# Callan

**September 30, 2021** 

North Dakota State Investment Board Legacy Fund

Investment Measurement Service Quarterly Review

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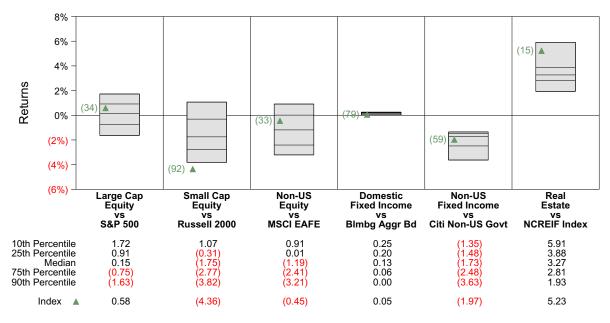


# Market Overview Active Management vs Index Returns

#### **Market Overview**

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

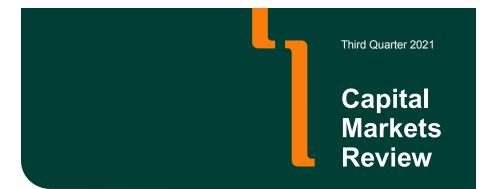
## Range of Separate Account Manager Returns by Asset Class One Quarter Ended September 30, 2021



### Range of Separate Account Manager Returns by Asset Class One Year Ended September 30, 2021









# Is 2% GDP Growth Good or Bad?

ECONOMY

A drop to 2% growth for GDP in 3Q21 after a 6.7% gain in 2Q is well within expectations for this lurching path toward normally functioning markets. So what about 4Q21? Do we face more of the 2%

solution or a rebound? Signs so far

Yields ended a vola-

tile quarter only slightly

higher after the Fed sig-

naled it may soon begin taper-

ing its bond buying program. For

the Aggregate, minor gains in

Treasuries and agency MBS were

offset by declines in government-

point to a rebound.

FIXED INCOME

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PAGE

Aggregate Is Flat

# Yields Slightly Up; Best Quarter for ODCE

Ever; REITs Are Mixed

The NFI-ODCE Index posted its strongest return ever in 3Q21; Industrial was the best performer. Vacancy rates kept compressing in Industrial and Multifamily as demand continued. Global REITs underperformed equities; U.S. REITs rose 1.0%, topping the S&P 500 Index.

Mixed Results as

HEDGE FUNDS/MACs

PAGE

challenging time.

**Volatility Returned** 

Hedge funds as a whole

ended the guarter higher,

driven by commodities-

oriented relative value, event-driven,

and sector-focused strategies, as

well as macro managers with short

positions in U.S. interest rates. But

credit-focused managers had a more

# Strong Fundraising Buoys Asset Class

related, CMBS, and corporates.

PRIVATE CREDIT

Investors appreciate the yield- and income-generating features of private credit in this low-rate environment. Private credit vintages 2008-18 generated an 8.3% median net IRR with a standard deviation of 6.1%. Fundraising continues to be active given investor interest.

# Flat Returns Now, but Strong Longer Term

INSTITUTIONAL INVESTORS

While all investor types saw returns hover around 0% in 3Q21, their results over longer periods continue to be robust. And many saw the best fiscal year returns (ending June) in a generation. But there is great unease about the future of portfolios amid lower return expectations.

# Indices Stall Over Mounting Worries

EQUITY

Slowing economic growth, supply chain dispared in ruptions, and inflationary pressure, as well as uncertainty around monetary policy, decreased U.S. investors' risk appetite. And in global ex-U.S. markets, Delta variant flare-ups and a slowdown in China weighed on stocks.

# Activity Dips in 3Q21 but Strong Gains YTD

PRIVATE EQUITY

Most private equity activity measures dipped in 3Q21 compared to the previous quarter; however, all year-to-date comparisons are strongly up. A rough averaging across fundraising and private investments and exits indicates big jumps in transaction count and dollar volume.

# Index Posts Fifth Straight Quarterly Gain

**DEFINED CONTRIBUTION** 

The Callan DC Index gained 5.8% in 2Q21. Investors continued to transfer assets out of relatively safer asset classes. The index's allocation to equity (72.2%) increased by more than a full percentage point from 1Q21, to its highest level since 4Q07 (72.9%).

# Broad Market Quarterly Returns

U.S. Equity Russell 3000



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



U.S. Fixed Income Bloomberg Agg



Global ex-U.S. Fixed Income Bloomberg Global Agg ex US



Sources: Bloomberg, FTSE Russell, MSCI

# Is 2% Growth Good or Bad?

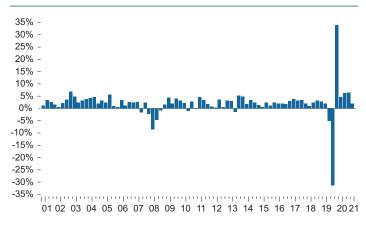
#### **ECONOMY** | Jay Kloepfer

Global equity markets hit the pause button in 3Q21. Investors watched nervously as the economic data showed signs of softening: weaker job gains, slower output growth strangled by supply chain issues, a drop in income growth, and signs of waning consumer sentiment. As the quarter unfolded, supply chain issues and fears surrounding the end of fiscal stimulus, the surge in the Delta variant, and the return to a Fed taper slowed economic activity. Spiking inflation stirred even more anxiety, and the equity markets pulled back sharply in September in anticipation of weak reports for the economy. The market's concerns appeared to be well-founded, as U.S. GDP came in at 2% growth for 3Q, down from the torrid 6.7% pace in 2Q and very much in line with reports of growth stalling in the euro zone and in Asia, particularly China.

Does the drop to 2% mean the recovery from the pandemic has been thrown off track? Recall that the global economy suffered disruption and volatility unprecedented in modern times: a stock market decline in the U.S. of 34% in just a handful of trading days, and the complete shutdown of industries such as hospitality, passenger transportation, in-person retail trade, and personal services. Global supply chains ground to a halt, and restarting everything was fully expected to result in a herky-jerky pattern of growth. That the recovery has gone as well as it has is a testament to the impact of the monetary and fiscal policy lavished during the upheaval by countries around the globe. That we are as far along as we are was not really considered likely just a year ago-vaccines were yet to be released; a second, much larger surge in COVID infections was spreading; and the notion of travel, of job recovery, and of a resumption of trade was a pipe dream. All of the supply/ demand issues within almost every market—labor, raw materials, commodities, energy, intermediate and finished goods, services, travel capacity, shipping—were fully expected. Price dislocations were also expected, and we have come to see them in goods as disparate as timber products, gasoline, computer chips, automobiles, and consumer goods. A drop to 2%

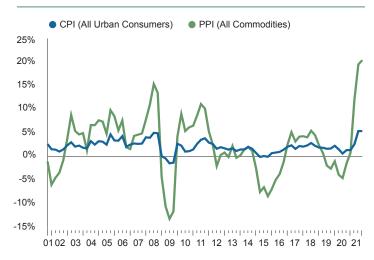
#### **Quarterly Real GDP Growth**

(20 Years)



Source: Bureau of Economic Analysis

#### Inflation Year-Over-Year



Source: Bureau of Labor Statistics

growth in 3Q following a robust 6.7% gain in 2Q is well within expectations for this lurching stop/start path toward normally functioning markets.

Unemployment in the U.S. dropped to 4.8% in September, but it is still above the pre-COVID rate of 3.5%. The economy added 194,000 jobs in September, down from 336,000 in August and a whopping 1,091,000 in July, and just one-third of the monthly average of 560,000 during 2021. The dislocation between

employers looking for employees and those looking for work has become extreme. The job market is still almost 5 million jobs below the pre-pandemic peak. Yet employers across sectors and regions of the country struggle to fill positions, particularly in services, retail trade, and hospitality, but also in basic labor within manufacturing, wholesale trade, transportation, and distribution. The end of pandemic unemployment support in September means workers will soon be forced back into the labor market, which may help alleviate its kinks. Uncertainty about the future for those about to lose benefits certainly fed into consumer sentiment in 3Q. Personal income declined in September, even though wages and salaries rose a solid 0.8% in just one month. The rise in wage and salary payments was not enough to offset the loss of social benefits.

So what about 4Q21? Do we face more of the 2% solution or a rebound in growth? Signs point to a rebound: inventory investment has yet to take place, which could be a major driver of growth; the toll from the Delta surge has fallen sharply. Highfrequency data in September and into the first month of 4Q suggest robust credit card spending, a renewed surge in air travel, and a rise in gasoline consumption to pre-pandemic seasonal levels. However, hotel revenues and restaurant spending have yet to recover from the flattening that occurred as the Delta variant hit in mid-summer—more fits and starts. The inflation surge that began in early 2021 continued through 3Q with a 5.7% rise; while disconcerting to many, the surge was completely expected. Going back to 4Q19, which takes out the base effect from the low readings in 2020, the price index rose at a 3.1% annual rate. Aggregate demand appears to have regained some strength at the very end of 3Q, as evidenced by a rise in real imports to levels above pre-pandemic levels. Overall, consensus estimates place 4Q GDP back at a 5% annual growth rate.

The Long-Term View

		_		Ended	
Index	3Q21	1 Yr	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	-0.1	31.9	16.9	16.6	9.7
S&P 500	0.6	30.0	16.9	16.6	9.7
Russell 2000	-4.4	47.7	13.5	14.6	9.1
Global ex-U.S. Equity					
MSCI EAFE	-0.4	25.7	8.8	8.1	5.2
MSCI ACWI ex USA	-3.0	23.9	8.9	7.5	
MSCI Emerging Markets	-8.1	18.2	9.2	6.1	
MSCI ACWI ex USA Small Cap	0.0	33.1	10.3	9.4	6.8
Fixed Income					
Bloomberg Agg	0.1	-0.9	2.9	3.0	5.1
90-Day T-Bill	0.0	0.1	1.2	0.6	2.1
Bloomberg Long G/C	0.1	-3.0	5.2	5.8	7.4
Bloomberg Gl Agg ex US	-1.6	-1.2	1.1	0.9	3.6
Real Estate					
NCREIF Property	5.2	12.1	6.8	9.0	9.2
FTSE Nareit Equity	1.0	37.4	6.8	11.3	10.0
Alternatives					
CS Hedge Fund	1.2	14.1	5.5	4.9	7.1
Cambridge PE*	11.5	56.9	21.0	15.8	15.6
Bloomberg Commodity	6.6	42.3	4.5	-2.7	1.4
Gold Spot Price	-0.8	-7.3	5.9	0.8	6.3
Inflation – CPI-U	1.0	5.4	2.6	1.9	2.2
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\*Data for most recent period lags by a quarter. Data as of 6/30/21. Sources: Bloomberg, Bureau of Economic Analysis, Credit Suisse, FTSE Russell, MSCI, NCREIF, Refinitiv/Cambridge, S&P Dow Jones Indices

#### **Recent Quarterly Economic Indicators**

	3Q21	2Q21	1Q21	4Q20	3Q20	2Q20	1Q20	4Q19
Employment Cost–Total Compensation Growth	3.7%	2.9%	2.6%	2.5%	2.4%	2.7%	2.8%	2.7%
Nonfarm Business–Productivity Growth	-5.0%	2.4%	4.3%	-3.4%	4.6%	11.2%	-0.8%	1.6%
GDP Growth	2.0%	6.7%	6.3%	4.5%	33.8%	-31.2%	-5.1%	1.9%
Manufacturing Capacity Utilization	76.4%	75.4%	74.5%	74.0%	71.9%	64.3%	74.4%	75.4%
Consumer Sentiment Index (1966=100)	74.8	85.6	80.2	79.8	75.6	74.0	96.4	97.2

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

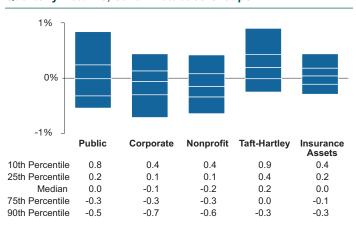
# Flat Returns in 3Q21, but Continued Strong Gains Over the Longer Term

# **INSTITUTIONAL INVESTORS**

- Institutional investors saw essentially flat returns in 3Q21, either slightly above or slightly below 0%.
- By plan size, larger investors outperformed smaller ones.
- Year-to-date and trailing one-year returns are much stronger, reflecting the rebound in the equity markets since the March 2020 pandemic depths.
- All investor types and sizes have shown strong returns over long time periods.
- Through June, many investors had enjoyed the best fiscal year returns in a generation, but their elation is tempered by sobering capital markets assumptions.
- There is also growing concern about a market drawdown, given the heady valuations relative to historical averages.
- As a result, clients are reevaluating the purpose and future of all asset classes, but fixed income remains the primary focus.
- For all the talk about inflation spiking, few investors have taken steps to address it in their portfolios.
- Hedge funds and other absolute return strategies have gained a new appreciation when compared to dismal fixed income expectations as a way to diversify growth risk with less of a return penalty.

- Investors have demonstrated remarkable discipline in rebalancing between growth and value managers, and U.S. and global ex-U.S. equity.
- Fixed income structures focus on the role of the asset class—to diversify equity, as a flight to quality, for liquidity, to help with interest rate exposure—balanced against the desire for return in a very low-yield environment.
- Real assets are under review with the growing concern for inflation. Investors question the inclusion of past real assets stalwarts: natural resources, energy, MLPs, and commodities.

## **Quarterly Returns, Callan Database Groups**



Source: Callan

#### Callan Database Median and Index Returns\* for Periods Ended 9/30/21

Database Group	Quarter	Year-to-Date	1 Year	3 Years	5 Years	10 Years
Public Database	0.0	9.0	20.2	10.2	10.0	9.7
Corporate Database	-0.1	5.8	14.9	10.6	9.4	9.4
Nonprofit Database	-0.2	9.0	21.5	10.6	10.4	9.6
Taft-Hartley Database	0.2	9.4	20.0	10.0	10.1	10.0
Insurance Assets Database	0.0	3.7	8.7	7.0	5.7	5.4
All Institutional Investors	0.0	8.5	19.8	10.4	10.0	9.7
Large (>\$1 billion)	0.2	9.3	20.7	10.9	10.3	9.9
Medium (\$100mm - \$1bn)	0.0	8.2	19.4	10.4	10.1	9.6
Small (<\$100 million)	-0.1	8.5	19.7	10.1	9.8	9.5

<sup>\*</sup>Returns less than one year are not annualized

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

In general, plans to return to offices have been delayed amid the Delta variant surge.

## **Defined Benefit (DB) Plans**

- An increasing number of corporate and public DB plans have conducted or are starting to conduct asset/liability studies.
- Lower return expectations stress return-on-asset assumptions.
- The American Rescue Plan Act (ARPA) provides a shot in the arm to corporate plans: lower liabilities, higher funded status, and lower required contributions.
- Low projected returns mean ROA assumptions for public DB plans face downward pressure. Weaker return assumptions may derail the expressed desire to bring in risk, spurring further demand for alts exposures and discussions of total fund leverage.
- There is growing interest in 20- and 30-year assumptions to justify more balanced portfolios and lessen pressure to risk up.

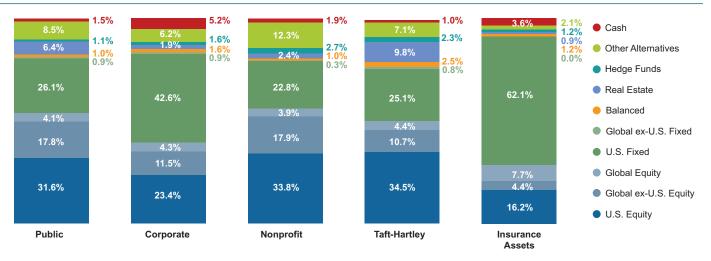
#### **Defined Contribution (DC) Plans**

- Glidepaths continue to be reassessed in light of lower shortterm CMAs.
- Some sponsors are taking a harder look at the diversified real assets option in their plans.
- DC plan litigation remains very active, and plaintiffs continue to identify novel allegations.
- Retirement income, managed accounts, and financial wellness continue to be topical discussion points for plan sponsors.
- With the potential of heightened inflation, a recent topic of discussion with investment structure evaluations involves the possibility of adding an inflation-sensitive fund, either in the form of a diversified real assets (DRA) fund or standalone TIPS fund.

### **Nonprofits**

- They are focused on meeting return targets.
- Subdued expectations for capital markets returns are challenging their risk tolerance.
- They continue to be dissatisfied with private real assets, hedge funds, and fixed income.

#### Average Asset Allocation, Callan Database Groups



Note: charts may not sum to 100% due to rounding. Other alternatives include but is not limited to: diversified multi-asset, private debt, private equity, and real assets. Source: Callan

# **Equity**

### **U.S. Equities**

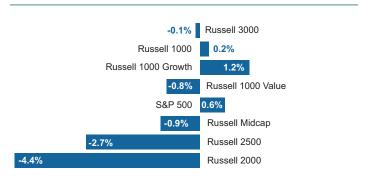
#### Returns compress over mounting concerns

- The S&P 500 Index rose 0.6% in 3Q21, and smaller cap growth indices posted their first negative quarter since the March 2020 low.
- Slowing economic growth, supply chain disruptions, and inflationary pressure, as well as uncertainty around monetary policy, decreased investors' risk appetite.
- In general, higher quality topped lower quality in large cap.
- Economically sensitive sectors such as Industrials (-4.2%) lagged; Financials (+2.7%) benefited.
- Growth outperformed value in large cap, and value outperformed growth in small cap.
- YTD, small value outperformed small growth by a whopping 2,000 bps (Russell 2000 Value: 22.9% vs. Russell 2000 Growth: 2.8%), a stark reversal from the prior year.

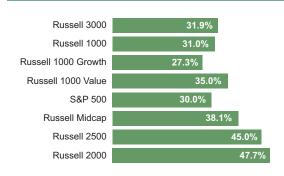
## Diversification and rebalancing are best defense

- Few if any pockets of opportunity remain in the equity markets as valuations have hit or exceeded long-term averages given the recent market run.
- Investors are grappling with exposures to risk assets: What to do? Where to go?
- The whipsaw effect over the last two years illustrates the need to remain committed to a long-term plan that emphasizes diversification and disciplined rebalancing.

#### **U.S. Equity: Quarterly Returns**



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

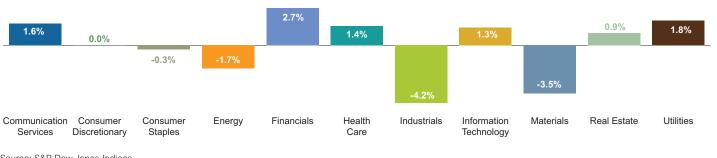


Sources: FTSE Russell and S&P Dow Jones Indices

#### Inflation and equity: not so bad, up to a point

- Investors typically fare OK with expected inflation levels but are negatively impacted when inflation is unexpectedly higher.
- Pre-GFC, stocks and interest rate movements (proxy for inflation) were highly correlated until 10-year U.S. Treasury yields reached 4.5%.

#### **Quarterly Performance of Industry Sectors**



- Post-GFC, stocks and interest rate movements were highly correlated until 10-year yields reached 3.5%.
- The current 10-Year Treasury yield is 1.5%.

## **Global Equity**

### Fears of stagflation stoke market volatility

- Delta variant flare-ups and slowdown in China weighed on global recovery.
- COVID-driven supply chain disruption continues to push inflation higher.
- Small cap outpaced large as global recovery concerns disproportionately punished large cap companies.
- Emerging markets struggled relative to developed markets as growth prospects were under pressure for China and Brazil.

# Market pivots to cyclicals

- Energy crunch fueled the sector to the highest return in the quarter as demand outstripped supply.
- Financials outperformed; Real Estate and Utilities generally underperformed with higher interest rate expectations.
- Sentiment and momentum signals added value in developed markets but not in emerging markets.

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

The U.S. dollar rose against other major currencies as the Fed signaled tapering is imminent, which notably detracted from global ex-U.S. results.

#### Growth vs. value

 Value outpaced growth in emerging markets due to the Energy rally, while both were relatively flat in developed markets.

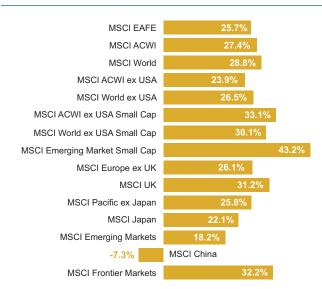
#### Global ex-U.S. Equity: Quarterly Returns

(U.S. Dollar)



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

(U.S. Dollar)



Source: MSCI

# **Fixed Income**

#### **U.S. Fixed Income**

#### Treasury yields largely unchanged from 2Q21

- Yields ended a volatile quarter only slightly higher after the Fed signaled it may soon begin tapering its bond buying program.
- 2-year and 10-year Treasury yields rose 3 and 7 bps, respectively.
- TIPS outperformed nominal Treasuries, and 10-year breakeven spreads widened 5 bps to 2.37%.

## Bloomberg Aggregate flat as spreads widened

- Minor gains in Treasuries and agency MBS were offset by declines in government-related, CMBS, and corporates.
- IG corporate trailed Treasuries by 15 bps (duration-adjusted) as spreads widened within long bonds.

#### High yield and leveraged loans continue rally

- Leveraged loans (+1.1%) outperformed high yield, driven by favorable supply/demand dynamics.
- High yield issuers' default rate declined to 0.9% in September, the lowest since March 2014.

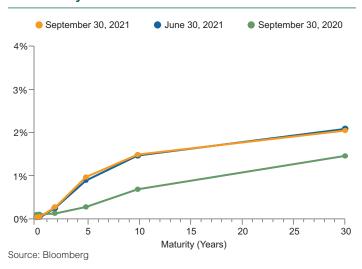
#### **Munis underperform Treasuries**

- Supply was modest and demand was fueled by expectations for higher tax rates and strong credit fundamentals.
- Lower-quality bonds continued their trend of outperformance as investors sought yield.

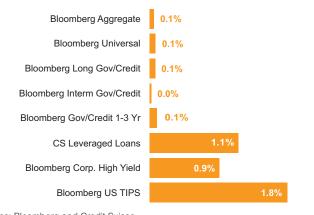
#### Fed reiterates that current price pressures are transitory

- Inflation is being temporarily influenced by pandemic-related supply bottlenecks (e.g., used cars and housing).
- Used autos spiked (+32% YOY), but rents (with a greater weight in the index) have started to apply price pressure.
- Fed's flexible average inflation targeting (FAIT) allows inflation to overshoot the 2% neutral rate; PCE (Fed's preferred inflation measure) rose 4.3% in August.

#### **U.S. Treasury Yield Curves**

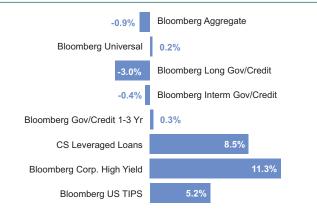


#### **U.S. Fixed Income: Quarterly Returns**



Sources: Bloomberg and Credit Suisse

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



Sources: Bloomberg and Credit Suisse

#### FIXED INCOME (Continued)

#### Policy adjustments may be on the horizon

- Fed signaled it would move up its taper announcement.
- Sep '21 Fed Funds rate forecast illustrated a potential rate hike in 2022, with a 25 bps increase; the previous dot plot had no hikes until 2023.

#### **Global Fixed Income**

## Flat on a hedged basis

- Returns were muted and U.S. dollar strength eroded returns for unhedged U.S. investors.
- The dollar gained roughly 2% vs. a basket of developed market currencies.

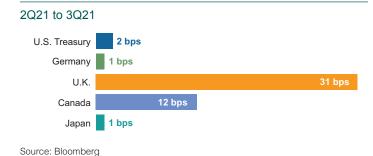
#### **Emerging market debt falls**

- The U.S. dollar-denominated index (EMBI Global Diversified) declined as the Delta variant in some countries raised concerns, and the local Index (JPM GBI-EM Global Diversified) lost further ground due to currency depreciation.
- Most emerging currencies depreciated versus the dollar. Notables included the Brazil real (-7.9%) and South Africa rand (-5.1%).
- EM corporates fared better amid improving corporate fundamentals and the global economic recovery.

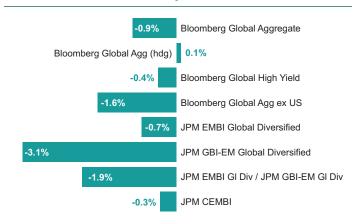
#### Inflation overseas

- Yields have increased as non-U.S. developed market countries also deal with supply bottlenecks and pressure from energy prices.
- Euro zone inflation has been elevated, but not at same level as the U.S.
- Central bank policy is mixed.
- The U.K.'s Bank of England has signaled a potential tightening of its monetary policy by the end of 2021.
- The European Central Bank remains on hold.

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

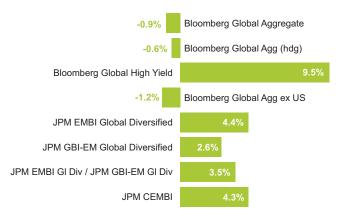


#### **Global Fixed Income: Quarterly Returns**



Sources: Bloomberg and JPMorgan Chase

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



Sources: Bloomberg and JPMorgan Chase

# Strong Quarter for Real Estate, Both Public and Private

#### REAL ESTATE/REAL ASSETS | Munir Iman

#### Strongest gains for ODCE in history

- The NFI-ODCE Index posted its best return ever in 3Q21;
   Industrial was the top performer.
- Income returns were positive except for the Hotel and Retail sectors.
- Appraisers are pricing in a recovery due to strong fundamentals in Industrial and Multifamily.
- Return dispersion by manager within the ODCE Index was due to the composition of underlying portfolios.

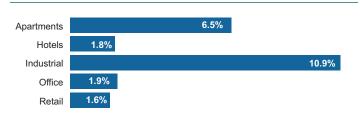
#### Compression in vacancy rates

- Vacancy rates kept compressing in Industrial and Multifamily as demand continued.
- Net operating income remained negative for Retail but its recovery continued; pent-up demand is evident through foot traffic in retail centers.
- 3Q21 rent collections have stabilized across all sectors.
- Demand outpaced supply as new construction of preleased Industrial and Multifamily occurred.

#### Gains in transaction volume

 Transaction volume increased quarter over quarter led by Multifamily and Industrial assets with strong credit tenants, which are trading at higher values than pre-COVID-19 levels.

## **Sector Quarterly Returns by Property Type**



Source: NCREIF

#### Global REITs trailed equities; U.S. REITs outperformed

- Global REITs underperformed in 3Q21, falling 0.9% compared to 0.0% for global equities (MSCI World).
- U.S. REITs rose 1.0% in 3Q21, beating the S&P 500 Index, which gained 0.6%.
- Global REITs were trading below NAV, except for those in Singapore, Japan, the United States, and Canada.
- Property sectors were mixed between trading at a discount or premium.
- Ongoing volatility in REIT share prices offers opportunities to purchase mispriced securities, individual assets from REIT owners, and discounted debt, as well as to lend to companies and/or execute take-privates of public companies.

## Callan Database Median and Index Returns\* for Periods Ended 9/30/21

Private Real Assets	Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	15 Years
Real Estate ODCE Style	3.2	10.5	11.5	6.3	6.9	9.1	5.6
NFI-ODCE (value wt net)	6.4	12.4	13.6	6.1	6.6	8.9	5.5
NCREIF Property	5.2	10.9	12.1	6.7	6.8	9.0	7.1
NCREIF Farmland	1.5	3.9	5.5	4.9	5.5	10.2	11.1
NCREIF Timberland	1.9	4.4	5.0	2.4	2.9	4.9	5.2
Public Real Estate							
Global Real Estate Style	-0.2	16.0	29.1	9.5	7.6	10.6	5.6
FTSE EPRA Nareit Developed	-0.9	14.5	29.6	6.2	4.5	8.3	3.8
Global ex-U.S. Real Estate Style	-2.2	7.4	22.3	8.4	6.9	10.3	4.9
FTSE EPRA Nareit Dev ex US	-2.7	6.1	20.8	4.2	4.3	7.1	2.9
U.S. REIT Style	1.3	22.8	34.8	12.5	8.4	12.3	7.4
EPRA Nareit Equity REITs	1.0	23.1	37.4	10.0	6.8	11.3	6.5

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

# **Pandemic's Impact Muted**

#### PRIVATE EQUITY | Gary Robertson

Private equity activity measures in 3Q21 backed down slightly from 2Q, although totals were still strong. The IPO market for both venture capital and buyouts showed the largest declines as public equity flattened in 3Q. So far this year, private equity activity has been vigorous, fueled by rapidly rising public equity valuations and very liquid capital markets.

Private equity partnerships holding final closes in 3Q totaled \$165 billion, with 398 new partnerships formed (unless otherwise noted, all data are from PitchBook). The dollar volume fell 32% from 2Q21, and the number of funds holding final closes declined 28%. So far, capital raised is running 24% ahead of YTD 2020. Venture capital and growth equity have been garnering a larger share of overall commitments, while overall private equity commitments continued to rise.

The number of new buyout transactions and dollar volume fell minutely. Funds closed 2,615 company investments with \$160 billion of disclosed deal value, a 7% decrease in count and a 2% drop in dollar value from 2Q21. New financing rounds in venture capital companies totaled 10,208, with \$180 billion of announced value. The number of investments was down 5% from the prior guarter, but announced value rose 8%. The median pre-money valuations of Seed through Series D rounds continued to increase in YTD 2021 over 2020.

#### Funds Closed 1/1/21 to 9/30/21

Strategy	No. of Funds	Amt (\$mm)	Share
Venture Capital	871	166,920	26%
Growth Equity	129	65,232	10%
Buyouts	329	321,149	50%
Mezzanine Debt	16	12,690	2%
Distressed	21	27,852	4%
Energy	4	1,967	0%
Secondary and Other	66	43,340	7%
Fund-of-Funds	22	5,432	1%
Totals	1,458	644,582	100%

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

There were 348 private M&A exits of private equity-backed companies (excluding venture capital), with disclosed values totaling \$174 billion. Exits were down 44% from the prior quarter but announced dollar volume leaped 29%. The year-to-date exit count is up 10%. There were 104 private equity-backed IPOs in 3Q raising \$32 billion, down from 112 totaling \$39 billion in 2Q.

Venture-backed M&A exits totaled 735 transactions with disclosed value of \$57 billion. The number of sales increased 5% and announced dollar volume rose 10%. The year-to-date exit count rose 43%. There were 119 VC-backed IPOs with a combined float of \$43 billion. For comparison, 2Q had 171 IPOs and total issuance of \$73 billion.

#### Private Equity Performance (%) (Pooled Horizon IRRs through 6/30/21\*)

Quarter	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
11.1	82.2	35.0	26.3	19.4	15.2	10.4	23.1
12.1	64.0	28.6	24.3	16.9	15.7	14.0	16.4
12.6	51.7	21.2	19.9	14.1	12.5	13.6	13.7
6.3	24.9	11.6	12.4	11.6	11.0	9.8	10.3
5.8	23.3	6.5	8.9	8.2	9.0	9.9	9.9
10.2	43.3	14.0	13.8	11.6	10.6	11.5	11.8
11.6	57.7	24.0	21.0	15.0	13.1	12.5	14.7
8.6	40.8	18.7	17.7	14.8	10.7	8.6	9.8
-0.1	31.9	16.0	16.9	16.6	10.4	9.8	9.7
	11.1 12.1 12.6 6.3 5.8 10.2 11.6	11.1     82.2       12.1     64.0       12.6     51.7       6.3     24.9       5.8     23.3       10.2     43.3       11.6     57.7       8.6     40.8	11.1     82.2     35.0       12.1     64.0     28.6       12.6     51.7     21.2       6.3     24.9     11.6       5.8     23.3     6.5       10.2     43.3     14.0       11.6     57.7     24.0       8.6     40.8     18.7	11.1     82.2     35.0     26.3       12.1     64.0     28.6     24.3       12.6     51.7     21.2     19.9       6.3     24.9     11.6     12.4       5.8     23.3     6.5     8.9       10.2     43.3     14.0     13.8       11.6     57.7     24.0     21.0       8.6     40.8     18.7     17.7	11.1     82.2     35.0     26.3     19.4       12.1     64.0     28.6     24.3     16.9       12.6     51.7     21.2     19.9     14.1       6.3     24.9     11.6     12.4     11.6       5.8     23.3     6.5     8.9     8.2       10.2     43.3     14.0     13.8     11.6       11.6     57.7     24.0     21.0     15.0       8.6     40.8     18.7     17.7     14.8	11.1       82.2       35.0       26.3       19.4       15.2         12.1       64.0       28.6       24.3       16.9       15.7         12.6       51.7       21.2       19.9       14.1       12.5         6.3       24.9       11.6       12.4       11.6       11.0         5.8       23.3       6.5       8.9       8.2       9.0         10.2       43.3       14.0       13.8       11.6       10.6         11.6       57.7       24.0       21.0       15.0       13.1         8.6       40.8       18.7       17.7       14.8       10.7	11.1     82.2     35.0     26.3     19.4     15.2     10.4       12.1     64.0     28.6     24.3     16.9     15.7     14.0       12.6     51.7     21.2     19.9     14.1     12.5     13.6       6.3     24.9     11.6     12.4     11.6     11.0     9.8       5.8     23.3     6.5     8.9     8.2     9.0     9.9       10.2     43.3     14.0     13.8     11.6     10.6     11.5       11.6     57.7     24.0     21.0     15.0     13.1     12.5       8.6     40.8     18.7     17.7     14.8     10.7     8.6

Note: Private equity returns are net of fees. Sources: Refinitiv/Cambridge and S&P Dow Jones Indices

\*Most recent data available at time of publication

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

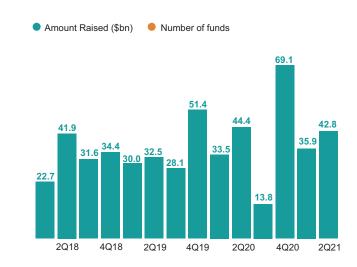
# **Asset Class Remains Attractive and Fundraising Stays Strong**

## PRIVATE CREDIT | Catherine Beard

- The yield- and income-generating characteristics of private credit remain attractive to institutional investors in a low-rate environment.
  - Private credit vintages 2008-18 generated an 8.3% median net IRR with a standard deviation of 6.1%.
  - Private credit is seen as fairly valued with a view that we are in a rising market.
- Direct lending portfolios proved resilient during the COVID dislocation due to the liquidity injected into the economy.
  - While pricing widened in the early stages of the dislocation, pricing and structures are back to pre-pandemic levels.
  - Direct lending portfolio valuations are back to 2019 levels.
  - New sponsor-backed lending deal flow has been at record levels through 3Q21.
  - Key industries of focus include technology, health care, and business services.
  - The balance has shifted back to borrowers with a return to covenant-lite structures, high leverage, and compressed pricing.
  - Downside has been limited by strong portfolio management during the dislocation coupled with capital available to shore up liquidity for troubled companies.
- Liquidity flowing into the U.S. economy has limited U.S. corporate stress and has muted the corporate distressed opportunity set.
- Areas of opportunity include those that offer diversification through differentiated collateral and/or areas of low correlation to public markets, including specialty finance, assetbacked lending, and niche areas (life sciences lending and artificial intelligence).

- 35% of investors polled by Pregin say they are allocating to private credit. The average target allocation is 6.2%.
- A majority of investors polled say private credit returns have met expectations. 40% intend to commit more capital to private credit over the next 12 months.
- Senior debt and mezzanine capital continue to see strong 2021 fundraising activity.
- There is also a ramp up of fundraising in specialty finance, asset-backed lending, and niche areas such as venture debt.

## Private Credit Fundraising (\$bn)





Source: Pregin

# Mixed Results as Volatility Returned to Markets

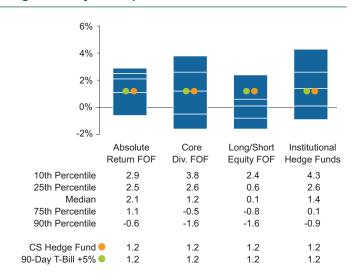
## **HEDGE FUNDS/MACs | Joe McGuane**

A variety of macro concerns, including China, inflation, interest rates, and the Delta variant, led to a volatile 3Q21 for financial markets, as investors took chips off the table toward the end of September.

While global markets all suffered a late-quarter drawdown, the S&P 500 (+0.6%) managed to produce a gain, as corporate earnings came in ahead of expectations. The Bloomberg High Yield Index rose 0.8%, as U.S. credit markets remained resilient despite the potential default of China's Evergrande. The MSCI Emerging Markets Index lost 8.1%.

Hedge funds as a whole ended the quarter higher, driven by commodities-oriented relative value, event-driven, and sector-focused strategies, as well as macro managers with short positions in U.S. interest rates. Representing hedge funds reporting performance without implementation costs,

#### **Hedge Fund Style Group Returns**



Sources: Callan, Credit Suisse, Federal Reserve

### Callan Peer Group Median and Index Returns\* for Periods Ended 9/30/21

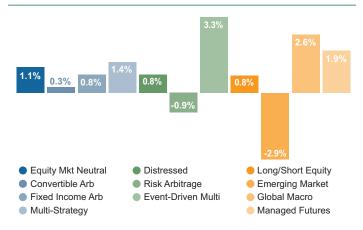
Hedge Fund Universe	Quarter	Year-to-Date	1 Year	3 Years	5 Years	10 Years
Callan Institutional Hedge Fund Peer Group	1.4	7.4	11.8	6.0	5.8	6.5
Callan Fund-of-Funds Peer Group	0.9	5.6	15.0	6.6	6.1	5.6
Callan Absolute Return FOF Style	2.1	7.1	14.6	5.1	4.9	4.9
Callan Core Diversified FOF Style	1.2	5.3	13.3	6.8	6.1	5.6
Callan Long/Short Equity FOF Style	0.1	5.1	17.0	10.1	8.7	7.5
BB GS Cross Asset Risk Premia 6% Vol Idx	1.3	2.3	3.5	1.6	2.0	4.2
Credit Suisse Hedge Fund	1.2	7.2	14.1	6.1	5.5	4.9
CS Convertible Arbitrage	0.3	4.5	8.9	6.5	5.1	4.6
CS Distressed	0.8	11.3	21.5	4.3	5.1	5.3
CS Emerging Markets	-2.9	4.7	10.5	8.8	6.9	5.9
CS Equity Market Neutral	1.1	4.2	4.9	0.8	1.5	1.8
CS Event-Driven Multi	3.3	14.3	26.6	7.9	6.8	5.3
CS Fixed Income Arb	0.8	4.7	8.1	4.3	4.8	4.7
CS Global Macro	2.6	8.9	15.4	8.0	6.5	4.4
CS Long/Short Equity	0.8	6.1	14.2	6.2	6.7	6.7
CS Managed Futures	1.9	8.2	14.6	5.0	1.8	1.4
CS Multi-Strategy	1.4	5.9	11.2	4.9	5.1	6.2
CS Risk Arbitrage	-0.9	4.3	16.0	7.9	6.3	4.4
HFRI Asset Wtd Composite	0.0	6.2	13.5	4.5	4.8	4.5
90-Day T-Bill + 5%	1.2	3.8	5.1	6.2	6.2	5.6

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

the Credit Suisse Hedge Fund Index (CS HFI) gained 1.2% in 3Q. As an actual hedge fund portfolio net of all fees, the median manager in the Callan Hedge Fund-of-Funds (FOF) Database Group added 0.9%.

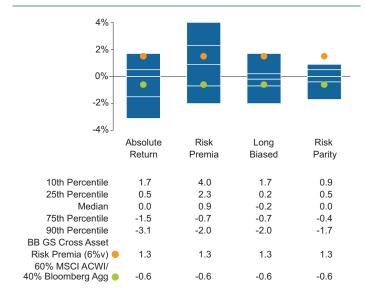
Serving as a proxy for large, broadly diversified hedge funds with low-beta exposure to equity markets, the median Callan Institutional Hedge Fund Peer Group added 1.4%. Within this style group, the average Hedged Equity manager gained the most at 3.7%, driven by managers focused on tech/media/technology (TMT) and event-related deals. Hedged Rates edged ahead only 0.02% as it navigated a bear flattening

#### **Credit Suisse Hedge Fund Strategy Returns**



Source: Credit Suisse

#### **MAC Style Group Returns**



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

across the yield curves in the U.S., U.K., and Continental Europe. The average Hedged Credit manager added 1.2%.

Within CS HFI, the best-performing strategy was Event Driven (+3.3%), aided by its exposure to corporate activity. Volatility across interest rates and equities helped Macro funds advance 2.6%. Multi-Strategy funds ended up 1.4%, with gains coming within credit and equity strategies. The laggard was Emerging Market (-2.9%).

Across the Callan Hedge FOF Database, the median Absolute Return FOF gained 2.1%. With exposures to non-directional and directional styles, the Core Diversified FOF rose 1.2%. Long/Short Equity FOF was slightly positive at 0.06%, after a tough September as mega cap tech exposure negatively impacted some managers.

Since the Global Financial Crisis, liquid alternatives to hedge funds have become popular for their attractive risk-adjusted returns uncorrelated with stock and bond investments but offered at a lower cost. Much of that interest is focused on rules-based, long-short strategies that isolate risk premia such as value, momentum, and carry. These alternative risk premia are often embedded in hedge funds as well as other actively managed investment products.

In 3Q, the Bloomberg GSAM Risk Premia Index increased 1.3% based upon a 6% volatility target. Within the underlying styles of the index, Commodity Carry (+2.9%) and Equity Quality (+2.1%) profited off strength in the energy and equity markets. The weakest risk premia was Equity Value L/S (-2.1%), as interest rate volatility and value equities detracted.

The median managers of the Callan Multi-Asset Class (MAC) Style Groups generated mixed returns gross of fees. The Callan Risk Premia MAC rose 0.9% based on its exposures to uncorrelated style premia targeting 5% to 15% portfolio volatility. The Callan Risk Parity MAC, which typically targets an equal risk-weighted allocation to the major asset classes with leverage, was flat. As the most conservative MAC style focused on non-directional strategies of long and short asset class exposures, the Callan Absolute Return MAC was also flat.

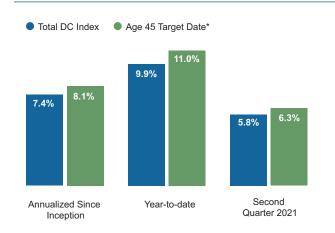
# **Index Posts Fifth Straight Quarterly Gain**

#### **DEFINED CONTRIBUTION | Patrick Wisdom**

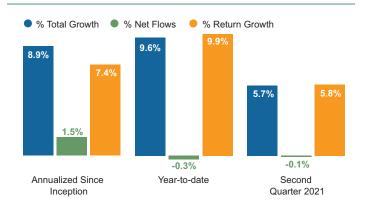
- The Callan DC Index™ rose 5.8% in 2Q21, marking a fifth straight quarter of gains. The Age 45 Target Date Fund posted a larger quarterly gain (6.3%), attributable to its higher allocation to equity, which outperformed fixed income during the quarter.
- Balances within the DC Index rose by 5.7%, the fifth straight quarterly gain.
- For the second straight quarter, target date funds (TDFs) placed atop the leaderboard, receiving 78.0% of net inflows.
- In a continuation from 1Q21, investors transferred assets out of relatively safer asset classes, as stable value (-28.1%) and U.S. fixed income (-17.7%) had sizable net outflows.
- U.S. large cap (-27.5%) also saw net outflows. In contrast, global ex-U.S. equity (8.6%) had the second-largest net inflows for the second straight quarter.
- Turnover (i.e., net transfer activity levels within DC plans) in the DC Index fell to 0.37% from the previous quarter's 0.42%.
- The Index's overall allocation to equity (72.2%) increased by more than a full percentage point from the previous guarter, bringing it to its highest level since 4Q07 (72.9%).
- In a continuation from the previous quarter, U.S. large cap (27.5%) had the largest percentage increase in allocation.
- Stable value (8.1%) saw the largest decrease in allocation, driven by material net outflows and relative underperformance.
- The prevalence of a high yield fixed income offering (7.9%) increased to its highest mark since 3Q16 (14.1%).

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

#### **Investment Performance**



#### **Growth Sources**



# **Net Cash Flow Analysis (2Q21)**

(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	78.09%
Global ex-U.S. Equity	8.06%
U.S. Large Cap	-27.54%
Stable Value	-28.12%
Total Turnover**	0.37%

Data provided here is the most recent available at time of publication. Source: Callan DC Index

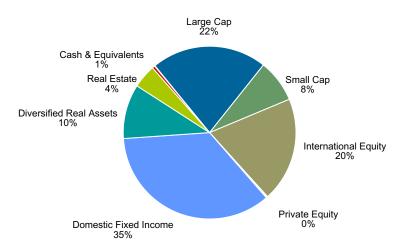
Note: DC Index inception date is January 2006.

- The Age 45 Fund transitioned from the average 2035 TDF to the 2040 TDF in June 2018.
- \*\* Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

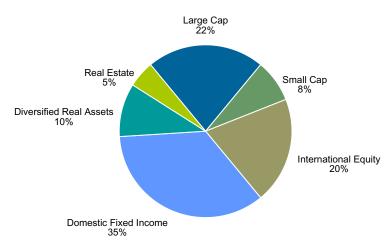
# Actual vs Target Asset Allocation As of September 30, 2021

The first chart below shows the Fund's asset allocation as of September 30, 2021. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

#### **Actual Asset Allocation**



# **Target Asset Allocation**



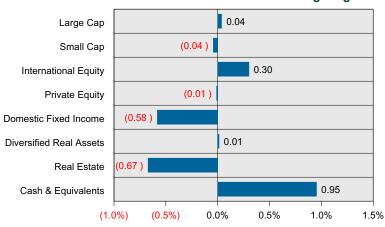
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	1,790,586	21.6%	22.0%	(0.4%)	(31,366)
Small Cap	663,616	8.0%	8.0%	`0.0%	1,087
International Equity	1,620,857	19.6%	20.0%	(0.4%)	(35,463)
Private Equity '	25,631	0.3%	0.0%	0.3%	25,631
Domestic Fixed Income	2,925,185	35.3%	35.0%	0.3%	26,624
Diversified Real Assets	847,204	10.2%	10.0%	0.2%	19,043
Real Estate	364,525	4.4%	5.0%	(0.6%)	(49,556)
Cash & Equivalents	43,999	0.5%	0.0%	0.5%	`43,999
Total	8.281.603	100.0%	100.0%		

<sup>\*</sup> Current Quarter Target = 35.0% Blmbg Aggregate, 22.0% Russell 1000 Index, 20.0% MSCI EAFE, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index and 5.0% NCREIF Total Index.



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

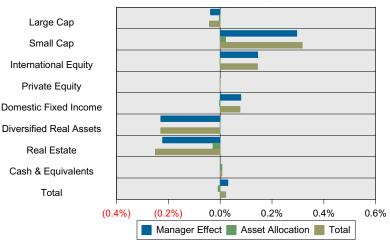




## **Actual vs Target Returns**

#### 0.04 (0.54) (4.36) 0.01 (0.66)0.28 0.05 0.53 2.85 5.23 (6%) (4%)(2%)0% 2% 4% 6% 8% Actual Target

## **Relative Attribution by Asset Class**



#### Relative Attribution Effects for Quarter ended September 30, 2021

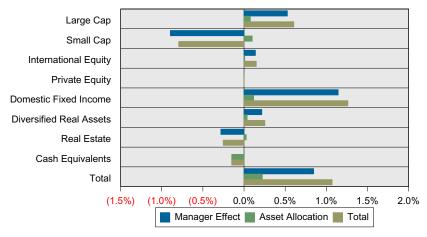
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	22%	22%	0.04%	0.21%	(0.04%)	(0.00%)	(0.04%)
Small Cap	8%	8%	(0.54%)	(4.36%)	0.30%	0.02%	0.32%
International Equity	20%	20%	`0.01%´	(0.66%)	0.15%	(0.00%)	0.14%
Private Equity ' '	0%	0%	(1.70%)	(1.70%)	0.00%	(0.00%)	(0.00%)
Domestic Fixed Incom	e 34%	35%	`0.28%′	`0.05%´	0.08%	(0.00%)	`0.08%
Diversified Real Asset	s 10%	10%	0.53%	2.85%	(0.23%)	(0.00%)	(0.23%)
Real Estate	4%	5%	0.00%	5.23%	(0.22%)	(0.03%)	(0.25%)
Cash & Equivalents	1%	0%	0.01%	0.01%	0.00%	0.01%	0.01%
Total			0.17% =	0.14%	+ 0.03% +	(0.01%)	0.02%

<sup>\*</sup> Current Quarter Target = 35.0% Blmbg Aggregate, 21.8% Russell 1000 Index, 19.8% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.3% NDLEG-Private Equity.

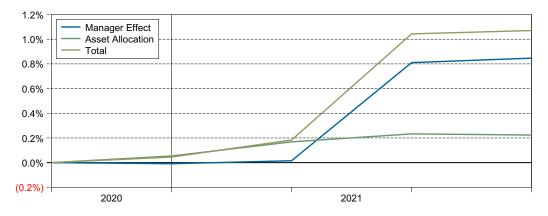


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset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

#### **One Year Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



#### One Year Relative Attribution Effects

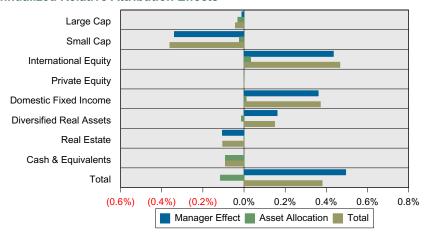
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	23%	22%	33.58%	30.96%	0.53%	0.08%	0.61%
Small Cap	8%	8%	35.71%	47.68%	(0.90%)	0.10%	(0.80%)
International Equity	20%	20%	27.29%	26.50%	0.14%	0.01%	0.15%
Private Equity ' '	0%	0%	11.59%	11.59%	0.00%	0.00%	0.00%
Domestic Fixed Incom		35%	2.09%	(0.90%)	1.15%	0.12%	1.26%
Diversified Real Asset	s 10%	10%	9.15%	6.84%	0.22%	0.04%	0.25%
Real Estate	4%	5%	6.23%	12.15%	(0.28%)	0.03%	(0.25%)
Cash Equivalents	1%	0%	0.04%	0.04%	0.00%	(0.15%)	(0.15%)
Total			17.31% =	= 16.23% -	+ 0.85% +	0.22%	1.07%

<sup>\*</sup> Current Quarter Target = 35.0% Blmbg Aggregate, 21.8% Russell 1000 Index, 19.8% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.3% NDLEG-Private Equity.

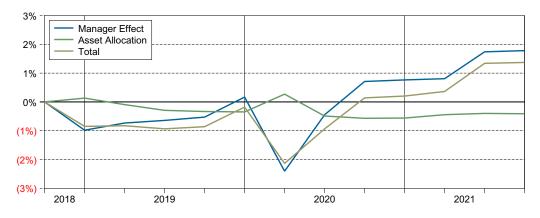


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset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

#### **Three Year Annualized Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



# **Three Year Annualized Relative Attribution Effects**

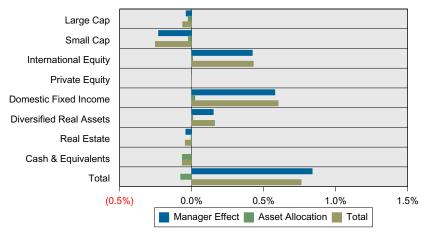
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	22%	22%	16.27%	16.43%	(0.01%)	(0.03%)	(0.04%)
Small Cap	8%	8%	6.77%	10.54%	(0.34%)	(0.02%)	(0.36%)
International Equity	20%	20%	9.90%	7.87%	0.43%	`0.03%´	0.47%
Private Equity ' ´	0%	0%	-	-	0.00%	0.00%	0.00%
Domestic Fixed Income	e 35%	35%	6.62%	5.36%	0.36%	0.01%	0.37%
Diversified Real Assets	s 10%	10%	8.38%	6.65%	0.16%	(0.01%)	0.15%
Real Estate	5%	5%	4.38%	6.72%	(0.10%)	`0.00%´	(0.10%)
Cash & Equivalents	1%	0%	1.03%	1.03%	`0.00%	(0.09%)	_(0.09%)_
Total			9.79% =	9.41%	+ 0.49% +	(0.11%)	0.38%

<sup>\*</sup> Current Quarter Target = 35.0% Blmbg Aggregate, 21.8% Russell 1000 Index, 19.8% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.3% NDLEG-Private Equity.

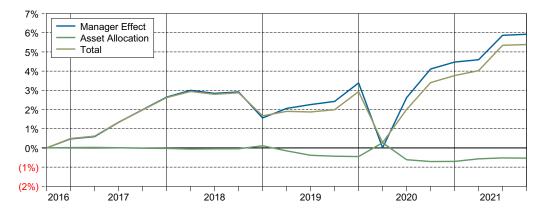


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset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

#### **Five Year Annualized Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



# **Five Year Annualized Relative Attribution Effects**

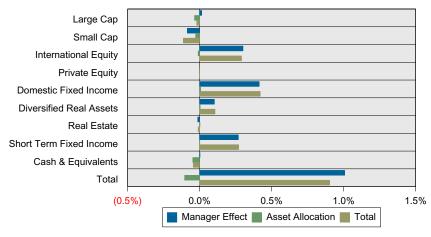
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	22%	22%	16.87%	17.11%	(0.04%)	(0.02%)	(0.06%)
Small Cap	8%	8%	10.75%	13.45%	(0.23%)	(0.02%)	(0.25%)
International Equity	20%	20%	10.91%	8.88%	0.42%	`0.01%´	`0.43%´
Private Equity	0%	0%	-	-	0.00%	0.00%	0.00%
Domestic Fixed Income		35%	4.70%	2.94%	0.58%	0.02%	0.60%
Diversified Real Assets	10%	10%	5.75%	4.17%	0.15%	0.01%	0.16%
Real Estate	5%	5%	5.76%	6.84%	(0.04%)	(0.00%)	(0.04%)
Cash & Equivalents	1%	0%	1.03%	1.03%	`0.00%′	(0.07%)	(0.07%)
Total			9.44% =	8.68%	+ 0.84% +	(0.08%)	0.76%

<sup>\*</sup> Current Quarter Target = 35.0% Blmbg Aggregate, 21.8% Russell 1000 Index, 19.8% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.3% NDLEG-Private Equity.

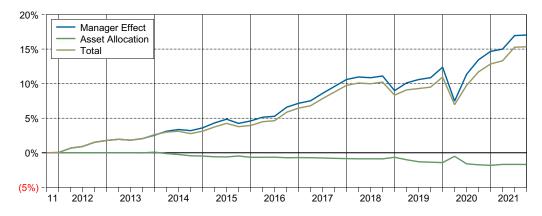


The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset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

#### **Ten Year Annualized Relative Attribution Effects**



#### **Cumulative Relative Attribution Effects**



# **Ten Year Annualized Relative Attribution Effects**

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	17%	17%	-	-	0.02%	(0.04%)	(0.02%)
Small Cap	6%	6%	-	-	(0.09%)	(0.03%)	(0.11%)
International Equity	15%	15%	-	-	`0.30%´	(0.01%)	`0.29%´
Private Equity .	0%	0%	-	-	0.00%	`0.00%	0.00%
Domestic Fixed Incom		26%	-	-	0.41%	0.01%	0.42%
Diversified Real Asset		7%	-	-	0.10%	0.00%	0.11%
Real Estate	4%	4%	-	-	(0.01%)	0.00%	(0.01%)
Short Term Fixed Inco		23%	-	-	0.27%	0.00%	0.27%
Cash & Equivalents	3%	2%	0.57%	0.57%	0.00%	(0.05%)	_(0.04%)_
Total			6.51% =	5.60%	+ 1.01% +	· (0.10%)	0.90%

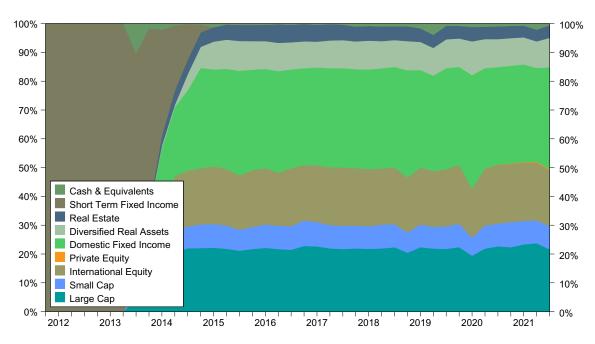
<sup>\*</sup> Current Quarter Target = 35.0% Blmbg Aggregate, 21.8% Russell 1000 Index, 19.8% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.3% NDLEG-Private Equity.



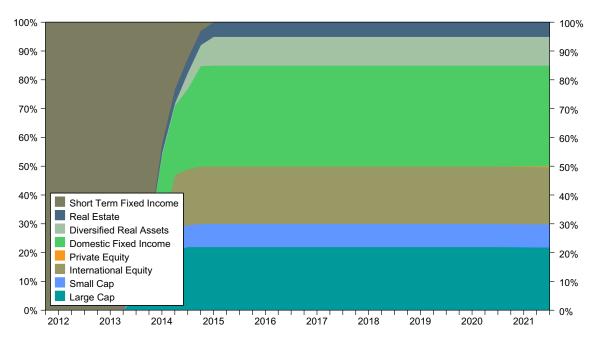
# **Actual vs Target Historical Asset Allocation**

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, and the fund's historical target asset allocation.

### **Actual Historical Asset Allocation**



## **Target Historical Asset Allocation**

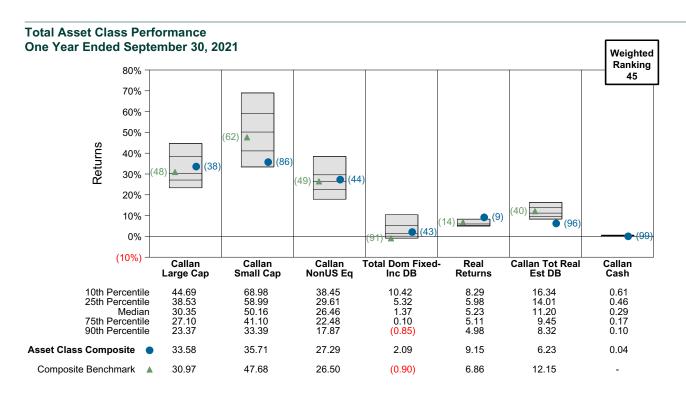


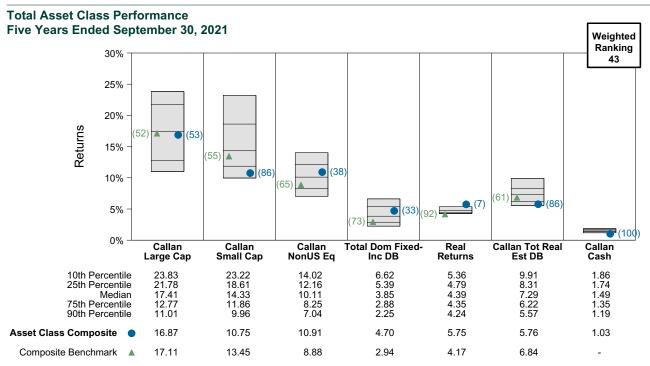
<sup>\*</sup> Current Quarter Target = 35.0% Blmbg Aggregate, 21.8% Russell 1000 Index, 19.8% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.3% NDLEG-Private Equity.



## **Asset Class Rankings**

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





<sup>\*</sup> Current Quarter Target = 35.0% Blmbg Aggregate, 21.8% Russell 1000 Index, 19.8% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.3% NDLEG-Private Equity.



# **Asset Class Allocation**

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2021, with the distribution as of June 30, 2021. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

#### **Asset Class Allocation**

	September 3	0, 2021			June 30, 2021		
	<b>Market Value</b>	Weight	Net New Inv.	Inv. Return	Market Value	Weight	
Global Equity	\$4,100,690,434	49.52%	\$(583,117,844)	\$735,915	\$4,683,072,363	52.07%	
Domestic Equity	\$2,454,202,048	29.63%	\$(391,037,193)	\$(1,290,370)	\$2,846,529,611	31.65%	
Large Cap	\$1,790,586,476	21.62%	\$(348,408,224)	\$2,580,534	\$2,136,414,166	23.76%	
L.A. Capital Enhanced	363,453,870	4.39%	(117,142,418)	1,765,795	478,830,494	5.32%	
L.A. Capital Large Cap Growth	555,167,729	6.70%	(137,336,833)	9,507,903	682,996,658	7.59%	
Parametric Large Cap	356,981,099	4.31%	(68,547,153)	3,461,048	422,067,204	4.69%	
LSV Large Cap Value	514,983,778	6.22%	(25,381,820)	(12,154,212)	552,519,810	6.14%	
Small Cap	\$663,615,572	8.01%	\$(42,628,969)	\$(3,870,904)	\$710,115,444	7.90%	
Atlanta Capital	218,139,632	2.63%	(2,835,016)	(4,483,508)	225,458,157	2.51%	
Riverbridge Small Cap Growth	237,133,726	2.86%	(3,416,905)	5,284,401	235,266,231	2.62%	
Sycamore Small Cap Value	208,342,213	2.52%	(36,377,047)	(4,671,796)	249,391,057	2.77%	
International Equity	\$1,620,857,348	19.57%	\$(196,275,282)	\$2,402,984	\$1,814,729,646	20.18%	
DFA Intl SmallCap Value	157,111,942	1.90%	(43,000,000)	1,093,467	199,018,476	2.21%	
LSV Intl Value	570,892,935	6.89%	(556.374)	(7,505,659)	578,954,968	6.44%	
Vanguard Intl Explorer Fund	162,639,978	1.96%	(36,000,000)	414,343	198,225,635	2.20%	
William Blair	730,212,493	8.82%	(116,718,908)	8,400,833	838,530,568	9.32%	
Private Equity	\$25,631,038	0.31%	\$4,194,631	\$(376,699)	\$21,813,106	0.24%	
50 South Capital	1,954,120	0.02%	0	(255,223)	2,209,343	0.02%	
Sixth Street TAO	23,676,918	0.29%	4,194,631	(121,476)	19,603,763	0.22%	
Domestic Fixed Income	\$2,925,185,401	35.32%	\$(10,638,520)	\$7,952,298	\$2,927,871,623	32.56%	
Ares ND Credit Strategies Fd	96,681,216	1.17%	8,049,180	(0)	88,632,036	0.99%	
BND CDs	45,890,683	0.55%	2,436,355	294,766	43,159,562	0.48%	
Cerberus ND Private Credit Fd	114,982,504	1.39%	0	1,680,667	113,301,837	1.26%	
Declaration Total Return	230,963,556	2.79%	(148,595)	1,843,103	229,269,048	2.55%	
PIMCO Bravo II	6,181,662	0.07%	(1,654,759)	(1)	7,836,422	0.09%	
PIMCO DISCO II	54,595,902	0.66%	(1,001,100)	1,007,826	53,588,076	0.60%	
Prudential	870,440,779	10.51%	(5,957,354)	155,851	876,242,283	9.74%	
SSgA US Govt Credit Bd Idx	404,455,698	4.88%	(4,015,032)	202,406	408,268,324	4.54%	
Wells Capital	228,904,407	2.76%	(7,112,661)	563,344	235,453,723	2.62%	
Western Asset Management	872,088,994	10.53%	(2,235,653)	2,204,336	872,120,311	9.70%	
Global Real Assets	\$1,211,728,112	14.63%	\$13,497,007	\$4,331,404	\$1,193,899,701	13.28%	
Real Estate	\$364,524,511	4.40%	\$0	\$335	\$364,524,176	4.05%	
Invesco Core Real Estate	185,546,682	2.24%	0	335	185,546,347	2.06%	
JP Morgan RE Inc & Growth	178,977,829	2.16%	0	0	178,977,829	1.99%	
Diversified	\$847,203,602	10.23%	\$13,497,007	\$4,331,070	\$829,375,525	9.22%	
Western Asset TIPS	515,337,098	6.22%	(136,694)	8,419,721	507,054,071	5.64%	
ISQ Global Infrastructure II	65,393,185	0.79%	3,228,058	(463,936)	62,629,063	0.70%	
JP Morgan Infrastructure	108,053,133	1.30%	(4,374,501)	1,399,210	111,028,424	1.23%	
Grosvenor Cust. Infrastructure	60,435,102	0.73%	(24,439)	(149,359)	60,608,900	0.67%	
Macquarie Infrastructure Fund IV	73,196,370	0.88%	(39,329)	(3,778,749)	77,014,448	0.86%	
Macquarie Infrastructure Fund V	24,788,713	0.30%	14,843,912	(1,095,817)	11,040,618	0.12%	
Cash	\$43,998,810	0.53%	\$(144,450,805)	\$8,294	\$188,441,320	2.10%	
Northern Trust Cash Account	26,267,772	0.32%	(141,014,450)	5,066	167,277,156	1.86%	
Bank of ND	17,731,038	0.21%	(3,436,355)	3,228	21,164,164	0.24%	
Total Fund	\$8,281,602,757	100.0%	\$(724,710,161)	\$13,027,912	\$8,993,285,006	100.0%	



# **Investment Manager Returns**

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2021. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2021

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Global Equity Gross	(0.05%)	31.52%	12.21%	<u>-</u>	- Tears
Net	(0.16%)	31.08%	11.92%	<del>-</del>	-
Weighted Benchmark	(0.86%)	31.84%	12.13%	-	-
Domestic Equity Gross Net Weighted Benchmark	(0.12%) (0.26%) (1.00%)	34.31% 33.84% 35.45%	13.74% 13.48% 14.96%	15.26% 15.03% -	- - -
Large Cap Gross Net Russell 1000 Index	0.04% ( <mark>0.10%)</mark> 0.21%	33.58% 33.24% 30.96%	16.27% 16.06% 16.43%	16.87% 16.67% 17.11%	- - 16.76%
L.A. Capital Enhanced - Gross	0.39%	31.07%	16.91%	16.71%	-
L.A. Capital Enhanced - Net	0.35%	30.91%	16.76%	16.56%	-
Russell 1000 Index	0.21%	30.96%	16.43%	17.11%	16.76%
L.A. Capital LargeCap Growth - Gross L.A. Capital LargeCap Growth - Net Russell 1000 Growth Index	1.65% 1.59% 1.16%	29.92% 29.65% 27.32%	22.01% 21.76% 22.00%	21.48% 21.23% 22.84%	- 19.68%
Parametric Clifton Large Cap - Gross	0.71%	30.76%	16.42%	16.92%	-
Parametric Clifton Large Cap - Net	0.25%	30.15%	16.31%	16.87%	-
S&P 500 Index	0.58%	30.00%	15.99%	16.90%	16.63%
LSV Large Cap Value - Gross	(2.27%)	44.85%	9.07%	11.61%	-
LSV Large Cap Value - Net	(2.34%)	44.45%	8.77%	11.30%	-
Russell 1000 Value Index	(0.78%)	35.01%	10.07%	10.94%	13.51%
Small Cap Gross Net Russell 2000 Index	(0.54%) (0.71%) (4.36%)	35.71% 34.89% 47.68%	6.77% 6.37% 10.54%	10.75% 10.44% 13.45%	- - 14.63%
Atlanta Capital - Gross	(1.99%)	29.86%	-	-	-
Atlanta Capital - Net	(2.14%)	29.10%	-	-	-
S&P 600 Small Cap Index	(2.84%)	57.64%	9.44%	13.57%	15.69%
Riverbridge Small Cap Growth - Gross	2.26%	-	-	-	-
Riverbridge Small Cap Growth - Net	2.07%	-	-	-	-
Russell 2000 Growth Index	(5.65%)	33.27%	11.70%	15.34%	15.74%
Sycamore Small Cap Value - Gross Sycamore Small Cap Value - Net Russell 2000 Value Index	(1.87%) (2.05%) (2.98%)	- - 63.92%	- - 8.58%	- 11.03%	- - 13.22%
International Equity Gross Net Benchmark(1)	0.01% (0.06%) (0.66%)	27.29% 26.94% 26.50%	9.90% 9.58% 7.87%	10.91% 10.58% 8.88%	- - 8.12%
DFA Intl Small Cap Value	0.60%	36.18%	4.41%	6.72%	-
World ex US SC Va	0.12%	35.29%	6.48%	8.12%	8.80%
LSV Intl Value - Gross	(1.30%)	29.96%	3.74%	6.94%	-
LSV Intl Value - Net	(1.39%)	29.46%	3.34%	6.53%	-
MSCI EAFE Index	(0.45%)	25.73%	7.62%	8.81%	8.10%
Vanguard Intl Explorer Fund	0.00%	30.03%	7.53%	9.48%	-
BMI, EPAC, <\$2 B	0.41%	30.06%	7.74%	9.03%	9.61%
William Blair - Gross	0.89%	23.47%	16.48%	15.20%	-
William Blair - Net	0.80%	23.04%	16.06%	14.77%	-
MSCI ACWI ex US IMI	(2.56%)	25.16%	8.34%	9.13%	7.74%
Private Equity Net	(1.70%)	11.59%	-	-	-
50 South Capital - Net	(11.55%)	-	-	-	-
Sixth Street TAO - Net	( <mark>0.59%)</mark>	13.74%	-	-	-
Benchmark(2)	1.02%	9.77%	-	-	

<sup>(1)</sup> MSCI EAFE through 6/30/2016 and MSCI World ex-US thereafter. (2) 50% S&P/LSTA Leveraged Loan B and 50% Blmbg HY Corp 2% Issue.



# **Investment Manager Returns**

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2021. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2021

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Domestic Fixed Income	Quartor	1001	10010	10010	10010
Gross	0.28%	2.09%	6.62%	4.70%	-
Net	0.26%	1.98%	6.50%	4.59%	-
Blmbg Aggregate	0.05%	(0.90%)	5.36%	2.94%	3.01%
Ares ND Credit Strategies Fd - Net	0.00%	13.53%	7.65%	-	-
Cerberus ND Private Credit Fd - Net	1.48%	11.55%	9.68%	-	-
S&P/LSTA Leveraged Loan B	1.14%	8.27%	4.51%	4.87%	5.28%
BND CDs - Net	0.67%	2.74%	2.96%	-	-
Declaration Total Return - Net	0.80%	5.22%	5.64%	4.68%	-
Libor-3 Month	0.03%	0.18%	1.26%	1.39%	0.88%
PIMCO Bravo II - Net(1)	0.00%	28.42%	2.78%	5.46%	-
PIMCO DiSCO II - Net (1)	1.88%	7.40%	5.80%	8.29%	-
Blmbg Aggregate	0.05%	(0.90%)	5.36%	2.94%	3.01%
Prudential - Gross	0.04%	0.74%	6.92%	4.64%	-
Prudential - Net	(0.02%)	0.54%	6.70%	4.41%	-
Blmbg Aggregate	0.05%	(0.90%)	5.36%	2.94%	3.01%
Wells Capital - Gross	0.22%	6.39%	9.51%	6.50%	-
Wells Capital - Net	0.18%	6.19%	9.32%	6.32%	-
Blmbg Credit Baa	0.03%	3.27%	7.83%	5.11%	5.32%
Western Asset - Gross	0.28%	0.14%	6.32%	4.08%	-
Western Asset - Net	0.25%	0.03%	6.20%	3.96%	-
Blmbg Aggregate	0.05%	(0.90%)	5.36%	2.94%	3.01%
SSgA US Govt Credit Bd Idx - Gross	0.05%	(1.07%)	6.06%	3.31%	-
SSgA US Govt Credit Bd Idx - Net	0.04%	(1.09%)	6.04%	3.29%	-
Blmbg Govt/Credit Bd	0.04%	(1.13%)	5.94%	3.24%	3.24%

<sup>(1)</sup> Prior to 7/1/2019, the Legacy Fund participated in these portfolios via the Insurance Pool. Beginning 7/1/2019, its portion of the pool was segregated into its own portfolios. Returns prior to that date reflect the data from the Insurance pool.



# **Investment Manager Returns**

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 2021. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2021

	Last	Last	Last 3	Last 5	Last 10
	Quarter	Year	Years	Years	Years
Global Real Assets					
Gross	0.37%	8.21%	7.13%	-	-
Net	0.36%	7.94%	6.82%	-	-
Weighted Benchmark	3.64%	8.61%	6.68%	-	-
Real Estate					
Gross	0.00%	6.23%	4.38%	5.76%	-
Net	0.01%	5.78%	3.88%	5.23%	-
NCREIF Total Index	5.23%	12.15%	6.72%	6.84%	8.99%
Invesco Core Real Estate - Gross	0.00%	7.80%	5.35%	6.21%	-
Invesco Core Real Estate - Net	0.00%	7.45%	5.00%	5.87%	-
NCREIF Total Index	5.23%	12.15%	6.72%	6.84%	8.99%
JP Morgan RE Inc & Growth - Gross	0.00%	4.65%	3.43%	5.32%	-
JP Morgan RE Inc & Growth - Net	0.03%	4.11%	2.78%	4.61%	-
NCREIF Total Index	5.23%	12.15%	6.72%	6.84%	8.99%
Diversified					
Gross	0.53%	9.15%	8.38%	5.75%	-
Net	0.52%	8.97%	8.16%	5.52%	-
Weighted Benchmark	2.85%	6.86%	6.65%	4.17%	-
Western Asset TIPS - Gross	1.66%	5.17%	7.58%	4.22%	-
Western Asset TIPS - Net	1.63%	5.06%	7.46%	4.10%	-
Benchmark(3)	1.79%	5.08%	7.83%	4.50%	3.72%
JP Morgan Infrastructure - Gross	1.26%	12.65%	7.85%	8.58%	-
JP Morgan Infrastructure - Net	1.29%	11.83%	7.05%	7.83%	-
Grosvenor Cust. Infrastructure - Net	(0.25%)	25.28%	15.20%	11.46%	-
Benchmark(1)	4.65%	10.02%	4.67%	3.99%	2.50%
Macquarie Infrastructure Fd IV - Net	(4.91%)	15.79%	-	-	-
Macquarie Infrastructure Fd V - Net	(8.12%)	-	-	-	-
ISQ Global Infrastructure II - Net	(0.73%)	19.03%	6.89%	-	-
Benchmark(2)	4.65%	10.02%	4.67%	-	-
Cash & Equivalents - Net	0.01%	0.04%	1.03%	1.03%	0.57%
NT Cash Account - Net	0.01%	0.01%	-	-	-
Bank of ND - Net	0.02%	0.09%	-	-	-
90 Day Treasury Bills	0.01%	0.07%	1.18%	1.16%	0.63%
Total Fund					
Gross	0.17%	17.31%	9.79%	9.44%	6.51%
Net	0.10%	17.04%	9.56%	9.22%	6.31%
Target*	0.14%	16.24%	9.41%	8.68%	5.60%

<sup>(3)</sup> Blmbg Global Inflation-Linked through 10/31/2018 and Blmbg US Govt Inflation Linked Bond Index thereafter.



<sup>\*</sup> Current Quarter Target = 35.0% Blmbg Aggregate, 21.8% Russell 1000 Index, 19.8% MSCI World ex US, 10.0% NDSIB Legacy DRA Weighted Benchmark, 8.0% Russell 2000 Index, 5.0% NCREIF Total Index and 0.3% NDLEG-Private Equity.

<sup>(1)</sup> CPI-W through 6/30/2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.

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

# Domestic Equity Period Ended September 30, 2021

#### **Quarterly Summary and Highlights**

- Domestic Equity's portfolio posted a (0.12)% return for the quarter placing it in the 45 percentile of the Total Domestic Equity Database group for the quarter and in the 54 percentile for the last year.
- Domestic Equity's portfolio outperformed the Domestic Equity Target by 0.89% for the quarter and underperformed the Domestic Equity Target for the year by 1.14%.

#### **Quarterly Asset Growth**

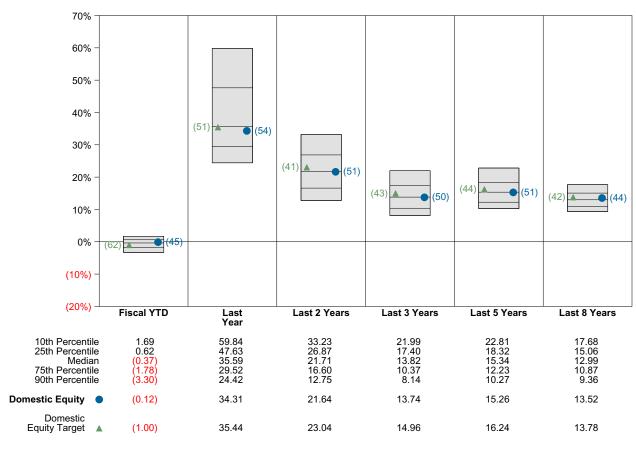
 Beginning Market Value
 \$2,846,529,611

 Net New Investment
 \$-391,037,193

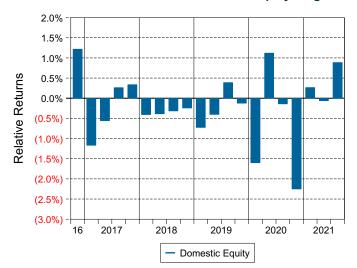
 Investment Gains/(Losses)
 \$-1,290,370

Ending Market Value \$2,454,202,048

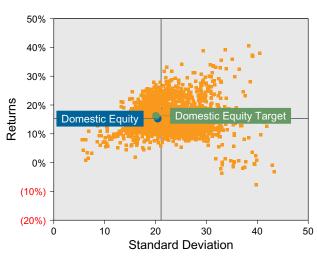
#### Performance vs Total Domestic Equity Database (Gross)



#### **Relative Return vs Domestic Equity Target**



# Total Domestic Equity Database (Gross) Annualized Five Year Risk vs Return





# Parametric Large Cap Period Ended September 30, 2021

#### **Investment Philosophy**

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

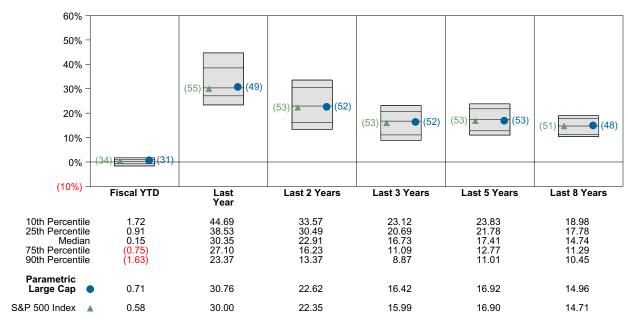
#### **Quarterly Summary and Highlights**

- Parametric Large Cap's portfolio posted a 0.71% return for the quarter placing it in the 31 percentile of the Callan Large Capitalization group for the quarter and in the 49 percentile for the last year.
- Parametric Large Cap's portfolio outperformed the S&P 500 Index by 0.13% for the quarter and outperformed the S&P 500 Index for the year by 0.75%.

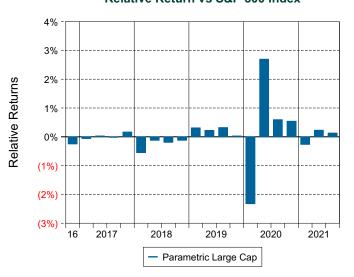
### **Quarterly Asset Growth**

Beginning Market Value	\$422,067,204
Net New Investment	\$-68,547,153
Investment Gains/(Losses)	\$3,461,048
Ending Market Value	\$356 981 099

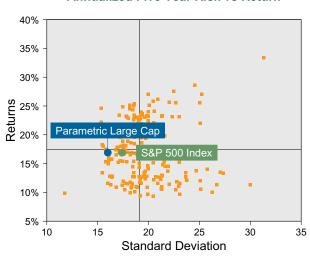
# Performance vs Callan Large Capitalization (Gross)



# Relative Return vs S&P 500 Index



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





#### L.A. Capital Period Ended September 30, 2021

#### **Investment Philosophy**

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

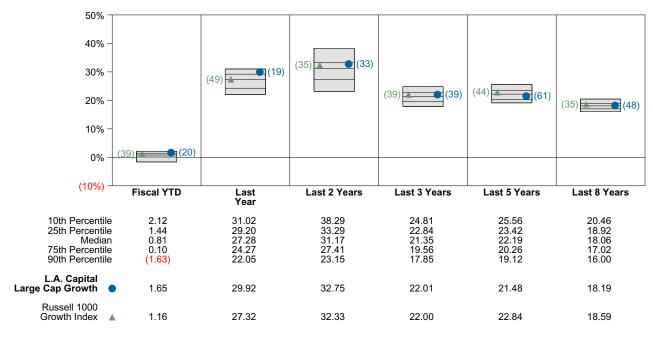
#### **Quarterly Summary and Highlights**

- L.A. Capital Large Cap Growth's portfolio posted a 1.65% return for the quarter placing it in the 20 percentile of the Callan Large Cap Growth group for the quarter and in the 19 percentile for the last year.
- L.A. Capital Large Cap Growth's portfolio outperformed the Russell 1000 Growth Index by 0.50% for the quarter and outperformed the Russell 1000 Growth Index for the year by 2.60%.

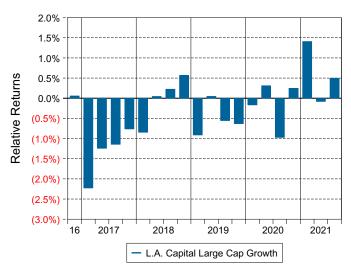
#### **Quarterly Asset Growth**

Beginning Market Value	\$682,996,658
Net New Investment	\$-137,336,833
Investment Gains/(Losses)	\$9,507,903
Ending Market Value	\$555 167 729

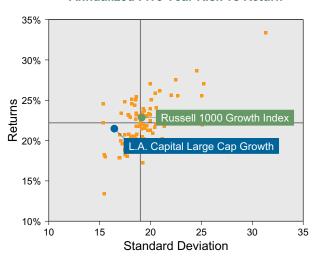
#### Performance vs Callan Large Cap Growth (Gross)



#### Relative Return vs Russell 1000 Growth Index



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





#### L.A. Capital Enhanced Period Ended September 30, 2021

#### **Investment Philosophy**

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

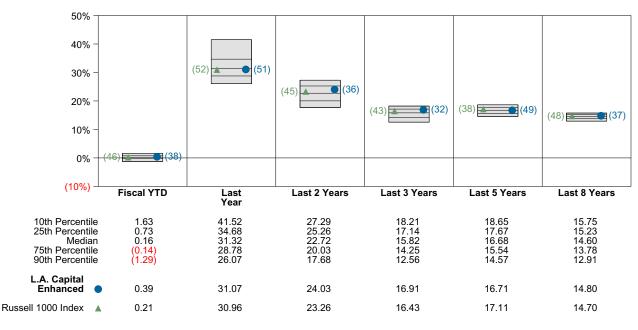
#### **Quarterly Summary and Highlights**

- L.A. Capital Enhanced's portfolio posted a 0.39% return for the quarter placing it in the 38 percentile of the Callan Large Cap Core group for the quarter and in the 51 percentile for the last year.
- L.A. Capital Enhanced's portfolio outperformed the Russell 1000 Index by 0.18% for the quarter and outperformed the Russell 1000 Index for the year by 0.10%.

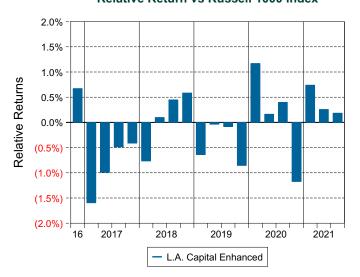
#### **Quarterly Asset Growth**

Beginning Market Value	\$478,830,494
Net New Investment	\$-117,142,418
Investment Gains/(Losses)	\$1,765,795
Ending Market Value	\$363.453.870

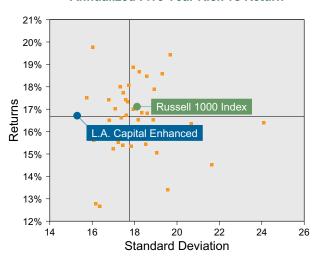
#### Performance vs Callan Large Cap Core (Gross)



#### Relative Return vs Russell 1000 Index



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





#### LSV Asset Management Period Ended September 30, 2021

#### **Investment Philosophy**

The objective of LSV Asset Management's Large Cap Value Equity (U.S.) strategy is to outperform the Russell 1000 Value by at least 200 basis points (gross of fees) per annum over a 3-5 year period with a tracking error of approximately 4%. Their stock selection process is a quantitative approach that ranks a broad universe of stocks on a combination of value and momentum factors and seeks to invest approximately 100 stocks in the most attractive securities possible within strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio is broadly diversified across industry groups and fully invested.

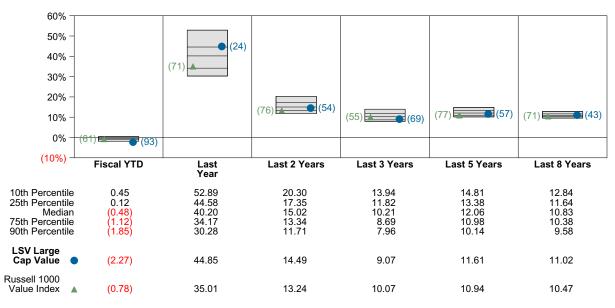
#### **Quarterly Summary and Highlights**

- LSV Large Cap Value's portfolio posted a (2.27)% return for the quarter placing it in the 93 percentile of the Callan Large Cap Value group for the quarter and in the 24 percentile for the last year.
- LSV Large Cap Value's portfolio underperformed the Russell 1000 Value Index by 1.49% for the quarter and outperformed the Russell 1000 Value Index for the year by 9.84%.

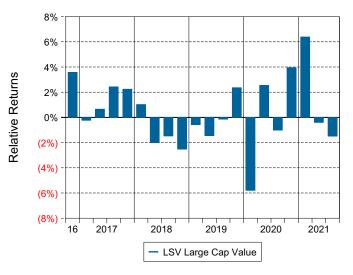
#### **Quarterly Asset Growth**

Beginning Market Value	\$552,519,810
Net New Investment	\$-25,381,820
Investment Gains/(Losses)	\$-12,154,212
Ending Market Value	\$514,983,778

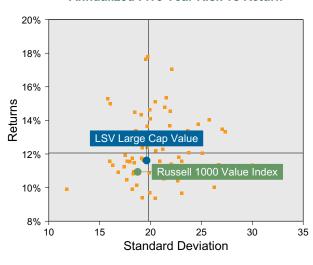
#### Performance vs Callan Large Cap Value (Gross)



#### Relative Return vs Russell 1000 Value Index



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





# Atlanta Capital Period Ended September 30, 2021

#### **Investment Philosophy**

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

#### **Quarterly Summary and Highlights**

- Atlanta Capital's portfolio posted a (1.99)% return for the quarter placing it in the 58 percentile of the Callan Small Capitalization group for the quarter and in the 93 percentile for the last year.
- Atlanta Capital's portfolio outperformed the S&P 600 Small Cap Index by 0.85% for the quarter and underperformed the S&P 600 Small Cap Index for the year by 27.78%.

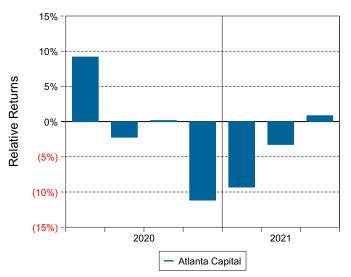
Quarterly	Asset	Growth
-----------	-------	--------

Beginning Market Value	\$225,458,157
Net New Investment	\$-2,835,016
Investment Gains/(Losses)	\$-4,483,508
Ending Market Value	\$218,139,632

#### Performance vs Callan Small Capitalization (Gross)



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



#### Cumulative Returns vs S&P 600 Small Cap Index





#### Riverbridge Small Cap Growth Period Ended September 30, 2021

#### **Investment Philosophy**

Riverbridge believes earnings power determines the value of a franchise. They focus on companies that are building earnings power and intrinsic value of the company over long periods of time. They also look for high-quality growth companies that demonstrate the ability to sustain strong secular earnings growth, regardless of overall economic conditions.

#### **Quarterly Summary and Highlights**

- Riverbridge Small Cap Growth's portfolio posted a 2.26% return for the quarter placing it in the 8 percentile of the Callan Small Cap Growth group for the quarter and in the 47 percentile for the last three-quarter year.
- Riverbridge Small Cap Growth's portfolio outperformed the Russell 2000 Growth Index by 7.91% for the quarter and outperformed the Russell 2000 Growth Index for the three-quarter year by 7.29%.

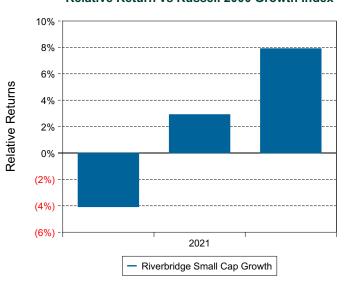
#### **Quarterly Asset Growth**

Beginning Market Value	\$235,266,231
Net New Investment	\$-3,416,905
Investment Gains/(Losses)	\$5,284,401
Ending Market Value	\$237,133,726

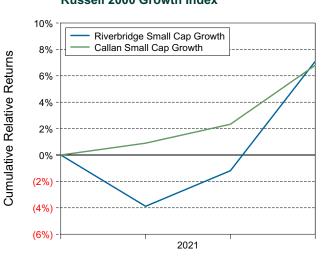
#### Performance vs Callan Small Cap Growth (Gross)



#### Relative Return vs Russell 2000 Growth Index



#### Cumulative Returns vs Russell 2000 Growth Index





#### Sycamore Small Cap Value Period Ended September 30, 2021

#### **Investment Philosophy**

The Small Cap Value strategy employs a bottom-up investment process to build a diversified portfolio of small cap companies that the investment team believes to possess each of the following attributes: better business with above-average financial strength, an exploitable valuation disparity between the current market value and the estimated fair value, and finally, the prospect for improving fundamentals.

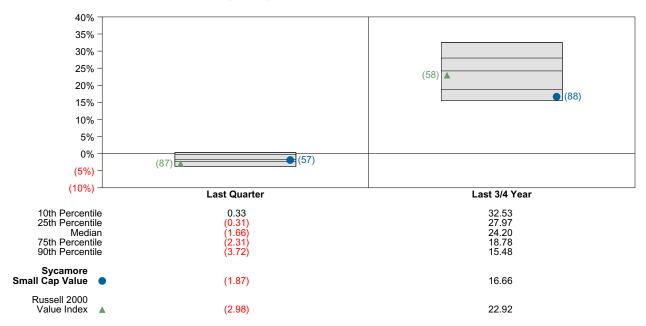
#### **Quarterly Summary and Highlights**

- Sycamore Small Cap Value's portfolio posted a (1.87)% return for the quarter placing it in the 57 percentile of the Callan Small Cap Value group for the quarter and in the 88 percentile for the last three-quarter year.
- Sycamore Small Cap Value's portfolio outperformed the Russell 2000 Value Index by 1.11% for the quarter and underperformed the Russell 2000 Value Index for the three-quarter year by 6.26%.

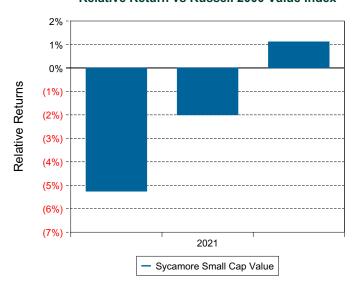
#### **Quarterly Asset Growth**

Beginning Market Value	\$249,391,057
Net New Investment	\$-36,377,047
Investment Gains/(Losses)	\$-4,671,796
Ending Market Value	\$208.342.213

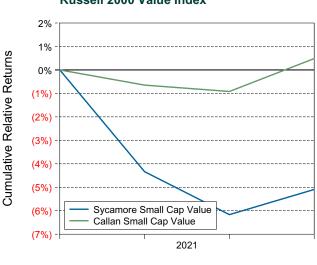
#### Performance vs Callan Small Cap Value (Gross)



#### Relative Return vs Russell 2000 Value Index



#### Cumulative Returns vs Russell 2000 Value Index





# International Equity Period Ended September 30, 2021

#### **Quarterly Summary and Highlights**

- International Equity's portfolio posted a 0.01% return for the quarter placing it in the 25 percentile of the Callan Non-US Equity group for the quarter and in the 44 percentile for the last year.
- International Equity's portfolio outperformed the International Equity Target by 0.67% for the quarter and outperformed the International Equity Target for the year by 0.79%.

#### **Quarterly Asset Growth**

 Beginning Market Value
 \$1,814,729,646

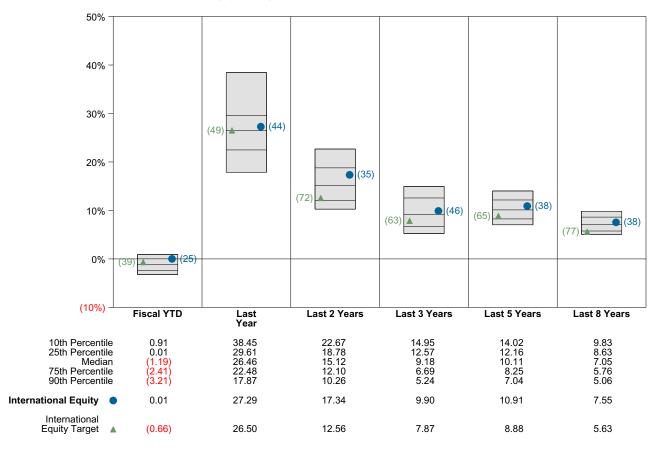
 Net New Investment
 \$-196,275,282

 Investment Gains/(Losses)
 \$2,402,984

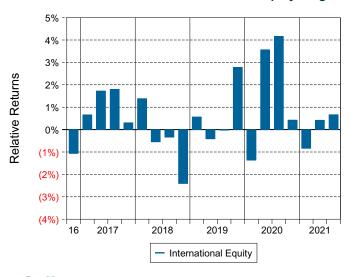
Ending Market Value

\$1,620,857,348

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



#### Relative Return vs International Equity Target



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





#### DFA Intl Small Cap Value Period Ended September 30, 2021

#### **Investment Philosophy**

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

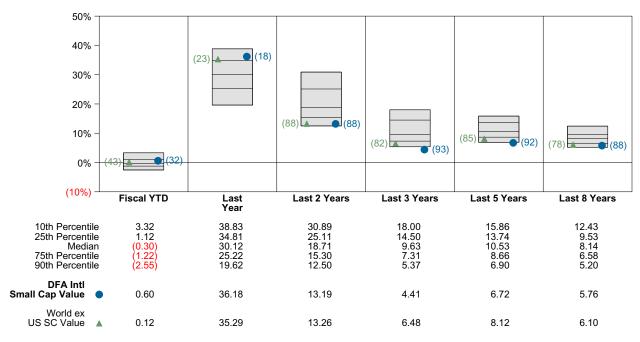
#### **Quarterly Summary and Highlights**

- DFA Intl Small Cap Value's portfolio posted a 0.60% return for the quarter placing it in the 32 percentile of the Callan International Small Cap Mut Funds group for the quarter and in the 18 percentile for the last year.
- DFA Intl Small Cap Value's portfolio outperformed the World ex US SC Value by 0.47% for the quarter and outperformed the World ex US SC Value for the year by 0.89%.

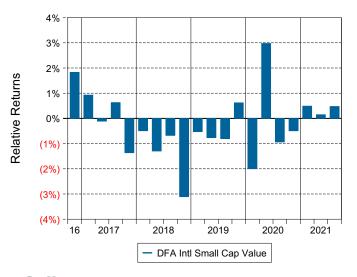
#### **Quarterly Asset Growth**

Beginning Market Value	\$199,018,476
Net New Investment	\$-43,000,000
Investment Gains/(Losses)	\$1,093,467
Ending Market Value	\$157,111,942

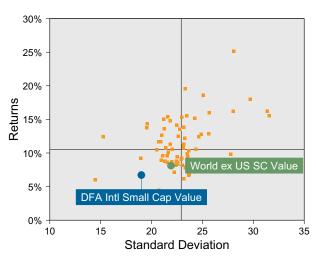
#### Performance vs Callan International Small Cap Mut Funds (Net)



#### Relative Return vs World ex US SC Value



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





#### LSV Intl Value Period Ended September 30, 2021

#### **Investment Philosophy**

The objective of LSV Asset Management's International Large Cap Value strategy is to outperform the MSCI EAFE Index by at least 250 basis points (gross of fees) per annum over an annualized 3-5 year period with a tracking error of approximately 5-6%. Their stock selection process is a quantitative approach that ranks a broad universe of stocks on a combination of value and momentum factors and seeks to invest approximately 150 stocks in the most attractive securities possible within strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio is broadly diversified across industry groups and fully invested. LSV weights countries at a neutral weight relative to the benchmark country weights. 50% of the portfolio is US dollar hedged.

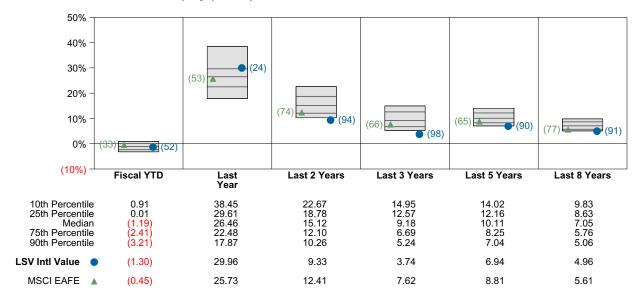
#### **Quarterly Summary and Highlights**

- LSV Intl Value's portfolio posted a (1.30)% return for the quarter placing it in the 52 percentile of the Callan Non-US Equity group for the quarter and in the 24 percentile for the last year.
- LSV Intl Value's portfolio underperformed the MSCI EAFE by 0.85% for the quarter and outperformed the MSCI EAFE for the year by 4.23%.

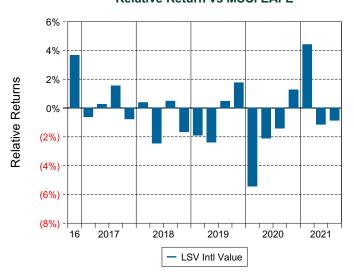
#### **Quarterly Asset Growth**

Beginning Market Value	\$578,954,968
Net New Investment	\$-556,374
Investment Gains/(Losses)	\$-7,505,659
Ending Market Value	\$570,892,935

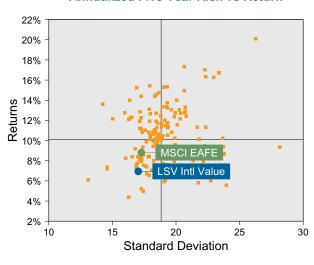
#### Performance vs Callan Non-US Equity (Gross)



#### Relative Return vs MSCI EAFE



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





#### Vanguard Intl Explorer Fund Period Ended September 30, 2021

#### **Investment Philosophy**

Vanguard International Explorer Fund invests primarily in the equity securities of small-capitalization companies located outside the United States that the advisor believes offer the potential for long-term capital appreciation. The advisor considers, among other things, whether a company is likely to have above-average earnings growth, whether the company's securities are attractively valued, and whether the company has any proprietary advantages.

#### **Quarterly Summary and Highlights**

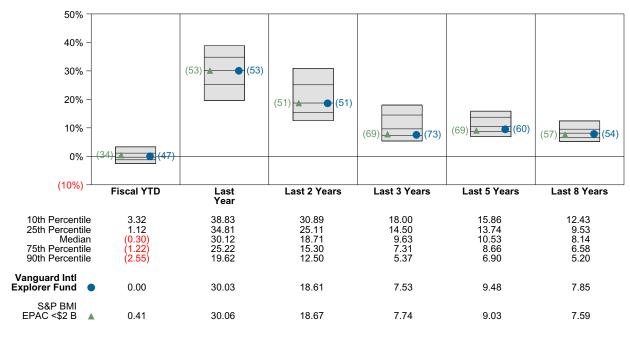
- Vanguard Intl Explorer Fund's portfolio posted a 0.00% return for the quarter placing it in the 47 percentile of the Callan International Small Cap Mut Funds group for the quarter and in the 53 percentile for the last year.
- Vanguard Intl Explorer Fund's portfolio underperformed the S&P BMI EPAC <\$2 B by 0.41% for the quarter and underperformed the S&P BMI EPAC <\$2 B for the year by 0.03%.

#### **Quarterly Asset Growth**

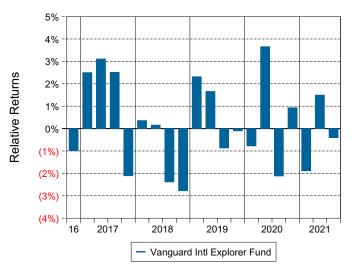
Beginning Market Value	\$198,225,635
Net New Investment	\$-36,000,000
Investment Gains/(Losses)	\$414,343

Ending Market Value \$162,639,978

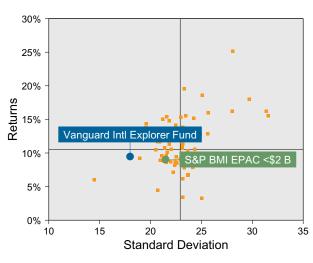
#### Performance vs Callan International Small Cap Mut Funds (Net)



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



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





#### William Blair Period Ended September 30, 2021

#### **Investment Philosophy**

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

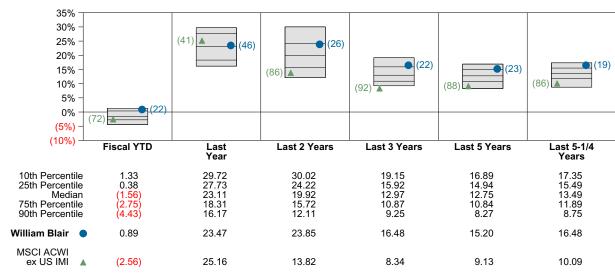
#### **Quarterly Summary and Highlights**

- William Blair's portfolio posted a 0.89% return for the quarter placing it in the 22 percentile of the Callan Non-US All Country Growth Equity group for the quarter and in the 46 percentile for the last year.
- William Blair's portfolio outperformed the MSCI ACWI ex US IMI by 3.45% for the quarter and underperformed the MSCI ACWI ex US IMI for the year by 1.69%.

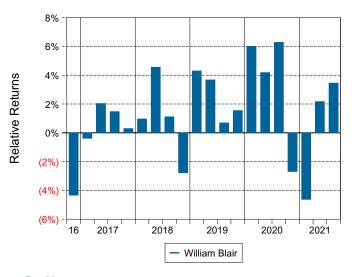
#### **Quarterly Asset Growth**

Beginning Market Value	\$838,530,568
Net New Investment	\$-116,718,908
Investment Gains/(Losses)	\$8,400,833
Ending Market Value	\$730,212,493

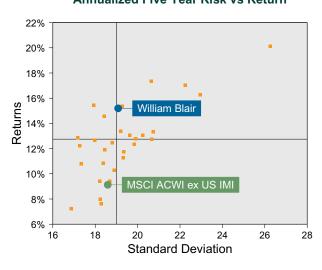
#### Performance vs Callan Non-US All Country Growth Equity (Gross)



#### Relative Return vs MSCI ACWI ex US IMI



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





#### Sixth Street TAO Period Ended September 30, 2021

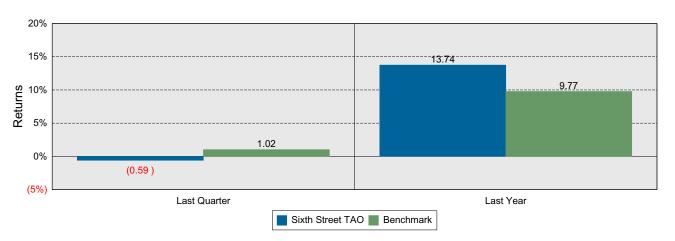
#### **Investment Philosophy**

Sixth Street Partners' TAO strategy is an opportunistics, theme-driven multi-strategy credit mandate that seeks to leverage the firm's entire credit platform by investing in theme-driven liquid and less liquid investments across a broad array of credit-oriented opportunities. The strategy invests in opportunities sourced across the firm that feature attractive risk/reward profiles but do not fit the investment mandates of SSP's Special Situations, Direct Lending and Fundamental Strategies platforms, thereby carrying the moniker "Adjacent Opportunities". These opportunities can be an outgrowth of certain conditions: non-control positions with attractive risk-reward profiles; higher return, low money multiples due to short duration situations; and longer duration opportunities with low macroeconomic correlations. The Benchmark is comprised of 50% S&P/LSTA Leveraged Loan B and 50% Blmbg HY Corp 2% Issue.

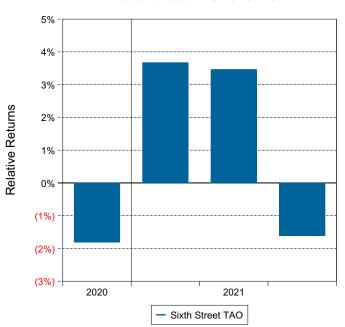
#### **Quarterly Summary and Highlights**

 Sixth Street TAO's portfolio underperformed the Benchmark by 1.61% for the quarter and outperformed the Benchmark for the year by 3.97%.

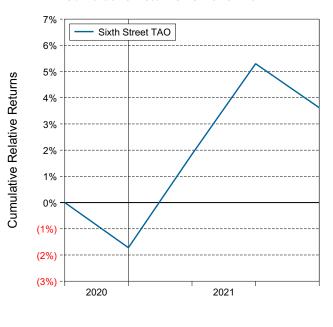
Quarterly Asset Growth		
Beginning Market Value	\$19,603,763	
Net New Investment	\$4,194,631	
Investment Gains/(Losses)	\$-121,476	
Ending Market Value	\$23,676,918	



#### Relative Return vs Benchmark



#### **Cumulative Returns vs Benchmark**





#### **Domestic Fixed Income** Period Ended September 30, 2021

#### **Quarterly Summary and Highlights**

- Domestic Fixed Income's portfolio posted a 0.28% return for the quarter placing it in the 36 percentile of the Total Domestic Fixed-Inc Database group for the quarter and in the 43 percentile for the last year.
- Domestic Fixed Income's portfolio outperformed the Domestic Fixed Income Target by 0.23% for the guarter and outperformed the Domestic Fixed Income Target for the year by 2.98%.

#### **Quarterly Asset Growth**

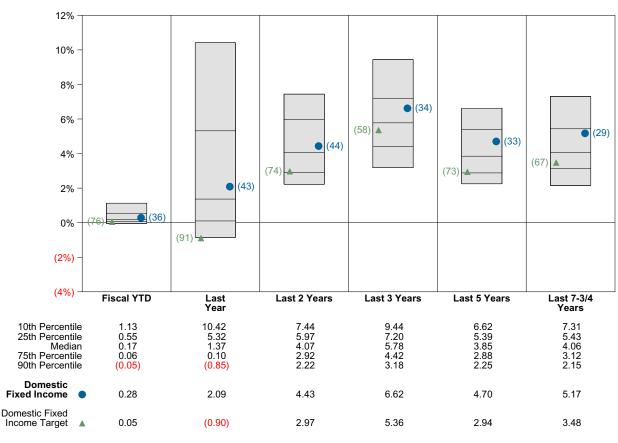
Beginning Market Value \$2,927,871,623 Net New Investment Investment Gains/(Losses)

\$-10,638,520 \$7,952,298

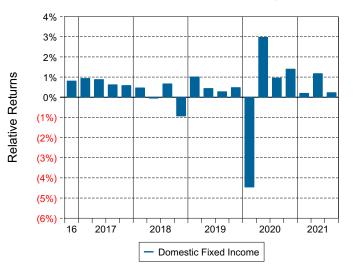
**Ending Market Value** 

\$2,925,185,401

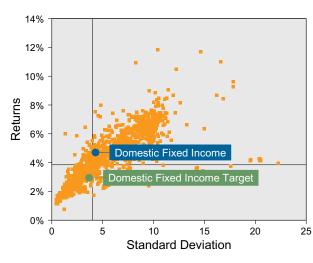
#### Performance vs Total Domestic Fixed-Inc Database (Gross)



#### Relative Returns vs **Domestic Fixed Income Target**



#### **Total Domestic Fixed-Inc Database (Gross)** Annualized Five Year Risk vs Return





#### Ares ND Credit Strategies Fd Period Ended September 30, 2021

#### **Quarterly Summary and Highlights**

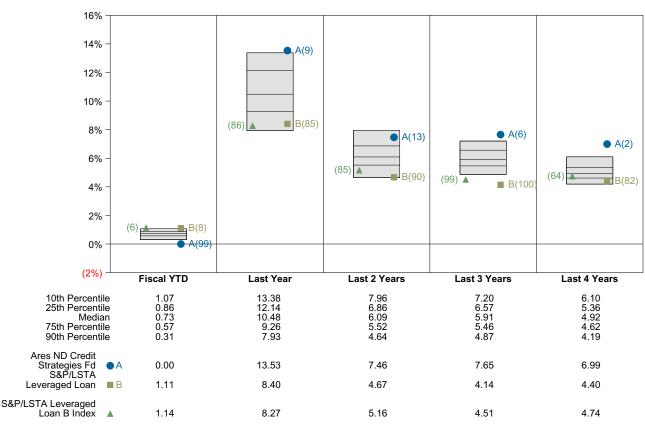
- Ares ND Credit Strategies Fd's portfolio posted a 0.00% return for the quarter placing it in the 99 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 9 percentile for the last year.
- Ares ND Credit Strategies Fd's portfolio underperformed the S&P/LSTA Leveraged Loan B Index by 1.14% for the quarter and outperformed the S&P/LSTA Leveraged Loan B Index for the year by 5.26%.

#### **Quarterly Asset Growth**

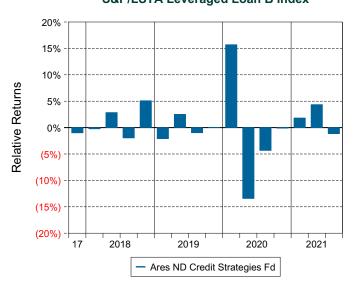
Beginning Market Value\$88,632,036Net New Investment\$8,049,180Investment Gains/(Losses)\$-0

Ending Market Value \$96,681,216

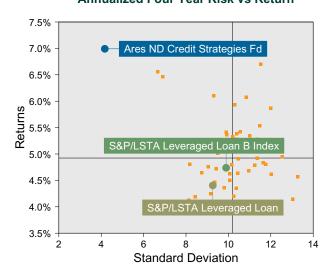
#### Performance vs Callan High Yield Mutual Funds (Net)



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



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





#### Cerberus ND Private Credit Fd Period Ended September 30, 2021

#### **Investment Philosophy**

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

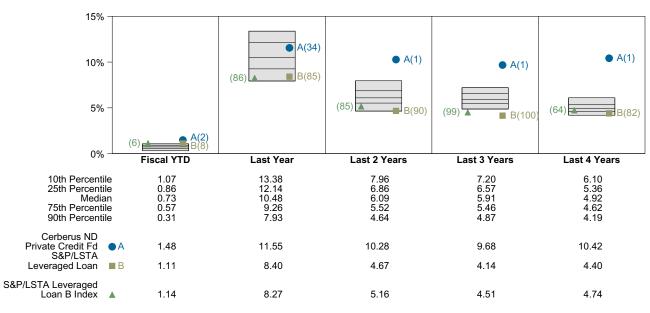
#### **Quarterly Summary and Highlights**

- Cerberus ND Private Credit Fd's portfolio posted a 1.48% return for the quarter placing it in the 2 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 34 percentile for the last year.
- Cerberus ND Private Credit Fd's portfolio outperformed the S&P/LSTA Leveraged Loan B Index by 0.34% for the quarter and outperformed the S&P/LSTA Leveraged Loan B Index for the year by 3.28%.

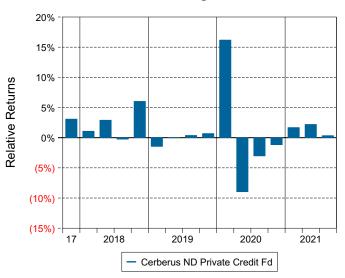
#### **Quarterly Asset Growth**

Beginning Market Value	\$113,301,837
Net New Investment	\$0
Investment Gains/(Losses)	\$1,680,667
Ending Market Value	\$114,982,504

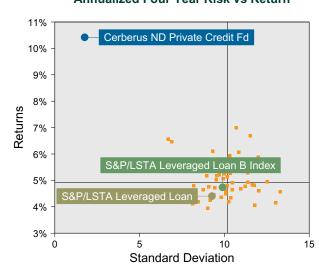
#### Performance vs Callan High Yield Mutual Funds (Net)



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



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





# Declaration Total Return Period Ended September 30, 2021

#### **Investment Philosophy**

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

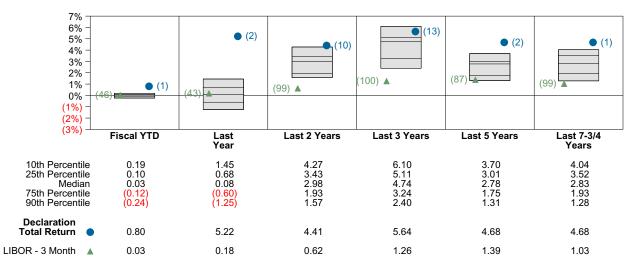
#### **Quarterly Summary and Highlights**

- Declaration Total Return's portfolio posted a 0.80% return for the quarter placing it in the 1 percentile of the Callan Intermediate Fixed Inc Mut Funds group for the quarter and in the 2 percentile for the last year.
- Declaration Total Return's portfolio outperformed the LIBOR
   3 Month by 0.77% for the quarter and outperformed the LIBOR - 3 Month for the year by 5.04%.

#### **Quarterly Asset Growth**

Beginning Market Value	\$229,269,048
Net New Investment	\$-148,595
Investment Gains/(Losses)	\$1,843,103
Ending Market Value	\$230.963.556

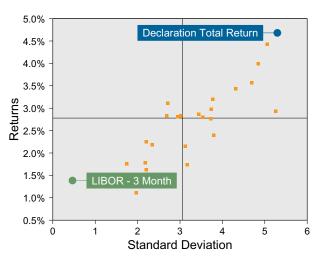
#### Performance vs Callan Intermediate Fixed Inc Mut Funds (Net)



#### Relative Return vs LIBOR - 3 Month



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





#### PIMCO Bravo II Period Ended September 30, 2021

#### **Investment Philosophy**

The BRAVO II Fund is a private equity style fund targeting an annualized IRR of 15-20% and multiple of 1.8-2x, net of fees and carried interest with an initial 5-year term. The fund will seek to capitalize on non-economic asset sale decisions by global financial institutions. The fund will have the flexibility to acquire attractively discounted, less liquid loans, structured credit and other assets tied to residential or commercial real estate markets in the U.S. and Europe. **Prior to July 1**, 2019, the Legacy Fund participated in these portfolios via the Insurance Pool. Beginning July 1, 2019, its portion of the pool was segregated into its own portfolios. Returns prior to that date reflect the data from the Insurance pool.

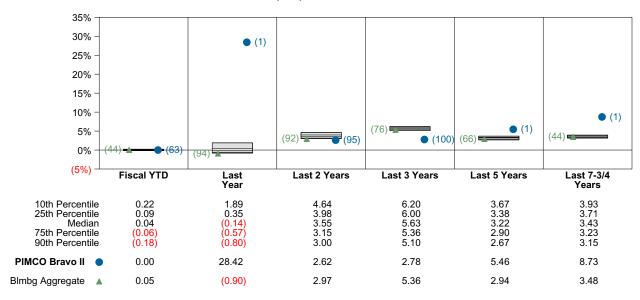
#### **Quarterly Summary and Highlights**

- PIMCO Bravo II's portfolio posted a 0.00% return for the quarter placing it in the 63 percentile of the Callan Core Bond Mutual Funds group for the quarter and in the 1 percentile for the last year.
- PIMCO Bravo II's portfolio underperformed the Blmbg Aggregate by 0.05% for the quarter and outperformed the Blmbg Aggregate for the year by 29.31%.

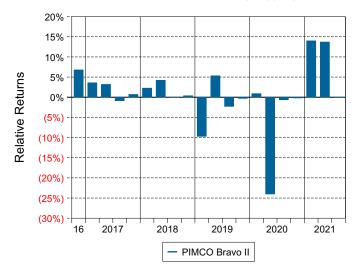
#### **Quarterly Asset Growth**

Beginning Market Value	\$7,836,422
Net New Investment	\$-1,654,759
Investment Gains/(Losses)	\$-1
Ending Market Value	\$6,181,662

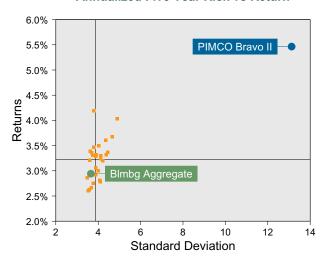
#### Performance vs Callan Core Bond Mutual Funds (Net)



#### Relative Return vs Blmbg Aggregate



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





#### PIMCO DISCO II Period Ended September 30, 2021

#### **Investment Philosophy**

The PIMCO Distressed Senior Credit Opportunities Fund is an opportunistic private-equity style Fund which seeks to provide investors enhanced returns principally through long-biased investments in undervalued senior and super senior structured credit securities that are expected to produce attractive levels of current income and that may also appreciate in value over the long term. The fund will look to capitalize on forced sales by liquidity constrained investors. **Prior to July 1**, 2019, the Legacy Fund participated in these portfolios via the Insurance Pool. Beginning July 1, 2019, its portion of the pool was segregated into its own portfolios. Returns prior to that date reflect the data from the Insurance pool.

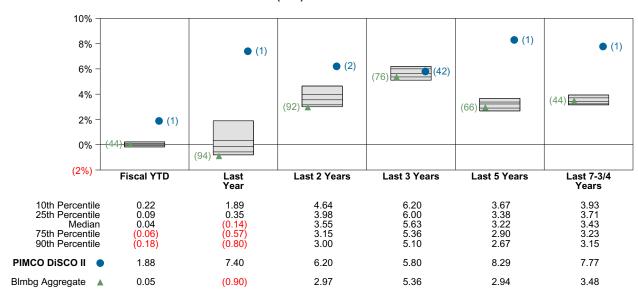
#### **Quarterly Summary and Highlights**

- PIMCO DiSCO II's portfolio posted a 1.88% return for the quarter placing it in the 1 percentile of the Callan Core Bond Mutual Funds group for the quarter and in the 1 percentile for the last year.
- PIMCO DiSCO II's portfolio outperformed the Blmbg Aggregate by 1.83% for the quarter and outperformed the Blmbg Aggregate for the year by 8.29%.

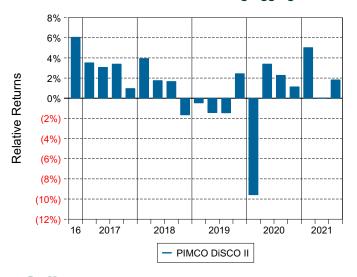
#### **Quarterly Asset Growth**

Beginning Market Value	\$53,588,076
Net New Investment	\$0
Investment Gains/(Losses)	\$1,007,826
Ending Market Value	\$54,595,902

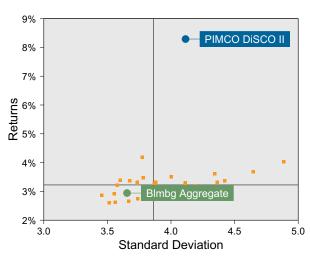
#### Performance vs Callan Core Bond Mutual Funds (Net)



#### Relative Return vs Blmbg Aggregate



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





#### **Prudential**

#### Period Ended September 30, 2021

#### **Investment Philosophy**

PGIM Fixed Income's Core Plus Strategy is an actively-managed strategy that seeks +150 bps over the Bloomberg Barclays U.S. Aggregate Bond Index or similar benchmark annualized over a market cycle (three to five years.) The Strategy seeks about half of its excess return from active sector allocation and up to one-third each from subsector/security selection and duration/yield curve/currencies, depending on market opportunities.

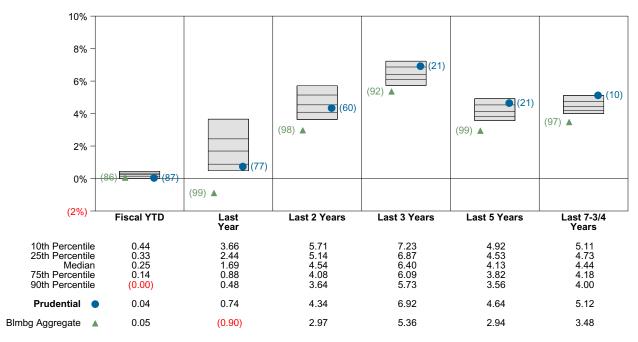
#### **Quarterly Summary and Highlights**

- Prudential's portfolio posted a 0.04% return for the quarter placing it in the 87 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 77 percentile for the last year.
- Prudential's portfolio underperformed the Blmbg Aggregate by 0.02% for the quarter and outperformed the Blmbg Aggregate for the year by 1.63%.

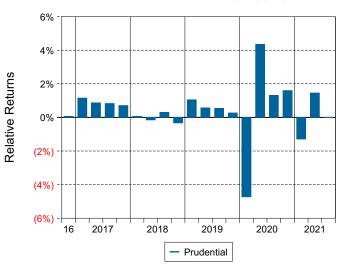
#### **Quarterly Asset Growth**

Beginning Market Value	\$876,242,283
Net New Investment	\$-5,957,354
Investment Gains/(Losses)	\$155,851
Ending Market Value	\$870 440 779

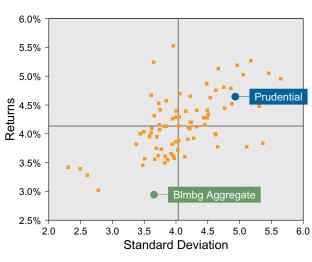
#### Performance vs Callan Core Plus Fixed Income (Gross)



#### Relative Return vs Blmbg Aggregate



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





#### SSgA US Govt Credit Bd Idx Period Ended September 30, 2021

#### **Investment Philosophy**

The Fund seeks an investment return that approximates as closely as practicable, before expenses, the performance of the Bloomberg Capital U.S. Government/Credit Bond Index over the long term.

#### **Quarterly Summary and Highlights**

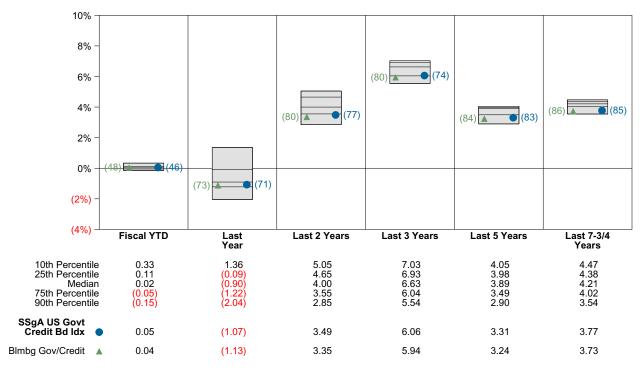
- SSgA US Govt Credit Bd Idx's portfolio posted a 0.05% return for the quarter placing it in the 46 percentile of the Callan Government/Credit group for the quarter and in the 71 percentile for the last year.
- SSgA US Govt Credit Bd Idx's portfolio outperformed the Blmbg Gov/Credit by 0.01% for the quarter and outperformed the Blmbg Gov/Credit for the year by 0.05%.

#### **Quarterly Asset Growth**

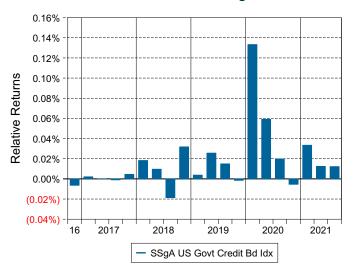
Beginning Market Value	\$408,268,324
Net New Investment	\$-4,015,032
Investment Gains/(Losses)	\$202,406

Ending Market Value \$404,455,698

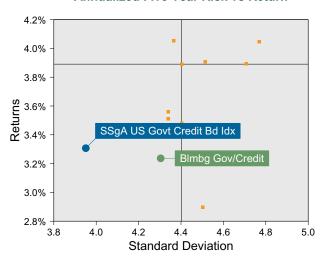
#### Performance vs Callan Government/Credit (Gross)



#### Relative Return vs Blmbg Gov/Credit



# Callan Government/Credit (Gross) Annualized Five Year Risk vs Return





#### Wells Capital Period Ended September 30, 2021

#### **Investment Philosophy**

The Medium Quality Credit fixed income strategy is designed to maximize total return from the high-grade corporate bond market while maintaining a strategic allocation to the BBB portion of the high yield market. The investment process for this fund starts with a "top-down" strategy. Security selection is determined by in-depth credit research, holding that in-depth knowledge of industries, companies, and their management teams can help identify credit trends that can lead to investment opportunities. Furthermore, a disciplined relative value framework is applied to help determine the optimal position to invest within an industry and within an individual issuer's capital structure.

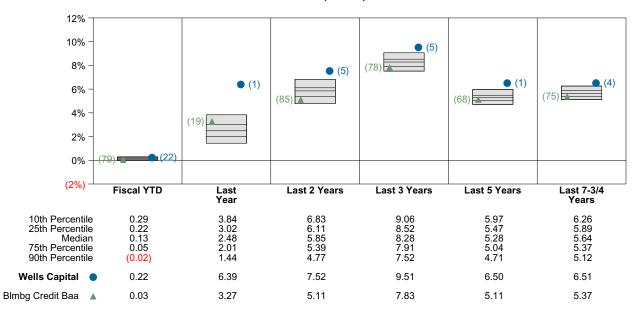
#### **Quarterly Summary and Highlights**

- Wells Capital's portfolio posted a 0.22% return for the quarter placing it in the 22 percentile of the Callan Investment Grade Credit Fixed Inc group for the quarter and in the 1 percentile for the last year.
- Wells Capital's portfolio outperformed the Blmbg Credit Baa by 0.19% for the quarter and outperformed the Blmbg Credit Baa for the year by 3.12%.

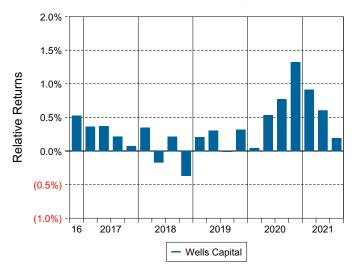
#### **Quarterly Asset Growth**

Beginning Market Value	\$235,453,723
Net New Investment	\$-7,112,661
Investment Gains/(Losses)	\$563,344
Ending Market Value	\$228,904,407

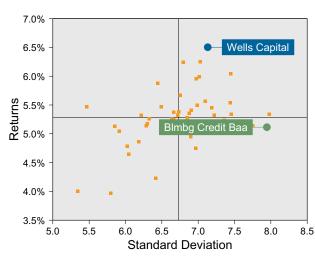
#### Performance vs Callan Investment Grade Credit Fixed Inc (Gross)



#### Relative Return vs Blmbg Credit Baa



# Callan Investment Grade Credit Fixed Inc (Gross) Annualized Five Year Risk vs Return





#### Western Asset Management Company Period Ended September 30, 2021

#### **Investment Philosophy**

Western Asset designs this portfolio using all major fixed-income sectors with a bias towards non-Treasuries, especially corporate, mortgage-backed and asset-backed securities. Value can be added through sector rotation, issue selection, duration and term structure weighting.

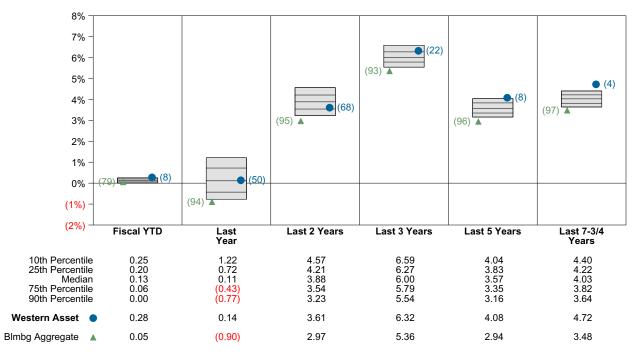
#### **Quarterly Summary and Highlights**

- Western Asset's portfolio posted a 0.28% return for the quarter placing it in the 8 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 50 percentile for the last year.
- Western Asset's portfolio outperformed the Blmbg Aggregate by 0.22% for the quarter and outperformed the Blmbg Aggregate for the year by 1.03%.

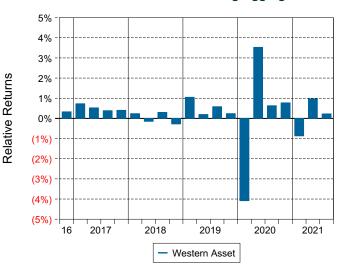
#### **Quarterly Asset Growth**

Beginning Market Value	\$872,120,311
Net New Investment	\$-2,235,653
Investment Gains/(Losses)	\$2,204,336
Ending Market Value	\$872 088 994

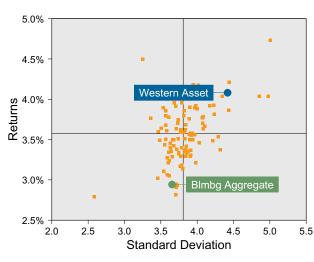
#### Performance vs Callan Core Bond Fixed Income (Gross)



#### Relative Return vs Blmbg Aggregate



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





#### Invesco Core Real Estate Period Ended September 30, 2021

#### **Investment Philosophy**

IRE's investment philosophy is comprised of two fundamental principles: (1) maximize the predictability and consistency of investment returns and (2) minimize the risk of capital loss. This philosophy forms the cornerstone of the company's real estate investment philosophy.

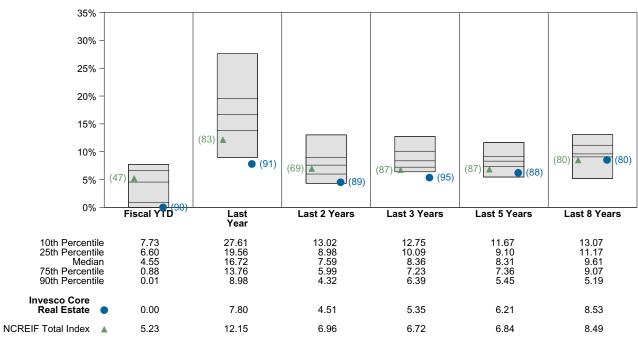
#### **Quarterly Summary and Highlights**

- Invesco Core Real Estate's portfolio posted a 0.00% return for the quarter placing it in the 90 percentile of the Callan Total Domestic Real Estate DB group for the quarter and in the 91 percentile for the last year.
- Invesco Core Real Estate's portfolio underperformed the NCREIF Total Index by 5.23% for the quarter and underperformed the NCREIF Total Index for the year by 4.35%.

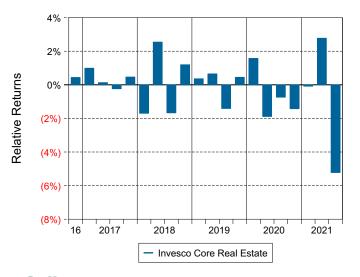
#### **Quarterly Asset Growth**

Beginning Market Value	\$185,546,347
Net New Investment	\$0
Investment Gains/(Losses)	\$335
Ending Market Value	\$185,546,682

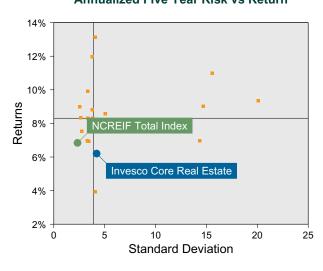
#### Performance vs Callan Total Domestic Real Estate DB (Gross)



#### **Relative Return vs NCREIF Total Index**



# Callan Total Domestic Real Estate DB (Gross) Annualized Five Year Risk vs Return





# JP Morgan RE Inc & Growth Period Ended September 30, 2021

#### **Investment Philosophy**

The J.P. Morgan U.S. Real Estate Income and Growth Fund seeks to construct and opportunistically manage a portfolio of core direct real estate investments, complemented by other real estate and real estate-related assets. The Fund pursues a broadly diversified absolute-return strategy and pursues all property investments on an opportunistic basis. The majority of the Fund's investments will be in direct core properties in the office, industrial, retail and residential sectors.

#### **Quarterly Summary and Highlights**

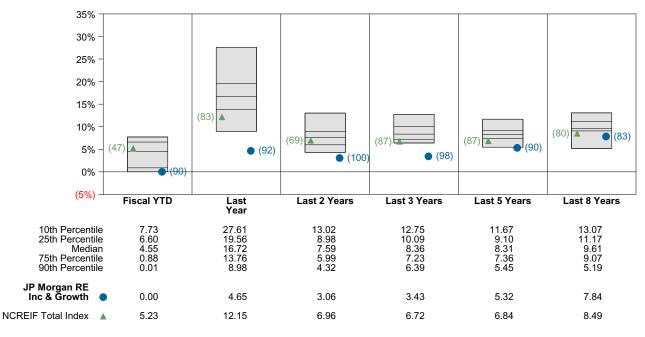
- JP Morgan RE Inc & Growth's portfolio posted a 0.00% return for the quarter placing it in the 90 percentile of the Callan Total Domestic Real Estate DB group for the quarter and in the 92 percentile for the last year.
- JP Morgan RE Inc & Growth's portfolio underperformed the NCREIF Total Index by 5.23% for the quarter and underperformed the NCREIF Total Index for the year by 7.50%.

#### **Quarterly Asset Growth**

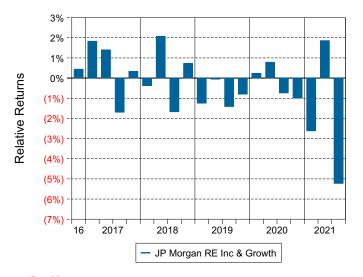
Beginning Market Value	\$178,977,829
Net New Investment	\$0
Investment Gains/(Losses)	\$0

Ending Market Value \$178,977,829

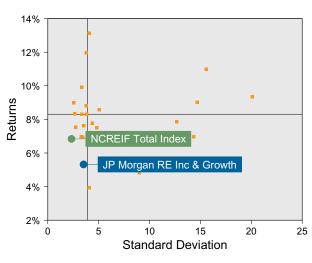
#### Performance vs Callan Total Domestic Real Estate DB (Gross)



#### **Relative Return vs NCREIF Total Index**



# Callan Total Domestic Real Estate DB (Gross) Annualized Five Year Risk vs Return





#### **Western Asset TIPS** Period Ended September 30, 2021

#### **Investment Philosophy**

The Western Asset US TIPS Full Discretion strategy is an inflation-protected strategy that aims to maximize total return and add value through duration and curve positioning, sector allocation, and security selection, while approximating benchmark risk. The strategy invests in a diversified portfolio using higher-yielding inflation-protected instruments with a bias toward Treasury Inflation-Protected Securities (TIPS). Opportunistic investments include high-yield, emerging markets, non-dollar securities, commodities and bank loans that may also be employed using derivatives. Benchmark: Bloomberg US TIPS through 12/31/2009; Bloomberg Global Inflation-Linked through 10/31/2018; Bloomberg US Govt Inflation Linked Bond Index thereafter.

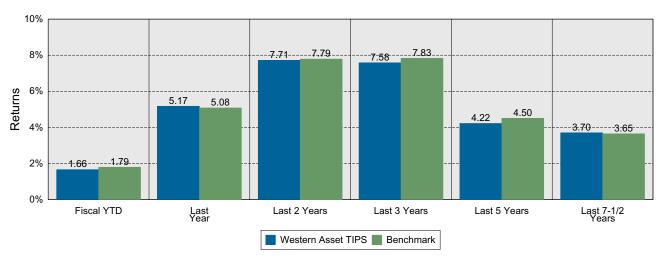
**Ending Market Value** 

#### **Quarterly Summary and Highlights**

 Western Asset TIPS's portfolio underperformed Benchmark by 0.13% for the quarter and outperformed the Benchmark for the year by 0.09%.

Quarterly Asset Growth		
Beginning Market Value	\$507,054,071	
Net New Investment	\$-136,694	
Investment Gains/(Losses)	\$8,419,721	

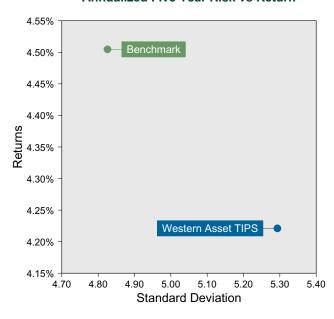
\$515,337,098



#### Relative Return vs Benchmark



#### Annualized Five Year Risk vs Return





#### ISQ Global Infrastructure II Period Ended September 30, 2021

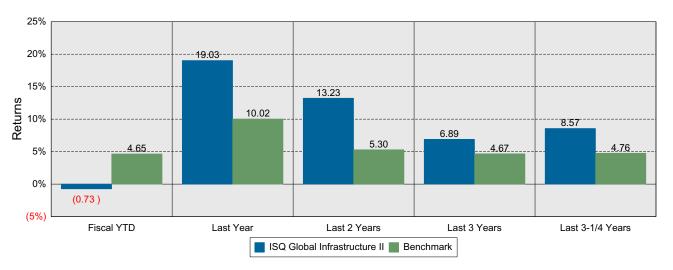
#### **Investment Philosophy**

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

#### **Quarterly Summary and Highlights**

 ISQ Global Infrastructure II's portfolio underperformed the Benchmark by 5.38% for the quarter and outperformed the Benchmark for the year by 9.01%.

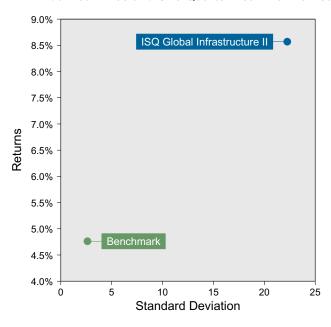
Quarterly Asset Growth		
Beginning Market Value	\$62,629,063	
Net New Investment	\$3,228,058	
Investment Gains/(Losses)	\$-463,936	
Ending Market Value	\$65,393,185	



#### Relative Return vs Benchmark

### 

#### Annualized Three and One-Quarter Year Risk vs Return





#### JP Morgan Infrastructure Period Ended September 30, 2021

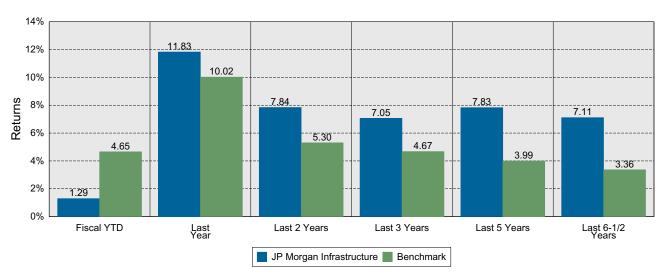
#### **Investment Philosophy**

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

#### **Quarterly Summary and Highlights**

 JP Morgan Infrastructure's portfolio underperformed the Benchmark by 3.36% for the quarter and outperformed the Benchmark for the year by 1.81%.

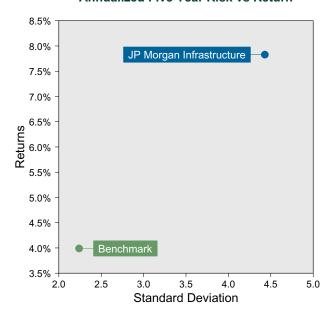
Quarterly Asset Gro	owth
Beginning Market Value	\$111,028,424
Net New Investment	\$-4,406,831
Investment Gains/(Losses)	\$1,431,540
Ending Market Value	\$108,053,133



#### Relative Return vs Benchmark



#### **Annualized Five Year Risk vs Return**





#### Grosvenor Cust. Infrastructure Period Ended September 30, 2021

#### **Investment Philosophy**

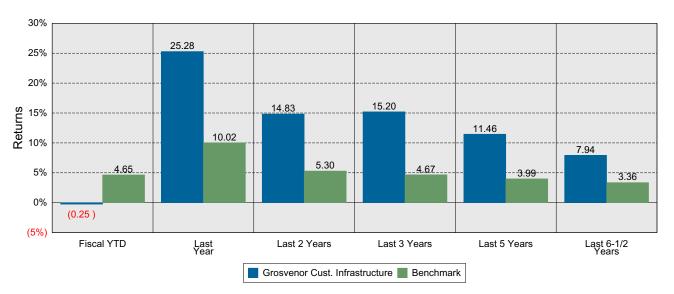
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified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

#### **Quarterly Summary and Highlights**

 Grosvenor Cust. Infrastructure's portfolio underperformed the Benchmark by 4.89% for the quarter and outperformed the Benchmark for the year by 15.26%.

#### **Quarterly Asset Growth**

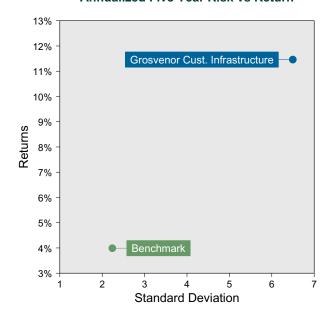
Beginning Market Value	\$60,608,900
Net New Investment	\$-24,439
Investment Gains/(Losses)	\$-149,359
Ending Market Value	\$60.435.102



#### Relative Return vs Benchmark

#### 10% 8% 6% Relative Returns 4% 2% 0% (2%) (4%)(6%)16 2017 2018 2019 2020 2021 Grosvenor Cust. Infrastructure

#### Annualized Five Year Risk vs Return





# Macquarie Infrastructure Fund IV Period Ended September 30, 2021

#### **Investment Philosophy**

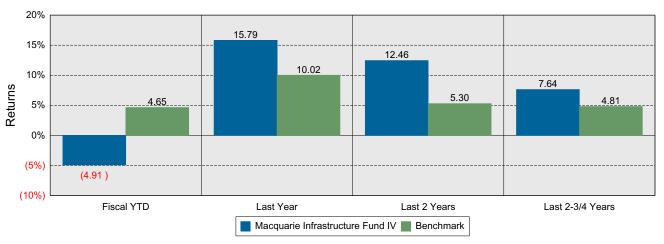
Macquarie's principal investment philosophy is to invest in infrastructure assets that exhibit monopolistic and/or contractual revenue drivers, limited substitution risk and high barriers to entry. The manager has continued to focus on investments where the team's sector expertise and operating experience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

#### **Quarterly Summary and Highlights**

 Macquarie Infrastructure Fund IV's portfolio underperformed the Benchmark by 9.56% for the quarter and outperformed the Benchmark for the year by 5.77%.

Quarterly	/ Asset	Growth

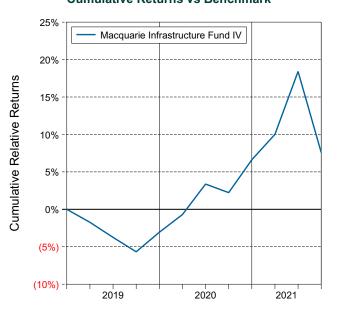
Beginning Market Value	\$77,014,448
Net New Investment	\$-39,329
Investment Gains/(Losses)	\$-3,778,749
Ending Market Value	\$73,196,370



#### Relative Return vs Benchmark

# 

#### Cumulative Returns vs Benchmark





#### Macquarie Infrastructure Fund V Period Ended September 30, 2021

#### **Investment Philosophy**

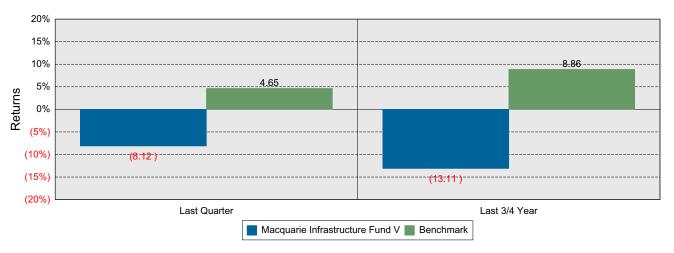
Macquarie's principal investment philosophy is to invest in infrastructure assets that exhibit monopolistic and/or contractual revenue drivers, limited substitution risk and high barriers to entry. The manager has continued to focus on investments where the team's sector expertise and operating experience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

#### **Quarterly Summary and Highlights**

 Macquarie Infrastructure Fund V's portfolio underperformed the Benchmark by 12.77% for the quarter and underperformed the Benchmark for the three-quarter year by 21.97%.

#### **Quarterly Asset Growth**

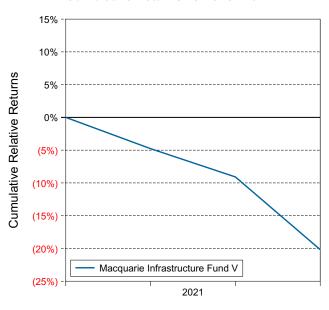
Beginning Market Value	\$11,040,618
Net New Investment	\$14,843,912
Investment Gains/(Losses)	\$-1,095,817
Ending Market Value	\$24,788,713



#### Relative Return vs Benchmark

# 10% - 5% - 65%) - 65%) - 620%) - 620%) - 620%) - 6201 - 62

#### **Cumulative Returns vs Benchmark**







3rd Quarter 2021

#### **Quarterly Highlights**

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

#### **New Research from Callan's Experts**

Comparing Actuarial vs. Consultant Rates of Return | In this paper, Callan's Brady O'Connell and John Pirone review the differences between actuarial discount rates and consultant return forecasts. They remind fiduciaries of the importance of these two assumptions, why the numbers vary in practice and use, and why setting asset-allocation strategy is not simply an act of making the consultant return expectation match the actuarial discount rate.

#### The Role of Real Estate and Infrastructure Debt in a Portfolio

As capital markets assumptions have declined, institutional investors are increasingly interested in real estate and infrastructure debt as they pursue return-seeking assets. In this article, Jan Mende and Munir Iman discuss key aspects of these options.

Now What? The Role of Target Date Funds in Retirement | Much of the attention on the rise of TDFs focused on their role during the "accumulation" phase, as participants build up assets during their career. Now that sponsors have successfully incorporated TDFs into their DC plans to help participants build up assets, the time is right to focus on the potential role of TDFs during retirement by examining the makeup and income-generating possibilities of the post-retirement glidepath.

#### **Blog Highlights**

GPs Take 'Credit' for Higher IRRs | Subscription credit facilities are used to finance activities that would otherwise be funded by capital calls from the limited partners in a private markets fund. These "sub lines" give the general partner the flexibility to call capital less frequently by combining multiple cash flows into a single capital call, and they also can delay initial capital calls until a large capital outlay is required. But investors should note that this increases the internal rate of return (IRR) as it shortens the effective investment period.

<u>Seeking Yield in All the Right Places</u> | One potential solution to help insurance investors meet their return goals without disproportionately adding risk is investment-grade private placements. This strategy presents opportunities to increase portfolio yields with higher spreads compared to other types of fixed income for similar levels of required capital.

PCE and CPI: What's the Difference? | The CPI is released by the Bureau of Labor Statistics and the PCE by the Bureau of Economic Analysis. While both measure inflation based on a basket of goods, they have subtle differences, including the sources of data, what they cover, and the formulas they use.

#### **Quarterly Periodicals**

<u>Private Equity Trends, 2Q21</u> | A high-level summary of private equity activity in the quarter through all the investment stages

<u>Active vs. Passive Charts, 2Q21</u> | A comparison of active managers alongside relevant benchmarks over the long term

Market Pulse Flipbook, 2Q21 | A quarterly market reference guide covering trends in the U.S. economy, developments for institutional investors, and the latest data on the capital markets

<u>Capital Markets Review, 2Q21</u> | Analysis and a broad overview of the economy and public and private market activity each quarter across a wide range of asset classes

<u>Hedge Fund Quarterly, 2Q21</u> | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

Real Assets Reporter, 2Q21 | A summary of market activity for real assets and private real estate during the quarter

#### **Events**

A complete list of all upcoming events can be found on our website: callan.com/events-education.

Please mark your calendar and look forward to upcoming invitations:

Research Café: DOL Cybersecurity Tips November 10, 2021 – 9:30 am (PST)

#### **National Conference**

April 25-27, 2022, in San Francisco

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

#### **Education: By the Numbers**

Unique pieces of research the Institute generates each year

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

**3,700** Total attendees of the "Callan College" since 1994

#### **Education**

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

# Introduction to Investments December 1-2, 2021 - Chicago

This program familiarizes institutional investor trustees and staff and asset management advisers with basic investment theory, terminology, and practices. Our virtual session is held over three days with virtual modules of 2.5-3 hours, while the in-person session lasts one-and-a-half days. This course is designed for individuals with less than two years of experience with asset-management oversight and/or support responsibilities. Virtual tuition is \$950 per person and includes instruction and digital materials. In-person tuition is \$2,350 per person and includes instruction, all materials, breakfast and lunch on each day, and dinner on the first evening with the instructors.

Additional information including registration can be found at: callan.com/events-education

# Introductory Workshop for DC Plan Fiduciaries March 23, 2022 - San Francisco

This one-day workshop centers on the fundamentals of administering a defined contribution (DC) plan. Designed primarily for ERISA fiduciaries and supporting staff members, attendees will gain a better understanding of the key responsibilities of an ERISA fiduciary and best practices for executing those responsibilities. Additionally, we will cover the basics of capital markets theory and DC investment menu design principles; investment manager evaluation, selection, and monitoring; best practices for evaluating fees; the regulatory and legal landscape; and industry trends. This workshop is complimentary and open to institutional investor clients.

Additional information including dates and registration can be found at: callan.com/events/mar-dc-college/



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

Greg Allen, CEO and Chief Research Officer

## Callan

Quarterly List as of September 30, 2021

#### **List of Callan's Investment Manager Clients**

Confidential - For Callan Client Use Only

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

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

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

Manager Name
abrdn (Aberdeen Standard Investments)
Acadian Asset Management LLC
Adams Street Partners, LLC
AEGON USA Investment Management Inc.
AllianceBernstein
Allianz
American Century Investments
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Aristotle Capital Management, LLC
Atlanta Capital Management Co., LLC
Aviva Investors
AXA Investment Managers
Baillie Gifford International, LLC
Baird Advisors
Barings LLC
Baron Capital Management, Inc.

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

**Manager Name** 

Credit Suisse Asset Management

Crescent Capital Group LP

Crosscreek Capital Group

D.E. Shaw Investment Management, LLC

DePrince, Race & Zollo, Inc.

Dimensional Fund Advisors LP

Doubleline

Duff & Phelps Investment Management Co.

**DWS** 

EARNEST Partners, LLC

Eaton Vance Management

Epoch Investment Partners, Inc.

Fayez Sarofim & Company

Federated Hermes, Inc.

Fidelity Institutional Asset Management

Fiera Capital Corporation

First Hawaiian Bank Wealth Management Division

First Sentier Investors (formerly First State Investments)

Fisher Investments

Franklin Templeton

GAM (USA) Inc.

GCM Grosvenor

GlobeFlex Capital, L.P.

GoldenTree Asset Management, LP

Goldman Sachs

Guggenheim Investments

**GW&K Investment Management** 

Harbor Capital Group Trust

Heitman LLC

Hotchkis & Wiley Capital Management, LLC

Income Research + Management, Inc.

Insight Investment

Intech Investment Management, LLC

Intercontinental Real Estate Corporation

Invesco

J.P. Morgan

Janus

Jennison Associates LLC

Jobs Peak Advisors

J O Hambro Capital Management Limited

**Manager Name** 

KeyCorp

Lazard Asset Management

LGIM America (formerly Legal & General Inv Mgmt America)

Lincoln National Corporation

Longview Partners

Loomis, Sayles & Company, L.P.

Lord Abbett & Company

LSV Asset Management

MacKay Shields LLC

Macquarie Investment Management (MIM)

Manning & Napier Advisors, LLC

Manulife Investment Management

McKinley Capital Management, LLC

Mellon

MetLife Investment Management

MFS Investment Management

MidFirst Bank

Mondrian Investment Partners Limited

Montag & Caldwell, LLC

Morgan Stanley Investment Management

MUFG Union Bank, N.A.

Natixis Investment Managers

Neuberger Berman

**Newton Investment Management** 

Ninety One North America, Inc. (formerly Investec Asset Mgmt.)

Northern Trust Asset Management

Nuveen

Pacific Investment Management Company

Parametric Portfolio Associates LLC

Partners Group (USA) Inc.

Pathway Capital Management

P/E Investments

Peregrine Capital Management, LLC

PFM Asset Management LLC

PGIM Fixed Income

PineBridge Investments

Polen Capital Management, LLC

Principal Global Investors

Putnam Investments, LLC

QMA LLC



**Manager Name** 

**RBC Global Asset Management** 

Regions Financial Corporation

Richard Bernstein Advisors LLC

Robeco Institutional Asset Management, US Inc.

Rothschild & Co. Asset Management US

S&P Dow Jones Indices

Schroder Investment Management North America Inc.

**SLC Management** 

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

State Street Global Advisors

Stone Harbor Investment Partners L.P.

Strategic Global Advisors, LLC

T. Rowe Price Associates, Inc.

The TCW Group, Inc.

Thompson, Siegel & Walmsley LLC

**Manager Name** 

Thornburg Investment Management, Inc.

Tri-Star Trust Bank

VanEck

Versus Capital Group

Victory Capital Management Inc.

Virtus Investment Partners, Inc.

Vontobel Asset Management

Voya

WCM Investment Management

WEDGE Capital Management

Wellington Management Company LLP

Wells Fargo Asset Management

Western Asset Management Company LLC

Westfield Capital Management Company, LP

William Blair & Company LLC

