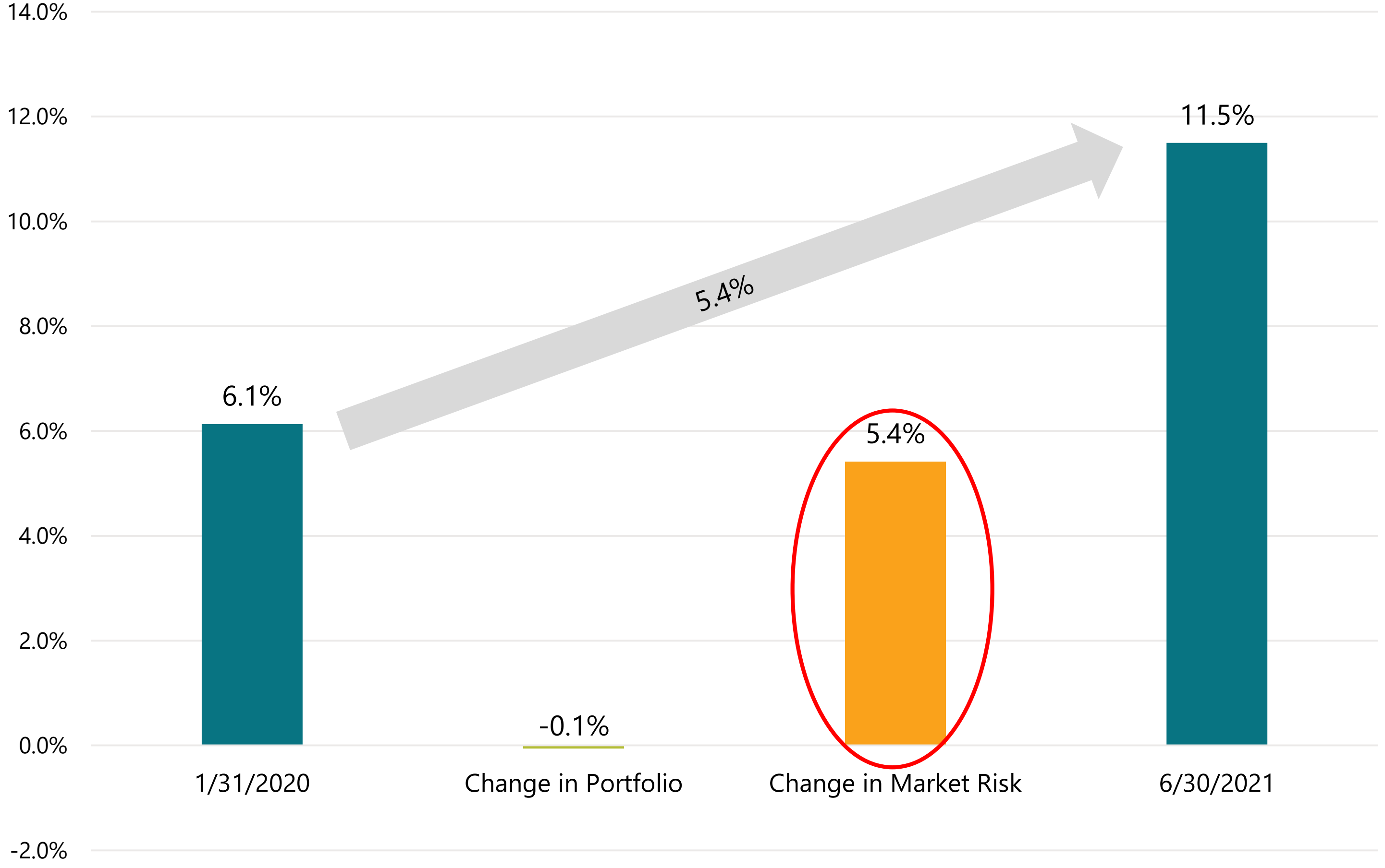
LEGACY FUND AS OF JUNE 30, 2021



- Risk has increased as a result of the global pandemic
- Risk is defined as the worst expected loss under normal market conditions (1 Year, 84% confidence)

RISK ATTRIBUTION

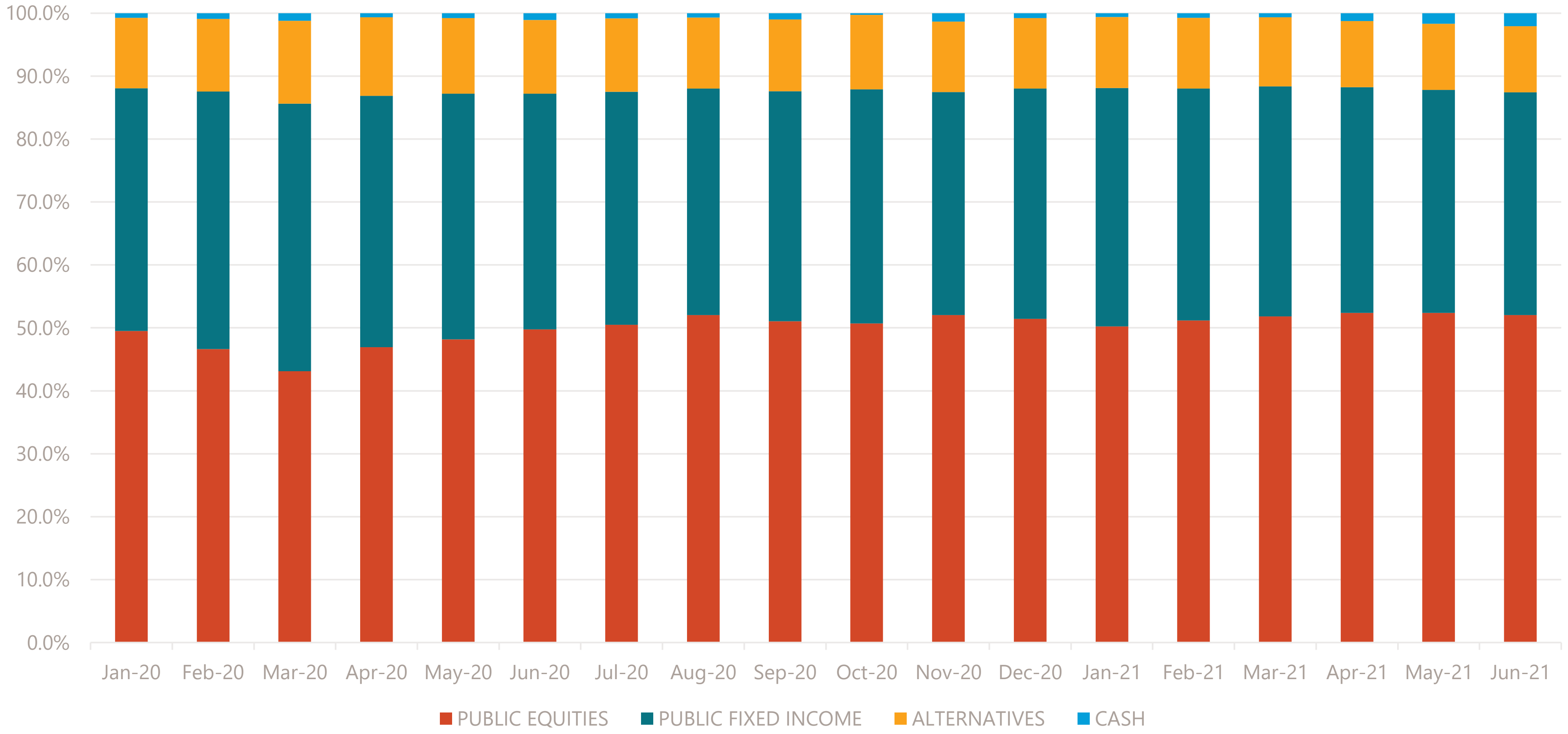
LEGACY FUND AS OF JUNE 30, 2021



- The increase in risk is driven by an increase in market risk
- Changes in the portfolio are NOT contributing to the increase in risk

ASSET ALLOCATION OVER TIME

LEGACY FUND AS OF JUNE 30, 2021



- Staff monitors portfolio allocations and rigorously rebalances to ensure exposures and allocations remain within targets

AGENDA ITEM IV.C.

Informational Overview

TO: **State Investment Board**

FROM: Eric Chin and Matt Posch

DATE: August 27, 2021

SUBJECT: **International Equity Search Overview**

Executive Summary:

Staff recommends adding a new quantitative international equity manager to increase active exposure in the Pension Pool and reduce manager concentration risk in the Legacy Fund and the Insurance Pool.

Research has shown that active strategies in international equities are generally well rewarded compared to passive investments. The Pension Pool maintains a sizeable investment to the Northern Trust Collective World ex-US Index Fund (5.7% of the Pension Pool as of June 30, 2021) a passively managed index fund. Staff believes it prudent to identify an active strategy funded by the Northern vehicle to improve the Pension Pool's ability to generate long-term excess returns.

In the Insurance Pool and the Legacy Fund, Staff is concerned with the large allocations to William Blair International Leaders (9.3% of the Legacy Fund and 2.5% of the Insurance Pool as of June 30, 2021) and LSV International Large Cap Value (6.4% of the Legacy Fund and 2.3% of the Insurance Pool as of June 30, 2021). Staff believes it prudent to identify a new international equity manager and fund it with capital from the two aforementioned funds to reduce manager concentration risk, while maintaining active exposure.

Lastly, Staff believes that adding a quantitative international strategy will add a new alpha engine to all three pools increasing strategy diversification.

Background:

In May of 2019, Staff recommended and the Board approved engaging Callan to assist Staff with analyzing and optimizing the public equity allocations across the three pools. Efforts led to the approval of two small cap equity managers, Riverbridge and VCM Sycamore. Since onboarding these two funds back in mid-2020, Staff has turned its attention towards the international equities allocation of the SIB portfolios. Staff's endeavors included speaking with and evaluating candidate managers, researching the international equities market, and conducting quantitative analyses on the SIB's international equity allocations. Staff's findings suggested that:

1. The international equity space was ripe for active investment strategies

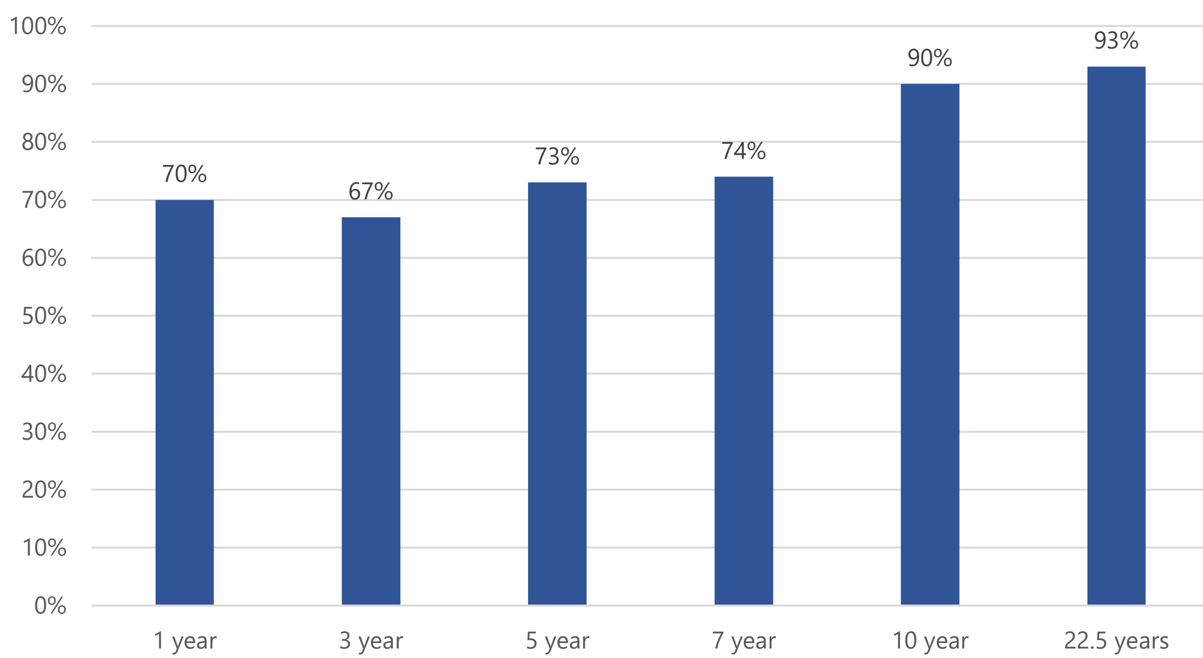
2. The addition of a new manager could enhance all three pools
    a. A new active manager could be implemented to increase active exposure in the Pension Pool
    b. A new active manager would reduce manager concentration risk in the Insurance Pool and the Legacy Fund
3. A quantitative strategy would add a diversifying element to existing equity strategies in the portfolio

As a result of these findings, in December of 2020 Staff reached out to Callan to conduct a search for an international equity manager. Staff worked alongside Callan to produce a short list of candidate managers. Additional due diligence has culminated in Staff inviting Arrowstreet Capital, L.P. to present its International Equity Strategy (ACWI ex US) to the Board.

The Case for Active Management in International Equities:

There is a strong case to utilize active investment strategies in international equities. Historical data suggests that investors in active strategies are generally well rewarded compared to investing in passive indices. The chart below shows that a large majority of active international equity strategies have outperformed the MSCI ACWI ex US Index, particularly over longer time frames.

Percent of International Equity Managers that Outperformed the MSCI ACWI ex US*



*Data is from eVestment All ACWI ex-US Equity manager universe as of June 30, 2021

Callan's research (see charts below) shows that the **median** active international equity strategy has generated 118 basis points of excess return over the MSCI ACWI ex US index (Average Annualized 3-Year Excess Return (gross,17.5 years as of June 30, 2021). The second chart shows that there is a persistence of positive excess returns generated by the median manager over time. With that said, there is significant dispersion around the excess returns generated by the 10th percentile manager vs the 90th percentile manager highlighting the importance of manager selection in this space.

Staff's analysis of the international equites segment finds that this space is well suited for an active approach. The MSCI ACWI ex-US Index (as a proxy for the international equities segment) consists of well over 2000 stocks. The index is large, diverse, complex and inefficient—characteristics that bode well for active strategies. Index constituents are diverse ranging from large, inefficient, debt-laden, state-run companies to small, independent, entrepreneurial companies still managed by founders. Moreover, international stocks are generally less well covered by the analyst community leading to significant price inefficiencies. Furthermore, the MSCI ACWI ex-US index comprises of almost 50 different countries each with different characteristics. Different countries will have different political systems, geopolitical risks, legal frameworks, economic growth, demographics etc. adding additional complexity to investing in international equities. A manager's ability to navigate both country and stock selection is key to generating excess returns.

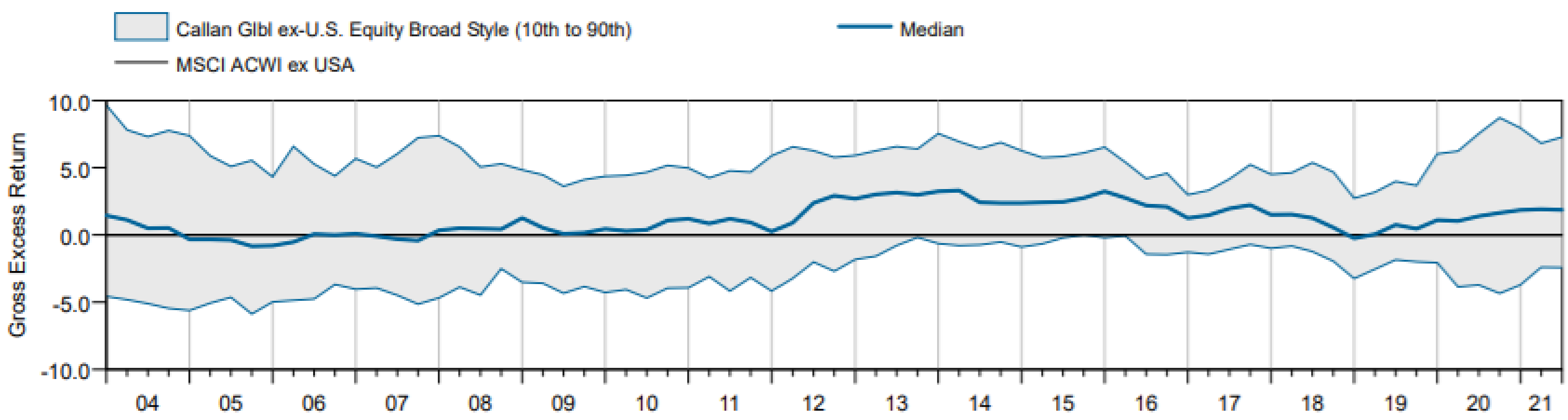
Global ex-U.S. Equity Broad Style vs. MSCI ACWI ex USA

How often Manager Beat Benchmark by more than Fee Hurdle in Rolling 3-Year Periods

Fee Hurdle	0.45%	0.50%	0.55%	0.60%	0.65%	0.70%	0.75%	0.80%	0.85%	0.90%
Median	70%	66%	59%	59%	59%	59%	59%	57%	56%	56%
45th Percentile	81%	80%	79%	79%	79%	77%	73%	71%	69%	64%
40th Percentile	94%	93%	91%	90%	89%	84%	84%	83%	83%	81%
35th Percentile	99%	97%	97%	97%	97%	97%	97%	96%	94%	93%
30th Percentile	100%	100%	100%	100%	100%	100%	100%	99%	99%	99%
25th Percentile	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

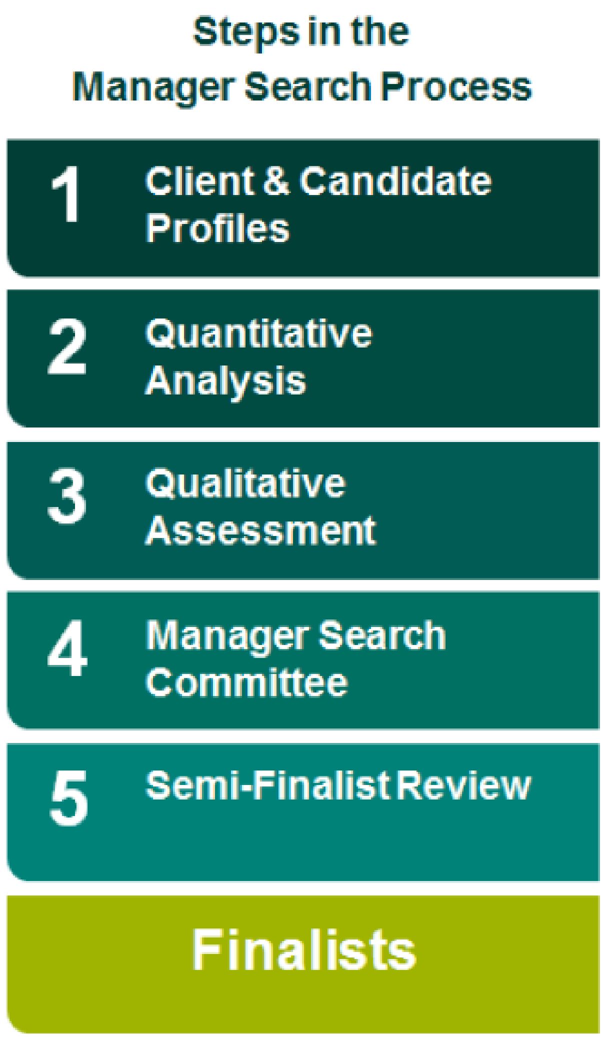
Average Annualized 3-Year Excess Return (gross) – Median Manager: 1.18%

Rolling 3-Year Gross Excess Return relative to MSCI ACWI ex USA
for 17 1/2 Years ended June 30, 2021



<u>Callan Search Process Overview</u>:

The Callan search process begins when the client (SIB/RIO) submits a candidate profile to Callan. This profile contains the desired characteristics the client is seeking in a manager and provides Callan with the necessary information to conduct its search. The following pages contain key highlights from Callan's search presentation.



Candidate Profile

1. **Manager Type**

   Only qualified investment counselors or organizations registered under the Investment Advisers Act of 1940 that are currently managing assets will be considered. This includes investment counselors and investment counseling subsidiaries of banks, brokerage houses and insurance companies.

2. **Investment Style**

   Client has a preference for including managers employing a quantitative process with a core orientation that incorporates differentiated and/or non-conventional information sources into their security valuation process. The manager will serve a core role in a structure with an incumbent fundamental growth equity manager (William Blair) and an incumbent quantitative value equity manager (LSV). No index provider preference but using MSCI ACWI ex-U.S. currently.

3. **Managed Assets**

   The client prefers a minimum of $4 billion in strategy assets and/or firm assets over $4 billion. Firms that don't meet these minimums will be considered on a case by case basis.

4. **Professional Staff**

   Investment staff should be stable and of sufficient depth and breadth to perform the ongoing duties of the firm and to ensure continuity of the investment process. The firm's executive management team should be experienced and stable. Additionally, there should be a sufficient number of client service professionals relative to the firm's client base to ensure that the client has reasonable access to the firm.

5. **Portfolio Manager Structure & Experience**

   Team approach preferred but not required. Key professionals should have at least 10 years of investment experience. Teams that have worked together for at least five years are preferred.

6. **Investment Vehicle**

   Separate account, CIT, or other commingled structure. Liquidity dependent on strategy fit; all else being equal, more liquidity is preferred to less.

7. **Historical Performance & Risk Criteria**

   Performance over multiple cumulative, annual and rolling periods will be evaluated relative to the appropriate peer group and index. Risk-adjusted measures and holdings-based portfolio characteristics will also be considered.

Candidate Profile (continued)

8. Qualities Specifically Sought

- The firm must be a viable, ongoing business
- Well established organization with institutional focus
- Disciplined and time-tested investment process with risk controls
- Low turnover of personnel
- Low dispersion of returns within appropriate composite
- Commitment to client service and an ability to effectively articulate their investment process
- Willingness to visit client as needed

9. Qualities To Be Avoided

- Concentrated client base
- Candidates currently involved in a merger, acquisition, or recent transaction impacting the firm's senior executives
- Excessive recent personnel turnover

10. Specific Client Requests & Additional Considerations

The client would like to review six candidates that include two client requests:

- Blackrock SAE
- Goldman Sachs' Global Alpha

Candidate Summary Matrix

	Organization/Team	Strategy/Portfolio	Summary Opinion
Acadian Asset Management LLC **All Country World ex U.S. Equity**	– Wholly-owned subsidiary of BrightSphere Investment Group, a publicly listed company on the NYSE – Firm managed $95 bn including $9.5 bn in the All Country World ex-U.S. Equity strategy as of 9/30/2020 – John Chisholm and Ross Dowd were appointed as Co-CEO in 1/2018 – Co-Directors of Global Equity Research Wesley Chan and Ryan Stever resigned in 3/2018 – Appointed Vladimir Zdorovtsov as director of global equity research in 12/2019 – Investment team consists of 28 portfolio managers and 59 quantitative analysts	– Employs a combination of top-down and bottom-up multi-factor models to construct the strategy – Top-down constitutes 20% of the process and consists of value, growth, momentum, volatility, and macro factors – Bottom-up drives 80% of the process and consists of ~40% value, ~20 % growth, ~20% quality, and ~20% technical – Portfolio holds 200-600 names with annual turnover of 50%-80% – Structural overweight in emerging markets – Diversified , all cap strategy with a value tilt	– Stable organization; parent company BrightSphere may sell its affiliates including Acadian; however, the terms of the firm structure are expected to be intact similar to the recent BHMS transaction in 7/2020 – Deep and experienced investment team despite the departure of research heads in 2018 – Systematic process mitigates key person risk – Robust process with a track record of enhancing its quantitative models and differentiated by its integration of ESG alpha factors relative to quant peers – Model is more efficacious in less efficient market places; subsequently, it veers to emerging markets and small cap – Strategy is expected to struggle during inflection points – Viable as a core in a multi-manager structure given the portfolio characteristics and risk/return profile; however, it may be suboptimal complementing another quantitative strategy

Candidate Summary Matrix (continued)

	Organization/Team	Strategy/Portfolio	Summary Opinion
Ariel Investments **Ariel International (DM/EM)**	– Independent and majority African American-owned firm – Firm managed \$12 bn including \$1.7 bn in the International strategy as of 9/30/2020 – Lead PM Rupal Bhansali joined Ariel in 2011 from MacKay Shields – Supporting analyst team has a history of turnover (i.e., two in 2013, one in 2015, 2016, 2017, 2018, and 2020) – Investment team consists of two portfolio managers and five dedicated analysts	– Employs a bottom-up, fundamental process to construct a quality oriented strategy – Seeks franchise-quality companies with sustainable growth and competitive advantages trading at a discount – Process focuses on risk considerations and downside risk – Portfolio holds 50-80 names with annual turnover of 5%-40% – Structural underweight in emerging markets – Defensive, core quality strategy	– Stable organization led by high profile leadership – Non-U.S. equities (i.e., global and international) make up ~60% of the firm-wide assets – Bhansali and Co-PM Micky Jagirdar (Bhansali's brother) are key individuals – Analyst turnover has not adversely impacted the team and/or strategy – Generates long-term alpha through downside protection (up/down: ~70/~70) – Viable as a core in a multi-manager structure given the portfolio characteristics and risk/return profile; however, it may episodically correlate to a value strategy

Candidate Summary Matrix (continued)

	Organization/Team	Strategy/Portfolio	Summary Opinion
Arrowstreet Capital **International Equity Strategy-ACWI ex US**	– Founded in 1999 and 100% employee-owned firm based in Boston – Three founders are Bruce Clarke, Peter Rathjens and John Campbell – Firm managed $110 bn, including $19 bn in the International Equity strategy as of 9/30/2020 – Investment team is headed by CIO Rathjens – Derek Vance succeeded Tuomo Vuolteenaho as co-head of Research, effective 1/1/2020; Vuolteenaho serves the team on a part-time basis – Christopher Malloy was appointed to replace Vance as head of Alpha Development – Senior investment team consists of nine in portfolio management, seven in research, three in implementation, and they are supported by 66 investment professionals	– Employs a combination of top-down and bottom-up factors to construct the strategy – In addition to direct effects (i.e., value, momentum, quality, sentiment, etc.), the quantitative model is design to exploit indirect /spillover effects (i.e., country, sector, related companies, supply chain, competitors, etc.) – Utilizes an integrated active currency process to enhance performance – Portfolio holds 300-450 names with annual turnover of 100%-150% – Diversified, all cap strategy with dynamic exposures to style, regions and sectors	– Stable and employee-owned organization – Quantitative process immunizes against key person risk – Depth and breadth of the team helps to manage team transitions – Robust process with a track record of enhancing its quantitative model – Differentiate alpha model, enabling consistent and persistent alpha over multiple market cycles – Strategy is currently closed to new investors; however, it is expected to reopen in the 2Q21 pending capacity study – Viable as a core in a multi-manager structure given the portfolio characteristics and risk/return profile

Candidate Summary Matrix (continued)

	Organization/Team	Strategy/Portfolio	Summary Opinion
BlackRock **Systematic Active Global Ex-US Alpha Tilts**	– Founded in 1988 and publicly-traded company under the ticker symbol "BLK" – Firm managed \$7.8 tn, including \$3.0 bn in the SAE Global Ex-US Alpha Tilts strategy as 9/30/2020 – Raffaele Savi and Jeff Shen co-heads Systematic Active Equity since Ken Kroner retired in 4/2016 – Investment team consists of 23 portfolio managers and 26 quantitative analysts	– Employs a combination of top-down and bottom-up systematic processes to construct risk-controlled portfolios – Composition of the alpha model is dynamic and consists of value, quality, sentiment, and theme factors – Quant model leverages machine learning and AI techniques – Portfolio holds 600-900 names with annual turnover of 100%-160% – Diversified, risk-controlled core strategy	– Stable organization – Deep and experienced investment team enables to manage leadership transition – Differentiated alpha signals through machine learning and AI – Track record of model enhancement – Viable as a core in a multi-manager structure given the portfolio characteristics and risk/return profile; however, it may be suboptimal complementing another quantitative strategy
Goldman Sachs Asset Management **All Country World ex-US Equity Insights with Country Tilts**	– Founded in 1988 and serves as the investment division of a publicly traded company Goldman Sachs & Co. – Firm managed \$1.9 tn, including \$5.5 bn in the global insights with country tilts strategies as of 9/30/2020 – Armen Avanessians became the sole global head of the Quantitative Investment Strategies as a result of Gary Chropuvka's retirement in 4/2020 – Strategy is co-managed by Len Ioffe, Osman Ali, Takashi Suwabe, and James Park – Ioffe, Ali, Suwabe, and Park are supported by 28 quantitative analysts	– Employs a combination of top-down and bottom-up systematic processes to construct risk-controlled portfolios – Quant model is dynamic, but generally composed of ~60% thematic and sentiment signals and ~40% fundamental valuation and profitability factors – Macro factors are integrated in the stock selection process – Portfolio holds 400-600 names with annual turnover of 100%-120% – Diversified, risk-controlled core strategy	– Stable organization – Quant team has had notable departures over the years; however, the dedicated portfolio management team for the product has been fairly stable – Systematic nature of the process enables to absorb team turnover without a meaningful disruption – Leverages alternative data to enhance alpha generation – Track record of model enhancement Viable as a core in a multi-manager structure given the portfolio characteristics and risk/return profile; however, it may be suboptimal complementing another quantitative strategy

Candidate Summary Matrix (continued)

	Organization/Team	Strategy/Portfolio	Summary Opinion
Marathon Asset Management **Active ACWI ex-US Equity**	– Founded in 1986 and majority-owned by the founders: Jeremey Hosking, Neil Ostrer, and William Arah; Hosking resigned in 2012 but remains ~30% owner despite launching a competing firm – Firm managed $51 bn, including $6.2 bn in the Active ACWI ex-US Equity strategy as of 9/30/2020 – Sleeved approach to portfolio management; strategy managed by Neil Oster (Europe, 21% of strategy), Charles Carter (Europe, 15%), Nick Longhurst (Europe, 6%), Justin Hill (Asia ex-Japan, 3%), David Cull (Asia ex-Japan and EM, 18%), Michael Godfrey (EM, 15%), William Arah (Japan, 7%), Simon Somerville (Japan, 4%), Michael Nickson (Japan, 5%), and Robert Anstey (Canada, 7%) – William MacLeod resigned in 10/2018 (Europe coverage) and Simon Todd (Japan) was terminated in 2/2019 – Justin Hill joined the team in 1/2021 to manage Asia ex-Japan sleeve	– Employs a multi-manager structure organized by regions to construct the strategy – Regional portfolio managers are bottom-up, fundamental investors who utilize capital cycle philosophy (i.e., profitability/ROI is inversely proportional to competition) to unearth value opportunities stemming from over/undershooting market expectations – Portfolio holds 400-500 names with annual turnover of 10%-30% – Diversified, all cap core strategy	– Stable organization since the departure of Hosking in 2012 – Hosking continue to own approximately 30% of the firm, which may challenge future ownership transition – Multiple regional portfolio manager structure mitigates key person risk and streamlines succession; changing allocations are being monitored as the firm transitions to second generation portfolio management – Differentiated philosophy and process yields favorable absolute and relative risk metrics – Viable as a core in a multi-manager structure given the portfolio characteristics and risk/return profile

Returns and Peer Group Rankings - Trailing Periods

Returns for Periods Ended September 30, 2020

Group: Callan NonUS AC Broad Eq (Percentile Rankings in Parentheses)

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
Acadian	6.47 (69)	4.41 (60)	1.25 (58)	8.81 (42)	5.61 (46)
Ariel	1.89 (98)	3.01 (64)	1.15 (61)	5.54 (72)	4.28 (57)
Arrowstreet	7.21 (63)	9.36 (49)	3.91 (46)	9.01 (38)	6.20 (35)
BlackRock	7.45 (57)	3.31 (63)	0.63 (65)	6.34 (58)	4.13 (60)
GSAM	8.41 (49)	5.29 (59)	0.71 (65)	7.57 (51)	5.39 (49)
Marathon	7.35 (59)	0.02 (71)	1.01 (62)	5.94 (62)	4.12 (61)
LSV (Complement)	2.98 (95)	(7.41) (94)	(3.97) (95)	3.74 (87)	1.93 (87)
William Blair (Complement)	13.02 (7)	24.33 (11)	11.72 (4)	14.12 (4)	10.56 (4)
Callan NonUS AC Broad Eq*	**8.24**	**9.34**	**3.09**	**7.71**	**5.32**
MSCI:ACWI ex US	**6.25 (72)**	**3.00 (64)**	**1.16 (59)**	**6.23 (58)**	**3.18 (75)**

Excess Correlation Table

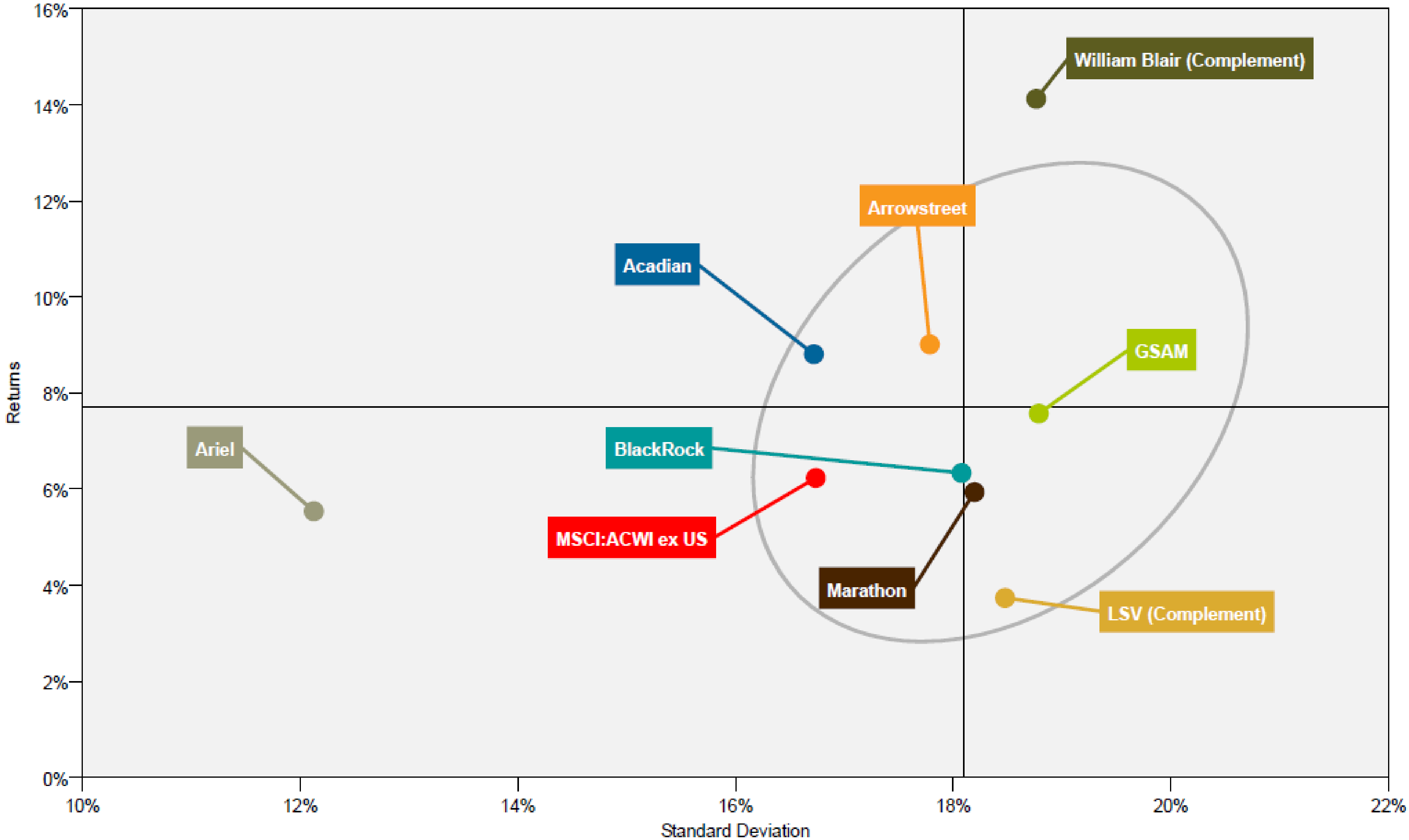
This excess correlation table shows the correlation of one portfolio's excess return to another portfolio's excess return. Excess return is the return minus a benchmark. For instance, Excess Correlation could measure the correlation of Manager A's return in excess of a benchmark with Manager B's return in excess of the same benchmark. Excess Correlation is used to indicate whether different managers outperform a market index at the same time.

Benchmark: MSCI ACWI ex US Index (USD Net Div) for Five Years Ended September 30, 2020

	Acadian	Ariel	Arrowstreet	BlackRock	GSAM	Marathon	LSV (Complement)	William Blair (Complement)
Acadian	**1.00**							
Ariel	0.35	**1.00**						
Arrowstreet	0.11	(0.20)	**1.00**					
BlackRock	0.24	(0.61)	0.26	**1.00**				
GSAM	0.25	(0.51)	0.50	0.65	**1.00**			
Marathon	(0.28)	(0.53)	0.10	0.49	0.31	**1.00**		
LSV (Complement)	0.04	(0.25)	(0.03)	0.19	0.16	0.48	**1.00**	
William Blair (Complement)	(0.04)	(0.10)	0.23	0.25	0.31	0.20	(0.48)	**1.00**

Risk/Reward Structure

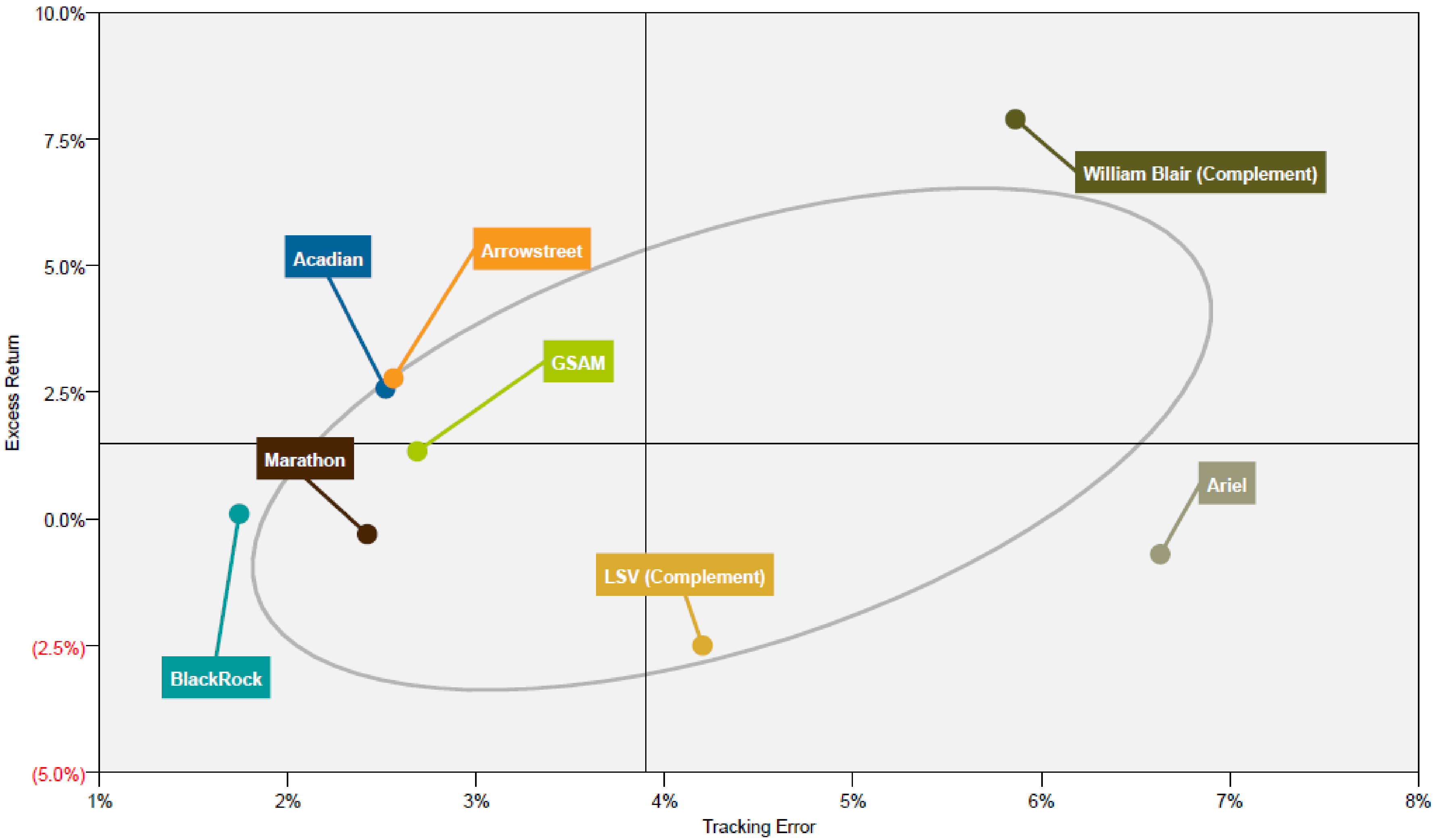
Risk/Reward for Five Years Ended September 30, 2020
Group: Callan NonUS AC Broad Eq (Ellipse with Median at Central Axis)



Manager candidate performance shown is gross-of-fees unless otherwise noted.

Excess Return vs. Tracking Error

Excess Return vs Tracking Error for Five Years Ended September 30, 2020
Benchmark: MSCI ACWI ex US Index (USD Net Div)
Group: Callan NonUS AC Broad Eq (Ellipse with Median at Central Axis)



Manager candidate performance shown is gross-of-fees unless otherwise noted.

ARROWSTREET
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North Dakota State Investment Board

Second Quarter 2021

Arrowstreet Attendees

Aidan Forde, CFA

Business Development Manager

Aidan is a member of the Business Development team responsible for Arrowstreet's sales, marketing and client service efforts.

Prior to joining Arrowstreet in 2019, Aidan was Director of Institutional Management at Putnam Investments, where he was responsible for business development and relationship management of institutional investors and consultants. Before joining Putnam, Aidan was Vice President at RBC Global Asset Management, driving sales and marketing efforts with prospective investors and clients across the U.S. Earlier in his career he worked at Eaton Vance in a number of roles and began his career at State Street as a Portfolio Administrator.

Aidan graduated from Merrimack College with a BA in Communication Studies and Political Science. He has been a CFA charterholder since 2013 and is a member of the Boston Security Analysts Society.

Manolis Liodakis, PhD

Partner, Head of Portfolio Management

Manolis leads the Portfolio Management Group. He is responsible for many of the functions associated with the day to day implementation of the firm's investment strategies. This includes portfolio construction, risk management, cash management and portfolio finance as well as trading. In addition, he is a member of the Investment and Operating committee of the firm and participates in several firm wide initiatives.

Prior to joining Arrowstreet, Manolis worked at Citadel Investment Group in Chicago where he was responsible for running $2 billion in global market neutral strategies. In addition, he has substantial sell- side research experience. He worked at Citigroup in London for seven years, where he was Head of European Quantitative Equity Research and was recognized as Best Quantitative Analyst by Institutional Investor from 2004 to 2008. He has also worked in quantitative research groups at both Morgan Stanley and Salomon Brothers.

Manolis received a PhD in Finance from City University, London in 1999 and an MBA in Finance from the University of Birmingham in 1996. Manolis graduated from Athens University of Economics & Business in 1994 with a BS in Economics and Business.

ARROWSTREET CAPITAL

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Firm Overview

Specialist Global Equities Manager

Commitment to Ongoing Research Program

Privately Owned

ARROWSTREET
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Senior Investment Team

Peter Rathjens, PhD – *Partner, CIO*
Co-Founded ASC: 1999

Research

John Campbell, PhD
Partner,
Co-Head of Research
1999

Derek Vance, CFA
Partner, Co-Head of Research
2008

Naveen Kartik C. K.
Partner
2013

Yosef Klein
Partner
2012

Jonathan Kluberg, PhD
Partner
2015

Tom Knox, PhD
Partner
2016

Christopher Malloy, PhD
Partner
2019

Alex Merlis, CFA
Partner
2006

Tuomo Vuolteenaho, PhD
Partner
2004

Julia Yuan, CFA
Partner
2012

Yijie Zhang, PhD
Partner
2006

Investment Processes

Sam Thompson, PhD
Partner,
Head of Investment Processes
2005

Marta Campillo, PhD
Partner
1999

Hui Wang, PhD
Partner
2012

Investment Services

Katie McHardy
Partner,
Head of Investment Services
2010

Joe Tiano
Partner
2014

Investment Analytics

Mary Rogers, CFA
Partner,
Head of Investment Analytics
2008

Portfolio Management

Manolis Liodakis, PhD
Partner,
Head of Portfolio Management
2012

Brandon Berger
Partner
2013

John Capeci, PhD
Partner
1999

Anne Luisi
Manager
2014

Alex Ogan
Partner
2005

George Pararas-Carayannis, CFA
Partner
2002

Alex Rodin, CFA
Manager
2016

Zach Vernon, CFA
Partner
2008

Michael Zervas, CFA
Partner
2004

Average Industry Experience: 17 Years

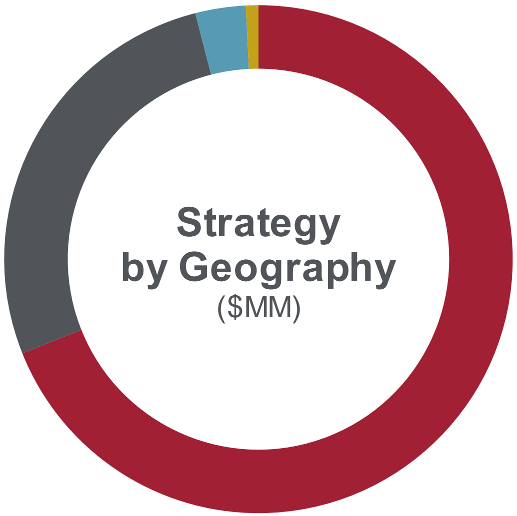
Average Tenure with Arrowstreet: 13 Years

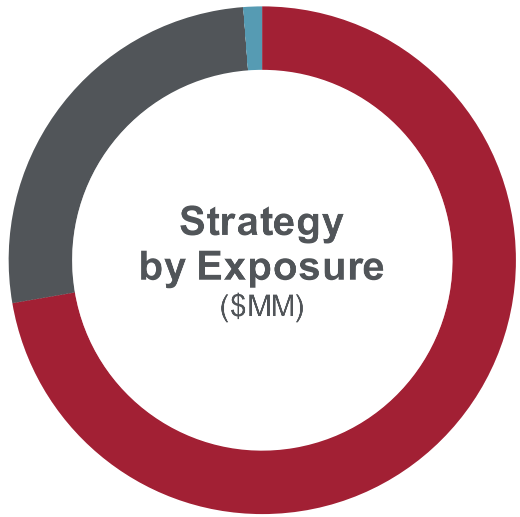
Supported by 81 Additional Investment Team Members

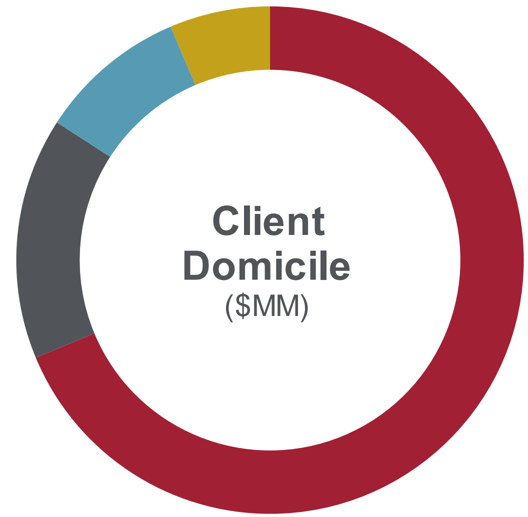
Note: Year denotes when team member started at Arrowstreet.
As of June 30, 2021.

Assets Under Management

— $ 151,615 MM —







$104,550	Global Equities	$109,609	Long-Only Equities	$104,180	United States
$41,007	Non-US Equities	$40,174	Alpha Extension	$23,371	EMEA
$4,850	Emerging Markets	$1,832	Beta Neutral Equities	$14,350	Asia-Pacific
$1,208	US Equity			$9,714	Canada

Data as of June 30, 2021.
Figures presented above are in USD.
Source: Arrowstreet Internal Databases.

ARROWSTREET CAPITAL

International Equity – ACWI ex US

Strategy Objectives

Consistently Outperform Broad Global Indices

Target Outperformance: 3% Per Year Over a Full Market Cycle (defined here for this purpose as 5 to 7 years)

Target Tracking Error: 3% – 7% Per Year

Core Investment Style

Style Neutral Over Long Periods

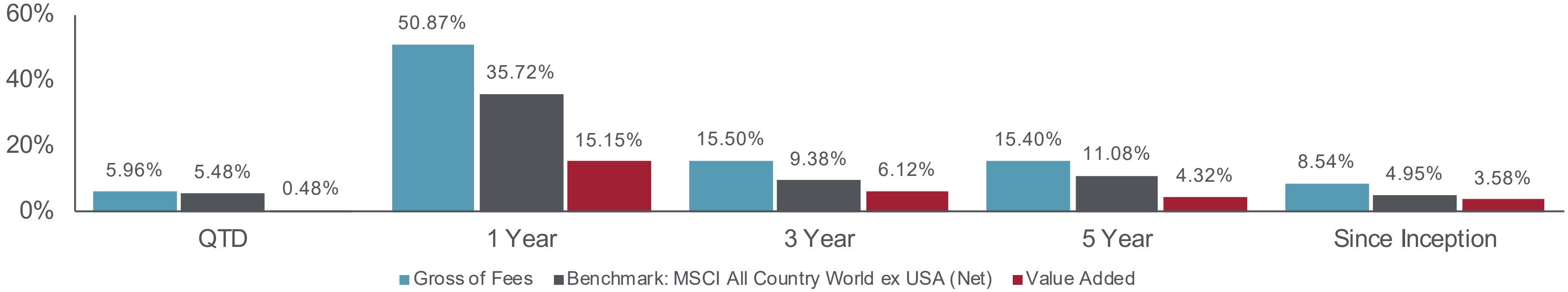
Risk Controlled

Outperform During a Broad Range of Market Environments

Diversification from Other Managers

International Equity Strategy ACWI ex US Composite

Performance Since Inception as of June 30, 2021



	QTD	1 Year	3 Year	5 Year	Since Inception (June 1, 2000)
Composite Performance (Gross of Fees)	5.96%	50.87%	15.50%	15.40%	8.54%
Benchmark: MSCI All Country World ex USA (Net)	5.48%	35.72%	9.38%	11.08%	4.95%
Value Added (Gross of Fees)	0.48%	15.15%	6.12%	4.32%	3.58%

Rep Account Statistics	Since Inception (Mar 03, 2008)
Tracking Error*	3.74%
Information Ratio*	1.16

* Based on the representative account in the International Equity Strategy ACWI Ex. U.S. Composite. Tracking Error represents the annualized standard deviation of the difference between the portfolio return and the portfolio's benchmark return. Information Ratio is determined by dividing the portfolio's annualized value added by the portfolio's annualized tracking error.

Source: Arrowstreet Internal Databases. Return periods greater than 1 year are annualized.

This information has been prepared solely for the benefit of select, qualified institutional investors for educational, informational and discussion purposes only and is not intended for mass distribution. See the International Equity Strategy ACWI Ex. U.S. Composite Performance Review Report for important disclosures to be read in conjunction with the performance results presented herein. The return information presented represents past performance and is not a guarantee of future results. All returns are calculated in USD. The information presented is gross of investment management fees. Applying such fees would lower the results. The firm's management fees are described in our Form ADV Part 2A Brochure. For example, if an account appreciated by 10% each year for ten years with no fees deducted, the average annualized return would be 10%. If the account was charged investment management fees of 0.75% for each of the ten years, then the average annualized return would have been 9.18%. Value added represents the difference between the composite's total returns and the benchmark. See the International Equity Strategy ACWI Ex. U.S. Composite Performance Review Report for any applicable benchmark changes over the history of the composite. Benchmark source: MSCI. MSCI makes no express or implied warranties or representations and shall have no liability whatsoever with respect to any MSCI data contained herein. The MSCI data may not be further redistributed or used as a basis for other indices or any securities or financial products. This report is not approved, reviewed or produced by MSCI.

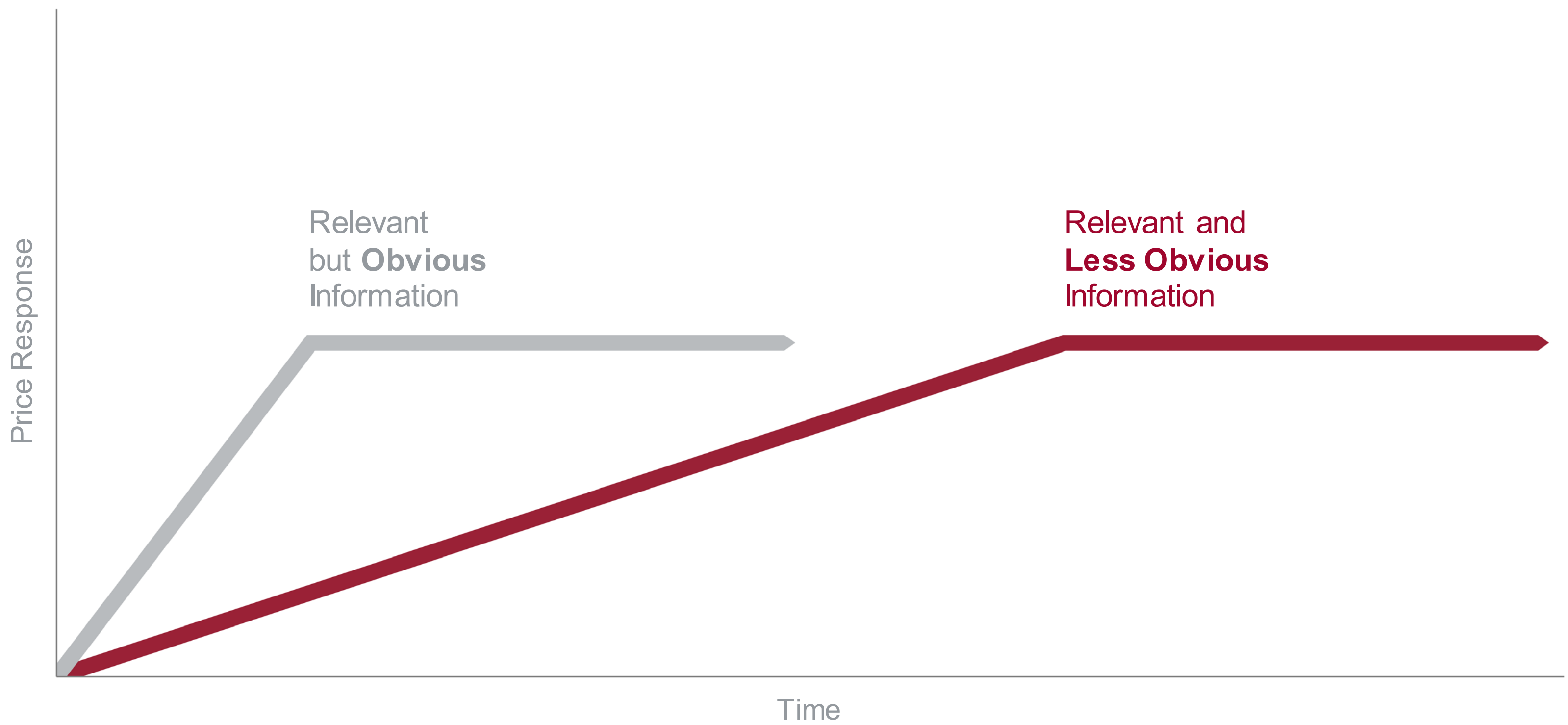
Portfolio Construction

Client Portfolios Built Considering Forecasts, Transaction Costs, and Risks

Investment Philosophy

Adding Value by Identifying Investment Signals that are

Relevant to Price & Less Obvious to Investors



Stylized representation. For illustrative purposes only.

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Defining Direct Effects

Influence of Stock Information

Signal Groups

> Catalysts

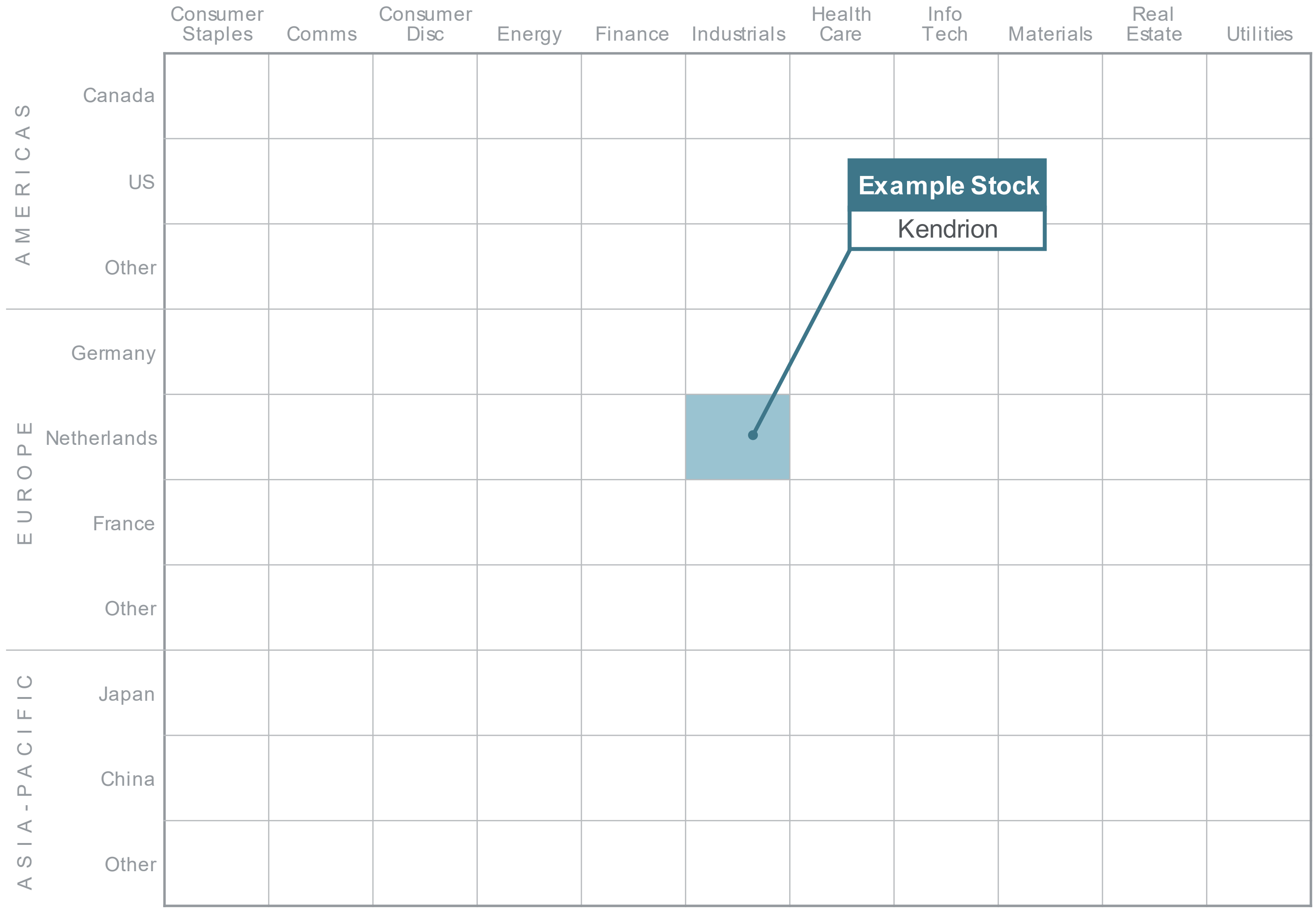
> Extreme Sentiment

> High Frequency

> Momentum

> Quality

> Value



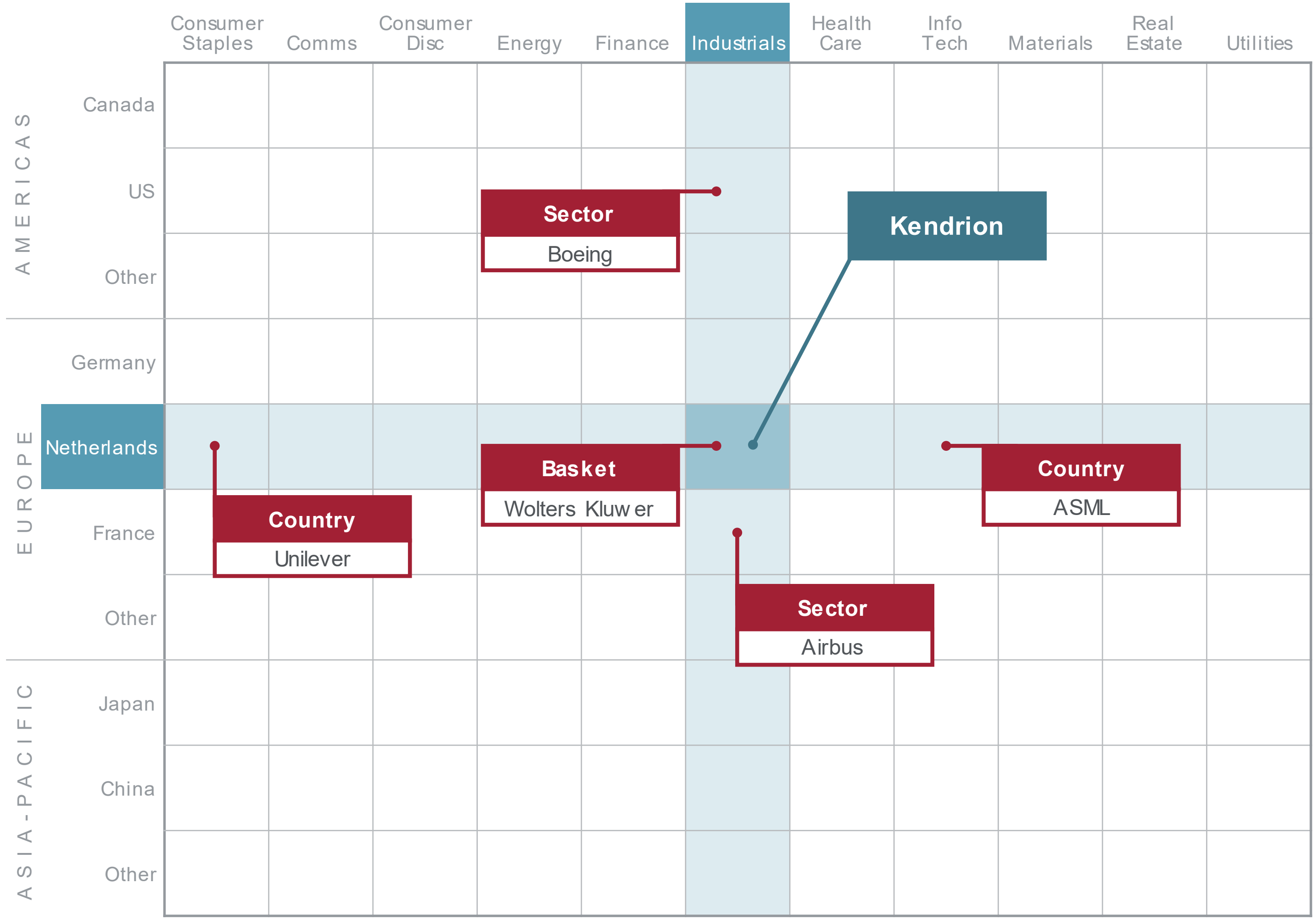
Data as of September 2019.
Source: Arrowstreet Internal Databases.

Defining Indirect Effects

Influence of Sector, Country & Basket Information

Signal Groups

- Catalysts
- Extreme Sentiment
- High Frequency
- Momentum
- Quality
- Value



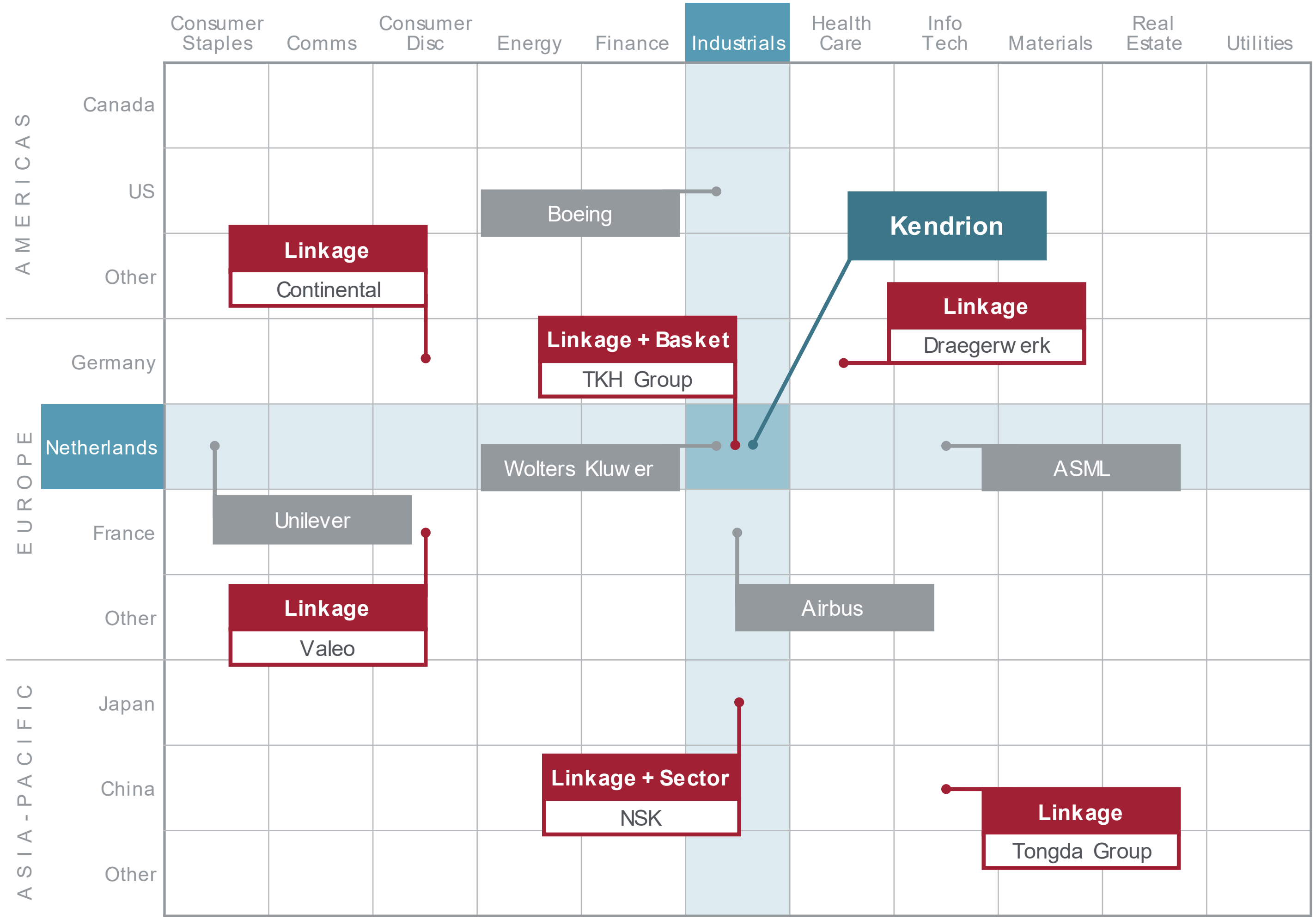
Data as of September 2019.
Source: Arrowstreet Internal Databases.

Enhancing Indirect Effects

Influence of Expanded Linkages

Signal Groups

- Momentum
- Value



Data as of September 2019.
Source: Arrowstreet Internal Databases.

Portfolio Construction

Client Portfolios Built Considering Forecasts, Transaction Costs, and Risks

Alpha Forecasts for Portfolio Candidates

10,000+ Stocks

Transaction Costs

Reflecting trade size and expected holding period

Risk Estimates

Proprietary risk model

Target Position Limits

(Relative to the benchmark)

Country:	+/- 10%
Sector:	+/- 15%
Basket:	+/- 5%
Stock:	+/- 3%

Style Controls

Control portfolio tilts

Portfolio

Generally
150 – 775 Stocks*

Broadly Diversified

Style Neutral

Risk Controlled

*Based on a portfolio of $500M USD.

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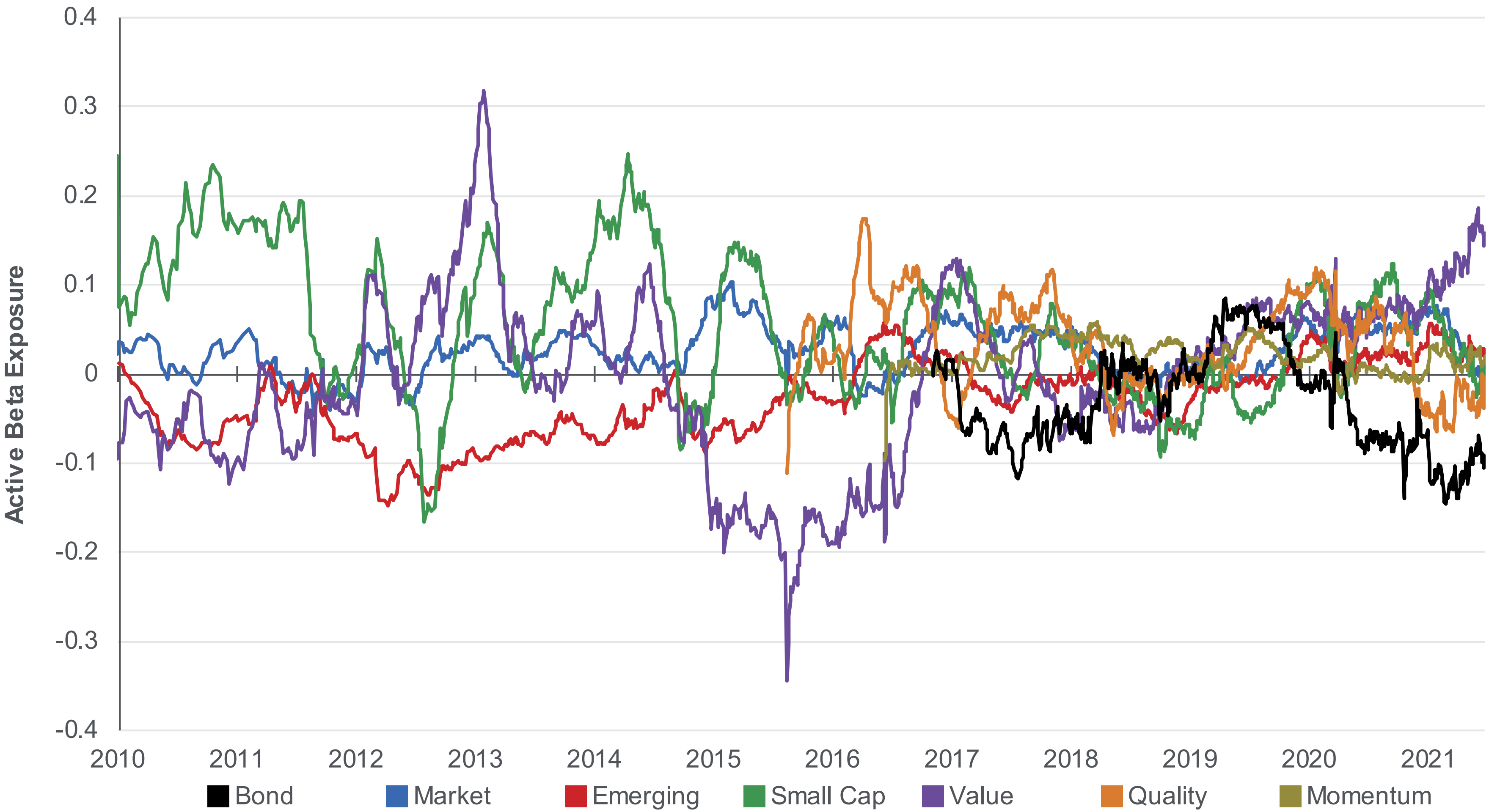
Style Controls: Active Beta Exposure

International Equity – ACWI ex US Representative Account



Data as of June 30, 2021. Represents Arrowstreet's proprietary measures of ex ante style betas.
Source: Arrowstreet Internal Databases.

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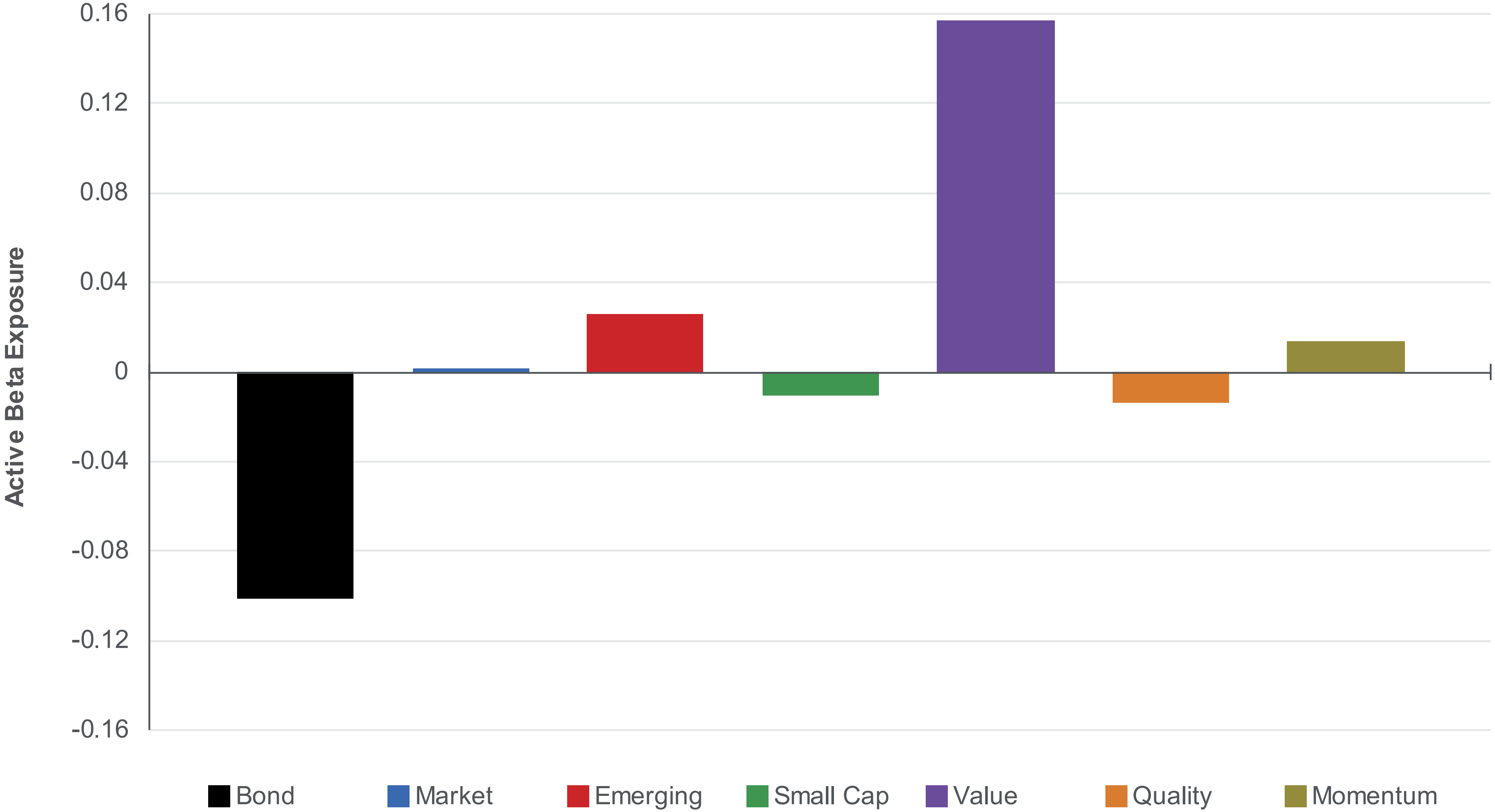
Style Controls: Active Beta Exposure Snapshot

International Equity – ACWI ex US Representative Account



Data as of June 30, 2021. Represents Arrowstreet's proprietary measures of ex ante style betas.
Source: Arrowstreet Internal Databases.

Why Arrowstreet Capital?

> Dedicated, experienced investors using quantitative tools to exploit investment insights in global markets

> Continuous re-investment in research to maintain competitive advantage

> Demonstrated ability to deliver sustainable risk-adjusted alpha across different market environments

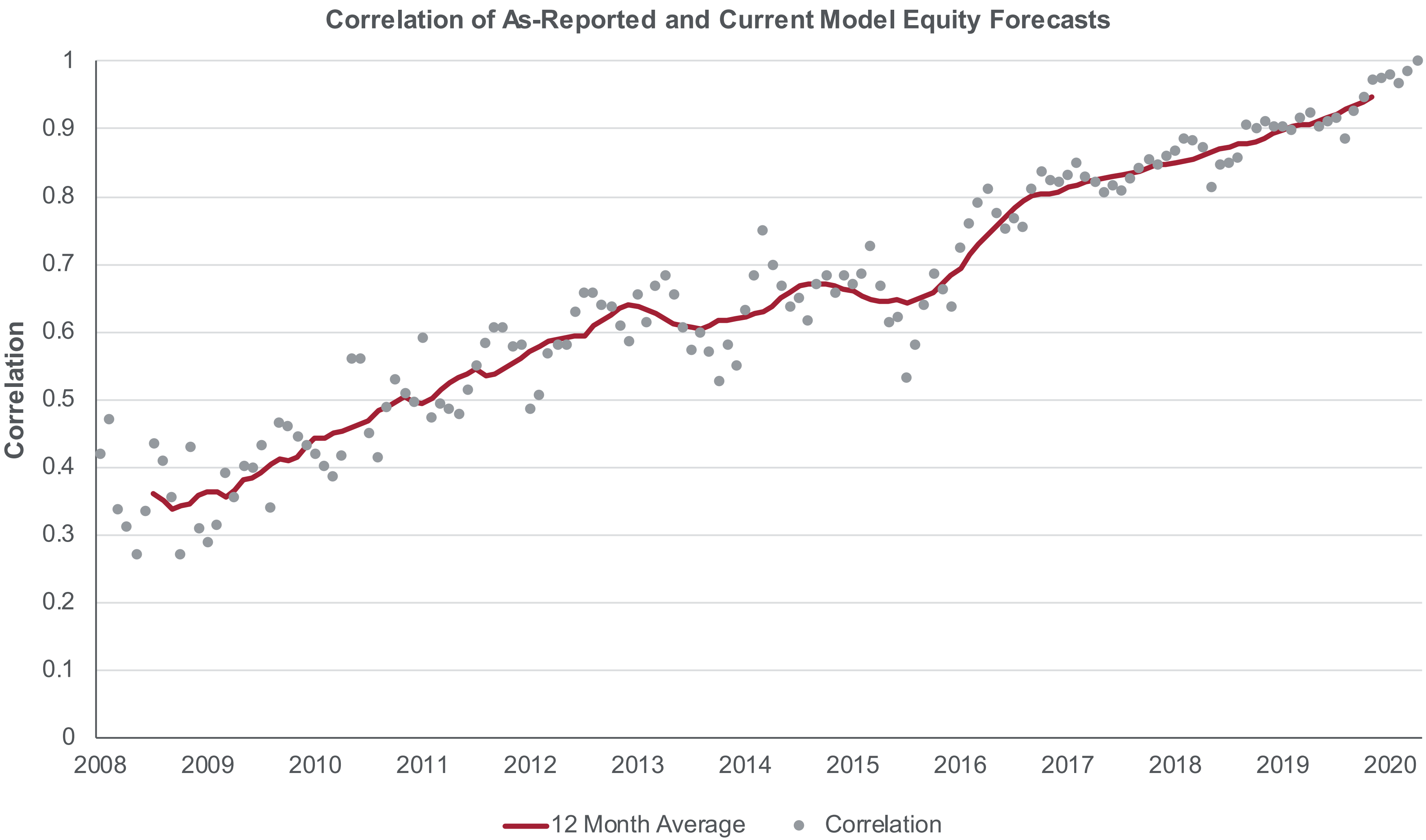
> Alignment of firm and client interests

> Institutional business focus and private ownership reinforce stability and continuity

ARROWSTREET CAPITAL

Exhibits

The Impact of Ongoing Research Innovations



Data as of December 31, 2020. Source: Arrowstreet Internal Databases.
Demonstrates declining similarity, as one moves backwards through time, between the "Current Model" historical unhedged equity forecasts that would have been produced by the model specification in use at the end of the reported timeline and the "As-Reported" unhedged equity forecasts that were produced by our model as it was specified at each point in time historically. By construction, the correlation of Current Model with itself, the last data point in the series, is equal to 1.

ARROWSTREET CAPITAL

Biographies – Senior Management

Name/Title	Responsibilities	Began at Firm	Years of Exp.	Education	Prior Experience
 **Peter Rathjens, PhD** *Partner,* *Chief Investment Officer*	Responsible for investment process; Chairs Investment Committee	1999	40	Princeton University, PhD in Economics: 1990 Oberlin College, BA in Economics and Mathematics: 1981	1998–1999: CIO, PanAgora 1995–1999: Director of Global Investments, PanAgora 1991–1995: Director of Research, PanAgora 1990–1991: Equity Analyst, Colonial Management 1988–1990: Assistant Professor of Economics, Brandeis University 1986–1988: Instructor of Economics, Princeton University 1983–1984: Quantitative Analyst, Lehman Brothers 1981–1983: Analyst, Data Resources
 **Anthony Ryan, CFA** *Partner,* *Chief Executive Officer*	Develops and implements strategic business plan	2011	34	London School of Economics, MS: 1986 University of Rochester, BA: 1985	2009–2011: Chief Administrative Officer, Fidelity Investments 2006–2009: U.S. Treasury Department 2000–2006: Partner, Head of Global Business Development & Client Relations, Grantham, Mayo, van Otterloo & Co. LLC 1994–2000: State Street Global Advisors, Principal, State Street Corporation 1988–1994: Manager, Global Investments, PanAgora 1987–1988: Manager, Equity Investments, The Boston Company

Biographies – Investment Professionals

	Name/Title	Responsibilities	Began at Firm	Years of Exp.	Education	Prior Experience
	**John Campbell, PhD** *Partner,* *Co-Head of Research*	Develops and implements research agenda	1999	29	Yale University, PhD in Economics: 1984 Oxford University, BA in Economics: 1979	1994–Present: Professor of Applied Economics, Harvard University 1998–1999: Director of External Research, PanAgora 1992–1998: Academic Advisory Committee, PanAgora 1984–1994: Professor of Economics, Princeton University
	**Derek Vance, CFA** *Partner,* *Co-Head of Research*	Develops and implements research agenda	2008	14	Harvard College, AB in Economics: 2007	2007–2008: Analyst, Goldman Sachs
	**Naveen Kartik C. K., CFA** *Partner*	Develops and enhances forecasting and risk models	2013	8	MIT, SM in Computation for Design and Optimization: 2013 Indian Institute of Technology, Madras BTech in Chemical Engineering: 2011	
	**Yosef Klein** *Partner*	Develops and enhances forecasting and risk models	2012	13	University of Chicago, MBA in Analytic Finance, Econometrics, and Statistics: 2008 University of Illinois at Chicago, MS in Mathematics: 2005 University of Chicago, BA in Mathematics: 2000	2008–2012: Quantitative Analyst, Wellington Management 2002–2004: Operations Manager, The Aryeh Goldbloom Team, Financial Planners

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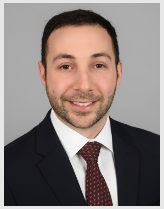
Biographies – Investment Professionals

Name/Title	Responsibilities	Began at Firm	Years of Exp.	Education	Prior Experience
 **Jonathan Kluberg, PhD** *Partner*	Develops and enhances forecasting and risk models	2015	10	MIT, PhD in Operations Research: 2011 Ecole Polytechnique, MS and BS in Applied Mathematics and Computer Science: 2006	2011–2015: Investment Analyst, HighVista Strategies
 **Tom Knox, PhD** *Partner*	Develops and enhances forecasting and risk models	2016	17	Harvard University, PhD in Business Economics: 2003 SM in Applied Mathematics and AB in Applied Mathematics: 1999	2009–2016: Quantitative Portfolio Manager, Convexity Capital Management 2007–2009: Portfolio Manager, QVT Financial 2004–2007: Bracebridge Capital, Vice President 2003–2004: Assistant Professor of Finance, University of Chicago
 **Christopher Malloy, PhD** *Partner*	Develops and enhances forecasting and risk models	2019	18	University of Chicago, PhD and MBA in Finance: 2003 Yale University, BA in Economics: 1996	2007–2019: Sylvan C. Coleman Chaired Professor of Financial Management, Harvard Business School 2003–2007: Assistant Professor of Finance, London Business School 1998–2003: Teaching Assistant, University of Chicago 1996–1998: Analyst, Federal Reserve Board, Washington, DC
 **Alex Merlis, CFA** *Partner*	Develops and enhances forecasting and risk models	2006	20	Boston University, MA in Mathematical Finance: 2006 Harvard University, AB in Physics and SM in Engineering Sciences: 1996	2003–2005: Quantitative Long/Short Analyst, Citadel Investment Group 2002–2003: Quantitative Analyst, StarMine Corp.

Biographies – Investment Professionals

Name/Title	Responsibilities	Began at Firm	Years of Exp.	Education	Prior Experience
 **Tuomo Vuolteenaho, PhD** *Partner*	Develops and enhances forecasting and risk models	2004	18	University of Chicago, PhD in Finance: 2000 Helsinki School of Economics and Business Administration, MS in Economics: 1995	2004: Consultant, Arrowstreet Capital 2000–2004: Assistant Professor of Economics, Harvard University 1995–2000: Teaching Assistant, University of Chicago
 **Julia Yuan, CFA** *Partner*	Develops and enhances forecasting and risk models	2012	10	Massachusetts Institute of Technology, MS in Finance: 2012 Peking University, BS in Economics: 2011	
 **Yijie Zhang, PhD** *Partner*	Develops and enhances forecasting and risk models	2006	15	Yale University, PhD in Finance: 2006 Rutgers University, MS in Economics: 2000 Tsignhua (Qinghua) University, BA in Finance: 1997	2003–2006: Teaching Assistant, Yale University
 **Manolis Liodakis, PhD** *Partner, Head of Portfolio Management*	Implements investment strategies	2012	23	City University, London, PhD in Finance: 1999 University of Birmingham, MBA in Finance: 1996 Athens University of Economics & Business, BS in Economics and Business: 1994	2008–2011: Managing Director of Global Equities Hybrid Strategies, Citadel Asset Management 2001–2008: Managing Director, Head of European Quantitative Equity Research, Citigroup Global Markets 2000–2001: Strategist, Morgan Stanley 1998–2000: Associate, Salomon Brothers

Biographies – Investment Professionals

Name/Title	Responsibilities	Began at Firm	Years of Exp.	Education	Prior Experience
 **Brandon Berger** *Partner*	Implements investment strategies	2013	11	Fordham University, MBA in Finance: 2011 Fordham University, BS in Business Administration with concentrations in Finance & International Business: 2010	2011–2013: Derivatives Market Maker, ABR Management LLC 2010–2011: Derivatives Trader, Toro Trading LLC
 **John Capeci, PhD** *Partner*	Implements investment strategies	1999	27	Princeton University, PhD in Economics: 1990 Harvard College, AB in Economics: 1984	1998–1999: Director of Research, PanAgora 1994–1998: Senior Investment Manager, PanAgora 1990–1995: Assistant Professor, Brandeis University
 **Alex Ogan** *Partner*	Implements investment strategies	2005	16	Harvard College, AB in Economics: 2005	2003–2004: Project Engineer, Aaxis Technologies
 **George Pararas-Carayannis, CFA** *Partner*	Implements investment strategies	2002	25	Babson College, MBA: 2011 Georgetown University, BS in Business Administration: 1996	2001–2002: Data Analyst, Putnam Investments 1998–2001: Senior Investment Associate, PanAgora 1997–1998: International Operations Administrator, Evergreen Keystone Funds 1996–1997: Registered Representative, Fidelity Investments

Biographies – Investment Professionals

Name/Title	Responsibilities	Began at Firm	Years of Exp.	Education	Prior Experience
 **Anne Luisi** *Manager*	Implements investment strategies	2014	15	University of Virginia, MBA: 2012 Dartmouth College, BS in Economics: 2002	2011–2014: Associate, Investment Specialist, J.P. Morgan Private Bank 2002–2008: Associate, High Yield Credit Sales, J.P. Morgan Securities
 **Alex Rodin, CFA** *Manager*	Implements investment strategies	2016	9	Emory University, BS in Business Administration: 2012	2012–2015: Equity Research Analyst, Spot Trading
 **Zach Vernon, CFA** *Partner*	Implements investment strategies	2008	15	Boston College, BS in Finance: 2006	2006–2008: Equity Derivatives Trading Operations Analyst, Blackrock
 **Michael Zervas, CFA** *Partner*	Implements investment strategies	2004	20	Stonehill College, BS in Business Administration: 2001	2001–2004: Consultant, FactSet Research Systems

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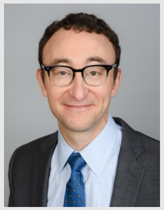
Biographies – Investment Professionals

Name/Title	Responsibilities	Began at Firm	Years of Exp.	Education	Prior Experience
 **Sam Thompson, PhD** *Partner,* *Head of Investment Processes*	Designs, develops, and maintains the investment systems used to support the management of client portfolios	2005	16	University of California at Berkeley, PhD in Economics and MA in Statistics: 2000 Yale University, BA in Economics: 1995	2005–2006: Consultant, Arrowstreet Capital 2004–2005: Associate Professor of Economics, Harvard University 2000–2004: Assistant Professor of Economics, Harvard University
 **Marta Campillo, PhD** *Partner*	Designs, develops, and maintains the investment systems used to support the management of client portfolios	1999	25	Boston University, PhD in Economics: 2000 Universidad Complutense, MA: 1992 Institute of Fiscal Studies, MA: 1990 Universidad de Autonoma, BS: 1989	1997–1999: Teaching Assistant, Dept. of Economics, Boston University 1995–1997: Research Assistant, Prof. Jeffrey Miron, Boston University 1990–1993: Research Associate, Foundation of Applied Economics Studies, FEDEA
 **Hui Wang, PhD** *Partner*	Designs, develops, and maintains the investment systems used to support the management of client portfolios	2012	9	University of Rochester, PhD in Physics: 2012 University of Science and Technology of China, BS in Physics: 2006	2007–2012: Research Assistant, University of Rochester 2006–2007: Teaching Assistant, University of Rochester
 **Katie McHardy** *Partner,* *Head of Investment Services*	Oversees pre- and post-trade activities including account, data, and market operations	2010	21	University of Massachusetts, Amherst, BA in Accounting: 2000	2002–2010: Auditor, Financial Services Practice, Deloitte LLP 2000–2002: Auditor, Arthur Andersen LLP

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Biographies – Investment Professionals

	Name/Title	Responsibilities	Began at Firm	Years of Exp.	Education	Prior Experience
	**Joe Tiano** *Partner*	Oversees post-trade activities including account, data, and market operations	2014	15	Boston University, MS in Computer Information Systems: 2019 Bentley University, BS in Economics-Finance: 2006	2010–2014: Trader, Sanford C. Bernstein HK Ltd. 2008–2010: Associate, Arrowstreet Capital, LP 2007–2008: Consultant, FactSet Research Systems
	**Mary Rogers, CFA, CIPM** *Partner,* *Head of Investment Analytics*	Oversees and produces analytics to support the investment process, including portfolio attribution	2008	14	Bentley University, BS in Finance: 2007	2007–2008: Associate, JPMorgan Chase

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International Equity – ACWI ex US Composite[1]

Time Period	Total Returns			Value Added		Annualized Three-Year Standard Deviation[7]		End of Period Composite Assets ($Mil)	Number of Portfolios	Composite Dispersion[8]	Total Firm Assets ($Mil)[9]
	Composite Gross-of-Fees[2]	Composite Net-of-Fees[3]	Benchmark[4]	Gross[5]	Net[6]	Composite	Benchmark[4]				
06/01/2000 - 12/31/2000	-5.95%	-6.34%	-8.42%	2.48%	2.08%	–	–	$94	1	–	$341
2001	-14.14%	-14.73%	-19.73%	5.59%	4.99%	–	–	$81	1	–	$1,657
2002	-11.36%	-11.97%	-14.95%	3.59%	2.97%	–	–	$71	1	–	$2,882
2003	35.59%	34.88%	40.83%	-5.25%	-5.95%	–	–	$1,591	4	–	$4,405
2004	24.26%	23.58%	20.91%	3.35%	2.68%	–	–	$2,579	6	–	$7,437
2005	17.01%	16.38%	16.62%	0.39%	-0.24%	–	–	$3,905	12	0.43%	$11,053
2006	25.98%	25.29%	26.65%	-0.67%	-1.36%	–	–	$4,885	12	1.38%	$17,646
2007	19.07%	18.43%	16.65%	2.42%	1.78%	–	–	$5,650	12	1.31%	$23,524
2008	-42.06%	-42.39%	-45.52%	3.47%	3.14%	–	–	$3,460	15	1.27%	$14,549
2009	50.10%	49.30%	41.45%	8.66%	7.86%	–	–	$5,753	16	4.28%	$23,270
2010	15.46%	14.86%	11.15%	4.31%	3.71%	–	–	$8,295	16	0.78%	$34,179
2011	-12.21%	-12.75%	-13.71%	1.49%	0.95%	23.48%	22.71%	$7,696	21	0.78%	$34,792
2012	20.24%	19.54%	16.83%	3.41%	2.71%	19.56%	19.26%	$10,022	21	0.66%	$41,117
2013	24.89%	24.17%	15.29%	9.61%	8.88%	16.58%	16.23%	$12,875	22	1.18%	$50,053
2014	-0.68%	-1.31%	-3.87%	3.19%	2.56%	13.34%	12.81%	$13,057	26	1.28%	$52,206
2015	-2.06%	-2.84%	-5.66%	3.60%	2.82%	12.41%	12.13%	$13,508	29	1.64%	$59,622
2016	6.27%	5.43%	4.50%	1.78%	0.93%	12.06%	12.51%	$15,160	29	0.72%	$69,939
2017	29.13%	28.12%	27.19%	1.94%	0.93%	11.69%	11.87%	$20,464	29	0.89%	$97,465
2018	-12.79%	-13.49%	-14.20%	1.41%	0.71%	11.49%	11.38%	$15,344	26	1.00%	$89,032
2019	23.45%	22.48%	21.51%	1.94%	0.97%	11.68%	11.34%	$20,647	26	0.75%	$106,168
2020	22.01%	21.05%	10.65%	11.36%	10.39%	19.24%	17.93%	$22,031	20	1.81%	$133,621
2021 1st Quarter	8.08%	7.87%	3.49%	4.59%	4.38%	18.88%	17.41%	$22,017	18	–	$143,436
2021 2nd Quarter	5.96%	5.75%	5.48%	0.48%	0.28%	18.74%	17.36%	$22,497	17	–	$151,615
2021 Year-to-Date	14.52%	14.08%	9.16%	5.36%	4.92%	–	–	$22,497	17	–	$151,615
2021 Trailing 1 Yr	50.87%	49.70%	35.72%	15.15%	13.98%	–	–	$22,497	17	–	$151,615

Time Period	Annualized Returns			Value Added		Annualized Standard Deviation[7]	
	Composite Gross-of-Fees[2]	Composite Net-of-Fees[3]	Benchmark[4]	Gross[5]	Net[6]	Composite	Benchmark[4]
Trailing 3 Year	15.50%	14.59%	9.38%	6.12%	5.21%	18.74%	17.36%
Trailing 5 Year	15.40%	14.49%	11.08%	4.32%	3.41%	15.52%	14.47%
Trailing 7 Year	9.45%	8.59%	5.33%	4.12%	3.26%	15.08%	14.42%
Trailing 10 Year	9.61%	8.81%	5.45%	4.16%	3.36%	15.49%	15.02%
Since Inception	8.54%	7.84%	4.95%	3.58%	2.88%	17.35%	17.03%

Data as of June 30, 2021
See the following footnotes for important disclosures to be read in conjunction with the performance results presented herein

International Equity – ACWI ex US Composite: Disclosures

Past results are not necessarily indicative of future results.

(1) This information has been prepared for the benefit of select, qualified institutional investors for educational, informational, and discussion purposes only and is not intended for mass distribution.

(2) Prior to January 1, 2019, gross-of-fees returns for both separately managed accounts and pooled investment funds for which Arrowstreet is the investment adviser and promoter (the Arrowstreet Sponsored Funds) were calculated net of trading expenses, net of operating expenses where such expenses were, at the discretion of the client, paid through the account (and gross of operating expenses otherwise) and gross of management fees (including performance fees, where applicable). Beginning January 1, 2019, gross-of-fees returns for separately managed accounts are calculated net of trading expenses, gross of operating expenses and gross of management fees (including performance fees, where applicable). The gross-of-fees returns for Arrowstreet Sponsored Funds continue to be calculated net of trading expenses, net of operating expenses and gross of management fees (including performance fees, where applicable).

(3) Net-of-fees returns for both separately managed accounts and Arrowstreet Sponsored Funds are arrived at by deducting management fees from the calculated gross returns.

Since October 1, 2014, composite net-of-fees returns have been calculated by applying the highest fee tier in the Composite fee schedule (0.80%) to the Composite gross-of-fees returns on a monthly basis and assuming only investment management base fees have been charged. Prior to October 1, 2014, composite net-of-fees returns were calculated using the Composite fee schedule in effect at the time and assuming only investment management base fees were charged. From January 1, 2008 through September 30, 2014, fees were computed based on average daily net asset values during the relevant quarter without separate adjustments for contributions or withdrawals, and assumed to be paid on the last day of each quarter. Prior to 2008, fee rates were applied to end of quarter market values, as adjusted for contributions and withdrawals within that quarter, and assumed to be paid on the last day of each quarter. In each case, actual fees charged vary from portfolio to portfolio. Please refer to the Required Fee and Expense Disclosure for Pooled Funds included within the Composite footnote for the fee schedule, operating expense ratios and total expense ratios for each pooled fund included within the Composite.

The Firm's standard investment advisory fee schedule applicable to the Composite is 0.80% for the first $50 million under management, 0.65% for the next $50 million under management, and 0.55% thereafter.

(4) The MSCI ACWI Ex. U.S. Index, Net, is a fully invested capitalization weighted index that assumes reinvestment of dividends and is net of withholding taxes retained at the source for entities which do not benefit from a double taxation treaty. Prior to February 1, 2001, the MSCI ACWI Ex. U.S. Index was presented gross of applicable withholding taxes. Index returns do not include any transaction costs, management fees or other costs. Benchmark Source: MSCI. MSCI makes no express or implied warranties or representations and shall have no liability whatsoever with respect to any MSCI data contained herein. The MSCI data may not be further redistributed or used as a basis for other indices or any securities or financial products. The report is not approved, reviewed or produced by MSCI.

(5) Value Added represents the Composite's performance relative to the Benchmark, calculated as the difference between the Composite Gross-of-Fees Returns and Benchmark Returns.

(6) Value Added represents the Composite's performance relative to the Benchmark, calculated as the difference between the Composite Net-of-Fees Returns and Benchmark Returns.

(7) Standard deviation is calculated using the gross-of-fees returns. The three-year annualized ex-post standard deviation is not presented for the Composite or its Benchmark where, at the time presented, the Composite incepted less than thirty-six months prior.

(8) Presented only for years where the Composite included more than five portfolios for the entire calendar year, and a portfolio is only included in this computation to the extent it was included in the Composite for the entire calendar year. Composite dispersion is computed using an asset weighted standard deviation measure based on portfolio gross returns and the assets in a portfolio at the beginning of each year. Several factors, individually or in combination, may lead to dispersion of performance among portfolios within the Composite, including cash flows in and out of a portfolio, differences in the instruments and markets available for investment and other individual portfolio restrictions.

(9) The 2020 GIPS Standards require disclosure of total firm assets as of each annual period ending on or after December 31, 2020. For reporting periods prior to December 31, 2020, composite assets as a percentage of total firm assets were disclosed as permitted under the GIPS Standards at the time. Total firm assets presented for periods prior to December 31, 2020 were not examined as part of our composite performance examination.

International Equity – ACWI ex US Composite: Disclosures

General Information

The Firm is defined as Arrowstreet Capital, Limited Partnership ("Arrowstreet" or the "Firm"), which includes all assets managed by Arrowstreet. Arrowstreet is a registered investment adviser with the United States Securities and Exchange Commission (SEC) under the U.S. Investment Advisers Act of 1940, as amended.

Arrowstreet claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Arrowstreet has been independently verified for the periods December 1, 1999 through December 31, 2020.

A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. The International Equity Strategy ACWI Ex. U.S. Composite has had a performance examination for the periods June 1, 2000 through December 31, 2020. The verification and performance examination reports are available upon request.

A complete list of composite descriptions is available upon request; the type of portfolios included within each composite are indicated on such list. In addition, Firm policies for valuing portfolios, calculating performance and preparing GIPS Composite Reports are available upon request. Dividend income is recorded on an accrual basis net of non-reclaimable withholding taxes.

The International Equity Strategy ACWI Ex. U.S. Composite (the "Composite"), created on June 1, 2000, consists of each discretionary fee paying portfolio that seeks to outperform its benchmark by investing primarily in long equity securities of issuers within its benchmark; such benchmark includes equity securities of issuers in markets generally considered to be developed or emerging markets, excluding the United States.

A portfolio is included in the Composite in the first full month following inception and a terminated portfolio is removed from the Composite following its last full month preceding its termination.

Portfolios in the Composite may utilize exchange-traded futures as part of its investment policy, including to manage a portfolio's exposure to cash. These instruments are often highly volatile, involve certain special risks that are not present in trading equities and may expose portfolios to a higher risk of loss than if only equities were traded. A low initial margin deposit is typically required to establish a futures position, which presents the potential for a high degree of leverage. As a result, a relatively small movement in the price of a futures contract may result in a profit or a loss which is high in proportion to the amount of funds actually placed as initial margin and may result in unquantifiable further losses exceeding any margin deposited. Further, when used for hedging purposes there may be an imperfect correlation between these instruments and the investments or market sectors being hedged.

Portfolios in the Composite may utilize over-the-counter forward foreign exchange contracts as part of their investment policy, including for investment or hedging purposes. These instruments are often highly volatile, involve certain special risks that are not present in trading equities and may expose portfolios to a higher risk of loss than if only equities were traded. Transactions in over-the counter derivatives may involve additional risk as there is no exchange or market on which to close out an open position. It may be impossible to liquidate an existing position, to assess or value a position, or to assess the exposure to risk. The use of such contracts involves counterparty risk, which is the risk that the contracting party will not fulfill its contractual obligation to deliver the currency contracted for at the agreed upon price. Further, when used for hedging purposes there may be an imperfect correlation between these instruments and the investments being hedged.

Portfolios in the Composite invest in non-US equities. Such investments often involve special risks beyond those in US equities, including currency fluctuation, lower liquidity, different accounting methods and economic and political systems, and higher transaction costs.

Results presented above are based on their U.S. Dollar (USD) equivalency. Portfolios included in the Composite may have different base currencies. Currency exchange rate fluctuations will impact performance results.

International Equity – ACWI ex US Composite: Disclosures

Required Fee and Expense Disclosure for Pooled Funds included within the Composite*
As of June 30, 2021:

Fund Name	Management Fee (Base Fees Only)[1]	Management Fee (Base & Performance Fees)[2]	Operating Expenses[3]	Total Expense Ratio[4] (Base Fees Only)	Total Expense Ratio[5] (Base & Performance Fees)
Arrowstreet Collective Investment Trust - Arrowstreet International Equity ACWI ex US CIT	0.75%	Not Applicable	0.06%	0.81%	Not Applicable
Arrowstreet Investment Trust - Arrowstreet International Equity ACWI ex US Trust Fund	0.75%[6]	0.25% and 20%[6]	0.03%	0.78%[6]	0.28%[6]
Arrowstreet US Group Trust - Arrowstreet International Equity – ACWI ex US Fund	Not Applicable[6]	Not Applicable[6]	0.03%	Not Applicable[6]	Not Applicable[6]

1 - Represents the fund's highest management fee schedule (including base fees and not performane fees) as of the above-noted date, expressed on an annualized basis. Actual fees charged may vary significantly between investors.

2 - Represents the fund's highest management fee schedule (including both base and performance fees) as of the above-noted date, expressed on an annualized basis. Actual fees charged may vary significantly between investors.

3 - Represents the fund's highest operating expense ratio (excluding transaction costs), as of the above-noted date, expressed on an annualized basis.

4 - Represents the fund's highest total expense ratio (including base fees and not performance fees; excluding transaction costs), as of the above-noted date, expressed on an annualized basis. Actual fees charged may vary significantly between investors.

5 - Represents the fund's highest total expense ratio (excluding transaction costs), as of the above-noted date. Operating expenses (excluding transaction costs) and base management fees are expressed on an annualized basis. Performance fees are expressed based on the amount of such fees accrued as of the above-noted date (note that the Composite Net-of-Fees returns presented on page 1 include performance fees once realized).

6 - Management and performance fees, if any, are negotiated and paid directly to the investment manager by investors and are not paid by the Fund. Actual fees charged may vary significantly between investors.

* Please refer to the applicable fund fact sheet and fund offering documents for additional details on all available share classes, including descriptions of the management fee structures offered.

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Strategy and Performance Endnotes

† Target Value Added" represents our ex-ante objective for outperformance per year relative to the benchmark over a full market cycle (defined here for this purpose as 5 to 7 years) based upon our assessment of the available investment opportunities when the portfolio is managed at the applicable tracking error range. "Tracking Error" represents the typical expected range of annualized standard deviation of the difference between the portfolio return and the portfolio's benchmark return. "Info Ratio" (Information Ratio) is determined by dividing Target Value Added by our internal expectation of full market cycle average tracking error.

1 Please see the applicable Composite Performance Review for each named investment strategy (all of which are available upon request) for important disclosures to be read in conjunction with the performance results presented herein, which also includes applicable benchmark changes over the history of the composite. The return information presented represents past performance and is not a guarantee of future results. Returns for periods over one year are annualized. Results presented above are based on their U.S. dollar (USD) equivalency. Portfolios included in each Composite may have different base currencies. Currency exchange rate fluctuations will impact performance results.

2 "Trailing Composite Gross Returns" are presented gross of investment management fees (including performance fees, where applicable) and include the reinvestment of income. Prior to January 1, 2019, gross-of-fees returns for both separately managed accounts and pooled investment funds for which Arrowstreet is the investment adviser and promoter (the Arrowstreet Sponsored Funds) were calculated net of trading expenses, net of operating expenses where such expenses were, at the discretion of the client, paid through the account (and gross of operating expenses otherwise) and gross of management fees (including performance fees, where applicable). Beginning January 1, 2019, gross-of-fees returns for separately managed accounts are calculated net of trading expenses, gross of operating expenses and gross of management fees (including performance fees, where applicable). The gross-of fees returns for Arrowstreet Sponsored Funds continue to be calculated net of trading expenses, net of operating expenses and gross of management fees (including performance fees, where applicable).

3 "Trailing Composite Net Returns" are presented net of investment management fees (including performance fees, where applicable) and include the reinvestment of income. Net-of-fee returns for both separately managed accounts and Arrowstreet Sponsored Funds are arrived at by deducting management fees (including performance fees, where applicable) from the calculated gross returns. Depending on the performance of a given portfolio, there exists the potential that no performance fees will be assessed for the relevant period end. Actual fees charged vary from portfolio to portfolio.

4 "Excess Returns" represents the difference between the composite total returns and the benchmark returns.

5 Benchmark Data Sources

MSCI

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FTSE/Frank Russell

FTSE 3-Month Treasury Bill Index

The FTSE 3-Month Treasury Bill Index (formerly referred to as the S&P/Citigroup 3-Month Treasury Bill Index) is an unmanaged index representative of three-month U.S. Treasury Bills. Index returns do not include any transaction costs, management fees or other costs.

6 As of February 1st, 2021 there are no longer any active constituents in the strategy.

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Important Information and Legal Disclosures

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ARROWSTREET
CAPITAL

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AGENDA ITEM IV.E.

BOARD ACTION REQUESTED

TO: State Investment Board

FROM: Investment Staff

DATE: August 27, 2021

SUBJECT: International Equity Manager Recommendation

RIO Recommendation:

Staff recommends that the SIB approve Arrowstreet Capital, L.P. to manage an international equity mandate for all three pools. Recommended initial target allocations are:

- 4.0% in the Pension Pool (approximately $299 million)
- 1.6% in the Insurance Pool (approximately $51 million)
- 5.3% in the Legacy Fund (approximately $438 million)
- The total allocation is approximately $789 million

The Arrowstreet International Equity Strategy employs a unique core focused quantitative strategy that utilizes a combination of direct and indirect signals to identify mispriced companies. The strategy is a strong complement to the SIB's existing international equity managers, LSV and William Blair. LSV-International Large Cap Value employs a deep value focus and William Blair-International Leaders employs a fundamental bottoms-up growth strategy.

Adding a third manager to the mix will accomplish a number of key goals in the SIB's international equity allocations. In the Pension Pool, the Arrowstreet strategy will be funded by the Northern Trust MSCI World-Ex US passive strategy. Staff believes that increasing active exposure in international equities is prudent (see *International Equity Search Overview)* and will help the Pension Pool generate excess returns over the long term. Adding a new diversifying manager to the Legacy Fund and Insurance Pool, will reduce manager concentration risk and also maintain active exposure.

Staff's recommendation of Arrowstreet is based on:

1) Performance for Arrowstreet's International ACWI ex-US strategy has been strong, falling in the top quartile of the peer universe for most time periods analyzed. Relative to the other strategies Staff evaluated, Arrowstreet has been able to consistently generate excess returns (3.6% annualized since inception) through a variety of market environments while maintaining its core style.

2) Arrowstreet's firm wide focus is on implementing quantitative investment strategies. The team is experienced and has significant depth with 26 members on the senior investment team, and an additional 81 team members supporting the investment process. The strong performance generated by Arrowstreet over long periods of time indicates the firm's ability to continually innovate and add new alpha signals to their models.

3) Arrowstreet's proprietary linkages model has been a key driver of the strategies outperformance. Arrowstreet is able to capitalize on relevant, but less obvious information due to their models ability to link companies in different ways. This robust model is a competitive advantage as it allows the strategy to capitalize on information other investors may be slower to react to. The firm continues to invest heavily in developing models and new signals in this area.

4) The models created by Arrowstreet employ both long and short term signals into their return forecasts. This enables the strategy to react quickly to new information and maintain accurate forecasts when market dynamics are changing. Frequent optimization helps to ensure desired positions are held in the portfolio and systematic tilts are avoided. Avoiding tilts reduces their exposure to crowded signals and contributes to more consistent performance.

Current policy allocations and projected policy allocations are as follows:

Legacy Fund	**Current Market Value (8/20/21)**	**Current Policy Allocation**	**Proposed Policy Allocation**	**Intital Estimated Market Value**
LSV	$ 570	8.0%	5.3%	$ 438
William Blair	$ 745	8.0%	5.3%	$ 438
Arrowstreet	$ -	0.0%	5.3%	**$ 438**
Total	$ 1,314	16.0%	16.0%	$ 1,314
Insurance Trust				
LSV	$ 73	2.5%	1.6%	$51
William Blair	$ 81	2.5%	1.6%	$51
Arrowstreet	$ -	0.0%	1.6%	**$51**
Total	$ 154	4.9%	4.9%	$ 154
Pension Trust				
MSCI Index	$ 435	5.8%	1.8%	$136
Arrowstreet	$ -	0.0%	4.0%	**$299**
Total	$ 435	5.8%	5.8%	$ 435
(amounts in millions)				
Arrowstreet Estimated Funding				**$789**

Process:

Staff began researching quantitative strategies in early 2019 as part of the mandate to optimize the public equity allocations. With the rapid growth and availability of new data sets, ever increasing computer power and continued advancements in data analysis and statistical methods, Staff wanted to explore how quantitative strategies have evolved. Staff reached out to firms that were known to have established quantitative platforms including Blackrock, Goldman Sachs, Two Sigma, D.E. Shaw, WorldQuant and Renaissance Technologies. As part of the research process, Staff also reached out to a number of alternative data vendors to better understand the cost of data, types of data available, and the accessibility of this data. This research combined with Staff's initial qualitative and statistical reviews of the aforementioned managers offered the evidence necessary to pursue avenues to incorporate a quantitative strategy in the SIB's portfolios.

Next, Staff conducted various market analyses and portfolio analyses to identify which markets were best suited for quantitative strategies (see *International Equity Search Overview*), and where a quantitative strategy could best impact the SIB's portfolios. Staff concluded a quantitative international equity mandate would be highly additive to all three pools.

In December of 2020, Staff reached out to Callan to conduct a search for an international equity manager. Callan performed an independent analysis of international equity managers and produced a short list of six candidate managers: Acadian, Ariel, Arrowstreet, BlackRock, GSAM, and Marathon. Over the next several, months Staff held additional due diligence calls, and conducted its own analysis of these managers. Arrowstreet emerged as a leading candidate. In the beginning of August, Staff conducted final onsite due diligence at Arrowstreet's headquarters in Boston, and met with senior members of the investment team.

Arrowstreet International Equity Strategy Evaluation:

1. **Organizational Overview:** Founded in June 1999, Arrowstreet Capital is a privately owned, discretionary institutional global asset manager headquartered in Boston, Massachusetts. As of June 30, 2021 Arrowstreet managed approximately $150 billion for a diverse client base including pension funds, endowments, and foundations. They offer a range of quantitative investment strategies such as long-only, alpha extension, and long/short strategies primarily in global equities.

2. **Arrowstreet International Equity – ACWI ex US:**

    a. **Philosophy:** Arrowstreet believes equity markets are inefficient and a well-conceived investment process can generate excess returns relative to passive benchmarks. For information to be applicable in an active investment process, it must be both relevant to share prices and slowly reflected in share prices. They believe the most valuable and often overlooked insights for forecasting equity returns are often found by observing information of related securities. This information is not as obvious and as a result is generally reflected more slowly in share prices. Arrowstreet utilizes a quantitative process to capture these insights to ultimately generate excess returns.

    b. **Strategy:** Arrowstreet's International Equity Strategy was incepted in June of 2000 and has a long 21 year track record. As of June 30, 2021 strategy assets were $22.5 billion. Arrowstreet's investment approach utilizes quantitative methods that focus on identifying and incorporating investment signals into proprietary return, risk, and transaction cost models. This strategy targets outperformance of 3% per year over a market cycle relative to the MSCI ACWI ex US index. Arrowstreet employs a core investment style that can outperform during a broad range of market environments.

        i. Process: Arrowstreet uses a return forecasting model to predict future returns on over 25,000 securities on a daily basis. This model takes into account direct and indirect effects of companies.
            - **Direct Effects:** Characteristics of the company itself.
            - **Indirect Effects:** Characteristics of other companies that are related in some way such as common locality, commercial relationships, sector affiliations and historical correlations.

        ii. Signals used to generate return forecasts consist of various types including:
            - **Valuation:** Identify stocks that are either undervalued or overvalued relative to fundamentals.
            - **Momentum:** Price momentum derived from a combination of the slow leakage of information and speculative behavior of investors.

- **Quality:** Slow moving complements to value signals that identify low risk, sustainable growth, and high profitability.
- **Catalysts:** High frequency signals that indicate changes in stock price in the near term.
- **Extreme Sentiment:** Complements of momentum and catalyst signals that measure levels of sentiment.
- **High frequency:** Identify short term opportunities and timing on longer term trades.

c. **Portfolio Construction:** Portfolios are constructed by trading off a stock's expected return, its contribution to portfolio level risk, and its estimated transaction costs. These inputs are combined in an optimization process that generate a recommended set of stocks to buy and sell. The portfolios are designed to avoid systematic biases towards any particular country, sector, style, or market cap. As the portfolio tilts in a particular direction, stock return forecasts are penalized for the tilt and must have greater return forecasts to compensate. Generally, the portfolio will be broadly diversified and consist of 150-775 stocks. Target position limits relative to the benchmark are as follows:

- Country: +/- 10%
- Sector: +/- 15%
- Basket: +/- 5%
- Stock: +/- 3%

d. **Performance Overview:** Arrowstreet's International ACWI ex-US strategy has had strong and consistent performance since the strategy's inception. The strategy has met its targets of an excess return over the benchmark of 3% and tracking error of 3% - 7% per year. RIO staff compared performance metrics with peers over the last decade and Arrowstreet landed in the top quartile for most periods.

Performance Analysis

Description	1 Yr	3 Yr	5 Yr	10 Yr	SI
Arrowstreet Intl ACWI ex-US	50.87	15.50	15.40	9.61	8.54
MSCI ACWI ex-US	35.72	9.38	11.08	5.45	4.94
Excess Returns	15.15	6.12	4.32	4.16	3.60

Risk And Regression

Description	1 Yr	3 Yr	5 Yr	10 Yr	SI
Standard Deviation	17.27	19.01	15.65	15.55	17.38
R-Squared (R2)	0.95	0.97	0.96	0.96	0.96
Annualized Alpha	6.79	5.15	3.44	3.97	3.51
Beta	1.15	1.07	1.05	1.01	1.00

Efficiency Measures

Description	1 Yr	3 Yr	5 Yr	10 Yr	SI
Sharpe Ratio	2.94	0.75	0.91	0.58	0.40
Tracking Error	4.26	3.26	3.11	3.19	3.52
Information Ratio	3.56	1.88	1.39	1.30	1.02
Upside Market Capture	137.70	121.54	114.59	112.45	108.00
Batting Average	0.75	0.69	0.60	0.61	0.60
Downside Market Capture	90.76	97.24	95.40	92.71	93.25

Source: eVestment gross returns, inception date of 06/30/2000 ending 6/30/2021

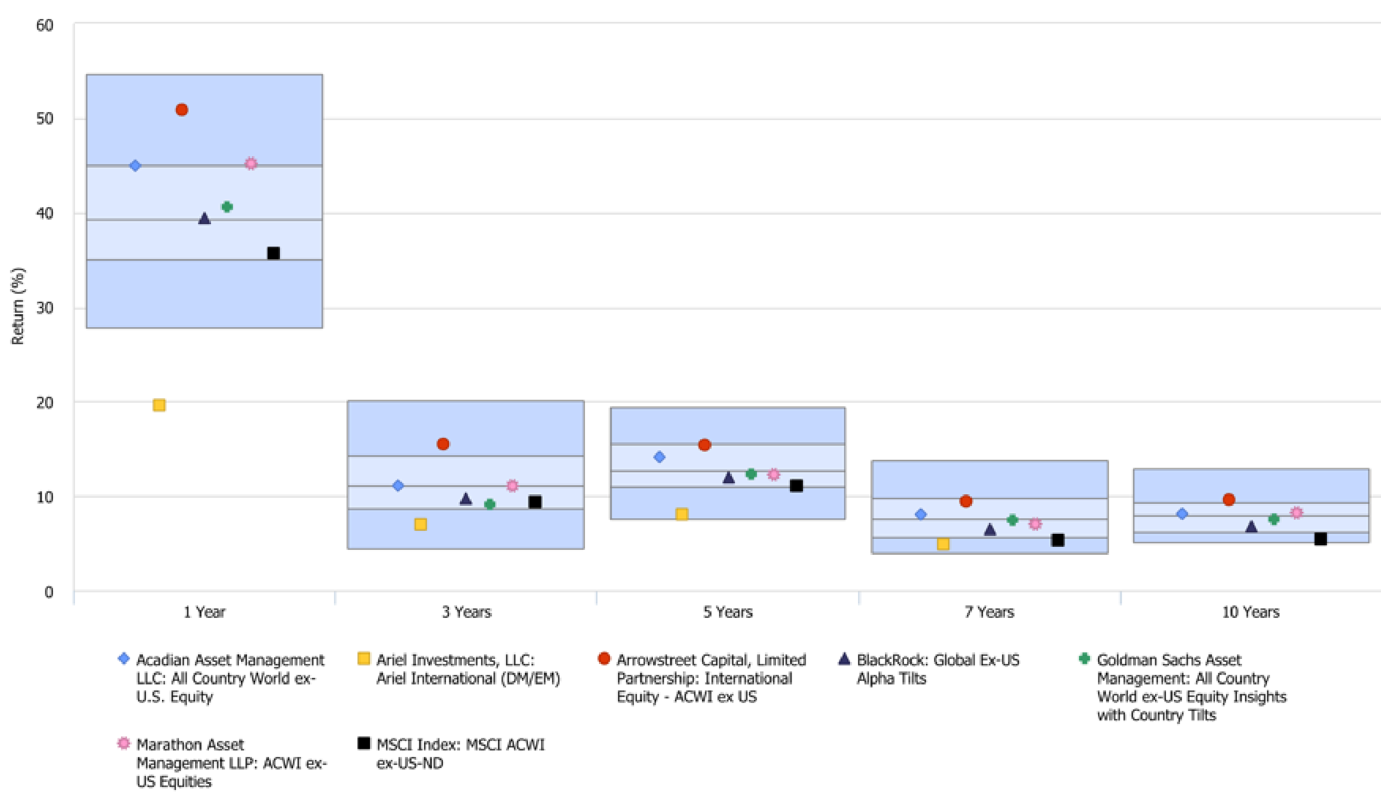
- Relative to the other candidates Staff reviewed, Arrowstreet has the strongest performance and efficiency measures. The ranked returns chart (2nd chart below) shows the candidate pool ranked against the whole eVestment ACWI ex-US Universe. Arrowstreet falls in the top quartile over the past decade.

10 year statistics

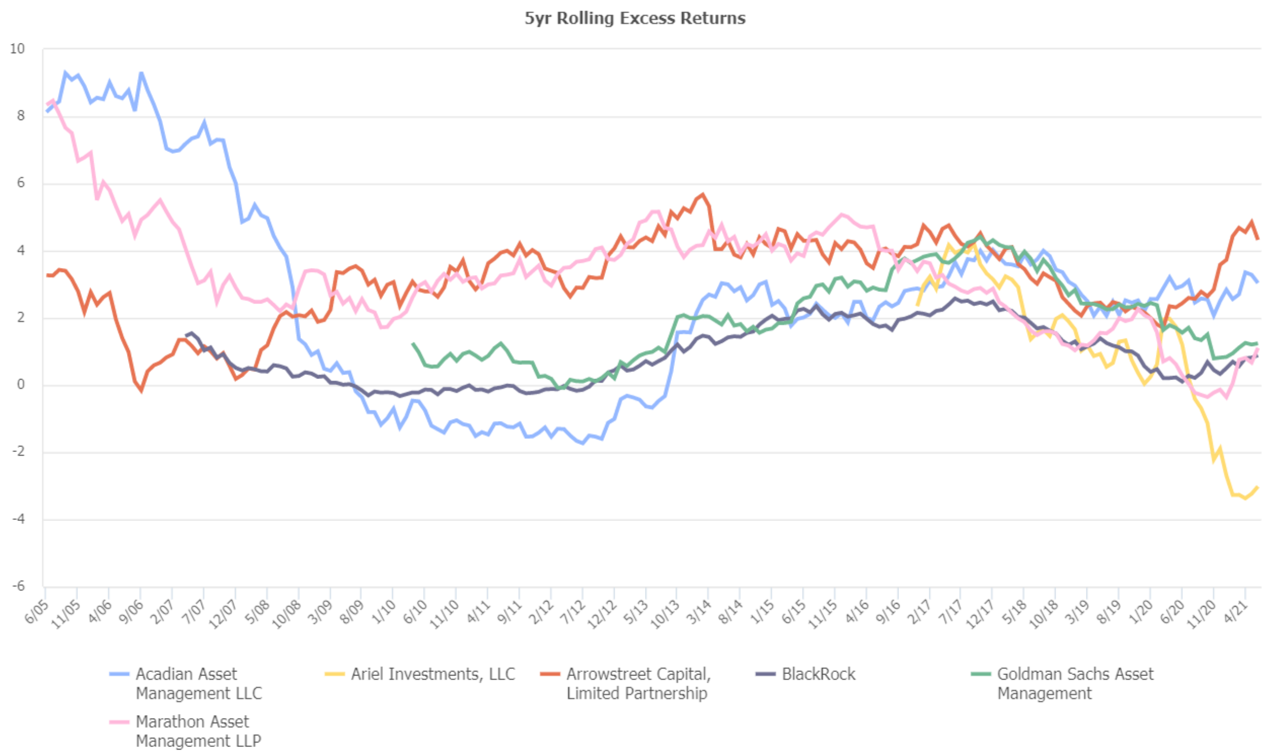
Firm Name	Arrowstreet Capital	Acadian Asset Management LLC	BlackRock	Goldman Sachs Asset Management	Marathon Asset Management LLP	MSCI ACWI ex-US Index
Returns	9.61	8.12	6.78	7.53	8.09	5.45
Excess Returns	4.16	2.67	1.33	2.08	2.64	0.00
Annualized Alpha	3.97	2.78	1.30	2.00	2.75	0.00
Tracking Error	3.19	3.39	1.70	2.58	3.05	0.00
Standard Deviation	15.55	14.86	15.13	15.40	14.76	15.08
Downside Deviation Relative to Index	1.53	2.02	1.04	1.66	1.88	0.00
Information Ratio	1.30	0.79	0.79	0.81	0.87	---
Sharpe Ratio	0.58	0.51	0.41	0.45	0.51	0.32
Sortino Ratio	0.91	0.75	0.60	0.66	0.75	0.47
Upside Market Capture	112.45	103.26	102.41	105.48	99.84	100.00
Downside Market Capture	92.71	91.14	96.28	95.70	88.16	100.00
Average Drawdown	8.35	10.41	8.31	9.52	7.09	11.11

Source: eVestment data using 10 years of gross returns ending 6/30/2021

Ranked Returns For Finalist Candidates Relative to ACWI ex-US Universe



- Arrowstreet has generated consistent excess returns over the benchmark. There has been only one rolling 5-year period in which Arrowstreet has underperformed the benchmark.



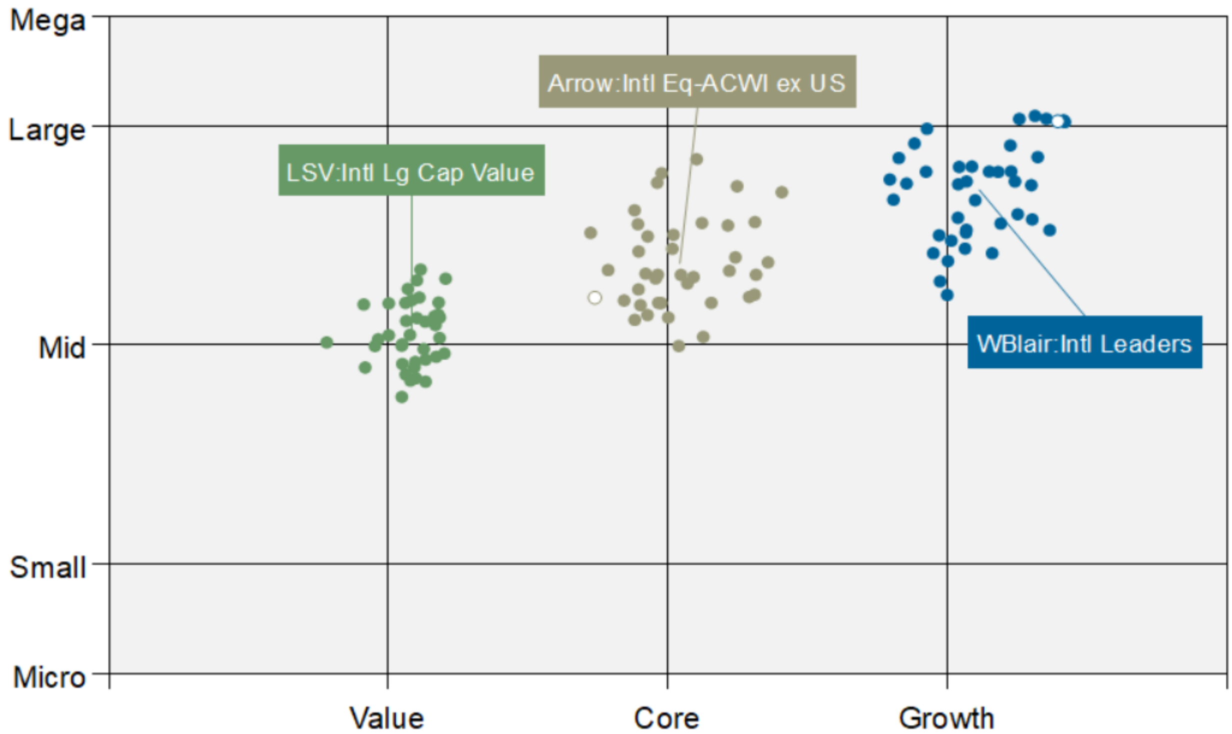
Source: eVestment, Benchmark is the MSCI ACWI ex US Index

- Staff produced and evaluated a hypothetical portfolio of the two existing international managers (LSV and William Blair) and compared it to a portfolio that included Arrowstreet. The table below lists the results of a 10 year history with annual rebalancing. The addition of Arrowstreet improved performance while also lowering tracking error to the international policy benchmark. While this example is hypothetical, it illustrates how the managers have historically been complimentary to each other.

	LSV, WBlair	LSV, WBlair, Arrowstreet	MSCI World ex-US-ND
Annualized Return	8.61%	8.96%	5.70%
Standard Deviation	15.22%	15.23%	14.97%
Alpha	2.80%	3.10%	---
Tracking Error	2.53%	2.33%	---
Information Ratio	1.15	1.40	---
Sharpe Ratio	0.53	0.55	0.34
Upside Market Capture	107.52%	108.80%	---
Downside Market Capture	93.71%	93.31%	---

- Arrowstreet fits nicely on the style map between LSV and William Blair. This indicates that the three managers have historically focused on different parts of the international equity landscape.

International Equity Style Map
for 10 Years Ended June 30, 2021



Source: Callan style map

Conclusion:

Following an intense and rigorous manager search and due diligence process, Staff has identified Arrowstreet Capital's International ACWI ex-US strategy as an attractive complimentary core strategy to the SIB's existing international equity mandates. Staff was highly impressed with the consistency of Arrowstreet's track record through various market environments. Arrowstreet has generated excess returns relative to the benchmark of 3.6% annualized in the International strategy since June 30, 2000. Much of this success can be attributed to the strength of the research team behind their investment process. Arrowstreet has been able to continually innovate and identify new alpha signals to incorporate into their models over time. Staff believes adding Arrowstreet to the portfolios will improve risk adjusted performance moving forward.

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MEMORANDUM

TO: **State Investment Board**
FROM: **Jan Murtha**
DATE: **August 25, 2021**
RE: **Executive Limitations/Staff Relations**

Ms. Murtha will provide a verbal update to the SIB on agency efforts to address current and future organizational risk through strategic planning. Including updates on the following topics:

1. **Facility Move:** RIO is still moving to WSI in 2021, but to a different space in the building. The "new" space doesn't require remodeling to add a reception area, and reduces the number of months the agency will pay rent at its current and future location. This change in space will result in an ongoing cost savings from our current location and allows us to save contingency fund dollars.

2. **Current Procurement Activities including:**

   - **PAS Project** – The project continues to operate on schedule. Responses to the vendor RFP have been received and reviewed. As part of the competitive bidding process demonstrations with vendors will be scheduled. Successful vendor selection, subsequent to a contract negotiation period to occur this fall. Project Kick-Off with vendor likely to occur December 2021.
   - **Death Audit –** The agency went through the procurement process to obtain automated death audit services to replace reliance on staff manual research efforts.
   - **Executive Search –** The search firm of EFL Associates was selected by the Executive Search Committee. A presentation from EFL will follow on search schedule/progress.
   - **Temporary Assistance for specialized services** – The agency is working with procurement to develop and issue an RFP for temporary assistance firms that can provide contract services for additional investment personnel.
   - **Conflict Monitoring** – The agency is working with procurement to develop and issue an RFP for automated conflict monitoring services.

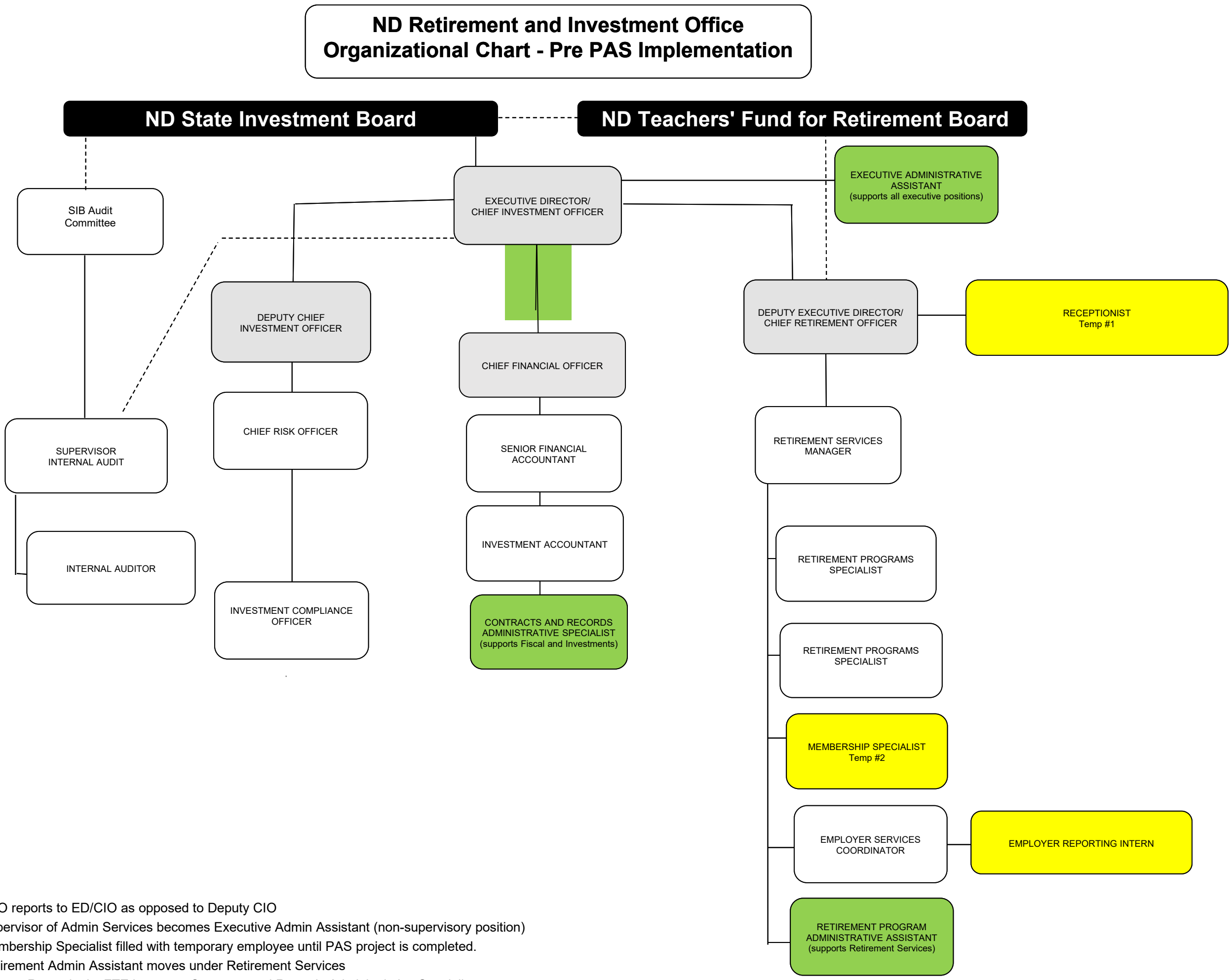
3. **IT Unification**: Unification efforts continue to progress, with both internal and external progress meetings.

4. **Retirements/Resignations/FTE's/Temporary Assistance**: Staff will provide information on resignations, retirements, internal promotions, temporary assistance and external postings. HRMS has graciously agreed to provide our agency with some additional services on a temporary basis during our interim period.

5. **Phase 1 Agency Reorganization & Strategic Planning to address Organizational Risk:**

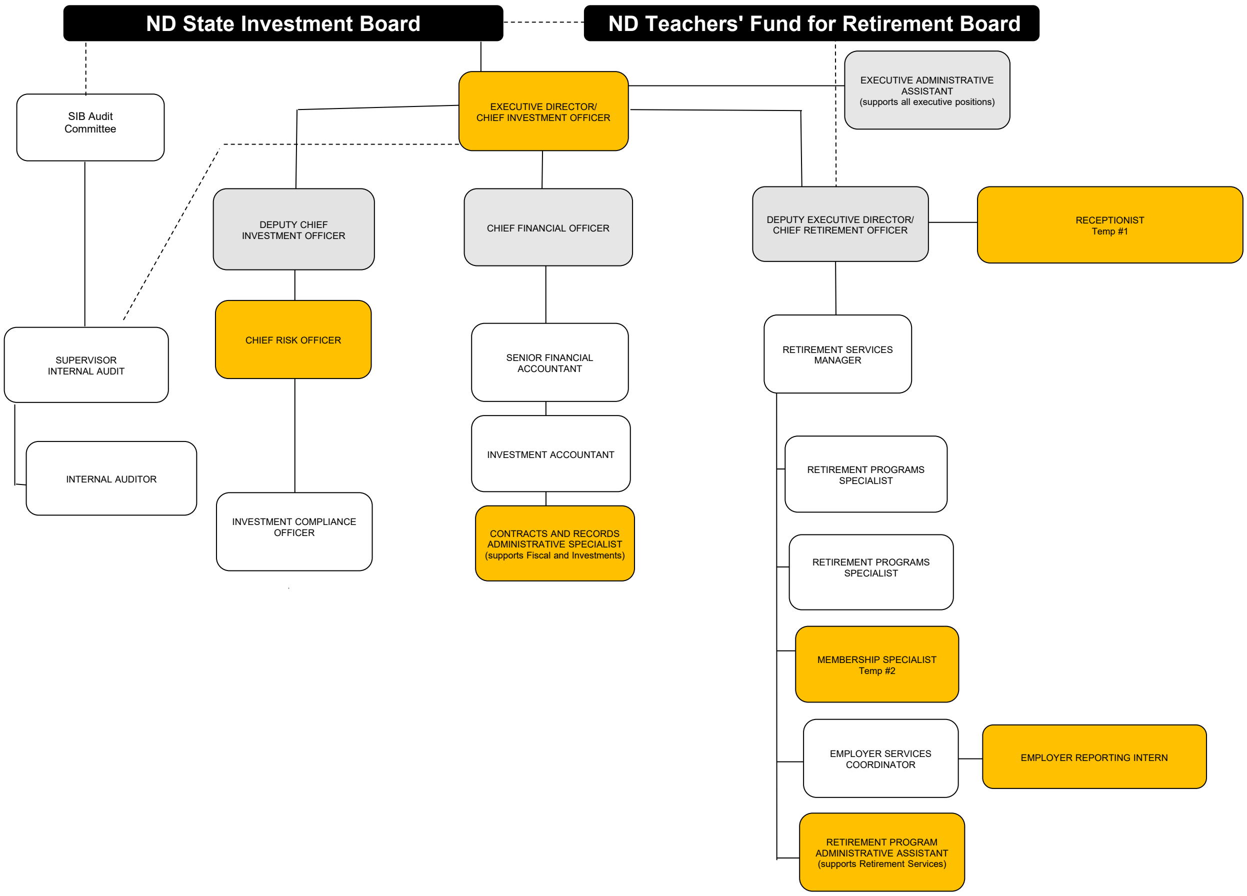
- **Phase 1 Reorg:** Attached as **Exhibit A** is Phase 1 of our agency reorganization which will go into effect September 1, 2021. The intent of the reorganization is to take the opportunity to reallocate resources to address interim and long term needs. Additional detail will be provided at the meeting.
- **Open Positions**: Attached as **Exhibit B** are current open positions within and additional temporary assistance for the agency that have been or are in the process of being posted.
- **Future Organizational structure to reduce organizational risk:** Ms. Murtha will highlight current organizational risk relating to: program needs/demands, shift in workforce trends, lack of redundancy and impact on critical oversight and reporting for fiscal division, succession planning efforts, and feedback from stakeholders. **Exhibits C and D** will outline a future path for the agency to address needs and reduce organizational risk. For the **investment program** specifically, staff will provide comparison data with other state or public entity investment programs at the meeting while highlighting the differing needs dependent on program structure and decisions relating to outsourcing program functions.

COMMITTEE ACTION REQUESTED: Information Only

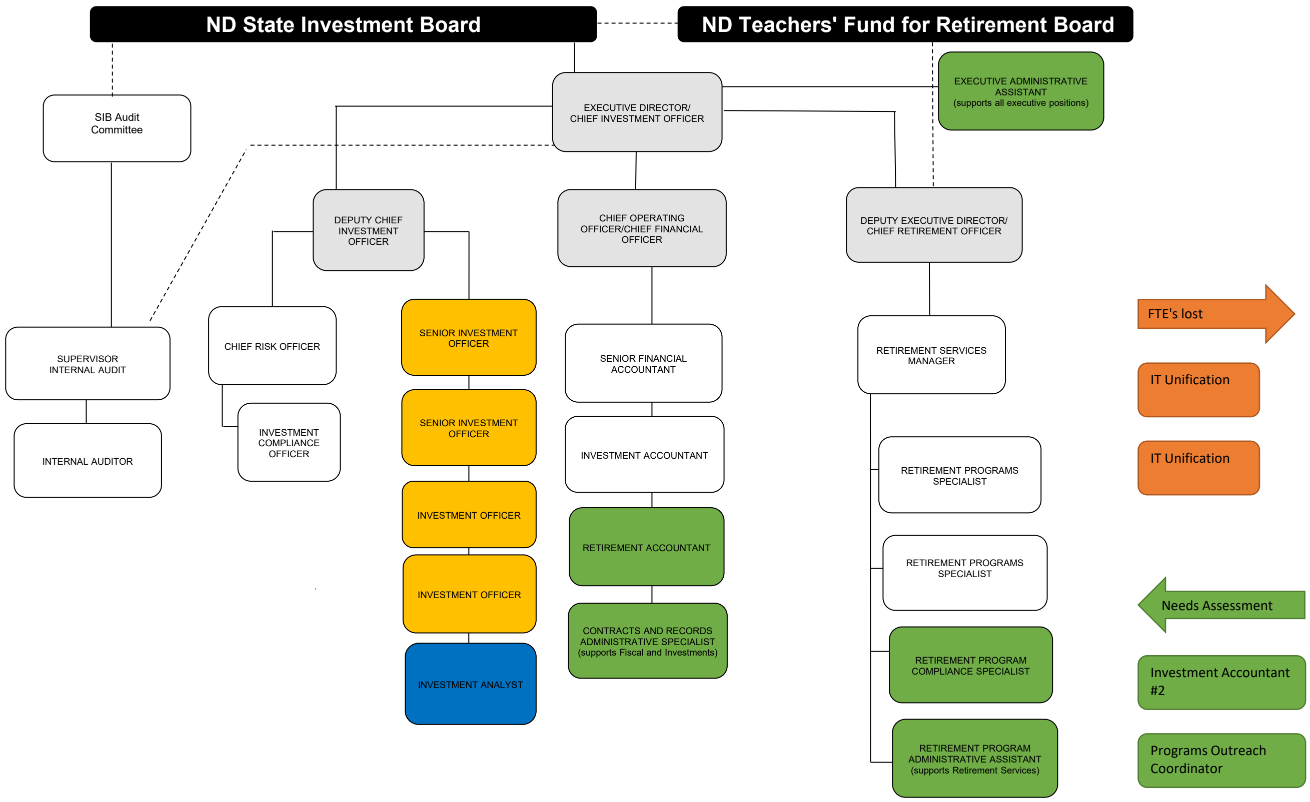


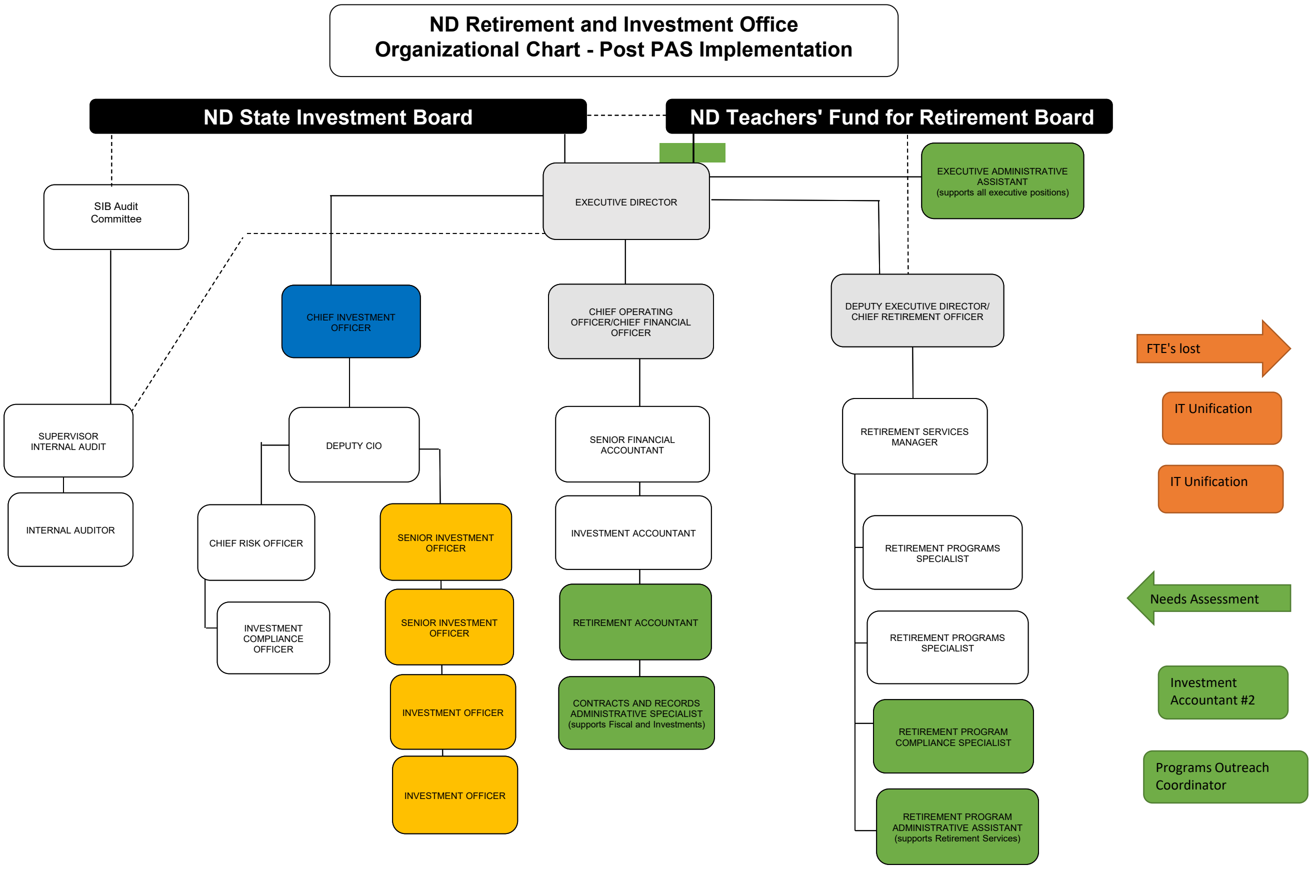
CFO reports to ED/CIO as opposed to Deputy CIO
Supervisor of Admin Services becomes Executive Admin Assistant (non-supervisory position)
Membership Specialist filled with temporary employee until PAS project is completed.
Retirement Admin Assistant moves under Retirement Services
Current Receptionist FTE becomes Contracts and Records Administriative Specialist
Temp Receptionist would be main receptionist through PAS completion (answer phones/front desk) with Retirement Program Admin Assistant, Executive Admin Assistant and Contracts/Records Admin Specialist as backups.
Employer Reporting Intern to assist with Employer Reports through PAS completion.

ND Retirement and Investment Office
Organizational Chart - Pre PAS Implementation



ND Retirement and Investment Office
Organizational Chart - Post PAS Implementation




ND Retirement and Investment Office
Organizational Chart - Post PAS Implementation
ND State Investment Board
ND Teachers' Fund for Retirement Board
SIB Audit Committee
EXECUTIVE DIRECTOR
EXECUTIVE ADMINISTRATIVE ASSISTANT (supports all executive positions)
SUPERVISOR INTERNAL AUDIT
INTERNAL AUDITOR
CHIEF INVESTMENT OFFICER
DEPUTY CIO
CHIEF RISK OFFICER
INVESTMENT COMPLIANCE OFFICER
SENIOR INVESTMENT OFFICER
SENIOR INVESTMENT OFFICER
INVESTMENT OFFICER
INVESTMENT OFFICER
CHIEF OPERATING OFFICER/CHIEF FINANCIAL OFFICER
SENIOR FINANCIAL ACCOUNTANT
INVESTMENT ACCOUNTANT
RETIREMENT ACCOUNTANT
CONTRACTS AND RECORDS ADMINISTRATIVE SPECIALIST (supports Fiscal and Investments)
DEPUTY EXECUTIVE DIRECTOR/ CHIEF RETIREMENT OFFICER
RETIREMENT SERVICES MANAGER
RETIREMENT PROGRAMS SPECIALIST
RETIREMENT PROGRAMS SPECIALIST
RETIREMENT PROGRAM COMPLIANCE SPECIALIST
RETIREMENT PROGRAM ADMINISTRATIVE ASSISTANT (supports Retirement Services)
FTE's lost
IT Unification
IT Unification
Needs Assessment
Investment Accountant #2
Programs Outreach Coordinator

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MEMORANDUM

Item V.B.

TO: SIB
FROM: Jan Murtha, Interim Executive Director
DATE: August 26, 2021
RE: Executive Search Status

At its July 23, 2021 meeting, the SIB authorized the Executive Search Committee to issue a Notice of Award for an Executive Search firm. Subsequent to the Search Committee's meeting of August 2, 2021 a notice of award was issued to EFL Associates (EFL). Following the protest period, staff finalized the contract with EFL and a Kick-off meeting between EFL and the RIO agency Executive Team was had on Friday August 20, 20201. Representatives from EFL will present virtually at the SIB meeting on the search process and progress as well as provide information to the Board on the potential candidate pool and factors to consider regarding the position description.

In order to proceed with the executive search, the SIB must decide whether to keep the Executive Director and Chief Investment Officer positions combined or to separate these positions permanently. Staff will highlight how the FTE granted by the legislature during the 2021 session may facilitate this transition if selected by the Board. In addition to search efforts, future resource allocation and strategic planning for organizational risk is dependent on the Boards decision.

Discussion Outline:

- Presentation by EFL
- Staff overview of resource options/allocations
- Board Discussion

BOARD ACTION. Decide whether to split the ED/CIO position or continue with a combined position. If split staff recommends proceeding with a search to fill the CIO position as a first priority.

EFL Associates, Inc.

Public Retirement Plan & Capital Markets Experts

August 26, 2021

TO: Dr. Robert Lech & Jan Murtha for the attention of North Dakota SIB Members

FROM: Dan Cummings & Omar Davis, EFL Associates

RE: Comments on separating the CIO/ED role into two separate roles

Let us begin by saying that we will, of course, support whatever determination the SIB members reach regarding how to structure this role. That said, we thought we'd offer a few thoughts for your consideration as you weigh this decision. Some of these thoughts are based upon a conversation we had yesterday with Dave Hunter and others are borne from our own experience recruiting both CIO's and ED's over the years.

Perspectives Shared by David Hunter

Dave shared that when he joined RIO, AUM was roughly $8B. He felt he was hired to be the CIO and the ED title was a nice, "add-on honorific". Instead of being solely devoted to being the CIO, Dave estimates he found those early years to be 75% devoted to being the CIO and 25% allocated to being the ED.

Over time, as AUM grew exponentially, largely due to the Legacy Fund, Dave indicated that balance changed to, at best 50%/ 50% and, then, in more recent time to 25% CIO, 75% ED. Part of that later swing Dave attributed to the in-State investment initiative.

All that said, Dave left RIO with a heavy heart. He speaks very favorably of the RIO team, the SIB, and their time in the State.

Our Perspectives

While NDRIO is certainly not alone in having a combined CIO/ED, from our perspective it is generally limited to much smaller plans (i.e. those with less than $2-3B in AUM). With $19B in AUM and the initiation of the in-State investment program, we believe a bifurcation of the role would be positive for multiple reasons.

First, creating separate CIO and ED roles better aligns the structure of NDRIO with the reality of what the entity has become, not what it once was. NDRIO is a complex, sophisticated $20 billion financial institution with a fiduciary responsibility to its members, and as custodian of billions of dollars earmarked to benefit the people of North Dakota more broadly. This immense responsibility requires the best possible administrative structure. The combined ED/CIO may no longer be adequate to provide that level of administration.

Second, bifurcation of the role allows for clarity of duties. NDRIO's size indicates that a CIO, dedicated full-time to portfolio oversight, and an Executive Director dedicated full-time to organizational administration, legislative engagement, and stakeholder relations, may be warranted.

A third consideration relates to the pool of interested candidates that NDRIO may have to make a selection from. The vast majority of investment professionals want to remain just that, investment professionals. Most shy away from roles that take them away from the markets. Their training, experience, and desires do not lead these professionals to seek additional "administrative" responsibilities.

By the same token, most people that relish the responsibilities that come with being an Executive Director (i.e. operational oversight, strategic planning, legislative engagement, governance board interaction, external stakeholder engagement, etc.) don't bring the requisite capital markets expertise. With the very lean team at NDRIO, no matter how dedicated and hard-working they are, with $19B under management, we're confident we all agree that sacrificing on the investment expertise is a non-starter.

Bottom line, finding one person who embodies all of the varied skill sets to be successful at each of these required duties is difficult. The responsibilities of each role are distinct and, as a result, the desired pedigree, experience, and skills are distinct.

As it relates to internal controls, bifurcating the role can provide more checks and balances to the investment oversight function. At many retirement plans and public asset management offices, the process of investing (i.e. hiring and terminating managers; determining the amount of capital to be invested in an asset class; in an opportunity; or with a manager) is typically overseen by a triumvirate consisting of the CIO, ED, and general investment consultant subject to governance board approval. At many organizations, these three must be in agreement before an investment decision can be advanced to the Investment Committee or governance board for ratification. Bifurcating the role of ED/CIO would allow NDRIO to implement this useful structure within its investment program. While not able to provide immunity to investment losses, the structure does ensure that more parties, entrusted with fiduciary oversight of the day-to-day investment program, are in general agreement as to the suitability of any particular investment. This structure mitigates the influence of any one entity on the allocation of fund assets and the overall performance of the program, providing trustees with an added level of assurance that investment decisions are being made in a prudent manner.

Finally, organizational representation can be enhanced when the ED and CIO roles are separate. Having two knowledgeable and highly skilled individuals available to represent NDRIO is a plus. The ED and CIO can be called upon to represent NDRIO, within their spheres of expertise and comfort, at industry events, with legislators, stakeholders, with the media, and, perhaps most importantly, with their fellow North Dakotans.

NORTH Dakota | State Investment Board
Be Legendary. RETIREMENT & INVESTMENT

MEMORANDUM

TO: **State Investment Board (SIB)**

FROM: **SIB Audit Committee**

DATE: **August 27, 2021**

SUBJECT: **Governance Update**

The State Investment Board (SIB) on May 21, 2021, requested the assistance of the SIB Audit Committee "to review SIB governance policy B-2, governing style in Section B governance process, to clearly define inquiry and to review the board's structure and bring a recommendation back to the full SIB." The Audit Committee meet on August 11, 2021 to review the request.

After a discussion, the Audit Committee is looking into different options and will be holding a special audit committee meeting in September to go over options in more depth. The Audit Committee is looking to help the Board be more proactive in addressing governance issues and training on governance. The Audit Committee will give another update at the September meeting with an update.

AGENDA ITEM VI.A.

Board Acceptance Requested

TO: State Investment Board

FROM: Connie Flanagan

DATE: August 27, 2021

SUBJECT: GFOA Award

The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to RIO for its Annual Comprehensive Financial Report (ACFR) for the fiscal year ended June 30, 2020. This marks the 23rd consecutive year that RIO has achieved this prestigious award.

In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

I would like to thank and congratulate all RIO team members who help to ensure we received this prestigious award for the 23rd consecutive year. It’s certainly a team effort and couldn’t be achieved without the contributions of all of our great team members.

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

North Dakota Retirement and Investment Office

For its Comprehensive Annual
Financial Report
For the Fiscal Year Ended

June 30, 2020

Christopher P. Morrill

Executive Director/CEO

Government Finance Officers Association
203 North LaSalle Street, Suite 2700
Chicago, Illinois 60601-1210
312.977.9700 *fax:* 312.977.4806

7/8/2021

Connie Flanagan
Chief Financial Officer
North Dakota Retirement and Investment Office

Dear Ms. Flanagan:

Congratulations!

We are pleased to notify you that your comprehensive annual financial report for the fiscal year ended June 30, 2020 has met the requirements to be awarded GFOA's Certificate of Achievement for Excellence in Financial Reporting. The GFOA established the Certificate of Achievement for Excellence in Financial Reporting Program (Certificate Program) in 1945 to encourage and assist state and local governments to go beyond the minimum requirements of generally accepted accounting principles to prepare comprehensive annual financial reports that evidence the spirit of transparency and full disclosure and then to recognize individual governments that succeed in achieving that goal. The Certificate of Achievement is the highest form of recognition in governmental accounting and financial reporting. Congratulations, again, for having satisfied the high standards of the program.

Your electronic award packet contains the following:

- **A "Summary of Grading" form and a confidential list of comments and suggestions for possible improvements**. We strongly encourage you to implement the recommended improvements in your next report. Certificate of Achievement Program policy requires that written responses to these comments and suggestions for improvement be included with your 2021 fiscal year end submission. If a comment is unclear or there appears to be a discrepancy, please contact the Technical Services Center at (312) 977-9700 and ask to speak with a Certificate of Achievement Program in-house reviewer.
- **Certificate of Achievement**. A Certificate of Achievement is valid for a period of one year. A current holder of a Certificate of Achievement may reproduce the Certificate in its immediately subsequent comprehensive annual financial report. Please refer to the instructions for reproducing your Certificate in your next report.
- **Award of Financial Reporting Achievement**. When GFOA awards a government the Certificate of Achievement for Excellence in Financial Reporting, we also present an Award of Financial Reporting Achievement (AFRA) to the department identified in the application as primarily responsible for achievement of the Certificate.
- **Sample press release**. Attaining this award is a significant accomplishment. Attached is a sample news release that you may use to give appropriate publicity to this notable achievement.

In addition, award recipients will receive via mail either a plaque (if first-time recipients or if the government has received the Certificate ten times since it received its last plaque) or a brass medallion to affix to the plaque (if the government currently has a plaque with space to affix the medallion). Plaques and medallions will be mailed separately.

As an award-winning government, we would like to invite one or more appropriate members of the team that put together your comprehensive annual financial report to apply to join the Special Review Committee. As members of the Special Review Committee, peer reviewers get exposure to a variety of reports from around the country; gain insight into how to improve their own reports; achieve professional recognition; and provide valuable input that helps other local governments improve their reports. Please see our website for eligibility requirements and information on completing an application.

Thank you for participating in and supporting the Certificate of Achievement Program. If we may be of any further assistance, please contact the Technical Services Center at (312) 977-9700.

Sincerely,

Michele Mark Levine

Michele Mark Levine
Director, Technical Services

GOVERNMENT FINANCE OFFICERS ASSOCIATION

NEWS RELEASE

FOR IMMEDIATE RELEASE

7/8/2021

For more information contact:
Michele Mark Levine, Director/TSC
Phone: (312) 977-9700
Fax: (312) 977-4806
Email: mlevine@gfoa.org

(Chicago, Illinois)—Government Finance Officers Association of the United States and Canada (GFOA) has awarded the Certificate of Achievement for Excellence in Financial Reporting to **North Dakota Retirement and Investment Office** for its comprehensive annual financial report for the fiscal year ended June 30, 2020. The report has been judged by an impartial panel to meet the high standards of the program, which includes demonstrating a constructive "spirit of full disclosure" to clearly communicate its financial story and motivate potential users and user groups to read the report.

The Certificate of Achievement is the highest form of recognition in the area of governmental accounting and financial reporting, and its attainment represents a significant accomplishment by a government and its management.

Government Finance Officers Association (GFOA) advances excellence in government finance by providing best practices, professional development, resources, and practical research for more than 21,000 members and the communities they serve.

ND State Investment Board Resolution
In Appreciation of
Bonnie Heit

WHEREAS, Bonnie Heit has served as a state employee and valued member of the Retirement and Investment Office for the past 33 years; and

WHEREAS, Bonnie Heit has diligently carried out her duties and responsibilities for the State Investment Board, the Retirement and Investment Office, and the general population of the State of North Dakota; and

WHEREAS, Bonnie Heit has been a valued and dedicated State employee in helping maintain the stability of the Retirement and Investment Office.

NOW THEREFORE, BE IT RESOLVED that Bonnie Heit be duly recognized by this Board for her years of unselfish dedication to the State of North Dakota through her service to the State Investment Board.

On Behalf of the State Investment Board

____

Lt. Governor Brent Sanford, Chair

____

Votes

____

Date

ND State Investment Board Resolution
In Appreciation of
Darren Schulz

WHEREAS, Darren Schulz has served as a state employee and valued member of the Retirement and Investment Office for the past 9 years; and

WHEREAS, Darren Schulz has diligently carried out his duties and responsibilities for the State Investment Board, the Retirement and Investment Office, and the general population of the State of North Dakota; and

WHEREAS, Darren Schulz has been a valued and dedicated State employee in helping maintain the stability of the Retirement and Investment Office.

NOW THEREFORE, BE IT RESOLVED that Darren Schulz be duly recognized by this Board for his years of unselfish dedication to the State of North Dakota through his service to the State Investment Board.

On Behalf of the State Investment Board

____
Lt. Governor Brent Sanford, Chair

____
Votes

____
Date

BOARD LEADERSHIP

INNOVATIVE APPROACHES TO GOVERNANCE

NUMBER 176, JULY–AUGUST 2021

www.wileyonlinelibrary.com/journal/bl

Diversity on Boards Should Be at the Top of Your Agenda

By Tonya Mitchem Grindon

Tonya Mitchem Grindon is a corporate finance shareholder at Baker Donelson. She is chair of the firm's business department and a member of its audit and finance committee. She is a former member of the firm's board of directors. In this article, she discusses the current state of board diversity and how critical it is for boards to improve on this metric.

Although diversity concerns have challenged management for many years, and in particular this past year following large movements focused on racial and social injustice, board diversity has largely stayed in the background. Few consumers know who sits on the boards of the companies they patronize, and discussions of board diversity have not been highlighted publicly. That is about to change, and companies should address this issue head on before it becomes a crisis management problem.

NASDAQ is considering a proposal that would require its members to disclose their board diversity numbers each year. If they are found to be wanting, it could compel the company to provide a public disclosure of the reasons behind their numbers. The Securities and Exchange Commission is reviewing the proposal, which has generated many questions about how it would be implemented.

Some states have moved proactively to mandate board diversity, copying what has been in place in Israel, Italy, France, and several other European nations for years. California passed a law in 2018 requiring at least one woman on a board, and last year expanded the law to include ethnic and LGBTQ diversity for public companies headquartered in the state. Noncompliance draws stiff fines, not to mention the public relations concerns these companies could face.

Shareholder activism cannot be far off. Major funds have signaled they will apply pressure for diversity. BlackRock, the world's largest asset manager, has warned companies where it has investments that it may vote against members of nominating and governance committees if boards lack diversity. Goldman Sachs has stopped underwriting initial public offerings of companies where the boards don't have at least two diverse directors.

If boards were waiting for incentives that carry a big stick, the moment has arrived. Prudent boards must prepare now.

(continued on page 2)

ALSO IN THIS ISSUE

CALENDAR OF EVENTS

Oct. 10–13

Governance Institute Leadership Conference

—The Broadmoor, 1 Lake Ave., Colorado Springs, CO 80906 USA

The Governance Institute will host its Leadership Conference Oct. 10–13 virtually and in person in Colorado Springs, Colo.

According to organizers, this event draws executive leaders from for-profit and nonprofit health care organizations, along with their boards and other stakeholders, for a slate of interactive sessions with expert speakers and the opportunity to meet others with a similar commitment to improving governance and achieving optimal board performance.

Key features of the event include:

- educational sessions aimed at helping attendees stay abreast of current topics in health care and board governance with the opportunity to earn continuing education credits;
- engaging and relevant presentations that will foster learning opportunities and team building for boards, health care executives, and medical staff leadership; and
- networking opportunities that will bring together organizations facing similar challenges.

(continued on page 8)

Diversity

(continued from front page)

Diversity Is a Fiduciary Duty

Understandably, boards have historically regarded their primary responsibility as bringing value to shareholders, not leading the charge for social justice. Fortunately, these two priorities overlap. Several studies have shown a correlation between board diversity and financial performance. Whether that indicates diversity makes companies stronger or reflects such companies having more competent boards might be debated. Either way, the correlation should not be dismissed.

Using 2017 data that drew on 1,000 companies in 12 countries, a 2018 McKinsey & Co. study found that companies with boards that were ethnically and culturally diverse were 33% more likely to outperform on EBIT margin. The study compared boards in the top quartile for diversity compared with those in the bottom quartile and showed similar correlations for profitability when executive teams had diversity, especially gender diversity.

Where Corporate America Stands

Boards in the United States have a long way to go on diversity according to a Deloitte and Alliance for Board Diversity study of Fortune 500 companies. Using 2020 data, the study found:

- Blacks (12.5% of the U.S. population) held 8.7% of board seats.
- Hispanics (18.5% of the U.S. population and the fastest-growing demographic group) held 4.1%.
- Asians (5.7% of the U.S. population) held 4.6%.

The study's data for Black men were particularly discouraging. Black men lost a net five seats on Fortune 500 boards from 2018 to 2020, a 1.5% decrease.

Other groups fared better over the same period. Hispanic men and women registered gains of 7.7% and 31.1%, respectively. Board representation for Black women rose 18.8%. Among Asians, women increased representation on boards by 45.9% and men by 22.3%. Overall, women represented a bright spot in the report, comprising 26.5% of board seats and making big gains in the period.

Good Intentions Do Not Move the Needle

Most companies have good intentions on diversity. When a board seat opens up, often the first question is, "Who do we know?" Human nature leads us to gravitate towards people from similar backgrounds, such as people from similar positions of leadership, both from within the same company or maybe from an external resource.

Frequently, companies claim that the pool of qualified minority talent is limited; unfortunately, this echoes an excuse similar to ones heard for years when it comes to picking top management and leaders in other fields. Boards must become more creative. If it were a price war or oppressive tariffs or brand erosion, there would be no shortage of management savvy applied to the problem. If we regard board diversity as a management challenge and work on identifying solutions, America as a whole will make it a part of the corporate culture to recognize diversity as part of an ingrained fiduciary duty, and there will be exponentially positive results.

The Trickle-Down Effect

Studies have shown that employee productivity and overall happiness skyrockets when upper management and leadership are diverse. People feel represented and heard when they see that someone they can identify with has been selected to help lead the company they work for.

According to Chrobot-Mason and Aramovich (2013), there are several numerically quantified benefits in the general workplace that begin to appear when leadership is diversified and these efforts for inclusiveness are implemented in the whole company environment. In the article, the results of several controlled studies are outlined. They show that when a company's board is diversified, employees look up to this change and are more likely to realize their full potential at work, which will foster innovation and a unique perspective based on the varied experiences, backgrounds, and work styles that a diverse workforce will bring.[1]

This also leads to another trickle-down benefit: decreasing employee turnover. According to one of the studies outlined in the article, when minority employees see others like them succeed in the workplace, they perceive that they, too, have the chance to do well and thus will be much less likely to leave the company. Adversely, it has been found that turnover among underrepresented groups is especially high if such group members perceive that the organization is not committed to supporting diversity.

Looking even further down the funnel, this effect does not stop with current employees. Each year, hundreds of thousands of young people complete educational programs, whether undergraduate, postgraduate, or alternative paths of study. Diversity is encouraged, lauded, and fostered on their campuses and in the classrooms, so why should that support stop when they reach the workforce? If diversity is seen as a motivation and an opportunity as students become the new workforce of America, they are more likely to promote and perpetuate diversity in the companies that hire them, creating a cyclical foundation to continue to bring diversity into the company, and by extension into the leadership. However, this initiative must start with the top and find its way down before becoming self-sustaining, and as many companies have reported, the effort is only sustainable if leadership views the effort as a continually developing process.

Challenges and How to Overcome Them

As has been shown historically, diversity is not a one-and-done issue. The work that comes with championing diversity on boards across America will have its challenges, as every restructuring initiative can present. Managing diversity is more than just acknowledging differences in people. As stated in the article, "Diversity in the Workplace: Benefits, Challenges, and the Required Managerial Tools," published by the University of Florida Extension Institute for Food and Agricultural Sciences, diversity initiatives involve recognizing the value of differences, combating discrimination, and promoting inclusiveness.[2]

Therefore, organizations need to develop, implement, and maintain ongoing networks and trainings to not only introduce change, but influence communal behaviors. In the article, "When and Why Diversity Improves Your Board's Performance," published by *Harvard Business Review* it addressed concerns surrounding the practice of "tokenism," with Mike Fucci, Chairman of the Board at Deloitte, stating that his board raised concerns about "checking the box" initiatives.[3] To offset these concerns, many boards are publicly ensuring that skills and expertise, along with demographics, are front and center in the recruiting process.

Getting in Front of Diversity Initiatives

The most important action boards can take is to implement preemptive initiatives that show a firm commitment to both the principle of diversity and to results. The last thing boards should want is for the government, stock exchanges, institutional investors, or activist investors to dictate rules on board nominees. If a company is to present a professional, strong, and inclusive personal brand, they must implement a diversity education model that centers on the fact that diversity is ongoing and will never be a one-and-done meeting or seminar.

All board members should be selected because they bring a particular set of experiences or skills to governing a company, as well as the right interpersonal chemistry. More than ever in this time of technological industrialization, changing world markets, political uncertainty, and social change, companies need to broaden their views about what combination of experience on their boards will make them continually relevant, stronger, and more cohesive. Boards don't have to sacrifice quality to be inclusive. Studies done around the world spanning the last 45 years can prove that. But boards must look broadly for expertise. General counsel, business school professors, and experts in fields that are relevant to a company's business will add insight on both risks and opportunities, whereas the viewpoints of other board members might not be as well-rounded, simply because they do not have the necessary perspective on the issues.

In the absence of immediate progress, set goals. A board with minimal diversity might commit to a goal of having 20% diversity within three years or 30% within five years. These goals buy time, show a genuine commitment, and the sound of the clock ticking will be an impetus to action.

Think broadly about diversity. There is no doubt a board needs to have an increasing awareness about diversity in terms of numbers, but this also is an opportunity to bring in a refreshing diversity of thought. Businesses face unprecedented challenges today and will benefit from having diverse voices at the table to guide management. Creating a diverse board isn't just a goodwill gesture or a social justice obligation. Rather, it's a way to cultivate the modern and multifaceted leadership that businesses must have to thrive in our ever-changing society. ❑

References

1. Chrobot-Mason, D. and Aramovich, N. (2013). The Psychological Benefits of Creating an Affirming Climate for Workplace Diversity. Group & Organization Management, 38(6), 659-689. doi: 10.1177/1059601113509835
2. Farnsworth, D., Clark, J., Green, Kelli, Lopez, M., Wysocki, A., and Kepner, K. (2020, October 7). Diversity in the workplace: Benefits, challenges, and the required managerial tools, Food and Resource Economics. doi.org/10.32473/edis-hr022-2002
3. Creary, S., McDonnell, M., ghair, S. and Scruggs, J. (2019, March 27). When and why diversity improves your board's performance. Harvard Business Review. https://hbr.org/2019/03/when-and-why-diversity-improves-your-boards-performance

WHEN WE SAY...

Board Leadership's mission is "to discover, explain and discuss innovative approaches to board governance with the goal of helping organizations achieve effective, meaningful and successful leadership to fulfill their missions."

Board Leadership aims to fulfill this mission by engaging its readers in a lively and illuminating inquiry into how board governance can be made more effective. This inquiry is based on three key assumptions:

- Boards exist to lead organizations, not merely monitor them.
- Effective board governance is not about either systems, structures, processes, theories, practices, culture, or behaviors—it is about all of them.
- Significant improvements are likely to come only through challenging the status quo and trying out new ideas in theory and in practice.

Uniquely among regular publications on board governance, *Board Leadership* primarily focuses on the job of board leadership as a whole, rather than on individual elements of practice within the overall job.

Over time, *Board Leadership* will provide a repository of different approaches to governance created through its regular "One Way to Govern" feature.

Here's what a few of the key terms we use mean to us:

- **Innovative:** Creating significant positive change
- **Approaches:** Principles, theories, ideas, methodologies and practices.
- **Board governance:** The job of governing whole organizations. ❑

Applying Industry Talent Development Best Practices to Advance Your Board: Lessons Learned From Industry to Accelerate Board Performance

By Tracy Duberman, Ph.D., and Paul Erdahl

Tracy Duberman is Founder & President, The Leadership Development Group (TLD Group), and Paul Erdahl is a senior consultant at TLD Group. The TLD Group helps boards of health care organizations position themselves for success through board retreats, board assessment, and selection, board succession planning, board team effectiveness, and more. In this article, they explore how talent management strategies can be used to build effective boards.

In a 2015 study, "Improving Corporate Performance by Enhancing Team Dynamics at the Board Level," 182 board directors rated their individual performances as "very effective."1 In that same study, only 30% of the respondents awarded their board team a similar "very effective" rating.

Now imagine if this discrepancy happened in our workplaces and organizations where, from the top to the bottom of the organizational chart, work teams comprise the fundamental units of our work.

Of course, in most organizations, the board of directors is not involved in day-to-day operations, and board-team performance is neither measured nor managed via organizational team-reporting structures or Human Resources.

Based on our executive and board development work with nonprofit organizations and corporations, however, two things are clear. First, many high-value board members feel that they are persistently underutilized. Second, many board directors and CEOs fail to use best-practice talent management strategies to guide decision-making in identifying and selecting directors with complementary leadership skills.

Start With Strategy: Design Your Board to Align With Your Organization's Strategic Plan

Before the board of directors and governance committee launch and lead the process of sourcing and short-listing their next board candidates, executive and board leadership need to come together for multiple co-strategy sessions. During these sessions, leadership and teams should identify current and future business and organizational needs. Next, they should itemize the desired characteristics of prospective board members who will bring expertise to help address those organization-specific needs. This needs analysis and planning process force the board to look internally to assess the organization and externally to examine current business dynamics in which they are operating and competing.

Each organization is different, but as board and executive leadership or committee chairs collaborate in this pre-recruitment planning process, here are some best-practice questions to ask and consider:

- What contextual and industry-specific factors (e.g., market trends and regulatory and public policy changes) will impact our industry and organization in the next five years?
- What are the recent and future demographic shifts and changes among our consumer base or nonprofit service areas?
- Based on organizational and industry dynamics, what business challenges do we need this new board member to help us address?
- What type of board is optimal for our business? Do we want to have a passive board that readily follows the guidance of the CEO or a highly engaged board that encourages candor and open discussions? Or should we aim to land somewhere along the passive-to-active continuum as outlined in a 2004 *Harvard Business Review* article, "Building Better Boards"?[2]
- What immediate needs, pain points, or leadership deficits can our new board appointment help us to address as an organization?

In a 2002 *Harvard Business Review* article, "What Makes Great Boards Great," Jeffrey A. Sonnenfeld, associate dean for executive programs at the Yale School of Management and the founder of the school's Chief Executive Leadership Institute, writes that boards need to be "strong, high-functioning work groups whose members trust and challenge one another and engage directly with senior managers on critical issues facing corporations."[3]

Therefore, in addition to aligning strategic organizational needs with a talent management strategy, this systematic analysis can build trust and mutual synergies among the board chair, board members, board committees, and with the executive leadership team.

"We need to consider not only how we structure the work of a board, but also how we manage the social system a board actually is," Sonnenfeld adds.

Diversity and Inclusion

Part of the "what type of board" question includes addressing issues of diversity and inclusion. From the C suite to the boardroom, leadership has a documented diversity problem. In the previously cited 2015 study, only 14% of the 182 boards were led by women.[1] Ethnic minority groups are also underrepresented in executive and board leadership roles.

Diversifying organizations isn't just the noble thing to do. Based on its review of 366 public companies, a McKinsey study, "Why Diversity Matters" found that companies in the top quartile of gender and racial diversity were 15% and 35%, respectively, more likely to have financial returns above the national industry median.[4]

The bottom line: For consistency, the board should reflect the customers the organization serves. As outgoing or retiring board members are replaced, board leads and governance committees need to be more thoughtful about who they are bringing onto the board and why. Or to quote from the American Hospital Association report, "5 Steps to Achieving Diversity on Your Board," "Diversity for diversity's sake should not be the end goal. The goal is building a board that is prepared for a more complex, challenging future."[5]

At the executive levels, we work with some organizations that are deliberate and thoughtful in how they institute diversity and inclusion initiatives. Some engage external experts and consultants. Others have created new executive leadership positions such as a chief diversity and inclusion officer.

How can we replicate these executive-level diversity initiatives with a comparable process in the boardroom?

First, leaders must define diversity as it applies to their organization and service area—including the strategic needs, delivery models, and the demographics of the community the organization serves. Second, although we tend to auto-associate diversity with gender, race, and ethnicity, a truly diverse organization interprets diversity broadly and authentically by recruiting and appointing leaders who have different ways of thinking and being. Finally, look and reach beyond the traditional networks and demographic silos to find or engage the trade and professional associations that can diversify recruitment sources and whose memberships may include the board's next best-fit candidate or appointee. Examples include the African American Board Leadership Institute, the National Association of Health Services Executives, the Executive Leadership Council, the National Association of Latino Healthcare Executives, and the National Association of Women Business Owners.

Recruiting Board Members

Ask any human resources director or executive search firm: Most American employers are in a race for qualified, high-value talent. Additionally, according to the article, "Overcoming the Leadership Development Gap" published by the Training Industry, in the next five years, 84% of U.S. organizations anticipate a shortfall in leaders—which will further reduce the pool of CEOs or industry thought leaders to tap for your next potential board appointment.[6]

Yet based on a study cited in the *Harvard Business Review*, among the study's 200 participant corporations, 40% reported that their board of directors lacks an effective recruitment process.[2]

Let's assume that the collaborative pre-recruitment planning led by the board chair and the board's governance committee has yielded a dual list of organizational strategic needs and corresponding must-have board-member competencies.

Now, here are some best-practice talent management strategies that will help boards to source, assess, and select the best-fit board candidates:

- An external search firm will bring a level of objectivity and circumvent the temptation to only tap current board members' personal or professional networks. Also, an external executive search firm has the capacity, experience, and established networks to source a diverse list of qualified and passionate candidates.
- Whatever search strategy is used, in addition to evaluating for industry acumen, we recommend using some of the same leadership assessment practices used to select senior executives. Consulting firms such as ours use assessments to provide insights into core values, critical thinking abilities, leadership presence, and interpersonal skills. These assessments offer insights to key questions: How does a candidate engage with others and tolerate diverging viewpoints? How will they react in a crisis—during organizational good and bad times? These attributes are a key factor in board relationships, culture, and overall success, and assessments can help organizations avoid selection mistakes.
- Ensure an equitable talent-recruitment process by developing and deploying a consistent board-interview protocol.
- Develop candidate assessment dashboards and summary reports to ensure that the interview process generates consistent and comparable data on which to base your final candidate selection.

Spend as Much Time Orienting New Board Members as You Do for Your CEO

New-executive onboarding is a standard and recommended practice in talent management. Yet this is often an overlooked step in the board context. In fact, according to the American Center for Association Leadership, approximately 31% of incoming association and nonprofit board members were not oriented to their organization's strategic plan.[7]

Board onboarding is more than pre-meeting refreshments or a short welcome speech from the board chair. Instead, the board leader and governance committee chairs should co-strategize, execute, and manage

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Lessons

(continued from page 5)

a formal onboarding process. This includes timely information sharing and enhanced cultural alignment so that all new appointees can learn about the organization while acculturating to the board's culture and its team dynamics.

Our Best-Practice Strategies for Successful Board Onboarding

Information sharing: Board chairs and governance committees need to plan and lead the process whereby the new board appointee will get oriented to standard board processes, including using the online board portal, if available. New board members also need to learn about organizational mission, strategic plan, operational characteristics, service or product lines, performance indicators, current and target consumer groups, and other baseline information, including recent organizational struggles or pain points. Invite new appointees to tour organizational facilities where they can develop a true understanding and familiarity with the organization and its main stakeholders and consumers.

Relationship building: Some effective relationship-building strategies include requiring the C-suite executives to reach out to the new board member to set up a meet-and-greet opportunity. Also, the onboarding process presents an opportunity for all board members to deepen team relationships: with each other and with the executive leadership team. In turn, strong relationships enhance board member engagement and accountability.

Fundraising and philanthropy: Are your nonprofit board members assumed or required to be part of the organization's fundraising or philanthropy initiatives? If so, they need to become immersed in the funding streams and current, planned capital, or other campaigns. To support fundraising, they need to develop a deep understanding of everyday service delivery and how the organization's work impacts the lives of the persons served.

Provide Learning and Development Opportunities for the Board

As we navigate the uncertainties of our current business environment, we must not overlook how board members can develop and expand their individual and collective capacities to keep pace with tomorrow's leadership needs.

To develop your board development process, start with an annual gap analysis to determine board members' real-time training or educational deficits—specifically as they align with your industry and organizational strategic plan. Next, begin to source the needed training.

New board appointees can benefit from a course on board participation and how to be a strategic board member. Current members can always use a refresher in this area as well. Possible training resources include the Center for Association Leadership, the National Association for Corporate Leadership, the National Association of Corporate Directors, and Board Source.

These organizations offer online articles, webinars, and training courses, including online board-leadership certificate programs. Or check if your state has an association for boards of nonprofits.

Across industries, as current and evolving business technologies change, consider offering some technology upskilling opportunities that can measurably contribute to your organizational success. According to a 2020 report, "Companies with Digitally Savvy Top Management Teams Perform Better" from the Massachusetts Institute of Technology Center for Information Research, it takes three board members with digital acumen to have a statistical impact on the organization's market value.[8]

Increase the digital competency of your board by recruiting and appointing new board members with proven technical capacities. Or engage a professional training expert to provide a topical overview that is relevant for your industry and can expand the board's enterprise-level understanding of current technological opportunities and risks, such as artificial intelligence, big data, telehealth, cyber security, supply chain management, or digital fundraising.

Whatever topics and training format the board needs and deploys, it's imperative that board leaders and committee chairs carve out some way to develop the board by allocating time and resources for shared team learning.

Also, consider blending formal training curricula with team and culture-building exercises that will build culture and align all board members around a common purpose.

Make Sure You Focus on Succession and Pipeline Development

An organization's future and sustained success depends on the organization's ability to identify future talent requirements and—at both the executive and board level—to attract, select,

FOOD FOR THOUGHT

"A true leader has the confidence to stand alone, the courage to make tough decisions, and the compassion to listen to the needs of others. He does not set out to be a leader, but becomes one by the equality of his actions and the integrity of his intent."

Douglas MacArthur

and develop those leaders who can deliver results.

The pool of current industry leaders is shrinking. As increasing globalization may force many current CEOs to expand their reach and reduce their availability, the pipeline for our future board members will keep shrinking too—all while the need for high-performing leadership keeps growing.

Therefore, best-in-class organizations are focusing on growing tomorrow's talent today by instituting a proactive and systematic pipeline development and leadership succession plan that allows them to assess future-centric talent needs and to plan for a seamless transition between leaders.

The key word here? "Proactive."

As we know, succession planning is a slow-boil process in which we deliberately nurture and build productive relationships with industry (or adjacent-industry) executives and thought leaders who, over time, have shown sustained interest in the organization's work and mission. External executive recruiters may also help in this pipeline development and succession-planning process.

By looking ahead and analyzing future leadership needs, a robust leadership succession plan can avoid or offset business and leadership interruptions.

In assessing and planning for future leadership needs, here are some questions to ask:

- Based on board terms and leadership tenures, what do the next five years look like for us? What changes can we expect?
- Based on that five-year projection, how can we source high-promise leaders to be ready to succeed outgoing board or C-suite leaders?
- Who are potential leaders within our sphere of influence?

Use Lessons Learned During the Pandemic to Create a More Robust Board

In 2020, as we rushed to decentralize, virtualize, or realign our work teams, many of us had to make leadership decisions on the fly. Also, the pandemic year forced many of us to look in the mirror to examine our own leadership styles and to address our deficits to find new and innovative approaches to leading better.

Equally, in the board context, travel restrictions and disease-control protocols have forced us to pivot from interstate boardroom meetings or planning retreats to virtual sessions and in some cases, the recalibration of

(continued on page 8)

N E W S

Boards improve on collaboration, effectiveness during pandemic

At the start of the COVID-19 pandemic, as organizations across the country had to shift their operations to the digital realm due to social distancing restrictions, a common fear among nonprofits was that the lack of in-person, face-to-face contact would hamper their organization's management. Nonprofits have been slow to adopt the kinds of digital technologies that they were now having to rely on out of necessity — especially virtual meeting platforms, online file-sharing, and related tech solutions that made it possible for staff, leadership and boards to interface, share ideas and strategize on how to keep their operations going.

However, those fears were misplaced, according to new survey data from OnBoard, a board management software provider serving the nonprofit community. In fact, the shift to virtual meetings, online fundraising channels and other digital tech led to increased effectiveness and collaboration, the company said. Per the survey, 79% of respondents said their boards have improved effectiveness in the past 12 months, with 59% citing the shift to remote work as the primary cause; 66% have seen improvements in board collaboration; and 47% have spent more time discussing strategic issues.

According to Rob Kunzler, OnBoard's Chief Marketing Officer, there are several factors that explain the reported improvements in board effectiveness.

"First, many of our customers and survey respondents work in sectors that were acutely impacted by the pandemic, including health care and higher education. The boards that lead these organizations faced uniquely new challenges caused by the pandemic itself — which led them to spend more time on genuinely strategic decision-making that directly impacted the health, safety, and survival of the business or organization, as well as its staff and clients. But everyday businesses and organizations faced similar challenging decisions," he said.

"However, the factor that survey respondents cited most for increased effectiveness and collaboration was the shift to remote work and virtual meetings itself," Kunzler said.

"Suppose you think about the boardroom and the personal interactions that occur there. In that case, conversations and chit-chat before, during, and after meetings — you can see how some view a virtual meeting as a more effective meeting method, as it runs a bit more quickly and indeed more deliberately."

Another factor, he said, is that when everyone moves onto a single shared platform, effectiveness increases.

"When everyone occupies the same amount of digital space, there's also a democratizing effect. Meeting participants who may have been less vocal in an in-person setting feel more obliged to participate or say their piece, increasing collaboration. Many boards also noted increased attendance, as traveling to or from the meeting was no longer necessary," he said.

For more information or to access the survey in full, visit https://www.onboardmeetings.com. ❑

Lessons

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the meetings' timelines and schedules accordingly.

On the positive side, the coronavirus pandemic forced many of us to upskill or amend our leadership approach to meet our organization's emergent or evolving needs.

Now, many of our fix-it strategies have turned out to be future-facing and best-practice solutions, and rather than reducing team functioning, virtual interactions have enhanced team engagement and work productivity.

CEOs, executive teams, and board directors need to be intentional and mindful in building a virtual culture of shared purpose. They also need to foster a psychologically safe, open-space culture in which each leader feels included and is encouraged to offer ideas and dissenting opinions. If needed, engage an external facilitator or coach who will detect some less-than-productive cultural norms that can be addressed by skilled facilitation practices.

As directors, committee chairs, board members, and executive leadership work and strategize at a distance, CEOs need to commit to consistent, timely, and easily accessed executive-to-board information sharing. Let's face it, no board member or committee chair can adequately study or prepare to discuss new KPI dashboards or quarterly business reports when there is limited or inadequate time in which to do so.

Finally, in tandem with our recommendations for consistent board development and training, provide training opportunities that will enhance and enliven board attendance, facilitate virtual or hybrid engagement, and advance the board's individual and collective contribution to organizational success. ❑

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Calendar of Events

(continued from page 1)

The conference will feature keynote Robert M. Wachter, professor and chair of the Department of Medicine at the University of California, San Francisco. He will discuss COVID-19 and the transformation of health care, with a focus on:

- three major areas in which COVID-19 led to acceleration in the transformation of health care,
- reasons for the rapid adoption of telemedicine during COVID-19, and
- three changes brought about by COVID-19 that are likely to endure after the pandemic is resolved.

For more information, visit https://bit.ly/3zPwUcX. ❑

BOARD LEADERSHIP
INNOVATIVE APPROACHES TO GOVERNANCE

BOARD LEADERSHIP: INNOVATIVE APPROACHES TO GOVERNANCE (Print ISSN: 1061-4249; Online ISSN: 1542-7862) is published bimonthly by Wiley Periodicals LLC, 111 River St., Hoboken, NJ 07030-5774 USA.

Postmaster: Send all address changes to *BOARD LEADERSHIP*, Wiley Periodicals LLC, c/o The Sheridan Press, PO Box 465, Hanover, PA 17331 USA.

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Printed in the USA by The Sheridan Press.

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