### **AGENDA**

## INVESTMENT COMMITTEE MEETING MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION (MCERA)

One McInnis Parkway, 1st Floor Retirement Board Chambers San Rafael, CA

September 17, 2020 – 9:00 a.m.

This meeting will be held via teleconference pursuant to Executive Order N-25-20, issued by Governor Newsom on March 12, 2020, Executive Order N-29-20, issued by Governor Newsom on March 17, 2020, and Executive Order N-35-20, issued by Governor Newsom on March 21, 2020.

The public may listen to and observe the meeting on YouTube at <a href="https://youtu.be/tW\_iXac-1R8">https://youtu.be/tW\_iXac-1R8</a>. If members of the public wish to comment, those comments may be submitted to MCERA via email at <a href="mailto:MCERABoard@marincounty.org">MCERABoard@marincounty.org</a>. This account will be monitored prior to and for the duration of the meeting. If the comment pertains to a particular agenda item, please identify that item number and the comment will be read to the Board during that discussion. Otherwise, the comment will be read under Item A, Open Time for Public Expression. All public comments submitted before or during the meeting that pertain to topics within the jurisdiction of the MCERA Board and otherwise comply with MCERA guidelines will be read in open session and kept as part of the permanent record

The Board of Retirement for the Marin County Employees' Retirement Association encourages a respectful presentation of public views to the Committee. The Board, staff and public are expected to be polite and courteous, and refrain from questioning the character or motives of others. Please help create an atmosphere of respect during Board and Committee meetings. If members of the public wish to speak on any agendized items, please alert the Retirement Administrator to that request prior to the matter being called.

### **CALL TO ORDER**

### **ROLL CALL**

### A. OPEN TIME FOR PUBLIC EXPRESSION

Note: The public may also address the Committee regarding any agenda item when the Committee considers the item.

Open time for public expression, from three to five minutes per speaker, on items not on the Committee Agenda. While members of the public are welcome to address the Committee during this time on matters within the Committee's jurisdiction, except as otherwise permitted by the Ralph M. Brown Act (Government Code Sections 54950 et seq.), no deliberation or action may be taken by the Committee concerning a non-agenda item. Members of the

Committee may (1) briefly respond to statements made or questions posed by persons addressing the Committee, (2) ask a question for clarification, or (3) provide a reference to staff for factual information.

### **B. NEW BUSINESS**

1. Private Debt Manager Interviews

Conduct interviews with potential private debt managers.

- a. Manager Overview Jim Callahan, President, Callan LLC.
- b. CarVal 9:15 a.m. Lucas Detor, Matthew Hanson
- c. Fortress 10:15 a.m. Drew McKnight, Danny Kayne
- d. Varde 11:30 a.m. George Hicks, Brad Bauer, Andrew Knapp
- 2. Private Debt Manager Selection (**Action**)

Consider and take possible action to select manager(s) for private debt allocation

3. <u>Investment Manager Update – Wellington Management Co., LLP – Anne Heaphy, Callan LLC</u>

### C. INVESTMENT CONSULTANT QUARTERLY REPORT

- 1. Quarterly Report as of June 30, 2020
  - a. Summary Report
  - b. Flash Performance Update

Note on Process: Items designated for information are appropriate for Committee action if the Committee wishes to take action.

Note on Voting: As provided by statute, the Alternate Safety Member votes in the absence of the Elected General or Safety Member, and in the absence of both the Retired and Alternate Retired Members. The Alternate Retired Member votes in the absence of the Elected Retired Member. If both Elected General Members, or the Safety Member and an Elected General Member, are absent, then the Elected Alternate Retired Member may vote in place of one absent Elected General Member.











Agenda material is provided upon request. Requests may be submitted by email to MCERABoard@marincounty.org, or by phone at (415) 473-6147.

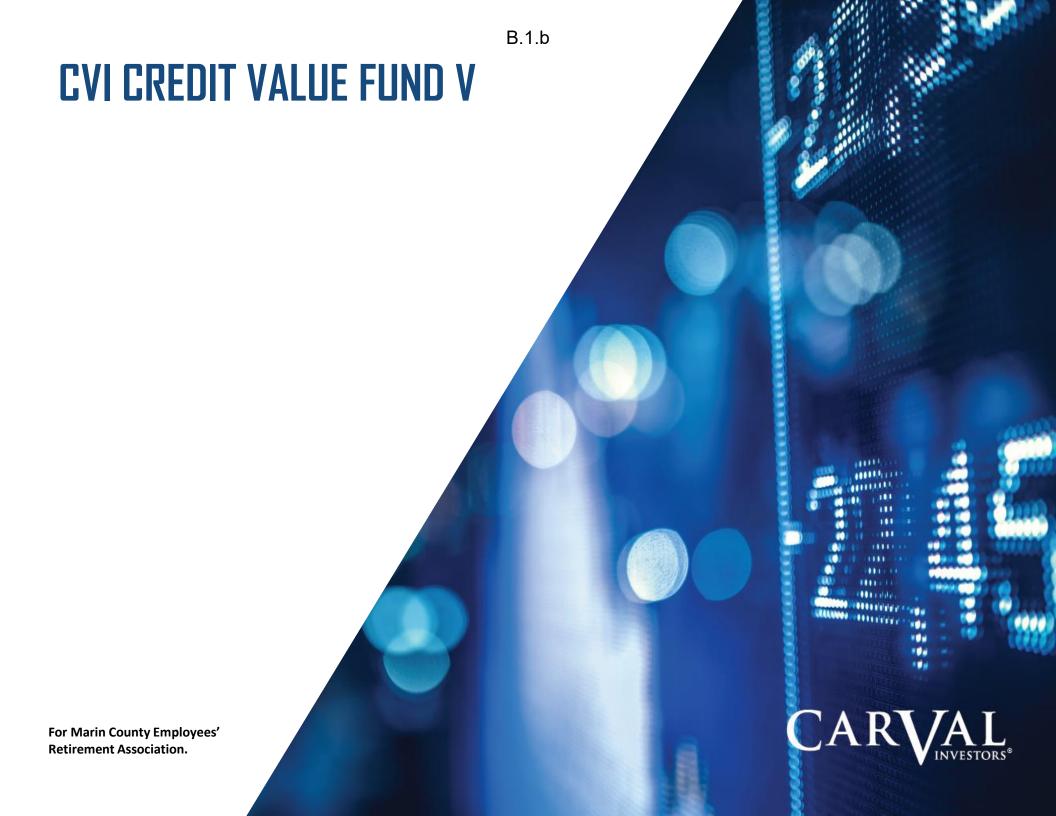
MCERA is committed to assuring that its public meetings are accessible to persons with disabilities. If you are a person with a disability and require an accommodation to participate in a County program, service, or activity, requests may be made by calling (415) 473-4381

(Voice), Dial 711 for CA Relay, or by email at least five business days in advance of the event. We will do our best to fulfill requests received with less than five business days' notice. Copies of documents are available in alternative formats upon request.

The agenda is available on the Internet at <a href="http://www.mcera.org">http://www.mcera.org</a>.

### B.1.a Manager Overview

This is a discussion with no backup.



# DISCLAIMER

These materials are intended solely for the Marin County Employees' Retirement Association board of directors and investment committee and are not intended to be used or relied upon by any other party to whom such materials become available.



## CVI CREDIT VALUE FUND V

### **COVID-19 Crisis is leading to a Global Recession**

CVI Credit Value Fund V (CVF V)

### **Distressed and Opportunistic Credit**

- Targeting 15% -20% net IRR\*
- Targeting 1.7x 2.0x net equity multiple\*
- All-weather, multi-asset approach

Financial markets in disarray

### Uniquely challenging environment

- COVID-19 has placed unprecedented strain on society and financial markets
- Promises of liquidity are running up against the reality of limited dealer capital
- More than \$1 trillion of distressed debt in the U.S. and significant opportunities in Europe

Experienced Team

### **Experienced Team, Proven Investment Process, Disciplined control environment**

- CarVal's 2008 and 2011 vintage funds delivered more than 17% net and 2x money multiple
- 70 investment professionals; Senior team averages 23 years investment experience and 11 years with CarVal
- Team has invested through the GFC and Tech Crisis down cycles as well as bull markets

Proven Strategy

### **Value Investing**

- Dislocations and market crises begin in liquid markets. CarVal has deep experience in the high yield and loan markets.
- Quality assets at distressed prices, not distressed assets with unpredictable values
- Capital vacuums, orphaned asset sales and distressed restructurings only when the path to recovery is clear



\*There is no guarantee that target returns will be achieved. See disclaimer regarding Targeted Returns.

# CARVAL INVESTORS: FIRM OVERVIEW

As of June 30, 2020

## B.1.b Global Alternative Investment Manager

- 100% employee-owned firm
- Approximately 185 employees
- \$9 billion in assets under management
- 33-year global track record in opportunistic and distressed credit
- Invested \$123 billion in 5,480 transactions in 82 countries

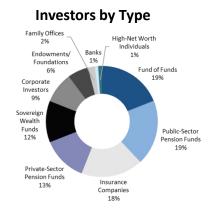
### **Specialists in Complex Credit**

- Approximately 70 investment professionals in the U.S., Europe and Asia
- Ability to capitalize on traded and private market opportunities across the full credit spectrum – performing, stressed, distressed
- Sourcing and origination We estimate that approximately 75% of deals are completed on a negotiated or lightly competitive basis\*

### **Diverse and Stable Investor Base**

- Over 250 institutional investors
- Most recent three flagship funds oversubscribed; returning investors represented more than 80% of capital in CVF IV





<sup>\*</sup>Measured during the period from January 2019 — December 2019. Includes deals in aviation, consumer loan portfolios, CRE debt, European loan portfolios, re-performing loans and solar ABS.



# CAPITALIZING ON MARKET DISTRESS FOR 33 YEARS

**Global Financial Crisis Argentine Crisis Post-Crisis Reform** Scandinavian banking crisis **Black Monday** European sovereign debt **Tequila Crisis, Mexico** Dot-com bubble and Bank deleveraging Japan asset bubble collapse crisis collapse Russian crisis QE U.S. Savings and Loan crisis 2014-2019 1987-1992 1993-1998 1999-2006 2007-2013 Unprecedented growth of **Opened offices in Singapore Developed structured credit** Opened offices in London, Started business in U.S. capabilities in U.S. & Europe loan portfolios and **Paris and Tokyo** and Shanghai opportunities in energy and Focused on loan portfolios petroleum, emerging Loan portfolios in the U.S. Enron, Merchant energy Invested over \$2 billion from the Resolution Trust markets, high yield and globally in Lehman assets and Europe U.S. consumer loans Corporation and claims aviation Distressed Japan assets U.S. C&I/SME loans Invested over \$1 billion in European loan portfolios Distressed LatAm debt U.K. and U.S. loan portfolios Loan portfolios in Europe Aviation assets Liquidation claims and the U.S. Liquidations claims from deleveraging banks

**DELTA** 

**COVID-19 Pandemic** 

**BARCLAYS** 

Oil Price War

**Global Recession** 

2020-2023

2020 – a more serious technical and fundamental dislocation than any in recent times

LEHMAN BANKING BANKING GROUP



Bank of Ireland (S)

AerFin

# OPPORTUNISTIC CREDIT INVESTORS FOCUSED ON FOUR CORE ASSET CLASSES

### INTEGRATED APPROACH WITH CROSS-DESK COLLABORATION



- Distressed Securities
- Bankruptcies and Liquidations
- Leveraged Loans
- High Yield Bonds
- CLOs



- Residential Mortgages
- Consumer
- Small Business
- CRE-backed
   Mezzanine Debt



- Issuer of Mortgage-Backed Securities
- Buyer of Asset-Backed Securities



- Aviation
- Shipping
- Renewable Energy

Active management of investments across our four boxes allows us the opportunity to achieve a balanced portfolio and targeted returns with less risk



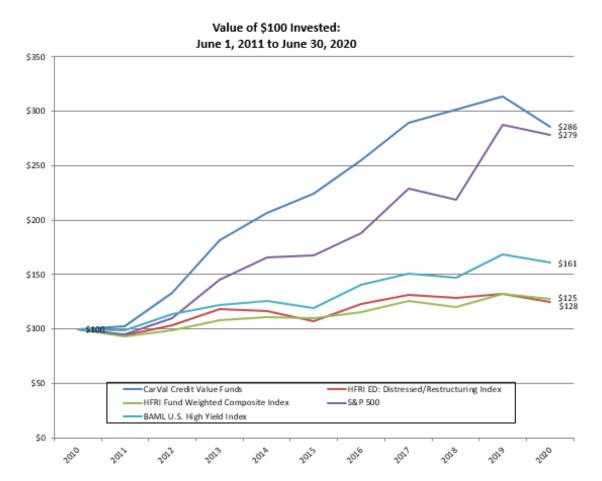
# DEEP-SECTOR EXPERTISE AMONG SENIOR INVESTMENT TEAM

| HIGH-YIELD TRADING, EMERGING MARKETS, HARD ASSETS |   |   |  | ST322  | U.S. AND EUROPE, CORPORATE SECURITIES                 |   | LOAN PORTFOLIOS, STRUCTURED CREDIT, REAL ESTATE  |   |  |
|---|---|---|--|--|---|---|--|---|--|
| LUCAS DETOR  Managing Principal  24 years         |   |   |  |  | JAMES GANLEY<br>Managing Principal<br>30 years        |   | JODY GUNDERSON<br>Managing Principal<br>26 years   |   |  |
| AVIATION  | SHIPPING &<br>WORKOUT                       | CORPORATE<br>LOAN<br>BUSINESS                     | HIGH<br>YIELD                                      | EMERGING<br>MARKETS<br>CORPORATE<br>SECURITIES | EUROPE<br>CORPORATE<br>SECURITIES                     | U.S.<br>CORPORATE<br>SECURITIES             | LOAN<br>PORTFOLIOS   | STRUCTURED<br>CREDIT  | U.S. CRE<br>CREDIT                             |
| Justin<br>Bradburn<br>Principal<br>23 years       | Greg<br>Belonogoff<br>Principal<br>22 years | Chris<br>Mawn<br>Managing<br>Director<br>19 years | John<br>Withrow<br>Principal<br>19 years           | Gerardo<br>Bernáldez<br>Principal<br>31 years  | <b>Bryan Simpson</b><br>Managing Director<br>20 years | <b>Jerry Keefe</b><br>Principal<br>30 years | Seth Cohen Principal 20 years  Stuart Lammin Principal 32 years  Dave Pelka Principal 17 years  James Sackett Principal 26 years | Neil Hepworth Managing Director 18 years Shane Huether Executive Adviser 25 years | Paul Mullaney<br>Managing Director<br>33 years |
|   |   |   | RISK   |  |   |   |  |   |  |
|   |   |   | <b>David Fry</b><br>Chief Risk Officer<br>29 years |  |   |   |  |   |  |

The senior credit investment team averages 24 years investment experience and 12 years with CarVal



# INVESTING THROUGH THE CYCLES



| Value of \$100                          |       |  |  |  |
|---|-------|--|--|--|
| CarVal Credit Value Funds*              | \$286 |  |  |  |
| S&P 500                                 | \$279 |  |  |  |
| BAML U.S. High Yield Index              | \$161 |  |  |  |
| HFRI Fund Weighted Composite Index      | \$128 |  |  |  |
| HFRI ED: Distressed/Restructuring Index | \$125 |  |  |  |

\*The CarVal Credit Value Funds net return is calculated using an average return for each presented year including 2019 (as of June 30, 2020) assuming an equally weighted allocation of capital across all CarVal Credit Value Funds (CVF I, II, III and IV) as of such year. The CarVal Credit Value Funds model net return does not represent the experience of any individual investor because it is a model net rate of return for credit investments managed by CarVal in multiple funds and investment pools each with its own separate fees and expense structures. Further, the liquidity provisions of the CarVal Credit Value Funds would not allow capital to be reallocated in the fashion presented in the table. The graph starts in June 2011, as the final close for CVFI occurred on June 30, 2011.

CarVal also manages other funds, which are excluded from the above data. The performance of those funds is available upon request. Past performance is not indicative of future results.

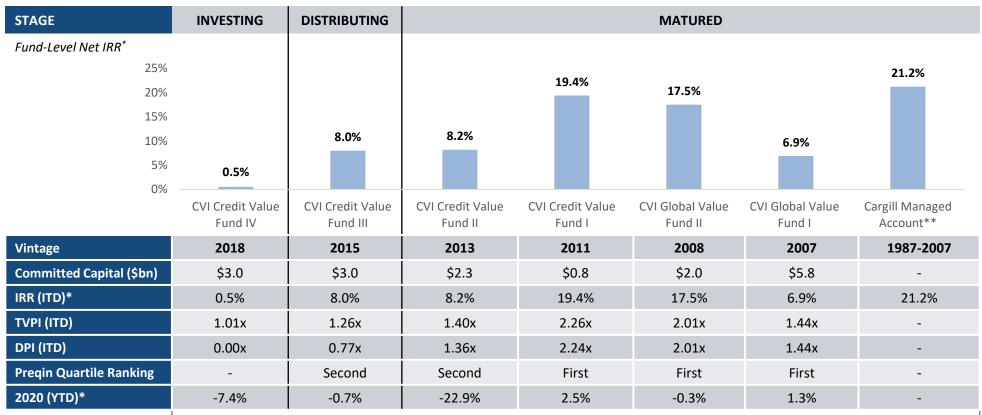
See disclaimer regarding Indices.



### B.1.b

# 33-YEAR HISTORY OF STABLE RETURNS ACROSS MARKET CYCLES

Fund data as of July 31, 2020 (estimate)



The Preqin Quartile Ranking is sourced from Preqin data as of June 2020. The data is comprised of various sources and various "as of dates." Completeness and accuracy is not guaranteed. Preqin's Quartile Ranking Methodology: The net IRR and multiple of each constituent fund is used to determine the fund's overall quartile rank, with equal weighting. The ranking applies to funds that have reported data within the past two years. Eight funds must report in order to constitute a benchmark. Each vintage must season for three years before auartile rankings are assigned.

\*\*Separate account managed for Cargill; track record does not include real estate (see disclaimer regarding CMA track record).

Note: CarVal also manages multiple single investor funds, open-ended funds and single-strategy focused funds. The track records for those funds are not included here but are available upon request.

Past performance is not indicative of future results.



<sup>\*2020</sup> figures are YTD (not annualized) net time-weighted returns of CVF I-IV and GVF I-II for stated time periods, inclusive of realized and unrealized results. IRRs: CVF I-IV= actual Net IRRs for those investment vehicles, exclusive of those investors that elected to redeem, performance for hedge-fund style (H Class) investors, Cargill's investment performance and employee coinvestment. Employees do not pay management or performance fees to CarVal, and Cargill, as both investor and former owner of the Management Company, bears certain taxes that are not borne by third party investors. Consequently, showing the Fund return exclusive of these investors is more representative of the performance of third-party investors in the Fund. In addition, limiting the return to private-equity style (P Class) investors more accurately portrays the return experience for a private equity investor within the hybrid fund structure. CMA = a modeled Net IRR, excluding direct real estate investment.

# HIGH SUCCESS RATE, QUICK DEPLOYMENT PACE

**88.5% success rate** on 905 credit investments made since 2011<sup>1</sup>

**86% of commitments** deployed in first 24 months, on average<sup>2</sup>

81% of contributed capital distributed back to investors in first 21 months of harvest, on average<sup>3</sup>

# 89.5% SUCCESS RATE AND 1.0% LOSS RATIO ON 2011 VINTAGE FUND<sup>4</sup>

<sup>1</sup>As of June 30, 2020. Success rate is the number of deals which returned a profit divided by the total deal count. Includes both realized and unrealized investments in all CarVal Credit Value Funds (CVF I, II, III and IV). The complete track record is available upon request. For additional detail, see disclaimer regarding Success Rates. <sup>2</sup>Reflects investment activity for all CarVal Credit Value Funds (CVF I, II, III and IV). Calculated from final close date based on aggregate investor commitments to the fund. <sup>3</sup>Reflects distributions by CarVal Credit Value Funds that have reached 21 months or more from the start of the harvest period (CVF I, II and III). CarVal also manages other funds, which are excluded from the above data. The performance of those funds is available upon request. Past performance is not indicative of future results. Source: CarVal Investors.

4The 2011 Vintage Fund refers to CVF I. See disclaimer regarding Success rates.



# CVI CREDIT VALUE FUND V

# Anticipated Fund Terms

**Fund Size:** Target \$2.5 billion

First Close: May 31, 2020

**Expected Final Close:** H1 2021

**Fund Term:** Three-year investment period; three-year

harvest period

Management Fee: 1.5% per annum, paid quarterly on

contributed capital

(Fee discounts for larger commitments)

**Carried Interest:** Cumulative 8% portfolio-level preferred return

100% catch-up thereafter until GP has received 20%

Profits are shared 80%/20% LP/GP split thereafter

**GP Contribution:** 1.5% of target commitments

**Target Returns:** 15% net



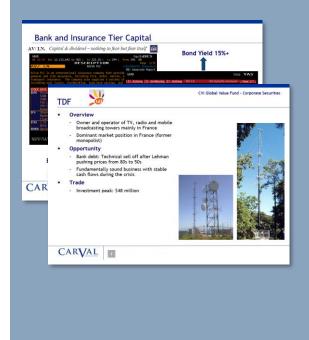
# INVESTMENT STRATEGY



# INVESTMENT STRATEGY IN A CRISIS: CARVAL'S LESSONS FROM OVER THREE DECADES INVESTING

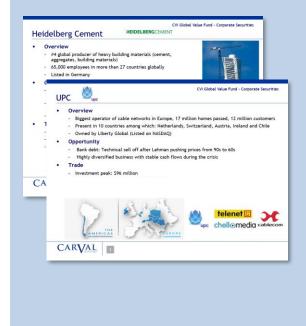
# Stage 1: TRADING

- Extreme volatility as fund flows overwhelm dealer capital
- Margin calls lead to rapid deleveraging
- Good assets sold to generate cash



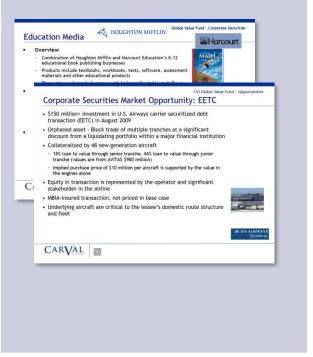
# Stage 2: DISTRESSED ASSETS

- Financial restructuring of impaired balance sheets
- Focus on COVID-sensitive sectors transportation, leisure, entertainment, retail



# Stage 3: CAPITAL VACUUMS/ORPHANED ASSETS

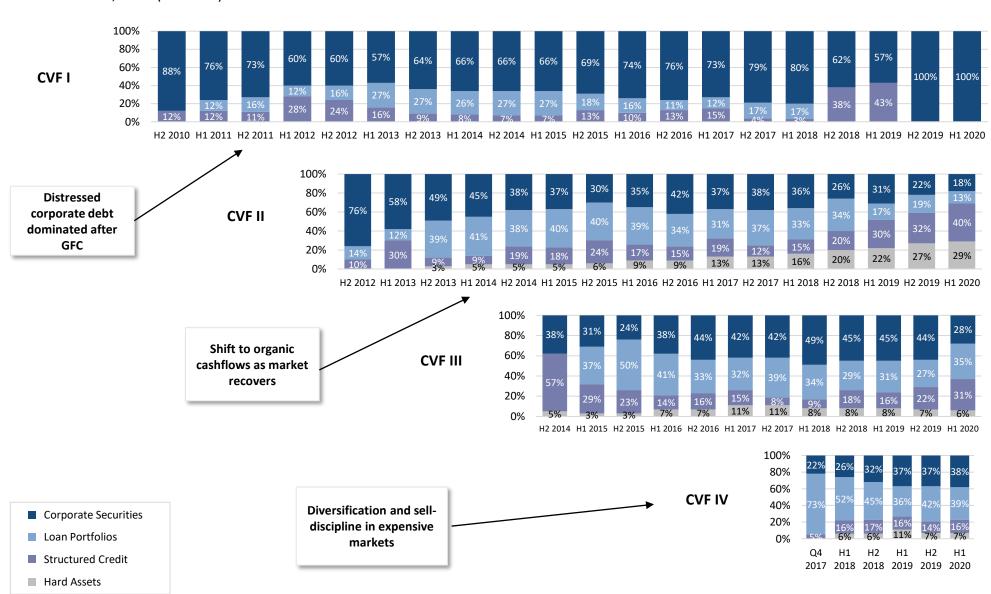
- New capital structures required by viable assets
- Strategic disposals/repositioning
- Capital returns to recovering asset classes





# PORTFOLIO EVOLUTION: MOVING CAPITAL TO THE OPPORTUNITIES

As of June 30, 2020 (estimate)





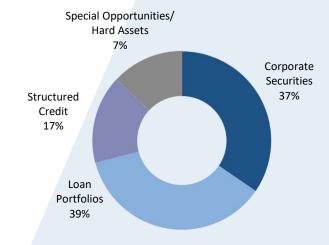
Figures based on Portfolio Composition which includes carrying value and recourse third-party debt.

# CVF IV PORTFOLIO COMPOSITION

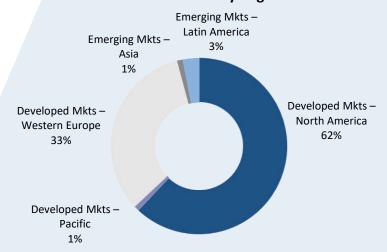
As of July 31, 2020 (estimate) (\$ millions)

| Investment Strategy                            | Portfolio Composition* |        |  |
|--|------------------------|--------|--|
| Investment Strategy                            | \$                     | %      |  |
| U.S. Loan Portfolios - Residential             | \$394.6                | 12.2%  |  |
| Structured Credit - RMBS                       | 320.3                  | 9.9%   |  |
| U.S. Loan Portfolios - Consumer                | 277.0                  | 8.6%   |  |
| U.S. Corporate Credit - Communications         | 233.3                  | 7.2%   |  |
| U.S. Corporate Credit - Alternative Energy     | 226.1                  | 7.0%   |  |
| European Loan Portfolios - Commercial          | 223.5                  | 6.9%   |  |
| European Corporate Credit - Financial Services | 191.8                  | 5.9%   |  |
| Hard Assets - Aircraft Leasing                 | 174.6                  | 5.4%   |  |
| European Loan Portfolios - Residential         | 120.0                  | 3.7%   |  |
| Commercial Real Estate Debt                    | 115.5                  | 3.6%   |  |
| Top 10 Strategies                              | \$2,276.7              | 70.4%  |  |
| Other Strategies                               | 957.1                  | 29.6%  |  |
| CVF IV Grand Total                             | \$3,233.8              | 100.0% |  |

### **CVF IV Portfolio by Asset Class\***



### **CVF IV Portfolio by Region\***





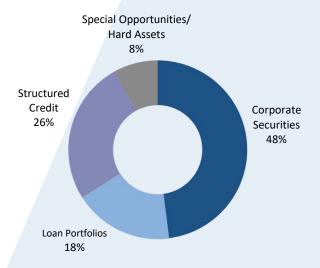
<sup>\*</sup>Figures based on Portfolio Composition which includes carrying value and recourse third-party debt.

# CVF V PORTFOLIO COMPOSITION

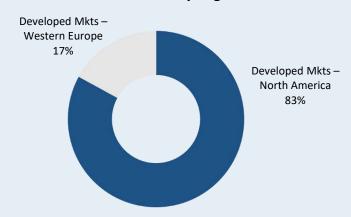
As of July 31, 2020 (estimate) (\$ millions)

| Investment Studton.                           | Portfolio Composition* |        |  |
|---|------------------------|--------|--|
| Investment Strategy                           | \$                     | %      |  |
| U.S. Corporate Credit - Communications        | \$30.2                 | 34.3%  |  |
| Structured Credit - Other                     | 15.6                   | 17.7%  |  |
| U.S. Corporate Credit - Retailing             | 11.1                   | 12.6%  |  |
| European Loan Portfolios - Residential        | 8.5                    | 9.7%   |  |
| Commercial Real Estate Debt                   | 7.6                    | 8.7%   |  |
| Structured Credit - Alternative Energy        | 7.5                    | 8.5%   |  |
| Hard Assets - Aircraft Leasing                | 6.8                    | 7.7%   |  |
| U.S. Corporate Credit - Leisure/Entertainment | 0.8                    | 0.8%   |  |
| Top 10 Strategies                             | \$88.1                 | 100.0% |  |
| Other Strategies                              | 0.0                    | 0.0%   |  |
| CVF V Grand Total                             | \$88.1                 | 100.0% |  |

### **CVF V Portfolio by Asset Class\***



### **CVF V Portfolio by Region\***



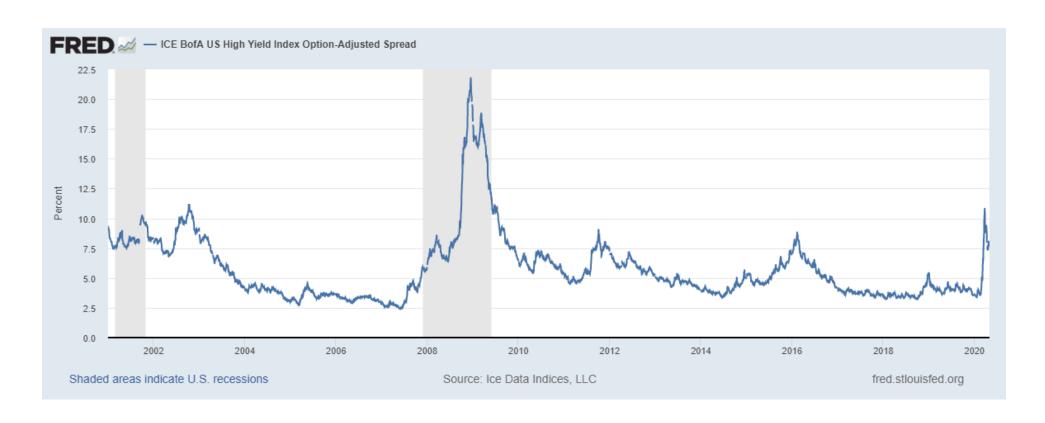


<sup>\*</sup>Figures based on Portfolio Composition which includes carrying value and recourse third-party debt.

# CVF V MARKET OPPORTUNITY



# HIGH YIELD SPREADS HAVE RETURNED TO LEVELS OF PRIOR CRISES



### **Revisiting the GFC Playbook**

- Early stages of a crisis are characterized by extreme volatility
- Indiscriminate selling to reduce risk and generate liquidity
- Capital vacuums and orphaned assets when there is a pathway to recovery

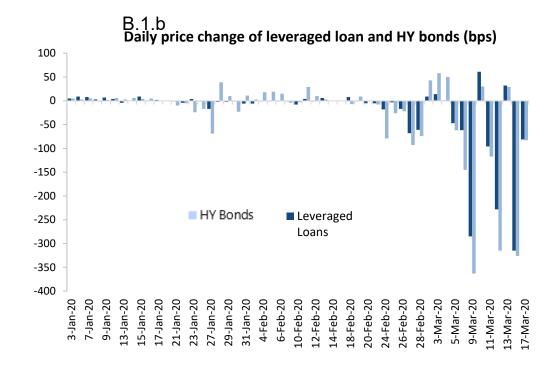


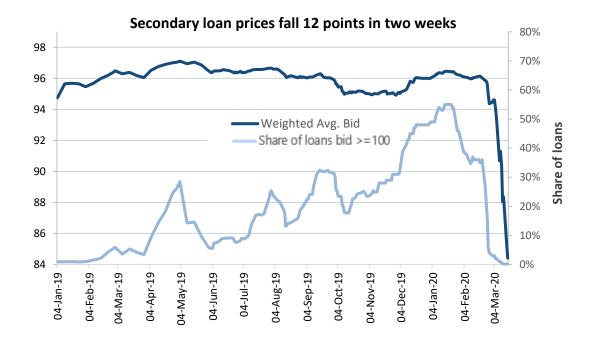
# EXTREME VOLATILITY WHILE LEVERAGE WAS UNWOUND

# CarVal Invested \$1.6 billion in March and April

Telecom 18%
European Financials 14%
Energy 17%
Structured Credit 15%
Other 36%

Record IG Issuance in April: \$285 Billion

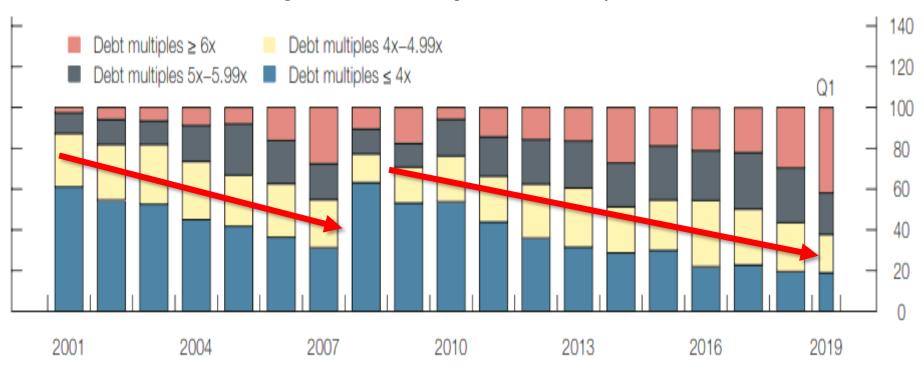






# WEAK LENDING STANDARDS BEFORE THE CRISIS ADD TO DISTRESS

### Distribution of large institutional leveraged loan volumes by debt-to-EBITDA ratio



Leverage mix is deteriorating, creditor protections weaker and investor base becoming more concentrated

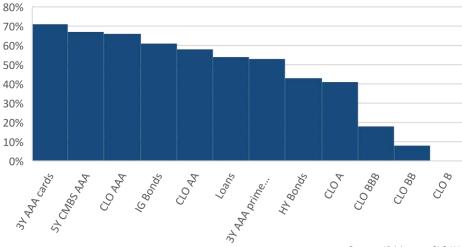
Corporate credit looking more dangerous than 2007



# ABS, COMMERCIAL REAL ESTATE AND LOWER-RATED ASSETS HAVE LAGGED THE RECOVERY

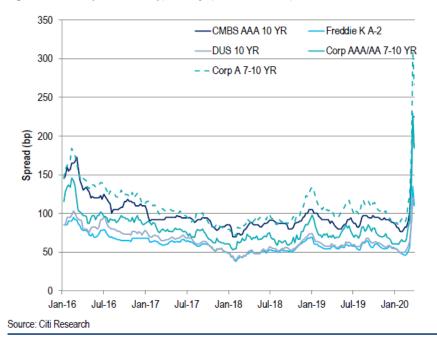
### B.1.b

### % Spread Recovery (21st Feb - 1st May 2020)



Source: JP Morgan CLO Weekly 4 May 2020

Figure 10. CMBS Spreads to Swap, January 1, 2016 - March 26, 2020





# U.S. CMBS LOANS UNDER DEFAULT OR LOAN MODIFICATION

### **Delinquent:** 970 loans (\$16.4 billion) became delinquent in May

- In total, 1,275 loans \$20.9 billion are currently delinquent.
- The resulting <u>delinquency rate increased by 430 bp month-over-month</u> to 5.6%

### **Specially serviced:** 218 loans (\$4.6 billion) transferred to special servicing in April.

- In total, 849 loans (\$13.8 billion) are currently specially serviced.
- The resulting <u>specially serviced rate increased by 106bp month over month</u> to 3.5

### Watchlist: 1,551 loans (\$29.4 billion) were added to the watchlist in May.

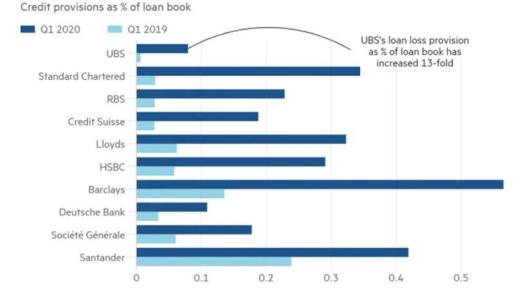
- In total, 4,585 loans (\$75.6 billion) are currently on the watchlist.
- The resulting watchlist rate increased by 642bp to 20.3%



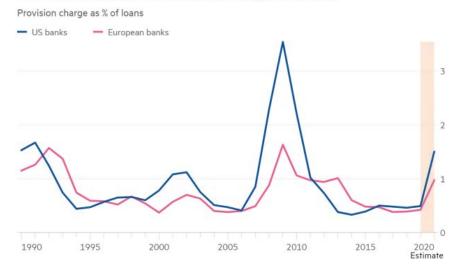
# CREDIT PROVISIONS POINT TOWARD THE NEXT WAVE OF NPLS

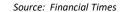
B.1.b

Banks prepare for onslaught of bad loans



### Loan loss estimates have increased in Europe and the US



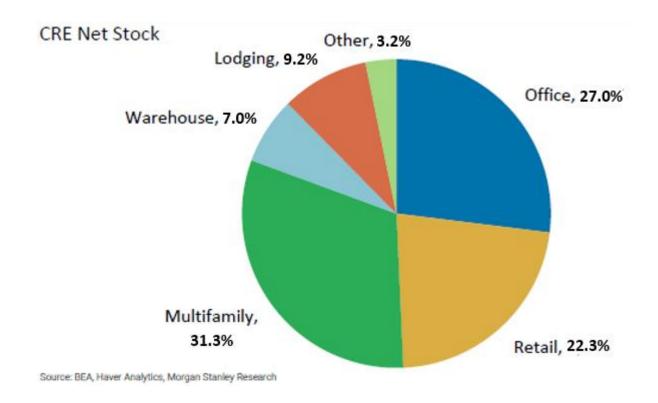




# SIZE OF THE CRE DEBT MARKET

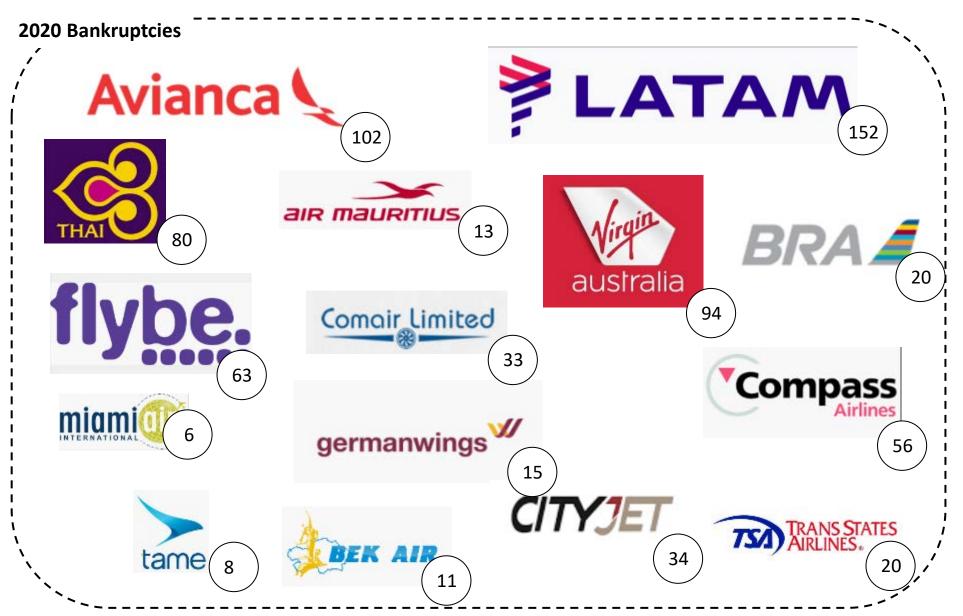
### **CRE Debt Market:** \$3.5 trillion

- 45% increase in the CRE debt market since 2013
- Hospitality debt outstanding is estimated to be \$300 billion



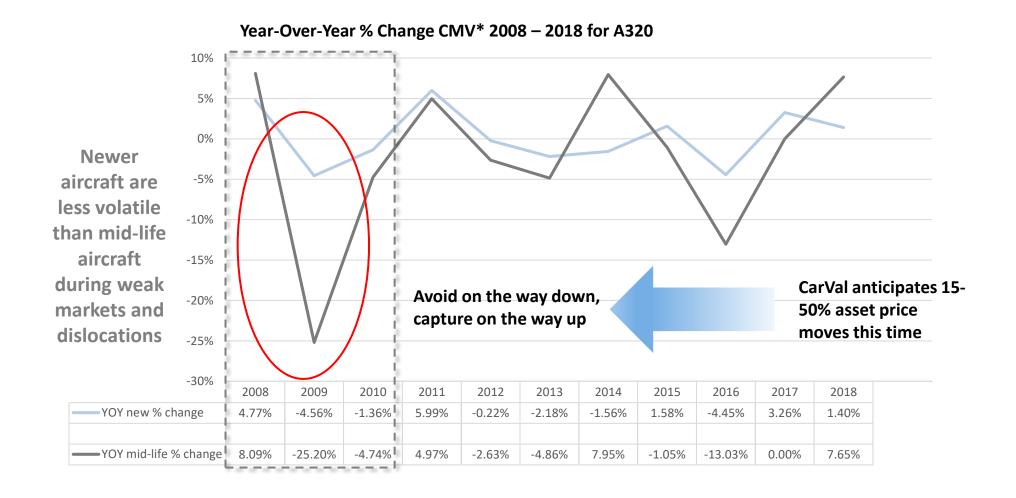


# AVIATION DEFAULTS HAVE STARTED .... 15 AIRLINES/748 AIRCRAFT





# ...THIS SHOULD CREATE AN INVESTMENT OPPORTUNITY



Source: Oriel Consult Limited, July 2018

\*Current Market Value ("CMV"): represents an appraiser's opinion of the most likely trading price that may be generated for an asset under the market conditions that are perceived to exist at the time in question. Market values are often value opinions based on each appraiser's careful analysis of information about recent transactions.



### B.1.b

# CVF V INVESTMENT FOCUS TODAY ACROSS FOUR BOXES



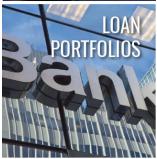
- Financials
- Restructurings
- Energy and Renewables
- Bankruptcies and liquidations
- High yield bonds
- Retail



- Aircraft ABS
- U.S. and European CMBS



- \$68 billion Illiquid annual opportunity set
- Newer, higher quality aircraft
- EETCs
- Bankruptcies and liquidations
- Aircraft ABS

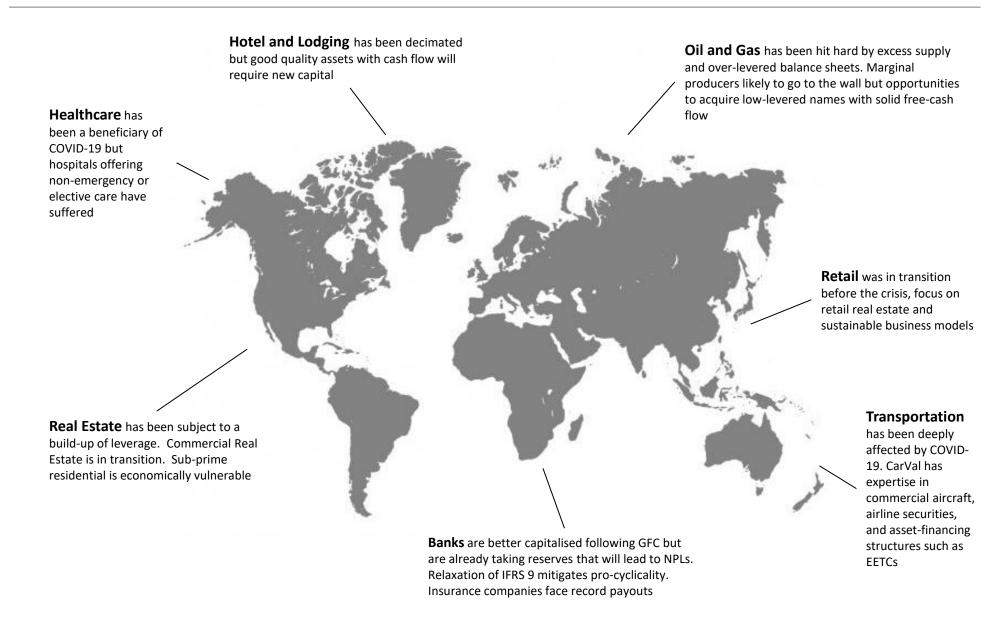


- U.S. commercial real estate debt with focus on hospitality (hospitality debt outstanding estimated to be \$300 billion today)
- Secondary debt on REITs (large universe of CUSIPS, with \$68 billion of issuance in 2019 and \$20 billion in 2020 YTD)
- Renewable energy
- U.S. consumer
- Re-performing loans
- Chinese NPLs



### B.1.b

# DISTRESS IS BEING FELT ACROSS THE GLOBAL ECONOMY





# FIVE RENEWABLES INVESTMENT STRATEGIES



### **Renewable Energy and Sustainability Projects**

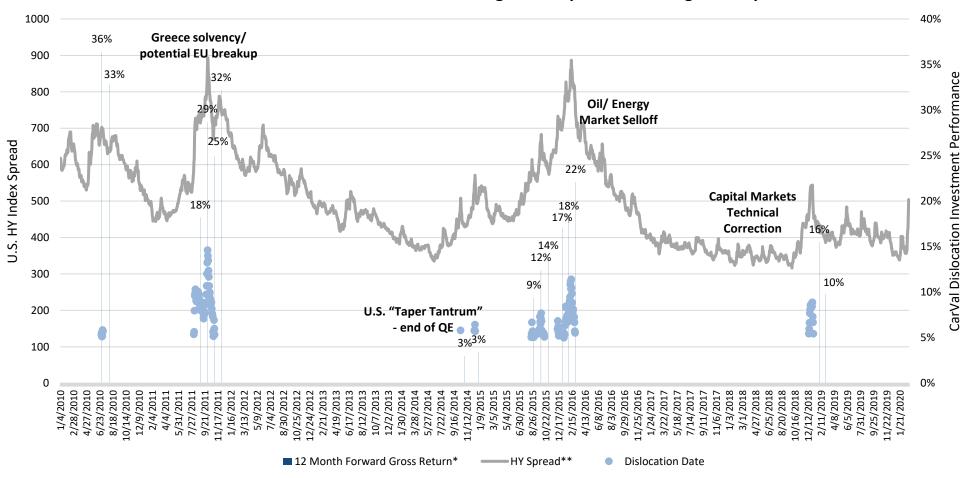
**C-PACE / Efficiency Secured Debt C&I Solar & Storage Residential Solar Loans** Solar ABS Securitizations: by Issue Financing energy efficiency Asset-backed securities Project finance bonds or Acquisition of mid-scale Newly originated loans to where underlying assets improvements, including loans secured on solar facilities with long homeowners installing are residential solar loans **Commercial Property** term contractual cashflows residential solar renewables assets Assessed Clean Energy loans or other renewables Levered Gross Returns: 12% - 15% 15% - 20% 12% - 15% 14% - 16% 12% - 14% **Traded Traded Private** Private Private Market Size \$20B+ Market Size: \$10B+ Market Size: \$20B+ Market Size \$10B+ Market Size: \$10B+



### B.1.b

# CARVAL: CREDIT MARKET DISLOCATION INVESTING 2010-2020

### Dislocation Event: Three-month U.S. High Yield Spread Widening > 125 bps



### CarVal's corporate investment 12-month performance following a dislocation event

2010 is used as a starting point in order to provide an adequate number of years to show multiple periods of dislocation dates. The period surrounding the financial crisis of 2008 is not shown due to the extremes in the number and size of dislocations in that period.

\*The 12-month Forward Gross Return" ("Gross Return") is calculated for the 12-month period starting with the first day of the month immediately following a dislocation date. The Gross Returns reflect the agreeate gross performance in all corporate investments held at any time in the relevant 12-month period by one or more funds managed by CarVal. Gross Return used herein means the gross invested not encount of the costs, expenses, or performance or management fees, which will reduce the returns. The funds have also invested in other asset classes that are not represented here. Fund-specific returns differ from those shown here, and such differences may be material. The returns shown above do not represent the actual investment return experienced by any investor.

\*\*The High Yield Spread ("HY Spread") refers to the difference in yield between high yield bonds and U.S. Treasuries, as measured by the ICE BofAML US High Yield Index (HOAO), which tracks the performance of U.S. dollar-denominated below-investment-grade corporate debt publicly issued in the U.S. domestic market. The HY Spread is provided here for information only, as an indicator of market dislocation. However, the Gross Returns shown incorporate instruments that are not part of the HOAO index, including but not limited to bonds that do not meet the index's definition of high yield, liquidation claims, and securities denominated in currencies other than U.S. dollars

This chart reflects trading in corporate securities, excluding emerging markets investments. This population reflects our belief that traded developed markets are likely to react most quickly to and present the widest opportunity set in dislocated markets. Full track record is available upon request.



# **APPENDIX**



# CARVAL'S SOURCING EDGE



We estimate that approximately 75% of deals are completed on a negotiated or lightly competitive basis\*

We believe this allows CarVal to:

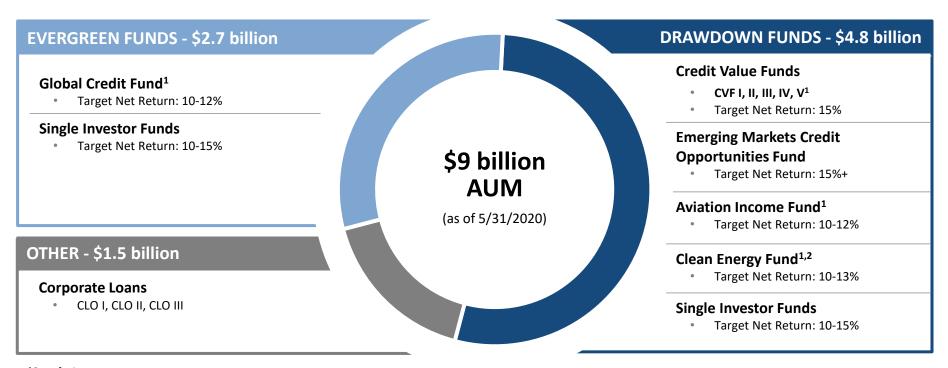
- Be more selective about the types of assets we acquire
- Negotiate protective provisions



The chart above is a snapshot that illustrates what CarVal believes is its sourcing edge across opportunistic credit strategies.

\*Measured during the period from January 2019 – December 2019.

# CARVAL INVESTORS PLATFORM



<sup>&</sup>lt;sup>1</sup>Open for investment

CarVal's diverse base of funds allows access to the firm's proprietary global credit platform





<sup>&</sup>lt;sup>2</sup>These funds are not being offered in the United Kingdom or any country of the European Economic Area. Other open funds are offered in select EEA jurisdictions only.

### B.1.b

# CARVAL AS A SUCCESSFUL ISSUER

• In recent years, CarVal has become an active issuer of new products in the market, successfully launching:

| SLATE I  | SLATE II   | MCMLT  | MCMLT  | DUKINFIELD I   | MCMLT  | HAWKSMOOR   | HAWKSMOOR  |
|--|--|--|--|--|--|---|--|
| October 2014   | October 2014   | 2015-1   | 2015-2   | August 2015  | 2016-1   | 2016-1  | 2016-2   |
| £2,384,335,000                                       | £408,258,000   | \$474,159,000  | \$272,038,000  | £459,700,000   | \$504,545,000  | £2,250,000,000  | £1,123,690,000   |
| U.K. Residential<br>Loans                            | U.K. Residential<br>Loans                              | U.S. Residential<br>Loans                            | U.S. Residential<br>Loans                            | U.K. Residential<br>Loans  | U.S. Residential<br>Loans                            | U.K. Residential<br>Loans                                     | U.K. Residential<br>Loans  |
| DUKINFIELD II  | MCMLT  | MCMLT  | MCMLT  | METAL  | MARLETTE*  | DPF   | MARLETTE *   |
| September 2016                                       | 2017-1   | 2017-2   | 2017-3   | 2017-1   | 2017-2   | 2017-1  | 2018-1   |
| £316,958,000   | \$395,316,146  | \$382,440,865  | \$433,817,744  | \$584,839,000  | \$247,777,242  | €867,004,000  | \$495,055,015  |
| U.K. Residential<br>Loans                            | U.S. Residential<br>Loans                              | U.S. Residential<br>Loans                            | U.S. Residential<br>Loans                            | Aircraft   | U.S. Consumer<br>Loans                               | Netherlands Residential,<br>Commercial and Mixed<br>Use Loans | U.S. Consumer<br>Loans   |
|  |  |  |  |  |  |   |  |
| MCMLT  | CARVL CLO I  | MCMLT  | MCMLT  | DPF  | MCMLT  | CARVL CLO II  | MCMLT  |
| MCMLT<br>2018-1                                      | 2018-1   | MCMLT<br>  | <b>MCMLT</b><br>                                     | <b>DPF</b><br>2018-1   | <b>MCMLT</b><br>2018-4                               | <b>CARVL CLO II</b><br>2019-1                                 | MCMLT<br>2019-1  |
|  |  |  |  |  |  |   |  |
| 2018-1   | 2018-1   | 2018-2   | 2018-3   | 2018-1   | 2018-4   | 2019-1  | 2019-1   |
| 2018-1<br>\$381,651,881<br>U.S. Residential          | 2018-1<br>\$512,250,000<br>Broadly Syndicated          | 2018-2<br>\$437,940,190<br>U.S. Residential          | 2018-3<br>\$426,064,874<br>U.S. Residential          | 2018-1 €400,000,000  Netherlands Residential, Commercial and Mixed                   | 2018-4<br>\$627,658,649<br>U.S. Residential          | 2019-1<br>\$732,750,000<br>Broadly Syndicated                 | 2019-1<br>\$440,000,000<br>U.S. Residential                          |
| 2018-1<br>\$381,651,881<br>U.S. Residential<br>Loans | 2018-1<br>\$512,250,000<br>Broadly Syndicated<br>Loans | 2018-2<br>\$437,940,190<br>U.S. Residential<br>Loans | 2018-3<br>\$426,064,874<br>U.S. Residential<br>Loans | 2018-1  €400,000,000  Netherlands Residential, Commercial and Mixed Use Loans        | 2018-4<br>\$627,658,649<br>U.S. Residential<br>Loans | 2019-1<br>\$732,750,000<br>Broadly Syndicated<br>Loans        | 2019-1<br>\$440,000,000<br>U.S. Residential<br>Loans                 |
| 2018-1<br>\$381,651,881<br>U.S. Residential<br>Loans | 2018-1<br>\$512,250,000<br>Broadly Syndicated<br>Loans | 2018-2<br>\$437,940,190<br>U.S. Residential<br>Loans | 2018-3<br>\$426,064,874<br>U.S. Residential<br>Loans | 2018-1  €400,000,000  Netherlands Residential, Commercial and Mixed Use Loans  MCMLT | 2018-4<br>\$627,658,649<br>U.S. Residential<br>Loans | 2019-1<br>\$732,750,000<br>Broadly Syndicated<br>Loans        | 2019-1<br>\$440,000,000<br>U.S. Residential<br>Loans<br>MCSLT 2020-1 |



# RESPONSIBLE INVESTING

# CarVal's Responsible Investing Policy in brief:

- We will incorporate ESG issues into investment analysis and decision making process
- CarVal is committed to adhering to the United Nations Principles for Responsible Investment
- Except where the UN Principles are in conflict CarVal's broader fiduciary responsibilities they form the basis of CarVal's commitment to RI
- CarVal has established a
   Responsible Investing Committee
   headed by the Chief Financial
   Officer to monitor the
   effectiveness and
   implementation of this policy

CarVal is a member of SASB, Sustainability Accounting Standards Board

### **CVF V will incorporate CarVal's Responsible Investing Policy**

- Since 1987, CarVal has adhered to strict investment discipline and strong ethics and compliance. In 2017, CarVal built on this discipline by adopting a formal Responsible Investing Policy based on the United Nations Principles for Responsible Investment.
- The investment team and the Portfolio Investment Committee will incorporate
   Environmental, Social and Governance (ESG) issues into all investment analysis and
   decision making. While ESG issues may not be the determinant of an investment decision,
   they will be incorporated into investment analysis and will be considered by the Portfolio
   Investment Committee on every investment.
- CarVal screens and excludes a limited set of industries, including certain types of weapons manufacturing – e.g. nuclear weapons, landmines and cluster munitions







# CARVAL SENIOR **INVESTMENT TEAM**











#### B.1.b

Lucas Detor - Mr. Detor is a managing principal and member of the Investment Committee for CarVal Investors, responsible for leading the firm's investment strategy and management. He also leads the firm's high yield and transportation investments and oversees capital formation and emerging markets for the firm. Mr. Detor joined CarVal from Morgan Stanley, where he most recently served as managing director and co-head of the global distressed and U.S. leveraged loan business. Mr. Detor has also served the U.S. government as a Special Agent with the United States Secret Service, as well as serving in the U.S. Army Reserves and New York National Guard. Mr. Detor received his M.B.A. from NYU's Stern School of Business and his B.S. in Accounting from SUNY Albany and is a Certified Public Accountant (inactive).

James Ganley - Mr. Ganley is a managing principal and member of the Investment Committee for CarVal Investors, responsible for leading the firm's investment strategy and management, as well as distressed corporate credit investments in the U.S. and Europe, and risk and portfolio management across CarVal's credit funds and investments globally. Prior to joining CarVal in 2009, Mr. Ganley was a managing director for the Special Situations Group at Goldman Sachs in Europe where he focused primarily on corporate credit investments including distressed credit, high-yield credit, event-driven investing and liquidations. Mr. Ganley received his MBA from the University of Chicago and his B.S. in finance and accountancy from Villanova University and is a Certified Public Accountant (inactive).

Jody Gunderson - Ms. Gunderson is a managing principal and member of the Investment Committee for CarVal Investors, responsible for leading the firm's investment strategy and management, as well as its global loan portfolios and real estate businesses. In addition, Ms. Gunderson manages investments in asset-backed securities globally, including residential mortgage-backed securities, commercial mortgage-backed securities and collateralized loan obligations. Prior to joining CarVal in 1994, Ms. Gunderson was a manager in the financial services practice of PricewaterhouseCoopers where she served investment fund, commercial banking and thrift clients. Ms. Gunderson earned her B.S. degree in Business from the University of Minnesota and is a Certified Public Accountant (inactive).

David Fry - Mr. Fry is the chief risk officer and a member of the Investment Committee for CarVal Investors. He is responsible for oversight of the portfolio and identification, quantification and communication of material risks. Prior to joining the firm in 1997, Mr. Fry was with Credit Suisse Financial Products in London in risk measurement, and in the financial risk management practice of Deloitte and Touche. Mr. Fry received his B.Sc. in mathematics, operational research, statistics and economics from the University of Warwick, UK and qualified as a UK Chartered Accountant.



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- 7. Complete disclosures. More complete disclosures and the terms and conditions relating to investments in any CarVal-managed investment vehicle will be contained in the governing agreements for such CarVal-managed investment vehicle.
- 8. Date. All time sensitive representations and warranties in this summary are made as of July 31, 2020 (estimate), unless stated otherwise.
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- 13. Success rate. Success rate is the number of deals which returned a profit divided by the total deal count. Includes both realized and unrealized investments in all CarVal Credit Value Funds (CVF I, II, III and IV). Profit is calculated at the investment level and does not include a deduction for fund-level costs, expenses, or performance or management fees. A deal is defined as an investment in an individual issuer, investment strategy or special purpose vehicle, and may in some instances include multiple underlying assets. Deals do not include certain other asset class or portfolio level activities, such as failed deal costs, f/x hedging, portfolio hedging and similar costs that do not attach to a particular deal. All calculations exclude from the numerator and denominator those deals which produced a capital loss of less than \$1.0 million. The complete track record is available upon request. CarVal also manages other funds, which are excluded from the above data. The performance of those funds is available upon request.



# **DISCLAIMER**

- 14. Projections. "Projections" (including targeted returns, opinions, predictions or expectations about any future event) contained in the Materials are based on a variety of estimates and assumptions by CarVal including, but not limited to, estimates of future operating results, the value of assets and market conditions at the time of disposition and the timing and manner of disposition or other realization events. These estimates and assumptions are inherently uncertain and are subject to business, industry, market, regulatory, geo-political, competitive and financial risks which are outside of the control of CarVal. There can be no assurance that the assumptions made will prove accurate and actual results may differ materially, including the possibility that an investor may lose some or all of invested capital. The inclusion of the Projections herein should not be regarded as an indication that CarVal considers the Projections to be a reliable prediction of future events and the Projections should not be relied upon as such. CarVal has not made any representation to any person regarding the Projections and does not intend to update or otherwise revise the Projections to reflect circumstances existing after the date when made or to reflect the occurrence of future events, even in the event that any or all of the assumptions underlying the Projections are later shown to be in error.
- 15. CMA Net performance figure. Net IRR for the CMA modeled return is calculated as an average of the annual model Net IRRs for each year of investment from 1987 to the date indicated. The model assumes an annual 1.5% management fee and a 80/20 split of profits between the investors and the general partner, respectively with an 8% preferred return with a 100% catch-up for the general partner for each year, each as a percentage of net invested capital as well as fund expenses. The model does not include the CMA's direct investment in direct real estate assets. The investment performance for the excluded investments is available upon request. No leverage, reinvestment of working capital, taxes or withholdings related to the selection and management of the investments presented in this table are included in this Net IRR calculation. The Net IRR does not represent the experience of any individual investor in a CarVal managed investment vehicle because it is a model net rate of return.
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**BofAML US High Yield Index** 

The index tracks the performance of below-investment-grade U.S. dollar-denominated corporate bonds publicly issued in the U.S. domestic market.

HFRI Fund Weighted Composite Index The HFRI Fund Weighted Composite Index is a global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net of all fees performance in U.S. Dollar and have a minimum of \$50 Million under management or a twelve (12) month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.

HFRI Event-Driven: Distressed/ Restructuring Index The HFRI indexes are a series of benchmarks designed by Hedge Fund Research, Inc. ("HFRI") to reflect hedge fund industry performance by constructing composites of constituent funds, as reported by the hedge fund managers listed within HFRI's database. The HFRI ED Distressed Restructuring Index is designed to be representative of funds that employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings. Managers are typically actively involved with the management of these companies, frequently involved on creditors' committees in negotiating the exchange of securities for alternative obligations, either swaps of debt, equity or hybrid securities. Managers employ fundamental credit processes focused on valuation and asset coverage of securities of distressed firms; in most cases portfolio exposures are concentrated in instruments which are publicly traded, in some cases actively and in others under reduced liquidity but in general for which a reasonable public market exists. In contrast to Special Situations, Distressed Strategies employ primarily debt (greater than 60%) but also may maintain related equity exposure.

S&P 500

Market-capitalization-weighted index of the 500 largest U.S. publicly traded companies.



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SINGAPORE

LONDON



# Fortress Credit Opportunities Fund V Expansion

August 2020





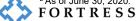
### **Fortress Investment Group Overview**

- Fortress Investment Group LLC was founded in 1998 and manages \$45.5 billion in AUM<sup>1</sup> and offers a range of alternative investment strategies
- Over 1,890 institutional and private investors around the world
- Headquartered in New York, Fortress has 846 employees across 14 offices worldwide<sup>2</sup>



<sup>&</sup>lt;sup>1</sup> Fee-paying AUM plus uncalled and recallable capital as of June 30, 2020. Fee paying AUM is defined as: (i) capital commitments or invested capital (or NAV, if lower) for the private equity funds, credit PE funds and related managed accounts, which in connection with private equity funds raised after March 2006 includes the mark-to-market value on public securities held within the fund, (ii) contributed capital or book equity for our publicly traded permanent capital vehicles, (iii) the NAV for hedge funds and the NAV or fair value for related managed accounts, and (iv) AUM related to co-managed funds. As of June 30, 2020, AUM includes \$0.4 billion of AUM related to co-managed funds.

<sup>2</sup> As of June 30, 2020.



| CREDIT PE<br>STRATEGIES   | LENDING<br>STRATEGIES   | REAL ESTATE<br>STRATEGIES   | CREDIT HF<br>STRATEGIES  | LIQUID SECURITIES  AND INCOME  STRATEGIES  |
|---|---|---|--|--|
| \$18.7 billion AUM <sup>1</sup>   | \$2.4 billion AUM <sup>1</sup>  | \$7.8 billion AUM <sup>1</sup>  | \$5.4 billion AUM <sup>1</sup>   | \$1.7 billion AUM <sup>1</sup>   |
| <ul><li>Closed-end</li></ul>  | <ul><li>Closed-end</li></ul>  | <ul><li>Closed-end</li></ul>  | <ul><li>Open-end</li></ul>   | <ul><li>Open-end</li></ul>   |
| <ul><li>Primarily</li><li>Opportunistic</li></ul>   | <ul><li>Lending</li></ul>   | <ul><li>Primarily<br/>Opportunistic</li></ul>   | <ul> <li>Multi-Strategy Credit</li> </ul>  | <ul><li>Various</li></ul>  |
| <ul> <li>Investments in distressed and undervalued credits / assets across various asset classes</li> <li>Time sensitive or event driven investments where we believe risk is fundamentally mispriced</li> <li>Strategies with specific investment focus</li> </ul> | <ul> <li>Investments primarily in senior secured loans across various differentiated lending sectors</li> <li>Majority of loans were directly originated by Fortress or where we were the lead club arranger</li> </ul> | <ul> <li>Investments in<br/>commercial real<br/>estate in the United<br/>States, Europe, and<br/>Japan</li> </ul> | <ul> <li>Investing in both<br/>private and public<br/>credit across loans,<br/>corporate debt and<br/>securities, portfolios<br/>and orphaned assets,<br/>real estate, and<br/>structured finance</li> </ul> | <ul> <li>Open-end strategies<br/>focused on income-<br/>generating assets<br/>and asset-based<br/>fixed income<br/>securities</li> </ul> |



### Launching Fortress Credit Opportunities Fund V Expansion

Fortress Credit Opportunities Funds seek to make opportunistic investments in distressed and undervalued assets

COVID-19 HAS FUNDAMENTALLY CHANGED THE CURRENT INVESTING ENVIRONMENT CREATING OPPORTUNITIES NOT SEEN FOR OVER A DECADE

- We believe the 24 months following the COVID-19 outbreak will be characterized by three phases of dislocation driven by
  - 1. Forced Liquidation (0 6 months): Margin calls, redemptions, and fire sales
  - 2. Illiquidity (Current Phase: 3 18 months): Short term cash needs and frozen capital markets
  - 3. Reconstruction (12 24 months): Borrowers in need of rebuilding their balance sheets
- FCO V has already begun to capitalize, primarily in asset backed securities and secondary loans, calling a total of 84% of capital to date<sup>1</sup> compared to 35% called as of March 6, 2020

#### LAUNCHING THE FORTRESS CREDIT OPPORTUNITIES FUND V EXPANSION

- We are launching the Fortress Credit Opportunities Fund V Expansion ("FCO V EXP" or the "Fund") to continue to invest in this historic opportunity which will target a gross IRR of at least 20%<sup>2</sup>
- FCO V EXP held its first close in May 2020 and to date has raised \$4.9 billion<sup>3</sup>. We expect a limited fundraise period
- We believe the Fund will invest heavily in the first two phases of dislocation, and LPs who can move quickly will be in a position to benefit

<sup>&</sup>lt;sup>2</sup> The target stated above is a leveraged, gross investment return target and does not take into account the promote, management fees or other expenses. Please refer to the Target Return disclaimer at the end of this Presentation for important information.

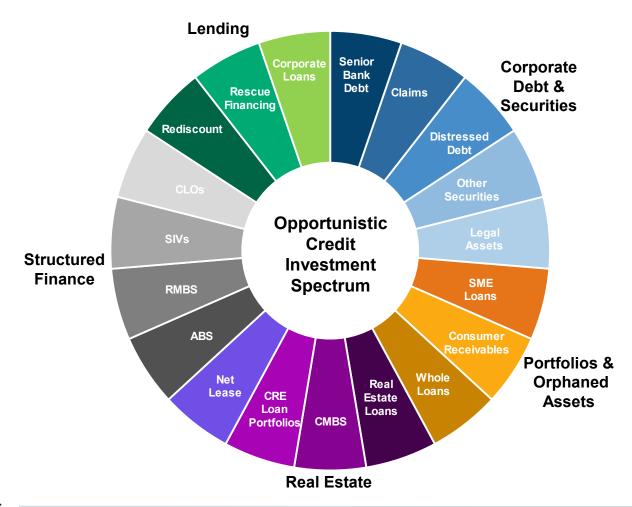




<sup>&</sup>lt;sup>1</sup> Represents gross capital called for FCO V only as of August 27, 2020.

### **Broad Fund Mandate with the Flexibility to Pivot**

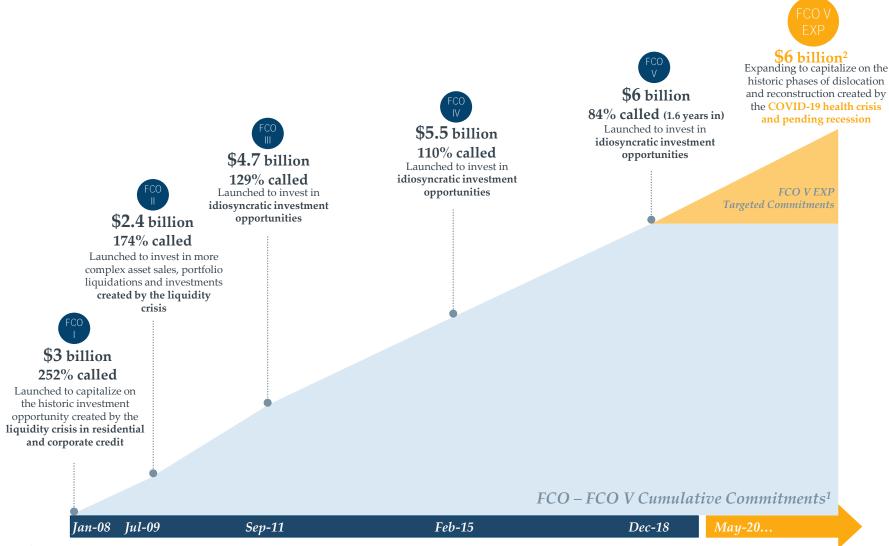
- We view credit as a single broad asset class across five distinct investment strategies: Lending, Corporate Debt & Securities, Portfolios & Orphaned Assets, Real Estate and Structured Finance
- We believe that the greatest potential return rests with the managers with the broadest mandates and with the experience, investment structure, and resources to move opportunistically across the entire credit spectrum





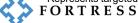
### We Believe FCO Funds Thrive in This Investing Environment

### Fortress Credit Opportunities Funds and related SMAs have total commitments of \$22 billion<sup>1</sup>

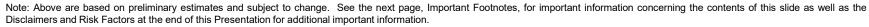


<sup>&</sup>lt;sup>1</sup>Note: Represents capital committed to FCO I-V and related SMAs; Capital called figures above are as of August 27, 2020, includes recallable capital, are for each FCO Fund, respectively, and do not include related SMAs.

<sup>&</sup>lt;sup>2</sup> Represents targeted commitment amounts to be raised by FCO V EXP and related SMAs.



|         | Loungh         | Committed             | Invested              | Estimate<br>3/31/            |                            |                              | arket as of<br>2020 | Cumulative                 | Cumulative<br>Distributions<br>(% of Estimated<br>Total<br>Distributions) <sup>4</sup> |
|---------|----------------|-----------------------|-----------------------|------------------------------|----------------------------|------------------------------|---------------------|----------------------------|--|
|         | Launch<br>Date | Capital<br>(millions) | Capital<br>(millions) | Gross<br>Return <sup>1</sup> | Net<br>Return <sup>1</sup> | Gross<br>Return <sup>2</sup> | Net<br>Return²      | Distributions <sup>3</sup> |  |
| FCO     | Jan 2008       | \$2,259               | \$4,713               | 33.8% (2.4x)                 | 25.4% (2.0x)               | 30.8% (2.3x)                 | 23.1% (1.9x)        | 193%                       | 92%  |
| FCO II  | July 2009      | \$1,378               | \$2,171               | 23.6% (2.2x)                 | 17.4% (1.9x)               | 20.7% (2.0x)                 | 15.1% (1.7x)        | 154%                       | 83%  |
| FCO III | Sep 2011       | \$2,747               | \$3,435               | 16.7% (1.8x)                 | 12.6% (1.5x)               | 13.2% (1.5x)                 | 9.3% (1.3x)         | 116%                       | 74%  |
| FCO IV  | Feb 2015       | \$2,858               | \$3,191               | 15.4% (1.8x)                 | 11.6% (1.6x)               | 8.0% (1.2x)                  | 4.8% (1.1x)         | 42%                        | 23%  |
| FCO V   | Dec 2018       | \$3,948               | \$2,338               | 21.8% (1.7x)                 | 17.1% (1.5x)               | 28.6% (1.1x)                 | 20.3% (1.1x)        | 8%                         | 4%   |
| Total   |                |                       |                       | 25.5% (1.9x)                 | 18.3% (1.7x)               |                              |                     |                            |  |



# FCO Funds Have Delivered Strong Returns | Important Footnotes<sup>B.1.c</sup>

- <sup>1</sup> Estimated returns are through the life of the applicable Fund (including identified estimated funding commitments, where applicable) and have been calculated based on aggregate estimated cash flows of underlying investments allocable to Fortress Credit Opportunities Fund (A) LP, Fortress Credit Opportunities Fund II (A) LP, Fortress Credit Opportunities Fund IV (A) LP, or Fortress Credit Opportunities Fund V (A) L.P. as a whole, as applicable (in each case, a "Fund A Investor"), which are based on a variety of estimates and assumptions by Fortress. There can be no assurance that any such estimates and assumptions will prove accurate, and actual results may differ materially. Estimated returns are presented on a gross basis except where noted and do not factor in the actual timing and amount of capital calls from and distributions to a Fund A Investor. Gross returns are gross of expenses, promote and management fees. Net returns are net of estimated expenses, promote and management fees. Multiples are calculated over commitments for FCO, FCO II, FCO III, and FCO IV and calculated over invested capital for FCO V. Actual returns for any investor may vary depending upon, among other things, the particular fund they are invested in and the date of such investment. Past performance is not a reliable indicator of future results and should not be relied upon as the basis for making an investment decision.
- <sup>2</sup> Mark-to-Market returns are calculated based on the actual timing and amount of aggregate capital calls from and distributions to fee paying Fund A investors and do not factor in the specific timing of cash flows of underlying investments and assume Fund A is liquidated on March 31, 2020 for an amount equal to its aggregate net market values of unrealized investments, cash and other fund assets. Actual returns to individual investors may differ materially due to, among other things, the timing of an investor's commitment, the particular fundlet in which they are invested and related investment structures utilized to address tax concerns, and fee waivers or discounts, if any, to which a particular investor is eligible. Current valuation and performance numbers are unaudited and are subject to change. There can be no assurance that any such investment can be liquidated at the current time or at current valuations. Gross returns are gross of expenses, promote, and management fees. Net Inception-to-Date returns are net of expenses, promote, and management fees. Multiples are calculated over commitments for FCO, FCO II, FCO III, and FCO IV and calculated over invested capital for FCO V.
- <sup>3</sup> For FCO, FCO II, and FCO III cumulative distributions are calculated as a percentage of capital called up until 100%; additional distributions above 100% are then calculated as a percentage of commitments. For FCO IV and FCO V, cumulative distributions are calculated as a percentage of capital called.
- <sup>4</sup> Actual cumulative distributions to date and estimated total distributions over the life of the applicable fund to individual investors may be lower due to the netting of any amounts for investments, fund expenses, promote or management fees against distributions, and may vary based on the particular fund's parallel partnership in which they are invested and related investment structures utilized to address tax concerns, and fee waivers or discounts, if any, to which a particular investor is eligible. Estimated total distributions are through the life of the applicable fund and have been calculated by adding aggregate fund distributions to date to the gross aggregate estimated remaining cash flows from underlying investments.

Note: Past performance is no guarantee of future results and an investment in any Fortress managed fund could lose value. We expect that COVID-19 will have a significant impact on the global economy as well as the Fund's investments. It is still too early to tell what the impact will be, but COVID-19 could have a significant adverse effect on the Fund and the business, financial condition, and results of operations of the Fund's portfolio investments. The trajectory of the spread of COVID-19 will determine the ultimate impact. You are cautioned against using the performance data presented herein for the purpose of making an investment decision. Please also note that no previous success by Fortress in dislocated markets is any guarantee of success in respect of investing and managing any portfolio investment during and post-the COVID-19 pandemic.

# **The Fortress Advantage**





# We Believe Fortress Is Uniquely Positioned to Participate in the Disfocation

#### WORLD CLASS INFRASTRUCTURE



### 165-PERSON GLOBAL INVESTMENT TEAM<sup>1</sup>

The Fund's investment committee members have been at Fortress for an average of 12 years and have actively invested and navigated multiple financial cycles



### SEASONED STRUCTURING CAPABILITIES

With a core underwriting philosophy to protect the downside



### BROAD FUND MANDATE

Allowing the flexibility to pivot between liquid and illiquid investments across asset classes and structures



### PRUDENT LEVERAGE

Driven by a core philosophy of asset/liability management, the Fund is expected to utilize non-recourse, non mark-to-market asset specific financing



### 115-PERSON ASSET MANAGEMENT TEAM<sup>1</sup>

Seek to identify problems early, minimize defaults and maximize recovery



### Global Investment and Asset Management Teams<sup>1</sup>

Fortress's extensive platform positions the Credit Funds team to purchase and manage assets globally



#### Fortress Credit Funds Team<sup>1</sup>

- Approximately 500 professionals across 14 offices globally (North America, Europe, Asia and Australia)
  - Approximately 165 investment professionals with a long track record of investing throughout distressed cycles around the world
  - Approximately 115 asset management professionals who help identify potential risks and issues early; enables implementation of strategies and action plans designed to maximize value of investments
- Invested over \$130 billion of capital since its launch in 2002, over \$100 billion of which
  was invested since the 2008 credit crisis
  - Completed thousands of transactions since 2002

### Fortress' Global Servicing Footprint<sup>1,2</sup>

#### \$200 billion+

Assets serviced by Fortress owned entities

10,000+

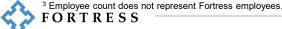
Employees at servicers where Fortress has equity ownership<sup>3</sup> ~10

Countries where assets are serviced

~20

Third party servicers utilized by Fortress

<sup>&</sup>lt;sup>2</sup> Certain servicers are owned by affiliates of Fortress-managed funds, including Fortress Private Equity Funds, and operate on a stand-alone basis and are independently capitalized and managed and includes servicers in which Fortress managed funds hold a minority, non-controlling equity interest, warrants or convertible debt interest. As a result, these companies are subject to potential divestment and there can be no assurance that any of these servicers will remain a Fortress affiliate or continue to be owned by Fortress managed funds.



<sup>&</sup>lt;sup>1</sup> Fortress Investment Group LLC, taken together with its advisory affiliates is defined together as "Fortress"; as of June 30, 2020.

## **Broad Servicing Relationships**

| Aircraft, Auto, Equipment &<br>Ship   | Commercial, Industrial &<br>Equipment  | Energy  | TruPS  |
|---|--|---|--|
| <ul> <li>✓ Falko Regional Aircraft</li> <li>✓ DASI</li> <li>✓ doValue</li> <li>✓ LoanMart</li> <li>✓ MicroFinancial</li> <li>Clipper</li> <li>Consumer Portfolio Services</li> <li>Florens</li> <li>Nostira</li> <li>Westlake</li> </ul>  | ✓ doValue ✓ MicroFinancial ✓ Proprietary   | ✓ IOG Capital  ■ Nostira  | <ul> <li>Taberna CDOs</li> <li>Taberna Europe CDOs</li> </ul>  |
| Asia Pacific / Europe   | Commercial Real Estate   | Residential   | Unsecured  |
| <ul> <li>✓ Adaxio AMC GmbH/CMIS</li> <li>✓ Blue Horizon Asset Management Co., Ltd.</li> <li>✓ doValue</li> <li>✓ Falko Regional Aircraft</li> <li>✓ FRE Asset Management KK</li> <li>✓ MyStays Hotel Management</li> <li>✓ Paratus AMC Limited</li> <li>✓ Vannin Capital</li> <li>✓ Village House Management</li> <li>✓ Proprietary</li> <li>AIQLABS</li> <li>Grifon Capital</li> <li>Intrum Oy</li> <li>Nostira</li> <li>Taberna CDOs</li> </ul> | ✓ 360 CB Realty ✓ CW Financial ✓ doValue ✓ Proprietary ■ Cohen Asset Management ■ Cortland Capital ■ Lucid ■ Midland ■ Wells Fargo | ✓ Adaxio AMC GmbH/CMIS ✓ Cardinal ✓ doValue ✓ Kairos Living ✓ Paradigm Quest ■ Pendulum Associates ■ TowerTax | <ul> <li>✓ Credit Shop LLC</li> <li>✓ doValue</li> <li>✓ LoanMart</li> <li>✓ Mogo</li> <li>✓ Uplift, Inc.</li> <li>■ American First Finance</li> <li>■ Asset Recovery Solutions, LLC</li> <li>■ Axcess Financial</li> <li>■ BlueVine Capital</li> <li>■ Canaccede</li> <li>■ Connect America</li> <li>■ Systems &amp; Services Technologies, Inc.</li> </ul> |

Note: As of June 30, 2020. Each servicer operates on a stand-alone basis and is independently capitalized and managed.

■ Indicates contractual relationship (including CDO collateral management agreements) or joint venture by one or more Fortress managed funds.



<sup>✓</sup> Indicates direct or indirect ownership interest (including minority, non-controlling equity interests, warrants or convertible debt interests) by one or more Fortress managed funds, including Fortress Private Equity Funds, which are subject to potential divestment. "Proprietary" represents in house Fortress servicing capabilities.

### THE FUND'S INVESTMENT COMMITTEE MEMBERS HAVE BEEN AT FORTRESS FOR AN AVERAGE OF 12 YEARS

| Pete Briger<br>Managing Partner  | <b>Dean Dakolias</b><br>Managing Partner | <b>Drew McKnight</b> Managing Partner  | <b>Joshua Pack</b><br>Managing Partner |
|--|--|--|--|
|  | OTHER INVESTMENT                         | COMMITTEE MEMBERS  |  |
| <b>Rahul Ahuja</b><br>Managing Director – Credit Funds<br>European Credit              |  | Ahsan Aijaz<br>Managing Director – Credit Fu<br>Net Lease Assets             | nds                                    |
| <b>Leslee Cowen</b><br>Managing Director – Credit Funds<br>Corporate Debt & Securities |  | <b>Avner Husen</b> Managing Director – Credit Fu Asset Based Securities      | inds                                   |
| <b>Mike Fallacara</b><br>Managing Director – Credit Funds<br>Residential Assets        |  | Marc Furstein<br>President – Credit Funds                                    |  |
| <b>Chris Linkas</b><br>Managing Director – Credit Funds<br>European Credit             |  | <b>Jason Meyer</b><br>Chief Operating Officer – Cred                         | lit Funds                              |
| Jack Neumark<br>Managing Director – Credit Funds<br>Special Situations & Legal Assets  |  | Mario Rivera Managing Director – Credit Fu Asset Based Securities            | ınds                                   |
| <b>Tim Sloan</b><br>Senior Advisor to Fortress Investment Gro                          | pup                                      | Brian Stewart  Managing Director – Credit Fu  Corporate Lending & Structured |  |



# **Our Current Playbook**





# PHASE I: FORCED LIQUIDATION

# PHASE II: ILLIQUIDITY

# PHASE III: RECONSTRUCTION

#### 3 **–** 18 Months 12 **–** 24 M

As capital markets freeze, recession sets in, and traditional capital sources dry up, borrowers will need to rebuild their balance sheets creating an opportunity to lend to high quality companies with predictable cash flows financing solutions

Once the economy normalizes, borrowers will need to rebuild their balance sheets creating an opportunity to lend to high quality companies with predictable cash flows

#### 0 **–** 6 Months

Similar to late 2008, we've seen margin calls and panic selling of otherwise stable securities at significant discounts in a move to cash as a strong preference for liquidity remains among institutional and retail investors

- Discounted Broadly Syndicated Bank Loans
- Discounted High Yield Bonds
- Discounted CLO Tranches
- Fund / Manager Liquidations
- Discounted ABS
- Stimulus Driven Financings

#### POTENTIAL INVESTMENTS

- Rescue Financing
- Hard Money Loans
- Acquire Failed Warehouses / Securitizations
- Purchase Discounted Assets to Generate Liquidity for Seller
- Opportunistic Sale Leasebacks

- Hibernating Business "Restart" Funding
- Exit Facilities
- Distress Debt Acquisitions
- Orphaned Fund Clean-up
- Debt for Equity Exchanges
- Loan Portfolio Purchases



### **Phase I: Forced Liquidation** | We've Seen this Movie Before

Phase I: Forced Liquidation was in full force and created a narrow window of *short-lived* opportunities similar to what we saw in 2008 through 2009

|                                |   | •   |  |  |
|--------------------------------|---|---|--|--|
|                                | RMBS  | CMBS  | OTHER ABS  | SECONDARY SECURITIES   |
| CATALYST                       | offload o   | credit markets caused an incitation therwise stable senior loans and an immediate opportunity for   | and securities at significant  | discounts,   |
| ASSET<br>SPECIFIC<br>CATALYSTS | Concerns increasing on<br>borrowers' ability to repay<br>as they experience financial<br>hardship. May result in<br>widespread modification<br>programs which will delay<br>cashflows and potentially<br>overwhelm loan servicers | Commercial real estate prices in the public markets were in deep distress given the potential impact of social distancing creating panic and forced selling | Extreme shift in demand<br>for industries like aviation,<br>hospitality, consumer<br>created a repricing of risk,<br>causing sellers to shed<br>assets at deep discounts<br>given a lack of buyers | Daily liquidity funds<br>meeting redemptions,<br>dislocation in the ETF<br>market creating arbitrage-<br>based selling, and credit<br>funds selling highest dollar<br>assets first |
| SELLERS                        | <ul><li>Mortgage REITs</li><li>Structured Product<br/>Hedge Funds</li><li>Daily Mutual Funds</li></ul>  | <ul><li>Mortgage REITs</li><li>Structured Products<br/>Hedge Funds</li></ul>  | <ul><li>Insurance Companies</li><li>Hedge Funds</li></ul>  | <ul><li>Loan Financing Facility<br/>Holders</li><li>Mutual Funds</li><li>ETFs</li></ul>  |
| FORTRESS<br>APPROACH           | Buy seasoned pools of unlevered mortgage loans where we seek to create a large discount to the underlying loan values   | Buy high quality assets where we have intimate knowledge of the collateral. Stay in the senior mortgage part of the capital structure                       | Focus on super senior parts of the capital structure. Seek discounted price to absorb downside draconian scenarios   | Opportunistically purchase loans we believe are relatively well protected against the COVID-19 economic impact   |



### **RMBS** | Liquidating Mortgage REIT<sup>1</sup>

# Acquisition of a diversified portfolio of seasoned RMBS from a Mortgage REIT that needed to sell down assets due to overwhelming margin calls

- During the 2-week period of March 16<sup>th</sup> to March 27<sup>th</sup>, 2020, Mortgage REITs faced heavy margin call pressure from their repo counterparties due to quickly expanding risk premiums across their investment book
- Supply significantly elevated particularly in seasoned legacy RMBS trusts; these are bonds that were issued over a
  decade ago and consist of long-term homeowners who have significant payment history
- FCO V, along with other Fortress managed funds, was able to transact with one of these liquidating REITs and purchased \$1.9 billion face value across 429 different securities with an average purchase price of 54% (\$1.0 billion invested). The market value of the portfolio on January 31<sup>st</sup> was 45% higher than our purchase price
- We also negotiated the ability to purchase that REIT's Call Rights which enable the holder to collapse the trust, sell-off its collateral and pay-off securities sooner. The REIT owned these rights on approximately 90% of the portfolio

### Portfolio Characteristics

| WA Collateral Detai | ils       | WA Performance |      |  |
|---------------------|-----------|----------------|------|--|
| Avg Loan Size       | \$176,838 | % 2yr Perfect  | 72%  |  |
| WAC                 | 4.64%     | 60+ DQ         | 14%  |  |
| Est. LTV            | 54.3      | Prepay Rate    | 6.7  |  |
| # of Loans          | 804       | Default Rate   | 3.3  |  |
| Age (yrs)           | 14.0      | Severity       | 60.7 |  |
| WA FICO             | 636       |                |      |  |



### **CMBS** | Parkmerced Senior Mortgage<sup>1</sup>

# Opportunity to purchase a portion of the senior mortgage secured by a high quality Bay Area multi-family project due to forced selling from REITs and liquidity strapped hedged funds

- Forced selling in the middle of March forced several entities into a "sell anything" mode and liquidated many
  high quality CMBS assets including this Single Asset deal backed by Parkmerced the 2<sup>nd</sup> largest MF in California
- The Fortress Credit Team is familiar with this property, having purchased it in 2010 and selling it in 2014
  - Asset has potential upside through a combination of development rights and gradual rent escalation
- FCO V, along with other Fortress managed funds, purchased \$135.3 million face value of various tranches of the first mortgage at an average purchase price of 79.1% (\$107 million invested)
  - The senior mortgage today attaches at \$1.18 billion (56% LTV) and a 5.2% cap rate and \$366,346 / unit

### High Level Metrics<sup>2</sup>

|           | 2013     | 2014     | 2015     | 2016     | 2017     | 2018     | 2019     | Debt U/W |
|-----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Occupancy | 96.0%    | 96.0%    | 91.0%    | 88.0%    | 90.0%    | 90.0%    | 94.2%    | 94.3%    |
| NOI       | \$41.8mm | \$45.1mm | \$45.7mm | \$44.2mm | \$49.6mm | \$53.7mm | \$55.8mm | \$60.5mm |

### **Property Details**

Potential upside to Sponsor through rent escalations over time with ~25% of tenants at below-market rents (about 75% of market)

| # Units          | 3,221      | Average Rent   | \$2,533 |
|------------------|------------|----------------|---------|
| # Residents      | 10,000+    | Market Rent    | \$3,391 |
| Acreage          | 152        | % Below Market | 24.4%   |
| Avg. Size / Unit | 955 Sq. Ft |                |         |

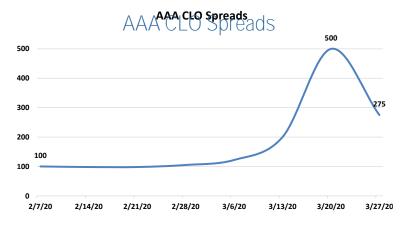
<sup>&</sup>lt;sup>1</sup> As of March 31, 2020.

<sup>&</sup>lt;sup>2</sup> Historical metrics provided by the seller.

### Other ABS | Antares AAA CLO<sup>1</sup>

Off-market situation to purchase the most senior tranche (AAA-rated) of a middle market credit manager due to overnight selling led by redemptions from asset managers

AAA CLOs were widening significantly during the week of March 16th increasing by as much as 400bps



- Redemption-related selling was frequently conducted overnight or on the weekends during this time and a pension fund was selling a AAA-rated middle market CLO which benefitted from 40%+ credit enhancement
- FCO V, along with other Fortress managed funds, purchased \$15 million face value at an average purchase price of 77.0% (\$11.6 million invested)

### **CLO Transaction Characteristics**

| Manager                     | Antares | AAA Coupon         | 3mL+175  |
|-----------------------------|---------|--------------------|----------|
| Credit Enhancement          | 43%     | Reinvest Date      | Jan 2024 |
| COVID-Impacted <sup>2</sup> | 5%      | Optional Call Date | Jan 2022 |
| WA Spread                   | 466     |                    |          |

<sup>&</sup>lt;sup>1</sup> As of March 31, 2020.



<sup>&</sup>lt;sup>2</sup> COVID-impacted industries based on Fortress' internal estimates.

### **Secondary Loans** | BSL Purchases

# In March 2020, FCO V actively purchased broadly syndicated loans in names that we believe are relatively well protected against the COVID-19 economic impact

- Opportunity emerged in the syndicated loan space when macro stress combined with daily liquidity needs by funds created attractive entry points in first lien debt
- Between March 11<sup>th</sup> and March 19<sup>th</sup>, the LSTA index experienced four of the five largest single day selloffs in history, the largest 7-day price move in history by multiple points, and was on pace for the worst month in history before prices stabilized during the final week of the month<sup>1</sup>
- Since March 19, 2020, FCO V has purchased \$164 million face value across 36 investments with an average purchase price of approximately 80% (\$130 million invested)

#### **Characteristics of Recently Purchased BSL Portfolio:**

BI FNDFD YIFI D-TO-MATURITY: 11.6%

٠,

COUPON RANGE: L+ 225 bps to L+525 bps

• WEIGHTED AVERAGE PURCHASE PRICE: 80%

WEIGHTED AVERAGE SPREAD: L+ 3.61%

AVERAGE TRANCHE SIZE: \$1.6 billion

AVERAGE LIBOR FLOOR: 64 bps

BSL Portfolio Industries

NON-DISCRETIONARY HEALTHCARE NON DURABLE CONSUMPTION GOODS

RECURRING B2B SOFTWARE

**TELECOM** 

**INSURANCE** 

**PACKAGING** 

CABLE

UTILITIES

### Senior Secured Loan to a Distressed Mortgage REIT

Senior Secured Loan to a distressed mortgage REIT to pay down repo debt and bolster cash balances for future cash flow needs and accretive acquisitions

- Mortgage REITs became severely liquidity constrained during March and April due to margin calls from bank repo lenders causing the equity to trade at a substantial discount to book value
- Q1 reporting for mREITs showed stabilized, albeit lower book values but a continued need for capital to manage future liquidity demands and new acquisitions
- Fortress managed funds participated in a \$600 million senior secured loan backed by a REIT's entire equity in various asset investments. The loan was almost 10x covered on the book value of those assets and 3.6x covered on a stressed valuation basis
- The 3-year loan was priced at 11%, 1 point OID and came with 50% warrant coverage. Half of the warrants were struck at-the-money and the other half at 130% of today's value
- The investment represents a secured way to participate in the equity recovery of mREITs. We assume warrants are monetized at various price to book ratios at 3-year maturity

### NAREIT Mortgage REIT Index - Price to Book Ratio



### REIT Book Value Composition (\$b)

| Asset Type          | Assets  | Debt      | Net Equity | Stress<br>Val |
|---------------------|---------|-----------|------------|---------------|
| MSRs                | \$6.06  | \$(3.85)  | \$2.21     | \$0.18        |
| Servicing Advances  | \$3.52  | \$(2.96)  | \$0.56     | \$0.56        |
| RMBS                | \$2.93  | \$(1.90)  | \$1.03     | \$0.47        |
| Whole Loans         | \$2.11  | \$(1.71)  | \$0.40     | \$0.24        |
| Net Cash / Other    | \$7.32  | \$(5.60)  | \$1.72     | \$0.72        |
| Total               | \$21.93 | \$(16.00) | \$5.93     | \$2.18        |
| Coverage to \$600mm | 9.9x    | 3.6x      |            |               |

### Sur La Table Senior Secured Loan<sup>1</sup>

#### Acquisition of a senior secured loan to Sur la Table

- In June 2020, we acquired a private senior secured loan to Sur La Table from a BDC at a substantial discount to par through a proprietary sourcing relationship in an off market transaction
- Sur La Table is a leading retailer with brand authority with home chefs operating retail stores, e-commerce and cooking classes
- Sur La Table struggled in a deteriorating bricks and mortar retail environment. The highly profitable in-store cooking classes came to a halt in the COVID shutdown leading to financial distress and the decision to file bankruptcy



#### **Investment Overview**

- The investment thesis supporting the loan acquisition had several components:
  - The purchase price represented liquidation value of the intellectual property which resulted in an option with limited downside risk to own the business as we developed an operating plan
  - Increasing consumption of food at home in the post-COVID environment has led to sustainable increased demand in the cooking category and the cooking classes are well positioned to capitalize on the trend
  - Distress in the mall/retail sector we believe would provide the opportunity for 40%+ rent savings after filing bankruptcy. Landlords are desperate to keep tenants that offer in person experiences to drive traffic
- We developed a relationship with a leading multi channel luxury retailer that had previously attempted to acquire the Company, and partnered with them to create value and de-risk the investment
- After buying the loan we agreed to acquire the business with a credit bid and were selected as the stalking horse bidder in the Company's bankruptcy sale process. Two other bidders were later qualified to bid at the auction. The result of the auction was a sale to one of the other bidders and the loan being paid off in full with accrued interest and fees. While we were confident in our plan to own the business we were uncomfortable with the increased valuation and were satisfied to fully realize a par payoff roughly just 60 days later

# **Future Investment Opportunity**





### The Leveraged Loan Markets Experience Historic Volatility

We see the outbreak of COVID-19 and the ensuing disruption of the global economy as a historic opportunity to buy quality assets at steep discounts



Outflows of nearly \$10 billion in March Amid Global Volatility, 2nd Highest in the Last 5 years



## Economic Volatility is Also Unprecedented and Expected to Continue

Real unemployment rate soars past 20%— and the U.S. has now lost 55.3 million jobs

55,321,000 Jobs lost in the last twenty weeks 7mm The Industries at Risk Have Huge Payrolls -U.S. Job Losses to 16.8 million in Total Persons Employed<sup>2</sup> **Mount With Small Firms Running on Fumes** -Bloomberg, August 5, 2020 (6)H1)H1 Restaurants and Bars 11.9mm employed \$309bn Nearly half of all furloughed workers now believe their Hotels and Other Lodging 2.0mm \$87bn temporary layoff will 5mm become permanent -CNBC, Augustt 3, 2020 Performing Arts, Sports and Museums 0.7mm \$63bn U.S. economy contracted at fastest Air Transportation 0.5mm \$59bn 4mm quarterly rate on record from April to June as coronavirus walloped workers, businesses Amusements, Gambling and Recreation 1.7mm \$56bn - Washington Post, July 30, 2020 31111111 **OCED** said unemployment rates A second Great Depression? around the world will not return In just a few months, the roughly Unemployment crisis hits big to their pre-pandemic levels until 50 million unemployment claims cities hard filed during the coronavirus at least 2022 2mm-CNBC, July 21, 2020 pandemic have far surpassed the - Wall Street Journal, July 7, 2020 37 million during the 18-month **Great Recession** Fed officials warn on 'thick fog' - Business Insider, July 9, 2020 ahead for U.S. economy as RECESSION 1mm recovery concerns deepen -Reuters, July 14, 2020 mnm 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

<sup>&</sup>lt;sup>1</sup> Latest data as of August 18, 2020, represents weekly initial unemployment claims. Source: FRED. <sup>2</sup> Represents 2018 compensation and full and part time employees for 2018. Source: Bureau of Economic Activity.



of Claims for Unemployment Insurance

### **Anatomy of a Cycle** | Fortress is an All Seasons Credit Investor

Fortress is an "all seasons" investor that we believe has the range / expertise to capitalize on the below phases and a senior team that's been investing together since the last crisis in 2008

PHASE I: PHASE II: PHASE III: **FORCED LIQUIDATION PROSPERITY** ILLIQUIDITY RECONSTRUCTION Focus: Public Markets Focus: Public & Private Markets Focus: Private Markets FCO III - IV, V FCO I - II, V - V EXP FCO I - II, V - V EXP FCO I - IV, V - V EXP Ability to source and underwrite Deep understanding of the value of Expertise to underwrite complex Recapitalization experience with the idiosyncratic investments; manage the underlying collateral and capital structures and complicated ability to identify companies we pivot risk structural expertise to navigate investments which attract few believe are undervalued due to bondholder rights buyers complexity or illiquidity Case Study: 2009 Case Study: 2009-2010 Case Study: 2014-2020 Case Study: 2008-2009 \$200mm<sup>4</sup> APFN Credit \$300mm+1 GMAC European \$2.3bn1 Legal Assets Portfolio \$6.5bn<sup>3</sup> RMBS Purchases Facility Mortgage Business Case Study: 2009 Case Study: 2008-2010 Case Study: 2011 Case Study: 2003-2020 \$1.1bn<sup>3</sup> U.S. Residential \$670mm<sup>4</sup> Madoff Tremont \$230mm+1 CIT \$12.2bn<sup>2</sup> Net Lease Portfolio DIP Loans, Secondary Bonds, Whole Loan Portfolio Loan Private Student Loan Portfolio ECONOMIC CYCLE NORMAL **WE ARE HERE** 

FORTRESS

<sup>&</sup>lt;sup>1</sup> Represents equity invested

<sup>&</sup>lt;sup>2</sup> Represents total transaction size including JV partner participation, if any

<sup>&</sup>lt;sup>3</sup> Represents total face amount purchased

<sup>&</sup>lt;sup>4</sup> Represents total loan facility amount

Note: Figures above represent amounts invested or purchased by Fortress Credit Opportunities Funds and other Fortress managed funds that participated in such investments. Please refer to the Estimated Returns and Forward Looking Statements disclaimers at the end of this Presentation.

### **Investment Opportunity by Sector**



### CORPORATES



### **ENERGY**



#### EUROPE

- Good companies with bad balance sheets
- Predictable cash flows which reduce basis
- Complicated restructurings in which risk is misunderstood
- Replacement capital provider
- Examples: CIT, ACAS, APEN, GM Nova Scotia
- Focus on production, with capital protected through hedge period
- Increase exposure to quality assets if indiscriminate selling materializes
- Midstream and power, valued through conservative assumptions
- Examples: Titanium, Casillas, T1 Power

- European bank selling of quality assets
- Replacement capital provider
- Large sourcing network and boots on the ground
- Examples: Realia, Zinc, Danaos, Solar Assets, Astaldi



### LEGAL ASSETS

- More litigation in recessionary environment
- Offer companies liquidity by monetizing litigation claims
- Competitive landscape may ease as hedge funds re-focus on core strategy
- Examples: MagCorp, Madoff Claims, European Telecommunications Company



#### **NET LEASE**

- Direct sale-leaseback with corporations as CFOs and Treasurers seek alternative sources of liquidity
- Sale-leasebacks to facilitate merger and acquisition transactions
- Purchasing assets from stressed noninstitutional sellers and REITs to lower their risky tenant exposure
- Examples: IHOP / Applebee's, Church's Chicken, Marsh Supermarkets, Westinghouse

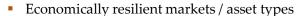


### NON-PERFORMING LOANS

- Focus on target markets where Fortress has an edge
- Wait out liquidity-driven sellers including banks and secondary owners that are behind on collections
- Examples: GMAC, Lico, Realia



### REAL ESTATE



- Developers focusing on workforce and affordable housing that need construction or bridge financing
- Buying debt at discounts from banks that need liquidity
- Examples: Zia Denver, Midtown Row, Brookview



#### REDISCOUNT

- Partner with longstanding servicing partners to purchase orphaned / distressed portfolios
- Lenders over their skis that lack experience and asset management infrastructure
- Examples: Condor / Wingspan Auto, Fireside



#### TRANSPORTATION

- Offer liquidity to known quality operators
- Existing partnerships create a proprietary sourcing network
- Opportunistically acquire assets at attractive levels
- Examples: Falko Regional Aircraft, Clipper, DASI



#### FORTRESS

# LIQUID SECONDARY STRESSED & DISTRESSED OPPORTUNITIES

# Actively acquiring liquid debt on businesses in the following industries:







Sports & Live Entertainment

Equipment & Apparel for Schools

Healthcare

Media & Entertainment

✓ REITs

#### LIQUID ABS OPPORTUNITIES

# Actively buying the following types of securities:

✓ EETC Securities

✓ Whole Business Securitizations

✓ SASB Securities

✓ CMBS

# Investment Pipeline | Current Illiquid Opportunities<sup>1</sup>

| Investment<br>Category                          | Est. Total<br>Transaction<br>Amount (mm) | Est.<br>Fortress<br>Amount (mm) | Description  |  |  |  |
|---|--|---------------------------------|--|--|--|--|
| Corporate Loan<br>Origination                   | \$845                                    | \$50                            | Distressed secondary purchase of a loan to leading provider of media and marketing solutions in the college athletics industry                             |  |  |  |
|   | \$100                                    | \$100                           | Hedge fund rescue financing with upside participation  |  |  |  |
|   | \$75                                     | \$75                            | Loan and warrants secured by the IP/contracts of an international celebrity  |  |  |  |
| Legal Assets                                    | \$510                                    | \$510                           | Secured loan to JV owned by two large-cap European companies secured against legal awards  |  |  |  |
|   | \$200                                    | \$200                           | Debt and equity investment in specialty finance platform originating insurance and legal-related assets in US and Europe                                   |  |  |  |
|   | €75                                      | €75                             | Acquisition of a corporate litigation portfolio owned by a large, publicly traded construction company headquartered in Europe                             |  |  |  |
|   | \$50                                     | \$50                            | Secured loan to a consumer litigation law firm secured by fee and expense receivables in a \$10 billion plus settlement with an international conglomerate |  |  |  |
|   | €40                                      | €40                             | Acquisition of a corporate litigation portfolio owned by a large European based electricity and gas company  |  |  |  |
|   | \$45                                     | \$45                            | Secured loan to finance a top 10 global law firm's U.S. contingency fee business   |  |  |  |
|   | \$2,000                                  | \$600                           | Sale-leaseback of a portfolio of convenience stores to a national c-store chain  |  |  |  |
|   | \$1,800                                  | \$540                           | Build to suit industrial opportunity in e-commerce   |  |  |  |
| Net Lease                                       | \$800                                    | \$320                           | Sale-leaseback of a portfolio of supermarkets from a regional chain  |  |  |  |
|   | \$75                                     | \$25                            | Acquisition of an existing industrial building leased to a credit tenant   |  |  |  |
|   | \$75                                     | \$35                            | Acquisition of a portfolio of real estate leased to convenience store and retail tenants   |  |  |  |
| Preferred and<br>Common<br>Equity<br>Securities | \$325                                    | \$125                           | Acquisition of a c-store portfolio   |  |  |  |
|   | \$250                                    | \$200                           | Acquisition of a regional supermarket chain  |  |  |  |
|   | \$125                                    | \$50                            | Acquisition of a real estate heavy convenience store chain   |  |  |  |
|   | \$50                                     | \$50                            | Preferred investment in a tower business   |  |  |  |
|   | \$30                                     | \$30                            | Senior secured loan and warrants to an MSS provider  |  |  |  |

<sup>&</sup>lt;sup>1</sup> As of August 18, 2020. Investment amounts are estimates and the allocations to Fortress managed funds are subject to change. There can be no assurance that transactions described above will ultimately be consummated, or that any such transaction will be allocated to any specific Fortress managed fund.

# **Summary of Selected Terms**





| Fund:                              | Fortress Credit Opportunities Fund V Expansion             |  |  |  |
|------------------------------------|--|--|--|--|
| Target Return:                     | Gross IRR of at least 20% <sup>2</sup>                     |  |  |  |
| Commitment Period:                 | April 30, 2023 (Consistent with FCO V) <sup>3</sup>        |  |  |  |
| Investment Term:                   | April 30, 2029 (Consistent with FCO $V$ ) <sup>4</sup>     |  |  |  |
| Minimum Commitment:                | \$10 million   |  |  |  |
| Management Fee:                    | 1.5% on <u>invested</u> equity per annum <sup>5</sup>      |  |  |  |
| Commitment Fee:                    | None   |  |  |  |
| Preferred Return:                  | 8%   |  |  |  |
| GP Catch-up:                       | 50% / 50%  |  |  |  |
| GP Promote:                        | 20%  |  |  |  |
| Transaction, Advisory, Other Fees: | Applied 100% to offset management fees payable by the Fund |  |  |  |

<sup>&</sup>lt;sup>5</sup> Additional fee discount available for Class A-1 Investors with commitments greater than \$100 million to the Fund, and commitments to the Fund plus predecessor Fortress Credit Opportunities Funds that equal or exceed \$500 million. Please refer to the Fund's offering documents for additional information on the management fee and management fee calculation.



<sup>&</sup>lt;sup>1</sup> The summary above is subject to change and does not contain complete information regarding the FCO V Exp's terms, and is subject to and qualified in its entirety by the information contained in FCO V Exp's offering documents, including without limitation, the confidential private placement memorandum (as amended, restated and/or supplemented from time to time, the "FCO V EXP PPM") and limited partnership agreement (as amended and/or restated from time to time, the "FCO V EXP LPA"), a copy of which is available upon request and which should be reviewed prior to making any investment in FCO V EXP.

<sup>&</sup>lt;sup>2</sup> The target stated above is a leveraged, gross investment return target and does not take into account the promote, management fees or other expenses. Actual net returns to investors will be lower as a result of these expenses. The target returns are premised on a number of factors, please refer to the Target Return disclaimer at the end of this Presentation for more information.

<sup>&</sup>lt;sup>3</sup> The Fund's commitment period expires on the earlier of i) April 30, 2023 and ii) the expiration of the commitment period of Fortress Credit Opportunities Funds V ("FCO V"). Note that the FCO V commitment period may be terminated earlier than April 30, 2023, following the departure of certain key persons with respect to FCO V or on a date determined by the general partner of FCO V.

<sup>&</sup>lt;sup>4</sup> The Fund's term expires on the later of i) April 30, 2029 and ii) the expiration of the term of FCO V. The term of FCO V expires on April 30, 2029, but may be extended for up to two consecutive one-year periods, subject to approval by the FCO V advisory board.

- A. Select Investment Examples
- B. Biographies
- C. Disclaimers and Risk Factors



# **Appendix A** | Select Investment Examples



Investment examples. Unless otherwise noted, the Investment Examples represent investments that were made, in whole or in part, by FCO, FCO II, FCO III, FCO IV and/or FCO V. The Investment Examples included herein do not comprise the entire FCO, FCO II, FCO III, FCO IV, or FCO V portfolios which are available upon request. Investment Examples included in the Presentation are intended to serve as a non-exhaustive set of examples of the types of investments that could be made in the Fund but are not themselves investments of the Fund. There can be no assurance that the Fund will make any investments with the same or even similar characteristics as the Investment Examples presented. The Investment Examples are presented for discussion purposes only and are not a reliable indicator of the likely performance or investment profile of the Fund or any investment to be made in the Fund. Notwithstanding any analysis included in the Presentation, it is possible that each of the Investment Examples could result in a total loss of any invested capital.

Forward looking statements. Forward looking statements (including estimates, opinions or expectations about any future event) contained in the Presentation are based on a variety of estimates and assumptions by Fortress, including, among others, estimates of future operating results, the value of assets and market conditions at the time of disposition, and the timing and manner of disposition or other realization events. These estimates and assumptions are inherently uncertain and are subject to numerous business, industry, market, regulatory, geo-political, competitive and financial risks that are outside of Fortress' control. There can be no assurance that any such estimates and assumptions will prove accurate, and actual results may differ materially, including the possibility that an investor may lose some or all of any invested capital. The inclusion of any forward looking statements herein should not be regarded as an indication that Fortress considers such forward looking statement to be a reliable prediction of future events and no forward looking statement should be relied upon as such. Neither Fortress nor any of its representatives has made or makes any representation to any person regarding any forward looking statements and none of them intends to update or otherwise revise such statements to reflect circumstances existing after the date when made or to reflect the occurrence of future events, even in the event that any or all of the assumptions underlying such forward looking statements are later shown to be in error.



# **Select Investment Examples** | Table of Contents

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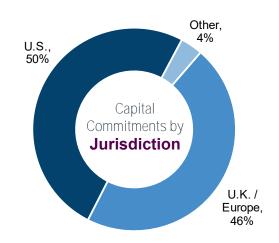


## **1. Legal Assets Portfolio** | Overview<sup>1</sup>

- Legal Assets provides capital solutions to law firms, corporations, specialty finance companies, plaintiffs and defendants, and other parties involved in litigation, regulatory, or other legal processes
- As of December 31, 2019, the Legal Assets portfolio was comprised of 36 investments across six primary asset types<sup>2</sup>:
  - CORPORATE LITIGATION PORTFOLIO TRANSACTIONS: Investments in portfolios of legal claims owned by large public or private corporations
  - Acquisitions of interests in, or loans secured by, court judgments, arbitration awards, or settlements that are subject to future legal processes
  - SINGLE-CASE LITIGATION FUNDING: Funding of legal fees or costs of large individual commercial litigations on a non-recourse basis

- LAW FIRM INVESTMENTS: Investments in law firms with litigation practices, typically in the form of a loan secured by the firm's contingency fees
- SETTLEMENT / AWARD MONETIZATIONS OR FINANCINGS:
   LEGAL-RELATED SPECIALTY FINANCE COMPANY INVESTMENTS: Investments in specialty finance companies that originate legal assets, e.g. litigation funders
  - LIQUIDATIONS: Financing or purchasing claims in bankruptcies where the primary driver is litigation
- Our exposure to legal claims is diversified across the six asset types with a focus in the U.S. and Western Europe





Please refer to the important Forward Looking Statements disclaimers on the front page of this section.



<sup>&</sup>lt;sup>1</sup> Includes closed transactions and committed transactions as of December 31, 2019.

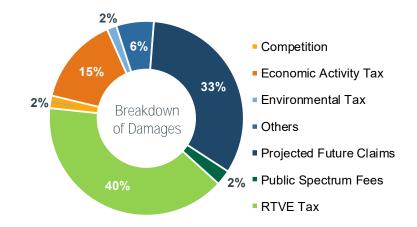
<sup>&</sup>lt;sup>2</sup> Investments made across Fortress managed funds.

# 1. Legal Assets Portfolio | European Telecommunications Compan y 1.c

€187.85 million structured trade with a publicly traded European telecommunications company, recourse to i) €1.5 billion in existing litigation claims plus ii) all claims accruing in the next 4 years

#### **BACKGROUND**

- In February 2019, Fortress managed funds closed on a €187.85 million investment in a structured trade with an investment grade, publicly traded European telecommunications company with a market cap of over €25 billion (the "Company")
- Fortress managed funds acquired a first-out interest in the proceeds of certain litigation assets of the Company, consisting of a portfolio of 100 existing claims with a headline damage value of approximately €1.5 billion and future litigation claims generated by the Company over the next four years



#### INVESTMENT OVERVIEW & STATUS UPDATE

- The waterfall for proceeds of existing and future claims is that Fortress managed funds are entitled to: i) 100% until return of invested capital plus a 10.0% preferred return; ii) 70% of the next €154.35 million in proceeds; iii) 50% of the next €154.35 million in proceeds; and iv) 30% of all remaining proceeds
- The Company covenanted to pursue all of the underlying claims and pay for all associated costs
- Collections have been sooner than projected in our underwriting base case with a considerable amount of the basis in the investment returned



### 2. Net Lease Portfolio | Overview

- The Net Lease Team at Fortress was established at the inception of the Credit business in 2002
- The team has acquired approximately \$12.2 billion in assets totaling over 2,700 properties¹
- Net leased assets are real estate assets leased to single tenants under the terms of a (generally) long term lease whereby the tenant is responsible for all (or almost all) property related expenses including taxes and maintenance
- The known and predictable stream of cash flows from the lease we believe makes this investment akin to a corporate bond, with the potential upside of real estate backing
- The bond-like nature allows the team to focus more on the credit and invest in various underlying real estate asset types: office, industrial, retail and special use assets

### Benefits of Triple Net Lease Assets

- Long term, stable "bond-like" coupon created through contractual rental payments
- Inflation hedge provided by escalations of base rental rate by fixed increases or tied to CPI
- No landlord duties or property expenses
- Protected by real estate in a downside scenario, unlike other fixed income alternatives, while benefitting from potential property upside

- Embedded positive option value through residual appreciation arising from improvements in tenant credit or general market sentiment
- May benefit from an advantageous position in Chapter 11 bankruptcy with treatment as an administrative expense versus a senior or unsecured creditor claim



# 2. Net Lease Portfolio | E-Commerce Company Build to Suit<sup>1</sup>

### Build-to-suit sale-leaseback transactions for an E-Commerce Company

#### **BACKGROUND**

- Starting in June 2018, Fortress managed funds entered into a series of build-to-suit ("BTS") sale-leaseback transactions with a large E-Commerce Company (the "Company") for seven large and eight small format distribution centers ("DCs")
- The assets are being built to expand the tenant's distribution network giving it next day and same day delivery capabilities. As such, they are located in top industrial markets, with the large DCs serving as "hubs" and the smaller DCs serving as "spokes" near densely populated areas
- Facilities will be state of the art warehouse / distribution centers



- Unlike traditional, more opportunistic BTS transactions, Fortress structured the leases so that it assumes no construction risk on these deals. The tenant is responsible for developing the buildings and carries all of the construction risks
- Each of the leases are further secured by a date certain clause that guarantees that the lease will commence approximately 1-2 months after the original estimated completion date, irrespective of possible timing delays.
- Security package above was further supplemented by a Put Option at 104% of cost: if the building is still not complete 12 months after the date certain, we have the option to put the asset back to the tenant for 104% of the costs to date
- Upon the completion of construction, the properties will be leased on individual, bondable triple net leases with 1.50% annual rent increases for 20 years on the large DCs and 12 years on the small DCs. The leases contain five, 5-year extension options
- Our tenant has an investment grade rating, and our create cap rate of 6.05% compares favorably to the tenant's similar duration bonds trading at 2.34%



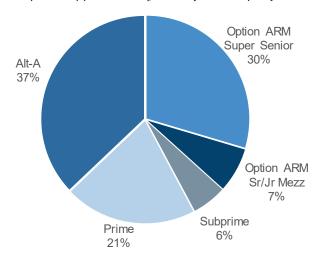
#### Fortress managed funds capitalized on the widespread portfolio liquidations in 2008 - 2009

#### BACKGROUND

- From 2008 to 2009, forced selling from leveraged investors, massive bond fund redemptions and mark-to-market pressured selling from the nation's largest financial institutions led to a tremendous supply / demand imbalance in the non-agency mortgage market
- Non-agency RMBS prices fell to unprecedented levels. Under conservative assumptions, bonds were trading at high-teens unlevered returns
- In response, Fortress managed funds made over 275 investments totaling \$6.5 billion notional value of RMBS
- Fortress also secured \$2.7 billion of 7-year term, non-recourse, non mark-to-market financing, which increased our purchasing power five-fold

#### Total Portfolio Purchases (Face at Purchase)

Senior RMBS (Option ARM, Alt-A, and Prime) comprised approximately 90% of RMBS portfolio



- From late 2009, the supply / demand imbalance had reversed course, and an increase in demand for non-agency RMBS was driven by the near-zero interest rate environment, government programs (e.g. PPIP), massive inflows back into bond funds and the return of overnight secured repo lending
  - Unlevered yields had fallen from high-teens to single digits, however the corresponding price appreciation had not been accompanied by improved credit performance
  - Given these market dynamics, the Fortress Credit business responded by selling down the \$6.5 billion portfolio<sup>1</sup> and by 2011 had sold over 95% of the portfolio as prices rallied

## 4. U.S. Residential Whole Loan Portfolio

#### Purchase of Distressed Residential Whole Loans - Performing, Non-Performing, and REO

#### **BACKGROUND**

- The lack of liquidity in the U.S. mortgage market and the disappearance of non-agency securitization as the primary exit strategy for banks, mortgage originators, and investment banks created an opportunity for the acquisition of residential whole loans at distressed prices and attractive yields from these sources
- Purchased 15 whole loan portfolios beginning in March 2008 from a variety of sources
  - Consisted of over 5,100 individual loans with a total unpaid principal balance of over \$1.1 billion
  - Fortress conducted extensive due diligence and property valuation on each asset
  - Fortress managed funds obtained non-recourse, non mark-to-market financing at LIBOR+200 bps with limited upside sharing from a lender to further enhance yields

- While several portfolios were acquired via competitive auction, some were purchased through Fortress' proprietary deal sourcing network
- We proactively increased the velocity at which the assets were monetized
  - Actively mined portfolio of non-performers and recently defaulted loans for modification opportunities and for borrowers with ability to continue to cashflow
  - Established relationships with multiple originators to pursue creative refinancing opportunities for the performing whole loan portfolio
  - Evaluated borrower's willingness and ability to retain their home, where possible, and pursue short sale opportunities in the event they could not
  - Portfolio sales to investors

## 5. APEN Credit Facility

#### Credit facility for APEN, an AIG-affiliated investment company

#### **BACKGROUND**

- In October 2009, Fortress managed funds committed to a \$200 million Initial Term Loan (of which \$100 million was drawn at close) to help APEN repay \$80 million of defaulted loans and to fund future capital calls. The Initial Term Loan had an annual coupon and Fortress managed funds received equity (through the Class A Units) in APEN's major subsidiary
- APEN was a fund-of-funds, primarily investing as a limited partner in top-tier private equity funds. The fund historically ran an over-commitment strategy, that, when combined with bank debt on the portfolio, created a severe liquidity crisis
- In May 2013, APEN approached investors to refinance the Initial Term Loan and Fortress managed funds again provided both a term loan (the "New Facility") as well as an equity investment and enhanced the existing preferred equity (the "Class A Units") to capture a greater portion of cash flows

- Fortress managed funds structured and financed a recapitalization of APEN via a \$150 million senior secured term loan, the purchase of approximately 13% (717,000 shares) of the outstanding publicly traded stock of APEN and the enhancement of the Class A Units
- As a result of the May 2013 refinancing, Fortress managed funds had received a return of its initial investment from a combination of interest payments on the Initial Facility and upside sharing from the Class A Units
- The recapitalization significantly enhanced the Class A Units. Prior to the recapitalization, the Class A Units were entitled to a percentage of cash flows, but only after the entire Facility had been repaid in full. Post the May 2013 refinancing, the Class A Units were entitled to such percentage of gross cash flows from the portfolio and are pari passu with the New Facility
- The New Facility was completely paid down through proceeds from portfolio realizations; the public stock was repurchased by the company, and remaining Class A Units continued to pay out until the portfolio wound down

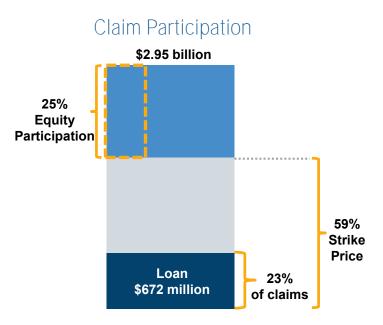


### 6. Madoff Tremont Loan

#### Senior secured loan facility and claim participation in the Madoff estate

#### **BACKGROUND**

- In June 2011, we entered into an agreement with Tremont and the Rye complex of funds to assist them in the settlement of their litigation claims with the Madoff Trustee
- At the time, the Madoff Trustee insisted on receiving cash settlements before entering into settlement agreements and banks and other providers of capital were reluctant to lend against the underlying collateral of a pre-allowed claim into the Madoff estate
- Fortress managed funds provided a \$658 million delayed draw term loan with upside equity sharing which was secured by approximately \$2.95 billion of Madoff claims



- The loan provided for an origination fee of 1%, an undrawn fee of 4% and a claim participation in the underlying asset equal to 24.7% of the \$2.95 billion claim above 59% recoveries in the Madoff estate. When drawn, the loan had a minimum interest rate of 9.5% (Libor + 8% with a 1.5% Libor floor) and prepayment penalties of 103% in the first year, 102% in the second year, and 101% in the third year
- We upsized the loan from \$658 million to \$672 million and assisted with resolving objections relating to the settlement agreement, allowing the loan to fund on November 6, 2012
- All of the Fortress managed funds' basis in the loan has been fully repaid
- Prior to the full repayment of the loan, Fortress managed funds earned fees, interest, and prepayment penalties
  on the facility and retained the equity upside in the claims through their claim participation



# 7. GMAC European Mortgage Business<sup>1</sup>

# In two separate transactions, purchased GMAC's four European residential mortgage businesses and four loan portfolios

#### **BACKGROUND**

- From July 2009 through September 2010, Fortress managed funds purchased GMAC's four European residential mortgage businesses and four loan portfolios
- Seller was seeking a strategy to exit UK and continental Europe assets
- Fortress' ability to underwrite rapidly both the assets and the operating companies allowed Fortress managed funds to acquire these assets at what we believed to be an attractive price
- Attractive loan purchase prices provided significant protection against future house price declines and the
  acquisition of the servicing entities provided additional servicing revenue and market expertise as financial
  institutions sell assets throughout Europe
- 6,222 whole loans with €933 million<sup>2</sup> claim value acquired across four European countries

#### INVESTMENT OVERVIEW & STATUS UPDATE

- Residential mortgage platforms currently service over 65,000 mortgage loans with over €9.5 billion in face value
- Servicing platforms are highly rated by Fitch
- The platforms in the UK and the Netherlands restarted their lending arms and have originated €4.3 billion of new mortgages in the last few years



### 8. CIT Private Student Loan Portfolio

#### Acquired a \$751.4 million private student loan portfolio from a bank for 20.8% of UPB

#### **BACKGROUND**

- In October 2010, successfully bid for a pool of private student loans being liquidated by CIT, which was exiting the private student loan business
- The purchase price, excluding transaction costs, was \$156 million, equal to approximately 29.2% of the performing portfolio of \$535 million or 20.8% of total UPB
- We believed the purchase price discount would provide strong upside optionality including financing, recoveries of delinquent loans (an additional \$216.5 million), higher prepayments and lower defaults

- In May 2011, we financed the portfolio with a \$110 million facility, returning substantial capital to Fortress managed funds
- In May 2014, we refinanced our original debt facility, which had paid down to a \$38.5 million outstanding balance, with a new \$100 million term loan financing. This resulted in an additional capital distribution to Fortress managed funds
- The portfolio outperformed our base case underwritten expectations, including lower defaults and higher prepayments
- We actively managed the portfolio and completed opportunistic partial portfolio sales in February 2012, May 2015, November 2015, December 2016 and December 2017
- Partial proceeds from the sales were used to pay down the leverage on the portfolio and the term loan financing outstanding balance was repaid in full in December 2016. Remaining proceeds from the sales resulted in capital distributions to Fortress managed funds
- We exited the remaining performing and charged-off portfolio in July 2018

**Appendix B** | Biographies



#### PETE BRIGER

Co-Chief Executive Officer of Fortress, Managing Partner of the Fortress Credit Funds business, Co-ClO of FCO V EXP

Mr. Briger is Co-Chief Executive Officer of Fortress and has been a member of the board of directors of Fortress since November 2006. Mr. Briger has been a member of the Management Committee of Fortress since 2002. Prior to joining Fortress in March 2002, Mr. Briger spent fifteen years at Goldman, Sachs & Co., where he became a partner in 1996. Mr. Briger is a member of the Council on Foreign Relations and the Chairman of the U.S. Soccer Investment Committee. In addition, Mr. Briger serves on the board of several charitable organizations, including the UCSF Foundation and Tipping Point. Mr. Briger received a B.A. from Princeton University and an M.B.A. from the Wharton School of Business at the University of Pennsylvania.

#### **DEAN DAKOLIAS**

Managing Partner of the Fortress Credit Funds business, Co-CIO of FCO V EXP

Mr. Dakolias serves on Fortress's Management and Operating Committees. Prior to joining Fortress in 2001, Mr. Dakolias was a Managing Director, Chief Credit Officer and co-founder of American Commercial Capital LLC (a specialty finance company) and Coronado Advisors (an SEC registered broker dealer), both of which were sold to Wells Fargo & Co. in 2001. Mr. Dakolias was previously a director at RER Financial Group ("RER") where he was responsible for the firm's acquisition efforts as a principal and as a provider of third party due diligence and asset management. Mr. Dakolias serves on the Board of Trustees for Columbia University, the American School of Classical Studies at Athens, and the Millbrook School. Mr. Dakolias is also a co-founder and member of the Executive Committee of The Hellenic Initiative, as well as a member of the Council on Foreign Relations. Mr. Dakolias received a B.S. in Physics from Columbia University.

#### DREW MCKNIGHT

Managing Partner of the Fortress Credit Funds business, Co-CIO of FCO V EXP

Mr. McKnight is based in San Francisco, heads the liquid strategies and serves on the investment committee for the Fortress Credit Funds business and is a member of the Management Committee of Fortress. Prior to joining Fortress in February 2005, Mr. McKnight was at Fir Tree Partners where he was responsible for analyzing and trading high yield and convertible bonds, bank debt, derivatives and equities for the value-based hedge fund. Prior to Fir Tree, Mr. McKnight worked at Goldman, Sachs & Co. in Leveraged Finance and the Distressed Bank Debt trading group. Mr. McKnight received a B.A. in Economics from the University of Virginia.



#### JOSHUA PACK

Managing Partner of the Fortress Credit Funds business, Co-CIO of FCO V EXP

Mr. Pack is based in Los Angeles, heads the illiquid strategies and serves on the investment committee for the Fortress Credit Funds business and is a member of the Management Committee of Fortress. Mr. Pack has more than 20 years of credit investment and workout experience through multiple credit cycles. Since joining the Fortress Credit Funds business at its inception in 2002, Mr. Pack has analyzed, structured and negotiated hundreds of lending, structured equity and real estate transactions. Prior to joining Fortress, Mr. Pack was a Vice President with Wells Fargo & Co. in the capital markets group. Before that, Mr. Pack was a Vice President with American Commercial Capital, an independent specialty finance company focused on corporate and real estate lending to middle market businesses that was subsequently acquired by Wells Fargo & Co. in 2001. Mr. Pack serves as a Director on multiple corporate and philanthropic Boards. Mr. Pack attended the United States Air Force Academy and received a B.A. in Economics from California State University, San Marcos.

#### MARC FURSTEIN

President of the Fortress Credit Funds business

Mr. Furstein is a member of the **firm's** Management Committee. Prior to joining Fortress in July 2001, Mr. Furstein co-founded and was the Chief Operating Officer of American Commercial Capital (a specialty finance company) and Coronado Advisors (an SEC registered broker dealer). Both companies were sold to Wells Fargo in 2001. Prior to that, Mr. Furstein was co-manager of the opportunistic real estate loan business of Goldman, Sachs & Co. Mr. Furstein was also involved in the acquisition of distressed business, consumer and real estate loans and had responsibility for the management of more than 60 portfolios of such assets. In this role, he designed and oversaw the implementation of financial reporting, tax, compliance and asset management systems, policies and procedures. Mr. Furstein received a B.A. from Columbia University and an M.B.A. from the Wharton School at the University of Pennsylvania.



**Appendix C** | Disclaimers and Risk Factors



In general. This disclaimer applies to this document and the verbal or written comments of any person presenting it. This document, taken together with any such verbal or written comments, is referred to herein as the "Presentation." Fortress Investment Group LLC, taken together with its subsidiaries, is referred to herein as "Fortress." Fortress Credit Opportunities Fund V Expansion is referred to herein as the "Fund" or "FCO V EXP". Fortress Credit Opportunities Fund is referred to herein as "FCO", Fortress Credit Opportunities Fund III is referred to herein as "FCO III", Fortress Credit Opportunities Fund IV is referred to herein as "FCO IV", and Fortress Credit Opportunities Fund V is referred to herein as "FCO V". Investing in the Fund (or any investment product made available through Fortress or any affiliate thereof) involves a high degree of risk. Prior to investing, investors in the Fund must familiarize themselves with the Fund's offering materials (which consist of the Fund's limited partnership agreement, offering memorandum and subscription document and are collectively referred to as the "Offering Documents") and be prepared to absorb the risks associated with any such investment, including a total loss of all invested capital. This Presentation is produced solely for the specified recipient and may not be transmitted, reproduced or made available to any other person. The complete terms regarding an investment in the Fund, including but not limited to the investment program, fees and charges, tax considerations, risk factors, conflicts of interest and liquidity are set forth in the Fund's Offering Documents.

No offer to purchase or sell securities. The Presentation does not constitute an offer to sell, or a solicitation of an offer to buy, any security and may not be relied upon in connection with the purchase or sale of any security. Any such offer would only be made by means of the Fund's Offering Documents, the terms of which shall govern in all respects. You are cautioned against using this information as the basis for making a decision to purchase any security or to otherwise engage in an investment advisory relationship with Fortress.

Other Fortress managed funds. Fortress manages a variety of other pools of capital and the senior investment professionals of the Fund are also responsible for other pools of capital. Returns associated with such other pools of capital are available upon request, although such other pools may have different investment and return profiles than the Fund and may therefore not be relevant. Fortress affiliates invest their own capital in a broad range of investments. In certain cases, the investment objectives and programs of such Fortress affiliates are similar to, or overlap with, the investment objectives and proposed investment program of the Fund. The Fund does not have the exclusive right to any investment opportunity. The Fund is subject to conflicts of interest.

Certain risk factors associated with the Fund. The Fund's investment program of investing in distressed and undervalued credit investments involves significant risks, many of which are uncertain and outside of Fortress's control. These risks include, among other things, factors such as general economic, political and capital market conditions, operating in a difficult and unpredictable credit environment, increased government intervention and restrictions that could adversely impact the Fund's investments, decreased liquidity of investments, as well as interest rate and counterparty risks. In addition, the Fund may invest a portion of its assets in commercial real estate and, therefore, is subject to additional risks incident to the ownership and operation of real estate, including, among other things (i) local real estate conditions; (ii) changes in supply of, or demand for, competing properties in an area; (iii) the financial condition of tenants, buyers and sellers of properties; (iv) laws, local governmental regulations and various administrative guidelines relating to real estate lending, management and/or ownership that are complex or unclear or otherwise difficult to comply with; (v) changes in tax, real estate, environmental and zoning laws and regulations; (vi) various uninsured or uninsurable risks; and (vii) natural disasters. Fortress also manages a variety of other pools of capital and the Fund does not have the exclusive right to any investment opportunity and, therefore, Fortress may have a potential conflict of interest with respect to the allocation of a given investment opportunity. Investing alongside Fortress affiliates may also present conflicts of interest as a result of, among other things, differing investment strategies (including time horizons) of various Fortress affiliates, availability of capital to make follow-on investments, control investments by affiliates, and investment in the Fund.

Internal rates of return and yields. To Fortress's knowledge, there are no established standards for the calculation of internal rates of return or yields ("Returns") for investment portfolios of the sort discussed in this Presentation. The use of a methodology other than the one used herein may result in different and possibly lower Returns. In addition, the current unrealized or estimated values that form the basis for Returns may not be realized in the future, which would materially and adversely affect actual Returns for the applicable investments and potentially the overall portfolio of which they are a part.

Forward looking statements. Forward looking statements (including estimated returns, opinions or expectations about any future event) contained in the Presentation are based on a variety of estimates and assumptions by Fortress, including, among others, estimates of future operating results, the value of assets and market conditions at the time of disposition, and the timing and manner of disposition or other realization events. These estimates and assumptions are inherently uncertain and are subject to numerous business, industry, market, regulatory, geo-political, competitive and financial risks that are outside of Fortress's control. There can be no assurance that any such estimates and assumptions will prove accurate, and actual results may differ materially, including the possibility that an investor may lose some or all of any invested capital. The inclusion of any forward looking statements herein should not be regarded as an indication that Fortress considers such forward looking statement to be a reliable prediction of future events and no forward looking statements should be relied upon as such. Neither Fortress nor any of its representatives has made or makes any representation to any person regarding any forward looking statements and none of them intends to update or otherwise revise such statements to reflect circumstances existing after the date when made or to reflect the occurrence of future events, even in the event that any or all of the assumptions underlying such forward looking statements are later shown to be in error.



*Past performance*. In all cases where historical performance is presented, please note that past performance is not a reliable indicator of future results and should not be relied upon as the basis for making an investment decision. Furthermore, the performance returns for FCO, FCO II, FCO III, FCO IV and FCO V were obtained under market conditions which may differ materially from the market conditions under which the Fund will invest. As a result, the performance of FCO, FCO II, FCO III, FCO IV and FCO V should not be considered a reliable indicator of the likely performance or investment profile of the Fund.

Target Return. The target return stated herein is a leveraged, gross investment return target and does not take into account the promote, management fees or other expenses. Actual net returns to investors will be lower as a result of these expenses. Actual net investor returns will be reduced by these amounts. The target returns are premised on a number of factors, including, without limitation, prior investments made by certain Fortress managed funds and the opportunities that the Fortress Credit Funds team is currently seeing and/or expect to see in the future in the marketplace, which are inherently uncertain and are subject to numerous business, industry, market, regulatory, geo-political, competitive and financial risks that are outside of Fortress's control. There can be no assurance that the assumptions made in connection with the target returns will prove accurate, and actual results may differ materially, including the possibility that an Investor may lose some or all of any invested capital. The inclusion of the target returns herein should not be regarded as an indication that Fortress or any of its representatives consider the target returns to be a reliable prediction of future events and the target returns should not be relied upon as such. Neither Fortress nor any of its representatives have made or make any representation to any person regarding the target returns and none of them intends to update or otherwise revise the target returns to reflect circumstances existing after the date when made or to reflect the occurrence of future events, even in the event that any or all of the assumptions underlying the target returns are later shown to be incorrect.

Estimated returns. Estimated returns (including estimated IRRs, multiples and cash flows) presented are through the life of the Funds and are based on a variety of estimates and assumptions by Fortress. There can be no assurance that any such estimates and assumptions will prove accurate, and actual results may differ materially, including the possibility that an investor may lose some or all of any invested capital. Estimated returns are presented on a gross basis unless otherwise noted and actual returns to investors will be lower due to the deduction of management fees, promote expenses, taxes and other Fund expenses.

Investment examples. Unless otherwise noted, the Investment Examples represent investments that were made, in whole or in part, by FCO, FCO II, FCO III, FCO IV and/or FCO V. The Investment Examples included herein do not comprise the entire FCO, FCO II, FCO III, FCO IV, or FCO V portfolios, which are available upon request. Investment Examples included in the Presentation are intended to serve as a non-exhaustive set of examples of the types of investments that could be made in the Fund but are not themselves investments of the Fund. There can be no assurance that the Fund will make any investments with the same or even similar characteristics as the Investment Examples presented. The Investment Examples are presented for discussion purposes only and are not a reliable indicator of the likely performance or investment profile of the Fund or any investment to be made in the Fund. Notwithstanding any analysis included in the Presentation, it is possible that each of the Investment Examples could result in a total loss of any invested capital.

Not suitable for all investors. An investment in the Fund may not be suitable for all investors. An investment in the Fund is only suitable for certain financially sophisticated investors who meet certain eligibility requirements, have no need for immediate liquidity in their investment and can bear the risk of an investment in the Fund for an extended period of time.

*Risk of loss.* An investment in the Fund is highly speculative, and there can be no assurance that the Fund's investment objectives will be achieved. Investors must be prepared to bear the risk of a total loss of their investment.

*Limited liquidity.* Investments in the Fund provide limited liquidity as there are significant restrictions on transferability of Fund securities. It is not expected that a public or secondary market will develop for the Fund's securities. Further, there can be no assurance that a transfer would be approved even in the event a market does develop.

Availability of financing. Certain performance figures described in the Presentation are based on, among other things, the availability of particular financing arrangements that may not be available to the Fund. The inability of the Fund to achieve similar financing arrangements could have a material impact on the Fund's performance.

Leverage. The Fund may use substantial leverage. The use of leverage can effect the volatility of investment returns and increase the risk of loss and possibility of gain due to market fluctuations in the value of such investment.

Regulatory. The Fund is not subject to the same regulatory requirements as a registered investment company.

No reliance, no update and use of information. You may not rely on the Presentation as the basis upon which to make an investment decision. To the extent that you rely on the Presentation in connection with any investment decision, you do so at your own risk. The Presentation does not purport to be complete on any topic addressed. The information in the Presentation is provided to you as of the dates indicated and Fortress does not intend to update the information after its distribution, even in the event that the information becomes materially inaccurate. Certain information contained in the Presentation includes calculations or figures that have been prepared internally and have not been audited or verified by a third party. Use of different methods for preparing, calculating or presenting information may lead to different results and such differences may be material.



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Switzerland Legal Disclaimer. The Fund has appointed Hugo Fund Services SA, 6 Cours de Rive, 1204 Geneva, Switzerland, as its Swiss Representative. Banque Cantonale de Genève, 17 Quai de l'Île, CH-1208 Geneva, Switzerland is the Swiss Paying Agent. In Switzerland interests shall be distributed exclusively to qualified investors. The fund offering documents, articles of association and audited financial statements can be obtained free of charge from the Representative. The place of performance with respect to interests distributed in or from Switzerland is the registered office of the Representative.





The Värde Dislocation Strategy
September 2020



## **Important Disclaimers**

B.1.d



The information contained in this document (this "Presentation") is qualified in its entirety by the following Important Disclaimers, all of which must be read in connection with this Presentation. This Presentation is not intended for sophisticated investors for information, data, strategies and part as advice by Varide Porthers, Inc. or you'der or the "Firm") or any other party. A recipient of this presentation should consult with its own legal, business and tax advisors with respect to the date hereof, and are subject to change without notice based on market and other developments. Therefore, neither the delivery of this Presentation at any time, nor any sale of interests in any Fund (as defined below), shall under any circumstances create an implication that the information contained herein is correct as of any time after such date. Neither the Securities and Exchange Commission nor any state securities administrator has approved, passed on or endorsed the ments of this Presentation or the securities referenced herein.

This Presentation is not intended as and does not constitute an offer to sell any securities or a solicitation of an offer to purchase any investment product or any interest in any fund (each a "Fund") managed by Várde in any jurisdiction to any person or entity. Such an offer or solicitation may be made only by the Confidential Private Offering Memorandum of a Fund (the "Memorandum and will be made only through, a Memorandum and will be subject to the terms and conditions contained therein and in the governing documents of the applicable Fund. If you are considering whether to invest in a Fund, you should not rely on this Presentation, but should rely solely on the information in the Memorandum and in the governing documents of the applicable Fund. If you are considering whether to invest in a Fund, you should not rely on this Presentation, but should rely solely on the information in the Memorandum and in the governing documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering whether to invest in a Fund, you should rely on this Presentation in the Memorandum and in the governing documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering documents of the applicable Fund. If you are considering documents of the applicable Fund. If

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Any past performance described herein is not indicative, or a guarantee, of future results. You should not assume that the performance of any specific investment or investment of performance levels. Any investment or investment or investment or investment objectives or strategies will be achieved or that an investor will not lose a portion or all of its investment. Any rates of returns described in this Presentation reflect particular moments in time and such returns may not be possible to replicate given the unique set of circumstances wherein investments were purchased or sold. Investors should draw their own conclusions regarding Värde's and the Funds' relative performance in the market. All financial information in this Presentation related to Värde or any Fund is unaudited. Any risk management or mitigation processes or actions discussed refer to efforts to monitor and manage risk but should not be confused with and do not imply no or low risk. You may contact Värde to ask any questions you may have with regard to this Presentation, including questions about the procedures and methodologies used to calculate the investment returns.

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Certain information contained herein constitutes "forward-looking statements," which can be identified by the use of forward-looking terminology such as "expect," "anticipate," "estimate," "forecast," "initiative," "objective," "plan," "goal," "project," "outlook," "priorities," "target," "intend," "evaluate," "pursue," "seek," "may," "would," "should," "believe," "potential," "continue," or the negative of any of those works or similar expressions intended to identify forward-looking statements. Due to various risks and uncertainties, actual events or results or the actual performance of a Fund may differ materially from those reflected or contemplated in such forward-looking statements. Investors are cautioned not to place undue reliance on forward-looking statements.

Any target performance information stated herein or elsewhere is not intended to predict any Fund's performance; instead, such information is meant to help explain how Vârde intends to construct such Fund's portfolio and what investments Vârde intends to pursue in light of Vârde and its affiliates' experience with similar transactions. Such target performance information is intended to indicate the returns, projected cash flows, projected future valuations of fund investments, relevant market dynamics (including capital markets, interest rates and other factors), anticipated contingencies and regulatory issues all of which are unpredictable in nature.

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#### Market dislocations and economic disruption offer high conviction credit investment opportunities

#### **Opportunity**



- Market dislocations and economic disruption on a historic scale present compelling opportunities across global credit – on a scale last seen during the GFC
- Our experience suggests that major credit cycles play out in several phases over time
- We believe this will present opportunities that offer private equity-like returns for credit risk
- Irrespective of short term market performance, significant fundamental distress opportunities are developing

#### Strategy<sup>1</sup>



- We are seeking to raise \$1 billion+ in capital commitments
- Flexible, global mandate to pursue a broad universe of mispriced, stressed, and distressed credit

#### Why Värde?



- 26+ years of investing experience in global credit markets and distressed, across many cycles
- Integrated global platform with over 90 investment professionals built to handle complexity and allocate capital and resources dynamically across the globe
- Breadth of capabilities provides ability to be flexible and patient, seeking best relative value in an uncertain environment
- Research-based approach supported by global platform and CIO team, portfolio management, and risk management

<sup>1.</sup> There can be no assurance that any Fund achieve returns or objectives stated herein. The ultimate returns realized by a Fund will depend on numerous factors, which are subject to uncertainty. Accordingly, there can be no assurances that any performance or return objective will be realized or achieved. In addition, there are a variety of risks that may impede the achievement of the performance objectives. You should not assume that the performance of any specific investment or investment strategy will be profitable; any investment may result in a loss to investors.

#### The Värde Global Investment Platform

B.1.d



Värde is a global alternative investment firm focused on credit and asset investing with over \$14.5 billion in assets under

management

#### Experienced

- Over \$70 billion invested since 1993
- 26+ years experience investing in credit, assets, and companies
- Led by 16 Partners with average of 14 years working together

#### Global

- Over 315 employees connected across 12 offices
- Over 90 investing professionals with more than 50% outside North America
- Dedicated trading operations across U.S., Europe, and Asia

#### Established

- Flexible platform built to handle complexity and allocate capital and resources around the globe
- Well-resourced platform functioning around the clock, without interruption
- Strong culture and leadership sustaining investing and business operations in uncertain times



## Consistent Philosophy Informs the Firm's Investing Activity 1.d



Värde's approach to credit is an extension of the Firm's time-tested investing philosophy

# Market Inefficiency & Catalysts

- Search opportunistically for mispriced situations where our broad experience and ability to work through complexity can produce favorable outcomes.
- Focus on value drivers, the path to unlock value, and potential exit strategies.

# Intrinsic Value & Deep Fundamental Research

- Seek to invest at a discount to intrinsic value, and/or at a price that provides downside protection and helps drive investment returns.
- Bottom-up, fundamental research is the basis for all investing.

#### **Flexibility**

 Shift capital and resources across the credit spectrum, asset classes and markets in pursuit of strong risk-adjusted returns and attractive relative value.

#### **Global & Local**

• **Global** perspective with meaningful **local** presence, built around language skills, local knowledge, investing experience, and operational infrastructure.

#### **Risk Management**

- Breadth of perspectives across credit spectrum and markets enhances ability to price risks and construct portfolios.
- Focus on downside protection in underwriting and opportunistic hedging of unwanted risks to improve results.





Värde's senior investment professionals<sup>1</sup> have 19 years of experience on average

| George Hicks (Co-Founder, Partner, Co-CEO) & Ilfryn Carstairs (Partner, Co-CEO, CIO)  Marcia Page (Co-Founder, Partner, Executive Chair) |   |   |   |                                    |   |   |  |  |  |  |  |
|--|---|---|---|------------------------------------|---|---|--|--|--|--|--|
|  |   |   |   |                                    |   |   |  |  |  |  |  |
| Ві   | Business Leadership   |   |   |                                    |   |   |  |  |  |  |  |
| Corporate &<br>Traded Credit   | Financial Services  |   | Real Estate   | Mortg                              | ages  | Real Assets & Infrastructure                                | Business Development<br>& Investor Relations,  |  |  |  |  |
| Giuseppe Naglieri<br>(Partner, Global Co-  | Rick Noel<br>(Partner, Global   | Tim Mooney<br>Head) (Partner, Global Head)                                  |   | Brian Schmidt<br>(Partner, Head of |   | Brad Bauer<br>(Partner, Global Head)<br>Todd Jelen<br>(SMD) | Communications & Public Affairs  Jon Fox (Partner, Global Head)                                  |  |  |  |  |
| Head) Scott Hartman (Partner, Global Co- Head) Haseeb Malik (Partner, Head of Asia)  | Elena Lieskovska (Partner, Head of Europe) Aneek Mamik (SMD, Head of North America and Asia)  +4 Investment Professionals |   | Francisco Milone<br>(Partner, Head of<br>Europe)<br>Anthony Iannazzo<br>(SMD) |                                    | ages, North<br>ca Real Estate)<br>unbar                               |   | Legal, Compliance, Audit & Tax  David Marple (Partner, General Counsel) Katie Kloster (SMD, CCO) |  |  |  |  |
| Carlos Sanz Esteve<br>(SMD)<br>+21 Investment<br>Professionals   |   |   | +22 Investment<br>Professionals   |                                    | ) Investment rofessionals   | +7 Investment<br>Professionals                              | Finance, Technology & Operations Brendan Albee (SMD, COO)  |  |  |  |  |
| Capital Markets Craig Rydqvist (SMD, Global Head)  |   | Portfolio Operations Andy Lenk (Partner) Krzysztof Drozd (SMD, Global Head) |   | ad)                                | Fund Analytics & Risk Management Mary Jo Sanderson (SMD, Global Head) |   | Human Resources & Administration<br>Ksenia Anikina (SMD, Global Head)                            |  |  |  |  |

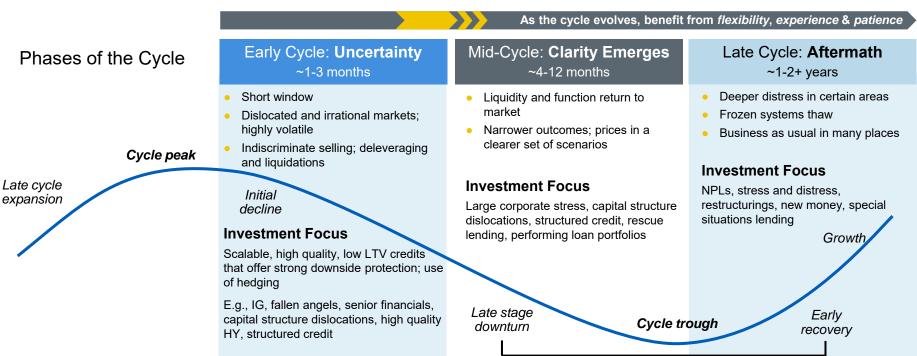
<sup>1.</sup> Defined as Managing Director and above.

## Värde's Tested Investment Playbook for the Cycle

B.1.d



Deep experience built over 26 years has taught us how to pursue each phase of the credit cycle



Indicates current position in the cycle

Represents illustrative evolution of strategy and capital deployment over time based on expected evolution of the credit cycle and the resulting opportunity set. Due to various risks and uncertainties, actual events or results may differ materially from the views and forward-looking statements included in this presentation. You should not assume that the performance of any specific investment strategy will be profitable, in line with targeted returns or consistent with estimates. Any investment or investment strategy can be impacted by numerous factors, including market and economic conditions, and may result in a loss to investors. There can be no assurance that any future event will occur or that any projections will be achieved.



### **Current Environment**

# **Drivers of the Growing Opportunity Set**

B.1.d



Current market dynamics and impending credit cycle create structural problems in credit

- Unprecedented sudden decline and physical disruption in economic activity inevitably leads to financial distress across multi-trillion dollar markets in the U.S., Europe, and Asia Pacific
- Despite government intervention, lasting fundamental economic damage is inevitable, efficacy varies globally, and focus has been on liquidity fundamental insolvency problems appear unresolved
- Historical peak financial leverage entering the pandemic<sup>1</sup> is met with record new issuance of corporate debt in public markets since March<sup>2</sup>, while the shape of the recovery remains unclear
- Liquidity squeeze from deleveraging and forced selling to raise cash created substantive dislocations across traded credit, and more dislocations are still to come in illiquid markets

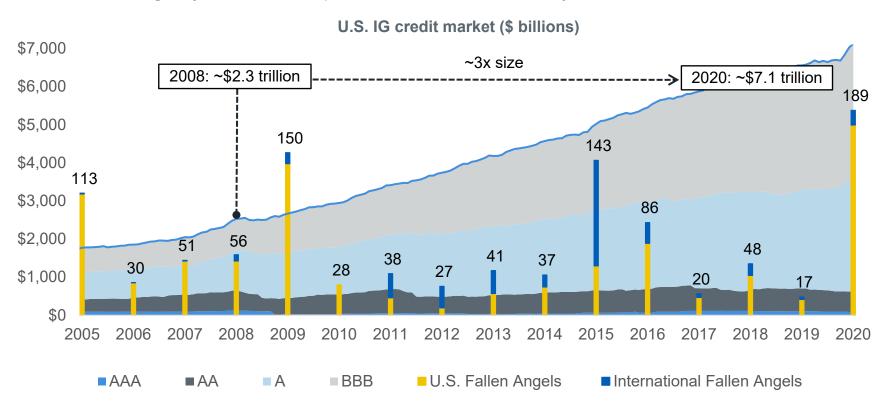
Distressed opportunity set continues to grow and will likely appear across a historically broad swath of the economy

<sup>1.</sup> Source: St. Louis Fed FRED Economic Data. 2. LCD, and offering of S&P Global Market Intelligence. You should not assume that the performance of any specific investment or investment or investment strategy will be profitable, in line with targeted returns or consistent with estimates. Any investment or inve

# Major Growth in IG Credit Market Increases Fallen Angel Petential



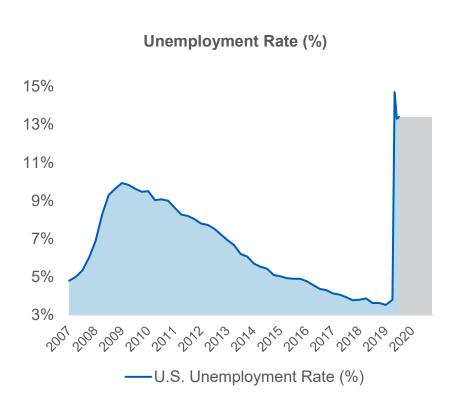
U.S. IG fallen angels year-to-date outpace the GFC and commodity downturn



## U.S. Economic Data Indicates a Recession is Underway B.1.d



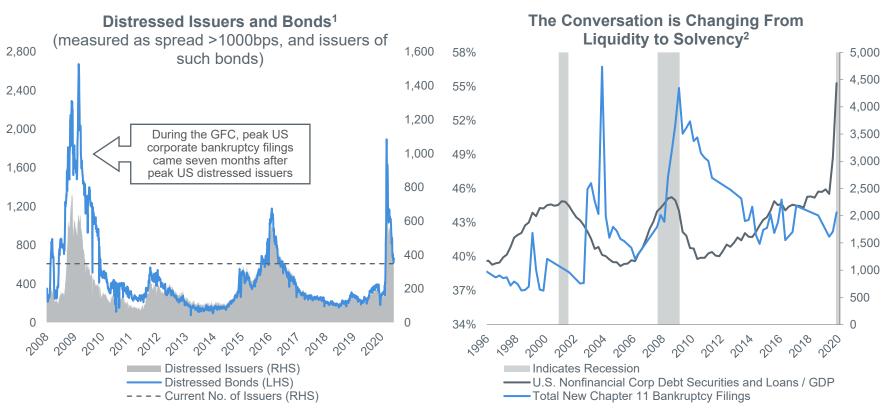
Physical disruption and a sharp decline in economic activity could result in prolonged market stress







Levels of distressed issuers and bonds remain elevated, and solvency concerns are rising



<sup>1.</sup> Source: Bloomberg, TRACE. Data as of June 30, 2020. 2. BLS, Administrative Office of US Courts, Haver Analytics, Bloomberg Finance LP, DB Global Research. Recession data from Federal Reserve Bank of St. Louis, Economic Research



# Phases of the Credit Cycle and Opportunity Set

Early Cycle: Uncertainty

Mid-Cycle: Clarity Emerges

Late Cycle: Aftermath

# Investment Considerations During the Phases of a Credit Cycle



A variety of investment opportunities may emerge as the cycle plays out

### Early Cycle: **Uncertainty**

Point of maximum uncertainty and dislocation: focus on high quality credit

- Aim for highest quality credit
- Capital structure dislocations
- Seek to hedge cheaply, but to select credits that are money good in their own right

### Mid-Cycle: Clarity Emerges

Narrower range of outcomes: deeper credit underwrite to extract value

- Corporate stress & distress
- Crossover opportunities; integration of credit and asset underwriting
- Structured credit
  - Non-agency MBS
  - Aircraft
  - Consumer
- Private credit
  - Performing assets and loan portfolios
  - Rescue lending

### Late Cycle: Aftermath

Economic stability but stress and distress continue to play out

- Corporate restructurings
- Non-performing loan portfolios & structured credit work-outs
- Alternative and special situations lending

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## Flexible Mandate to Invest Through the Credit Cycle

B.1.d



Relative value is assessed across the opportunity set at each phase of the cycle

| Sample Investment Types                                | Early Cycle  | Mid-Cycle         | Late Cycle   |
|--|--------------|-------------------|--------------|
| Highest Quality Credit;<br>Cap Structure Dislocations  | $\checkmark$ | ✓                 |              |
| Corporate Stress & Distressed;<br>Crossover            | $\checkmark$ | $\checkmark$      |              |
| Structured Credit                                      | $\checkmark$ | $\checkmark$      |              |
| Performing Asset and Loan<br>Portfolios                |              | $\checkmark$      | $\checkmark$ |
| Rescue Lending   |              | $\checkmark$      | $\checkmark$ |
| Restructurings; NPLs; Special<br>Situations Lending    |              |                   | $\checkmark$ |
|  |              | Investment Period |              |
| Expected portion of capital invested (incl. recycling) |              |                   |              |

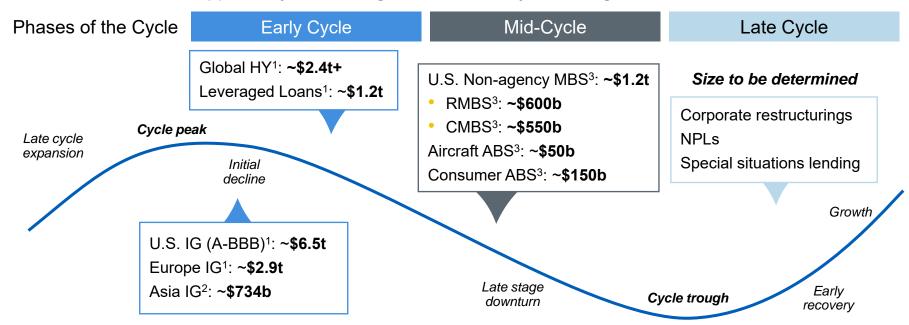
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## **Opportunities Abound as the Credit Cycle Plays Out**

B.1.d



Size of the investment opportunity sets throughout the credit cycle are significant



<sup>1)</sup> Source: BAML Chartbook. 2) Bloomberg. 3) Sources: SIFMA, Deutsche Bank, Värde estimates. Data as of June 30, 2020. Represents illustrative evolution of strategy and capital deployment over time based on expected evolution of the credit cycle and the resulting opportunity set. Due to various risks and uncertainlies, actual events or results may differ materially from the views and forward-looking statements included in this presentation. You should not assume that the performance of any specific investment or trinestergy will be profileable, in line with returns or consistent with estimates. Any investment or investment strategy can be impacted by numerous factors, including market and economic conditions, and may result in a loss to investment strategy can be impacted by numerous factors, including market and economic conditions, and may result in a loss to investment strategy can be impacted by numerous factors, including market and economic conditions, and may result in a loss to investment strategy can be impacted by numerous factors, including market and economic conditions, and may result in a loss to investment strategy can be impacted by numerous factors, including market and economic conditions, and may result in a loss to investment strategy can be impacted by numerous factors, including market and economic conditions, and may result in a loss to investment strategy can be impacted by numerous factors, including market and economic conditions, and may result in a loss to investment strategy can be impacted by numerous factors, including market and the profile of the profil

## Investment Opportunities Remain Beyond Initial Dislocation 1.d



Early cycle investments likely over short window; stressed and distressed opportunities develop over time

- After the initial, most chaotic stage of dislocation, there remains a deep opportunity set ahead
- In our view, compelling opportunities in high quality credit remain, despite popular narrative that they
  have all but played out
  - Focus shifts to selective investments where more fundamental credit underwriting is required
  - For example, Covid-19 affected sectors, other dislocated IG credit, and high quality HY credit
- Earliest entry points into true stressed and distressed opportunities typically represent poor relative value
- We believe that dislocation and distress will persist over time, but the window to capitalize on higher quality opportunities will be brief

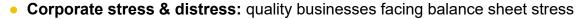
## **Mid-Cycle Investment Opportunities**

B.1.d



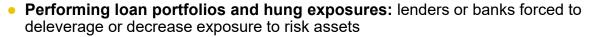
As path of the cycle becomes clearer, we expect our investment focus to shift to situations where fundamental research and operating expertise increasingly differentiate

# Corporate Stress & Distress



 Capital structure dislocations: relative value and mispricings across the capital structure of a single issuer

#### **Private Credit**



Rescue lending: real and financial assets for collateral

#### Structured Credit



#### • CMBS and RMBS: mispriced and distressed bonds, troubled real estate loans

 CLOs and ABS: opportunities in dislocated structures or to purchase assets and portfolios, e.g., corporate loan purchases, aircraft, other transportation

#### Crossover



# **Crossover:** joint underwriting by teams with deep credit knowledge and underlying asset expertise

Real estate, consumer finance, aircraft

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## Mid-Cycle Opportunities are Growing Increasingly Robust B.1.d



### Delayed reckoning by lenders continues to build systemic stress

- The market has largely lacked motivated selling, as lenders have gravitated toward forbearance in the hope that economic activity would normalize quickly
  - Some real problems have simply been delayed as the forcing mechanism for selling or seeking rescue capital has been stayed
  - Forbearance is **temporary** and places mounting stress in other parts of the system
- Covid-19 has accelerated both secular industry decline (e.g., weak retail, fossil fuels), and the need to restructure weak balance sheets; a natural fallout is likely over an expedited timeframe
- Pipeline of private credit opportunities building across asset classes, with need for liquidity and capital getting nearer as owners and lenders mark down values appropriately
- In publicly traded markets, corporate debt has presented best relative value in the initial stages of this
  credit cycle in our view, but stress and dislocation are building in pockets of structured credit

## **Late Cycle Investment Opportunities**

B.1.d



Market dislocations resolve and liquidity returns to markets in the aftermath of a cycle. We expect late-cycle investments to be a limited opportunity set, given their typically longer duration profile.



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### **Portfolio Construction Process**

B.1.d



### Strategy performance driven by factors beyond good underwriting

- Position sizing a function of risk, shape of the trade, conviction and size/liquidity of the capital structure
- Risk assessed at individual position level and evaluated relative to other investment opportunities globally
- Systematic evaluation of portfolio risks, including concentration (e.g. sector or country), interest rate, commodity and liquidity
- Dedicated Fund Analytics & Risk Management team that assists PMs with portfolio management, allocations and position sizing
- Potential opportunistic hedging of unwanted risks



**Appendix** 



# In Our Investing

We believe that ESG principles align naturally with our fiduciary responsibility to protect and create value for our investors.

### In Our Business

**ESG** 

As our core values state, we align our actions with our commitments while holding ourselves and others to a high standard.



Full integration among those who set ESG policy and those who invest LP capital

In Action







### In Evolution

### Thoughtful application

- Relevant ESG analysis is integrated into investment process
- Investment teams and Portfolio Operations Group (POG) partner with Portfolio Companies as appropriate

### Active analysis

- ESG Steering Committee provides oversight and coordination across the Firm's ESG efforts.
   Diverse, cross-functional representation, including 4 Investment Partners, led by CIO and Deputy CIO
- Steering Committee sponsoring a thorough review of the Firm's ESG policies and practices
- Robust effort underway to develop bespoke ESG guidelines for each investment segment at Värde

## **ESG – In Our Business: Diversity & Inclusion**

B.1.d



Harnessing the power of collective intelligence and cognitive diversity

- Established Executive D&I Council in 2018 with Co-CEO George Hicks as Chair
- Thoughtfully redesigned hiring and talent management processes to minimize unconscious bias
- Conducted firm-wide Conscious Inclusion training
- More than doubled female Investment Professional headcount from 9% in 2015 to 20% in 2020
- Continued collaboration with portfolio companies and external institutions, such as World Economic Forum, to promote D&I best practices



We believe a team comprised more fully of individuals with diverse backgrounds, experiences, perspectives, and insights makes us better investors and better corporate citizens.



## **ESG – In Our Business: Philanthropy**

B.1.d



### Fundamentally changing lives for good through a culture of engaged generosity

- Established five firm-wide philanthropic priorities:
  - Children & youth development
  - Climate & environment
  - Education
  - Housing & homelessness
  - Hunger & healthy food systems
- Increased firm-sponsored volunteer opportunities across the globe, partnering with 14 new organizations in 2019
- In response to the Covid-19 pandemic, Värde is:
  - Making significant philanthropic donations from each of our 12 global offices to local organizations
  - Funding individual donation opportunities from each of our 315+ employees to an organization of their choice to give back where it is needed most in the communities where we work and live

















# Callan



September 17, 2020

Distressed/Dislocation Opportunities - Reference

#### **Catherine Beard**

**Alternatives Consulting** 

Jim Callahan, CFA

President

# Callan

**Distressed/Dislocation Allocation** 

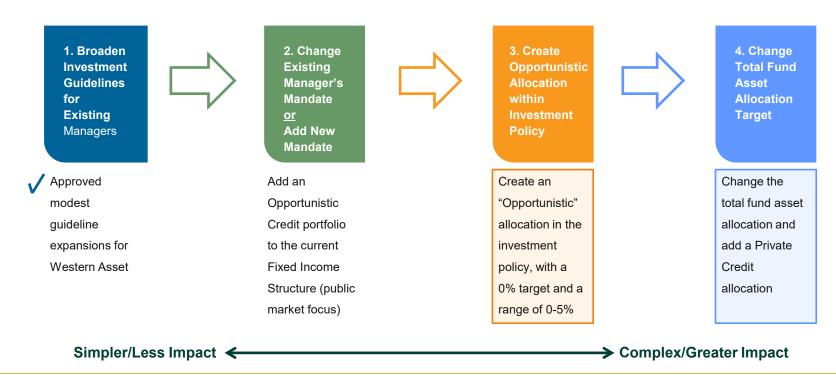
## Framework for Considering Current Market Opportunities

Potential investment opportunity resulting from market disruption lies within the credit and debt markets.

- These emerging opportunities appear to be significant and lie across both the public and private markets.
- The opportunities range from simple (easier to consider and evaluate, little to no fee impact, smaller impact on overall portfolio) to more complex (heavier due diligence requirements, higher fees, bigger potential impact on portfolio).

In evaluating market dislocation opportunities:

- 1. What opportunities should be considered?
- 2. How should these opportunities be included within the portfolio?





## **Allocation Options within the Total Fund**

### 1. Broaden Investment Guidelines for Existing Managers

 Western Asset Intermediate Credit - MCERA increased the limit on below investment grade securities from 20% to 30% and on contingent convertible securities and preferred stock from 5% to 10%.

### 2. Change Existing Manager's Mandate or Add New Mandate

 An opportunistic allocation focused on public markets could be added, but we believe private market funds are more compelling and offer broader diversification (options 3 or 4).

#### 3. Create an "Opportunistic" allocation in the investment policy, with a 0% target and a range of 0-5%

- Allows the Board to consider compelling investment opportunities that result from market cycles and dislocations.
- Allocation would only be used to the extent the Board was presented with an idea that added to the overall portfolio and represented a unique situation given market conditions or circumstances.

### Change the Total Fund Asset Allocation

- Could add a Private Credit allocation to the total fund asset allocation.
- Changing the asset allocation target would have the biggest impact on the risk and return of the portfolio.
- Would always need to "fill" the allocation to maintain the target.

#### Recommendation:

Option 3 - creating an Opportunistic allocation within MCERA's total fund and allocating approximately 4% of total plan assets (~\$100 million) in commitments to distressed/dislocation funds.



### **Private Distressed/Dislocation Funds**

### **Benefits and Considerations**

Distressed/dislocation funds are private, closed-end funds and operate similar to private equity.

#### Benefits:

- Capitalize on current opportunities
- Higher potential return
- Targeted net internal rates of return for distressed funds range from 10% 20%+
- Provides a differentiated return stream and diversification
- Addresses a different opportunity set private debt/credit

#### Considerations:

- Higher returns = higher risk
- Expected volatility ranges from 15% 20%
- Higher fees
- Management fees range from 1% 2% plus carried interest
- Additional underwriting and due diligence costs for Callan evaluations
- Funds are illiquid and commitment is locked up for life of the fund
- Typical fund is structured for 6 10+ years
- A specific amount is committed to a fund
- Capital is called as investment opportunities present themselves:
- The investment period is generally 3-5 years, so it could take that long for a fund to draw most of the commitment amount
- Net coupon payments distributed back to investors (generally after investment period)



### **Structure Considerations**



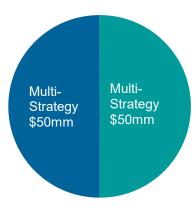
#### **Expected Return:\***

Net IRR (levered): 15% – 20%

MOIC: 1.2x - 1.5x

**Expected Volatility\*:** 16% – 20%

#### Two Managers



#### **Expected Return:**

Net IRR (levered): 13% – 18%

MOIC: 1.2x - 1.5x

Expected Volatility: 15% – 18%

#### **Three Managers**



#### **Expected Return:**

Net IRR (levered): 13% – 18%

MOIC: 1.3x - 1.7x

Expected Volatility: 15% – 18%

#### Reference: Callan Capital Markets Projections (10 Years)

|                        | <b>Expected Return</b> | <b>Expected Volatility</b> |
|------------------------|------------------------|----------------------------|
| Broad U.S. Equity      | 7.15%                  | 18.10%                     |
| Global ex-U.S. Equity  | 7.25%                  | 20.50%                     |
| Core U.S. Fixed Income | 2.75%                  | 3.75%                      |
| Private Equity         | 8.50%                  | 27.80%                     |
| MCERA Total Fund       | 6.60%                  | 13.20%                     |
|                        |                        |                            |

Net IRR = Net Internal Rate of Return MOIC = Multiple of Invested Capital

\*Approximations: expected return and volatility for each structure will depend on actual manager composition



## **Funding the Allocation**

Where to fund this type of allocation?

Given any allocation to the Opportunistic portfolio would make it overweight to its 0% target, the resulting
implication is that another asset class (or classes) would need to be underweight their targets.

Funding for the allocation can come from equities, fixed income, or a combination of both:

- Funding from equities: comparable/increased return, slightly lower or equivalent risk
- Funding from fixed income: increases return, increases risk
- Mixture of both: increases return, moderated risk

Funding will occur over multiple quarters as capital is drawn.

• When capital calls occur, current allocations relative to targets will be reviewed to determine funding source.



# Callan

**Distressed/Dislocation Funds** 

# **Callan High Conviction Distressed/Dislocation Focus**

## Multi-Strategy Funds

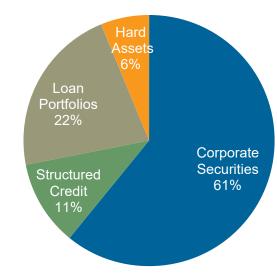
|                         | CarVal   | Fortress   | Varde Partners  |
|-------------------------|--|--|---|
| Name of Strategy        | CVI Credit Value Fund V  | Credit Opportunities Fund V Expansion  | Dislocation Fund  |
| Distressed Style        | Multi-Strategy   | <b>Multi-Strategy</b>  | Multi-Strategy  |
| Investment Focus        | Corporate securities, loan portfolios, structured credit, hard assets. Quality assets at distressed prices, orphaned asset sales, and distressed restructurings. | Distressed and mispriced opportunities; financial institutions and specialty finance companies; orphan portfolios; idiosyncratic asset transactions; structured credit transactions. | Initially dislocated, high quality credits; eventually larger restructurings and NPLs |
| Primary Activity Phase* | I, II, III   | I, II, III   | I, II, III  |
| Structure               | Draw-Down  | Draw-Down  | Draw-Down   |
| FUND DATA               |  |  |   |
| Target Net IRR          | 15%  | 20%+ Gross   | Mid to high teens   |
| Target net MOIC         | N/A  | N/A  | N/A   |
| Investment Period       | 3 years  | Co-terminus with FCOF V -<br>April 2023  | 18 month investment period  |
| Fund Term               | 6 years  | 6 year harvest through April 2029  | 4 1/2 years   |
| Target Fund Size        | \$2.5bn  | \$3bn  | \$1bn   |
| Hard Cap                | \$3.0bn  | \$3.5bn  | \$1.5bn   |
| Open?                   | Yes  | Yes  | Yes   |
| First Close Date        | 31-May   | every 15 days  | May   |
| Second Close Date       |  | every 15 days  | June  |
| Final Close Date        | H1 2021  | November   | October   |
| FEES                    |  |  |   |
| Management Fee          | 150 bps  | 150 bps  | 150 bps   |
| Charged on              | Invested   | Invested   | Invested  |
| Carried Interest        | 20%  | 20%  | 20%   |
| Preferred Return/Hurdle | 8%   | 8%   | 8%  |
| GP Catch-Up             | 100%   | 50%  | 60%   |

<sup>\*</sup>Phase I = Current Period (0-12 mos); Phase II = Intermediate Period (0-24 mos); Phase III = Extended Period (12-36+ mos) Note: Subject to change based on information released by managers. As of 5/18/2020.

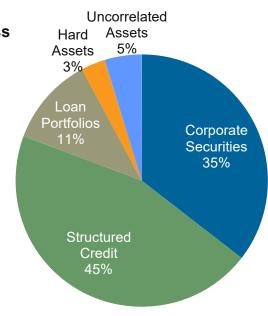


# **Portfolio Construction by Sector**

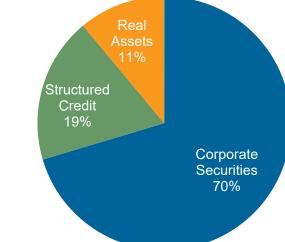




### **Fortress**









# Net Internal Rate of Return (IRR) and Total Value to Paid In (TVPI) by Vintage

|            |                 |                 | Multi-s         | trategy Priv    | ate Credit I    | Fund Vintag | e – Net IRR      | Compariso | n               |                 |        |                        |
|------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------|------------------|-----------|-----------------|-----------------|--------|------------------------|
|            | 2007            | 2008            | 2009            | 2010            | 2011            | 2012        | 2013             | 2014      | 2015            | 2016            | 2017   | 2018                   |
| Net IRR    |                 |                 |                 |                 |                 |             |                  |           |                 |                 |        |                        |
| CarVal     | 6.9%            | 17.5%           |                 |                 | 19.4%           |             | 8.4%             |           | 7.4%            |                 |        | (-11.1%)               |
| Quartile   | 3 <sup>rd</sup> | <b>1</b> st     |                 |                 | 1 <sup>st</sup> |             | 2 <sup>ndt</sup> |           | 3 <sup>rd</sup> |                 |        | 4 <sup>th</sup>        |
| Fortress   |                 | 25.5%           | 17.4%           |                 | 14.4%           |             |                  |           | 13.9%           |                 |        | 18.8%                  |
| Quartile   |                 | <b>1</b> st     | 1 <sup>st</sup> |                 | 1 <sup>st</sup> |             |                  |           | 1st             |                 |        | <b>1</b> st            |
| Varde      |                 | 15.3%           |                 | 11.3%           |                 |             | 8.0%             |           |                 | 8.2%            |        | 0.8%                   |
| Quartile   |                 | 2 <sup>nd</sup> |                 | 3 <sup>rd</sup> |                 |             | 2 <sup>nd</sup>  |           |                 | 3 <sup>rd</sup> |        | 4th                    |
| Quartiles* |                 |                 |                 |                 |                 |             |                  |           |                 |                 |        |                        |
| Upper      | 10.38%          | 15.96%          | 14.82%          | 14.28%          | 10.23%          | 11.70%      | 9.21%            | 10.89%    | 10.08%          | 11.90%          | 11.09% | 9.12%                  |
| Median     | 7.35%           | 11.90%          | 12.05%          | 11.89%          | 8.17%           | 7.26%       | 6.54%            | 8.38%     | 8.83%           | 9.32%           | 6.98%  | 7.19%                  |
| Lower      | 2.10%           | 9.80%           | 9.01%           | 9.83%           | 7.00%           | 3.72%       | 5.00%            | 6.79%     | 6.68%           | 0.62%           | 3.86%  | 2.78%                  |
|            |                 |                 | Multi-s         | trategy Priv    | ate Credit F    | und Vintag  | e – Net TVP      | Compariso | on              |                 |        |                        |
|            | 2007            | 2008            | 2009            | 2010            | 2011            | 2012        | 2013             | 2014      | 2015            | 2016            | 2017   | 2018                   |
| Net TVPI   |                 |                 |                 |                 |                 |             |                  |           |                 |                 |        |                        |
| CarVal     | 1.4x            | 2.0x            |                 |                 | 2.3x            |             | 1.4x             |           | 1.2x            |                 |        | 0.9x                   |
| Quartile   | 2 <sup>nd</sup> | 1 <sup>st</sup> |                 |                 | 1 <sup>st</sup> |             | 1 <sup>st</sup>  |           | 2 <sup>nd</sup> |                 |        | <b>4</b> <sup>th</sup> |
| Fortress   |                 | 2.0x            | 1.9x            |                 | 1.6x            |             |                  |           | 1.7x            |                 |        | 1.5x                   |
| Quartile   |                 | 1 <sup>st</sup> | 1 <sup>st</sup> |                 | 1 <sup>st</sup> |             |                  |           | 1 <sup>st</sup> |                 |        | 1 <sup>st</sup>        |
| Varde      |                 | 2.2x            |                 | 1.9x            |                 |             | 1.5x             |           |                 | 1.2x            |        | 1.0x                   |
| Quartile   |                 | <b>1</b> st     |                 | 1 <sup>st</sup> |                 |             | 1 <sup>st</sup>  |           |                 | 1 <sup>st</sup> |        | 2nd                    |
| Quartiles* |                 |                 |                 |                 |                 |             |                  |           |                 |                 |        |                        |
| Upper      | 1.67x           | 1.90x           | 1.68x           | 1.60x           | 1.53x           | 1.44x       | 1.38x            | 1.27x     | 1.25x           | 1.16x           | 1.18x  | 1.09x                  |
| Median     | 1.35x           | 1.45x           | 1.45x           | 1.46x           | 1.37x           | 1.22x       | 1.27x            | 1.21x     | 1.13x           | 1.13x           | 1.13x  | 1.05x                  |
| Lower      | 1.15x           | 1.36x           | 1.27x           | 1.31x           | 1.33x           | 1.12x       | 1.13x            | 1.15x     | 1.18x           | 1.01x           | 1.05x  | 1.01x                  |

<sup>\*\*\*</sup>Green fields highlight 1st Quartile manager performance; Varde TVPI > IRR Quartile performance due to little to no fund leverage; limited use of subscription lines; longer investment periods; less portfolio turnover.



<sup>\*</sup>Fortress, CarVal data provided by the manager; Varde vintage data from Pitchbook

<sup>\*\*</sup>Pitchbook Distressed Credit benchmark

# Realized/Unrealized Loss and Recovery by Year

|               |       |       |       | Multi-   | strategy Pri  | vate Credit F | und – Realiz | zed Loss/Re | coveries |        |       |       |       |       |
|---------------|-------|-------|-------|----------|---------------|---------------|--------------|-------------|----------|--------|-------|-------|-------|-------|
|               | 2008  | 2009  | 2010  | 2011     | 2012          | 2013          | 2014         | 2015        | 2016     | 2017   | 2018  | 2019  | 2020  | Total |
| CarVal        |       |       |       |          |               |               |              |             |          |        |       |       |       |       |
| # Investments |       |       | 1     | 6        | 11            | 38            | 35           | 27          | 20       | 10     | 41    | 16    | 2     | 207   |
| Below Cost %  |       |       | 25.0% | 18.2%    | 19.3%         | 25.5%         | 26.7%        | 29.7%       | 15.9%    | 12.7%  | 13.2% | 12.1% | 4.4%  | 17.9% |
| Recovery %    |       |       | 97.9% | 95.1%    | 83.2%         | 77.3%         | 87.3%        | 83.6%       | 70.6%    | 87.6%  | 90.4% | 55.8% | 75.9% | 81.6% |
| Fortress      |       |       |       |          |               |               |              |             |          |        |       |       |       |       |
| # Investments | 6     | 0     | 12    | 3        | 4             | 2             | 2            | 2           | 0        | 0      | 0     | 0     | 3     | 34    |
| Below Cost %  | 15.0% | 0%    | 18.5% | 4.3%     | 8.7%          | 7.4%          | 7.7%         | 6.5%        | 0%       | 0%     | 0%    | 0%    | 15.0% | 7.10% |
| Recovery %    | 77.0% | 0%    | 68.2% | 43.0%    | 91.7%         | 91.1%         | 79.6%        | 82.1%       | 0%       | 0%     | 0%    | 0%    | 0.0%  | 75.3% |
| Varde         |       |       |       |          |               |               |              |             |          |        |       |       |       |       |
| # Investments | 37    | 17    | 19    | 20       | 4             | 3             | 0            | 0           | 2        | 1      |       |       |       | 103   |
| Below Cost %  | 12.2% | 15.5% | 12.6% | 15.1%    | 10.3%         | 98.4%         | 0.0%         | 0.0%        | 100.0%   | 100.0% |       |       |       | 13.6% |
| Recovery %    | 66.5% | 64.5% | 75.2% | 79.8%    | 75.6%         | 91.7%         | NA           | NA          | 68.2%    | NA     |       |       |       | 69.2% |
|               |       |       |       | Multi-st | trategy Priva | te Credit Fu  | nd – Unreali | zed Loss/Re | coveries |        |       |       |       |       |
|               | 2008  | 2009  | 2010  | 2011     | 2012          | 2013          | 2014         | 2015        | 2016     | 2017   | 2018  | 2019  | 2020  | Total |
| CarVal        |       |       |       |          |               |               |              |             |          |        |       |       |       |       |
| # Investments |       |       | 0     | 2        | 0             | 4             | 6            | 1           | 8        | 5      | 5     | 13    | 7     | 52    |
| Below Cost %  |       |       | NA    | 6.1%     | NA            | 2.7%          | 4.6%         | 1.1%        | 6.3%     | 6.3%   | 1.6%  | 9.8%  | 15.6% | 4.4%  |
| Recovery %    |       |       | NA    | NM       | NA            | NM            | 45.0%        | 13.8%       | 57.0%    | 71.0%  | 84.6% | 51.5% | 34.4% | 53.8% |
| Fortress      |       |       |       |          |               |               |              |             |          |        |       |       |       |       |
| # Investments | 1     | 0     | 2     | 3        | 1             | 2             | 3            | 9           | 3        | 5      | 8     | 11    | 6     | 53    |
| Below Cost %  | 2.5%  | NA    | 3.1%  | 4.3%     | 2.2%          | 7.4%          | 11.5%        | 29.0%       | 15.0%    | 22.7%  | 20.5% | 25.6% | 30.0% | 11.1% |
| Recovery %    | 65.2% | NA    | 45.5% | 70.8%    | 92.6%         | 73.9%         | 73.7%        | 81.9%       | 63.7%    | 92.2%  | 92.3% | 94.4% | 90.8% | 77.1% |
| Varde         |       |       |       |          |               |               |              |             |          |        |       |       |       |       |
| # Investments | 0     | 1     | 1     | 0        | 0             | 0             | 0            | 0           | 0        | 0      |       |       |       | 2     |
| Below Cost %  | NA    | 0.2%  | 6.7%  | NA       | NA            | NA            | NA           | NA          | NA       | NA     |       |       |       | 1.0%  |
| Recovery %    | NA    | 13.2% | 87.2% | NA       | NA            | NA            | NA           | Na          | Na       | NA     |       |       |       | 83.8% |





# Confidential Matter: Due Diligence Materials on Private Investments

Agenda Item B.2 Due Diligence Reports

Investment Committee September 17, 2020

# Callan



#### Memorandum

To: MCERA Board of Trustees

From: Jim Callahan, CFA

Anne Heaphy

Date: September 17, 2020

Subject: Wellington Organizational Update

Wellington Management Company announced the retirement of CEO Brendan Swords, effective June 30, 2021. Upon his retirement, Jean Hynes will succeed Swords as chief executive officer. Hynes joined the firm in 1991. She was a health care analyst and portfolio manager and led the health care sector research team. She became a partner in 2001, and then was elected to be a managing partner in 2014. In conjunction with this announcement, Steve Klar has been appointed as president, effective January 1, 2021. Klar joined the firm in 2004, became a partner in 2009, and then a managing partner in 2017. Swords, Hynes, and Klar are the three managing partners of the firm.

Wellington is typically thoughtful in its succession planning efforts and generally provides ample notice as illustrated here. Callan has no immediate concerns with this announcement.

# Callan

June 30, 2020

Marin County
Employees' Retirement Association

Investment Measurement Service
Quarterly Review

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# The Stock Market Is Not the Economy

**ECONOMY** 

While equities rebounded in 2Q20, economies around the world face signiicant challenges as the pandemic creates an unprecedented environment. U.S. GDP, for instance, fell an astonishing 9.5% in the quarter, or 32.9% on an annualized basis, while a quarter of all jobs evaporated.

# Returns Positive After 1st Quarter Volatility

INSTITUTIONAL INVESTORS

Every type of institutional investor showed gains over the one year ending with the second quarter, rebounding from the irst quarter. And while all lagged a 60% stocks/40% bonds benchmark over that time period, over longer periods they have roughly matched its performance.

# **Bounceback Leads Indices to Soar in 2Q**

**EQUITY** 

U.S. equity markets bounced back from PAGE March lows in 2Q20, with three sectors (Technology, Consumer Discretionary, Energy) posting returns in excess of 30%. Accommodative monetary policies helped fuel the market recovery for global equities.

### Mixed Performance Around the World

FIXED INCOME

After strong performance in 1Q20, U.S. Treasury returns lagged other "spread" sectors in 2Q20 as risk appetites rebounded. Developed market sovereign bond yields ended lower amid rate cuts overseas. Emerging market debt rebounded, helped by rising oil prices.

# Appreciation Falters; REITs Underperform

REAL ESTATE/REAL ASSETS

All sectors of the NCREIF
Property Index saw negative appreciation in
2Q20, but income remained positive
except for Hotels. Transaction volume dropped off with the exception
of Industrial assets that have tenants with strong credit. REITs underperformed equity benchmarks.

# Heightened Focus on Portfolio Holdings

PRIVATE EQUITY

Activity slowed in 2Q20, although larger transactions helped prop up dollar volumes. The market is in a period of both price discovery and a heightened focus on existing portfolio holdings. First quarter returns were down, but by less than half those of public equity.

# Beta Leads, and Alpha Follows

HEDGE FUNDS/MACs

Global markets reverted to risk-on mode in 2Q20, and most hedge fund strategies beneit ed. The CS HFI rose 6.2%, while the median manager in the Callan Hedge Fund-of-Funds Database Group gained 7.7%. The Callan Institutional Hedge Fund Peer Group increased 6.0%.

# Index Posts Largest Drop Since 4Q08

DEFINED CONTRIBUTION

The equity downturn in 1Q20 led to the decline and ended four straight quarters of gains. Balances saw the biggest plunge ever. Stable value funds saw the biggest inlo ws as participants sought safety. Allocation to equity reached the lowest level since 2012.

### **Broad Market Quarterly Returns**

U.S. Equity Russell 3000



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



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



Global ex-U.S. Fixed Income Bloomberg Barclays Gbl ex US



Sources: Bloomberg Barclays, FTSE Russell, MSCI

### The Stock Market Is Not the Economy

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

Stock markets around the globe staged spectacularly swift recoveries in the second quarter from their sudden and equally spectacular plunge in the irst quarter, providing investors with the hallowed V-shaped recovery that once seemed impossible. While major equity indices are headed back toward all-time highs, the economies underlying these markets face a path quite different from a V-shaped recovery. The sectors driving the U.S. stock market, technology in particular, are not the sectors like retail and hospitality that employ the largest number of workers.

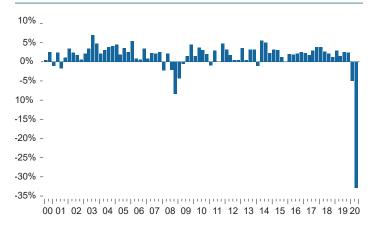
The staggered reopening of states within the U.S. and economies around the globe drove a sharp rise in economic activity in May and June, but a range of high-frequency indicators suggests the pace of recovery has since softened following a resurgence in COVID-19 infections and deaths. The prospect for many locales to pause or roll back easing, and the observed retrenchment in spending by businesses and consumers, looms over the path to recovery. Government belt tightening may undermine the rebound, as tax revenues for localities have plummeted in the face of a surge in demand for services. Revenue shortfalls for state and local governments for isca I year 2021 may total \$200 billion, according to IHS Markit. Consensus forecasts still call for a strong rebound in the third quarter followed by a more gradual recovery, but the risk has risen for a W-shaped trajectory, where a decline follows the third quarter pop, and then a more durable recovery begins with a delay, perhaps in the second half of 2021.

The word "unprecedented" to describe the current environment may seem overused, but the speed and depth of the economic disruption was indeed unprecedented. The total output of the U.S. economy as measured by GDP dropped 9.5% in the second quarter, or an annualized decline of 32.9%, unheard of in modern times. Approximately one quarter of all jobs disappeared in a matter of weeks.

GDP is an admittedly challenged measure of true economic activity even in normal times, and annualized percent changes around the chasm of the COVID-19 economic shutdown are

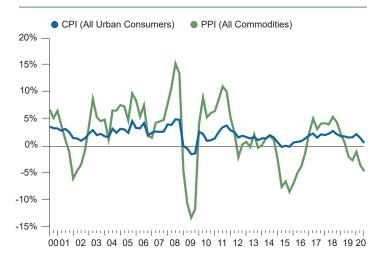
#### **Quarterly Real GDP Growth**

(20 Years)



Source: Bureau of Economic Analysis

#### Inl ation Year-Over-Year



Source: Bureau of Labor Statistics

problematic in context. Adding to the data confusion is the seasonal adjustment methodology, which under normal circumstances greatly reduces the signal-to-noise ratio in monthly and quarterly GDP estimates but exacerbates the severity of data swings in times of extreme stress. These limitations aside, GDP remains the most comprehensive metric for examining U.S. and global activity. For the whole year, projections by forecaster Capital Economics suggest a GDP decline of close to 5% in the U.S. and Japan, 7.5% in the euro zone, and greater than 10% in the U.K. Ofici al estimates for China peg 2020 GDP growth

at 2%, while unofici al estimates show a small loss (-1%). The focus going forward will be on the level of GDP, employment, unemployment, sales, and production, and when we can recover pre-pandemic levels of economic activity. Consensus estimates peg U.S. GDP regaining its pre-pandemic level in the second half of 2021, barring the appearance of the W-shaped recovery.

The most immediate and severe impact to the U.S. economy has been in the job market. Initial unemployment claims spiked to 6.9 million in the last week of March. The weekly claims have since subsided, but remain at levels unprecedented before the pandemic, topping 1 million every week since then. In addition to regular state unemployment programs, the CARES Act expanded beneit s to many not typically covered by states and extended regular beneit s for up to 13 weeks. The sum of these programs provided unemployment beneits for over 30 million persons through the end of June, off a starting job base of 155 million in February. The job market staged a surprising surge in May and June, but the high-frequency data are suggesting a marked softening into the summer.

U.S. inla tion perked up in June following declines for three consecutive months, but year-over-year CPI is up just 0.6%, well below recent trends and the Fed's long-term target of 2%. By some measures, second quarter inla tion fell to its lowest point in SEVEN decades. CPI measures consumer prices against a basket of typical goods and services purchased. GDP and consumption price dela tors measure price changes of goods and services as actually transacted, and both measures saw almost 2% declines in the second guarter. While concerns are rising that the iscal and monetary stimulus enacted to rescue the global economies will be highly inla tionary, the prospect

The Long-Term View

|                                 |      | _     |       |        | 6/30/20 |
|---------------------------------|------|-------|-------|--------|---------|
| Index                           | 2Q20 | Year  | 5 Yrs | 10 Yrs | 25 Yrs  |
| U.S. Equity                     |      |       |       |        |         |
| Russell 3000                    | 22.0 | 6.5   | 10.0  | 13.7   | 9.3     |
| S&P 500                         | 20.5 | 7.5   | 10.7  | 14.0   | 9.3     |
| Russell 2000                    | 25.4 | -6.6  | 4.3   | 10.5   | 8.2     |
| Global ex-U.S. Equity           |      |       |       |        |         |
| MSCI EAFE                       | 14.9 | -5.1  | 2.1   | 5.7    | 4.5     |
| MSCI ACWI ex USA                | 16.1 | -4.8  | 2.3   | 5.0    |         |
| MSCI Emerging Markets           | 18.1 | -3.4  | 2.9   | 3.3    |         |
| MSCI ACWI ex USA Small Cap      | 22.8 | -4.3  | 2.5   | 6.0    | 5.5     |
| Fixed Income                    |      |       |       |        |         |
| Bloomberg Barclays Agg          | 2.9  | 8.7   | 4.3   | 3.8    | 5.4     |
| 90-Day T-Bill                   | 0.0  | 1.6   | 1.2   | 0.6    | 2.4     |
| Bloomberg Barclays Long G/C     | 6.2  | 18.9  | 9.0   | 7.8    | 7.7     |
| Bloomberg Barclays Gl Agg ex US | 3.4  | 0.7   | 2.9   | 2.0    | 3.7     |
| Real Estate                     |      |       |       |        |         |
| NCREIF Property                 | -1.0 | 2.7   | 6.8   | 9.7    | 9.1     |
| FTSE Nareit Equity              | 11.8 | -13.0 | 4.1   | 9.1    | 9.5     |
| Alternatives                    |      |       |       |        |         |
| CS Hedge Fund                   | 6.2  | -0.7  | 1.6   | 3.8    | 7.5     |
| Cambridge PE*                   | -7.8 | 2.1   | 10.4  | 12.3   | 14.7    |
| Bloomberg Commodity             | 5.1  | -17.4 | -7.7  | -5.8   | 0.7     |
| Gold Spot Price                 | 12.8 | 27.4  | 9.0   | 3.8    | 6.4     |
| Inl ation – CPI-U               | -0.1 | 0.6   | 1.6   | 1.7    | 2.1     |

\*Data for most recent period lags by a quarter. Data as of 3/31/20. Sources: Bloomberg, Bloomberg Barclays, Bureau of Economic Analysis, Credit Suisse, FTSE Russell, MSCI, NCREIF, S&P Dow Jones Indices, Refinitiv/Cambridge

of near-term dela tion is real, and holds the potential to derail the recovery—falling prices could slow consumer and business spending, especially if delation becomes a spiral rather than a temporary dip.

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

|   | 2Q20   | 1Q20  | 4Q19  | 3Q19  | 2Q19  | 1Q19  | 4Q18  | 3Q18  |
|---|--------|-------|-------|-------|-------|-------|-------|-------|
| Employment Cost–Total Compensation Growth | 2.7%   | 2.8%  | 2.7%  | 2.8%  | 2.7%  | 2.8%  | 2.9%  | 2.8%  |
| Nonfarm Business–Productivity Growth      | 2.5%*  | -0.8% | 1.2%  | -0.3% | 2.7%  | 3.9%  | 0.5%  | 1.6%  |
| GDP Growth                                | -32.9% | -5.0% | 2.4%  | 2.6%  | 1.5%  | 2.9%  | 1.3%  | 2.1%  |
| Manufacturing Capacity Utilization        | 63.1%  | 73.5% | 75.0% | 75.4% | 75.5% | 76.4% | 77.0% | 76.9% |
| Consumer Sentiment Index (1966=100)       | 74.0   | 96.4  | 97.2  | 93.8  | 98.4  | 94.5  | 98.2  | 98.1  |

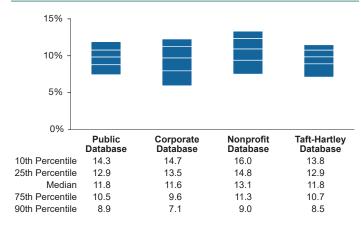
Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan

## **Returns Positive After 1st Quarter Volatility**

#### INSTITUTIONAL INVESTORS

- After the pandemic-induced market volatility in 1Q20, all types of institutional investors rebounded to positive performance for the 12 months ending with the second quarter. Corporate dein ed beneit (DB) plans fared notably better than others, gaining 6.4%. Other types of investors saw increases of roughly 2%-3%. All fell short of major U.S. stock and bond indices, as well as a 60% S&P 500/40% Bloomberg Barclays Aggregate benchmark, but outperformed global ex-U.S. equities by a wide margin.
- Over the last 20 years, institutional investors have performed in line with the 60%/40% benchmark, with returns in a range of 5.7%-5.9% annualized.
- The V-shaped equity market decline and recovery experienced in the irst half of 2020 revealed levels of volatility not seen since the Global Financial Crisis of 2008-09. Investors' recent experience with volatility may reveal their "true" tolerance for risk.
- We note that the stock market is not the economy and the path out of recession remains undiscovered.

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



Source: Callan

- For institutional investors, the key is to stay the course: rebalance; manage liquidity; evaluate their portfolios for impairment or unexpected performance; and watch for opportunity, both inside the portfolio and across the markets.

#### Callan Database Median and Index Returns\* for Periods Ended 6/30/20

| Database Group              | Quarter | Year-to-date | Year | 3 Years | 5 Years | 10 Years |
|-----------------------------|---------|--------------|------|---------|---------|----------|
| Public Database             | 11.79   | -2.34        | 3.26 | 5.81    | 6.02    | 8.09     |
| Corporate Database          | 11.64   | 0.00         | 6.36 | 6.89    | 6.74    | 8.47     |
| Nonproi t Database          | 13.10   | -3.26        | 2.67 | 5.52    | 5.59    | 7.89     |
| Taft-Hartley Database       | 11.82   | -2.74        | 3.21 | 5.93    | 6.21    | 8.55     |
| All Institutional Investors | 12.04   | -2.26        | 3.63 | 5.88    | 6.03    | 8.24     |
| Large (>\$1 billion)        | 10.87   | -1.62        | 4.09 | 6.39    | 6.40    | 8.48     |
| Medium (\$100mm - \$1bn)    | 11.99   | -2.18        | 3.62 | 5.94    | 6.12    | 8.24     |
| Small (<\$100 million)      | 12.71   | -2.71        | 3.31 | 5.65    | 5.76    | 8.07     |

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

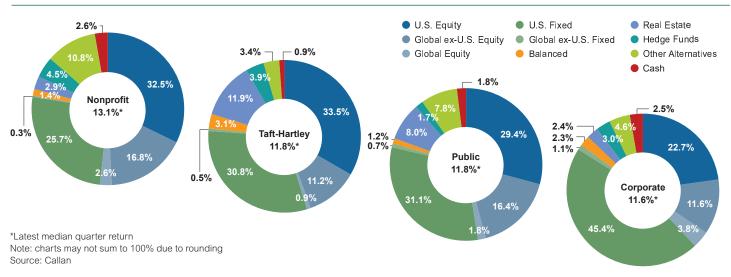
Source: Callan. Callan's database includes the following groups: public defined benefit (DB) plans, corporate DB plans, nonprofits, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan's clients. All database group returns presented gross of fees. Past performance 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.

#### INSTITUTIONAL INVESTORS (Continued)

- The massive monetary and iscal intervention by governments will change the landscape:
  - The continuing low-yield environment and the capital markets going forward favor growth.
  - Investors need to remember the purpose of capital market assumptions: To dein e an investor's return expectation, while matching the investor's risk tolerance and investment time horizon. Importantly, they are not point estimates: they dein e a range of possible outcomes.
  - Investors also need to assess what can serve as an equity diversiie r equal to bonds with the return of zero interest rates. Are they willing to pay for the beneit of ixe d income?
- Some decisions are on hold, particularly serious restructuring of asset class exposures, but strategic planning continues apace.
- Based on Callan's client activity, many types of institutional investors plan to adjust their strategic allocations by shifting out of publicly traded asset classes and into alternatives, including private equity, private credit, and real assets.
- This interest has led to a surge in asset allocation reviews and discussions about the capital markets with investors.
- As part of those assessments, investors are re-examining the purposes of all diversile rs, including real assets, hedge funds and liquid alternatives, ixe d income, and private equity and private credit.

- Private credit in particular drew attention. All institutional investor types had some interest in increasing private credit, and none indicated an intention to cut their allocations.
- Corporate DB plans indicated they intended to reduce allocations to equities but increase allocations to ixe d income. The capital market upheaval has not derailed the trend toward de-risking; the commitment to de-risking is solid.
- Public DB plans expressed interest in a range of opportunistic strategies, such as unconstrained ixe d income.
- Nonproit's continued to emphasize return enhancement. Strategic asset allocation work is focused on evaluating investment portfolios that can support the desired distribution rate in order to balance intergenerational equity.
- The top concern for insurance clients was yield.
- In terms of their strategic allocations, insurance clients indicated they planned to shift out of equities, both U.S. and global ex-U.S., and increase allocations to a variety of credit and alternative investments.
- Institutional investors expressed strong interest in educational topics relevant to the current market environment.
- Finally, COVID-19 was top of mind for all investor types. One noticeable impact was a dramatic shift in meetings. Virtually all clients in an exclusive Callan survey said that the vast bulk of their meetings were now occurring virtually, and a third were doing all of their meetings that way.

#### **Average Asset Allocation, Callan Database Groups**



## **Equity**

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

U.S. equity markets bounced back from March lows in 2Q20 (Russell 1000: +21.8%). The S&P 500 (+20.5%) recorded its best quarterly performance since 1998. Three sectors (Technology, Consumer Discretionary, and Energy) posted returns in excess of 30%. Information Technology (+30.5%) continues to be a top performer with the "FAAMG" stocks (Facebook, Amazon, Apple, Microsoft, and Google) up 35% in the quarter. Many Technology stocks beneit ed from the "stay at home" environment. Energy stocks (+30.5%) rebounded after OPEC+ and non-OPEC production cuts buoyed crude prices.

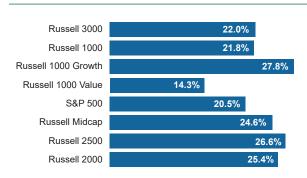
## Small cap outgained large cap

- From the irst to the second quarter, the Russell 2000 swung from its worst quarterly performance to one of its three best quarterly returns since the inception of the index.
- The Russell 2000 still lags the Russell 1000 on a year-todate and trailing one-year basis, exemplifying the extreme dislocation between large and small cap performance in the irst quarter.
- Better-than-expected economic data and Fed actions helped shift investment sentiment in favor of small cap.

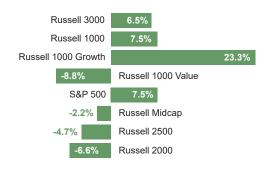
#### Growth outpaced value across market capitalizations

Russell's value indices underperformed their growth counterparts across the market cap spectrum during the irst quarter decline as well as during the second quarter recovery (Russell 1000 Growth: +27.8%; Russell 1000 Value:

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



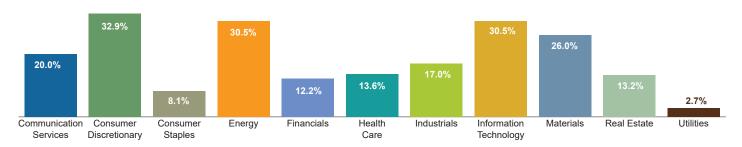
### U.S. Equity: One-Year Returns



Sources: FTSE Russell and S&P Dow Jones Indices

- +14.3%; Russell 2000 Growth: +30.6%; Russell 2000 Value: +18.9%).
- Persistently low interest rates, a latter yield curve, and slower economic growth are some of the headwinds for the value factor.

## **Quarterly Performance of Industry Sectors**



Source: S&P Dow Jones Indices

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

Accommodative monetary policies coupled with massive is cal stimulus helped fuel the second quarter market recovery after the irst quarter's declines.

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

- Developed markets with the most success at mitigating the coronavirus led; Australia (+28.9%), New Zealand (+28.1%), and Germany (+26.5%) were the top performers.
- Countries' inability to "la tten the curve" acted as headwinds to their equity markets, namely the U.K. (+7.8%).
- Every sector in MSCI EAFE except Energy (-0.03%) posted positive returns, led by cyclical stocks, whose prices are highly sensitive to changes in the economy; Information Technology (+23.4%) companies also provided strong returns as working-from-home trends continued to support the sector.
- Factor performance in developed ex-U.S. markets was led by momentum and quality, relecting the cyclical rebound (momentum) coupled with continued pandemic uncertainty (quality, light to safety); growth continued to outperform value (EAFE Growth: +17.0% vs. EAFE Value: +12.4%).

#### **Emerging Markets**

- Emerging markets produced their strongest quarterly gains in over a decade as isca I and monetary stimulus from countries aided the second quarter rebound across all countries and sectors.
- Most EM countries ended lockdowns during the period, but Latin America, India, and some parts of Southeast Asia ended the second quarter with cases surging.
- Commodity-linked economies such as South Africa (+27.2%), Brazil (+22.9%), and Russia (+18.7%) recovered on the strength of metals, mining, and oil-related securities after being some of the worst-performing countries in 1Q20.
- China (+15.6%) lagged the index as U.S.-China trade tensions reignited and additional sanctions were imposed.
- Every sector posted positive returns, most in double digits.
- Growth outperformed value (EM Growth: +22.1% vs. EM Value: +13.8%)

#### Global ex-U.S. Small Cap

- Global ex-U.S. small caps rallied during the second quarter as lockdowns eased and economies reopened.
- A risk-on mindset pervaded the global ex-U.S. small cap market that fueled double-digit returns for every sector in the MSCI ACWI ex-USA Small Cap Index.
- Australia (+47.1%) was the top-performing country; Japan (+12.8%) and the U.K. (+14.8%) were two of the weakest.

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

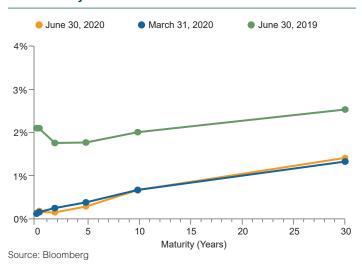
#### U.S. Treasury yields were range-bound

- The 10-year U.S. Treasury yield reached a high of 0.91% in June before closing the quarter at 0.66%, down slightly from the 1Q20 quarter-end level of 0.70%.
- After strong performance in 1Q20, U.S. Treasury returns lagged other "spread" sectors as risk appetites rebounded, fueled by massive Fed stimulus programs as well as improved liquidity.
- The Fed left rates on hold at 0% 0.25% for the foreseeable future, anchoring the low end of the yield curve.
- TIPS outperformed nominal Treasuries as expectations for inla tion rose. The 10-year breakeven spread ended the quarter at 1.34%, up from 0.87% as of the end of 1Q20.

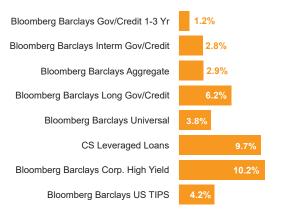
## Corporate credit rallied due to spread narrowing

- Corporate credit rebounded amid improving investor conidence and economic data. However, fallen angels continued to spark concern with nearly half the investment grade bond market now rated BBB.
- Investment grade corporate spreads narrowed by 122 bps to 150 bps despite companies issuing record amounts of debt totaling \$1.4 trillion; the Fed provided continued support through the announcements of the Primary and Secondary Market Corporate Credit Facilities.
- In a reversal from 1Q20, lower quality outperformed as BBB-rated credit (+11.2%) outperformed single A (+7.0%), AA (+5.0%), and AAA (+1.7%).
- High yield corporates also posted sharp returns (+10.2%).
   CCC-rated high yield corporates (+9.1%) lagged BB-rated corporates (+11.5%).
- The high yield default rate reached a 10-year high (6.2%).
- Energy (+40.0%) was the highest-performing high yield bond sub-sector, rele cting sharply higher oil prices.

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

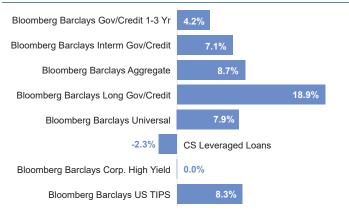


#### **U.S. Fixed Income: Quarterly Returns**



Sources: Bloomberg Barclays and Credit Suisse

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



Sources: Bloomberg Barclays and Credit Suisse

#### FIXED INCOME (Continued)

#### **Global Fixed Income**

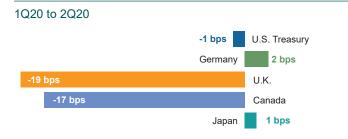
#### Global ex-U.S. i xed income rose amid rate cuts

- The U.S. dollar depreciated modestly against a basket of developed market currencies, most notably the Australian and New Zealand dollars (-12.5%, -8.4%, respectively). The dollar was roughly la t versus the yen.
- Developed market sovereign bond yields ended the quarter lower amid rate cuts overseas, and the unhedged Bloomberg Barclays Global Aggregate ex-US benchmark posted positive returns (+3.4%)
- The ECB expanded the stimulus program announced in March from €750 billion to €1.35 trillion.

#### Emerging market debt made up ground

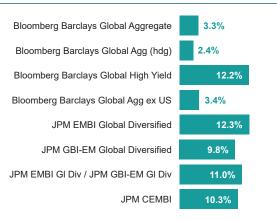
- The J.P. Morgan EMBI Global Diversiie d dollar-denominated benchmark posted strong returns (+12.3%) as oil prices rose and central bank liquidity measures took effect. However, the index remains slightly below year-end 2019 levels.
- Higher-yielding countries led the way in 2Q20 (+16.6%); however they remain down (-12.7%) relative to investment grade constituents year-to-date, according to index data from J.P. Morgan.
- Within the J.P. Morgan GBI-EM Global Diversiie d local currency-denominated benchmark (+9.8%), returns were positive for the vast majority of constituents. Oil-sensitive economies such as Mexico, Colombia, and South Africa rebounded to some degree, but remained down year-to-date.

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



Source: Bloomberg Barclays

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



Sources: Bloomberg Barclays and JPMorgan Chase

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



Sources: Bloomberg Barclays and JPMorgan Chase

## Pandemic Has Muted Impact on Private Real Estate; REITs Underperform

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

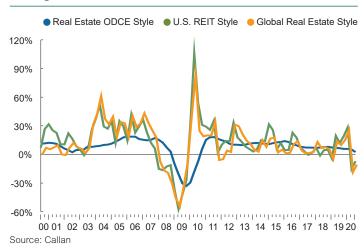
#### Private U.S. Real Estate

- The continued impact of the pandemic was rele cted in 2Q20 results.
- All sectors of the NCREIF Property Index saw negative appreciation, but income remained positive except in the Hotel sector.
- Industrial remains the best performer.
- The dispersion of returns by manager within the NFI ODCE Index was due to both the composition of underlying portfolios and different valuation methodologies/approaches.
- Negative returns are expected over the next few quarters.
- Vacancy rates for all property types are or will be impacted.
- Net operating income has declined as retail experienced the largest drop-off in over 20 years.
- Second quarter rent collections show relatively stable income throughout the quarter in the Industrial, Apartment, and Ofice sectors. The Retail sector remains challenged, with regional malls impacted most heavily.
- Class A/B urban apartments were relatively strong, followed by certain types of Industrial and Ofice.
- Supply was in check before the pandemic.
- Construction is limited to in ishing up existing projects but has been hampered by shelter-in-place policies and shortages of materials.
- New construction will be basically halted in future quarters except for pre-leased properties.
- Transaction volume has dropped off during the quarter with the exception of Industrial assets that have tenants with strong credit, which are trading at pre-COVID-19 levels.
- Cap rates remained steady during the quarter. The spread between cap rates and 10-year Treasuries is relatively high, leading some market participants to speculate that cap rates may not adjust much. Price discovery is happening and there are limited transactions.
- Callan believes the pandemic may cause a permanent repricing of risk across property types. Property types with more reliable cash lows will experience less of a change in cap rates; however, those with less reliable cash lows will see greater adjustments.

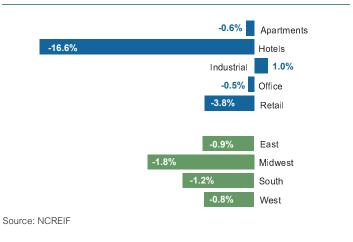
#### **U.S. and Global REITs**

- Global REITs underperformed in 2Q20, gaining 10.1% compared to 19.4% for global equities (MSCI World).
- U.S. REITs rose 11.8% in 2Q20, lagging the S&P 500 Index, which jumped 20.5%.
- Globally, REITs (except in Singapore) are trading at a discount to NAV.
- In some regions the discount is at a ive -year low.
- All property types except for data centers, hotels, and life sciences are trading at the bottom of their range.
- Ongoing volatility in REIT share prices offers opportunities to purchase mispriced securities, individual assets from REIT

#### **Rolling One-Year Returns**



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



#### REAL ESTATE/REAL ASSETS (Continued)

owners, and discounted debt, as well as lend to companies and/or execute take-privates of public companies.

Infrastructure

- 1Q20 was the third-largest quarter for closed-end infrastructure fundraising (\$37 billion), following 4Q19 (\$43 billion) and 3Q18 (\$38 billion). The closed-end fund market continues to expand, with infrastructure debt, emerging markets, and sector-speciic strategies (e.g., communications and renewables). Investor interest in mezzanine or debt-focused funds has increased.
- Open-end funds raised signiica nt capital in 2019, and the universe of investable funds continues to increase as the sector matures.
- In 2020 assets with guaranteed/contracted revenue or more inelastic demand patterns (e.g., renewables, telecoms, and

utilities) fared better than assets with GDP/demand-based revenue (e.g. airports, seaports, and midstream-related).

#### Real estate investment opportunities

- Primary opportunity: purchase of mispriced publicly traded real estate, both equity and debt
- Emerging opportunity: purchase of mezzanine loans from forced sellers

## Infrastructure investment opportunities

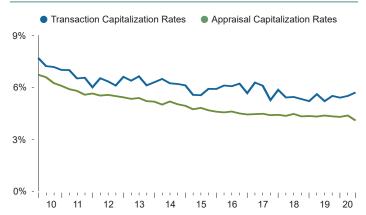
- Primary opportunity: purchase of mispriced publicly traded infrastructure
- Infrastructure lending if traditional lenders retrench

#### **NCREIF Capitalization Rates by Property Type**



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

### **NCREIF Transaction and Appraisal Capitalization Rates**



Source: NCREIF

Note: Transaction capitalization rate is equal weighted.

### Callan Database Median and Index Returns\* for Periods Ended 6/30/20

| Private Real Assets              | Quarter | Year to Date | Year  | 3 Years | 5 Years | 10 Years | 15 Years |
|----------------------------------|---------|--------------|-------|---------|---------|----------|----------|
| Real Estate ODCE Style           | -0.6    | -0.2         | 2.5   | 5.5     | 7.2     | 10.1     | 6.0      |
| NFI-ODCE (value wt net)          | -1.7    | -1.0         | 1.3   | 4.7     | 6.3     | 9.8      | 6.0      |
| NCREIF Property                  | -1.0    | -0.3         | 2.7   | 5.4     | 6.8     | 9.7      | 7.7      |
| NCREIF Farmland                  | 0.6     | 0.5          | 2.5   | 4.9     | 6.2     | 10.7     | 12.9     |
| NCREIF Timberland                | 0.1     | 0.2          | 0.3   | 2.3     | 2.7     | 4.4      | 6.2      |
| Public Real Estate               |         |              |       |         |         |          |          |
| Global Real Estate Style         | 10.5    | -17.0        | -10.7 | 2.2     | 3.7     | 8.4      | 5.6      |
| FTSE EPRA Nareit Developed       | 10.1    | -21.3        | -16.3 | -1.6    | 1.3     | 6.3      |          |
| Global ex-U.S. Real Estate Style | 10.1    | -17.2        | -9.2  | 3.1     | 3.5     | 7.9      | 5.6      |
| FTSE EPRA Nareit Dev ex US       | 8.6     | -21.5        | -15.9 | -0.9    | 0.6     | 5.4      |          |
| U.S. REIT Style                  | 12.1    | -13.9        | -7.1  | 2.9     | 5.8     | 10.3     | 7.1      |
| EPRA Nareit Equity REITs         | 11.8    | -18.7        | -13.0 | 0.0     | 4.1     | 9.1      | 6.0      |

\*Returns less than one year are not annualized.

Sources: Callan, FTSE Russell, NCREIF

## **Activity Falls but Dollars Continue to Flow**

#### PRIVATE EQUITY | Gary Robertson

Private equity metrics such as fundraising, company purchase prices, and private M&A exits plunged by count in the second quarter, but dollar volumes held relatively steady as larger transactions were able to proceed. Only IPOs increased in the second quarter, supported by the public market rally. Private equity returns in the irst quarter fell, but by less than half of public equity's decline.

Fundraising ► Final closes for private equity partnerships in the second quarter totaled \$149 billion of commitments in 229 partnerships, based on preliminary data. (Unless otherwise noted, all data come from PitchBook.) The dollar volume fell 18% but the number of funds rose 1% from the irst quarter. For the irst half, 2020 is running \$26 billion or 10% ahead of a year ago, although the number of funds raised has fallen by 25%. We expect the second half of 2020 will decline from the irst half, as general partners are slowing the deployment pace of their current funds and focusing on existing companies, resulting in fewer new funds coming to market.

**Buyouts** ► Funds closed 973 investments with \$75 billion in disclosed deal value, a 51% fall in count and a 29% drop in dollar value from the irst quarter. Average buyout prices plunged to 9.2x EBITDA in the second quarter, 2.3x lower than pricing for the full year 2019. Average leverage multiples fell to 4.9x.

#### Funds Closed 1/1/20 to 6/30/20

| Strategy            | No. of Funds | Amt (\$mm) | Share |
|---------------------|--------------|------------|-------|
| Venture Capital     | 261          | 59,755     | 20%   |
| Growth Equity       | 42           | 29,669     | 10%   |
| Buyouts             | 123          | 125,411    | 42%   |
| Mezzanine Debt      | 4            | 2,888      | 1%    |
| Distressed          | 5            | 8,000      | 3%    |
| Energy              | 3            | 6,175      | 2%    |
| Secondary and Other | 46           | 50,431     | 17%   |
| Fund-of-Funds       | 25           | 14,879     | 5%    |
| Totals              | 509          | 297,209    | 100%  |

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

**Venture Capital** ► New rounds of in ancing in VC companies totaled 5,741, with \$65 billion of announced value. The number of investments fell 20% but value rose 2% from the irst guarter.

Exits ► There were 219 private M&A exits of private equity-backed companies, with disclosed values totaling \$121 billion. The count fell 59% but values rose 68%. There were 15 private equity-backed IPOs in the second quarter raising an aggregate \$11 billion, up 15% and 57%, respectively, from the irst quarter. Venture-backed M&A exits totaled 283 with disclosed value of \$23 billion. The number of sales declined 31% from the irst quarter, but value rose 35%. There were 74 VC-backed IPOs in the second quarter with a combined lo at of \$11 billion; the count jumped 40% and the issuance grew 83%.

### Private Equity Performance (%) (Pooled Horizon IRRs through 3/31/20\*)

| Strategy             | 3 Months | Year  | 3 Years | 5 Years | 10 Years | 15 Years | 20 Years | 25 Years |
|----------------------|----------|-------|---------|---------|----------|----------|----------|----------|
| All Venture          | -2.85    | 9.10  | 14.62   | 11.29   | 14.85    | 11.36    | 5.71     | 28.09    |
| Growth Equity        | -5.45    | 5.44  | 13.53   | 11.77   | 12.82    | 12.60    | 10.35    | 14.17    |
| All Buyouts          | -9.93    | 0.79  | 10.71   | 11.31   | 13.28    | 12.32    | 10.95    | 12.78    |
| Mezzanine            | -4.78    | 2.38  | 8.70    | 8.84    | 10.57    | 10.16    | 7.51     | 9.56     |
| Credit Opportunities | -12.06   | -9.91 | 1.44    | 3.50    | 7.84     | 8.33     | 9.13     | 9.32     |
| Control Distressed   | -12.20   | -8.67 | 2.09    | 5.02    | 9.25     | 8.92     | 9.56     | 10.09    |
| All Private Equity   | -7.84    | 2.24  | 10.93   | 10.53   | 12.85    | 11.72    | 9.33     | 13.77    |
| S&P 500              | -19.60   | -6.98 | 5.10    | 6.73    | 10.53    | 7.58     | 4.79     | 8.85     |
| Russell 3000         | -20.90   | -9.13 | 4.00    | 5.77    | 10.15    | 7.50     | 4.91     | 8.81     |

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

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

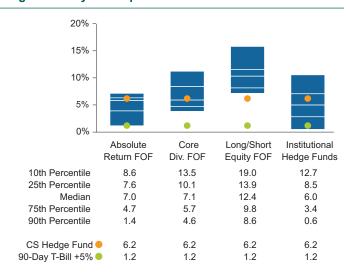
## Beta Leads, Alpha Follows

#### HEDGE FUNDS/MACs | Jim McKee

Emboldened by dramatic monetary and isca I stimulus, global markets reverted to full risk-on mode in the second quarter, and most hedge fund strategies beneit ed. Illustrating raw hedge fund performance without implementation costs, the Credit Suisse Hedge Fund Index (CS HFI) rose 6.2% in the second quarter, its strongest quarterly performance since 2009. The median manager in the Callan Hedge Fund-of-Funds Database Group, representing actual hedge fund portfolios, advanced 7.7% net of all fees and expenses.

The median manager in the Callan Institutional Hedge Fund Peer Group, tracking 50 of the largest, broadly diversiie d hedge funds with low-beta exposure to equity markets, gained 6.0%. Those funds focused on market neutral equity or rates arbitrage edged ahead 3% to 5%; those more exposed to illiquid credit strategies rebounded over 7%.

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



Sources: Callan, Credit Suisse, and Federal Reserve

#### Callan Peer Group Median and Index Returns\* for Periods Ended 6/30/20

| Hedge Fund Universe                        | Quarter | Year to Date | Year | 3 Years | 5 Years | 10 Years |
|--|---------|--------------|------|---------|---------|----------|
| Callan Institutional Hedge Fund Peer Group | 6.0     | -0.6         | 1.3  | 3.9     | 4.1     | 5.4      |
| Callan Fund-of-Funds Peer Group            | 7.7     | -0.8         | 1.2  | 3.1     | 2.6     | 4.3      |
| Callan Absolute Return FOF Style           | 7.0     | -2.8         | -1.8 | 2.3     | 2.2     | 3.5      |
| Callan Core Diversii ed FOF Style          | 7.1     | 0.2          | 2.1  | 3.4     | 2.2     | 4.2      |
| Callan Long/Short Equity FOF Style         | 12.4    | -1.2         | 1.7  | 3.5     | 3.0     | 5.2      |
| Credit Suisse Hedge Fund                   | 6.2     | -3.3         | -0.7 | 2.1     | 1.6     | 3.8      |
| CS Convertible Arbitrage                   | 5.9     | 0.2          | 3.2  | 2.8     | 3.0     | 3.9      |
| CS Distressed                              | 5.6     | -5.7         | -7.9 | -1.0    | 0.3     | 3.3      |
| CS Emerging Markets                        | 13.2    | 1.3          | 4.7  | 4.1     | 4.1     | 4.8      |
| CS Equity Market Neutral                   | 3.4     | -2.1         | -2.7 | 0.0     | 0.0     | 1.6      |
| CS Event-Driven Multi                      | 12.0    | -9.0         | -7.3 | -0.6    | -1.3    | 2.1      |
| CS Fixed Income Arb                        | 2.7     | -3.2         | -0.7 | 2.1     | 2.9     | 4.5      |
| CS Global Macro                            | 4.6     | -3.9         | -1.1 | 3.2     | 1.8     | 3.9      |
| CS Long/Short Equity                       | 9.8     | -2.5         | 2.6  | 3.5     | 2.7     | 5.2      |
| CS Managed Futures                         | -2.9    | -2.9         | -2.0 | 2.2     | -0.4    | 1.2      |
| CS Multi-Strategy                          | 3.9     | -2.8         | -0.9 | 1.6     | 3.0     | 5.7      |
| CS Risk Arbitrage                          | 7.5     | 0.2          | 2.4  | 2.3     | 3.0     | 2.8      |
| HFRI Asset Wtd Composite                   | 4.5     | -7.4         | -5.0 | 0.9     | 1.1     | 3.6      |
| 90-Day T-Bill + 5%                         | 1.2     | 3.1          | 6.6  | 6.8     | 6.2     | 5.6      |

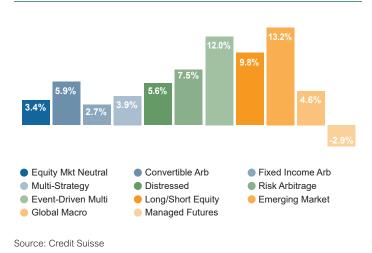
\*Net of fees. Sources: Callan, Credit Suisse, Hedge Fund Research

Within CS HFI, the best-performing strategies last quarter were Emerging Markets (+13.2%), Event-Driven Multi-Strategy (+12.0%), and Long/Short Equity (+9.8%). Arbitrage strategies also beneit ed from the risk-on rally, but their hedges limited gains to mid-single digits or less. As the worstperforming strategy in CS HFI, Managed Futures (-2.9%) was caught la t-footed in the sudden equity rally.

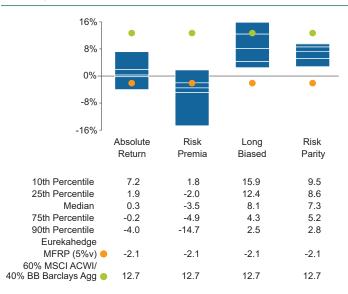
Within the Hedge FOF Group, market exposures notably affected performance in the second quarter. Given its net long equity exposure, the median Callan Long/Short Equity FOF (+12.4%) decidedly beat the Callan Absolute Return FOF (+7.0%).

Within Callan's database of liquid alternative solutions, the median managers of the Callan Multi-Asset Class (MAC) Style Group generated mixed returns, gross of fees, consistent with their underlying risk exposures. Typically targeting equal risk-weighted allocations to major asset classes with leverage, the Callan Risk Parity MAC added 7.3%. However, the more traditional equity-centric benchmark of 60% MSCI ACWI and 40% Bloomberg Barclays US Aggregate Bond Index rose 12.7%. Given a usually long equity bias within dynamic asset allocation models, the Callan Long-Biased MAC (+8.1%) also trailed the global benchmark. As the most conservative MAC style focused on non-directional strategies of long and short asset class exposures, the Callan Absolute Return MAC edged ahead 0.3%. Rele cting the second quarter's challenging environment for alternative betas, such as the equity value and momentum factors, the median Callan Risk Premia MAC fell 3.5%.

#### Credit Suisse Hedge Fund Strategy Returns



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



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

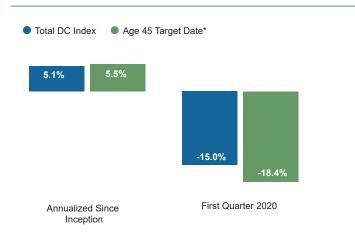
## **Index Posts Largest Quarterly Drop Since 4Q08**

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

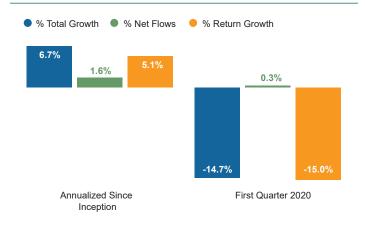
- The Callan DC Index™ lost 15.0% in 1Q20, the sharpest plunge since 4Q08, ending four consecutive quarters of gains. The Age 45 Target Date Fund posted a larger loss (-18.4%), attributable to its higher allocation to equity, which underperformed ixe d income.
- The Index's sharp drop in balances (-14.7%) reversed four straight quarters of growth and was the biggest since the Index's inception. Poor investment returns (-15.0%) were the sole driver; quarterly net lo ws (0.3%) played a small mitigating role.
- With investors seeking less-risky investments, stable value funds saw the largest inlo ws (49.7%). U.S. large cap equity (-54.3%) and U.S. small/mid cap equity (-26.0%) had the largest outlo ws.
- Turnover in the DC Index (i.e., net transfer activity levels within DC plans) increased dramatically to 0.96% from the previous quarter's 0.38%, the highest since 3Q12.
- The allocation to equity fell to 66.0% in 1Q20 from 70.2% in the previous quarter, the lowest since 2012. The allocation to stable value increased to 11.8%.
- The allocations to large cap equity (23.8%) and small/mid cap equity (7.0%) both decreased by more than 1.4 percentage points. Global ex-U.S. equity (4.6%) and company stock (1.8%) had the next-largest decreases in allocation.
- The prevalence of a high yield offering (4.8%) increased in 1Q20 by nearly a percentage point from the previous quarter and now sits at its highest mark since 2017. On the other hand, the percentage of plans offering U.S. small/mid-cap equity dipped for the second straight quarter following six consecutive quarters of 100% prevalence.
- The presence of company stock (20.0%) decreased by more than a percentage point from the previous quarter. Similarly, the percentage of plans offering a brokerage window (40.0%) also fell by more than a percentage point.

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 (First Quarter 2020)**

(Top Two and Bottom Two Asset Gatherers)

| Asset Class       | Flows as % of<br>Total Net Flows |
|-------------------|----------------------------------|
| Stable Value      | 49.67%                           |
| U.S. Fixed Income | 21.23%                           |
| U.S. Smid Cap     | -26.03%                          |
| U.S. Large Cap    | -54.30%                          |
| Total Turnover**  | 0.96%                            |

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

Source: Callan DC Index

Note: DC Index inception date is January 2006.

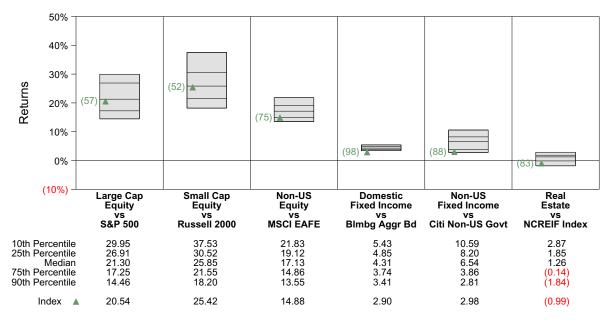
- The Age 45 Fund transitioned from the average 2035 TDF to the 2040 TDF in June 2018.
- \*\* Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

# Market Overview Active Management vs Index Returns

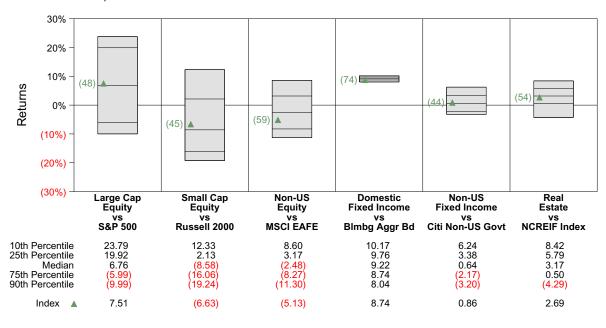
#### **Market Overview**

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 June 30, 2020



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





### **Investment Manager Asset Allocation**

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2020, with the distribution as of March 31, 2020. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

#### **Asset Distribution Across Investment Managers**

June 30, 2020 March 31, 2020 **Market Value** Weight Net New Inv. Inv. Return Market Value Weight **Domestic Equity** \$648,385,384 \$775,222,651 30.07% \$(11,842,169) \$138,679,436 28.01% SSGA S&P 500 Index Fund 543,411,201 21.08% (2,543,114)92,881,966 453,072,349 19.57% DFA Small Cap Core 209,280,047 8.12% (723, 197)39,846,396 170,156,849 7.35% (8,575,858) Parametric Domestic Equity Futures 22,531,402 0.87% 5,951,074 25,156,186 1.09% International Equity \$595,929,220 23.11% \$(2.354.147) \$93,622,953 \$504.660.413 21.80% Morgan Stanley Value 167.731.914 6.51% 26,147,420 141.584.494 6 12% 0 Artisan Partners Growth 180 855 895 7 01% 0 26.827.548 154 028 348 6 65% TimesSquare Intl Small Cap 100,394,617 3.89% (125,085)18,515,024 82,004,677 3.54% 3.47% Parametric Emerging Markets 89,414,557 13,949,201 75,465,355 3.26% Parametric International Equity Futures 57,532,238 2.23% (2,229,062)8,183,760 51,577,540 2.23% 21.05% \$(4,802,423) **Fixed Income** \$542.658.816 \$35.625.191 \$511,836,048 22.11% Wellington Core Plus 268,188,777 10.40% (1,956,656)15.039.825 255.105.608 11.02% Western Intermediate Credit 147,766,558 5.73% (1,342,975)13,106,881 136,002,652 5.88% Colchester Global 140,991,205 5.47% (145, 118)7,529,051 133,607,272 5.77% Parametric Fixed Income Futures -14,287,724 (0.55%)(1,357,674)(50,566)-12,879,484 (0.56%)\$(2,898,469) Real Estate \$240,278,410 9.32% \$(170,376) \$243,347,254 10.51% 17,395,078 0.75% Woodmont 17,395,078 0.67% n n (188,941)**UBS Trumbull Property Fund** 118,717,063 4.60% (2.954,369)121,860,373 5.26% 104,155,826 **AEW Core Property Trust** 4.04% 18,564 55,627 104,081,635 4.50% AEW Partners V, LP \*\* 10,443 0.00% 10,169 0.00% \$157,716,379 \$(62,504) \$140,661,243 6.08% **Public Real Assets** 6.12% \$17,117,639 **INVESCO Commodities Fund** 1.47% 38,396,983 1.49% (62,504)4,411,185 34,048,302 BlackRock TIPS Index Fund 40,903,273 1.59% 0 1,733,656 39,169,617 1.69% KBI Global Resources Fund 43,568,544 1.69% 0 8,053,794 35,514,750 1.53% Blackrock REIT Index Fund 34,847,579 0 2,919,004 31,928,575 1.38% 1.35% \$266,604,281 10.34% \$265.943.305 11.49% Private Equity' \$660.976 \$0 Abbott ACE VI\* 52.372.892 2 03% (125,479)0 52.498.371 2 27% Abbott ACE VII\* 35.875.318 1.39% (785,000)0 36.660.318 1.58% Abbott 2016\* 34,070,052 1.32% 2,025,000 0 32,045,052 1.38% Abbott 2017\* 7,013,951 0.27% 375,000 0 6,638,951 0.29% Pathway PPEF 2008\* 2.12% 2.44% 54,600,710 (1,915,670)0 56,516,380 Pathway PE I-7\* 34,787,722 1.35% (813,424)0 35,601,146 1.54% Pathway PE I-8\* 41.492.087 1.61% 1,225,887 0 40.266.200 1.74% Pathway PE I-9\* 6,391,548 0.25% 674,661 5,716,887 0.25% **Total Fund** \$2,578,409,756 100.0% \$(18,570,642) \$282,146,751 \$2,314,833,648 100.0%

<sup>\*\*</sup>Estimate

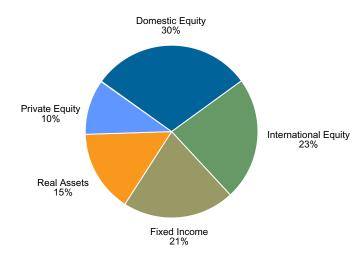


<sup>\*</sup>Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

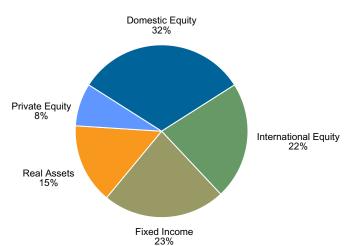
# Actual vs Target Asset Allocation As of June 30, 2020

The first chart below shows the Fund's asset allocation as of June 30, 2020. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

#### **Actual Asset Allocation**



## **Target Asset Allocation**



| Asset Class          | \$Millions<br>Actual | Weight<br>Actual | Min<br>Target | Target | Max<br>Target | Percent<br>Difference | \$Millions<br>Difference  |
|----------------------|----------------------|------------------|---------------|--------|---------------|-----------------------|---------------------------|
| Domestic Equity      | 775                  | 30.1%            | 28.0%         | 32.0%  | 36.0%         | (1.9%)                | (50)                      |
| International Equity | 596                  | 23.1%            | 19.0%         | 22.0%  | 25.0%         | `1.1%′                | ( <mark>50</mark> )<br>29 |
| Fixed Income         | 543                  | 21.0%            | 20.0%         | 23.0%  | 26.0%         | (2.0%)                | ( <del>5</del> 0)<br>11   |
| Real Assets          | 398                  | 15.4%            | 12.0%         | 15.0%  | 18.0%         | `0.4%´                | `11′                      |
| Private Equity       | 267                  | 10.3%            | 0.0%          | 8.0%   | 12.0%         | 2.3%                  | 60                        |
| Total                | 2.578                | 100.0%           |               | 100.0% |               |                       |                           |

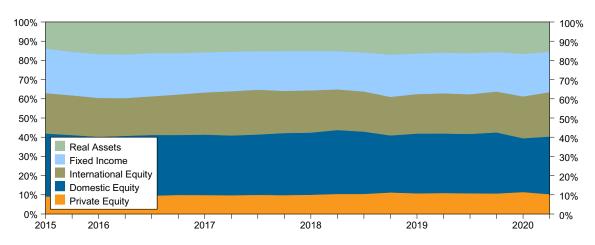
<sup>\*</sup> Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% FTSE WGBI, 5.8% Blmbg Intmdt Credit, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg:TIPS and 1.6% MSCI ACWI ex US IMI (Lagged).



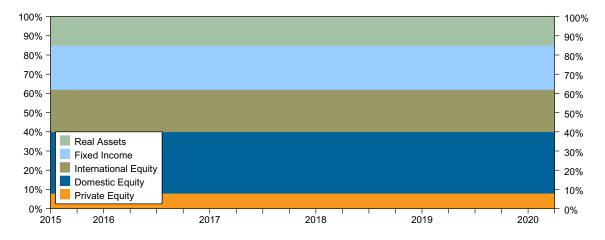
## **Actual vs Target Historical Asset Allocation**

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Callan Public Fund Spons - Large (>1B).

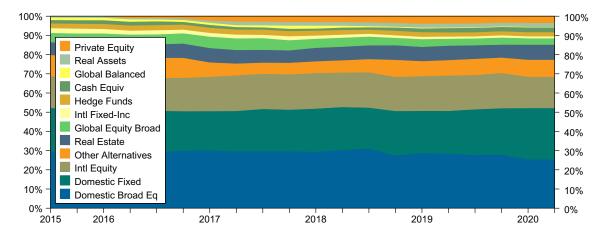
#### **Actual Historical Asset Allocation**



#### **Target Historical Asset Allocation**



#### Average Callan Public Fund Spons - Large (>1B) Historical Asset Allocation



<sup>\*</sup> Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% FTSE WGBI, 5.8% Blmbg Intmdt Credit, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg:TIPS and 1.6% MSCI ACWI ex US IMI (Lagged).

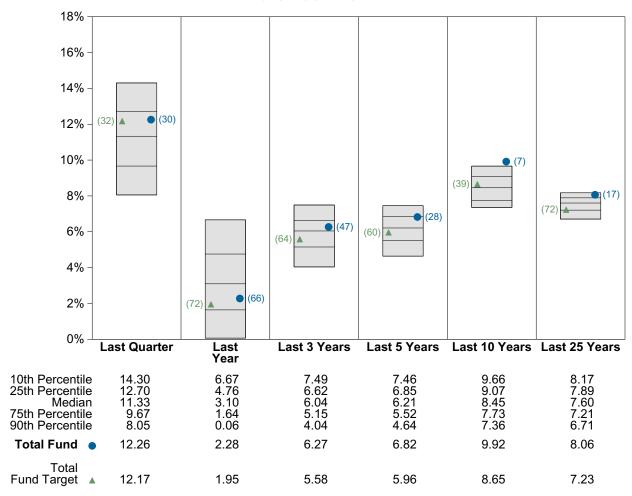


## Total Fund Period Ended June 30, 2020

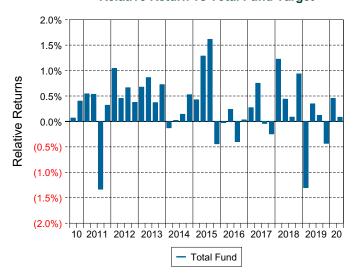
#### **Quarterly Summary and Highlights**

- Total Fund's portfolio posted a 12.26% return for the quarter placing it in the 30 percentile of the Callan Public Fund Spons Large (>1B) group for the quarter and in the 66 percentile for the last year.
- Total Fund's portfolio outperformed the Total Fund Target by 0.08% for the quarter and outperformed the Total Fund Target for the year by 0.33%.

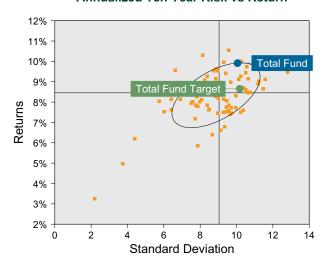
#### Performance vs Callan Public Fund Spons - Large (>1B) (Gross)



#### **Relative Return vs Total Fund Target**



# Callan Public Fund Spons - Large (>1B) (Gross) Annualized Ten Year Risk vs Return



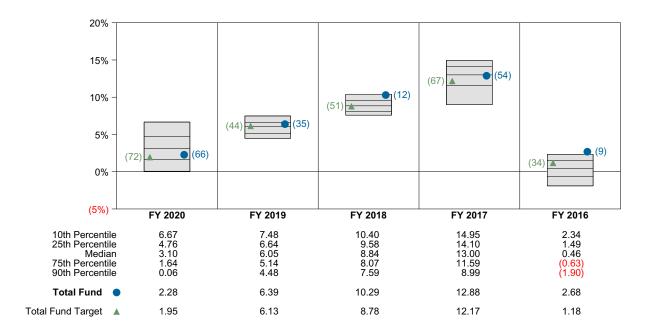


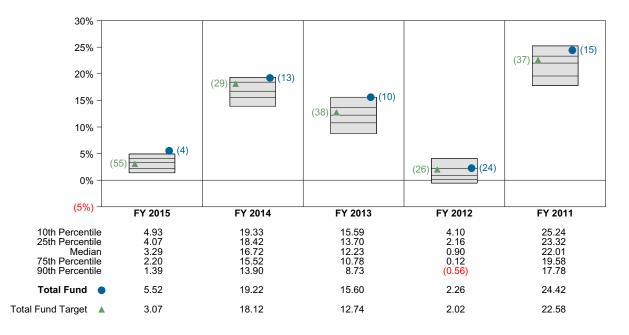
#### C.1

## Marin County Employees' Retirement Association Performance vs Callan Public Fund Spons - Large (>1B)

#### **Return Ranking**

The chart below illustrates fund rankings over various periods versus the Callan Public Fund Spons - Large (>1B). The bars represent the range of returns from the 10th percentile to the 90th percentile for each period for all funds in the Callan Public Fund Spons - Large (>1B). The numbers to the right of the bar represent the percentile rankings of the fund being analyzed. The table below the chart details the rates of return plotted in the graph above.





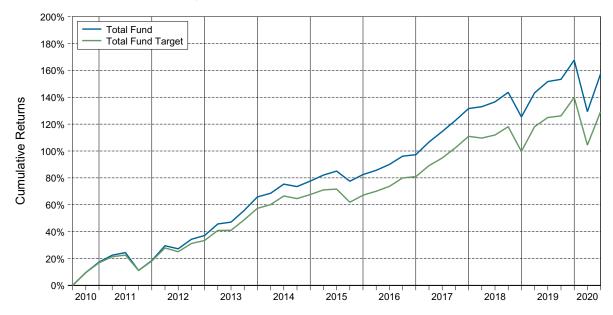
<sup>\*</sup> Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% FTSE WGBI, 5.8% Blmbg Intmdt Credit, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg:TIPS and 1.6% MSCI ACWI ex US IMI (Lagged).



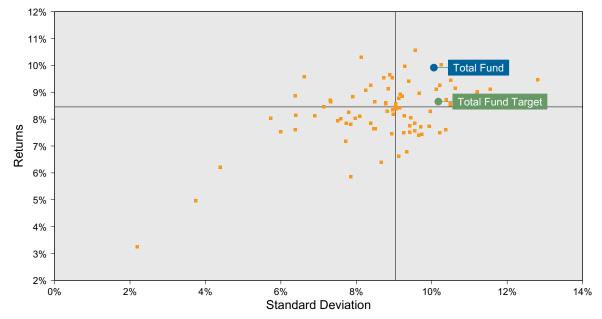
## **Cumulative Performance Relative to Target**

The first chart below illustrates the cumulative performance of the Total Fund relative to the cumulative performance of the Fund's Target Asset Mix. The Target Mix is assumed to be rebalanced each quarter with no transaction costs. The second chart below shows the return and the risk of the Total Fund and the Target Mix, contrasted with the returns and risks of the funds in the Callan Public Fund Spons - Large (>1B).

#### **Cumulative Returns Actual vs Target**



#### Ten Year Annualized Risk vs Return



Squares represent membership of the Callan Public Fund Spons - Large (>1B)

<sup>\*</sup> Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% FTSE WGBI, 5.8% Blmbg Intmdt Credit, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg:TIPS and 1.6% MSCI ACWI ex US IMI (Lagged).

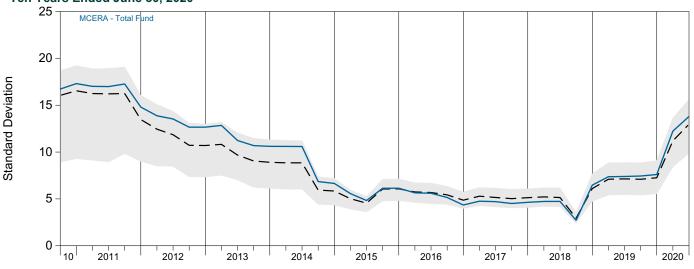


## MCERA - Total Fund Historical Consistency Analysis

#### **Consistency of Standard Deviation and Sharpe Ratio**

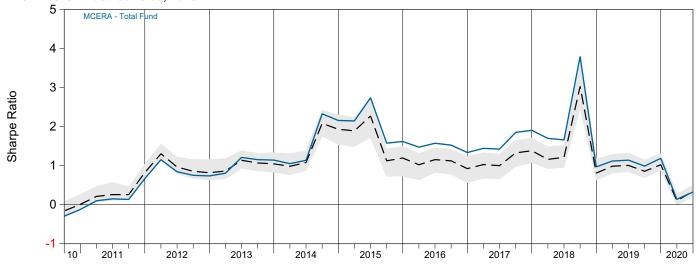
The first chart below illustrates the consistency of standard deviation over rolling three year periods. The gray area represents the range of standard deviation for the 10th through 90th percentile for the Callan Public Fund Spr DB. The second chart below illustrates the consistency of sharpe ratio over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

### Rolling Three Year Standard Deviation Ten Years Ended June 30, 2020



| Rolling Three Year Period Analysis | Median | Portfolio |
|------------------------------------|--------|-----------|
| Average Annual Standard Deviation  | 8.61%  | 9.24%     |
| % Positive Periods                 | 100%   | 100%      |
| Average Ranking                    | 50     | 40        |

# Rolling Three Year Sharpe Ratio Relative to Composite Benchmark Ten Years Ended June 30, 2020



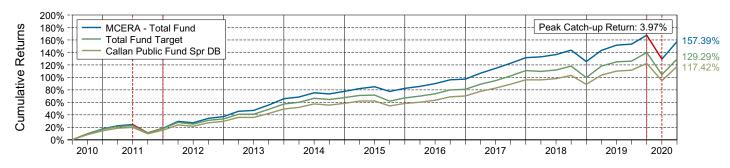
| Rolling Three Year Period Analysis | Median | Portfolio |
|------------------------------------|--------|-----------|
| Average Annual Sharpe Ratio        | 1.04%  | 1.22%     |
| % Positive Periods                 | 98%    | 95%       |
| Average Ranking                    | 50     | 35        |



## MCERA - Total Fund Drawdown Analysis for Ten Years Ended June 30, 2020

The following analysis focuses on downside risk by looking at cumulative drawdowns experienced from peak-to-trough for the portfolio, index, and peer group. Drawdown is measured from the "high-water mark" of cumulative return to the subsequent "trough". The first chart illustrates the Worst Absolute Drawdown as well as the Current Drawdown (cumulative return from high-water mark to now). The second chart focuses on Relative Drawdown (negative excess return vs. index). The bottom charts highlight the portfolio's peer rankings during drawdown periods.

#### **Absolute Cumulative Drawdown Analysis**

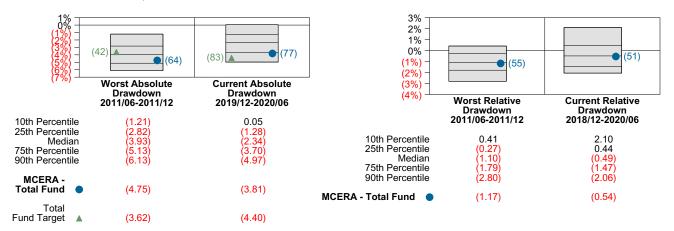


|                           | Worst Absolute Drawdown |       |                 |         | Current Absolute Drawdown |         |       |                 |         |         |
|---------------------------|-------------------------|-------|-----------------|---------|---------------------------|---------|-------|-----------------|---------|---------|
|                           | Return                  | Years | Period          | Index   | Peers                     | Return  | Years | Period          | Index   | Peers   |
| MCERA - Total Fund        | (4.75)%                 | 0.50  | 2011/06-2011/12 | (3.62)% | (3.72)%                   | (3.81)% | 0.50  | 2019/12-2020/06 | (4.40)% | (2.27)% |
| Recovery from Trough      | 9.28%                   | 0.25  | 2011/12-2012/03 | 8.24%   | 7.31%                     | 12.26%  | 0.25+ | 2020/03-2020/06 | 12.17%  | 11.68%  |
| Total Fund Target         | (8.44)%                 | 0.25  | 2018/09-2018/12 |         |                           | (4.40)% | 0.50  | 2019/12-2020/06 |         |         |
| Callan Public Fund Spr DB | (7.09)%                 | 0.25  | 2018/09-2018/12 |         |                           | (2.27)% | 0.50  | 2019/12-2020/06 |         |         |

#### Relative Cumulative Drawdown Analysis vs. Total Fund Target **Cumulative Relative Returns** Peak Catch-up Rel Rtn: 0.54% MCERA - Total Fund 12.26% 10% 8% 6% 4% 2% 0% 2010 2011 2012 2013 2015 2016 2020 2014 2017 2018 2019

|                      | Worst Relative Diawdown |       |                 | Current Relative Drawdown |       |                 |  |
|----------------------|-------------------------|-------|-----------------|---------------------------|-------|-----------------|--|
|                      | Rel Rtn                 | Years | Period          | Rel Rtn                   | Years | Period          |  |
| MCERA - Total Fund   | (1.17)%                 | 0.50  | 2011/06-2011/12 | (0.54)%                   | 1.50  | 2018/12-2020/06 |  |
| Recovery from Trough | 1.43%                   | 0.50  | 2011/12-2012/06 | 0.66%                     | 1.25+ | 2019/03-2020/06 |  |

Drawdown Rankings vs. Total Fund Target Rankings against Callan Public Fund Sponsor Database Ten Years Ended June 30, 2020

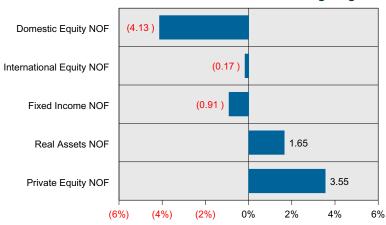




## Quarterly Total Fund Relative Attribution - June 30, 2020

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

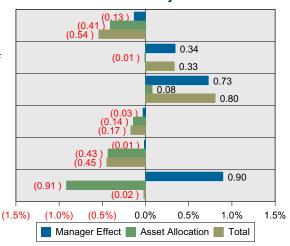




## **Actual vs Target Returns**

#### 21.56 Domestic Equity NOF 22.03 18.52 International Equity NOF 16.96 6.92 3.63 3.54 3.72 (0.11)12.15 12.17 (5%)0% 5% 10% 15% 20% 25% 30% Actual Target

## **Relative Attribution by Asset Class**



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

Fixed Income NOF

Real Assets NOF

Private Equity NOF

Total

| Asset Class            | Effective<br>Actual<br>Weight | Effective<br>Target<br>Weight | Actual<br>Return | Target<br>Return | Manager<br>Effect | Asset<br>Allocation | Total<br>Relative<br>Return |
|------------------------|-------------------------------|-------------------------------|------------------|------------------|-------------------|---------------------|-----------------------------|
| Domestic Equity NO     | = 28%                         | 32%                           | 21.56%           | 22.03%           | (0.13%)           | (0.41%)             | (0.54%)                     |
| International Equity N | NOF 22%                       | 22%                           | 18.52%           | 16.96%           | `0.34%′           | (0.01%)             | 0.33%                       |
| Fixed Income NOF       | 22%                           | 23%                           | 6.92%            | 3.63%            | 0.73%             | `0.08%´             | 0.80%                       |
| Real Assets NOF        | 17%                           | 15%                           | 3.54%            | 3.72%            | (0.03%)           | (0.14%)             | (0.17%)                     |
| Private Equity NOF     | 12%                           | 8%                            | (0.11%)          | 0.00%            | (0.01%)           | (0.43%)             | (0.45%)                     |
| <b>—</b> ( )           |                               |                               | 40.450/          | 40.470/          | - 0.000/          | (0.040()            | (0.000()                    |
| Total                  |                               |                               | 12.15% =         | : 12.17% -       | + 0.90% +         | (0.91%)             | (0.02%)                     |

<sup>\*</sup> Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% FTSE WGBI, 5.8% Blmbg Intmdt Credit, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg:TIPS and 1.6% MSCI ACWI ex US IMI (Lagged). Net-of-fee attribution

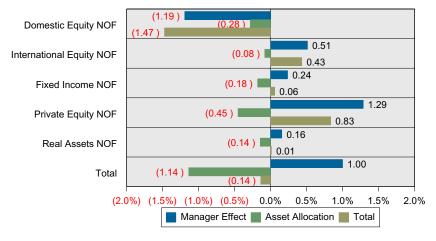


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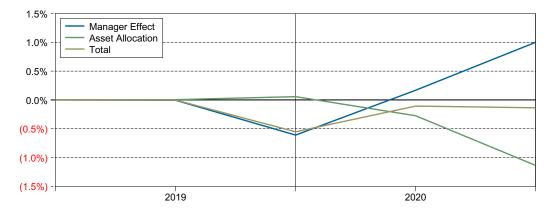
## Cumulative Total Fund Relative Attribution - June 30, 2020

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

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



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



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

| Asset Class  Domestic Equity NOF International Equity N Fixed Income NOF Private Equity NOF Real Assets NOF | Effective Target Weight 32% 22% 23% 8% 15% | Actual<br>Return<br>2.25%<br>(2.50%)<br>8.88%<br>(2.85%)<br>(2.34%) | Target<br>Return<br>6.53%<br>(4.74%)<br>7.29%<br>(13.89%)<br>(3.21%) | Manager<br>Effect<br>(1.19%)<br>0.51%<br>0.24%<br>1.29%<br>0.16% | Asset<br>Allocation<br>(0.28%)<br>(0.08%)<br>(0.18%)<br>(0.45%)<br>(0.14%) | Total Relative Return (1.47%) 0.43% 0.06% 0.83% 0.01% |
|---|--|---|--|--|--|---|
| Total   |  | 1.81% =   | 1.95% +  | · 1.00% +  | (1.14%)  | (0.14%)   |

<sup>\*</sup> Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% FTSE WGBI, 5.8% Blmbg Intmdt Credit, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg:TIPS and 1.6% MSCI ACWI ex US IMI (Lagged). Net-of-fee attribution

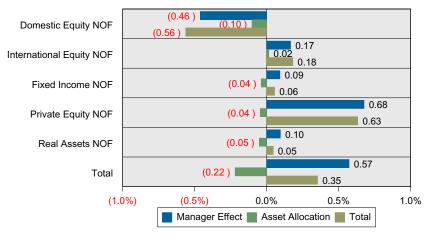


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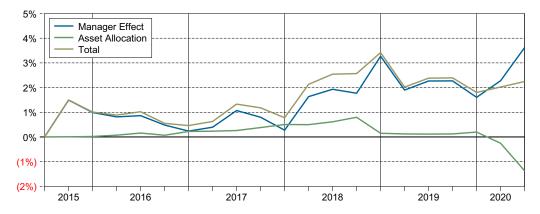
## Cumulative Total Fund Relative Attribution - June 30, 2020

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

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



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



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

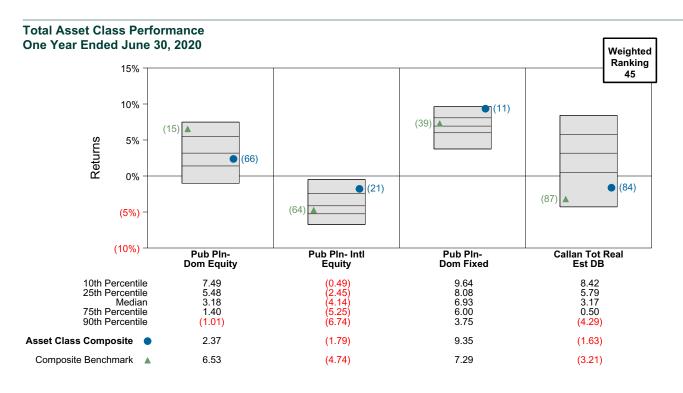
| Asset Class                                   | Effective<br>Actual<br>Weight | Effective<br>Target<br>Weight | Actual<br>Return | Target<br>Return | Manager<br>Effect              | Asset<br>Allocation | Total<br>Relative<br>Return |
|---|-------------------------------|-------------------------------|------------------|------------------|--------------------------------|---------------------|-----------------------------|
| Domestic Equity NOF<br>International Equity N |                               | 32%<br>22%                    | 8.43%<br>2.99%   | 10.03%<br>2.30%  | ( <mark>0.46%)</mark><br>0.17% | (0.10%)<br>0.02%    | (0.56%)<br>0.18%            |
| Fixed Income NOF                              | 22%                           | 23%                           | 4.68%            | 4.15%            | 0.09%                          | (0.04%)             | 0.06%                       |
| Private Equity NOF<br>Real Assets NOF         | 10%<br>16%                    | 8%<br>15%                     | 11.46%<br>4.51%  | 4.42%<br>3.96%   | 0.68%<br>0.10%                 | (0.04%)<br>(0.05%)  | 0.63%<br>0.05%              |
|   |                               |                               | 0.040/           | <b>5.000</b> /   |                                |                     |                             |
| Total   |                               |                               | 6.31% =          | 5.96%            | + 0.57% +                      | (0.22%)             | 0.35%                       |

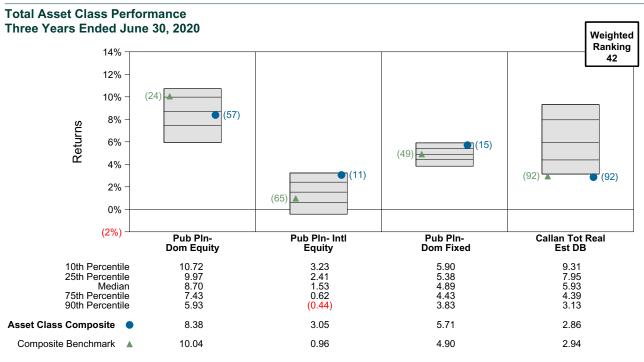
<sup>\*</sup> Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% FTSE WGBI, 5.8% Blmbg Intmdt Credit, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg:TIPS and 1.6% MSCI ACWI ex US IMI (Lagged). Net-of-fee attribution



## **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.



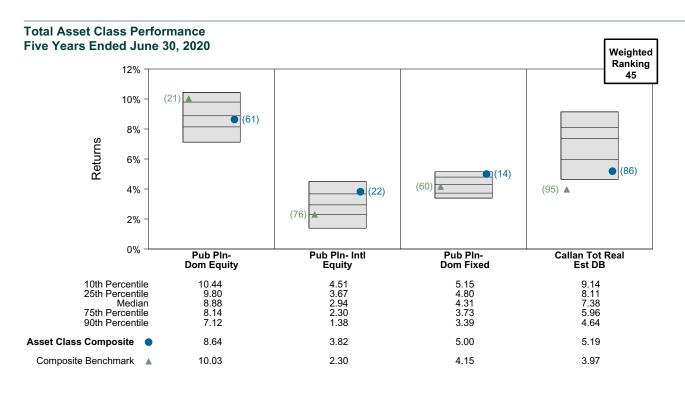


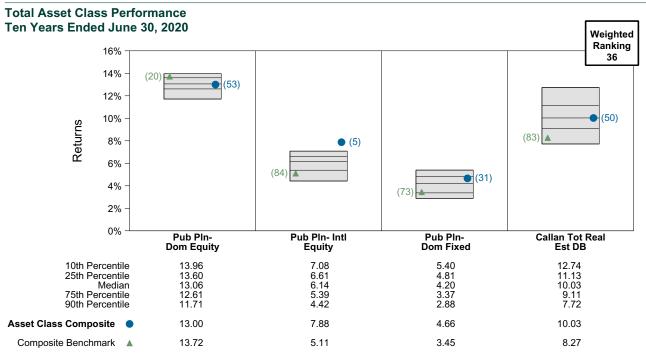
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## **Asset Class Rankings**

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<sup>\*</sup> Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% FTSE WGBI, 5.8% Blmbg Intmdt Credit, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg:TIPS and 1.6% MSCI ACWI ex US IMI (Lagged).



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

### Returns for Periods Ended June 30, 2020

|   | Last                              | Last                                  | Last<br>3                  | Last<br>5                  | Last<br>10                   |
|---|-----------------------------------|---------------------------------------|----------------------------|----------------------------|------------------------------|
|   | Quarter                           | Year                                  | Years                      | Years                      | Years                        |
| Domestic Equity Equity Benchmark                                    | <b>21.59%</b><br>22.03%           | <b>2.37%</b><br>6.53%                 | <b>8.38%</b><br>10.04%     | <b>8.64%</b><br>10.03%     | <b>13.00%</b><br>13.72%      |
| Large Cap Equity SSGA S&P 500 Index Fund                            | <b>20.67%</b> 20.54%              | <b>7.59%</b><br>7.46%                 | <b>10.72%</b><br>10.73%    | <b>10.76%</b><br>10.76%    | 13.86%                       |
| S&P 500 Index   | 20.54%                            | 7.51%                                 | 10.73%                     | 10.73%                     | 13.99%                       |
| Small Cap Equity  DFA Small Cap Core  Russell 2000 Index            | <b>23.85%</b><br>23.45%<br>25.42% | <b>(9.70%)</b><br>(11.40%)<br>(6.63%) | <b>2.10%</b><br>-<br>2.01% | <b>3.15%</b><br>-<br>4.29% | <b>10.75%</b><br>-<br>10.50% |
|   |                                   | , ,                                   |                            |                            |                              |
| International Equity International Benchmark                        | <b>18.71%</b><br>16.96%           | <b>(1.79%)</b><br>(4.74%)             | <b>3.05%</b><br>0.96%      | <b>3.82%</b><br>2.30%      | <b>7.88%</b><br>5.11%        |
| Morgan Stanley Value  | 18.47%                            | 0.59%                                 | 2.68%                      | 3.39%                      | 7.18%                        |
| Artisan Partners Growth   | 17.65%                            | 0.73%                                 | 6.42%                      | 4.29%                      | 9.29%                        |
| MSCI EAFE Index   | 14.88%                            | (5.13%)                               | 0.81%                      | 2.05%                      | 5.73%                        |
| TimesSquare Intl Small Cap  | 22.83%                            | (2.24%)                               | -                          | -                          | -                            |
| MSCI EAFE Small Cap Index Parametric Emerging                       | 19.88%<br>18.71%                  | (3.52%)<br>(14.19%)                   | 0.53%<br>(2.69%)           | 3.81%<br>0.23%             | 8.02%                        |
| MSCI Emerging Markets Index   | 18.08%                            | (3.39%)                               | 1.90%                      | 2.86%                      | 3.27%                        |
| Fixed Income  | 6.99%                             | 9.35%                                 | 5.71%                      | 5.00%                      | 4.66%                        |
| Fixed Income Benchmark  | 3.63%                             | 7.29%                                 | 4.90%                      | 4.15%                      | 3.45%                        |
| Wellington Core Plus  | 5.92%                             | 10.09%                                | 6.18%                      | 5.38%                      | 5.01%                        |
| Bloomberg Aggregate Index   | 2.90%                             | 8.74%                                 | 5.32%                      | 4.30%                      | 3.82%                        |
| Western Asset Intermediate Credit                                   | 9.68%                             | 8.18%                                 | 5.62%                      | 5.01%                      | 5.06%                        |
| Blended Benchmark****   | 6.67%                             | 6.97%                                 | 4.88%                      | 4.18%                      | 3.68%                        |
| Colchester Global   | 5.64%                             | 4.09%                                 | 3.80%                      | 3.74%                      | -                            |
| FTSE World Govt Bond Index  | 2.04%                             | 4.60%                                 | 3.98%                      | 3.70%                      | 2.37%                        |
| Real Assets<br>Real Asset Benchmark                                 | <b>3.70%</b><br>3.72%             | <b>(1.63%)</b> (3.21%)                | <b>2.86%</b><br>2.94%      | <b>5.19%</b><br>3.97%      | <b>10.03%</b><br>8.27%       |
| Private Real Estate   | (1.19%)                           | 0.99%                                 | 3.86%                      | 7.42%                      | 11.19%                       |
| NFI-ODCE Equal Weight Net   | (1.47%)                           | 1.70%                                 | 5.09%                      | 6.72%                      | 9.95%                        |
| UBS Trumbull Property Fund  | (2.43%)                           | (0.86%)                               | 2.22%                      | 4.54%                      | _                            |
| AEW Core Property Trust   | 0.05%                             | 2.35%                                 | 5.78%                      | 7.32%                      | -                            |
| Public Real Assets  | 12.17%                            | (4.91%)                               | 1.55%                      | 1.24%                      | _                            |
| Public Real Assets Benchmark  | 9.65%                             | (10.20%)                              | (0.26%)                    | 0.31%                      | -                            |
| BlackRock TIPS Index Fund   | 4.43%                             | 8.43%                                 | 5.20%                      | 3.89%                      | _                            |
| Bloomberg US TIPS Index   | 4.24%                             | 8.28%                                 | 5.05%                      | 3.75%                      | 3.52%                        |
| BlackRock REIT Index Fund (1)                                       | 9.14%                             | (17.64%)                              | (1.63%)                    | 3.01%                      | -                            |
| DJ US Select REIT Index   | 9.11%                             | (17.71%)                              | (1.99%)                    | 2.45%                      | 8.27%                        |
| Invesco Commodity Fund (2)  | 12.97%                            | (13.42%)                              | (3.43%)                    | (6.43%)                    | ·=-                          |
| Bloomberg Commodity Index   | 5.08%                             | (17.38%)                              | (6.14%)                    | (7.69%)                    | (5.82%)                      |
| KBI Global Resources Fund (3)<br>S&P Global Natural Resources Index | 22.68%<br>20.17%                  | (0.81%)<br>(17.36%)                   | 3.74%<br>(0.75%)           | 2.84%<br>0.31%             | 0.89%                        |
| KBI Custom Benchmark (4)  | 20.21%                            | 3.67%                                 | 5.60%                      | 4.67%                      | 6.53%                        |
| Private Equity**  | 0.00%                             | (2.07%)                               | 11.30%                     | 12.66%                     | 13.24%                       |
| Total Fund  | 12.26%                            | 2.28%                                 | 6.27%                      | 6.82%                      | 9.92%                        |
| Total Fund - NOF  | 12.15%                            | 1.81%                                 | 5.76%                      | 6.31%                      | 9.37%                        |
| Total Fund - IRR  | 12.21%                            | 1.98%                                 | 6.24%                      | 6.92%                      | 9.76%                        |
| Total Fund Target   | 12.17%                            | 1.95%                                 | 5.58%                      | 5.96%                      | 8.65%                        |
| Public Fund Sponsor Database  | 11.79%                            | 3.26%                                 | 5.81%                      | 6.02%                      | 8.09%                        |
|   |                                   |                                       |                            |                            |                              |

<sup>\*\*\*\*\*</sup>Blended Index = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit thereafter.



The Total Fund/Plan IRR Calculation is based upon best available data.
(1) MCERA changed managers in 3Q17. Prior returns linked to Vanguard REIT Index Fund.
(2) MCERA changed managers in 2Q16. Prior returns linked to BlackRock Commodity Index Fund.
(3) MCERA changed managers in 3Q16. Prior returns linked to SSGA Natural Resources Index Fund.
(4) KBI Custom Benchmark consists of 1/3 each: S-Network Global Water Index, Wilderhill New Energy

Global Innovation Index, and Dax Global Agribusiness Index.

\*\*Current market values are those of the prior quarter, adjusted for capital calls and distributions

of current quarter.
\*\*\*Estimate

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30. 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.

|   | FY 2020             | FY 2019          | FY 2018         | FY 2017          | FY 2016             |
|---|---------------------|------------------|-----------------|------------------|---------------------|
| Domestic Equity   | 2.37%               | 6.41%            | 16.87%          | 19.56%           | (0.59%)             |
| Equity Benchmark  | 6.53%               | 8.98%            | 14.78%          | 18.51%           | 2.14%               |
| arge Cap Equity   | 7.59%               | 10.33%           | 14.36%          | 18.07%           | 4.00%               |
| SSGA S&P 500 Index Fund   | 7.46%               | 10.44%           | 14.40%          | 17.97%           | 4.08%               |
| S&P 500 Index   | 7.51%               | 10.42%           | 14.37%          | 17.90%           | 3.99%               |
| Small Cap Equity  | (9.70%)             | (4.42%)          | 23.31%          | 23.47%           | (11.13%)            |
| DFA Small Cap Core  | (11.40%)            | ` -              | -               | -                | ` - ′               |
| Russell 2000 Index  | (6.63%)             | (3.31%)          | 17.57%          | 24.60%           | (6.73%)             |
| nternational Equity   | (1.79%)             | 3.12%            | 8.05%           | 18.41%           | (6.92%)             |
| International Benchmark   | (4.74%)             | 0.26%            | 7.75%           | 20.43%           | (9.61%)             |
| Morgan Stanley Value  | 0.59%               | 0.95%            | 6.61%           | 17.87%           | (7.41%)             |
| Artisan Partners Growth   | 0.73%               | 9.99%            | 8.77%           | 14.74%           | (10.76%)            |
| MSCI EAFE Index   | (5.13%)             | 1.08%            | 6.84%           | 20.27%           | (10.16%)            |
| FIAM International Small Cap  | -                   | -                | 12.26%          | 23.14%           | (2.74%)             |
| S&P EPAC Small Cap Index  | (4.00%)             | (6.38%)          | 11.27%          | 22.97%           | (4.77%)             |
| TimesSquare Intl Small Cap  | (2.24%)             | /G 250/\         | 10 450/         | -<br>22 400/     | (2.670/)            |
| MSCI EAFE Small Cap Index   | (3.52%)<br>(14.19%) | (6.35%)<br>2.98% | 12.45%<br>4.27% | 23.18%<br>18.89% | (3.67%)<br>(7.65%)  |
| Parametric Emerging MSCI Emerging Markets Index                     | (14.19%)<br>(3.39%) | 2.98%<br>1.22%   | 4.27%<br>8.20%  | 23.75%           | (7.65%)<br>(12.05%) |
|   | , ,                 |                  |                 |                  | ,                   |
| ixed Income   | 9.35%               | 7.68%            | 0.31%           | 1.28%            | 6.68%               |
| Fixed Income Benchmark  | 7.29%               | 7.36%            | 0.21%           | (0.83%)          | 7.05%               |
| Wellington Core Plus  | 10.09%              | 8.35%            | 0.34%           | 2.40%            | 6.05%               |
| Bloomberg Aggregate Index   | 8.74%               | 7.87%            | (0.40%)         | (0.31%)          | 6.00%               |
| Western Asset Intermediate Credit                                   | 8.18%               | 8.94%            | (0.02%)         | 3.11%            | 5.09%               |
| Blended Benchmark****   | 6.97%               | 8.23%            | (0.36%)         | 1.36%            | 4.97%               |
| Colchester Global   | 4.09%               | 5.88%            | 1.47%           | (0.81%)          | 8.29%               |
| FTSE World Govt Bond Index  | 4.60%               | 5.48%            | 1.90%           | (4.14%)          | 11.26%              |
| Real Assets   | (1.63%)             | 3.10%            | 7.29%           | 4.10%            | 13.68%              |
| Real Assets Benchmark   | (3.21%)             | 3.80%            | 8.58%           | 4.30%            | 6.79%               |
| Private Real Estate   | 0.99%               | 3.08%            | 7.60%           | 6.55%            | 19.84%              |
| NFI-ODCE Equal Weight Net   | 1.70%               | 5.99%            | 7.68%           | 7.23%            | 11.24%              |
| UBS Trumbull Property Fund  | (0.86%)             | 0.04%            | 7.70%           | 5.60%            | 10.71%              |
| AEW Core Property Trust   | 2.35%               | 6.92%            | 8.16%           | 7.77%            | 11.61%              |
| Public Real Assets  | (4.91%)             | 3.14%            | 6.80%           | 0.39%            | 1.14%               |
| Public Real Asset Benchmark   | (10.20%)            | 0.91%            | 9.51%           | 1.01%            | 1.32%               |
| BlackRock TIPS Index Fund   | 8.43%               | 4.95%            | 2.30%           | (0.38%)          | 4.35%               |
| Bloomberg US TIPS Index   | 8.28%               | 4.84%            | 2.11%           | (0.63%)          | 4.35%               |
| BlackRock REIT Index Fund (1)                                       | (17.64%)            | 9.81%            | 5.26%           | (1.79%)          | 24.06%              |
| DJ US Select REIT Index   | (17.71%)            | 9.75%            | 4.23%           | (2.43%)          | 22.85%              |
| Invesco Commodity Fund (2)  | (13.42%)            | (7.44%)          | 12.37%          | (8.47%)          | (12.99%)            |
| Bloomberg Commodity Index   | (17.38%)            | (6.75%)          | 7.35%           | (6.50%)          | (13.32%)            |
| KBI Global Resources Fund (3)<br>S&P Global Natural Resources Index | (0.81%)<br>(17.36%) | 4.65%<br>(4.63%) | 7.54%<br>24.07% | 13.43%<br>14.70% | (9.16%)<br>(9.47%)  |
| KBI Custom Benchmark (4)  | 3.67%               | 7.71%            | 5.46%           | 12.80%           | (5.43%)             |
| =   | (0.070()            | 40.550           | 00.000/         | 00.400/          |                     |
| Private Equity**  | (2.07%)             | 16.55%           | 20.80%          | 20.43%           | 9.29%               |
| otal Fund   | 2.28%               | 6.39%            | 10.29%          | 12.88%           | 2.68%               |
| Total Fund - NOF  | 1.81%               | 5.88%            | 9.74%           | 12.34%           | 2.19%               |
| Total Fund -IRR   | 1.83%               | 6.02%            | 10.19%          | 12.82%           | 2.61%               |
| Total Fund Careau Database  | 1.95%               | 6.13%            | 8.78%           | 12.17%           | 1.18%               |
| Public Fund Sponsor Database  | 3.26%               | 6.08%            | 8.29%           | 12.36%           | 0.88%               |
| 7.00% Actuarial Assumption  | 7.00%               | 7.00%            | 7.00%           | 7.00%            | 7.00%               |

<sup>\*\*\*\*\*</sup>Blended Index = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit thereafter.



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The table below details the rates of return for the Fund's investment managers over various time periods ended June 30. 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.

|                              | FY 2015 | FY 2014 | FY 2013 | FY 2012  | FY 2011 |
|------------------------------|---------|---------|---------|----------|---------|
| Domestic Equity              | 7.52%   | 24.38%  | 22.55%  | 1.07%    | 35.41%  |
| Equity Benchmark             | 7.29%   | 25.22%  | 21.46%  | 3.84%    | 32.37%  |
| Large Cap Equity             | 7.47%   | 24.60%  | 21.36%  | 2.46%    | 31.98%  |
| Dodge & Cox Value            | -       |         | -       | 0.40%    | 30.50%  |
| RCM Growth                   | -       | -       | -       | (0.65%)  | 31.40%  |
| S&P 500 Index                | 7.42%   | 24.61%  | 20.60%  | 5.45%    | 30.69%  |
| Small Cap Equity             | 7.05%   | 23.57%  | 25.33%  | (3.63%)  | 48.85%  |
| Russell 2000 Index           | 6.49%   | 23.64%  | 24.21%  | (2.08%)  | 37.41%  |
| DFA Value                    | 3.50%   | 25.92%  | 33.04%  | (3.56%)  | 40.67%  |
| Russell 2000 Value Index     | 0.78%   | 22.54%  | 24.76%  | (1.44%)  | 31.35%  |
| Russell 2000 Growth Index    | 12.34%  | 24.73%  | 23.67%  | (2.71%)  | 43.50%  |
| nternational Equity          | (1.97%) | 22.56%  | 19.76%  | (7.18%)  | 32.48%  |
| International Benchmark      | (4.97%) | 22.28%  | 13.91%  | (14.79%) | 30.26%  |
| Morgan Stanley Value         | (2.55%) | 20.84%  | 19.69%  | (7.10%)  | 29.25%  |
| Artisan Partners Growth      | 0.60%   | 23.64%  | 21.84%  | (2.57%)  | 33.42%  |
| MSCI EAFE Index              | (4.22%) | 23.57%  | 18.62%  | (13.83%) | 30.36%  |
| FIAM International Small Cap | 1.65%   | 27.34%  | 26.27%  | (12.50%) | 40.91%  |
| S&P EPAC Small Cap Index     | 0.33%   | 29.15%  | 20.11%  | (15.62%) | 36.79%  |
| ixed Income                  | (0.57%) | 6.02%   | 1.89%   | 8.77%    | 5.79%   |
| Fixed Income Benchmark       | (1.02%) | 4.36%   | (0.69%) | 7.47%    | 3.90%   |
| Wellington                   | 1.79%   | 6.31%   | 1.74%   | 8.39%    | 5.14%   |
| Bloomberg Aggregate Index    | 1.86%   | 4.37%   | (0.69%) | 7.47%    | 3.90%   |
| Western Asset                | 1.44%   | 5.22%   | 2.93%   | 8.80%    | 7.33%   |
| Bloomberg Aggregate Index    | 1.86%   | 4.37%   | (0.69%) | 7.47%    | 3.90%   |
| Real Assets                  | 22.79%  | 13.73%  | 13.23%  | 13.02%   | 13.00%  |
| Real Assets Benchmark        | 13.15%  | 11.21%  | 10.72%  | 12.04%   | 16.73%  |
| Real Estate                  | 22.84%  | 13.73%  | 13.23%  | 13.02%   | 13.00%  |
| NCREIF Total Index           | 12.98%  | 11.21%  | 10.72%  | 12.04%   | 16.73%  |
| NFI-ODCE Equal Weight Net    | 13.64%  | 11.37%  | 10.80%  | 11.46%   | 19.33%  |
| Woodmont                     | 37.42%  | 14.06%  | 13.03%  | 12.26%   | 9.02%   |
| AEW Partners V Fund          | 44.36%  | 27.76%  | 20.69%  | 23.82%   | 14.98%  |
| RREEF America III            | 24.69%  | 27.46%  | 19.17%  | 20.69%   | 65.53%  |
| ING Clarion                  | -       | -       | -       | 10.01%   | 26.72%  |
| Private Equity               | 10.45%  | 25.66%  | 12.34%  | 5.16%    | 16.55%  |
| Total Fund                   | 5.52%   | 19.22%  | 15.60%  | 2.26%    | 24.42%  |
| Total Fund - NOF             | 5.02%   | 18.65%  | 15.01%  | 1.67%    | 23.71%  |
| Total Fund Target            | 3.07%   | 18.12%  | 12.74%  | 2.02%    | 22.58%  |
| Public Fund Sponsor Database | 3.19%   | 16.33%  | 11.99%  | 1.20%    | 20.86%  |
| 7.00% Actuarial Assumption   | 7.00%   | 7.00%   | 7.00%   | 7.00%    | 7.00%   |
| 1.00% Actuariai Assumption   | 7.00%   | 1.00%   | 1.00%   | 1.00%    | 7.00%   |



The table below details the rates of return for the Fund's investment managers over various time periods. 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.

|   | 12/2019-               |                         |                           |                      |                         |
|---|------------------------|-------------------------|---------------------------|----------------------|-------------------------|
|   | 6/2020                 | 2019                    | 2018                      | 2017                 | 2016                    |
| Domestic Equity<br>Equity Benchmark               | <b>(6.69%)</b> (3.48%) | <b>28.93%</b><br>31.02% | <b>(5.14%)</b><br>(5.24%) | <b>20.85%</b> 21.13% | <b>13.35%</b><br>12.74% |
| Large Cap Equity                                  | (3.06%)                | 31.67%                  | (4.56%)                   | 21.89%               | 12.04%                  |
| SSGA S&P 500 Index Fund                           | (3.12%)                | 31.46%                  | (4.36%)                   | 21.86%               | 12.03%                  |
| S&P 500 Index                                     | (3.08%)                | 31.49%                  | (4.38%)                   | 21.83%               | 11.96%                  |
| Small Cap Equity                                  | (15.31%)               | 22.34%                  | (8.19%)                   | 18.21%               | 16.70%                  |
| DFA Small Cap Core                                | (16.86%)               | 22.19%                  | -                         | -                    | -                       |
| Russell 2000 Index                                | (12.98%)               | 25.52%                  | (11.01%)                  | 14.65%               | 21.31%                  |
| International Equity                              | (8.56%)                | 24.44%                  | (12.81%)                  | 29.99%               | 0.23%                   |
| International Benchmark                           | (11.24%)               | 21.63%                  | (14.76%)                  | 27.81%               | 4.41%                   |
| Morgan Stanley Value                              | (5.19%)                | 21.63%                  | (12.86%)                  | 26.28%               | (0.82%)                 |
| Artisan Partners Growth                           | (7.36%)                | 30.65%                  | `(9.79%)                  | 32.52%               | (8.53%)                 |
| MSCI EAFE Index                                   | (11.34%)               | 22.01%                  | (13.79%)                  | 25.03%               | 1.00%                   |
| TimesSquare Intl Small Cap<br>MSCI EAFE Small Cap | (11.91%)<br>(13.11%)   | 24.96%                  | (17.89%)                  | 33.01%               | -<br>2.18%              |
| Parametric Emerging                               | (16.98%)               | 13.48%                  | (17.89%)                  | 28.61%               | 13.85%                  |
| MSCI Emerging Markets Index                       | (9.78%)                | 18.44%                  | (14.57%)                  | 37.28%               | 11.19%                  |
| Fixed Income                                      | 6.84%                  | 8.87%                   | (0.09%)                   | 5.43%                | 4.55%                   |
| Fixed Income Benchmark                            | 5.17%                  | 8.21%                   | (0.17%)                   | 4.55%                | 2.70%                   |
| Wellington Core Plus                              | 6.98%                  | 10.16%                  | (0.17%)                   | 5.11%                | 4.93%                   |
| Bloomberg Aggregate Index                         | 6.14%                  | 8.72%                   | 0.01%                     | 3.54%                | 2.65%                   |
| Western Asset Intermediate Credit                 | 5.50%                  | 10.11%                  | (0.07%)                   | 4.43%                | 5.21%                   |
| Blended Benchmark**** Colchester Global           | 4.16%<br>1.69%         | 9.52%<br>8.02%          | 0.01%<br>(0.47%)          | 3.67%<br>8.68%       | 3.68%<br>4.33%          |
| FTSE World Govt Bond Index                        | 4.08%                  | 5.90%                   | (0.84%)                   | 7.49%                | 1.60%                   |
| Real Assets                                       | (4.54%)                | 7.26%                   | 1.01%                     | 7.91%                | 9.37%                   |
| Real Asset Benchmark                              | (5.95%)                | 9.32%                   | 0.40%                     | 7.42%                | 11.18%                  |
| Private Real Estate                               | (0.83%)                | 1.54%                   | 7.30%                     | 6.57%                | 8.11%                   |
| NFI-ODCE Equal Weight Net                         | (0.77%)                | 5.18%                   | 7.30%                     | 6.92%                | 8.36%                   |
| UBS Trumbull Property Fund                        | (2.00%)                | (1.91%)                 | 6.97%                     | 6.29%                | 7.21%                   |
| AEW Core Property Trust                           | (0.55%)                | 6.24%                   | 7.73%                     | 7.96%                | 8.49%                   |
| Public Real Assets                                | (9.19%)                | 15.95%                  | (7.59%)                   | 10.03%               | 11.14%                  |
| Public Real Assets Benchmark                      | (13.13%)               | 14.08%                  | (7.27%)                   | 7.95%                | 14.37%                  |
| BlackRock TIPS Index Fund                         | 6.12%                  | 8.53%                   | (1.12%)                   | 3.24%                | 4.84%                   |
| Bloomberg US TIPS Index                           | 6.01%                  | 8.43%                   | (1.26%)                   | 3.01%                | 4.68%                   |
| BlackRock REIT Index Fund (1)                     | (21.96%)               | 23.15%                  | (4.16%)                   | 6.10%                | 8.62%                   |
| DJ US Select REIT Index                           | (22.01%)               | 23.10%                  | (4.22%)                   | 3.76%                | 6.68%                   |
| MSCI REIT Index<br>Invesco Commodity Fund (2)     | (18.45%)<br>(15.74%)   | 25.84%<br>6.23%         | (4.57%)<br>(10.99%)       | 5.07%<br>5.91%       | 8.60%<br>11.05%         |
| Bloomberg Commodity Index                         | (19.40%)               | 7.69%                   | (10.99%)                  | 1.70%                | 11.77%                  |
| KBI Global Resources Fund (3)                     | (8.22%)                | 25.87%                  | (13.86%)                  | 25.66%               | 21.17%                  |
| S&P Global Natural Resources Index                | (19.47%)               | 16.41%                  | (13.08%)                  | 21.98%               | 31.45%                  |
| KBI Custom Benchmark (4)                          | (5.73%)                | 28.74%                  | (13.77%)                  | 21.95%               | 7.57%                   |
| Private Equity**                                  | (8.64%)                | 18.53%                  | 16.44%                    | 22.16%               | 13.53%                  |
| Total Fund  | (3.81%)                | 18.73%                  | (2.68%)                   | 17.41%               | 8.10%                   |
| Total Fund - NOF                                  | (4.03%)                | 18.19%                  | (3.16%)                   | 16.81%               | 7.61%                   |
| Total Fund -IRR                                   | (4.22%)                | 18.57%                  | (2.91%)                   | 17.28%               | 8.13%                   |
| Total Fund Target                                 | (4.40%)                | 20.11%                  | (5.33%)                   | 16.58%               | 8.26%                   |
| Public Fund Sponsor Database                      | (2.34%)                | 17.78%                  | (3.77%)                   | 15.54%               | 7.71%                   |

<sup>\*\*\*\*</sup>Blended Index = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit thereafter.



The Total Fund/Plan IRR Calculation is based upon best available data.
(1) MCERA changed managers in 3Q17. Prior returns linked to Vanguard REIT Index Fund.
(2) MCERA changed managers in 2Q16. Prior returns linked to BlackRock Commodity Index Fund.
(3) MCERA changed managers in 3Q16. Prior returns linked to SSGA Natural Resources Index Fund.

<sup>(4)</sup> KBI Custom Benchmark consists of 1/3 each: S-Network Global Water Index, Wilderhill New Energy

Global Innovation Index, and Dax Global Agribusiness Index.

\*\*Current market values are those of the prior quarter, adjusted for capital calls and distributions

of current quarter.
\*\*\*Estimate

The table below details the rates of return for the Fund's investment managers over various time periods. 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.

|                              | 2015      | 2014     | 2013     | 2012    | 2011     |
|------------------------------|-----------|----------|----------|---------|----------|
| Domestic Equity              | (0.72%)   | 11.02%   | 34.25%   | 17.20%  | (1.09%)  |
| Equity Benchmark             | 0.48%     | 12.56%   | 33.55%   | 16.42%  | 1.03%    |
| Laws Quarter V               | 4.400/    | 40.700/  | 00.400/  | 40.000/ | (0.700() |
| Large Cap Equity             | 1.46%     | 13.70%   | 32.40%   | 16.68%  | (0.79%)  |
| SSGA S&P 500 Index Fund      | 1.44%     | 13.69%   | 32.39%   | 16.07%  | 2.14%    |
| Dodge & Cox Value            | -         | -        | -        | 20.59%  | (3.02%)  |
| RCM Growth                   | -         | -        | -        | 10.26%  | (3.73%)  |
| S&P 500 Index                | 1.38%     | 13.69%   | 32.39%   | 16.00%  | 2.11%    |
| Small Cap Equity             | (6.22%)   | 4.65%    | 38.37%   | 18.28%  | (2.29%)  |
| Russell 2000 Index           | (4.41%)   | 4.89%    | 38.82%   | 16.35%  | (4.18%)  |
| DFA Value                    | (6.06%)   | 5.04%    | 42.66%   | 22.41%  | (6.75%)  |
| Russell 2000 Value Index     | (7.47%)   | 4.22%    | 34.52%   | 18.05%  | (5.50%)  |
| Columbus Circle Growth       | (6.66%)   | 4.51%    | 32.88%   | 14.09%  | 2.49%    |
| Russell 2000 Growth Index    | (1.38%)   | 5.60%    | 43.30%   | 14.59%  | (2.91%)  |
| Russell 2000 Growth Index    | (1.5070)  | 3.00 /0  | 40.0070  | 14.5570 | (2.3170) |
| International Equity         | (0.66%)   | (3.27%)  | 22.57%   | 23.53%  | (8.87%)  |
| International Benchmark      | (4.60%)   | (3.89%)  | 15.82%   | 17.04%  | (14.31%) |
| Morgan Stanley Value         | 1.17%     | (5.10%)  | 21.79%   | 20.70%  | (7.40%)  |
| Artisan Partners Growth      | (2.61%)   | 0.24%    | 26.68%   | 26.87%  | (6.12%)  |
| MSCI EAFE Index              | (0.81%)   | (4.90%)  | 22.78%   | 17.32%  | (12.14%) |
|                              | 12.54%    |          | 31.84%   | 26.26%  | (12.14%) |
| FIAM International Small Cap |           | (5.75%)  |          |         |          |
| S&P EPAC Small Cap Index     | 8.58%     | (3.43%)  | 27.93%   | 19.92%  | (14.74%) |
| Parametric Emerging          | (15.12%)  | (3.00%)  | 3.38%    | 21.17%  | (17.23%) |
| MSCI Emerging Markets Index  | (14.92%)  | (2.19%)  | (2.60%)  | 18.23%  | (18.42%) |
| Fixed Income                 | (0.61%)   | 4.46%    | (0.90%)  | 8.28%   | 7.93%    |
| Fixed Income Benchmark       | (0.39%)   | 3.74%    | (2.02%)  | 4.21%   | 7.84%    |
| Wellington Core Plus         | 0.30%     | 6.40%    | (0.79%)  | 8.03%   | 7.82%    |
| Bloomberg Aggregate Index    | 0.55%     | 5.97%    | (2.02%)  | 4.21%   | 7.84%    |
| Western Asset                | 1.25%     | 4.56%    | (0.66%)  | 9.79%   | 7.39%    |
| Blended Benchmark****        | 0.90%     | 4.16%    | (2.02%)  | 4.21%   | 7.84%    |
| Colchester Global            | (5.52%)   | 4.1070   | (2.0270) | 7.2170  | 7.0470   |
| FTSE World Govt Bond Index   | (3.57%)   | (0.48%)  | (4.00%)  | 1.65%   | 6.35%    |
| 1 TOE World Govt Borld Index | (0.57 70) | (0.4070) | (4.0070) | 1.00 /0 | 0.55 /0  |
| Real Assets                  | 18.37%    | 15.55%   | 13.01%   | 14.69%  | 13.57%   |
| Real Assets Benchmark        | 5.44%     | 11.82%   | 10.98%   | 10.54%  | 14.26%   |
|                              |           |          |          |         |          |
| Private Real Estate          | 29.00%    | 15.55%   | 13.01%   | 14.69%  | 13.57%   |
| NCREIF Total Index           | 13.33%    | 11.82%   | 10.98%   | 10.54%  | 14.26%   |
| NFI-ODCE Equal Weight Net    | 14.18%    | 11.42%   | 12.36%   | 9.93%   | 14.99%   |
| Moodmont                     | 64.040/   | 10 700/  | 49.400/  | 1E 000/ | 44.000/  |
| Woodmont                     | 64.21%    | 18.72%   | 13.48%   | 15.29%  | 11.86%   |
| UBS Trumbull Property Fund   | 12.93%    | 11.56%   | -        | -       | -        |
| AEW Core Property Trust      | 13.76%    | 11.31%   | =        |         | -        |
| AEW Partners V (estimated)   | 45.46%    | 46.59%   | 26.24%   | 19.92%  | 17.13%   |
| RREEF America III            | 8.52%     | 27.93%   | 16.97%   | 23.73%  | 55.41%   |
| ING Clarion                  | =         | -        | -        | -       | 18.70%   |
| Private Equity**             | 11.24%    | 14.19%   | 20.25%   | 12.28%  | 6.63%    |
| TitalFood                    | 0.700/    | 7.400/   | 00.040/  | 45 700/ | 4.000/   |
| Total Fund                   | 2.73%     | 7.10%    | 20.94%   | 15.70%  | 1.00%    |
| Total Fund - NOF             | 2.24%     | 6.59%    | 20.37%   | 15.03%  | 0.42%    |
| Total Fund Target            | (0.26%)   | 6.51%    | 17.92%   | 12.93%  | 1.13%    |
| Public Fund Sponsor Database | 0.03%     | 6.02%    | 15.74%   | 12.66%  | 0.91%    |
|                              | 0.0070    | 0=/0     |          | 0 0 / 0 | 2.0.70   |



<sup>\*</sup> Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index, 5.8% Blmbg Intmdt Credit, 5.8% FTSE WGBI, 1.8% MSCI US REIT Index, 1.8% Blmbg Commodity TR Idx, 1.8% Blmbg:TIPS, 1.8% S&P Glb L/M Cmdty+NR (Nt) and 1.6% MSCI ACWI ex US IMI. \*\*Current market values are those of the prior quarter, adjusted for capital calls and distributions

of current quarter.

\*\*\*\*Blended Index = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit thereafter.

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

#### Returns for Periods Ended June 30, 2020

|  | 14                      | Last 2                     |                       | Last<br>5             | Last                  |
|--|-------------------------|----------------------------|-----------------------|-----------------------|-----------------------|
|  | Last                    | Last<br>Year               | 3                     | -                     | 10<br>Yaara           |
| Net-of-Fees  | Quarter                 | rear                       | Years                 | Years                 | Years                 |
|  | 21.56%                  | 2.25%                      | 8.21%                 | 8.43%                 | 12.75%                |
| Domestic Equity Equity Benchmark                           | 22.03%                  | 6.53%                      | 10.04%                | 10.03%                | 13.72%                |
| Large Cap Equity   | 20.66%                  | 7.56%                      | 10.69%                | 10.73%                | 13.77%                |
| SSĞA S&P 500 İndex Fund<br>S&P 500 Index                   | 20.53%<br>20.54%        | 7.43%<br>7.51%             | 10.70%<br>10.73%      | 10.73%<br>10.73%      | 13.99%                |
| Small Cap Equity   | 23.76%<br>23.36%        | (10.01%)                   | 1.59%                 | 2.59%                 | 10.12%                |
| DFA Small Cap Core<br>Russell 2000 Index                   | 25.42%                  | (11.70%)<br>(6.63%)        | 2.01%                 | 4.29%                 | 10.50%                |
| International Equity International Benchmark               | <b>18.52%</b><br>16.96% | <b>(2.50%)</b><br>(4.74%)  | <b>2.26%</b><br>0.96% | <b>2.99%</b><br>2.30% | <b>7.05%</b><br>5.11% |
| international benchmark                                    | 10.90 %                 | (4.74%)                    | 0.90%                 | 2.30%                 | 5.11%                 |
| Morgan Stanley Value                                       | 18.30%                  | 0.00%                      | 2.03%                 | 2.73%                 | 6.49%<br>8.27%        |
| Artisan Partners Growth MSCI EAFE Index                    | 17.42%<br>14.88%        | (0.08%)<br>(5.13%)         | 5.53%<br>0.81%        | 3.38%<br>2.05%        | 8.27%<br>5.73%        |
| TimesSquare Intl Small Cap                                 | 22.83%                  | (2.24%)                    | -                     | =                     | -                     |
| MSCI EAFE Small Cap Index Parametric Emerging              | 19.88%<br>18.48%        | (3.52%)<br>(14.86%)        | 0.53%<br>(3.45%)      | 3.81%<br>(0.57%)      | 8.02%                 |
| MSCI Emerging Markets Index                                | 18.08%                  | (3.39%)                    | 1.90%                 | 2.86%                 | 3.27%                 |
| Fixed Income   | 6.92%                   | 8.88%                      | 5.37%                 | 4.68%                 | 4.38%                 |
| Fixed Income Benchmark                                     | 3.63%                   | 7.29%                      | 4.90%                 | 4.15%                 | 3.45%                 |
| Wellington Core Plus                                       | 5.86%                   | 9.87%                      | 5.96%                 | 5.17%                 | 4.80%                 |
| Bloomberg Aggregate Index                                  | 2.90%                   | 8.74%                      | 5.32%                 | 4.30%                 | 3.82%                 |
| Western Asset Intermediate Credit Blended Benchmark****    | 9.60%<br>6.67%          | 7.86%<br>6.97%             | 5.31%<br>4.88%        | 4.70%<br>4.18%        | 4.77%<br>3.68%        |
| Colchester Global  | 5.53%                   | 3.65%                      | 3.35%                 | 3.29%                 | -                     |
| FTSE World Govt Bond Index                                 | 2.04%                   | 4.60%                      | 3.98%                 | 3.70%                 | 2.37%                 |
| Real Assets  | 3.54%                   | (2.34%)                    | 2.17%                 | 4.51%                 | 9.49%                 |
| Real Assets Benchmark                                      | 3.72%                   | (3.21%)                    | 2.94%                 | 3.97%                 | 8.27%                 |
| Private Real Estate  | (1.36%)                 | 0.03%                      | 2.98%                 | 6.51%                 | 10.54%                |
| NFI-ODCE Equal Weight Net                                  | (1.47%)                 | 1.70%                      | 5.09%                 | 6.72%                 | 9.95%                 |
| UBS Trumbull Property Fund                                 | (2.58%)                 | (1.80%)                    | 1.35%                 | 3.59%                 | -                     |
| AEW Core Property Trust                                    | (0.17%)                 | 1.23%                      | 4.76%                 | 6.31%                 | -                     |
| Public Real Assets Public Real Assets Benchmark            | <b>12.06%</b><br>9.65%  | <b>(5.29%)</b><br>(10.20%) | 1.14%<br>(0.26%)      | <b>0.90%</b><br>0.31% | <u>-</u>              |
|  |                         | ,                          | ,                     |                       |                       |
| BlackRock TIPS Index Fund<br>Bloomberg US TIPS Index       | 4.42%<br>4.24%          | 8.39%<br>8.28%             | 5.17%<br>5.05%        | 3.86%<br>3.75%        | 3.52%                 |
| BlackRock REIT Index Fund (1)                              | 9.13%                   | (17.69%)                   | (1.69%)               | 2.93%                 | -                     |
| DJ US Select REIT Index                                    | 9.11%                   | (17.71%)                   | (1.99%)               | 2.45%                 | 8.27%                 |
| Invesco Commodity Fund (2)                                 | 12.77%<br>5.08%         | (14.04%)<br>(17.38%)       | (4.05%)<br>(6.14%)    | (6.98%)<br>(7.69%)    | (5.82%)               |
| Bloomberg Commodity Index<br>KBI Global Resources Fund (3) | 22.43%                  | (17.36%)                   | 2.86%                 | 2.14%                 | (0.02%)               |
| S&P Global Natural Resources Index                         | 20.17%                  | (17.36%)                   | (0.75%)               | 0.31%                 | 0.89%                 |
| KBI Custom Benchmark (4)                                   | 20.21%                  | 3.67%                      | 5.60%                 | 4.67%                 | 6.53%                 |
| Private Equity**   | (0.11%)                 | (2.85%)                    | 10.27%                | 11.48%                | 10.00%                |
| Total Fund   | 12.15%                  | 1.81%                      | 5.76%                 | 6.31%                 | 9.37%                 |
| Total Fund Sagner Detahage                                 | 12.17%                  | 1.95%                      | 5.58%                 | 5.96%                 | 8.65%                 |
| Public Fund Sponsor Database                               | 11.79%                  | 3.26%                      | 5.81%                 | 6.02%                 | 8.09%                 |

of current quarter.
\*\*\*\*Blended Index = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit thereafter.



<sup>\*</sup> Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% FTSE WGBI, 5.8% Blmbg Intmdt Credit, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg:TIPS and 1.6% MSCI ACWI ex US Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg:TIPS and 1. IMI (Lagged).

(1) MCERA changed managers in 3Q17. Prior returns linked to Vanaguard REIT Index Fund.

(2) MCERA changed managers in 2Q16. Prior returns linked to BlackRock Commodity Index Fund.

(3) MCERA changed managers in 3Q16. Prior returns linked to SSGA Natural Resources Index Fund.

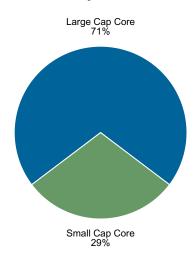
(4) KBI Custom Benchmark consists of 1/3 each: S-Network Global Water Index, Wilderhill New Energy Global Innovation Index, and Dax Global Agribusiness Index.

<sup>\*\*</sup>Current market values are those of the prior quarter, adjusted for capital calls and distributions

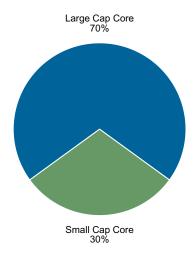
# Actual vs Target Style Allocation As of June 30, 2020

The first chart below shows the Fund's style allocation as of June 30, 2020. The second chart shows the Fund's target style allocation as outlined in the investment policy statement.

### **Actual Style Allocation**



## **Target Style Allocation**



| Asset Class    | \$Millions<br>Actual | Weight<br>Actual | Target | Percent<br>Difference | \$Millions<br>Difference |
|----------------|----------------------|------------------|--------|-----------------------|--------------------------|
| Large Cap Core | 547                  | 70.6%            | 70.0%  | 0.6%                  | 5                        |
| Small Cap Core | 228                  | 29.4%            | 30.0%  | (0.6%)                | (5)                      |
| Total          | 775                  | 100.0%           | 100.0% |                       |                          |

<sup>\*</sup> Current Quarter Target = 70.0% S&P 500 Index and 30.0% Russell 2000 Index.



## Domestic Equity Composite Period Ended June 30, 2020

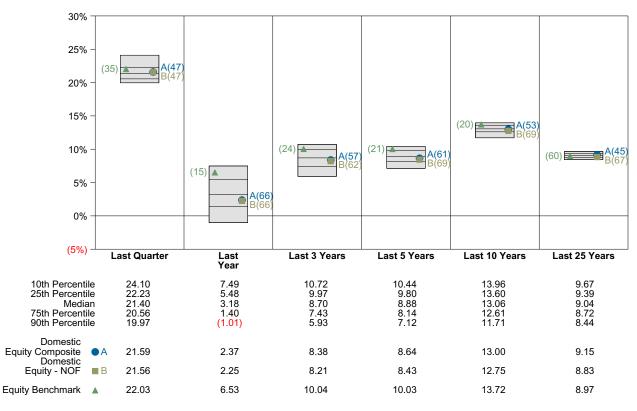
#### **Investment Philosophy**

The Equity Benchmark is comprised of 51.1% S&P/BARRA Value, 22.2% S&P 500, 15.6% Russell 2000 and 11.1% S&P/BARRA Growth through 12/31/1999, 80% S&P 500 and 20% Russell 2000 from 12/31/1999 to 06/30/2010, and 100% Russell 3000 from 06/30/2010 to present.

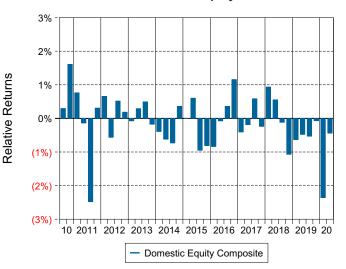
#### **Quarterly Summary and Highlights**

- Domestic Equity Composite's portfolio posted a 21.59% return for the quarter placing it in the 47 percentile of the Public Fund - Domestic Equity group for the quarter and in the 66 percentile for the last year.
- Domestic Equity Composite's portfolio underperformed the Equity Benchmark by 0.44% for the quarter and underperformed the Equity Benchmark for the year by 4.16%.

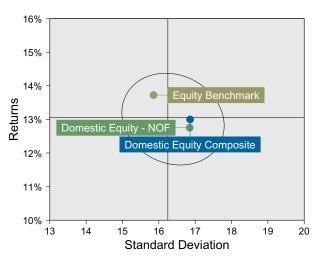
#### Performance vs Public Fund - Domestic Equity (Gross)



#### Relative Return vs Equity Benchmark



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



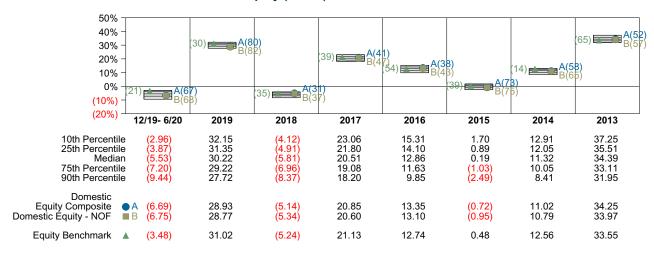


# **Domestic Equity Composite Return Analysis Summary**

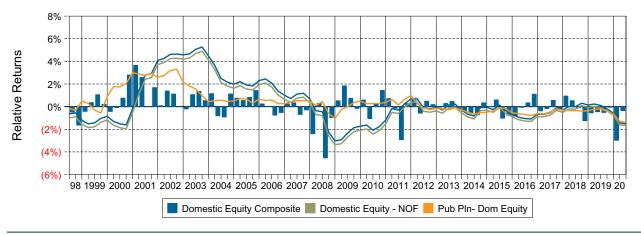
# **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 12 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

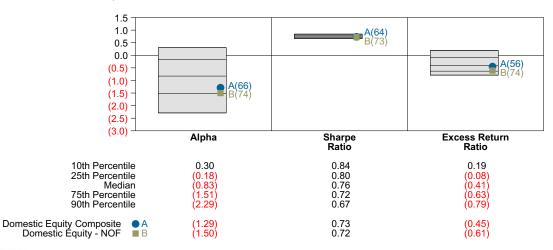
# Performance vs Public Fund - Domestic Equity (Gross)



Rolling 12 Quarter and Quarterly Relative Return vs Equity Benchmark



Risk Adjusted Return Measures vs Equity Benchmark Rankings Against Public Fund - Domestic Equity (Gross) Ten Years Ended June 30, 2020



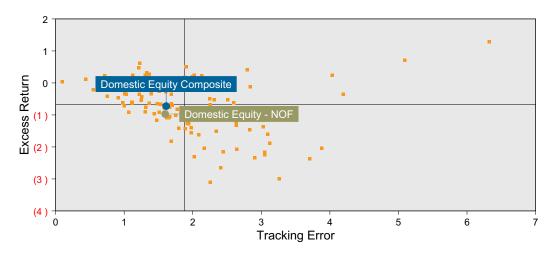


# **Domestic Equity Composite Risk Analysis Summary**

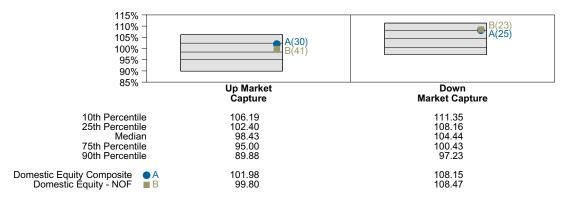
### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

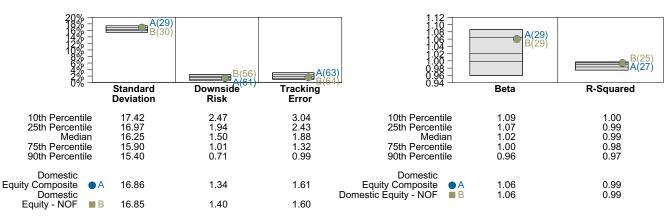
# Risk Analysis vs Public Fund - Domestic Equity (Gross) Ten Years Ended June 30, 2020



Market Capture vs Equity Benchmark Rankings Against Public Fund - Domestic Equity (Gross) Ten Years Ended June 30, 2020



Risk Statistics Rankings vs Equity Benchmark Rankings Against Public Fund - Domestic Equity (Gross) Ten Years Ended June 30, 2020





# Domestic Equity Composite Equity Characteristics Analysis Summary

### **Portfolio Characteristics**

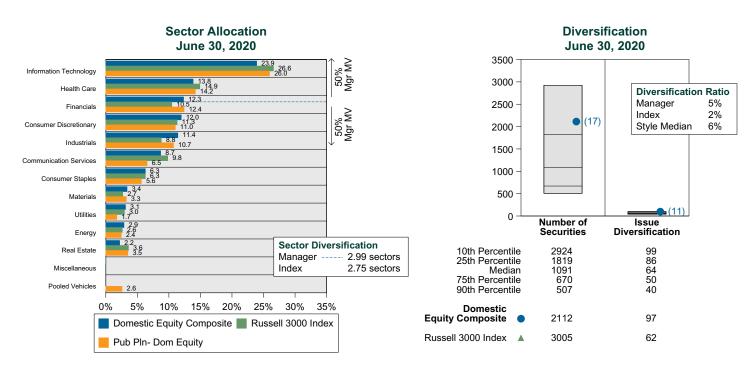
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

# Portfolio Characteristics Percentile Rankings Rankings Against Public Fund - Domestic Equity as of June 30, 2020



### **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.

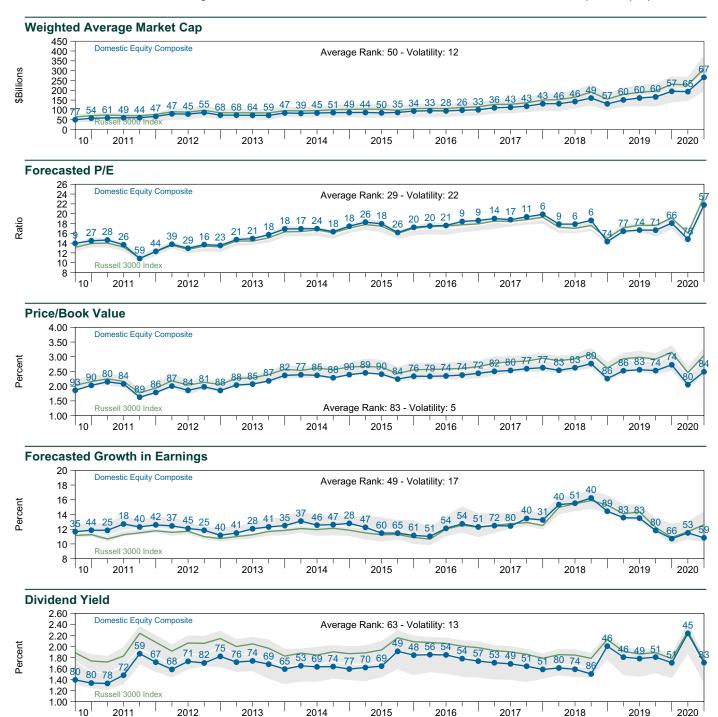




# **Portfolio Characteristics Analysis**

# **Pub Pln-Dom Equity**

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Pub Pln- Dom Equity Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The Russell 3000 Index is shown for comparison purposes.



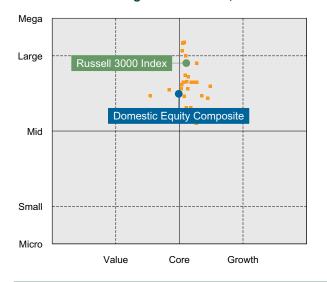
Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.



# **Current Holdings Based Style Analysis Domestic Equity Composite As of June 30, 2020**

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

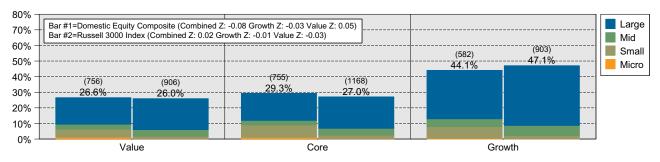
# Style Map vs Pub Pln- Dom Equity Holdings as of June 30, 2020



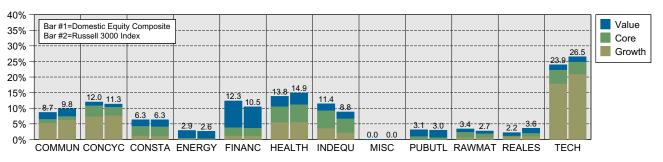
# Style Exposure Matrix Holdings as of June 30, 2020

| <b>26.6%</b> (756)<br><b>26.0%</b> (906) | <b>29.3%</b> (755)<br><b>27.0%</b> (1168)                         | <b>44.1%</b> (582)<br><b>47.1%</b> (903)  | 100.0% (2093)<br>100.0% (2977)  |
|--|---|---|---|
| 26.6% (756)                              | 29.3% (755)   | , ,   | 100.0% (2093)   |
|  | ( ,   | ( . ,   | ( ,   |
| 0.2% (346)                               | 0.3% (396)  | 0.1% (152)  | 0.6% (894)  |
| 1.2% (321)                               | 1.0% (209)  | 0.4% (80)   | 2.6% (610)  |
| . ,                                      | · /   | · ,   | 5.6% (1190)   |
|  |   |   |   |
| 5.0% (222)                               | 7.9% (351)  | 7.5% (284)  | 20.4% (857)   |
| 4.3% (162)                               | 4.2% (178)  | 6.6% (256)  | 15.1% (596)   |
| 3.2% (115)                               | 2.9% (107)  | 5.0% (130)  | 11.2% (352)   |
| 20.0% (99)                               | 20.2% (89)  | 38.5% (109)   | 78.6% (297)   |
| 17.2% (98)                               | 17.5% (88)  | 31.2% (88)  | 65.8% (274)   |
|  | 20.0% (99) 3.2% (115) 4.3% (162) 5.0% (222) 1.4% (299) 1.2% (321) | 20.0% (99) 20.2% (89) 3.2% (115) 2.9% (107) 4.3% (162) 4.2% (178) 5.0% (222) 7.9% (351) 1.4% (299) 2.3% (505) 1.2% (321) 1.0% (209) | 20.0% (99)     20.2% (89)     38.5% (109)       3.2% (115)     2.9% (107)     5.0% (130)       4.3% (162)     4.2% (178)     6.6% (256)       5.0% (222)     7.9% (351)     7.5% (284)       1.4% (299)     2.3% (505)     1.9% (386)       1.2% (321)     1.0% (209)     0.4% (80) |

# Combined Z-Score Style Distribution Holdings as of June 30, 2020



# Sector Weights Distribution Holdings as of June 30, 2020

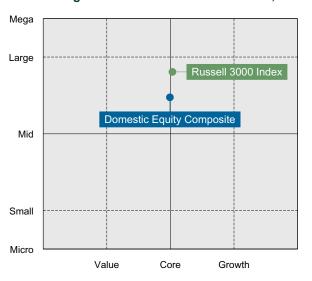




# Historical Holdings Based Style Analysis Domestic Equity Composite For Three Years Ended June 30, 2020

This page analyzes the historical investment style of a portfolio utilizing a detailed holdings-based style analysis to determine average actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the average historical market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the average historical portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The next two style exposure charts illustrate the actual quarterly cap/style and style only segment exposures of the portfolio through history.

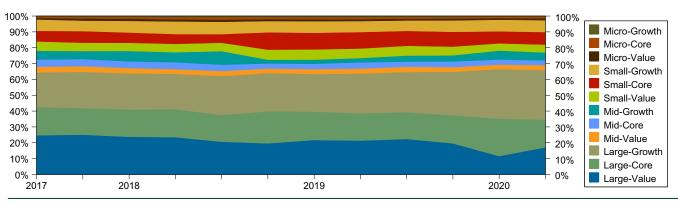
# Average Style Map vs Pub Pln- Dom Equity Holdings for Three Years Ended June 30, 2020



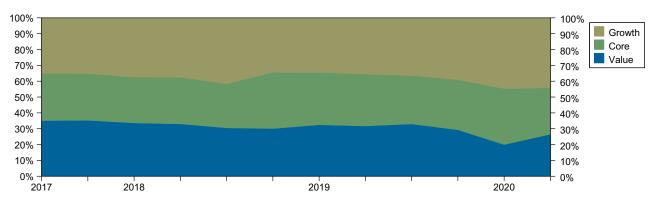
# Average Style Exposure Matrix Holdings for Three Years Ended June 30, 2020

|       | Value       | Core         | Growth      | Total                |
|-------|-------------|--------------|-------------|----------------------|
|       | 31.4% (901) | 30.0% (1170) | 38.6% (900) | <b>100.0%</b> (2971) |
| Total |             |              |             |                      |
|       | 30.9% (690) | 31.1% (692)  | 37.9% (450) | 100.0% (1832)        |
|       | 0.3% (302)  | 0.3% (384)   | 0.2% (206)  | <b>0.8%</b> (892)    |
| Micro |             |              |             |                      |
|       | 1.2% (274)  | 1.1% (214)   | 0.6% (87)   | 2.9% (575)           |
|       | 1.9% (326)  | 2.6% (485)   | 2.1% (377)  | <b>6.7%</b> (1188)   |
| Small |             |              |             |                      |
|       | 5.6% (212)  | 8.2% (285)   | 7.2% (191)  | 21.0% (688)          |
|       | 4.7% (170)  | 5.8% (206)   | 6.0% (218)  | <b>16.5%</b> (594)   |
| Mid   |             |              |             |                      |
|       | 3.2% (102)  | 3.7% (101)   | 4.8% (84)   | 11.8% (287)          |
|       | 24.5% (103) | 21.3% (95)   | 30.3% (99)  | <b>76.0%</b> (297)   |
| Large | , ,         |              | , ,         |                      |
|       | 21.0% (102) | 18.1% (92)   | 25.2% (88)  | 64.3% (282)          |

# **Domestic Equity Composite Historical Cap/Style Exposures**



### **Domestic Equity Composite Historical Style Only Exposures**

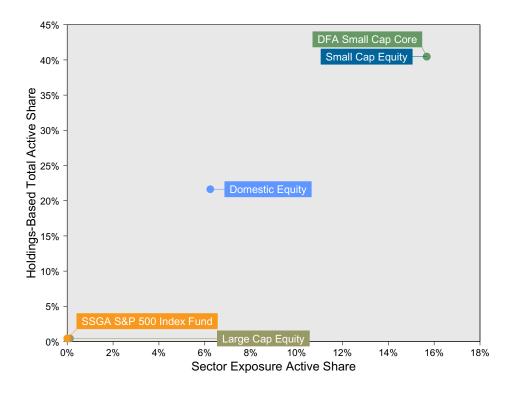




# Active Share Structure Analysis For One Quarter Ended June 30, 2020

This analysis compares multiple portfolios and composites in an active share context, illustrating the varying degrees of active risk taken by individual portfolios, and how they combine into active risk profiles for composites and the equity structure. Two sources of active share (active risk) are shown: 1) Total Holdings-Based Active Share based on individual position comparisons to the index (and the subcomponent from holding non-index securities), and 2) Sector Exposure Active Share that quantifies the more macro-level sector differences from the index.

# Active Share Analysis Ended June 30, 2020



|                         | Weight<br>% | Index        | Total<br>Act Share | Non-Idx<br>Act Share | Sector<br>Act Share | Number<br>Securities | Security<br>Diverse |
|-------------------------|-------------|--------------|--------------------|----------------------|---------------------|----------------------|---------------------|
| Small Cap Equity        | 29.40%      | Russell 2000 | 40.47%             | 10.46%               | 15.68%              | 1626                 | 280.45              |
| DFA Small Cap Core      | 27.00%      | Russell 2000 | 40.47%             | 10.46%               | 15.68%              | 1626                 | 280.44              |
| Large Cap Equity        | 70.60%      | S&P 500      | 0.43%              | 0.02%                | 0.12%               | 505                  | 40.35               |
| SSGA S&P 500 Index Fund | 70.10%      | S&P 500      | 0.43%              | 0.02%                | 0.00%               | 505                  | 40.25               |
| Domestic Equity         | 100.00%     | Russell 3000 | 21.63%             | 0.27%                | 6.24%               | 2112                 | 97.22               |



# SSGA S&P 500 Index Fund Period Ended June 30, 2020

### **Investment Philosophy**

SSGA believes that their passive investment strategy can provide market-like returns with minimal transaction costs. The first full guarter of performance is 2Q11. Performance prior to 2Q11 is that of the manager's composite.

# **Quarterly Summary and Highlights**

- SSGA S&P 500 Index Fund's portfolio posted a 20.54% return for the quarter placing it in the 57 percentile of the Callan Large Capitalization group for the quarter and in the 49 percentile for the last year.
- SSGA S&P 500 Index Fund's portfolio underperformed the S&P 500 Index by 0.01% for the quarter and underperformed the S&P 500 Index for the year by 0.05%.

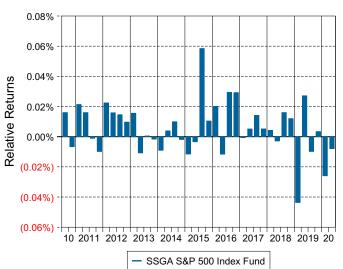
# **Quarterly Asset Growth**

| Beginning Market Value    | \$453,072,349 |
|---------------------------|---------------|
| Net New Investment        | \$-2,543,114  |
| Investment Gains/(Losses) | \$92,881,966  |
| Ending Market Value       | \$543,411,201 |

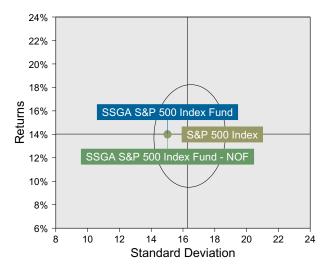
# Performance vs Callan Large Capitalization (Gross)



# Relative Return vs S&P 500 Index



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



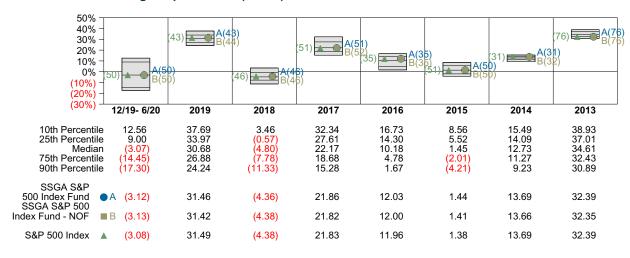


# SSGA S&P 500 Index Fund Return Analysis Summary

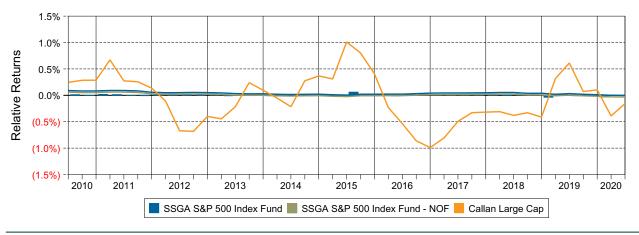
# **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 12 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

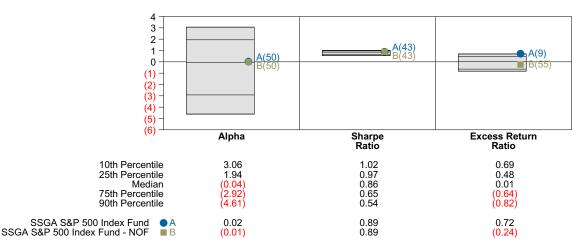
# Performance vs Callan Large Capitalization (Gross)



Rolling 12 Quarter and Quarterly Relative Return vs S&P 500 Index



Risk Adjusted Return Measures vs S&P 500 Index Rankings Against Callan Large Capitalization (Gross) Ten Years Ended June 30, 2020





# DFA Small Cap Core Period Ended June 30, 2020

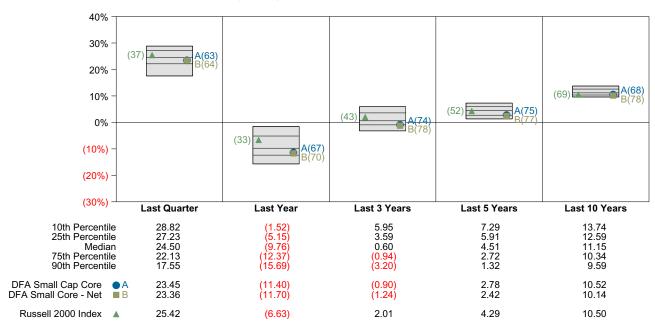
### **Investment Philosophy**

Dimensional's core philosophical principles are: public capital markets work (Dimensional uses information in market prices to identify reliable dimensions of expected market returns: size, relative price, and profitability and to design and implement strategies along those dimensions); diversification is essential (helps reduce uncertainty, manage risk, increase the reliability of outcomes, and provide flexibility); and managing tradeoffs adds value (Dimensional seeks to add value by targeting market premiums efficiently and continuously, reducing the costs associated with turnover, and implementing a flexible trading strategy). The first full quarter of performance is 1Q19. Prior performance is that of the manager's composite.

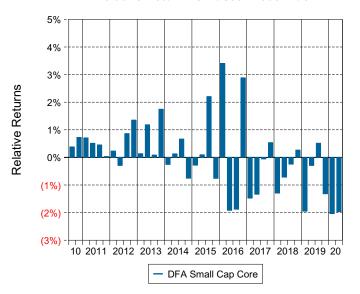
### **Quarterly Summary and Highlights**

- DFA Small Cap Core's portfolio posted a 23.45% return for the quarter placing it in the 63 percentile of the Callan Small Cap Core group for the quarter and in the 67 percentile for the last year.
- DFA Small Cap Core's portfolio underperformed the Russell 2000 Index by 1.96% for the quarter and underperformed the Russell 2000 Index for the year by 4.77%.

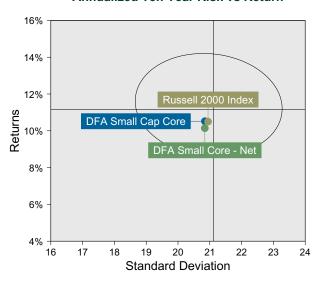
# Performance vs Callan Small Cap Core (Gross)



### Relative Return vs Russell 2000 Index



# Callan Small Cap Core (Gross) Annualized Ten Year Risk vs Return



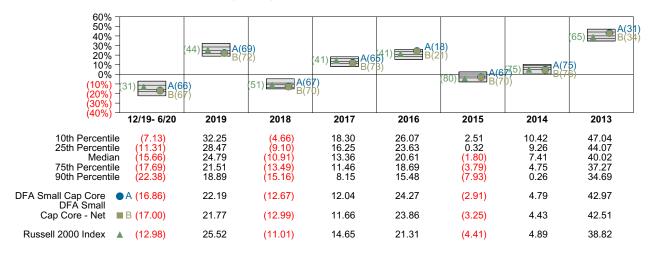


# DFA Small Cap Core Return Analysis Summary

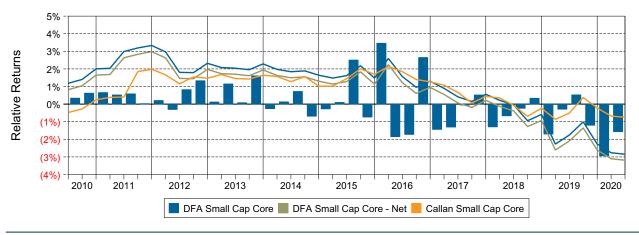
# **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 12 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

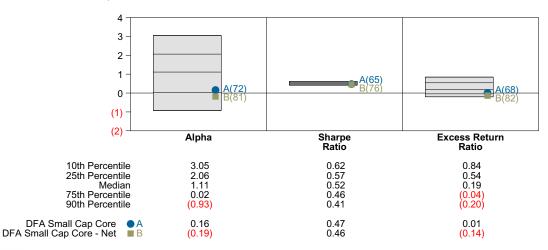
# Performance vs Callan Small Cap Core (Gross)



Rolling 12 Quarter and Quarterly Relative Return vs Russell 2000 Index



Risk Adjusted Return Measures vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Ten Years Ended June 30, 2020



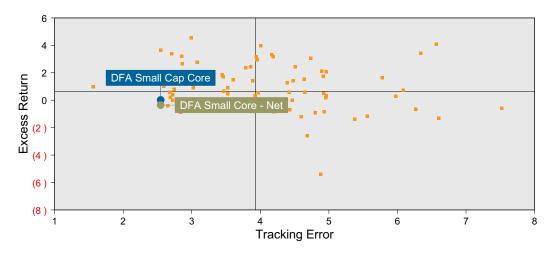


# DFA Small Cap Core Risk Analysis Summary

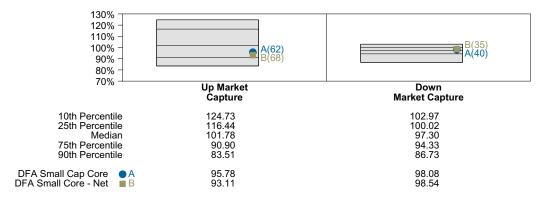
### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

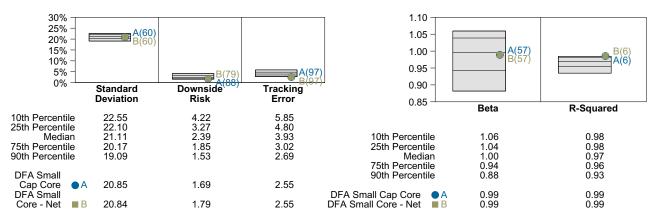
# Risk Analysis vs Callan Small Cap Core (Gross) Ten Years Ended June 30, 2020



Market Capture vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Ten Years Ended June 30, 2020



Risk Statistics Rankings vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Ten Years Ended June 30, 2020



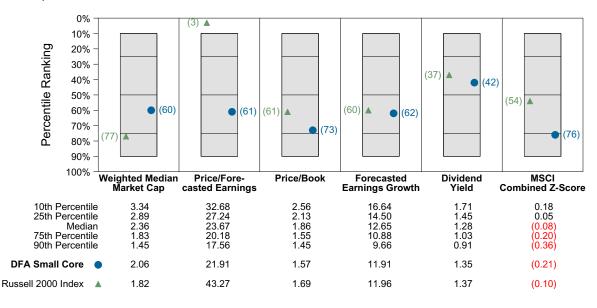


# DFA Small Core Equity Characteristics Analysis Summary

### **Portfolio Characteristics**

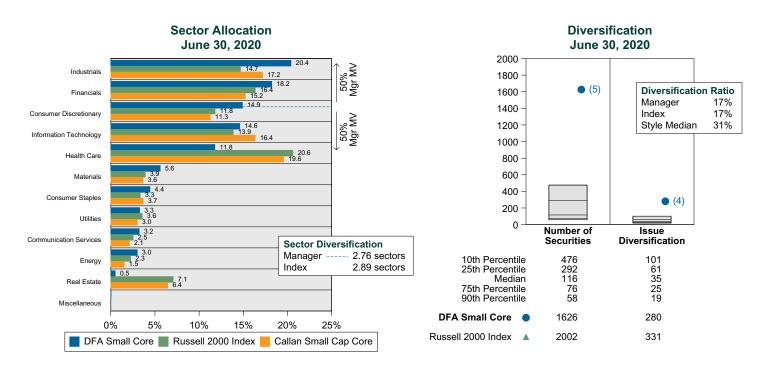
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

# Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Cap Core as of June 30, 2020



### **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.

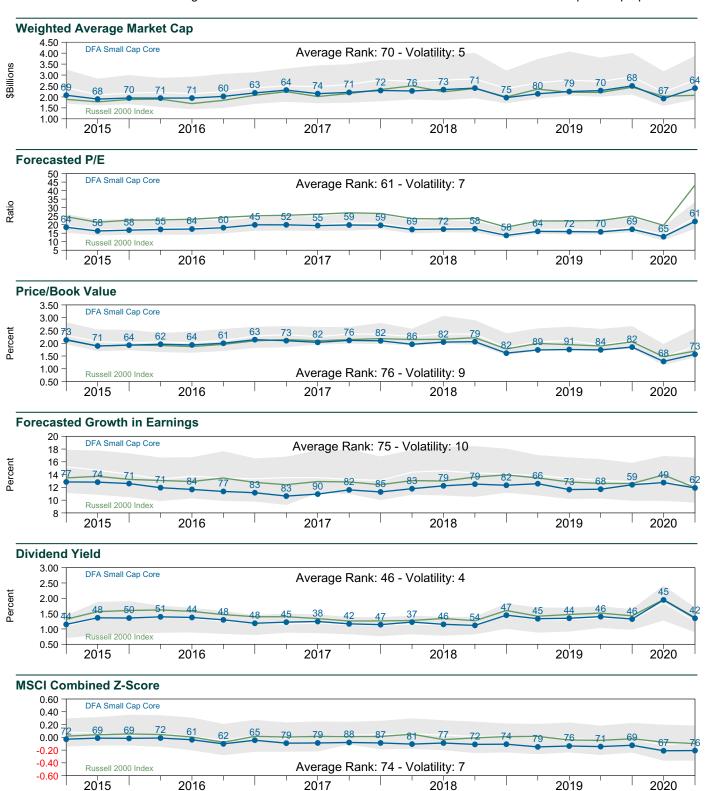




# **Portfolio Characteristics Analysis**

### Callan Small Cap Core

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan Small Cap Core Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The Russell 2000 Index is shown for comparison purposes.



Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.



# Marin Co. - DFA Small Core **Top 10 Portfolio Holdings Characteristics** as of June 30, 2020

# 10 Largest Holdings

|                                  |                        |             |           |         |         | Price/     |          |            |
|----------------------------------|------------------------|-------------|-----------|---------|---------|------------|----------|------------|
|                                  |                        | Ending      | Percent   |         |         | Forecasted |          | Forecasted |
|                                  |                        | Market      | of        | Qtrly   | Market  | Earnings   | Dividend | Growth in  |
| Stock                            | Sector                 | Value       | Portfolio | Return  | Capital | Ratio      | Yield    | Earnings   |
| Horizon Therapeutics Pub Ltd Shs | Health Care            | \$1,187,244 | 0.6%      | 87.64%  | 10.60   | 24.72      | 0.00%    | 18.00%     |
| Quidel Corp                      | Health Care            | \$922,256   | 0.4%      | 128.75% | 9.40    | 29.72      | 0.00%    | 39.60%     |
| Amedisys                         | Health Care            | \$900,379   | 0.4%      | 8.17%   | 6.43    | 38.37      | 0.00%    | 13.83%     |
| Lhc Group Inc                    | Health Care            | \$829,415   | 0.4%      | 24.34%  | 5.51    | 35.95      | 0.00%    | 12.28%     |
| Helen of Troy Corp Ltd           | Consumer Discretionary | \$804,963   | 0.4%      | 30.92%  | 4.77    | 21.24      | 0.00%    | 12.34%     |
| Trex Co Inc                      | Industrials            | \$787,574   | 0.4%      | 62.30%  | 7.52    | 47.42      | 0.00%    | 12.82%     |
| Fti Consulting                   | Industrials            | \$668,628   | 0.3%      | (4.36)% | 4.25    | 19.52      | 0.00%    | 43.72%     |
| Topbuild                         | Consumer Discretionary | \$654,405   | 0.3%      | 58.81%  | 3.79    | 22.33      | 0.00%    | 13.60%     |
| Manhattan Associates             | Information Technology | \$648,379   | 0.3%      | 89.08%  | 5.98    | 59.17      | 0.00%    | 6.39%      |
| Tetra Tech                       | Industrials            | \$644,670   | 0.3%      | 12.32%  | 4.27    | 24.45      | 0.86%    | 15.00%     |

# **10 Best Performers**

|                              |                        |           |           |         |         | Price/     |          |            |
|------------------------------|------------------------|-----------|-----------|---------|---------|------------|----------|------------|
|                              |                        | Ending    | Percent   |         |         | Forecasted |          | Forecasted |
|                              |                        | Market    | of        | Qtrly   | Market  | Earnings   | Dividend | Growth in  |
| Stock                        | Sector                 | Value     | Portfolio | Return  | Capital | Ratio      | Yield    | Earnings   |
| Celldex Therapeutics Inc New | Health Care            | \$28,041  | 0.0%      | 698.45% | 0.47    | (4.30)     | 0.00%    | -          |
| Macrogenics Inc              | Health Care            | \$120,363 | 0.1%      | 379.73% | 1.37    | (10.31)    | 0.00%    | -          |
| Lovesac Company              | Consumer Discretionary | \$24,735  | 0.0%      | 349.92% | 0.38    | (47.52)    | 0.00%    | 30.00%     |
| Michaels Cos Inc             | Consumer Discretionary | \$121,731 | 0.1%      | 336.46% | 1.04    | 6.23       | 0.00%    | (21.90)%   |
| Mersana Therapeutics Inc     | Health Care            | \$78,320  | 0.0%      | 301.37% | 1.57    | (19.97)    | 0.00%    | -          |
| Qep Res Inc                  | Energy                 | \$58,943  | 0.0%      | 285.39% | 0.31    | (6.58)     | 0.00%    | 58.83%     |
| Inovio Pharmaceuticals Inc   | Health Care            | \$227,889 | 0.1%      | 262.17% | 4.26    | 91.98      | 0.00%    | -          |
| Nautilus                     | Consumer Discretionary | \$67,940  | 0.0%      | 255.17% | 0.28    | (138.36)   | 0.00%    | (5.44)%    |
| Matador Res Co               | Energy                 | \$187,060 | 0.1%      | 242.77% | 0.99    | 314.81     | 0.00%    | 53.76%     |
| At Home Group Inc            | Consumer Discretionary | \$83,643  | 0.0%      | 221.24% | 0.42    | 90.14      | 0.00%    | (14.60)%   |
|                              |                        |           |           |         |         |            |          |            |

# **10 Worst Performers**

|                                |             | Ending    | Percent   |          |         | Forecasted |          | Forecasted |
|--------------------------------|-------------|-----------|-----------|----------|---------|------------|----------|------------|
|                                |             | Market    | of        | Qtrly    | Market  | Earnings   | Dividend | Growth in  |
| Stock                          | Sector      | Value     | Portfolio | Return   | Capital | Ratio      | Yield    | Earnings   |
| Hertz Global Holdings Inc      | Industrials | \$36,395  | 0.0%      | (77.15)% | 0.20    | (0.34)     | 0.00%    | (26.86)%   |
| On Deck Cap Inc                | Financials  | \$10,888  | 0.0%      | (53.26)% | 0.04    | (1.22)     | 0.00%    | 9.87%      |
| Lsb Inds Inc                   | Materials   | \$5,382   | 0.0%      | (44.77)% | 0.03    | (0.62)     | 0.00%    | (40.89)%   |
| Teekay Tankers Ltd Cl A        | Energy      | \$26,909  | 0.0%      | (42.36)% | 0.37    | 2.30       | 7.49%    | (30.45)%   |
| Lendingclub Corp               | Financials  | \$45,259  | 0.0%      | (42.12)% | 0.32    | (5.77)     | 0.00%    | (5.32)%    |
| Proassurance Corp              | Financials  | \$129,246 | 0.1%      | (41.93)% | 0.78    | (26.85)    | 1.38%    | 27.30%     |
| Seacor Marine Holdings Inc Com | Energy      | \$10,582  | 0.0%      | (41.80)% | 0.06    | (0.80)     | 0.00%    | -          |
| Minerva Neurosciences Inc      | Health Care | \$18,581  | 0.0%      | (40.03)% | 0.14    | (3.41)     | 0.00%    | -          |
| Scorpio Bulkers Inc            | Industrials | \$12,316  | 0.0%      | (39.46)% | 0.19    | (1.95)     | 1.31%    | -          |
| State Auto Finl Corp           | Financials  | \$148,923 | 0.1%      | (35.41)% | 0.78    | 15.30      | 2.24%    | (0.52)%    |



# Current Holdings Based Style Analysis DFA Small Cap Core As of June 30, 2020

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

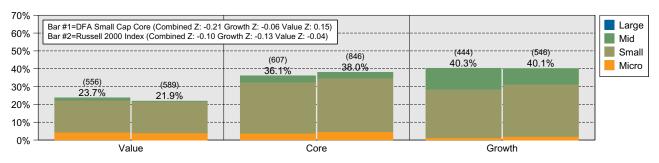
# Style Map vs Callan Small Cap Core Holdings as of June 30, 2020



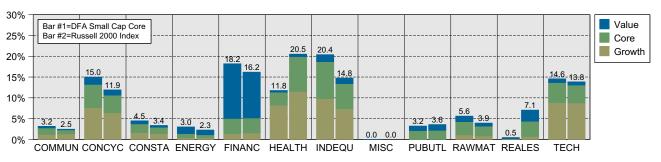
# Style Exposure Matrix Holdings as of June 30, 2020

|         | 21.9% (589)   | 38.0% (846)  | 40.1% (546)  | 100.0% (1981)  |
|---------|---------------|--------------|--------------|----------------|
| Total   | 23.1 /0 (330) | 30.170 (007) | 40.570 (444) | 100.076 (1007) |
|         | 23.7% (556)   | 36.1% (607)  | 40.3% (444)  | 100.0% (1607)  |
| IVIICIO | 4.0% (346)    | 4.7% (396)   | 2.0% (152)   | 10.6% (894)    |
| Micro   | 4.4% (321)    | 3.8% (209)   | 1.3% (80)    | 9.5% (610)     |
|         | 17.7% (242)   | 30.0% (433)  | 29.4% (356)  | 77.1% (1031)   |
| Small   |               |              |              |                |
|         | 17.9% (216)   | 28.6% (349)  | 27.1% (284)  | 73.7% (849)    |
|         | 0.2% (1)      | 3.3% (17)    | 8.8% (38)    | 12.3% (56)     |
| Mid     | 1.476 (19)    | 3.0 % (49)   | 11.0 % (80)  | 10.0 /6 (148)  |
|         | 1.4% (19)     | 3.6% (49)    | 11.8% (80)   | 16.8% (148)    |
| Large   | 0.0% (0)      | 0.0% (0)     | 0.0% (0)     | 0.0% (0)       |
|         | 0.0% (0)      | 0.0% (0)     | 0.0% (0)     | 0.0% (0)       |

# Combined Z-Score Style Distribution Holdings as of June 30, 2020



# Sector Weights Distribution Holdings as of June 30, 2020

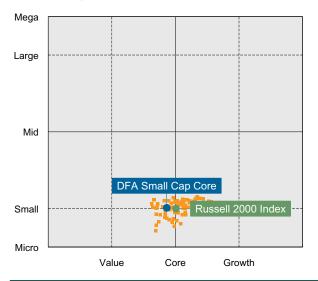




# Historical Holdings Based Style Analysis DFA Small Cap Core For Three Years Ended June 30, 2020

This page analyzes the historical investment style of a portfolio utilizing a detailed holdings-based style analysis to determine average actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the average historical market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the average historical portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The next two style exposure charts illustrate the actual quarterly cap/style and style only segment exposures of the portfolio through history.

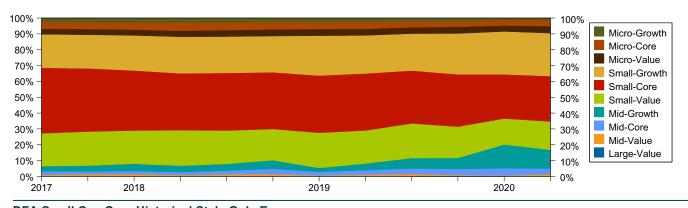
# Average Style Map vs Callan Small Cap Core Holdings for Three Years Ended June 30, 2020



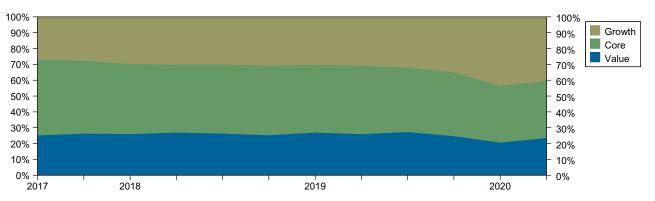
# Average Style Exposure Matrix Holdings for Three Years Ended June 30, 2020

|       | 0.0% (0)    | 0.0% (0)    | 0.0% (0)    | 0.0% (0)             |
|-------|-------------|-------------|-------------|----------------------|
| Large |             |             |             |                      |
|       | 0.0% (0)    | 0.0% (0)    | 0.0% (0)    | 0.0% (0)             |
|       | 1.2% (16)   | 2.9% (29)   | 6.0% (39)   | 10.0% (84)           |
| Mid   |             |             |             |                      |
|       | 1.2% (6)    | 3.7% (18)   | 7.1% (31)   | <b>12.0%</b> (55)    |
|       | 20.4% (238) | 35.2% (384) | 23.8% (271) | 79.5% (893)          |
| Small |             |             |             |                      |
|       | 18.9% (262) | 31.1% (433) | 26.7% (348) | <b>76.7%</b> (1043)  |
|       | 4.0% (328)  | 4.2% (313)  | 2.3% (144)  | 10.5% (785)          |
| Micro |             |             |             |                      |
|       | 3.9% (302)  | 4.6% (383)  | 2.8% (205)  | <b>11.4%</b> (890)   |
|       | 25.6% (582) | 42.3% (726) | 32.2% (454) | 100.0% (1762)        |
| Total |             |             |             |                      |
|       | 24.0% (570) | 39.4% (834) | 36.6% (584) | <b>100.0%</b> (1988) |
|       | Value       | Core        | Growth      | Total                |

# **DFA Small Cap Core Historical Cap/Style Exposures**



**DFA Small Cap Core Historical Style Only Exposures** 





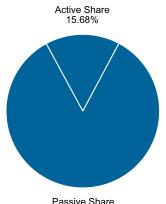
# DFA Small Core Active Share Analysis as of June 30, 2020 vs. Russell 2000 Index

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.

# **Holdings-Level Active Share**

# Index Active Share 30.00% Non-Index Active Share 10.46% Passive Share 59.53%

# **Sector Exposure Active Share**



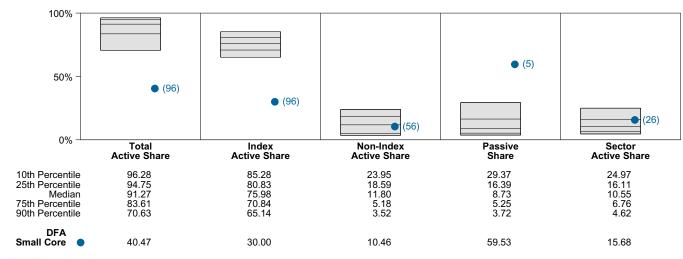
Passive Share 84.32%

Total Active Share: 40.47%

Communication Services
Consumer Discretionary
Consumer Staples
Energy
Financials
Health Care
Industrials
Information Technology
Materials
Miscellaneous
Real Estate
Utilities
Total

| Index<br>Active Share<br>Within Sector | Non-Index<br>Active Share<br>Within Sector | Total<br>Active Share<br>Within Sector | Index<br>Weight | Manager<br>Weight | Contribution to<br>Total Portfolio<br>Active Share |
|--|--|--|-----------------|-------------------|--|
| 23.83%                                 | 13.60%                                     | 37.43%                                 | 2.53%           | 3.22%             | 1.18%  |
| 23.63%                                 | 10.99%                                     | 34.62%                                 | 11.81%          | 14.91%            | 5.14%  |
| 23.11%                                 | 10.90%                                     | 34.02%                                 | 3.34%           | 4.44%             | 1.54%  |
| 24.48%                                 | 13.32%                                     | 37.80%                                 | 2.26%           | 3.00%             | 1.10%  |
| 23.18%                                 | 8.90%                                      | 32.09%                                 | 16.36%          | 18.23%            | 5.78%  |
| 44.35%                                 | 11.22%                                     | 55.57%                                 | 20.62%          | 11.79%            | 8.72%  |
| 16.18%                                 | 10.11%                                     | 26.29%                                 | 14.69%          | 20.40%            | 5.45%  |
| 27.70%                                 | 10.90%                                     | 38.60%                                 | 13.87%          | 14.61%            | 5.61%  |
| 19.41%                                 | 13.22%                                     | 32.63%                                 | 3.90%           | 5.60%             | 1.68%  |
| 0.00%                                  | 100.00%                                    | 100.00%                                | -               | 0.04%             | 0.02%  |
| 93.22%                                 | 0.00%                                      | 93.22%                                 | 7.06%           | 0.50%             | 3.41%  |
| 21.77%                                 | 4.40%                                      | 26.17%                                 | 3.55%           | 3.27%             | 0.83%  |
| 30.00%                                 | 10.46%                                     | 40.47%                                 | 100.00%         | 100.00%           | 40.47%   |

### Active Share vs. Callan Small Cap Core

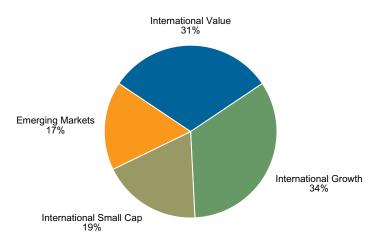




# **Actual vs Target Style Allocation** As of June 30, 2020

The first chart below shows the Fund's style allocation as of June 30, 2020. The second chart shows the Fund's target style allocation as outlined in the investment policy statement.





# **Target Style Allocation**



| Asset Class             | \$000s<br>Actual | Weight<br>Actual | Target | Percent<br>Difference | \$000s<br>Difference |
|-------------------------|------------------|------------------|--------|-----------------------|----------------------|
| International Value     | 167,732          | 31.2%            | 30.0%  | 1.2%                  | 6,213                |
| International Growth    | 180,856          | 33.6%            | 30.0%  | 3.6%                  | 19,337               |
| International Small Cap | 100,395          | 18.6%            | 20.0%  | (1.4%)                | (7,285)<br>(18,265)  |
| Emerging Markets .      | 89,415           | 16.6%            | 20.0%  | (3.4%)                | (18,265)             |
| Total                   | 538,397          | 100.0%           | 100.0% |                       |                      |

<sup>\*</sup> Current Quarter Target = 30.0% MSCI EAFE, 30.0% MSCI ACWI ex US IMI, 20.0% MSCI EM Gross and 20.0% S&P Dev ex US Small Cap.



# International Equity Composite Period Ended June 30, 2020

### **Investment Philosophy**

The International Benchmark is comprised of 100% MSCI EAFE Index through 06/30/2010, and 100% MSCI ACWI ex-US IMI Index thereafter.

### **Quarterly Summary and Highlights**

- International Equity Composite's portfolio posted a 18.71% return for the quarter placing it in the 20 percentile of the Public Fund - International Equity group for the quarter and in the 21 percentile for the last year.
- International Equity Composite's portfolio outperformed the International Benchmark by 1.75% for the quarter and outperformed the International Benchmark for the year by 2.95%.

# Performance vs Public Fund - International Equity (Gross)



# Relative Return vs International Benchmark



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



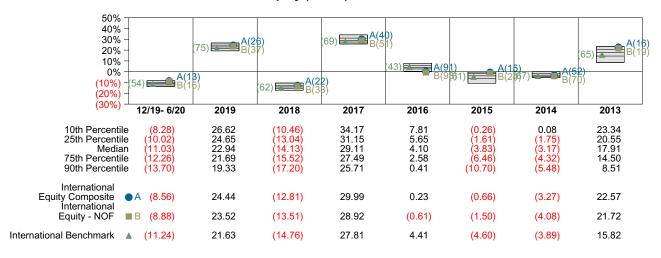


# International Equity Composite Return Analysis Summary

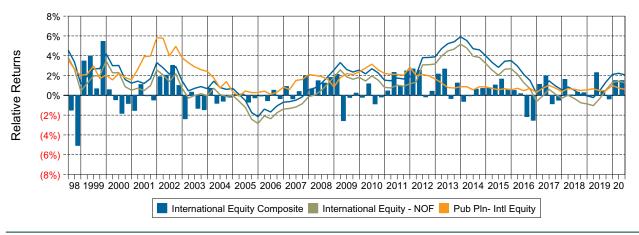
# **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 12 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

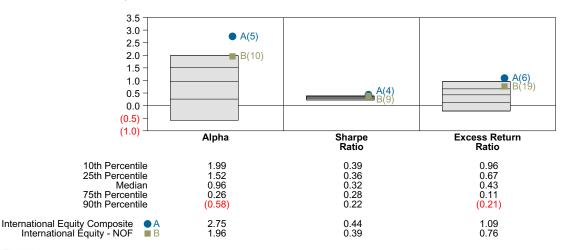
# Performance vs Public Fund - International Equity (Gross)



Rolling 12 Quarter and Quarterly Relative Return vs International Benchmark



Risk Adjusted Return Measures vs International Benchmark Rankings Against Public Fund - International Equity (Gross) Ten Years Ended June 30, 2020



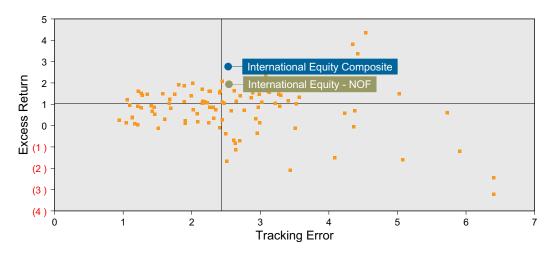


# International Equity Composite Risk Analysis Summary

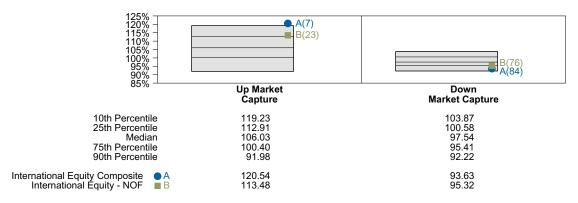
### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

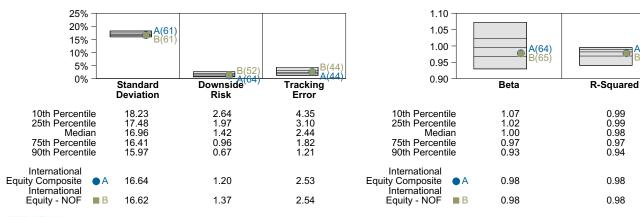
# Risk Analysis vs Public Fund - International Equity (Gross) Ten Years Ended June 30, 2020



Market Capture vs MSCI ACWI ex US IMI Index (USD Net Div) Rankings Against Public Fund - International Equity (Gross) Ten Years Ended June 30, 2020



Risk Statistics Rankings vs MSCI ACWI ex US IMI Index (USD Net Div) Rankings Against Public Fund - International Equity (Gross) Ten Years Ended June 30, 2020





# International Equity Composite Equity Characteristics Analysis Summary

### **Portfolio Characteristics**

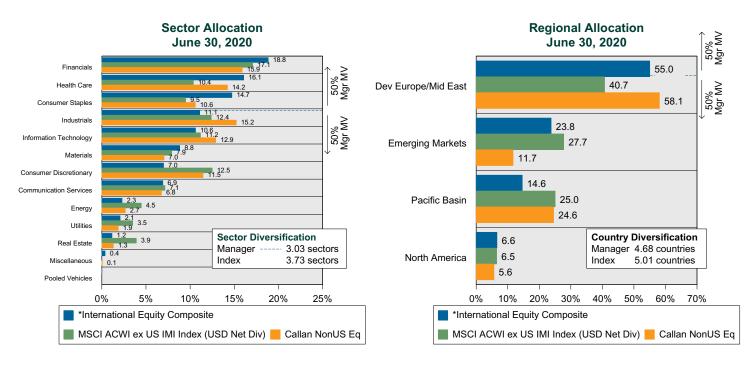
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

# Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Equity as of June 30, 2020



### **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.



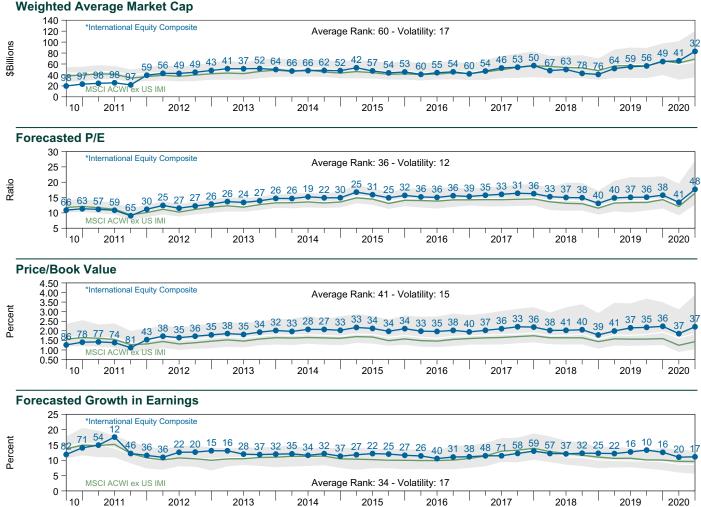
<sup>\*6/30/20</sup> portfolio characteristics generated using most recently available holdings (3/31/20) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

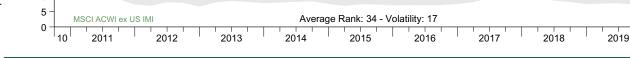


# **Portfolio Characteristics Analysis**

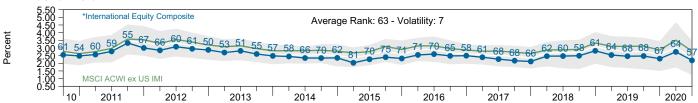
# Callan NonUS Eq

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan NonUS Eq Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The MSCI ACWI ex US IMI is shown for comparison purposes.

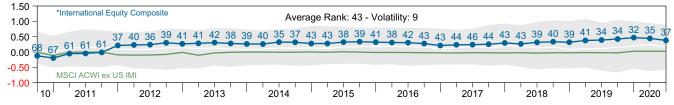












<sup>\*6/30/20</sup> portfolio characteristics generated using most recently available holdings (3/31/20) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

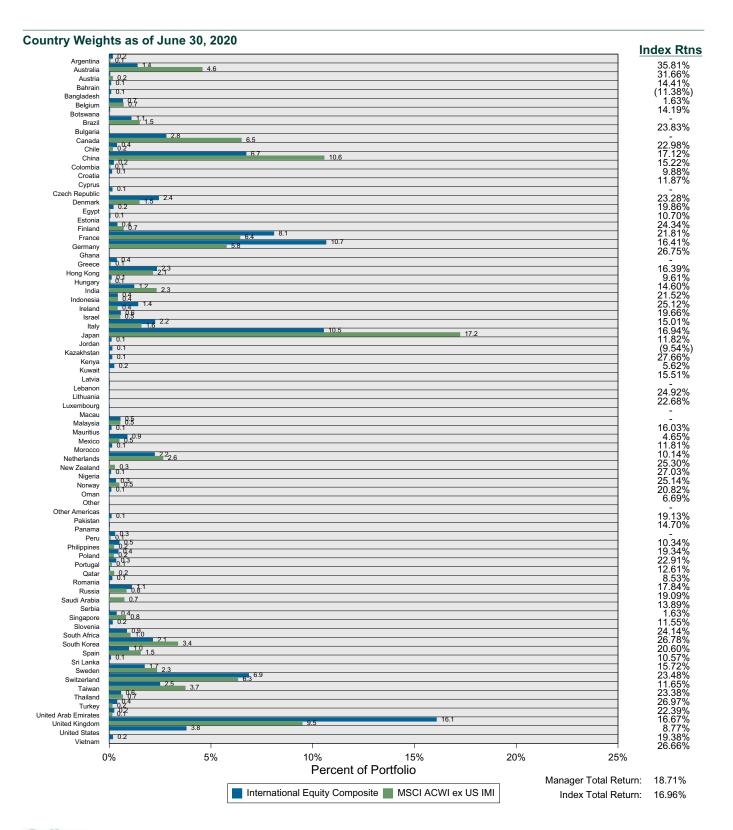
Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.



# Country Allocation International Equity Composite VS MSCI ACWI ex US IMI

### **Country Allocation**

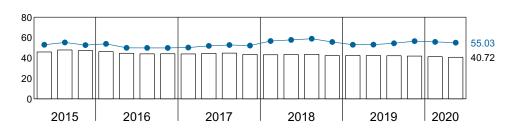
The chart below contrasts the portfolio's country allocation with that of the index as of June 30, 2020. This chart is useful because large deviations in country allocation relative to the index are often good predictors of tracking error in the subsequent quarter. To the extent that the portfolio allocation is similar to the index, the portfolio should experience more "index-like" performance. In order to illustrate the performance effect on the portfolio and index of these country allocations, the individual index country returns are also shown.



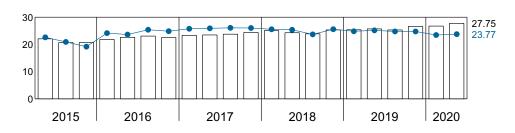


# Marin County Employees' Retirement Association **History of Ending Regional Weights** Period Ended June 30, 2020

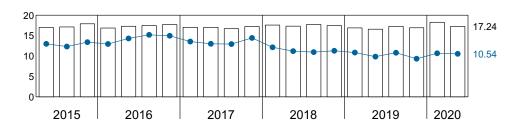




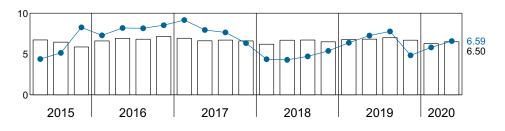
# **Emerging Markets**



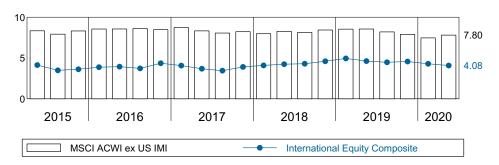
# Japan



# **North America**



# **Pacific Basin**

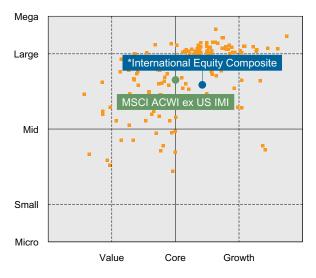




# **Current Holdings Based Style Analysis International Equity Composite** As of June 30, 2020

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

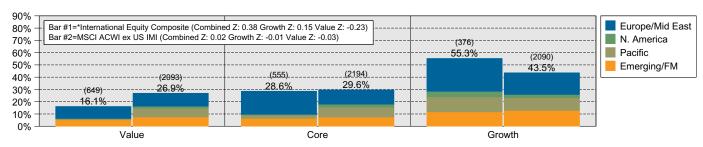
# Style Map vs Callan NonUS Eq Holdings as of June 30, 2020



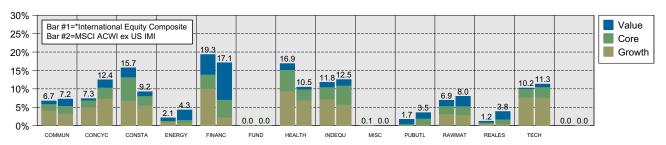
# **Style Exposure Matrix** Holdings as of June 30, 2020

|                 | 26.9% (2093) | 29.6% (2194) | 43.5% (2090) | 100.0% (6377) |
|-----------------|--------------|--------------|--------------|---------------|
| Total           |              |              |              |               |
|                 | 16.1% (649)  | 28.6% (555)  | 55.3% (376)  | 100.0% (1580) |
| Emerging/<br>FM | 7.6% (1013)  | 7.4% (956)   | 12.8% (932)  | 27.8% (2901)  |
|                 | 5.2% (617)   | 6.4% (500)   | 11.7% (290)  | 23.3% (1407)  |
|                 | 7.2% (584)   | 8.1% (603)   | 10.5% (572)  | 25.7% (1759)  |
| Pacific         | . ,          |              | , ,          |               |
|                 | 0.8% (5)     | 2.6% (12)    | 12.2% (28)   | 15.7% (45)    |
|                 | 1.5% (77)    | 2.5% (116)   | 2.5% (86)    | 6.6% (279)    |
| N. America      | . ,          |              | , ,          | , ,           |
|                 | 0.3% (3)     | 0.6% (2)     | 4.5% (7)     | 5.5% (12)     |
| Mid East        | 10.6% (419)  | 11.6% (519)  | 17.6% (500)  | 39.9% (1438)  |
| Europe/         | 9.8% (24)    | 18.9% (41)   | 26.9% (51)   | 55.5% (116)   |

# **Combined Z-Score Style Distribution** Holdings as of June 30, 2020



# **Sector Weights Distribution** Holdings as of June 30, 2020



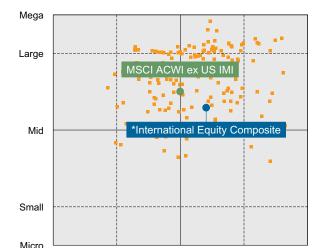
<sup>\*6/30/20</sup> portfolio characteristics generated using most recently available holdings (3/31/20) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.



# Historical Holdings Based Style Analysis International Equity Composite For Three Years Ended June 30, 2020

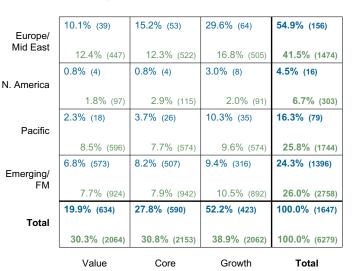
This page analyzes the historical investment style of a portfolio utilizing a detailed holdings-based style analysis to determine average actual exposures to various region and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the average historical market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the average historical portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The next two style exposure charts illustrate the actual quarterly region/style and style only segment exposures of the portfolio through history.

# Average Style Map vs Callan NonUS Eq Holdings for Three Years Ended June 30, 2020



Value

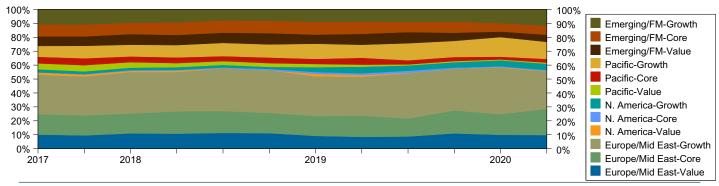
# Average Style Exposure Matrix Holdings for Three Years Ended June 30, 2020



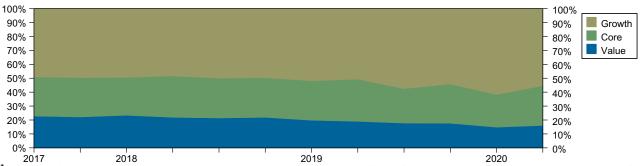
# \*International Equity Composite Historical Region/Style Exposures

Growth

Core



### \*International Equity Composite Historical Style Only Exposures



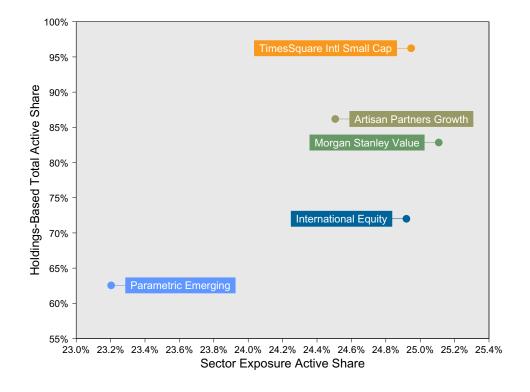
\*6/30/20 portfolio characteristics generated using most recently available holdings (3/31/20) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.



# Active Share Structure Analysis For One Quarter Ended June 30, 2020

This analysis compares multiple portfolios and composites in an active share context, illustrating the varying degrees of active risk taken by individual portfolios, and how they combine into active risk profiles for composites and the equity structure. Two sources of active share (active risk) are shown: 1) Total Holdings-Based Active Share based on individual position comparisons to the index (and the subcomponent from holding non-index securities), and 2) Sector Exposure Active Share that quantifies the more macro-level sector differences from the index.

# Active Share Analysis Ended June 30, 2020



|                            | Weight  |                     | Total     | Non-ldx   | Sector    | Number     | Security |
|----------------------------|---------|---------------------|-----------|-----------|-----------|------------|----------|
|                            | %       | Index               | Act Share | Act Share | Act Share | Securities | Diverse  |
| *International Equity      | 100.00% | MSCI ACWI ex US IMI | 72.01%    | 7.65%     | 24.92%    | 1728       | 55.24    |
| Morgan Stanley Value       | 28.15%  | MSCI EAFE           | 82.84%    | 8.60%     | 25.11%    | 60         | 15.94    |
| Artisan Partners Growth    | 30.35%  | MSCI EAFE           | 86.18%    | 19.19%    | 24.51%    | 59         | 13.45    |
| TimesSquare Intl Small Cap | 16.85%  | MSCI EAFE Small Cap | 96.23%    | 18.94%    | 24.95%    | 79         | 21.32    |
| Parametric Emerging        | 15.00%  | MSCI EM             | 62.55%    | 18.79%    | 23.20%    | 1542       | 185.31   |

<sup>\*6/30/20</sup> portfolio characteristics generated using most recently available holdings (3/31/20) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.



# Morgan Stanley Value Period Ended June 30, 2020

### **Investment Philosophy**

The International Equity team uses a value-driven, bottom-up approach to maximize return potential, combined with sufficient diversification to minimize investment risk. The first full quarter of performance began 4Q01. Prior performance is that of the manager's composite. Cash percentage listed is the cash represented in the commingled trust.

### **Quarterly Summary and Highlights**

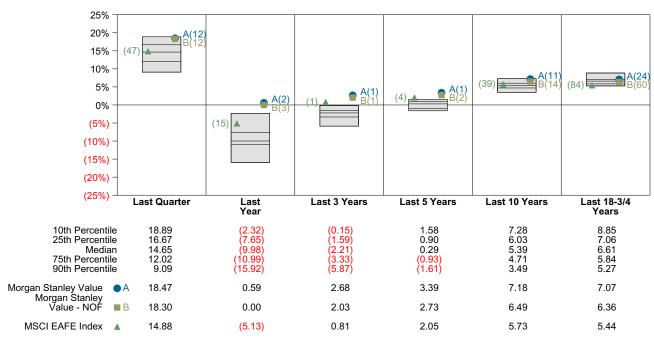
- Morgan Stanley Value's portfolio posted a 18.47% return for the quarter placing it in the 12 percentile of the Callan Non-US Developed Value Equity group for the quarter and in the 2 percentile for the last year.
- Morgan Stanley Value's portfolio outperformed the MSCI EAFE Index by 3.59% for the quarter and outperformed the MSCI EAFE Index for the year by 5.72%.

### **Quarterly Asset Growth**

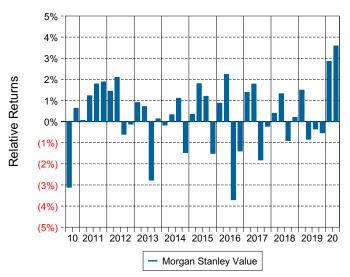
| Beginning Market Value    | \$141,584,494 |
|---------------------------|---------------|
| Net New Investment        | \$0           |
| Investment Gains/(Losses) | \$26,147,420  |
| Ending Market Value       | \$167,731,914 |

Percent Cash: 0.0%

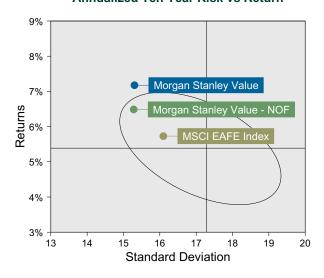
# Performance vs Callan Non-US Developed Value Equity (Gross)



# Relative Return vs MSCI EAFE Index



# Callan Non-US Developed Value Equity (Gross) Annualized Ten Year Risk vs Return



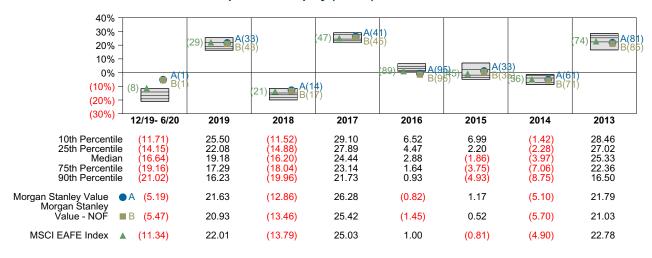


# Morgan Stanley Value Return Analysis Summary

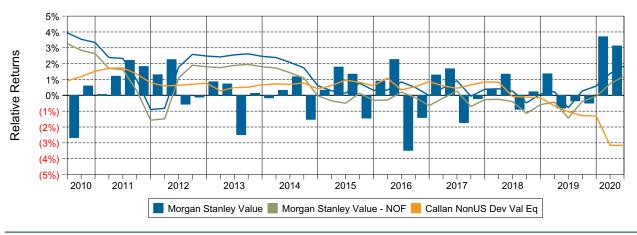
# **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 12 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

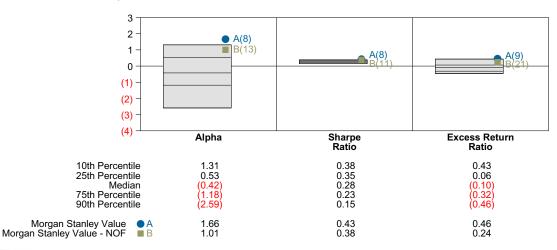
# Performance vs Callan Non-US Developed Value Equity (Gross)



Rolling 12 Quarter and Quarterly Relative Return vs MSCI EAFE Index



Risk Adjusted Return Measures vs MSCI EAFE Index Rankings Against Callan Non-US Developed Value Equity (Gross) Ten Years Ended June 30, 2020



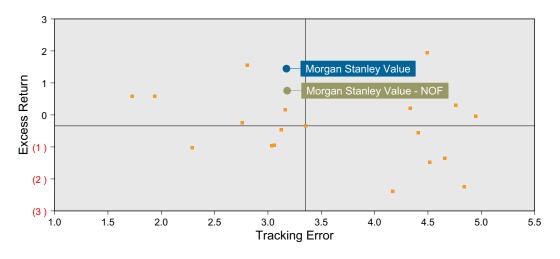


# Morgan Stanley Value Risk Analysis Summary

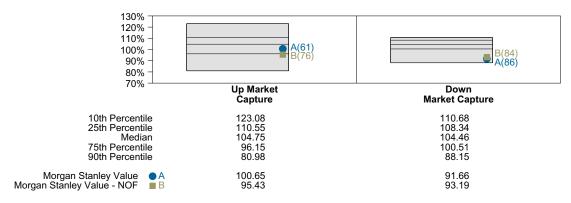
### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

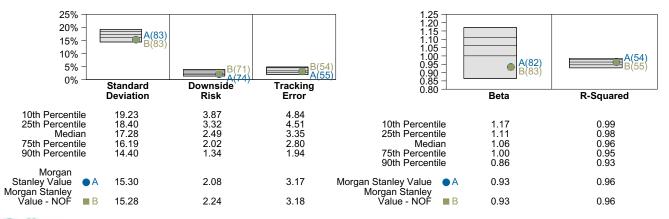
# Risk Analysis vs Callan Non-US Developed Value Equity (Gross) Ten Years Ended June 30, 2020



# Market Capture vs MSCI EAFE Index Rankings Against Callan Non-US Developed Value Equity (Gross) Ten Years Ended June 30, 2020



# Risk Statistics Rankings vs MSCI EAFE Index Rankings Against Callan Non-US Developed Value Equity (Gross) Ten Years Ended June 30, 2020



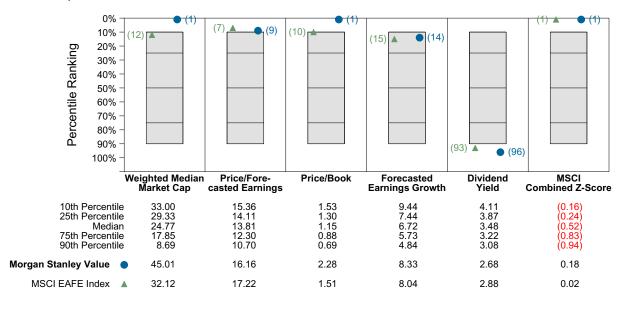


# Morgan Stanley Value Equity Characteristics Analysis Summary

### **Portfolio Characteristics**

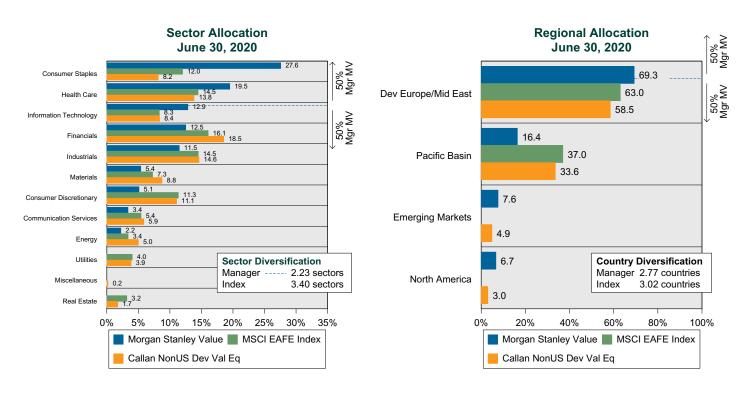
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

# Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Developed Value Equity as of June 30, 2020



### **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.

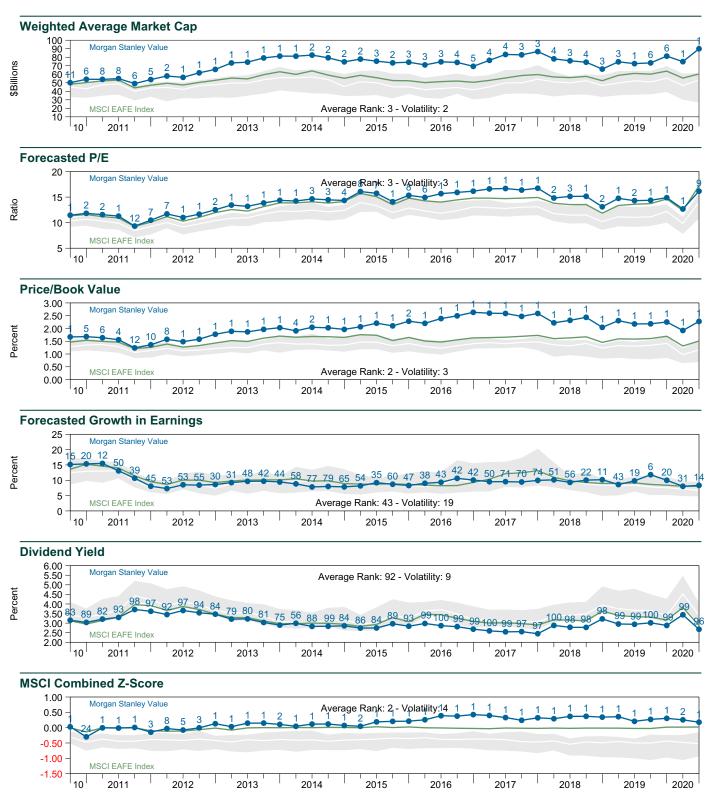




# **Portfolio Characteristics Analysis**

# Callan NonUS Dev Val Eq

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan NonUS Dev Val Eq Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The MSCI EAFE Index is shown for comparison purposes.



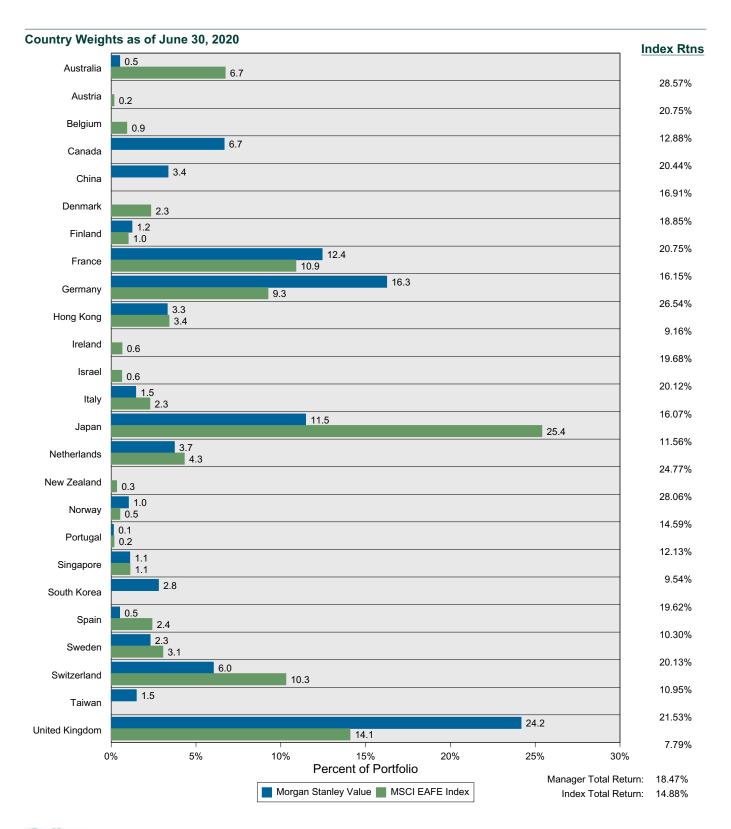
Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.



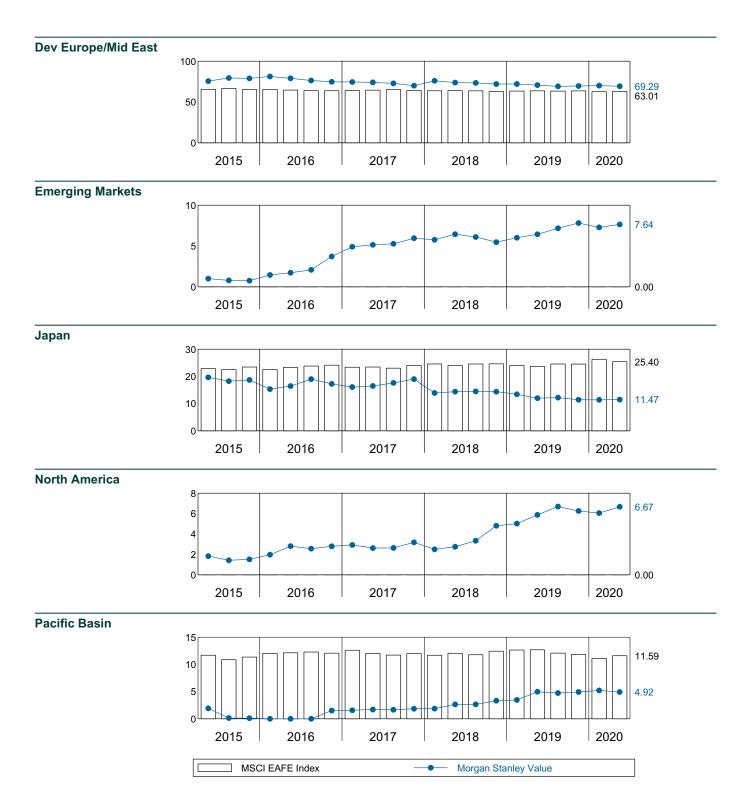
# Country Allocation Morgan Stanley Value VS MSCI EAFE Index

# **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of June 30, 2020. This chart is useful because large deviations in country allocation relative to the index are often good predictors of tracking error in the subsequent quarter. To the extent that the portfolio allocation is similar to the index, the portfolio should experience more "index-like" performance. In order to illustrate the performance effect on the portfolio and index of these country allocations, the individual index country returns are also shown.









# Morgan Stanley Value vs MSCI EAFE Index Attribution for Quarter Ended June 30, 2020

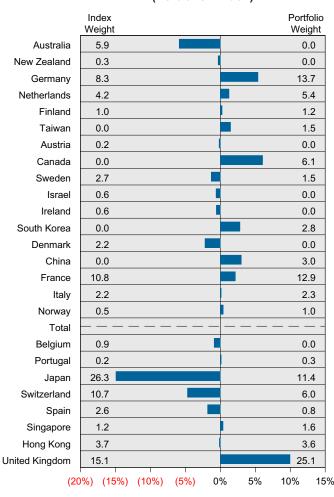
#### International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.

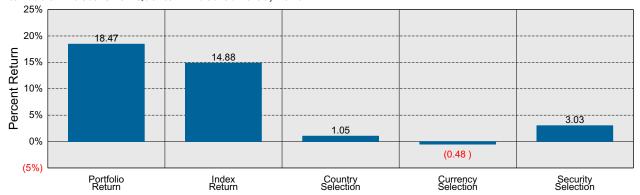
#### Index Returns by Country

#### Dollar Local Currency Return Return Return 12.5 14.3 Australia New Zealand 17.9 8.6 Germany 24.2 2.4 Netherlands 22.2 2.2 Finland 18.9 24 Taiwan 18.6 2.5 Austria 18.0 2.4 Canada 15.2 4.5 Sweden 13.2 6.3 Israel 18.9 1.0 Ireland 16.9 2.4 South Korea 18.2 1.2 Denmark 16.0 2.5 China 15.5 1.2 2.4 France 13.8 13.8 Italy 24 Norway 5.7 8.9 Total 12.6 2.0 10.7 2.4 Belgium Portugal 10.5 2.4 Japan 11.5 0.1 9.2 Switzerland 2.1 7.9 24 Spain Singapore 7.3 2.1 Hong Kong 9.2 0.0 United Kingdom (0.4)30% (10%)0% 10% 20% 40%

## Beginning Relative Weights (Portfolio - Index)



#### Attribution Factors for Quarter Ended June 30, 2020

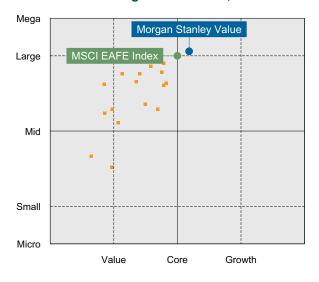




#### **Current Holdings Based Style Analysis Morgan Stanley Value** As of June 30, 2020

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

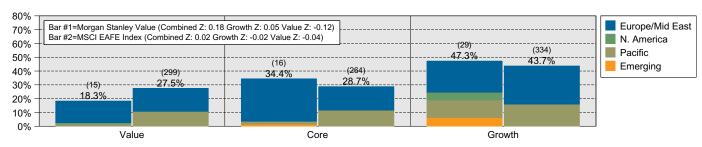
#### Style Map vs Callan NonUS Dev Val Eq Holdings as of June 30, 2020



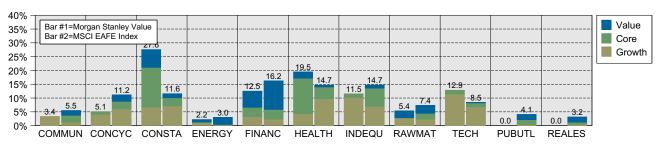
#### **Style Exposure Matrix** Holdings as of June 30, 2020

|                     | Value       | Core        | Growth      | Total        |
|---------------------|-------------|-------------|-------------|--------------|
|                     | 27.5% (299) | 28.7% (264) | 43.7% (334) | 100.0% (897) |
| Total               |             |             |             |              |
|                     | 18.3% (15)  | 34.4% (16)  | 47.3% (29)  | 100.0% (60)  |
|                     | 0.0% (0)    | 0.0% (0)    | 0.0% (0)    | 0.0% (0)     |
| Emerging            |             |             |             |              |
|                     | 0.0% (0)    | 1.4% (1)    | 6.2% (3)    | 7.6% (4)     |
|                     | 10.7% (162) | 11.6% (136) | 16.0% (157) | 38.3% (455)  |
| Pacific             |             | , ,         | , ,         | , ,          |
|                     | 1.6% (1)    | 2.1% (3)    | 12.7% (8)   | 16.4% (12)   |
|                     | 0.0% (0)    | 0.0% (0)    | 0.0% (0)    | 0.0% (0)     |
| N. America          |             |             |             |              |
|                     | 1.0% (1)    | 0.0% (0)    | 5.7% (2)    | 6.7% (3)     |
| Europe/<br>Mid East | 16.8% (137) | 17.1% (128) | 27.7% (177) | 61.7% (442)  |
| E                   | 15.7% (13)  | 30.9% (12)  | 22.7% (16)  | 69.3% (41)   |

#### **Combined Z-Score Style Distribution** Holdings as of June 30, 2020



#### **Sector Weights Distribution** Holdings as of June 30, 2020

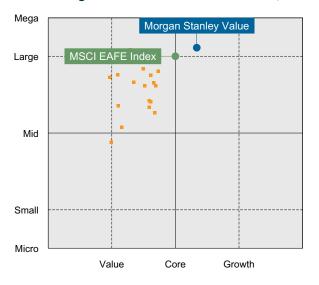




#### Historical Holdings Based Style Analysis Morgan Stanley Value For Three Years Ended June 30, 2020

This page analyzes the historical investment style of a portfolio utilizing a detailed holdings-based style analysis to determine average actual exposures to various region and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the average historical market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the average historical portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The next two style exposure charts illustrate the actual quarterly region/style and style only segment exposures of the portfolio through history.

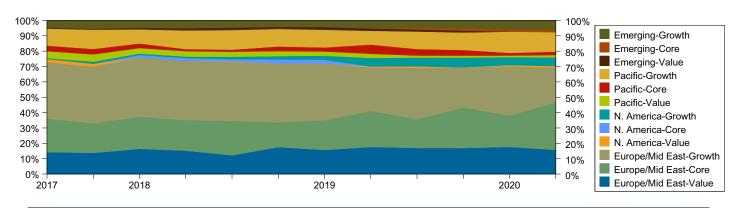
#### Average Style Map vs Callan NonUS Dev Val Eq Holdings for Three Years Ended June 30, 2020



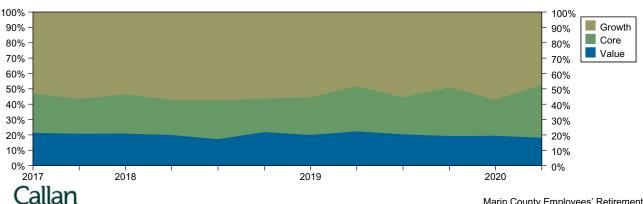
#### Average Style Exposure Matrix Holdings for Three Years Ended June 30, 2020



#### Morgan Stanley Value Historical Region/Style Exposures



#### Morgan Stanley Value Historical Style Only Exposures



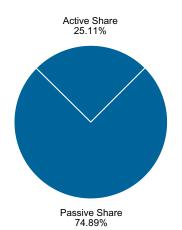
#### Morgan Stanley Value Active Share Analysis as of June 30, 2020 vs. MSCI EAFE Index

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.

#### **Holdings-Level Active Share**

# Passive Share 17.16% Index Active Share 74.24% Non-Index Active Share 8.60%

#### **Sector Exposure Active Share**

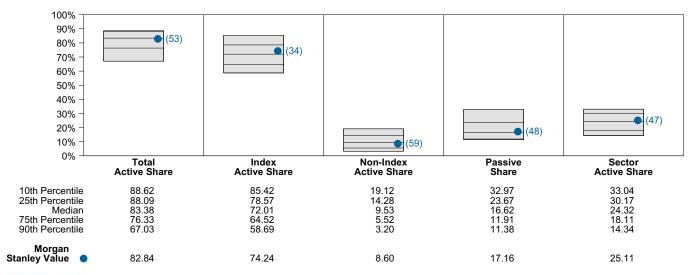


Total Active Share: 82.84%

Communication Services
Consumer Discretionary
Consumer Staples
Energy
Financials
Health Care
Industrials
Information Technology
Materials
Real Estate
Utilities
Total

| Index<br>Active Share<br>Within Sector | Non-Index<br>Active Share<br>Within Sector | Total<br>Active Share<br>Within Sector | Index<br>Weight | Manager<br>Weight | Contribution to<br>Total Portfolio<br>Active Share |
|--|--|--|-----------------|-------------------|--|
| 50.00%                                 | 50.00%                                     | 100.00%                                | 5.43%           | 3.36%             | 4.40%  |
| 80.85%                                 | 5.77%                                      | 86.62%                                 | 11.34%          | 5.10%             | 6.59%  |
| 72.43%                                 | 5.28%                                      | 77.71%                                 | 12.01%          | 27.57%            | 16.82%   |
| 73.94%                                 | 22.32%                                     | 96.26%                                 | 3.38%           | 2.23%             | 2.68%  |
| 82.92%                                 | 3.06%                                      | 85.99%                                 | 16.07%          | 12.52%            | 12.06%   |
| 57.58%                                 | 0.00%                                      | 57.58%                                 | 14.47%          | 19.50%            | 10.85%   |
| 89.68%                                 | 0.00%                                      | 89.68%                                 | 14.50%          | 11.49%            | 11.52%   |
| 53.02%                                 | 22.47%                                     | 75.48%                                 | 8.33%           | 12.85%            | 8.56%  |
| 65.80%                                 | 26.03%                                     | 91.83%                                 | 7.26%           | 5.39%             | 5.74%  |
| 100.00%                                | 0.00%                                      | 100.00%                                | 3.18%           | -                 | 1.59%  |
| 100.00%                                | 0.00%                                      | 100.00%                                | 4.04%           | -                 | 2.03%  |
| 74.24%                                 | 8.60%                                      | 82.84%                                 | 100.00%         | 100.00%           | 82.84%   |

#### Active Share vs. Callan NonUS Dev Val Eq





# Artisan Partners Growth Period Ended June 30, 2020

#### **Investment Philosophy**

Artisan's Non-U.S. Growth team identifies themes and/or industries that Artisan believes are likely to exhibit strong growth. Once these themes are identified, securities are selected based on their ability to excel within their industry. The first full quarter of performance is 1Q03. MCERA is invested in the mutual fund until 02/15/2018. Cash percentage listed is the cash represented in the CIT. Switch to a CIT account on 02/15/2018 Tier III.

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

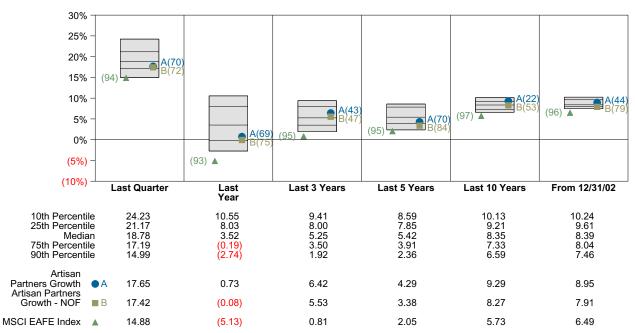
- Artisan Partners Growth's portfolio posted a 17.65% return for the quarter placing it in the 70 percentile of the Callan Non-US Broad Growth Equity group for the quarter and in the 69 percentile for the last year.
- Artisan Partners Growth's portfolio outperformed the MSCI EAFE Index by 2.77% for the quarter and outperformed the MSCI EAFE Index for the year by 5.86%.

#### **Quarterly Asset Growth**

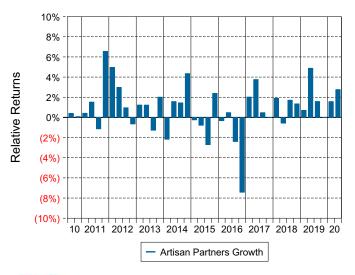
| Beginning Market Value    | \$154,028,348 |
|---------------------------|---------------|
| Net New Investment        | \$0           |
| Investment Gains/(Losses) | \$26,827,548  |
| Ending Market Value       | \$180,855,895 |

Percent Cash: 0.0%

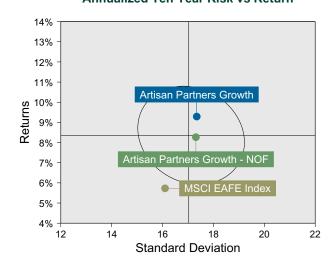
#### Performance vs Callan Non-US Broad Growth Equity (Gross)



#### **Relative Return vs MSCI EAFE Index**



# Callan Non-US Broad Growth Equity (Gross) Annualized Ten Year Risk vs Return



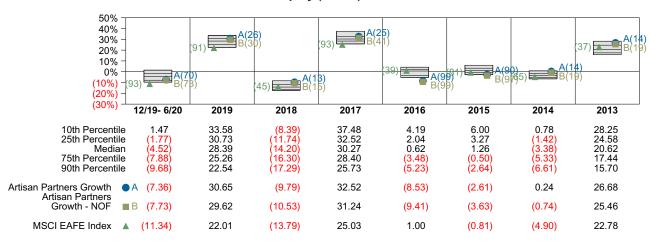


# Artisan Partners Growth Return Analysis Summary

#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 12 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

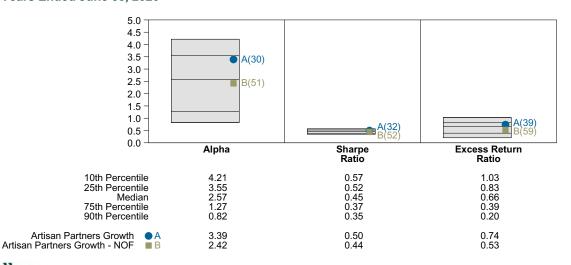
#### Performance vs Callan Non-US Broad Growth Equity (Gross)



Rolling 12 Quarter and Quarterly Relative Return vs MSCI EAFE Index



Risk Adjusted Return Measures vs MSCI EAFE Index Rankings Against Callan Non-US Broad Growth Equity (Gross) Ten Years Ended June 30, 2020



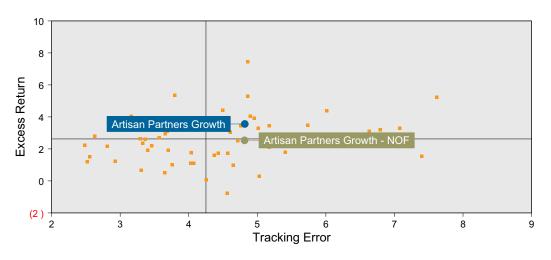


# Artisan Partners Growth Risk Analysis Summary

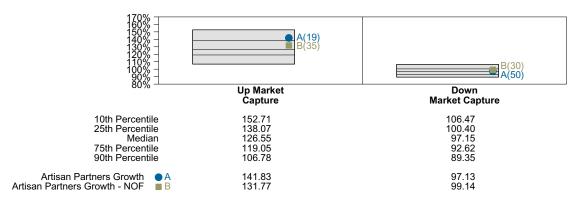
#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

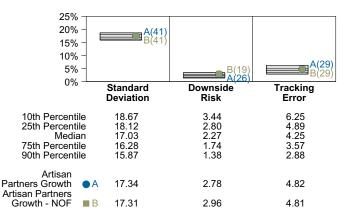
#### Risk Analysis vs Callan Non-US Broad Growth Equity (Gross) Ten Years Ended June 30, 2020

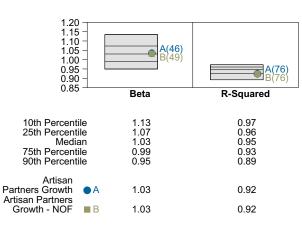


#### Market Capture vs MSCI EAFE Index Rankings Against Callan Non-US Broad Growth Equity (Gross) Ten Years Ended June 30, 2020



#### Risk Statistics Rankings vs MSCI EAFE Index Rankings Against Callan Non-US Broad Growth Equity (Gross) Ten Years Ended June 30, 2020





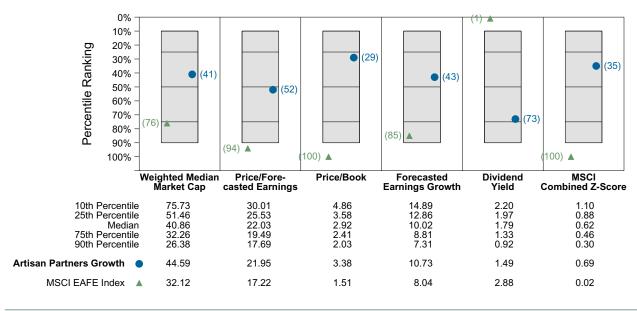


# Artisan Partners Growth Equity Characteristics Analysis Summary

#### **Portfolio Characteristics**

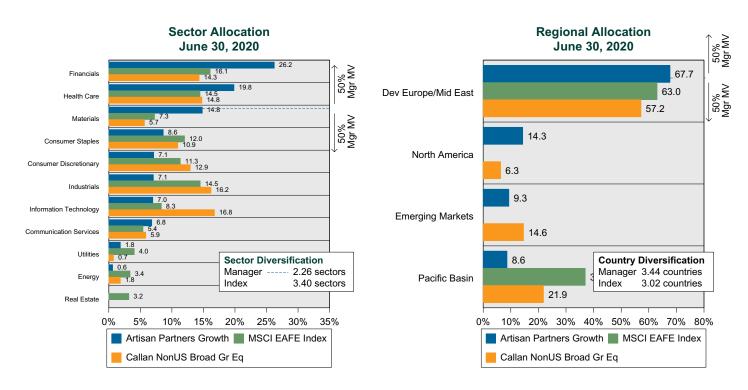
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Broad Growth Equity as of June 30, 2020



#### **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.

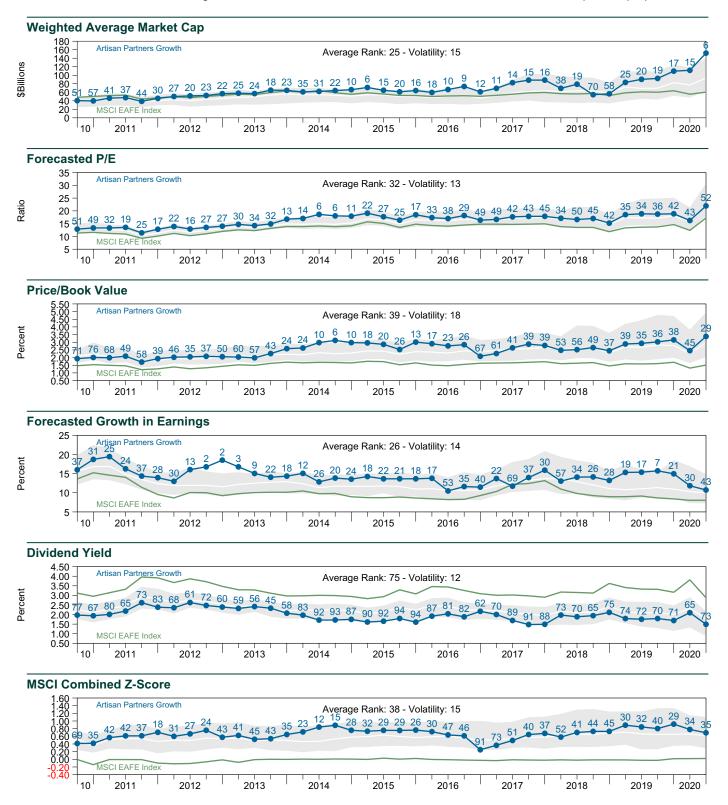




#### **Portfolio Characteristics Analysis**

#### Callan NonUS Broad Gr Eq

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan NonUS Broad Gr Eq Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The MSCI EAFE Index is shown for comparison purposes.



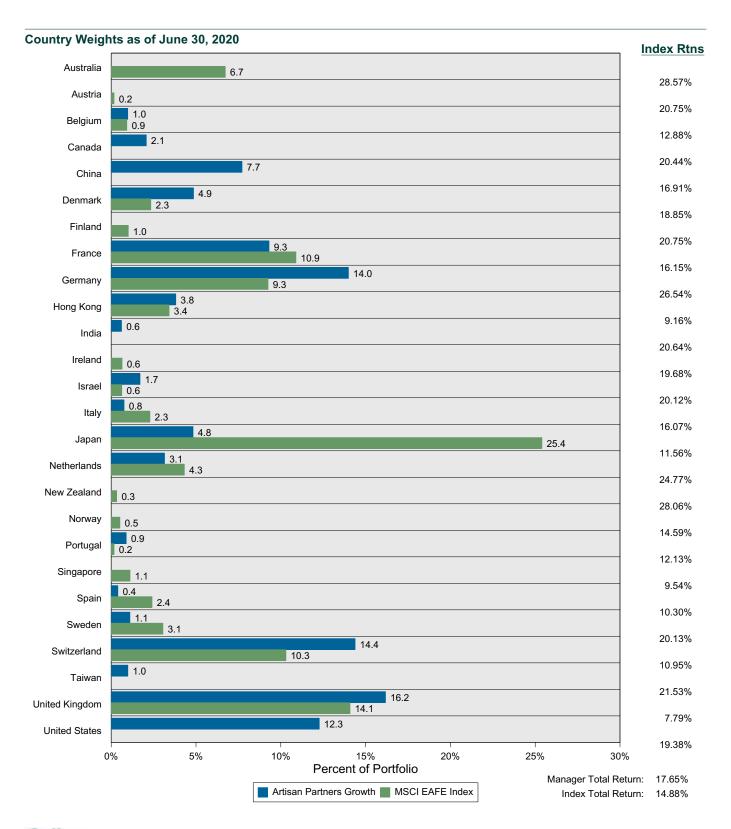
Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.



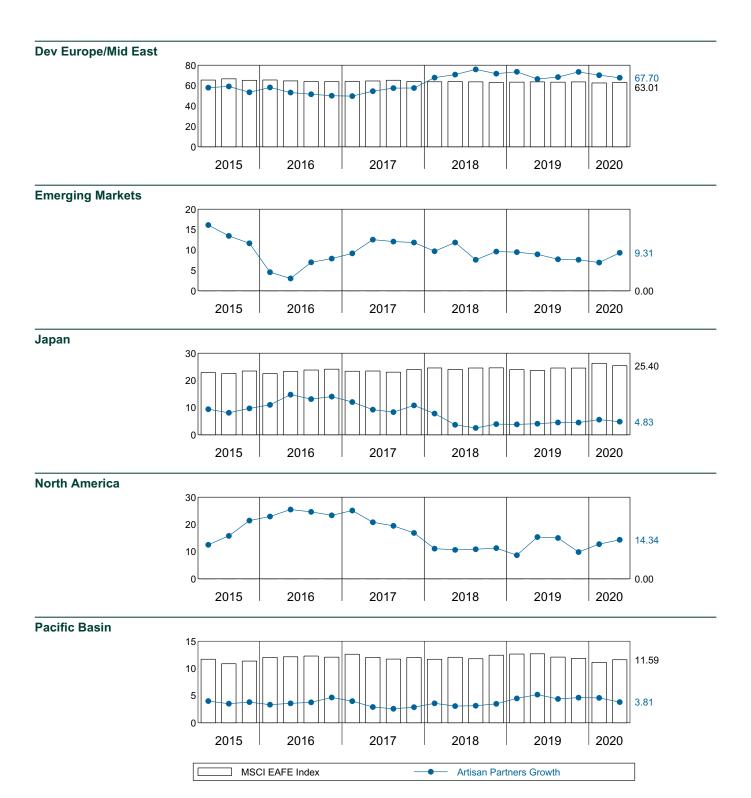
# Country Allocation Artisan Partners Growth VS MSCI EAFE Index

#### **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of June 30, 2020. This chart is useful because large deviations in country allocation relative to the index are often good predictors of tracking error in the subsequent quarter. To the extent that the portfolio allocation is similar to the index, the portfolio should experience more "index-like" performance. In order to illustrate the performance effect on the portfolio and index of these country allocations, the individual index country returns are also shown.









# Artisan Partners Growth vs MSCI EAFE Index Attribution for Quarter Ended June 30, 2020

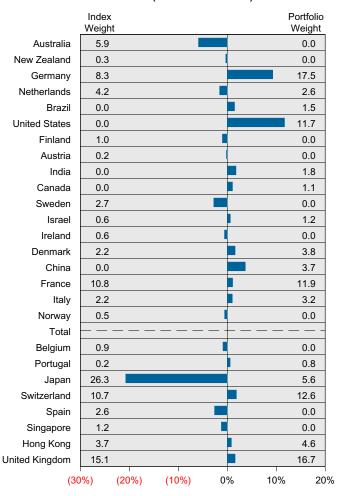
#### International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.

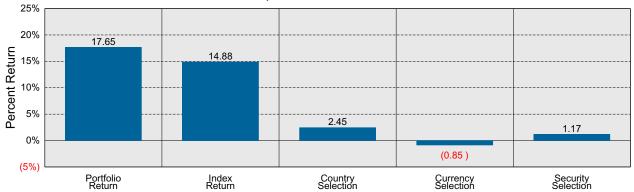
#### Index Returns by Country

#### Dollar Local Currency Return Return Return Australia 14.3 12.5 New Zealand 17.9 8.6 Germany 24.2 2.4 Netherlands 22.2 2.2 Brazil 30.1 (5.5)**United States** 21.8 0.0 Finland 18.9 2.4 Austria 18.0 2.4 India 20.4 0.2 Canada 15.2 4.5 Sweden 6.3 13.2 18.9 1.0 Israel Ireland 16.9 2.4 Denmark 16.0 2.5 China 15.5 1.2 France 13.8 2.4 13.8 2.4 Italy Norway 5.7 8.9 Total 12.6 2.0 Belgium 10.7 2.4 Portugal 10.5 24 11.5 Japan 0.1 Switzerland 9.2 2.1 Spain 7.9 2.4 7.3 Singapore 2.1 Hong Kong 9.2 0.0 United Kingdom (0.4)30% (10%)0% 10% 20% 40%

## Beginning Relative Weights (Portfolio - Index)



#### Attribution Factors for Quarter Ended June 30, 2020



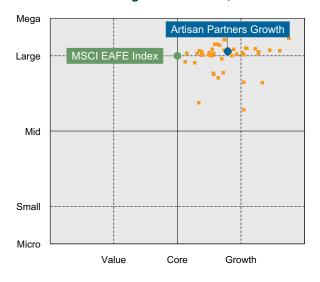


#### **Current Holdings Based Style Analysis Artisan Partners Growth** As of June 30, 2020

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

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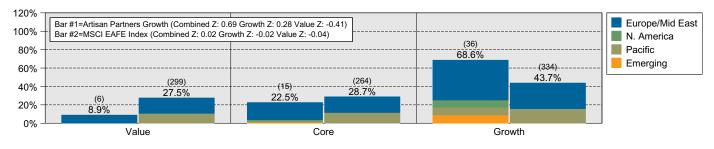
#### Style Map vs Callan NonUS Broad Gr Eq Holdings as of June 30, 2020



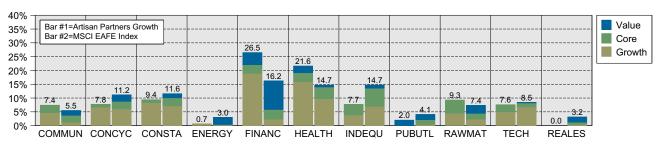
#### **Style Exposure Matrix** Holdings as of June 30, 2020

|                     | 27.5% (299) | 28.7% (264) | 43.7% (334) | 100.0% (897) |
|---------------------|-------------|-------------|-------------|--------------|
|                     |             |             |             |              |
| Total               |             |             |             |              |
|                     | 8.9% (6)    | 22.5% (15)  | 68.6% (36)  | 100.0% (57)  |
|                     | 0.0% (0)    | 0.0% (0)    | 0.0% (0)    | 0.0% (0)     |
| Emerging            |             |             |             |              |
|                     | 0.0% (0)    | 1.1% (1)    | 9.1% (6)    | 10.1% (7)    |
|                     | 10.7% (162) | 11.6% (136) | 16.0% (157) | 38.3% (455)  |
| Pacific             | •           |             |             |              |
|                     | 0.0% (0)    | 1.3% (1)    | 8.2% (5)    | 9.4% (6)     |
|                     | 0.0% (0)    | 0.0% (0)    | 0.0% (0)    | 0.0% (0)     |
| N. America          |             |             |             | . ,          |
|                     | 0.0% (0)    | 1.7% (1)    | 8.0% (5)    | 9.7% (6)     |
| Europe/<br>Mid East | 16.8% (137) | 17.1% (128) | 27.7% (177) | 61.7% (442)  |
| <b>.</b> , [        | 8.9% (6)    | 18.5% (12)  | 43.4% (20)  | 70.8% (38)   |

#### **Combined Z-Score Style Distribution** Holdings as of June 30, 2020



#### **Sector Weights Distribution** Holdings as of June 30, 2020





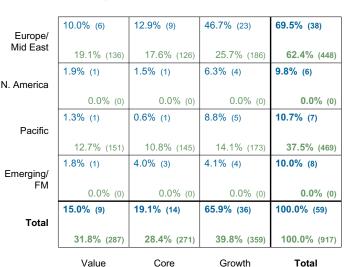
#### Historical Holdings Based Style Analysis Artisan Partners Growth For Three Years Ended June 30, 2020

This page analyzes the historical investment style of a portfolio utilizing a detailed holdings-based style analysis to determine average actual exposures to various region and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the average historical market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the average historical portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The next two style exposure charts illustrate the actual quarterly region/style and style only segment exposures of the portfolio through history.

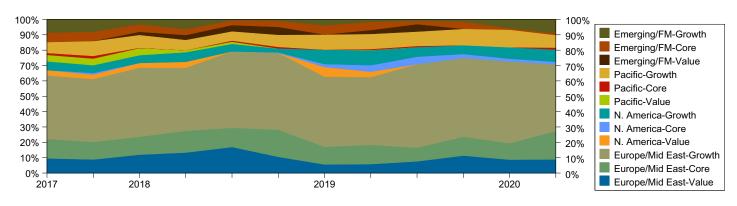
#### Average Style Map vs Callan NonUS Broad Gr Eq Holdings for Three Years Ended June 30, 2020

# Artisan Partners Growth Large MSCI EAFE Index Micro Value Core Growth

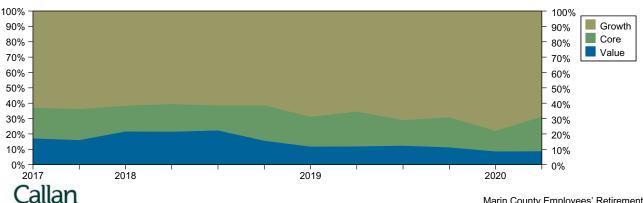
#### Average Style Exposure Matrix Holdings for Three Years Ended June 30, 2020



#### **Artisan Partners Growth Historical Region/Style Exposures**



#### **Artisan Partners Growth Historical Style Only Exposures**



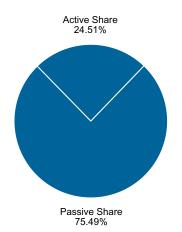
#### Artisan Partners Growth Active Share Analysis as of June 30, 2020 vs. MSCI EAFE Index

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.

#### **Holdings-Level Active Share**

# Passive Share 13.86% Non-Index Active Share 19.19%

#### **Sector Exposure Active Share**

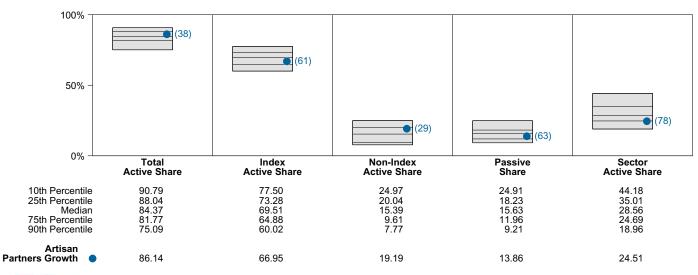


Total Active Share: 86.14%

Communication Services
Consumer Discretionary
Consumer Staples
Energy
Financials
Health Care
Industrials
Information Technology
Materials
Real Estate
Utilities
Total

| Index<br>Active Share<br>Within Sector | Non-Index<br>Active Share<br>Within Sector | Total<br>Active Share<br>Within Sector | Index<br>Weight | Manager<br>Weight | Contribution to<br>Total Portfolio<br>Active Share |
|--|--|--|-----------------|-------------------|--|
| 60.49%                                 | 31.64%                                     | 92.13%                                 | 5.43%           | 6.82%             | 5.68%  |
| 50.59%                                 | 43.17%                                     | 93.77%                                 | 11.34%          | 7.12%             | 8.37%  |
| 63.55%                                 | 10.14%                                     | 73.69%                                 | 12.01%          | 8.64%             | 7.15%  |
| 50.00%                                 | 50.00%                                     | 100.00%                                | 3.38%           | 0.61%             | 2.00%  |
| 66.24%                                 | 19.71%                                     | 85.95%                                 | 16.07%          | 26.24%            | 18.84%   |
| 62.78%                                 | 14.49%                                     | 77.27%                                 | 14.47%          | 19.85%            | 13.88%   |
| 77.82%                                 | 6.72%                                      | 84.54%                                 | 14.50%          | 7.08%             | 8.54%  |
| 78.95%                                 | 16.28%                                     | 95.24%                                 | 8.33%           | 6.98%             | 7.25%  |
| 67.28%                                 | 21.21%                                     | 88.49%                                 | 7.26%           | 14.82%            | 10.17%   |
| 100.00%                                | 0.00%                                      | 100.00%                                | 3.18%           | -                 | 1.59%  |
| 92.92%                                 | 0.00%                                      | 92.92%                                 | 4.04%           | 1.84%             | 2.65%  |
| 66.95%                                 | 19.19%                                     | 86.14%                                 | 100.00%         | 100.00%           | 86.14%   |

#### Active Share vs. Callan NonUS Broad Gr Eq





#### TimesSquare Intl Small Cap Period Ended June 30, 2020

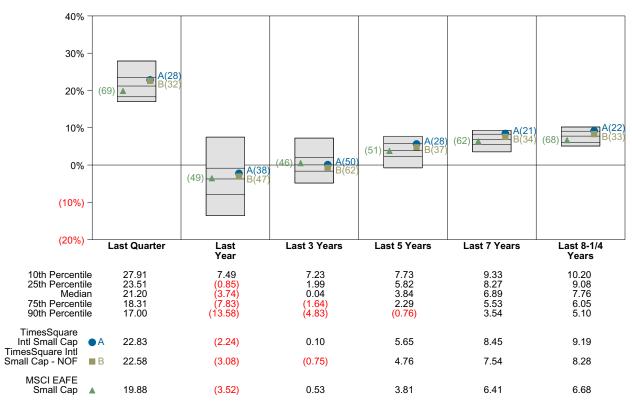
#### **Investment Philosophy**

TimesSquare Capital Management believes in fundamental equity growth research with a particular emphasis on the assessment of management quality, an in-depth understanding of superior business models, and valuation discrepancies. The first full guarter of performance began 3Q19. Prior performance is that of the manager's composite.

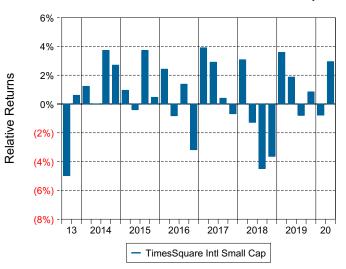
#### **Quarterly Summary and Highlights**

- TimesSquare Intl Small Cap's portfolio posted a 22.83% return for the quarter placing it in the 28 percentile of the Callan International Small Cap group for the quarter and in the 38 percentile for the last year.
- TimesSquare Intl Small Cap's portfolio outperformed the MSCI EAFE Small Cap by 2.95% for the quarter and outperformed the MSCI EAFE Small Cap for the year by 1.28%.

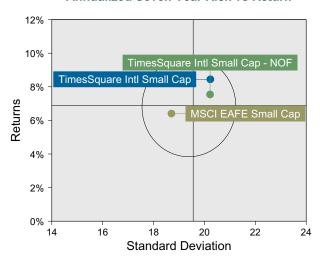
#### Performance vs Callan International Small Cap (Gross)



#### Relative Return vs MSCI EAFE Small Cap



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



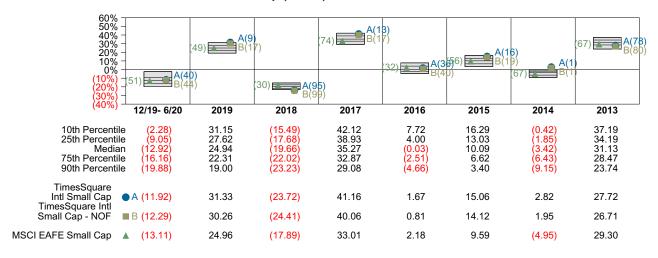


#### TimesSquare Intl Small Cap Return Analysis Summary

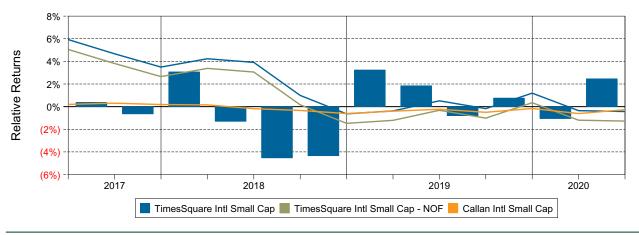
#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 12 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

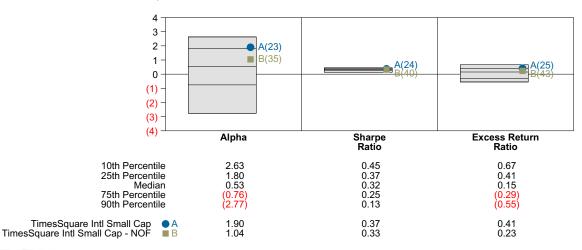
#### Performance vs Callan International Small Cap (Gross)



Rolling 12 Quarter and Quarterly Relative Return vs MSCI EAFE Small Cap



Risk Adjusted Return Measures vs MSCI EAFE Small Cap Rankings Against Callan International Small Cap (Gross) Seven Years Ended June 30, 2020



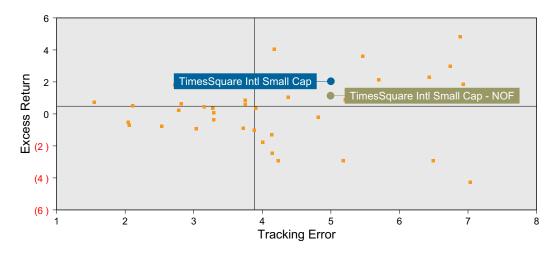


# TimesSquare Intl Small Cap Risk Analysis Summary

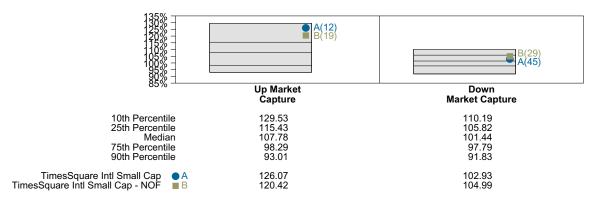
#### **Risk Analysis**

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

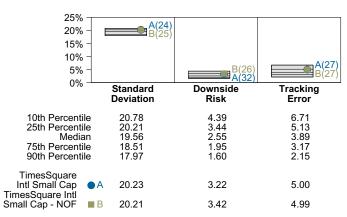
#### Risk Analysis vs Callan International Small Cap (Gross) Seven Years Ended June 30, 2020

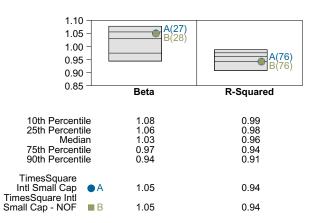


Market Capture vs MSCI EAFE Small Cap Rankings Against Callan International Small Cap (Gross) Seven Years Ended June 30, 2020



Risk Statistics Rankings vs MSCI EAFE Small Cap Rankings Against Callan International Small Cap (Gross) Seven Years Ended June 30, 2020





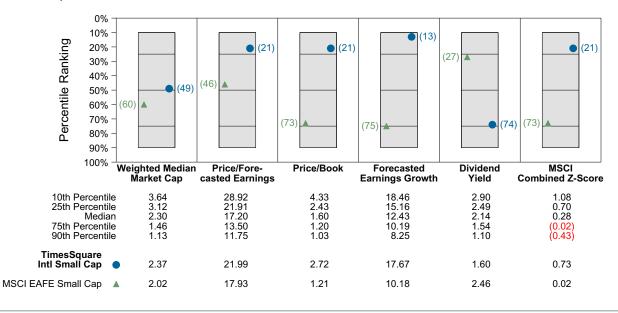


# TimesSquare Intl Small Cap Equity Characteristics Analysis Summary

#### **Portfolio Characteristics**

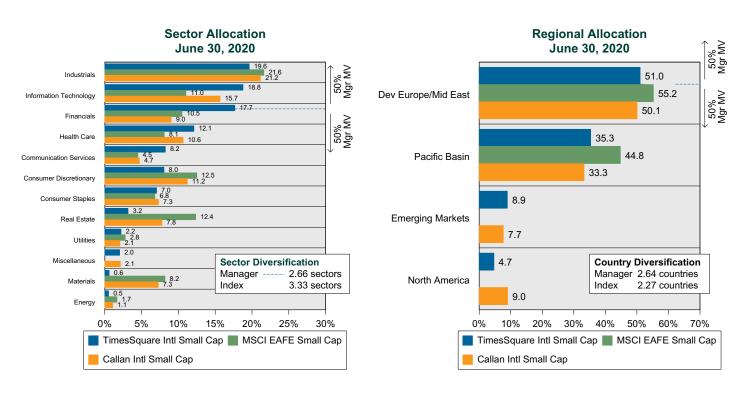
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### Portfolio Characteristics Percentile Rankings Rankings Against Callan International Small Cap as of June 30, 2020



#### **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.

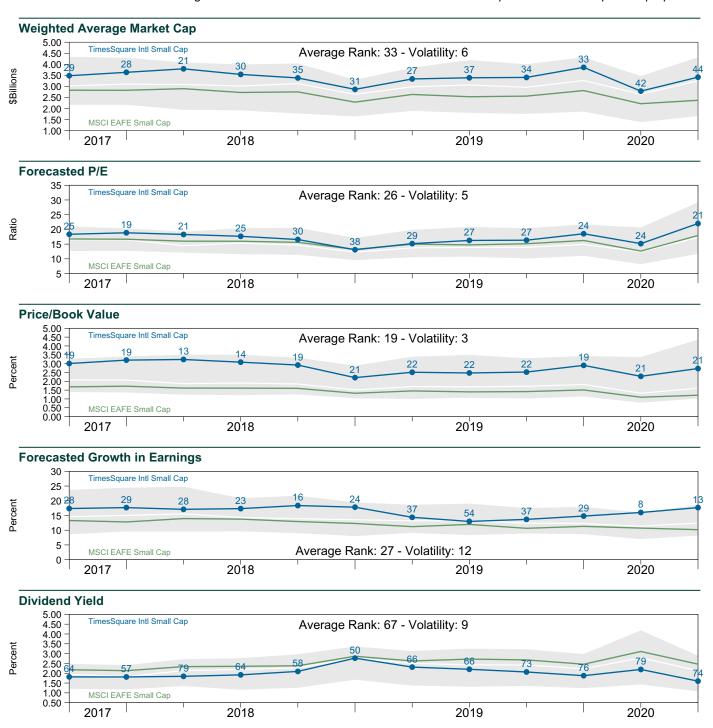




#### **Portfolio Characteristics Analysis**

#### Callan Intl Small Cap

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan Intl Small Cap Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The MSCI EAFE Small Cap is shown for comparison purposes.



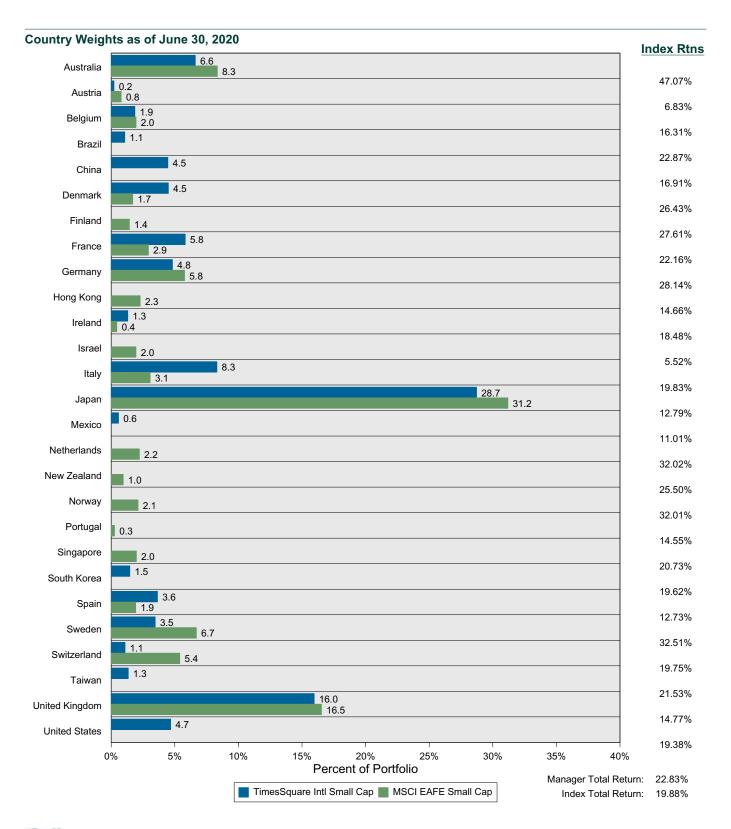
Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.



# Country Allocation TimesSquare Intl Small Cap VS MSCI EAFE Small Cap

#### **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of June 30, 2020. This chart is useful because large deviations in country allocation relative to the index are often good predictors of tracking error in the subsequent quarter. To the extent that the portfolio allocation is similar to the index, the portfolio should experience more "index-like" performance. In order to illustrate the performance effect on the portfolio and index of these country allocations, the individual index country returns are also shown.





#### Marin County Employees' Retirement Association **History of Ending Regional Weights** Period Ended June 30, 2020



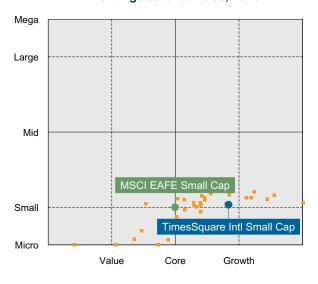


#### **Current Holdings Based Style Analysis** TimesSquare Intl Small Cap As of June 30, 2020

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

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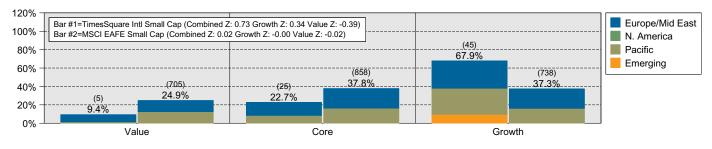
#### Style Map vs Callan Intl Small Cap Holdings as of June 30, 2020



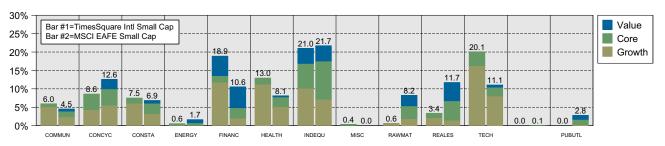
#### **Style Exposure Matrix** Holdings as of June 30, 2020

| 9.4% (5) 24.9% (705) | 22.7% (25)<br>37.8% (858)                       | 67.9% (45)<br>37.3% (738)   | 100.0% (75)<br>100.0% (2301)   |
|----------------------|---|---|--|
| . ,                  | , ,   | . ,   | , ,  |
| . ,                  | , ,   | . ,   | , ,  |
| 0.070 (0)            | 0.070 (1)                                       | 0.070 (0)   | 0.070 (1)  |
| 0.0% (0)             | 0.0% (1)  | 0.0% (0)  | 0.0% (1)   |
|                      |   |   |  |
| 0.0% (0)             | 0.0% (0)  | 9.6% (11)   | 9.6% (11)  |
| 12.5% (422)          | 16.4% (465)                                     | 16.1% (415)   | 44.9% (1302)   |
|                      |   |   |  |
| 1.4% (1)             | 8.1% (7)  | 28.4% (16)  | 37.8% (24)   |
| 0.0% (1)             | 0.0% (1)  | 0.0% (0)  | 0.0% (2)   |
|                      |   |   |  |
| 0.0% (0)             | 0.4% (1)  | 0.0% (0)  | 0.4% (1)   |
| 12.4% (282)          | 21.4% (391)                                     | 21.2% (323)   | 55.0% (996)  |
| 8.1% (4)             | 14.2% (17)                                      | 29.9% (18)  | 52.2% (39)   |
|                      | 0.0% (0)<br>0.0% (1)<br>1.4% (1)<br>12.5% (422) | 12.4% (282) 21.4% (391) 0.0% (0) 0.4% (1) 0.0% (1) 0.0% (1) 1.4% (1) 8.1% (7) 12.5% (422) 16.4% (465) 0.0% (0) 0.0% (0) | 12.4% (282) 21.4% (391) 21.2% (323) 0.0% (0) 0.4% (1) 0.0% (0) 0.0% (1) 0.0% (1) 0.0% (0) 1.4% (1) 8.1% (7) 28.4% (16) 12.5% (422) 16.4% (465) 16.1% (415) 0.0% (0) 0.0% (0) 9.6% (11) |

#### **Combined Z-Score Style Distribution** Holdings as of June 30, 2020



#### **Sector Weights Distribution** Holdings as of June 30, 2020

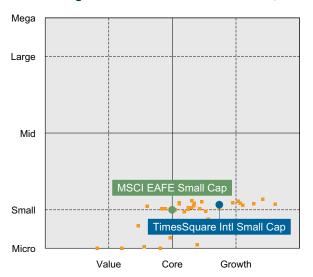




#### **Historical Holdings Based Style Analysis** TimesSquare Intl Small Cap For Three Years Ended June 30, 2020

This page analyzes the historical investment style of a portfolio utilizing a detailed holdings-based style analysis to determine average actual exposures to various region and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the average historical market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the average historical portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The next two style exposure charts illustrate the actual quarterly region/style and style only segment exposures of the portfolio through history.

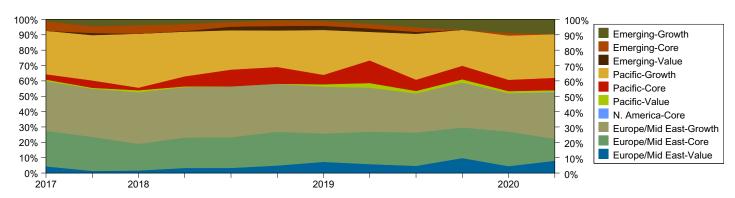
#### Average Style Map vs Callan Intl Small Cap Holdings for Three Years Ended June 30, 2020



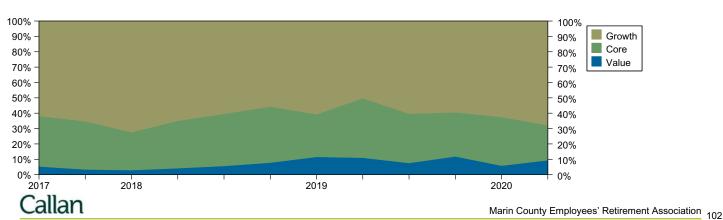
#### **Average Style Exposure Matrix** Holdings for Three Years Ended June 30, 2020

|                     | Value       | Core        | Growth      | Total         |
|---------------------|-------------|-------------|-------------|---------------|
|                     | 26.9% (756) | 37.6% (825) | 35.5% (721) | 100.0% (2302) |
| Total               |             |             |             |               |
|                     | 7.3% (6)    | 31.0% (23)  | 61.7% (45)  | 100.0% (74)   |
|                     | 0.0% (0)    | 0.0% (0)    | 0.0% (0)    | 0.0% (0)      |
| Emerging            |             |             |             |               |
|                     | 1.1% (1)    | 3.2% (3)    | 4.0% (5)    | 8.3% (9)      |
|                     | 12.9% (445) | 15.2% (429) | 15.1% (401) | 43.2% (1275)  |
| Pacific             |             |             |             |               |
|                     | 1.2% (1)    | 7.6% (5)    | 27.5% (17)  | 36.2% (23)    |
|                     | 0.0% (0)    | 0.0% (0)    | 0.0% (0)    | 0.0% (0)      |
| N. America          |             |             |             |               |
|                     | 0.0% (0)    | 0.0% (0)    | 0.0% (0)    | 0.0% (0)      |
| Europe/<br>Mid East | 13.9% (311) | 22.4% (396) | 20.4% (320) | 56.8% (1027)  |
| Furanc/             | 5.0% (4)    | 20.2% (15)  | 30.3% (23)  | 55.4% (42)    |

#### TimesSquare Intl Small Cap Historical Region/Style Exposures



#### TimesSquare Intl Small Cap Historical Style Only Exposures



#### TimesSquare Intl Small Cap Active Share Analysis as of June 30, 2020 vs. MSCI EAFE Small Cap

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.

#### **Holdings-Level Active Share**

# Index Active Share 77.30% Passive Share 3.77% Non-Index Active Share

#### **Sector Exposure Active Share**



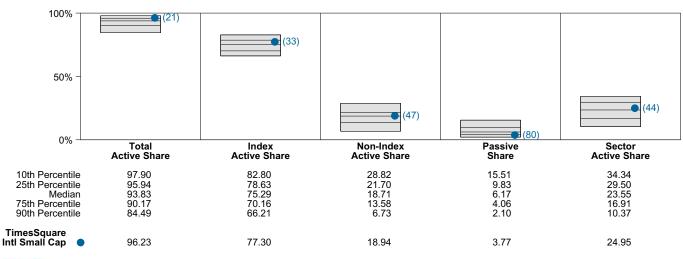
75.05%

Total Active Share: 96.23%

Communication Services Consumer Discretionary **Consumer Staples** Energy Financials Health Care Industrials Information Technology Materials Miscellaneous Real Estate Utilities Total

| Index<br>Active Share<br>Within Sector | Non-Index<br>Active Share<br>Within Sector | Total<br>Active Share<br>Within Sector | Index<br>Weight | Manager<br>Weight | Contribution to<br>Total Portfolio<br>Active Share |
|--|--|--|-----------------|-------------------|--|
| 54.02%                                 | 45.23%                                     | 99.25%                                 | 4.51%           | 8.23%             | 6.33%  |
| 77.43%                                 | 20.11%                                     | 97.53%                                 | 12.51%          | 8.04%             | 9.96%  |
| 69.91%                                 | 26.70%                                     | 96.61%                                 | 6.80%           | 7.04%             | 6.69%  |
| 95.21%                                 | 0.00%                                      | 95.21%                                 | 1.66%           | 0.52%             | 1.01%  |
| 78.82%                                 | 17.18%                                     | 96.00%                                 | 10.49%          | 17.67%            | 13.67%   |
| 74.13%                                 | 18.25%                                     | 92.38%                                 | 8.08%           | 12.11%            | 9.48%  |
| 84.89%                                 | 10.10%                                     | 94.99%                                 | 21.62%          | 19.62%            | 19.51%   |
| 81.18%                                 | 11.08%                                     | 92.26%                                 | 11.03%          | 18.78%            | 14.04%   |
| 50.00%                                 | 50.00%                                     | 100.00%                                | 8.18%           | 0.59%             | 4.39%  |
| 0.00%                                  | 100.00%                                    | 100.00%                                | -               | 2.02%             | 1.01%  |
| 98.83%                                 | 0.00%                                      | 98.83%                                 | 12.36%          | 3.16%             | 7.59%  |
| 50.00%                                 | 50.00%                                     | 100.00%                                | 2.77%           | 2.21%             | 2.49%  |
| 77.30%                                 | 18.94%                                     | 96.23%                                 | 100.00%         | 100.00%           | 96.17%   |

#### Active Share vs. Callan Intl Small Cap





#### **Parametric Emerging** Period Ended June 30, 2020

#### **Investment Philosophy**

This strategy is managed by Parametric Portfolio Associates, which is majority owned by Eaton Vance. Parametric uses a structured and disciplined investment approach of investing in emerging markets countries to capture their long-term growth potential, while seeking to avoid undue risk through country timing or concentrated stock selection strategies. The first full quarter for MCERA's mutual fund investment began 12/31/2010. An additional investment was made into a collective investment trust in October 2013. The Eaton Vance Emerging composite combines the two investments and is shown gross of fees. In November 2016 the Mutual fund investment was rolled into the CIT fund and closed.

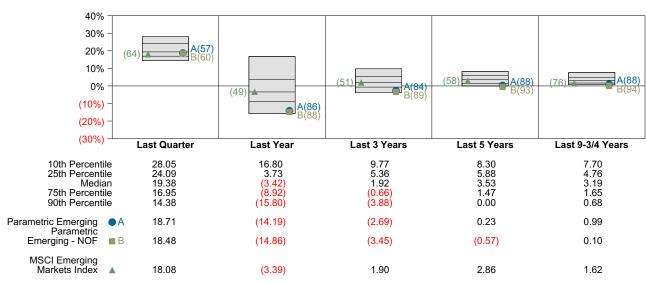
#### **Quarterly Summary and Highlights**

- Parametric Emerging's portfolio posted a 18.71% return for the quarter placing it in the 57 percentile of the Emerging Markets Equity DB group for the quarter and in the 86 percentile for the last year.
- Parametric Emerging's portfolio outperformed the MSCI Emerging Markets Index by 0.63% for the quarter and underperformed the MSCI Emerging Markets Index for the year by 10.80%.

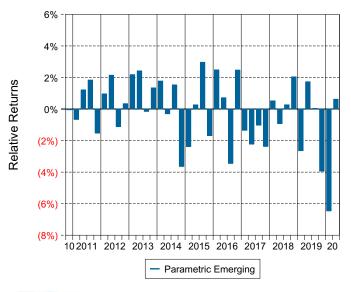
| Quarterly | V Asset | Growth  |
|-----------|---------|---------|
| Qualteri  | y Abbei | GIOWIII |

| Beginning Market Value    | \$75,465,355 |
|---------------------------|--------------|
| Net New Investment        | \$0          |
| Investment Gains/(Losses) | \$13,949,201 |
| Ending Market Value       | \$89,414,557 |

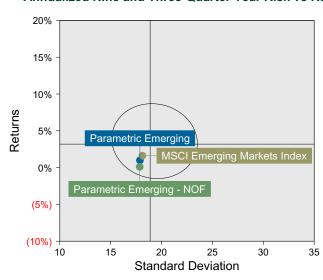
#### Performance vs Emerging Markets Equity DB (Gross)



#### Relative Returns vs **MSCI Emerging Markets Index**



#### **Emerging Markets Equity DB (Gross)** Annualized Nine and Three-Quarter Year Risk vs Return



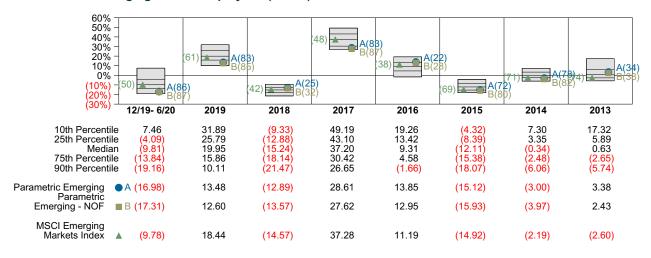


#### **Parametric Emerging Return Analysis Summary**

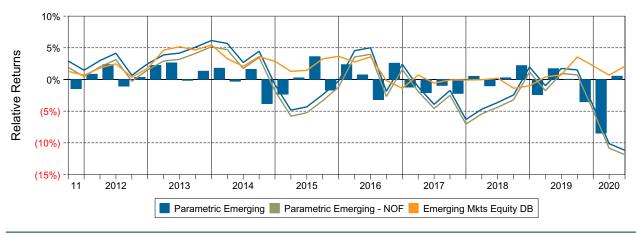
#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 4 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

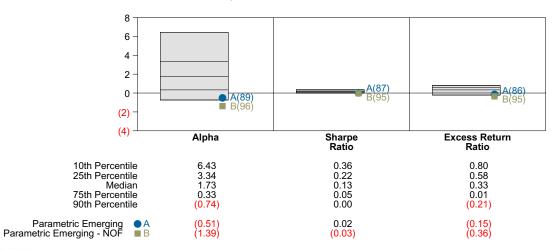
#### Performance vs Emerging Markets Equity DB (Gross)



Rolling 4 Quarter and Quarterly Relative Return vs MSCI Emerging Markets Index



Risk Adjusted Return Measures vs MSCI Emerging Markets Index Rankings Against Emerging Markets Equity DB (Gross) Nine and Three-Quarter Years Ended June 30, 2020



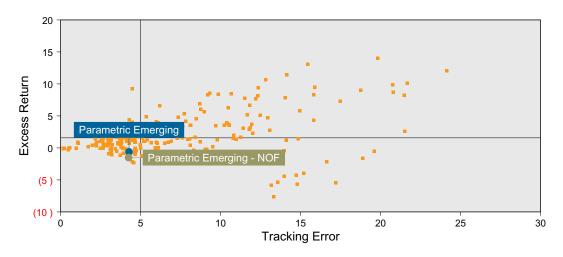


#### **Parametric Emerging Risk Analysis Summary**

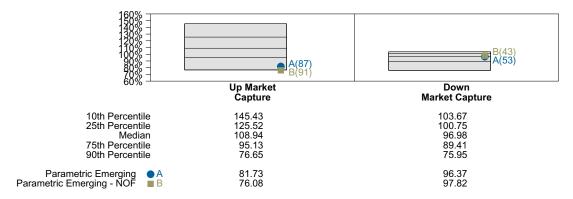
#### Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

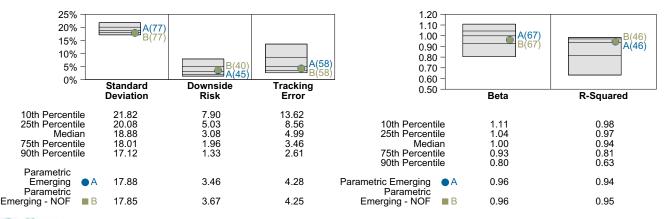
#### Risk Analysis vs Emerging Markets Equity DB (Gross) Nine and Three-Quarter Years Ended June 30, 2020



Market Capture vs MSCI Emerging Markets Index Rankings Against Emerging Markets Equity DB (Gross) Nine and Three-Quarter Years Ended June 30, 2020



Risk Statistics Rankings vs MSCI Emerging Markets Index Rankings Against Emerging Markets Equity DB (Gross) Nine and Three-Quarter Years Ended June 30, 2020



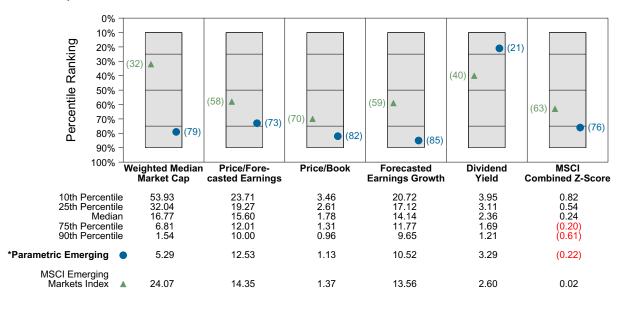


#### **Parametric Emerging Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

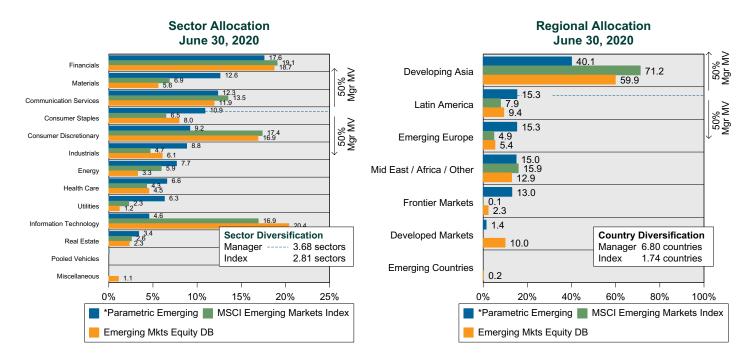
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Portfolio Characteristics Percentile Rankings Rankings Against Emerging Markets Equity DB** as of June 30, 2020



#### **Sector Weights**

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.



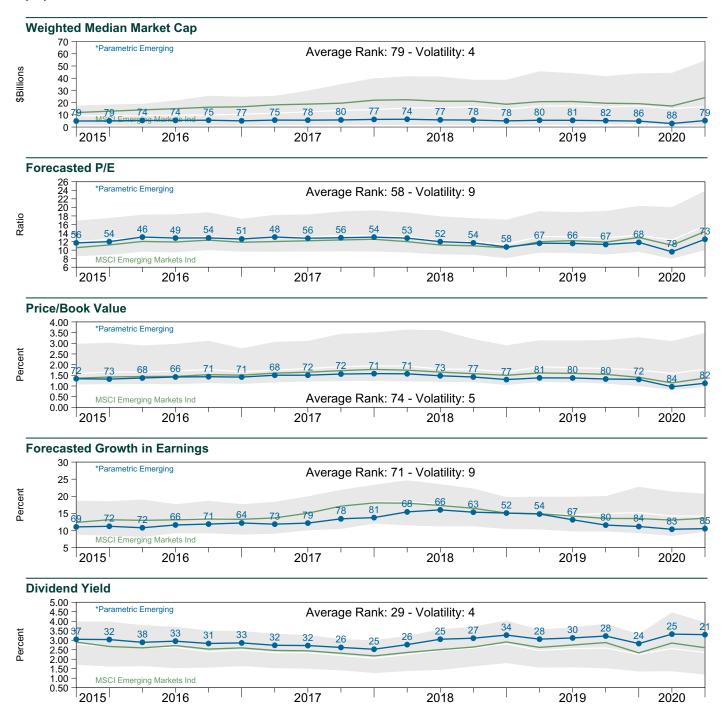
<sup>\*6/30/20</sup> portfolio characteristics generated using most recently available holdings (3/31/20) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.



#### **Portfolio Characteristics Analysis**

#### **Emerging Mkts Equity DB**

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Emerging Mkts Equity DB Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The MSCI Emerging Markets Ind is shown for comparison purposes.



Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.

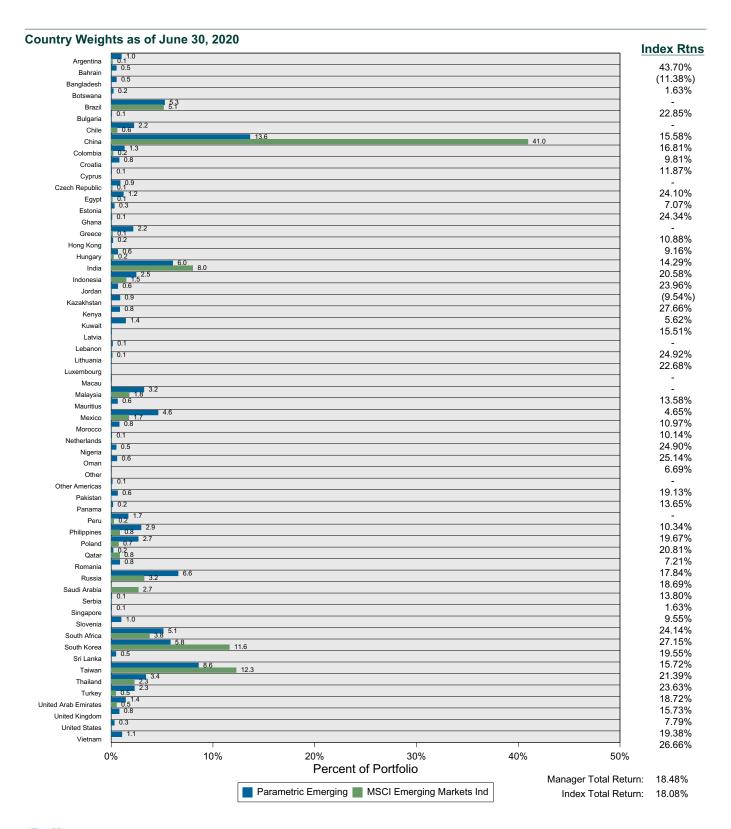


<sup>\*6/30/20</sup> portfolio characteristics generated using most recently available holdings (3/31/20) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

#### **Country Allocation** Parametric Emerging VS MSCI Emerging Markets Index

#### **Country Allocation**

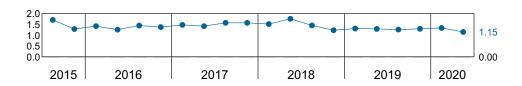
The chart below contrasts the portfolio's country allocation with that of the index as of June 30, 2020. This chart is useful because large deviations in country allocation relative to the index are often good predictors of tracking error in the subsequent guarter. To the extent that the portfolio allocation is similar to the index, the portfolio should experience more "index-like" performance. In order to illustrate the performance effect on the portfolio and index of these country allocations, the individual index country returns are also shown.



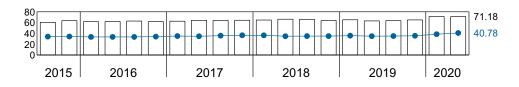


#### Marin County Employees' Retirement Association **History of Ending Regional Weights** Period Ended June 30, 2020

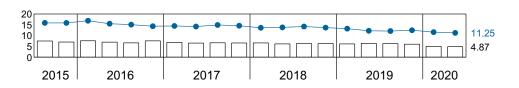
#### **Developed Markets**



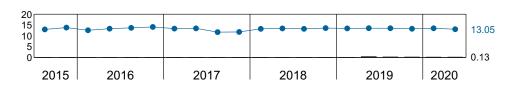
#### **Developing Asia**



#### **Emerging Europe**



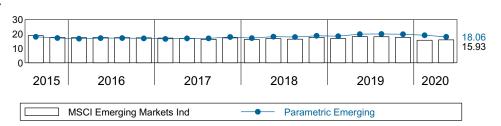
#### **Frontier Markets**



#### Latin America



#### Mid East / Africa / Other





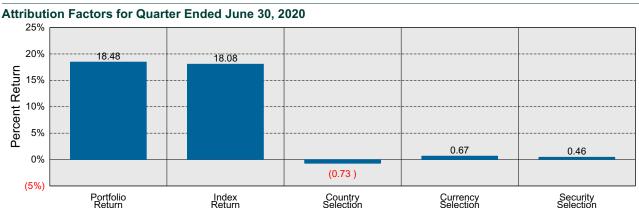
#### C.1

# Parametric Emerging vs MSCI Emerging Markets Index Attribution for Quarter Ended June 30, 2020

#### **International Attribution**

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



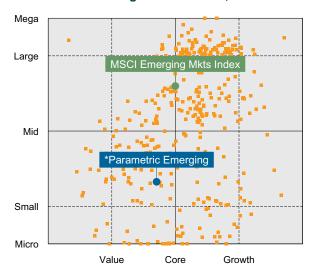




#### **Current Holdings Based Style Analysis Parametric Emerging** As of June 30, 2020

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

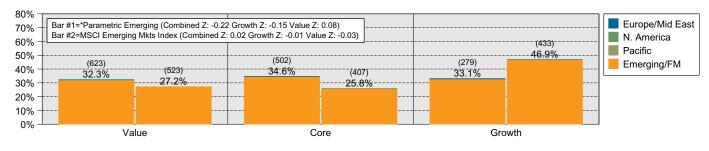
#### Style Map vs Emerging Mkts Equity DB Holdings as of June 30, 2020



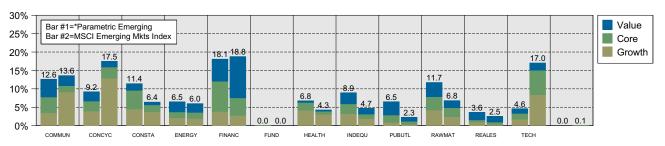
#### **Style Exposure Matrix** Holdings as of June 30, 2020

|                     | Value       | Core        | Growth      | Total         |
|---------------------|-------------|-------------|-------------|---------------|
|                     | 27.2% (523) | 25.8% (407) | 46.9% (433) | 100.0% (1363) |
| Total               |             |             |             |               |
|                     | 32.3% (623) | 34.6% (502) | 33.1% (279) | 100.0% (1404) |
| Emerging/<br>FM     | 27.2% (523) | 25.8% (406) | 46.9% (432) | 99.9% (1361)  |
|                     | 32.0% (617) | 34.6% (499) | 32.8% (277) | 99.3% (1393)  |
|                     | 0.0% (0)    | 0.0% (0)    | 0.0% (0)    | 0.0% (0)      |
| Pacific             | (1)         | ( )         | ( )         | (1)           |
|                     | 0.2% (3)    | 0.0% (1)    | 0.0% (1)    | 0.2% (5)      |
|                     | 0.0% (0)    | 0.1% (1)    | 0.0% (1)    | 0.1% (2)      |
| N. America          | 0.076 (2)   | 0.0 % (0)   | 0.0 % (0)   | 0.0 /6 (2)    |
|                     | 0.0% (2)    | 0.0% (0)    | 0.0% (0)    | 0.0% (2)      |
| Europe/<br>Mid East | 0.0% (0)    | 0.0% (0)    | 0.0% (0)    | 0.0% (0)      |
|                     | 0.1% (1)    | 0.0% (2)    | 0.3% (1)    | 0.4% (4)      |

#### **Combined Z-Score Style Distribution** Holdings as of June 30, 2020



#### **Sector Weights Distribution** Holdings as of June 30, 2020



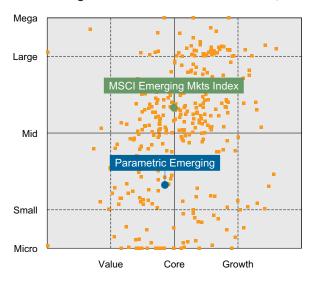
<sup>\*6/30/20</sup> portfolio characteristics generated using most recently available holdings (3/31/20) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.



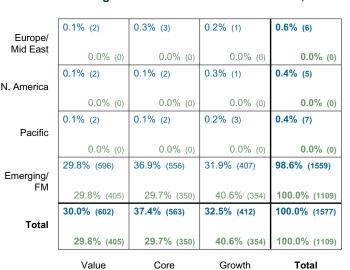
#### **Historical Holdings Based Style Analysis Parametric Emerging** For Three Years Ended June 30, 2020

This page analyzes the historical investment style of a portfolio utilizing a detailed holdings-based style analysis to determine average actual exposures to various region and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the average historical market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the average historical portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The next two style exposure charts illustrate the actual quarterly region/style and style only segment exposures of the portfolio through history.

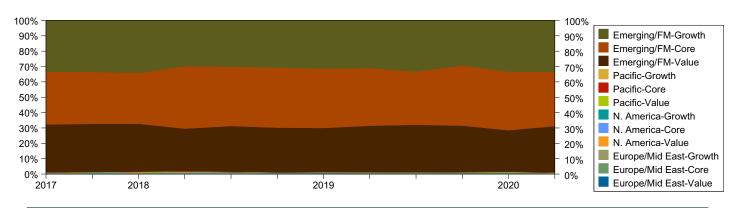
#### Average Style Map vs Emerging Mkts Equity DB Holdings for Three Years Ended June 30, 2020



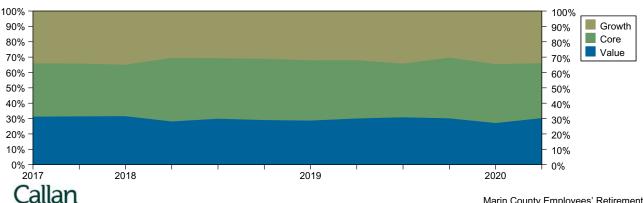
#### **Average Style Exposure Matrix** Holdings for Three Years Ended June 30, 2020



#### Parametric Emerging Historical Region/Style Exposures



#### **Parametric Emerging Historical Style Only Exposures**



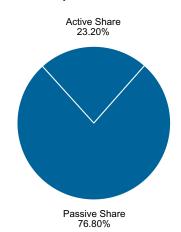
# **Parametric Emerging** Active Share Analysis as of June 30, 2020 vs. MSCI Emerging Markets Index

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.

### **Holdings-Level Active Share**

# Index Active Share 43.76% Non-Index Active Share Passive Share 37.45%

#### **Sector Exposure Active Share**

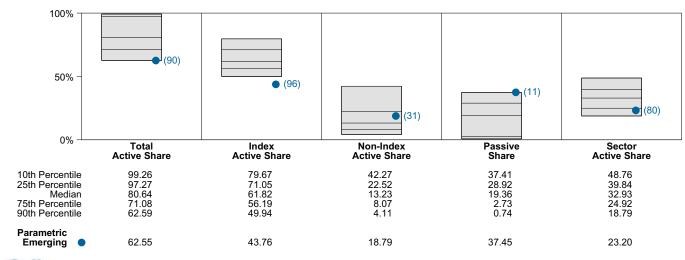


Total Active Share: 62.55%

Communication Services Consumer Discretionary **Consumer Staples** Energy Financials Health Care Industrials Information Technology Materials **Pooled Vehicles** Real Estate Utilities Total

| Index<br>Active Share<br>Within Sector | Non-Index<br>Active Share<br>Within Sector | Total<br>Active Share<br>Within Sector | Index<br>Weight | Manager<br>Weight | Contribution to<br>Total Portfolio<br>Active Share |
|--|--|--|-----------------|-------------------|--|
| 48.50%                                 | 15.88%                                     | 64.38%                                 | 13.50%          | 12.35%            | 8.32%  |
| 50.99%                                 | 21.75%                                     | 72.74%                                 | 17.38%          | 9.19%             | 9.66%  |
| 28.48%                                 | 14.34%                                     | 42.82%                                 | 6.48%           | 10.90%            | 4.30%  |
| 34.66%                                 | 11.23%                                     | 45.89%                                 | 5.95%           | 7.67%             | 3.30%  |
| 38.07%                                 | 22.16%                                     | 60.23%                                 | 19.07%          | 17.59%            | 11.15%   |
| 38.57%                                 | 16.82%                                     | 55.39%                                 | 4.30%           | 6.58%             | 3.39%  |
| 37.03%                                 | 25.75%                                     | 62.78%                                 | 4.69%           | 8.83%             | 4.52%  |
| 36.56%                                 | 17.25%                                     | 53.81%                                 | 16.93%          | 4.55%             | 8.01%  |
| 37.48%                                 | 19.56%                                     | 57.03%                                 | 6.86%           | 12.60%            | 5.89%  |
| 0.00%                                  | 100.00%                                    | 100.00%                                | -               | 0.04%             | 0.02%  |
| 26.24%                                 | 16.70%                                     | 42.94%                                 | 2.58%           | 3.40%             | 1.27%  |
| 30.96%                                 | 20.47%                                     | 51.42%                                 | 2.27%           | 6.31%             | 2.69%  |
| 43.76%                                 | 18.79%                                     | 62.55%                                 | 100.00%         | 100.00%           | 62.52%   |

#### Active Share vs. Emerging Mkts Equity DB

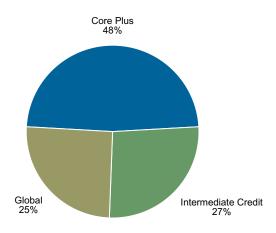




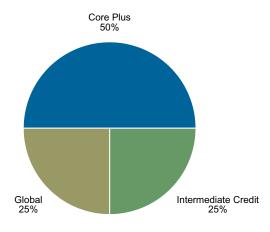
# **Actual vs Target Style Allocation** As of June 30, 2020

The first chart below shows the Fund's style allocation as of June 30, 2020. The second chart shows the Fund's target style allocation as outlined in the investment policy statement.





# **Target Style Allocation**



| Asset Class         | \$Millions<br>Actual | Weight<br>Actual | Target | Percent<br>Difference | \$Millions<br>Difference |
|---------------------|----------------------|------------------|--------|-----------------------|--------------------------|
| Core Plus           | 268                  | 48.2%            | 50.0%  | (1.8%)                | (10)                     |
| Intermediate Credit | 148                  | 26.5%            | 25.0%  | 1.5%                  | <b>`</b> 9′              |
| Global              | 141                  | 25.3%            | 25.0%  | 0.3%                  | 2                        |
| Total               | 557                  | 100.0%           | 100.0% |                       |                          |

<sup>\*</sup> Current Quarter Target = 50.0% Blmbg Aggregate, 25.0% FTSE WGBI and 25.0% Blmbg Intmdt Credit.



# Fixed Income Composite Period Ended June 30, 2020

#### **Investment Philosophy**

Fixed Income Benchmark is comprised of 100% Blmbg Aggregate until 03/31/2014 and 50% Blmbg Aggregate, 25% Blmbg Intermediate Credit, and 25% FTSE WGBI thereafter.

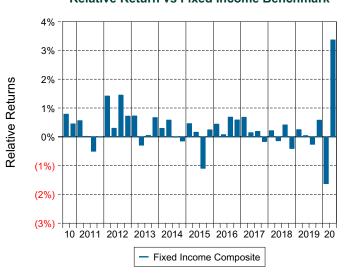
#### **Quarterly Summary and Highlights**

- Fixed Income Composite's portfolio posted a 6.99% return for the quarter placing it in the 3 percentile of the Public Fund Domestic Fixed group for the quarter and in the 11 percentile for the last year.
- Fixed Income Composite's portfolio outperformed the Fixed Income Benchmark by 3.37% for the quarter and outperformed the Fixed Income Benchmark for the year by 2.05%.

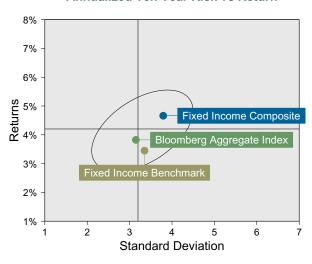
# Performance vs Public Fund - Domestic Fixed (Gross)



# Relative Return vs Fixed Income Benchmark



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



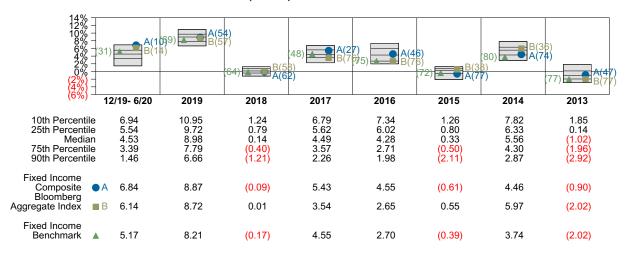


# Fixed Income Composite Return Analysis Summary

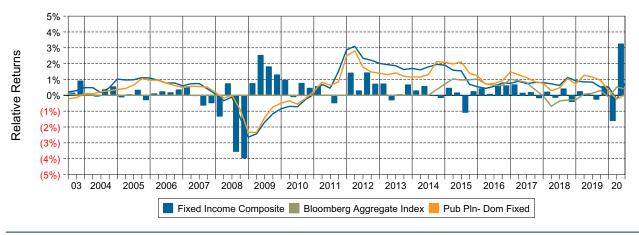
#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 12 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

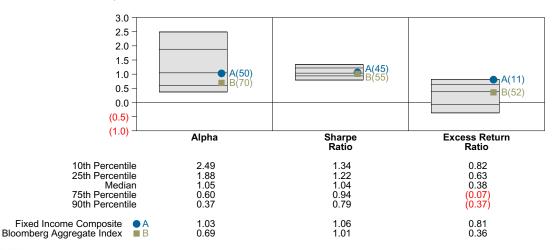
#### Performance vs Public Fund - Domestic Fixed (Gross)



Rolling 12 Quarter and Quarterly Relative Return vs Fixed Income Benchmark



Risk Adjusted Return Measures vs Fixed Income Benchmark Rankings Against Public Fund - Domestic Fixed (Gross) Ten Years Ended June 30, 2020



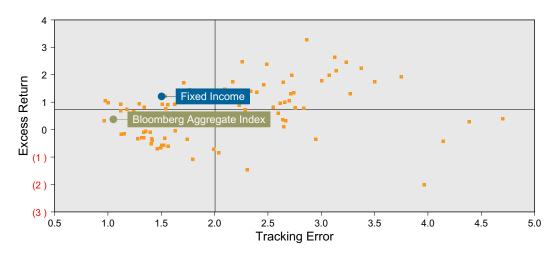


# **Fixed Income Risk Analysis Summary**

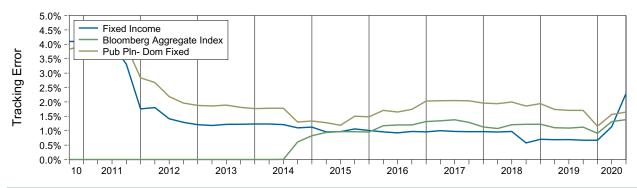
#### Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

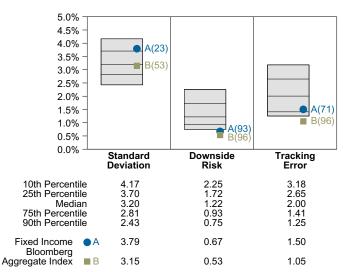
### Risk Analysis vs Public Fund - Domestic Fixed (Gross) Ten Years Ended June 30, 2020

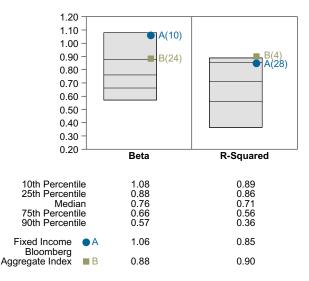


Rolling 12 Quarter Tracking Error vs Fixed Income Benchmark



Risk Statistics Rankings vs Fixed Income Benchmark Rankings Against Public Fund - Domestic Fixed (Gross) Ten Years Ended June 30, 2020





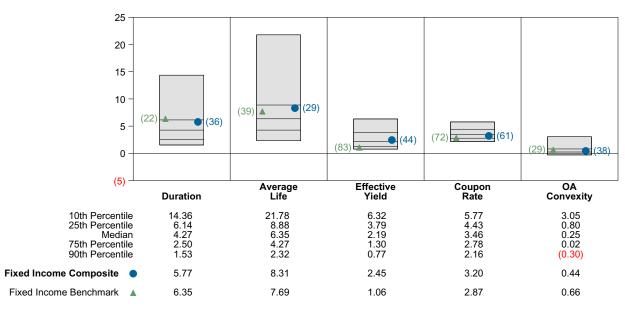


# **Fixed Income Composite Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

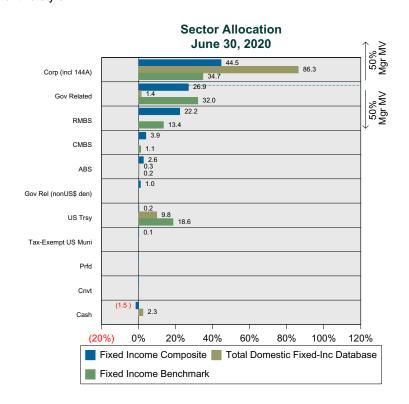
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

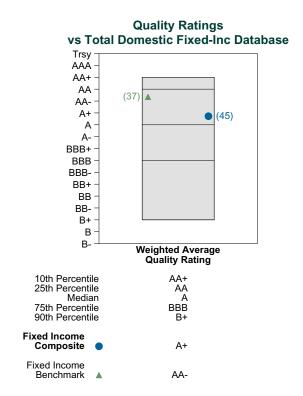
### **Fixed Income Portfolio Characteristics** Rankings Against Total Domestic Fixed-Inc Database as of June 30, 2020



#### Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.







# **Wellington Core Plus** Period Ended June 30, 2020

#### **Investment Philosophy**

Wellington's fixed income process focuses on fundamental research, diversification and risk control. The firm's orientation is toward intensive, bottom-up research. Marin switched Wellington's mandate from Core to Core Plus in first guarter 2012. Returns prior to that are linked to Wellington's Core Plus composite (portfolio A). The Wellington Management return stream (portfolio B) is Marin's historical core bond returns linked to the core plus returns. Wellington's hire date was in third quarter 2002.

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

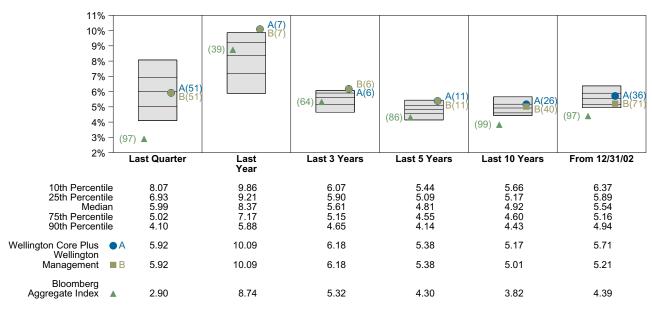
- Wellington Core Plus's portfolio posted a 5.92% return for the quarter placing it in the 51 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 7 percentile for the last year.
- Wellington Core Plus's portfolio outperformed Bloomberg Aggregate Index by 3.02% for the guarter and outperformed the Bloomberg Aggregate Index for the year by 1.35%.

#### **Quarterly Asset Growth**

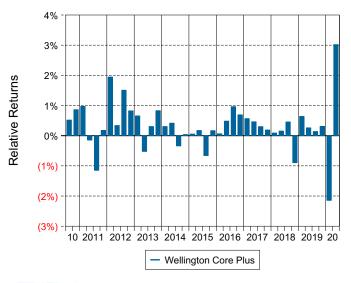
| Beginning Market Value    | \$255,105,608 |
|---------------------------|---------------|
| Net New Investment        | \$-1,956,656  |
| Investment Gains/(Losses) | \$15,039,825  |
| Ending Market Value       | \$268,188,777 |

Percent Cash: 0.0%

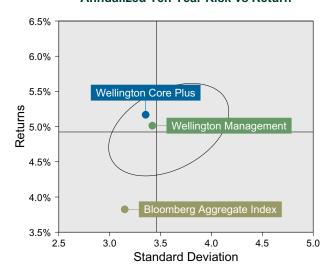
#### Performance vs Callan Core Plus Fixed Income (Gross)



#### Relative Returns vs **Bloomberg Aggregate Index**



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





# Wellington Management Period Ended June 30, 2020

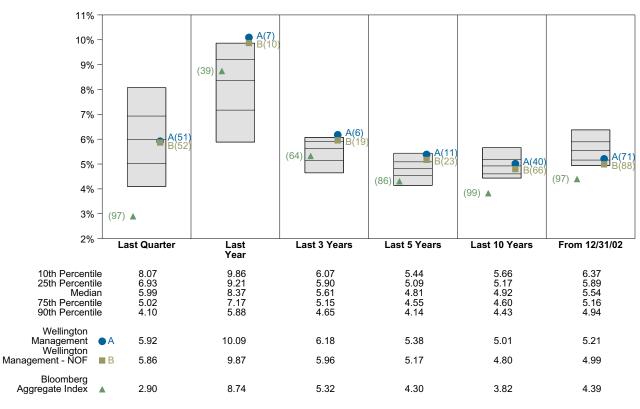
#### **Investment Philosophy**

Wellington's fixed income process focuses on fundamental research, diversification and risk control. The firm's orientation is toward intensive, bottom-up research. Marin switched Wellington's mandate from Core to Core Plus in first quarter 2012. Wellington's hire date was in third quarter 2002.

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

- Wellington Management's portfolio posted a 5.92% return for the quarter placing it in the 51 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 7 percentile for the last year.
- Wellington Management's portfolio outperformed the Bloomberg Aggregate Index by 3.02% for the quarter and outperformed the Bloomberg Aggregate Index for the year by 1.35%.

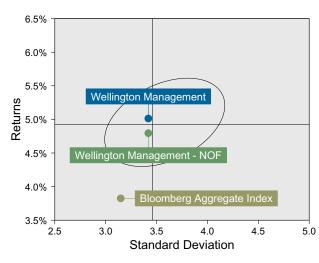
# Performance vs Callan Core Plus Fixed Income (Gross)



# Relative Returns vs Bloomberg Aggregate Index



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



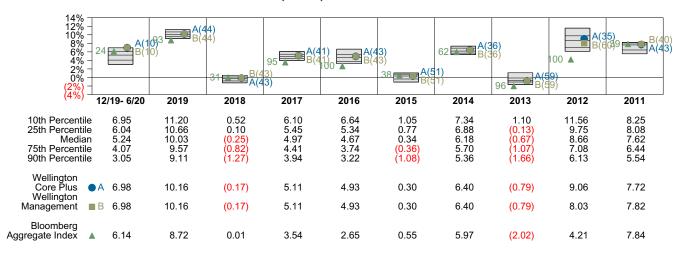


# **Wellington Core Plus Return Analysis Summary**

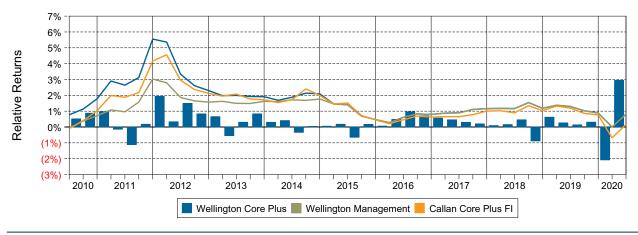
#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 12 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

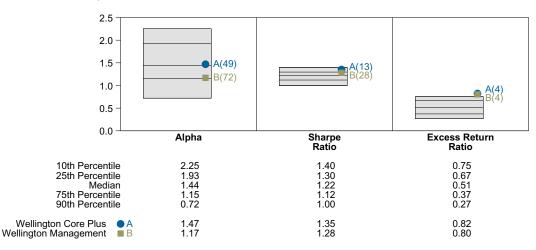
### Performance vs Callan Core Plus Fixed Income (Gross)



Rolling 12 Quarter and Quarterly Relative Return vs Bloomberg Aggregate Index



Risk Adjusted Return Measures vs Bloomberg Aggregate Index Rankings Against Callan Core Plus Fixed Income (Gross) Ten Years Ended June 30, 2020



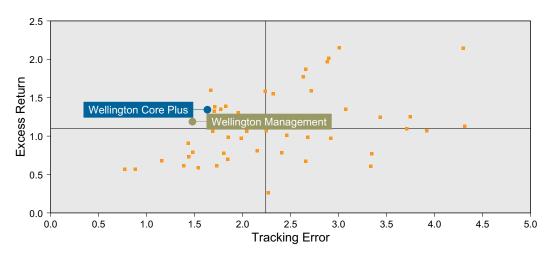


# **Wellington Core Plus Risk Analysis Summary**

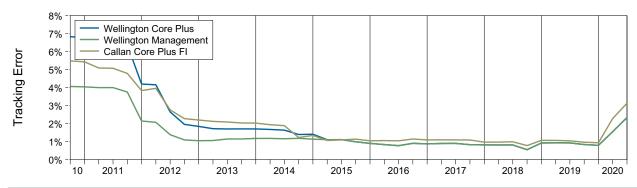
#### Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

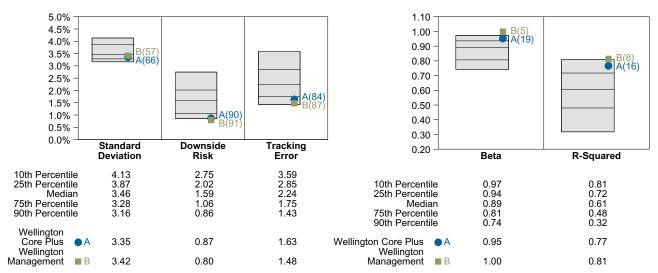
### Risk Analysis vs Callan Core Plus Fixed Income (Gross) Ten Years Ended June 30, 2020



Rolling 12 Quarter Tracking Error vs Bloomberg Aggregate Index



Risk Statistics Rankings vs Bloomberg Aggregate Index Rankings Against Callan Core Plus Fixed Income (Gross) Ten Years Ended June 30, 2020



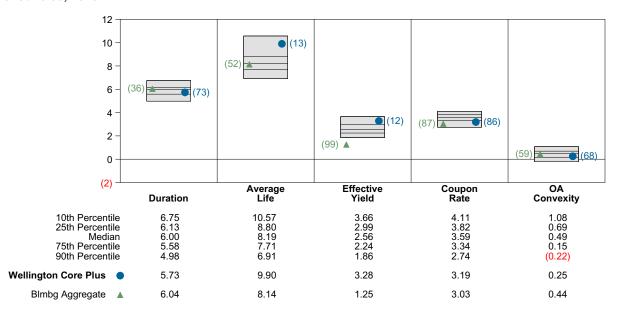


# **Wellington Core Plus Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

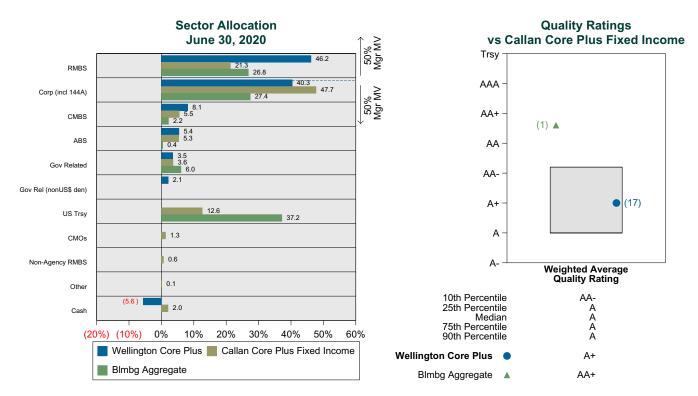
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Fixed Income Portfolio Characteristics** Rankings Against Callan Core Plus Fixed Income as of June 30, 2020



# Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.

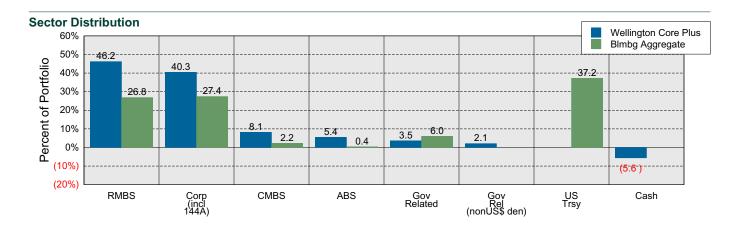


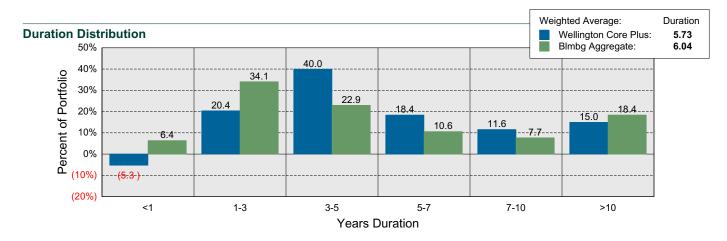


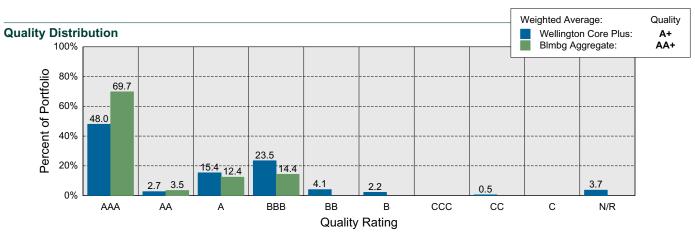
# **Wellington Core Plus Portfolio Characteristics Summary** As of June 30, 2020

# **Portfolio Structure Comparison**

The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.









# **Portfolio Characteristics Analysis**

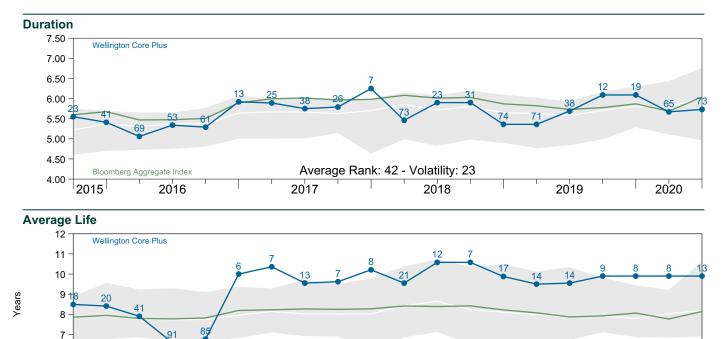
#### Callan Core Plus FI

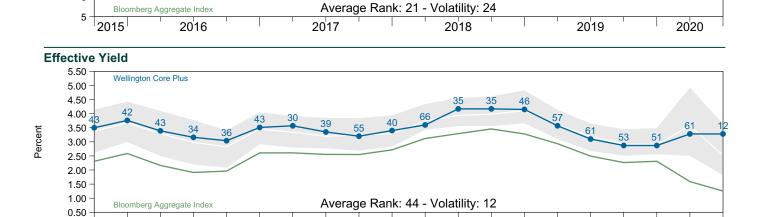
6

2015

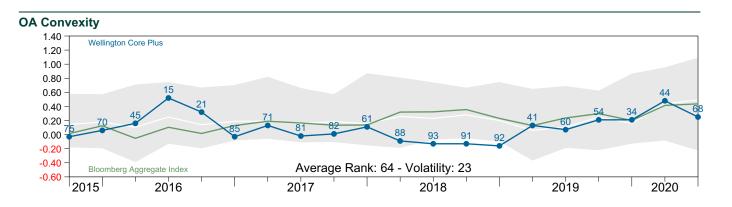
2016

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan Core Plus FI Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The Bloomberg Aggregate Index is shown for comparison purposes.





2017



2018

Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.



2019

2020

# Western Intermediate Credit Period Ended June 30, 2020

#### **Investment Philosophy**

Western Asset's philosophy in managing investment-grade credit portfolios involves the integration of fundamental credit research with relative value analysis to drive long-term performance in corporate portfolios. The firm's Global Credit Team applies a tightly controlled, value-oriented approach with the firm's top-down macroeconomic view that is integrated with extensive bottom-up credit research and relative value analysis. There are three differentiating features of this investment philosophy: the first is a consistent emphasis on long-term value investing; the second is a style of top-down macroeconomic and industry views integrated with extensive bottom-up fundamental research and relative value analysis; and the third is the long-term commitment the firm has to credit research. Marin switched Western's mandate from Core Plus to Intermediate Credit in first quarter 2014. Returns prior to that are linked to Western's Intermediate Credit composite.

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

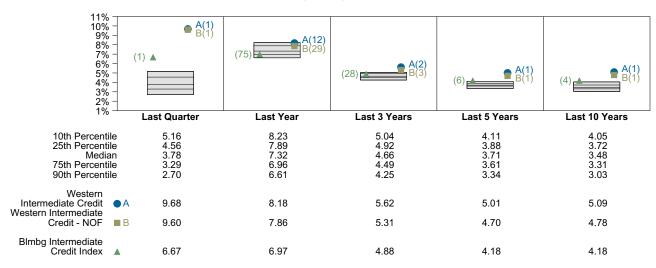
- Western Intermediate Credit's portfolio posted a 9.68% return for the quarter placing it in the 1 percentile of the Callan Intermediate Fixed Income group for the quarter and in the 12 percentile for the last year.
- Western Intermediate Credit's portfolio outperformed the Blmbg Intermediate Credit Index by 3.00% for the quarter and outperformed the Blmbg Intermediate Credit Index for the year by 1.21%.

#### **Quarterly Asset Growth**

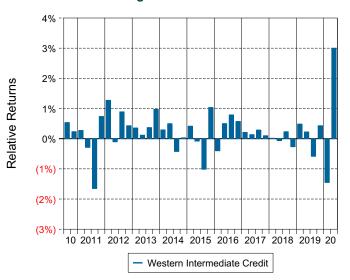
| Beginning Market Value    | \$136,002,652 |
|---------------------------|---------------|
| Net New Investment        | \$-1,342,975  |
| Investment Gains/(Losses) | \$13,106,881  |
| Ending Market Value       | \$147 766 558 |

Percent Cash: 0.0%

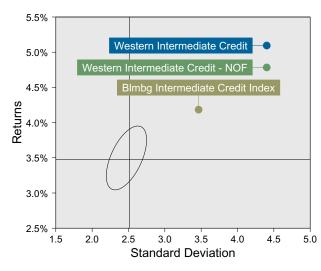
### Performance vs Callan Intermediate Fixed Income (Gross)



# Relative Returns vs Blmbg Intermediate Credit Index



# Callan Intermediate Fixed Income (Gross) Annualized Ten Year Risk vs Return



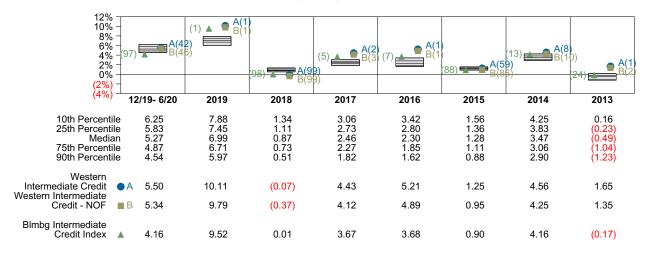


# Western Intermediate Credit Return Analysis Summary

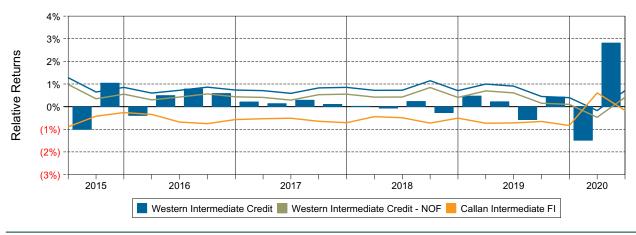
#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 12 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

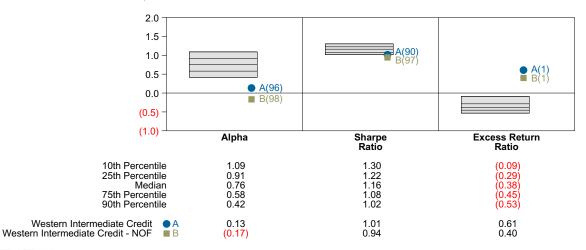
#### Performance vs Callan Intermediate Fixed Income (Gross)



Rolling 12 Quarter and Quarterly Relative Return vs Blmbg Intermediate Credit Index



Risk Adjusted Return Measures vs Blmbg Intermediate Credit Index Rankings Against Callan Intermediate Fixed Income (Gross) Ten Years Ended June 30, 2020



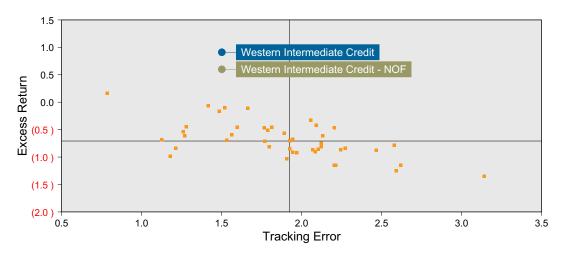


# **Western Intermediate Credit Risk Analysis Summary**

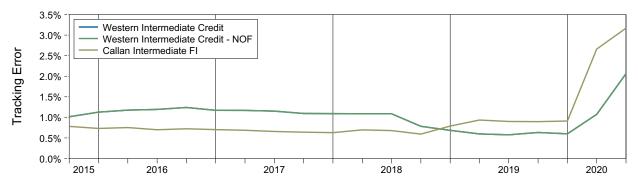
#### Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

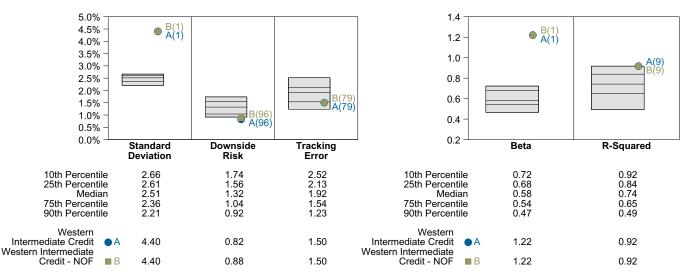
# Risk Analysis vs Callan Intermediate Fixed Income (Gross) Ten Years Ended June 30, 2020



# Rolling 12 Quarter Tracking Error vs Blmbg Intmdt Credit



# Risk Statistics Rankings vs Blmbg Intmdt Credit Rankings Against Callan Intermediate Fixed Income (Gross) Ten Years Ended June 30, 2020



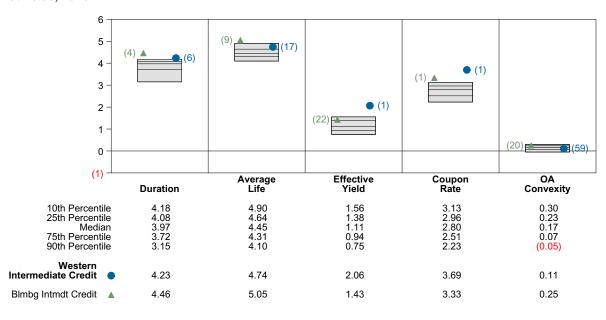


# **Western Intermediate Credit Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

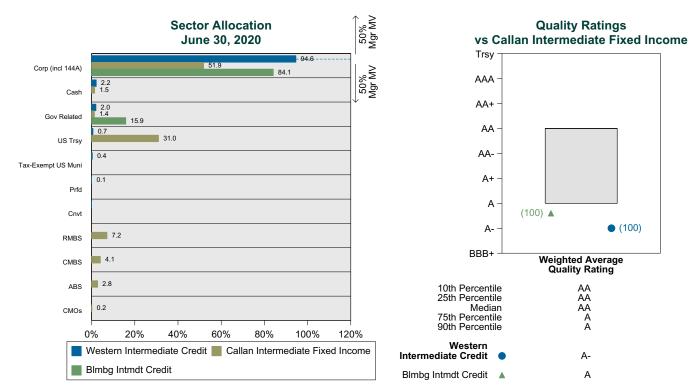
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Fixed Income Portfolio Characteristics** Rankings Against Callan Intermediate Fixed Income as of June 30, 2020



# Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.



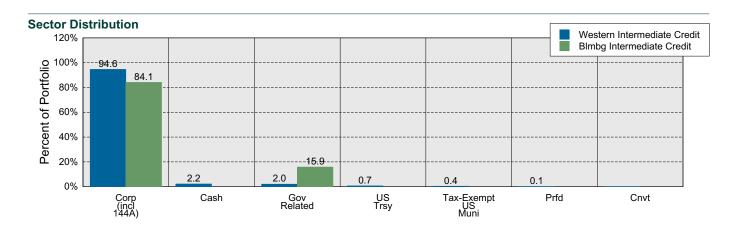


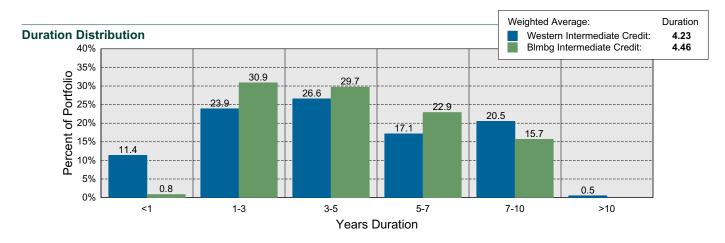
**(100)** 

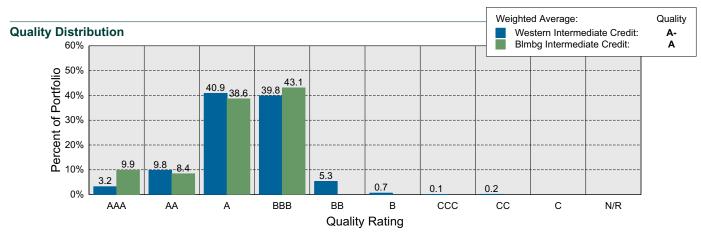
# **Western Intermediate Credit Portfolio Characteristics Summary** As of June 30, 2020

#### **Portfolio Structure Comparison**

The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.





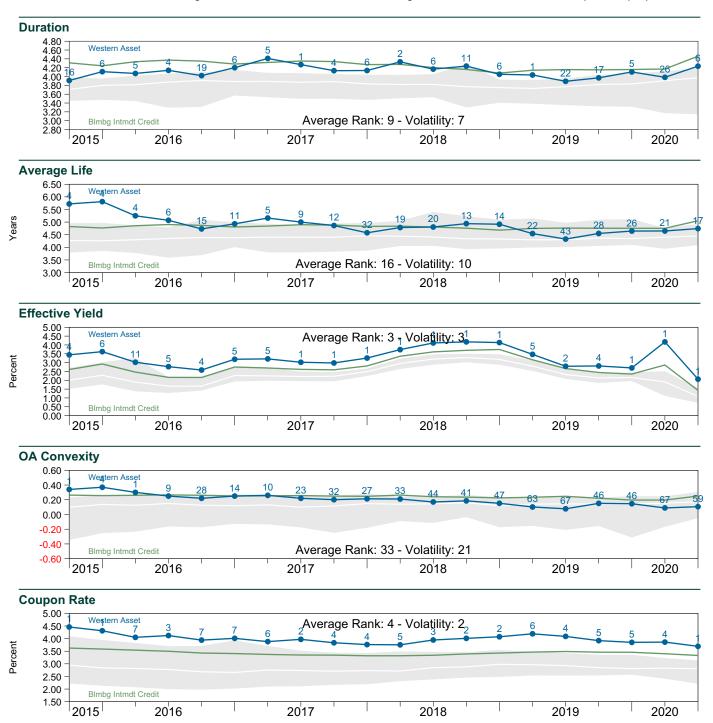




# **Portfolio Characteristics Analysis**

#### Callan Intermediate FI

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan Intermediate FI Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The Blmbg Intmdt Credit is shown for comparison purposes.



Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.



# Colchester Global Period Ended June 30, 2020

#### **Investment Philosophy**

Colchester is a value-oriented manager. They believe that investments should be valued in terms of the income they will generate in real terms. The investment approach is therefore based on the analysis of inflation, real interest rates and real exchange rates, supplemented by an assessment of sovereign financial balances - fiscal, external and monetary. Portfolios are constructed to benefit from those opportunities with the greatest relative investment potential for a given level of risk. The investment opportunity set currently includes the domestic sovereign debt of the non-classic countries such as Brazil, Poland and Mexico among others. Colchester uses sovereign only portfolios. The first full quarter of performance began 2Q14. Prior performance is that or the manager's composite.

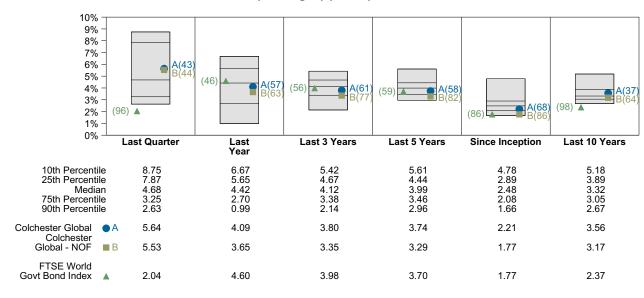
#### **Quarterly Summary and Highlights**

- Colchester Global's portfolio posted a 5.64% return for the quarter placing it in the 43 percentile of the Callan Global Fixed Income (Unhedged) group for the quarter and in the 57 percentile for the last year.
- Colchester Global's portfolio outperformed the FTSE World Govt Bond Index by 3.60% for the quarter and underperformed the FTSE World Govt Bond Index for the year by 0.50%.

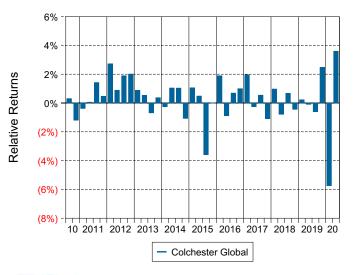
#### **Quarterly Asset Growth**

| Beginning Market Value    | \$133,607,272 |
|---------------------------|---------------|
| Net New Investment        | \$-145,118    |
| Investment Gains/(Losses) | \$7,529,051   |
| Ending Market Value       | \$140,991,205 |

#### Performance vs Callan Global Fixed Income (Unhedged) (Gross)



# Relative Returns vs FTSE World Govt Bond Index



# Callan Global Fixed Income (Unhedged) (Gross) Annualized Ten Year Risk vs Return



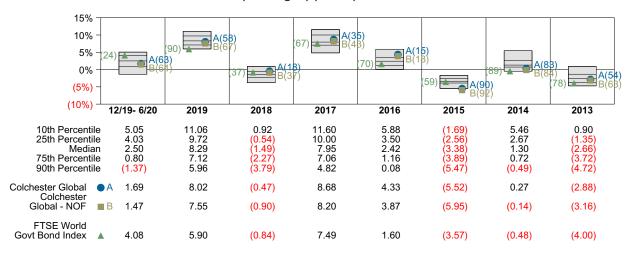


# **Colchester Global Return Analysis Summary**

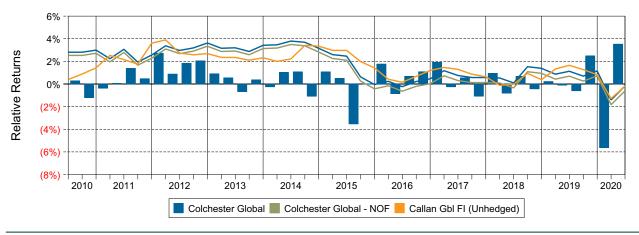
#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 12 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

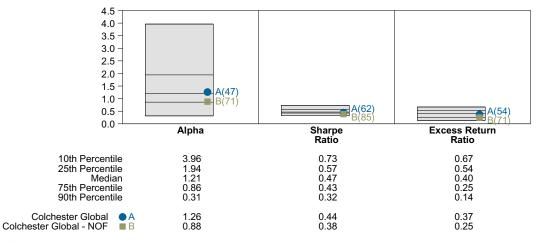
#### Performance vs Callan Global Fixed Income (Unhedged) (Gross)



Rolling 12 Quarter and Quarterly Relative Return vs FTSE World Govt Bond Index



Risk Adjusted Return Measures vs FTSE World Govt Bond Index Rankings Against Callan Global Fixed Income (Unhedged) (Gross) Ten Years Ended June 30, 2020



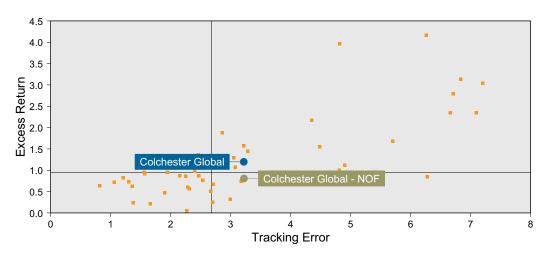


# **Colchester Global Risk Analysis Summary**

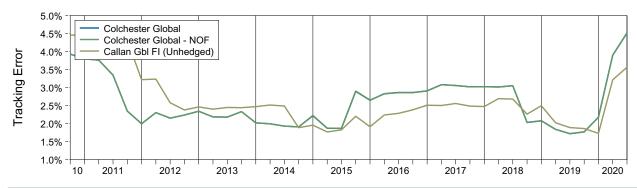
#### Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

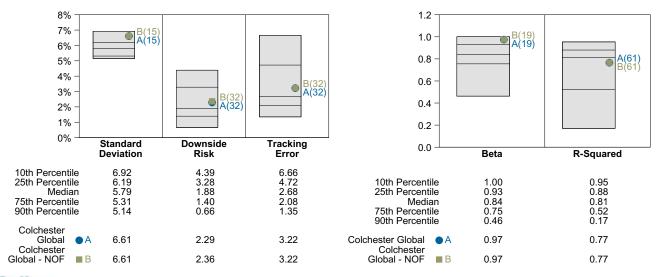
### Risk Analysis vs Callan Global Fixed Income (Unhedged) (Gross) Ten Years Ended June 30, 2020



Rolling 12 Quarter Tracking Error vs FTSE World Govt Bond Idx



Risk Statistics Rankings vs FTSE World Govt Bond Idx Rankings Against Callan Global Fixed Income (Unhedged) (Gross) Ten Years Ended June 30, 2020



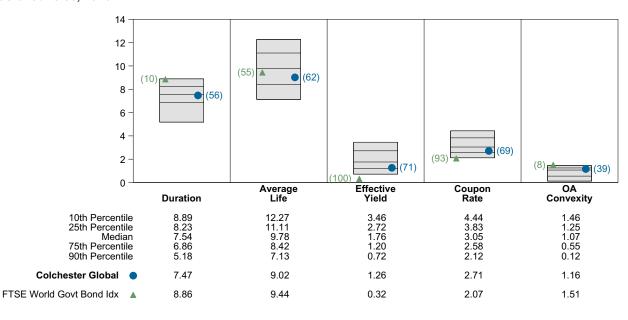


# **Colchester Global Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

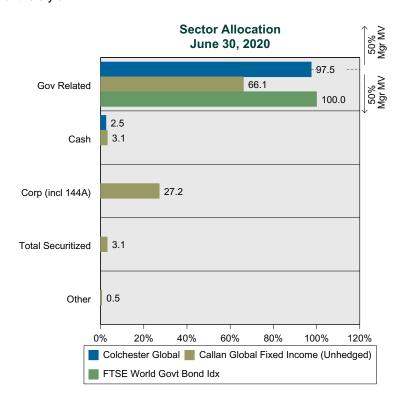
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

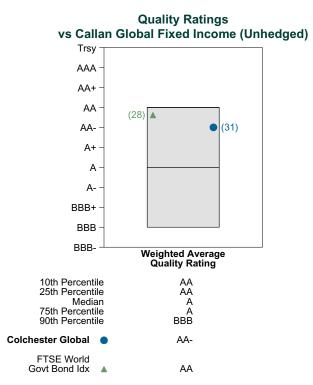
#### **Fixed Income Portfolio Characteristics** Rankings Against Callan Global Fixed Income (Unhedged) as of June 30, 2020



#### Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.



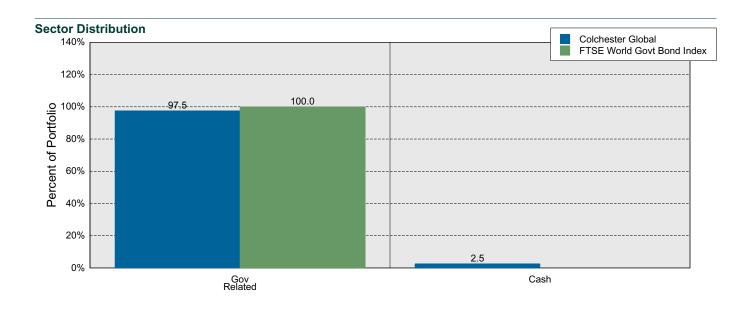


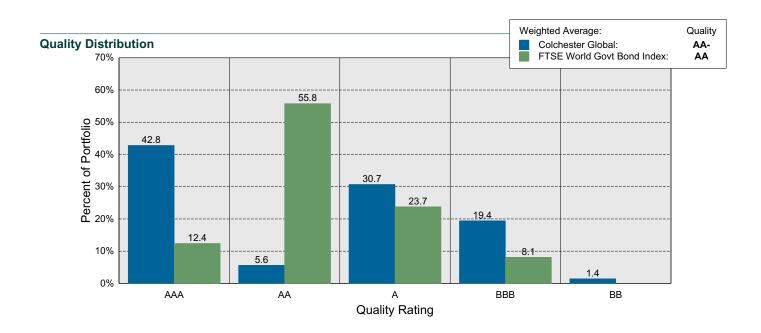


# **Colchester Global Portfolio Characteristics Summary** As of June 30, 2020

### **Portfolio Structure Comparison**

The charts below compare the structure of the portfolio to that of the index from two perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The last chart compares the distribution across quality ratings.



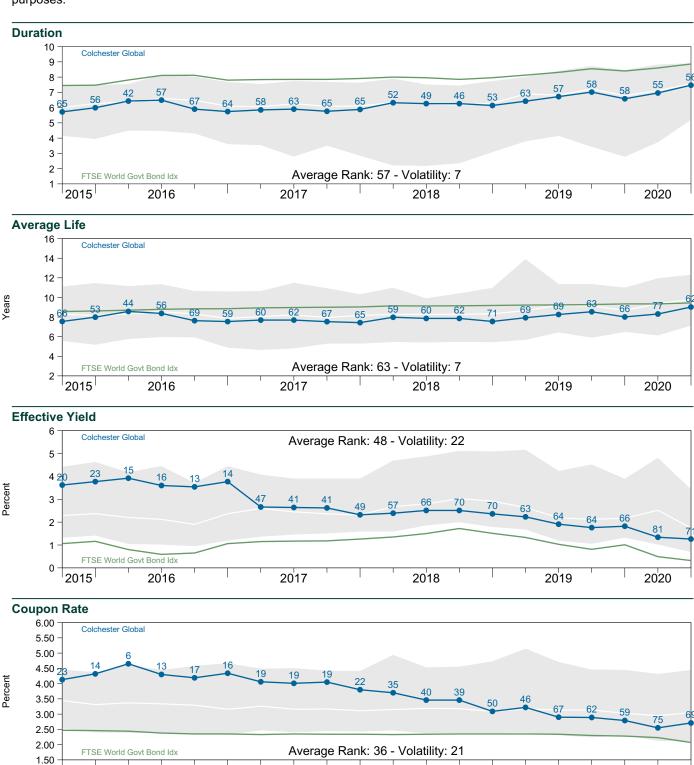




# **Portfolio Characteristics Analysis**

## Callan Gbl FI (Unhedged)

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan Gbl FI (Unhedged) Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The FTSE World Govt Bond Idx is shown for comparison purposes.



Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.

2018

2017



2015

2016

2019

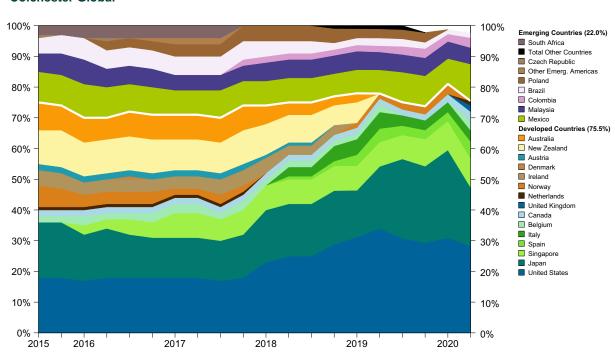
2020

# Marin County Employees' Retirement Association **Historical Distribution of Countries Percent of Ending Weights in Country**

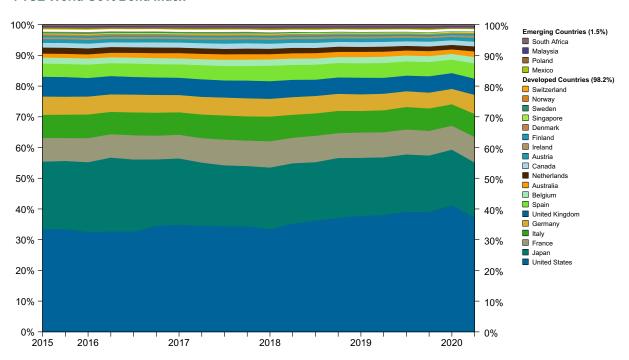
# **Country Distribution**

The Historical Distribution of Countries chart illustrates the split between developed and emerging market countries over time. The white line delineates developed and emerging market countries as defined by MSCI.

# **Colchester Global**



#### **FTSE World Govt Bond Index**



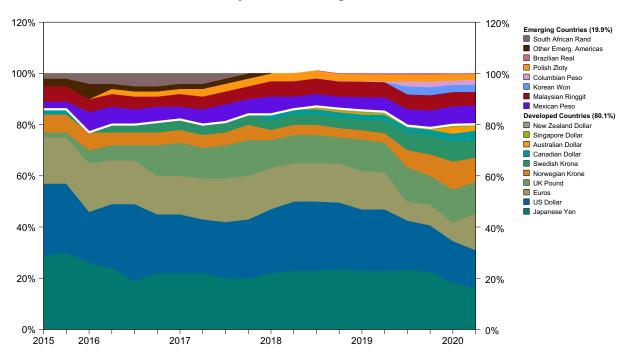


# Marin County Employees' Retirement Association

### **Long/Short Country Distribution**

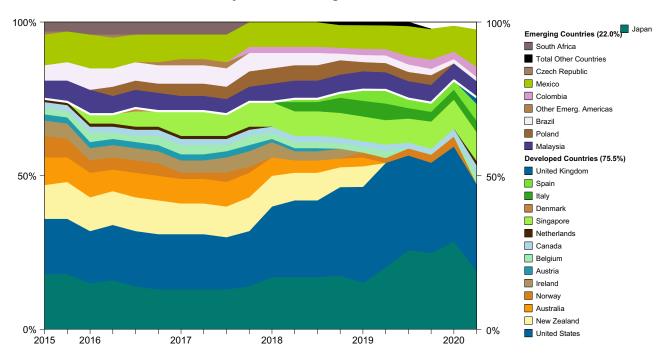
The Long/Short Historical Distribution of Countries chart illustrates the split between developed and emerging market countries over time. The white line delineates developed and emerging market countries as defined by MSCI. The top chart represents the portfolio's long exposures and the bottom chart represents the portfolio's short exposures.

## Colchester Global - Historical Currency Allocation, Long Positions





### Colchester Global - Historical Country Allocation, Long Positions





# Real Estate Composite Period Ended June 30, 2020

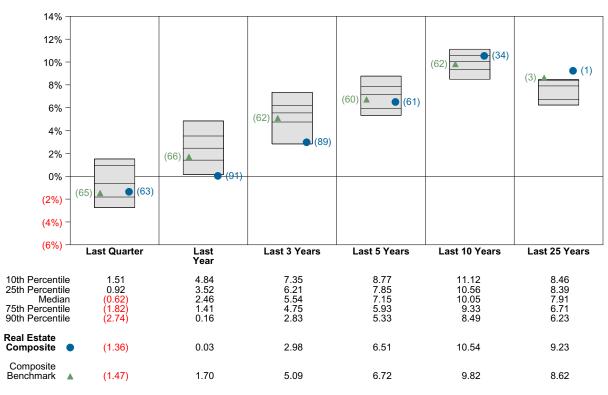
#### **Investment Philosophy**

The Total Real Estate Funds Database consists of both open and closed-end commingled funds as well as separate accounts managed by real estate firms. The returns represent the overall performance of institutional capital invested in real estate properties. The composite benchmark is comprised of the NCREIF Classic Index through 12/31/2004, NCREIF Total Property Index through 12/31/2014, and the NFI-ODCE Equal Weight Net thereafter.

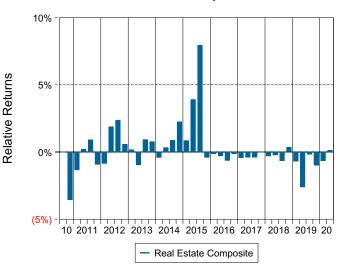
#### **Quarterly Summary and Highlights**

- Real Estate Composite's portfolio posted a (1.36)% return for the quarter placing it in the 63 percentile of the Callan Real Estate ODCE group for the quarter and in the 91 percentile for the last year.
- Real Estate Composite's portfolio outperformed the Composite Benchmark by 0.11% for the quarter and underperformed the Composite Benchmark for the year by 1.67%.

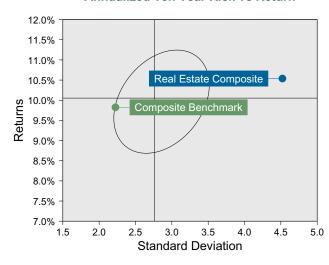
### Performance vs Callan Real Estate ODCE (Net)



#### Relative Return vs Composite Benchmark



# Callan Real Estate ODCE (Net) Annualized Ten Year Risk vs Return

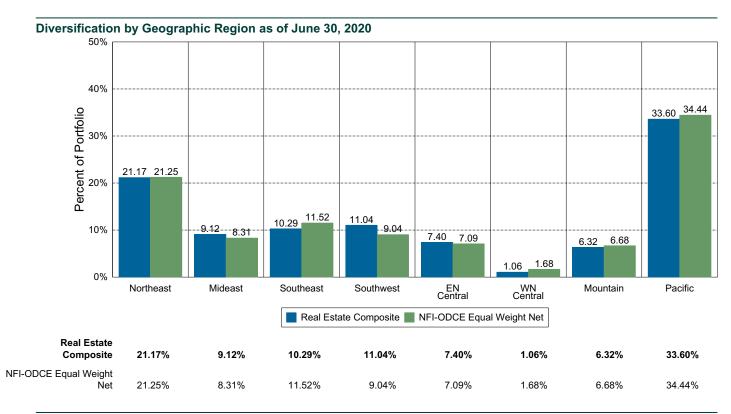


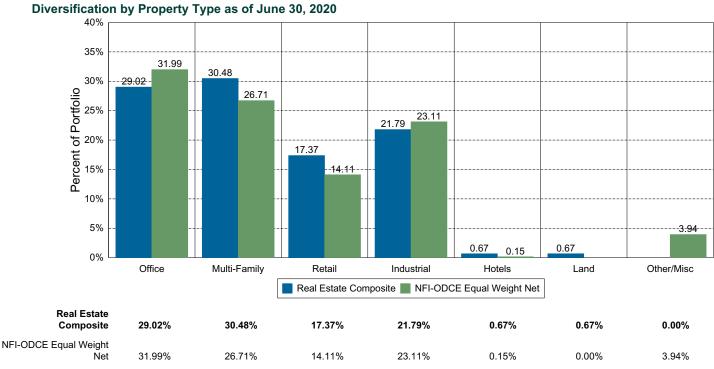


# **Real Estate Composite** Diversification Analysis as of June 30, 2020

#### **Diversification Analysis**

The following charts provide information on the diversification of the portfolio with regards to both Geographic Region and Property Type. Similar information is provided on the relevant market index for comparison.







# **UBS Trumbull Property Fund Period Ended June 30, 2020**

#### **Investment Philosophy**

The Total Real Estate Funds Database consists of both open and closed-end commingled funds as well as separate accounts managed by real estate firms. The returns represent the overall performance of institutional capital invested in real estate properties. UBS Trumbull Property Fund was funded 04/01/2013. Prior performance is that of the manager's composite.

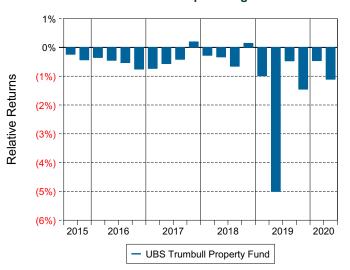
### **Quarterly Summary and Highlights**

- UBS Trumbull Property Fund's portfolio posted a (2.58)% return for the quarter placing it in the 89 percentile of the Callan Real Estate ODCE group for the quarter and in the 93 percentile for the last year.
- UBS Trumbull Property Fund's portfolio underperformed the NFI-ODCE Equal Weight Net by 1.11% for the quarter and underperformed the NFI-ODCE Equal Weight Net for the year by 3.50%.

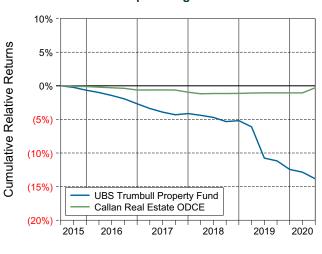
### Performance vs Callan Real Estate ODCE (Net)



#### Relative Returns vs NFI-ODCE Equal Weight Net



#### Cumulative Returns vs NFI-ODCE Equal Weight Net





# **UBS Trumbull Property Fund** Period Ended June 30, 2020

#### **Investment Philosophy**

UBS Trumbull Property Fund was funded 04/01/2013. Prior history represents the returns of the composite.

#### **Fund Summary**

Inception Date: January, 1978 Vehicle Type: Limited Partnership Key Professionals: Paul Canning - PM

> Nolan Henry - PM Mario Maturo - PM Peter Shaplin - PM Pamela Thompson - PM

Target Return: to outperform the NFI-ODCE index over

a full market cycle.

Target Income Return: N/A Min Acct Size (\$mm): 1

Gross/Net Asset Value (\$mm): 18,694 / 15,076

Fund Cash (\$mm): 146 Current Leverage: 18.20%

Joint Venture Level (gross) (\$mm): 8,965

**Occupancy:** 91.90% Implied Cap Rate: 4.20% Number of Investments: 184 **Entry/Exit Queue (\$mm):** 0 / 8,322

#### **Fee Information**

Management Fee: First \$10 1.00

0.99 Next \$10 Next \$10 0.95 Next \$15 0.89 Next \$15 0.82 Next \$25 0.81 Next \$50 0.79 Next \$150 0.67 Next \$150 0.60 Balance 0.56

Performance Fee: The "Variable Fee %" is set at a fulcrum point of 0.15%, and ranges from a min of 0% to a max of

0.25%. (Currently Suspended)

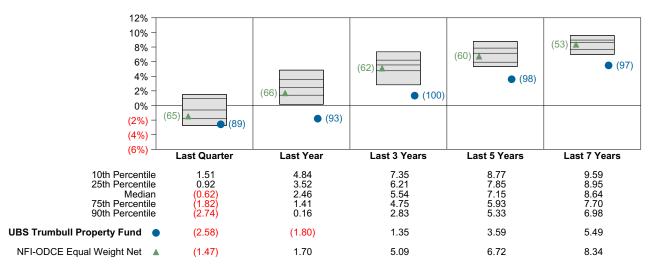
#### **Client Summary**

Client Inception Date: March, 2013 **Client Commitment:** \$93,000,000 Client Market Value: \$118,717,063

Dividend Re-Investment: Yes Advisory Board Seat: No

#### **Time-Weighted Returns**

#### Performance vs Callan Real Estate ODCE



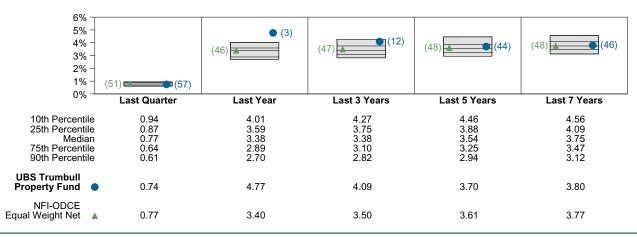


# **UBS Trumbull Property Fund Return Analysis**

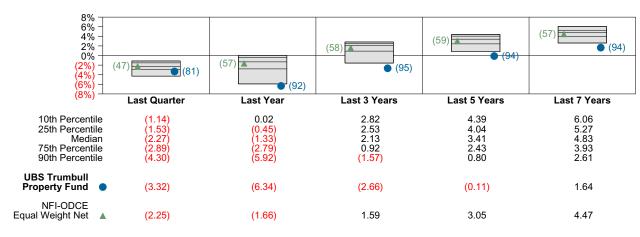
#### **Return Analysis**

The graphs below give a detailed analysis of the portfolio's return by decomposing it into component subreturns. The first chart shows the portfolio's income return ranked against the income returns of the appropriate peer group. The second chart performs the same comparison using appreciation returns. The bottom graph illustrates the historical composition of total return on an income versus appreciation basis.

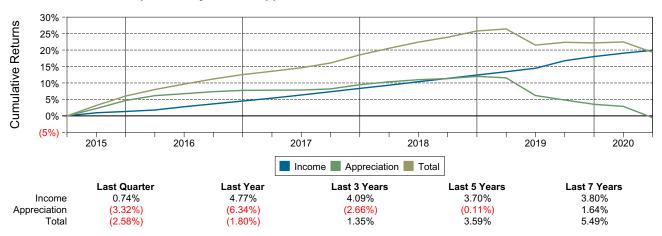
# Income Rankings vs Callan Real Estate ODCE Periods ended June 30, 2020



# Appreciation Rankings vs Callan Real Estate ODCE Periods ended June 30, 2020



#### **Cumulative Return Composition by Income/Appreciation**

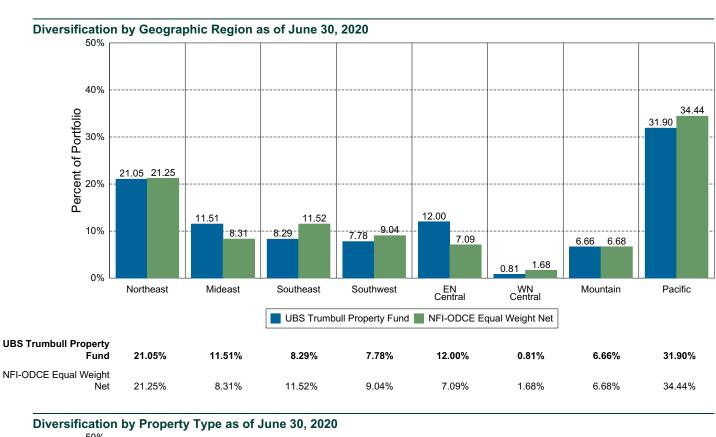


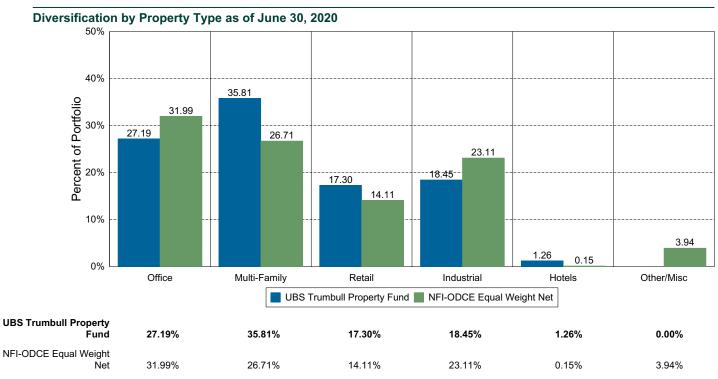


# **UBS Trumbull Property Fund** Diversification Analysis as of June 30, 2020

#### **Diversification Analysis**

The following charts provide information on the diversification of the portfolio with regards to both Geographic Region and Property Type. Similar information is provided on the relevant market index for comparison.







# **UBS Trumbull Property Fund Real Estate Portfolio Quarterly Changes in Market Value**

|         | Beg. of       | Capital        |              |           |                |                | End of        |
|---------|---------------|----------------|--------------|-----------|----------------|----------------|---------------|
|         | Period        | + Contri-      | + Accounting | - Mgmt.   | + Appre-       | - Distri-      | = Period      |
|         | <u>Market</u> | <u>butions</u> | Income       | Fees      | <u>ciation</u> | <u>butions</u> | <u>Market</u> |
| 06/2013 | 0             | 15,000,000     | 191,243      | 0         | 312,502        | 0              | 15,503,745    |
| 09/2013 | 15,503,745    | 0              | 200,125      | 44,173    | 223,167        | 109,779        | 15,773,085    |
| 12/2013 | 15,773,085    | 0              | 189,604      | 45,487    | 166,738        | 108,465        | 15,975,475    |
| 03/2014 | 15,975,475    | 107,834        | 199,263      | 46,118    | 204,848        | 107,834        | 16,333,468    |
| 06/2014 | 16,333,468    | 114,341        | 211,177      | 46,005    | 188,736        | 114,341        | 16,687,375    |
| 09/2014 | 16,687,375    | 50,114,010     | 207,022      | 47,469    | 324,384        | 114,010        | 67,171,312    |
| 12/2014 | 67,171,312    | 113,458        | 850,851      | 49,136    | 1,176,014      | 113,458        | 69,149,041    |
| 03/2015 | 69,149,041    | 456,518        | 847,191      | 185,133   | 1,216,204      | 456,518        | 71,027,303    |
| 06/2015 | 71,027,303    | 531,819        | 887,499      | 185,877   | 1,184,273      | 531,819        | 72,913,198    |
| 09/2015 | 72,913,198    | 530,305        | 873,485      | 192,820   | 1,621,083      | 530,305        | 75,214,947    |
| 12/2015 | 75,214,947    | 8,528,003      | 992,278      | 200,434   | 1,511,669      | 528,003        | 85,518,460    |
| 03/2016 | 85,518,460    | 20,584,418     | 1,267,447    | 227,418   | 917,650        | 584,418        | 107,476,139   |
| 06/2016 | 107,476,139   | 830,134        | 1,314,727    | 279,897   | 598,402        | 830,134        | 109,109,371   |
| 09/2016 | 109,109,371   | 834,803        | 1,210,594    | 283,891   | 637,533        | 834,803        | 110,673,607   |
| 12/2016 | 110,673,607   | 836,654        | 1,212,189    | 290,688   | 403,783        | 836,654        | 111,998,892   |
| 03/2017 | 111,998,892   | 841,974        | 1,227,298    | 293,978   | 58,803         | 841,974        | 112,991,015   |
| 06/2017 | 112,991,015   | 909,645        | 1,291,880    | 266,150   | 35,108         | 909,645        | 114,051,853   |
| 09/2017 | 114,051,853   | 941,431        | 1,309,576    | 243,930   | 374,159        | 941,431        | 115,491,658   |
| 12/2017 | 115,491,658   | 943,648        | 1,339,746    | 251,600   | 1,373,436      | 943,648        | 117,953,240   |
| 03/2018 | 117,953,240   | 968,020        | 1,294,320    | 237,096   | 925,404        | 968,020        | 119,935,868   |
| 06/2018 | 119,935,868   | 977,928        | 1,411,878    | 258,687   | 710,211        | 977,928        | 121,799,272   |
| 09/2018 | 121,799,272   | 1,008,523      | 1,352,122    | 238,279   | 370,697        | 1,008,523      | 123,283,812   |
| 12/2018 | 123,283,812   | 1,013,556      | 1,372,021    | 243,677   | 757,746        | 1,013,556      | 125,169,903   |
| 03/2019 | 125,169,903   | 1,021,100      | 1,366,657    | 246,576   | (508,136)      | 1,021,100      | 125,781,848   |
| 06/2019 | 125,781,848   | 1,079,490      | 1,413,105    | 243,089   | (6,053,774)    | 1,079,490      | 120,898,089   |
| 09/2019 | 120,898,089   | 1,092,620      | 1,451,086    | 241,430   | (357,727)      | 1,092,620      | 121,750,018   |
| 12/2019 | 121,750,018   | 1,104,717      | 1,549,219    | 241,524   | (1,492,215)    | 1,104,717      | 121,565,497   |
| 03/2020 | 121,565,497   | 1,116,663      | 1,292,265    | 241,930   | (755,458)      | 1,116,663      | 121,860,373   |
| 06/2020 | 121,860,373   | 1,090,091      | 1,097,634    | 188,941   | (4,052,003)    | 1,090,091      | 118,717,063   |
|         | 0             | 112,691,701    | 29,423,503   | 5,561,434 | 2,073,239      | 19,909,946     | 118,717,063   |

Returns

Net Portfolio Cumulative IRR = 4.46%

Ratios

Capital Account = \$118,717,063 Total Value = \$138,627,009

Committed Capital = \$93,000,000

Paid In Capital = \$112,691,701

Remaining Commitment = \$(19,691,701)

PIC Multiple (Paid In Capital/Committed Capital) = 121.17%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$99,025,361

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.23x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.18x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 1.05x



# AEW Core Property Trust Period Ended June 30, 2020

#### **Investment Philosophy**

The Total Real Estate Funds Database consists of both open and closed-end commingled funds as well as separate accounts managed by real estate firms. The returns represent the overall performance of institutional capital invested in real estate properties. AEW Core Property Trust was funded 04/01/2013. Prior performance is that of the manager's composite.

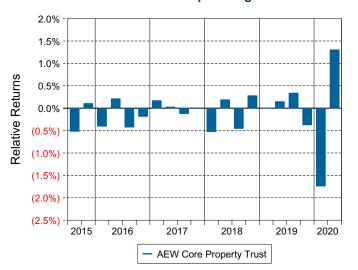
#### **Quarterly Summary and Highlights**

- AEW Core Property Trust's portfolio posted a (0.17)% return for the quarter placing it in the 35 percentile of the Callan Real Estate ODCE group for the quarter and in the 81 percentile for the last year.
- AEW Core Property Trust's portfolio outperformed the NFI-ODCE Equal Weight Net by 1.30% for the quarter and underperformed the NFI-ODCE Equal Weight Net for the year by 0.47%.

#### Performance vs Callan Real Estate ODCE (Net)



#### Relative Returns vs NFI-ODCE Equal Weight Net



#### Cumulative Returns vs NFI-ODCE Equal Weight Net





# **AEW Core Property Trust** Period Ended June 30, 2020

#### **Investment Philosophy**

AEW Core Property Trust was funded 04/01/2013. Prior history represents the returns of the composite.

#### **Fund Summary**

Inception Date: July, 2007 Vehicle Type: Private REIT

Key Professionals: Daniel Bradley - PM

Michael Byrne - PM Pamela Herbst - Research

Sara Cassidy - PM Lily Kao - PM

Target Return: Outperform NFI-ODCE on a total

net-of-fee basis

Target Income Return: None Stated

Min Acct Size (\$mm): 5

Gross/Net Asset Value (\$mm): 9,453 / 7,139

Fund Cash (\$mm): 368 Current Leverage: 25.29%

Joint Venture Level (gross) (\$mm): 3,642

**Occupancy: 95.17%** Implied Cap Rate: 4.52% Number of Investments: 84 Entry/Exit Queue (\$mm): 84 / 400

#### **Fee Information**

Management Fee: First \$10 1.10

1.00 Next \$15 Next \$25 0.85 Next \$50 0.80 Next \$50 0.75 Next \$150 0.65 Balance 0.50

Performance Fee: None.

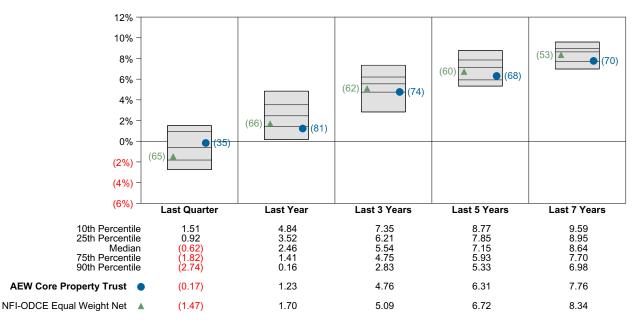
#### **Client Summary**

Client Inception Date: March, 2013 **Client Commitment:** \$65,000,000 **Client Market Value:** \$104,155,826

Dividend Re-Investment: Yes Advisory Board Seat: Yes

#### **Time-Weighted Returns**

#### Performance vs Callan Real Estate ODCE



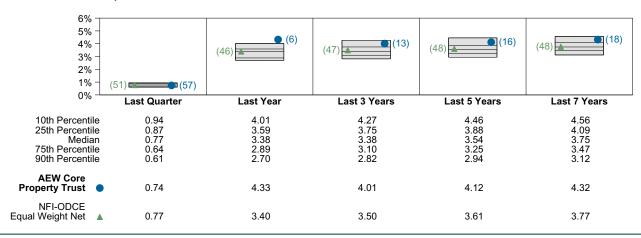


# **AEW Core Property Trust Return Analysis**

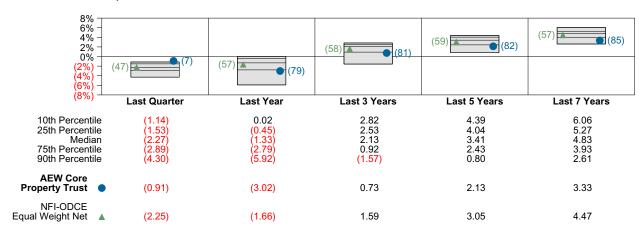
#### **Return Analysis**

The graphs below give a detailed analysis of the portfolio's return by decomposing it into component subreturns. The first chart shows the portfolio's income return ranked against the income returns of the appropriate peer group. The second chart performs the same comparison using appreciation returns. The bottom graph illustrates the historical composition of total return on an income versus appreciation basis.

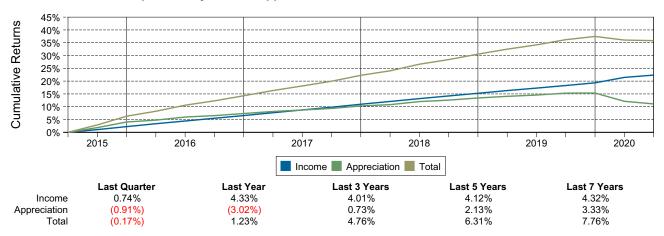
#### Income Rankings vs Callan Real Estate ODCE Periods ended June 30, 2020



#### **Appreciation Rankings vs Callan Real Estate ODCE** Periods ended June 30, 2020



#### **Cumulative Return Composition by Income/Appreciation**

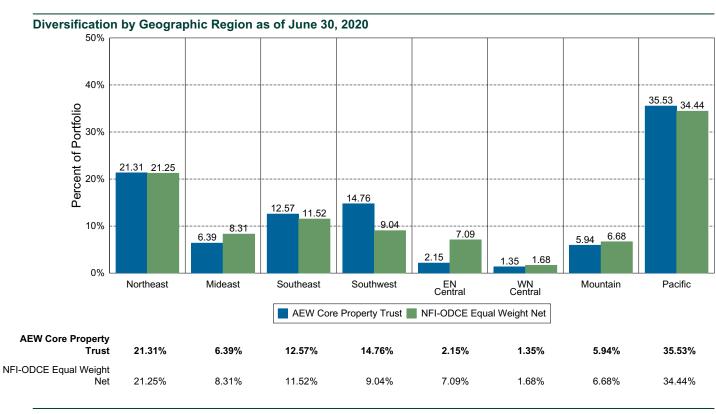


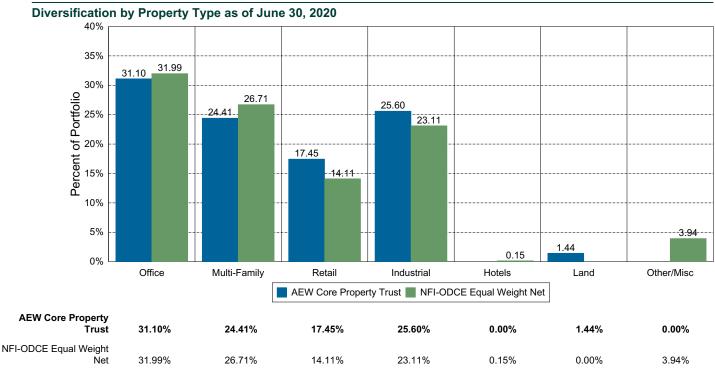


# **AEW Core Property Trust** Diversification Analysis as of June 30, 2020

#### **Diversification Analysis**

The following charts provide information on the diversification of the portfolio with regards to both Geographic Region and Property Type. Similar information is provided on the relevant market index for comparison.







# **AEW Core Property Trust Real Estate Portfolio Quarterly Changes in Market Value**

|         | Beg. of       | Capital        |              |           |                |                | End of        |
|---------|---------------|----------------|--------------|-----------|----------------|----------------|---------------|
|         | Period        | + Contri-      | + Accounting | - Mgmt.   | + Appre-       | - Distri-      | = Period      |
|         | <u>Market</u> | <u>butions</u> | Income       | Fees      | <u>ciation</u> | <u>butions</u> | <u>Market</u> |
| 06/2013 | 0             | 15,000,000     | 192,549      | 41,231    | 268,915        | 150,824        | 15,269,410    |
| 09/2013 | 15,269,410    | 150,824        | 226,706      | 42,517    | 306,680        | 183,696        | 15,727,407    |
| 12/2013 | 15,727,407    | 183,696        | 303,012      | 37,398    | 206,218        | 264,988        | 16,117,946    |
| 03/2014 | 16,117,946    | 33,222,276     | 623,003      | 114,914   | 522,479        | 507,204        | 49,863,586    |
| 06/2014 | 49,863,586    | 17,549,916     | 905,459      | 156,899   | 670,175        | 747,422        | 68,084,815    |
| 09/2014 | 68,084,815    | 747,422        | 944,637      | 161,067   | 1,139,287      | 783,065        | 69,972,030    |
| 12/2014 | 69,972,030    | 783,065        | 972,401      | 155,837   | 1,251,272      | 816,196        | 72,006,735    |
| 03/2015 | 72,006,735    | 816,196        | 972,694      | 168,586   | 638,759        | 802,613        | 73,463,185    |
| 06/2015 | 73,463,185    | 802,613        | 988,196      | 175,043   | 2,143,959      | 812,347        | 76,410,562    |
| 09/2015 | 76,410,562    | 812,347        | 993,811      | 179,848   | 1,412,205      | 813,198        | 78,635,878    |
| 12/2015 | 78,635,878    | 813,198        | 1,102,620    | 185,579   | 1,714,754      | 916,324        | 81,164,548    |
| 03/2016 | 81,164,548    | 916,324        | 1,093,744    | 188,677   | 587,895        | 904,050        | 82,669,785    |
| 06/2016 | 82,669,785    | 904,050        | 1,056,494    | 192,513   | 960,689        | 863,229        | 84,535,275    |
| 09/2016 | 84,535,275    | 863,229        | 1,067,747    | 195,238   | 442,537        | 872,662        | 85,840,887    |
| 12/2016 | 85,840,887    | 872,662        | 1,061,970    | 198,421   | 669,007        | 1,883,889      | 86,362,215    |
| 03/2017 | 86,362,215    | 1,883,889      | 1,121,855    | 201,427   | 659,254        | 918,903        | 88,906,884    |
| 06/2017 | 88,906,884    | 918,903        | 1,108,522    | 204,264   | 473,117        | 903,013        | 90,300,149    |
| 09/2017 | 90,300,149    | 903,013        | 1,102,049    | 207,192   | 526,719        | 894,277        | 91,730,462    |
| 12/2017 | 91,730,462    | 894,277        | 1,183,353    | 210,963   | 818,534        | 971,684        | 93,443,979    |
| 03/2018 | 93,443,979    | 971,684        | 1,136,185    | 213,730   | 434,496        | 921,771        | 94,850,842    |
| 06/2018 | 94,850,842    | 921,771        | 1,168,295    | 217,903   | 1,040,248      | 950,028        | 96,813,226    |
| 09/2018 | 96,813,226    | 950,028        | 1,118,223    | 220,758   | 493,999        | 897,095        | 98,257,623    |
| 12/2018 | 98,257,623    | 897,095        | 1,133,631    | 224,184   | 742,068        | 908,760        | 99,897,474    |
| 03/2019 | 99,897,474    | 908,760        | 1,150,344    | 227,250   | 570,092        | 922,837        | 101,376,583   |
| 06/2019 | 101,376,583   | 922,837        | 1,075,108    | 229,901   | 450,896        | 843,976        | 102,751,546   |
| 09/2019 | 102,751,546   | 843,976        | 1,119,293    | 233,149   | 682,271        | 885,396        | 104,278,542   |
| 12/2019 | 104,278,542   | 885,396        | 1,172,671    | 235,080   | 39,159         | 937,079        | 105,203,610   |
| 03/2020 | 105,203,610   | 937,079        | 1,178,343    | 232,381   | (2,059,881)    | 945,134        | 104,081,635   |
| 06/2020 | 104,081,635   | 945,134        | 1,010,789    | 231,759   | (955,162)      | 694,811        | 104,155,826   |
|         | 0             | 88,221,661     | 28,283,703   | 5,283,708 | 16,850,641     | 23,916,472     | 104,155,826   |

Returns

Net Portfolio Cumulative IRR = 7.50%

Ratios

Capital Account = \$104,155,826 Total Value = \$128,072,298

Committed Capital = \$65,000,000

Paid In Capital = \$88,221,661

Remaining Commitment = \$(23,221,661)

PIC Multiple (Paid In Capital/Committed Capital) = 135.73%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$80,934,165

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.45x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.27x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 1.18x



# **AEW Partners V Fund (Liquidating)** Real Estate Portfolio Quarterly Changes in Market Value

|         | Beg. of       | Capital        |              |         |                | Dist. of    | Return         | End of        |
|---------|---------------|----------------|--------------|---------|----------------|-------------|----------------|---------------|
|         | Period        | + Contri-      | + Accounting | - Mgmt. | + Appre-       | - Income &  | - of           | = Period      |
|         | <u>Market</u> | <u>butions</u> | Income       | Fees    | <u>ciation</u> | Real. Gains | <u>Capital</u> | <u>Market</u> |
| 03/2006 | 0             | 0              | (10,691)     | 62,496  | (375)          | 0           | 0              | (73,562)      |
| 06/2006 | (73,562)      | 1,020,258      | (6,842)      | 15,624  | 1,494          | 0           | 0              | 925,724       |
| 09/2006 | 925,724       | 291,502        | (9,963)      | 15,624  | 148,054        | 0           | 0              | 1,339,693     |
| 12/2006 | 1,339,693     | 510,130        | (18,629)     | 15,624  | 50,129         | 0           | 0              | 1,865,699     |
| 03/2007 | 1,865,699     | 400,815        | (3,631)      | 15,624  | 246,300        | 0           | 0              | 2,493,559     |
| 06/2007 | 2,493,559     | 473,692        | 59           | 15,624  | 20,060         | 394,252     | 266,875        | 2,310,619     |
| 09/2007 | 2,310,619     | 218,627        | (8,353)      | 15,624  | 64,064         | 60,803      | 73,107         | 2,435,423     |
| 12/2007 | 2,435,423     | 364,377        | (41,023)     | 15,624  | 119,263        | 130,203     | 233,493        | 2,498,720     |
| 03/2008 | 2,498,720     | 0              | (16,992)     | 15,624  | (2,829)        | 0           | 0              | 2,463,275     |
| 06/2008 | 2,463,275     | 218,627        | (10,892)     | 15,624  | 1,864          | 0           | 0              | 2,657,250     |
| 09/2008 | 2,657,250     | 255,065        | (18,094)     | 15,624  | (81,085)       | 71,057      | 0              | 2,726,455     |
| 12/2008 | 2,726,455     | 0              | (48,501)     | 15,624  | (475,775)      | 0           | 0              | 2,186,555     |
| 03/2009 | 2,186,555     | 0              | (31,084)     | 15,624  | (226,975)      | 0           | 0              | 1,912,872     |
| 06/2009 | 1,912,872     | 72,876         | (12,072)     | 15,624  | (399,859)      | 0           | 0              | 1,558,193     |
| 09/2009 | 1,558,193     | 145,751        | (3,089)      | 15,624  | (116,486)      | 0           | 0              | 1,568,745     |
| 12/2009 | 1,568,745     | 255,065        | (18,922)     | 15,624  | (121,104)      | 0           | 0              | 1,668,160     |
| 03/2010 | 1,668,160     | 54,657         | 5,561        | 15,624  | (2,035)        | 0           | 0              | 1,710,719     |
| 06/2010 | 1,710,719     | 36,438         | 19,498       | 8,787   | (8,825)        | 0           | 0              | 1,749,043     |
| 09/2010 | 1,749,043     | 0              | 18,526       | 8,900   | 8,102          | 0           | 0              | 1,766,771     |
| 12/2010 | 1,766,771     | 0              | 3,293        | 8,652   | 140,005        | 0           | 23,822         | 1,877,595     |
| 03/2011 | 1,877,595     | 0              | 9,503        | 8,335   | 27,763         | 0           | 0              | 1,906,526     |
| 06/2011 | 1,906,526     | 36,438         | 33,690       | 8,353   | 15,832         | 164,029     | 101,225        | 1,718,879     |
| 09/2011 | 1,718,879     | 94,738         | 28,188       | 7,928   | 38,997         | 0           | 170,893        | 1,701,981     |
| 12/2011 | 1,701,981     | 0              | 14,509       | 7,681   | 114,184        | 0           | 254,718        | 1,568,275     |
| 03/2012 | 1,568,275     | 36,438         | 10,990       | 7,362   | 119,211        | 0           | 0              | 1,727,552     |
| 06/2012 | 1,727,552     | 0              | 32,599       | 7,354   | 7,609          | 0           | 0              | 1,760,406     |
| 09/2012 | 1,760,406     | 0              | 26,358       | 6,983   | 36,202         | 108,985     | 108,985        | 1,598,013     |
| 12/2012 | 1,598,013     | 0              | 7,601        | 7,025   | 58,792         | 0           | 0              | 1,657,381     |
| 03/2013 | 1,657,381     | 0              | 5,395        | 6,412   | 58,128         | 0           | 228,726        | 1,485,766     |
| 06/2013 | 1,485,766     | 0              | 27,435       | 6,108   | 72,403         | 28,949      | 0              | 1,550,547     |
| 09/2013 | 1,550,547     | 0              | 21,228       | 6,120   | 91,248         | 0           | 0              | 1,656,903     |
| 12/2013 | 1,656,903     | 0              | 6,847        | 5,041   | 58,200         | 0           | 509,333        | 1,207,576     |
| 03/2014 | 1,207,576     | 0              | 16,028       | 4,468   | 62,521         | 21,722      | 0              | 1,259,935     |
| 06/2014 | 1,259,935     | 0              | 21,482       | 4,504   | 74,475         | 0           | 11             | 1,351,377     |
| 09/2014 | 1,351,377     | 0              | 12,932       | 4,255   | 146,252        | 261,949     | 0              | 1,244,357     |
| 12/2014 | 1,244,357     | 0              | 11,785       | 3,811   | 158,974        | 0           | 79,920         | 1,331,385     |
| 03/2015 | 1,331,385     | 0              | 9,666        | 3,671   | 70,587         | 0           | 134,705        | 1,273,262     |
| 06/2015 | 1,273,262     | 0              | 24,291       | 3,452   | 64,435         | 0           | 597,371        | 761,165       |
| 09/2015 | 761,165       | 0              | 6,913        | 2,216   | 53,138         | 62,673      | 534,757        | 221,570       |
| 12/2015 | 221,570       | 0              | (2,783)      | 899     | 40,448         | 76,779      | 36,124         | 145,433       |
| 03/2016 | 145,433       | 0              | 1,225        | 509     | 186            | 29,111      | 0              | 117,224       |
| 06/2016 | 117,224       | 0              | 1,798        | 458     | 1,460          | 43,696      | 0              | 76,328        |
| 09/2016 | 76,328        | 0              | (1,254)      | 0       | 3,940          | 0           | 29,137         | 49,877        |
| 12/2016 | 49,877        | 0              | (1,681)      | 0       | 12,581         | 11,660      | 17,490         | 31,627        |
| 03/2017 | 31,627        | 0              | 201          | 0       | 0              | 0           | 0              | 31,828        |
| 06/2017 | 31,828        | 0              | (206)        | 0       | 199            | 0           | 0              | 31,821        |
| 09/2017 | 31,821        | 0              | (457)        | 0       | 463            | 0           | 12,389         | 19,438        |
|         |               |                |              |         |                |             |                |               |



# **AEW Partners V Fund (Liquidating) Real Estate Portfolio Quarterly Changes in Market Value**

|         | Beg. of       | Capital        |              |         |                | Dist. of    | Return         | End       | d of |
|---------|---------------|----------------|--------------|---------|----------------|-------------|----------------|-----------|------|
|         | Period        | + Contri-      | + Accounting | - Mgmt. | + Appre-       | - Income &  | - of           | = Per     | riod |
|         | <u>Market</u> | <u>butions</u> | Income       | Fees    | <u>ciation</u> | Real. Gains | <u>Capital</u> | <u>Ma</u> | rket |
| 12/2017 | 19,438        | 0              | (643)        | 0       | 27,792         | 0           | 29,150         | 17,       | 437  |
| 03/2018 | 17,437        | 0              | (363)        | 0       | 1,863          | 0           | 0              | 18,       | 937  |
| 06/2018 | 18,937        | 0              | 0            | 0       | (1,522)        | 0           | 0              | 17,       | 415  |
| 09/2018 | 17,415        | 0              | (93)         | 0       | 2,525          | 0           | 7,288          | 12,       | 559  |
| 12/2018 | 12,559        | 0              | (116)        | 0       | (703)          | 0           | 0              | 11,       | 740  |
| 03/2019 | 11,740        | 0              | 1,378        | 0       | (974)          | 0           | 0              | 12,       | 144  |
| 06/2019 | 12,144        | 0              | (340)        | 0       | 21             | 0           | 0              | 11,       | 825  |
| 09/2019 | 11,825        | 0              | (129)        | 0       | (88)           | 0           | 0              | 11,       | 608  |
| 12/2019 | 11,608        | 0              | (235)        | 0       | 672            | 0           | 0              | 12,       | 045  |
| 03/2020 | 12,045        | 0              | (209)        | 0       | (1,667)        | 0           | 0              | 10,       | 169  |
| 06/2020 | 10,169        | 0              | (94)         | 0       | 368            | 0           | 0              | 10,       | 443  |
|         | 0             | 4,485,494      | 111,598      | 451,764 | 780,502        | 1,465,868   | 3,449,519      | 10,       | 443  |

Returns Net Portfolio Cumulative IRR = 1.96%

Ratios

Capital Account = \$10,443 Total Value = \$4,925,830

Committed Capital = \$5,000,000

Paid In Capital = \$4,485,494

Remaining Commitment = \$514,506

PIC Multiple (Paid In Capital/Committed Capital) = 89.71% Total Economic Exposure (Capital Account + Remaining Commitment) = \$524,949

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.10x

DPI Realization Multiple (Distributions/Paid In Capital) = 1.10x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.00x



# **Public Real Assets** Period Ended June 30, 2020

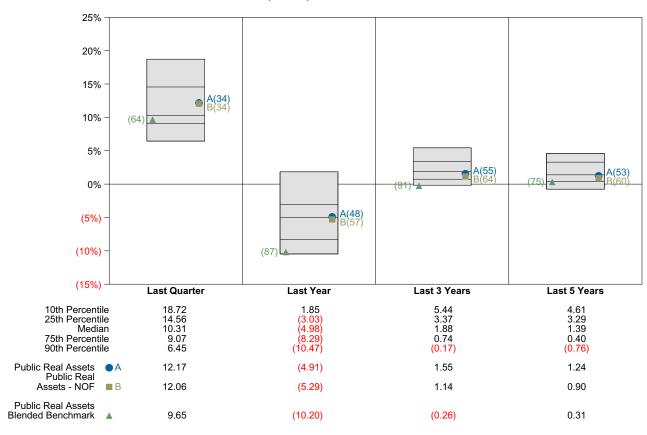
#### **Quarterly Summary and Highlights**

- Public Real Assets's portfolio posted a 12.17% return for the quarter placing it in the 34 percentile of the Callan Real Assets Database group for the quarter and in the 48 percentile for the last year.
- Public Real Assets's portfolio outperformed the Public Real Assets Blended Benchmark by 2.52% for the quarter and outperformed the Public Real Assets Blended Benchmark for the year by 5.28%.

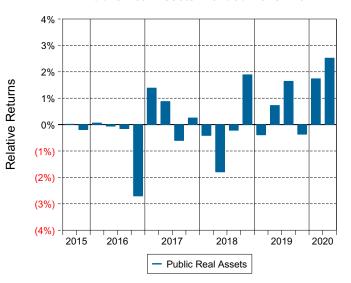
#### **Quarterly Asset Growth**

Beginning Market Value \$140,661,243 Net New Investment \$-62,504 Investment Gains/(Losses) \$17,117,639 **Ending Market Value** \$157,716,379

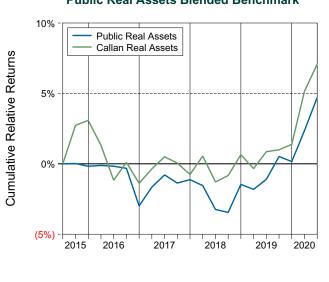
# Performance vs Callan Real Assets Database (Gross)



#### Relative Returns vs **Public Real Assets Blended Benchmark**



#### **Cumulative Returns vs Public Real Assets Blended Benchmark**





# BlackRock TIPS Index Fund Period Ended June 30, 2020

#### **Investment Philosophy**

BlackRock TIPS Index Fund was funded in 2Q15. The first full quarter of performance is 3Q15. Prior performance is that of the manager's composite.

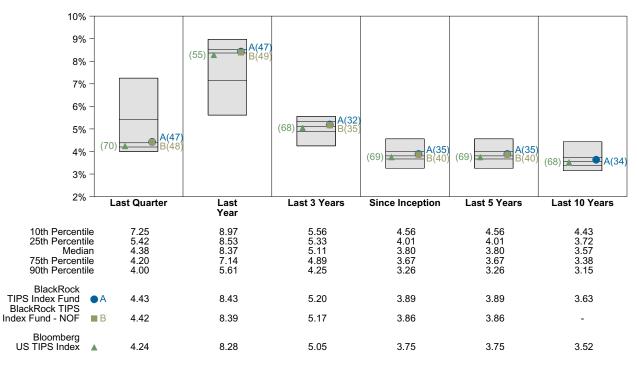
#### **Quarterly Summary and Highlights**

- BlackRock TIPS Index Fund's portfolio posted a 4.43% return for the quarter placing it in the 47 percentile of the Real Returns Database group for the quarter and in the 47 percentile for the last year.
- BlackRock TIPS Index Fund's portfolio outperformed the Bloomberg US TIPS Index by 0.18% for the quarter and outperformed the Bloomberg US TIPS Index for the year by 0.15%.

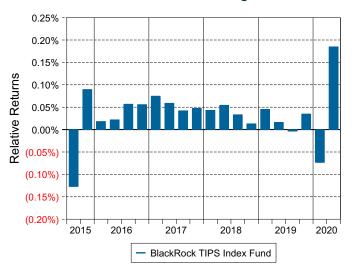
| Quarterly | Asset | Growth |
|-----------|-------|--------|
|-----------|-------|--------|

| Beginning Market Value    | \$39,169,617 |
|---------------------------|--------------|
| Net New Investment        | \$0          |
| Investment Gains/(Losses) | \$1,733,656  |
| Ending Market Value       | \$40,903,273 |

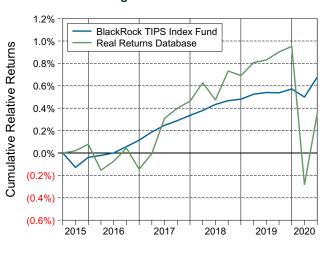
#### Performance vs Real Returns Database (Gross)



#### Relative Return vs Bloomberg US TIPS Index



#### Cumulative Returns vs Bloomberg US TIPS Index



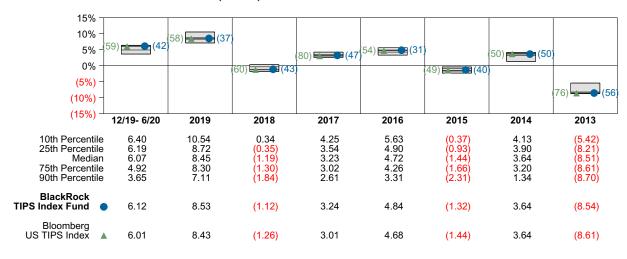


# BlackRock TIPS Index Fund **Return Analysis Summary**

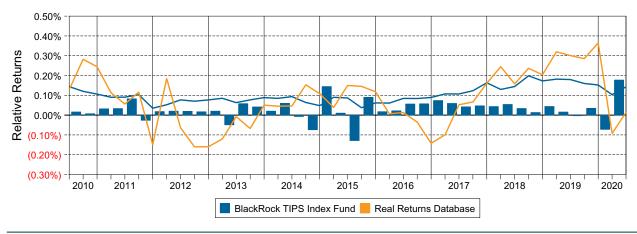
#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 12 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

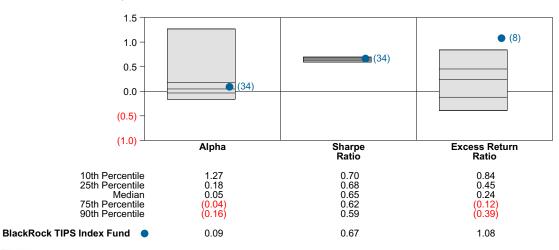
#### Performance vs Real Returns Database (Gross)



Rolling 12 Quarter and Quarterly Relative Return vs Bloomberg US TIPS Index



Risk Adjusted Return Measures vs Bloomberg US TIPS Index Rankings Against Real Returns Database (Gross) Ten Years Ended June 30, 2020





# BlackRock REIT Index Fund Period Ended June 30, 2020

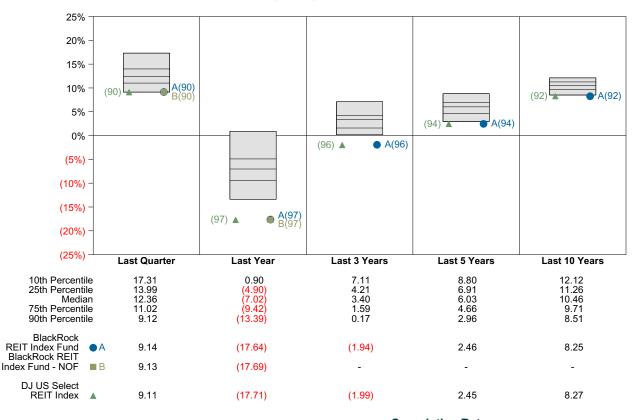
#### **Investment Philosophy**

BlackRock REIT Index Fund was funded in 3Q17. The first full quarter of performance is 4Q17. Prior performance is that of the manager's composite.

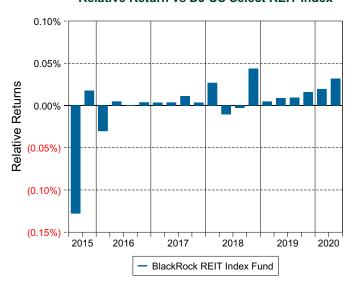
#### **Quarterly Summary and Highlights**

- BlackRock REIT Index Fund's portfolio posted a 9.14% return for the quarter placing it in the 90 percentile of the Callan Real Estate Mutual Funds group for the quarter and in the 97 percentile for the last year.
- BlackRock REIT Index Fund's portfolio outperformed the DJ US Select REIT Index by 0.03% for the quarter and outperformed the DJ US Select REIT Index for the year by 0.07%.

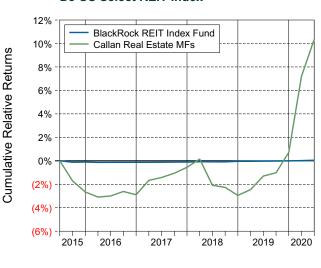
# Performance vs Callan Real Estate Mutual Funds (Gross)



#### Relative Return vs DJ US Select REIT Index



#### Cumulative Returns vs DJ US Select REIT Index



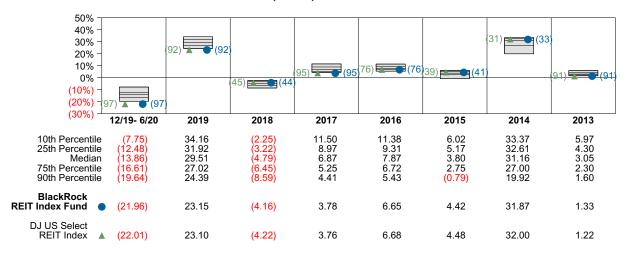


# BlackRock REIT Index Fund **Return Analysis Summary**

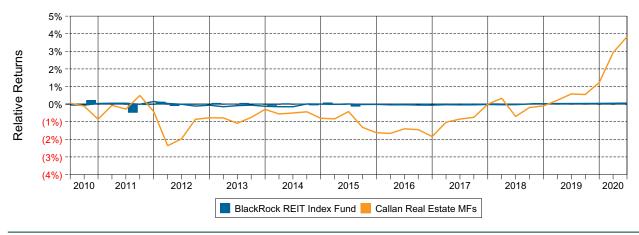
#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 12 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

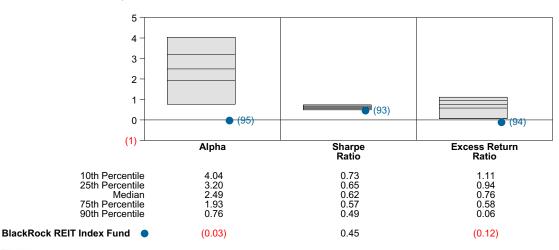
#### Performance vs Callan Real Estate Mutual Funds (Gross)



Rolling 12 Quarter and Quarterly Relative Return vs DJ US Select REIT Index



Risk Adjusted Return Measures vs DJ US Select REIT Index Rankings Against Callan Real Estate Mutual Funds (Gross) Ten Years Ended June 30, 2020





# **Invesco Commodity Fund** Period Ended June 30, 2020

#### **Investment Philosophy**

INVESCO Commodities Index Fund was funded in 2Q16. The first full guarter of performance is 3Q16. Prior performance is that of the manager's composite.

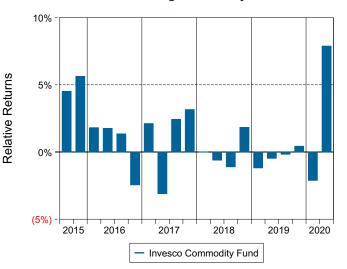
#### **Quarterly Summary and Highlights**

- Invesco Commodity Fund's portfolio posted a 12.97% return for the quarter placing it in the 21 percentile of the Callan Commodities group for the quarter and in the 33 percentile for the last year.
- Invesco Commodity Fund's portfolio outperformed the Bloomberg Commodity Index by 7.89% for the quarter and outperformed the Bloomberg Commodity Index for the year by 3.96%.

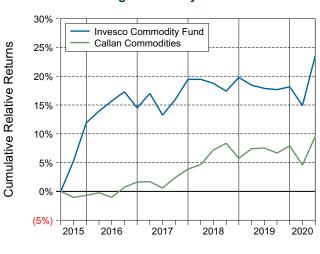
# Performance vs Callan Commodities (Gross)



# Relative Returns vs **Bloomberg Commodity Index**



#### **Cumulative Returns vs Bloomberg Commodity Index**



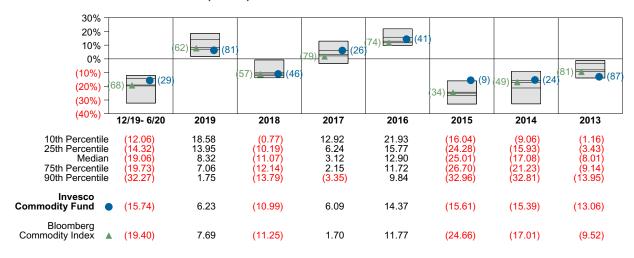


# **Invesco Commodity Fund Return Analysis Summary**

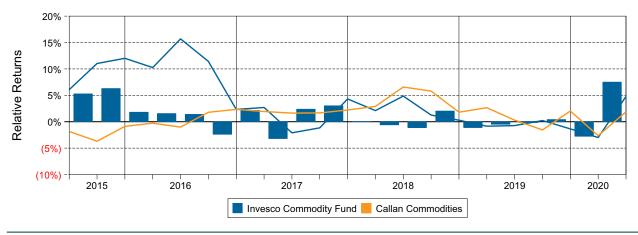
#### **Return Analysis**

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and 4 quarter rolling manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

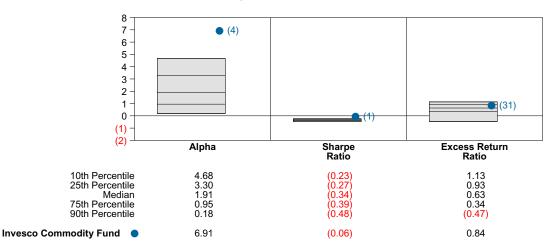
#### Performance vs Callan Commodities (Gross)



Rolling 4 Quarter and Quarterly Relative Return vs Bloomberg Commodity Index



Risk Adjusted Return Measures vs Bloomberg Commodity Index **Rankings Against Callan Commodities (Gross)** Eleven and Three-Quarter Years Ended June 30, 2020



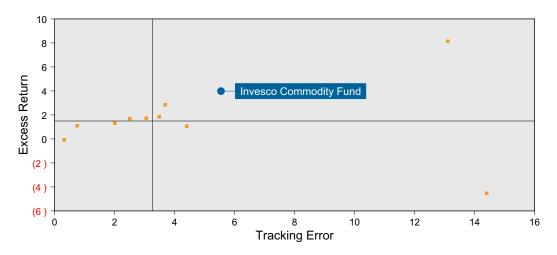


# **Invesco Commodity Fund Risk Analysis Summary**

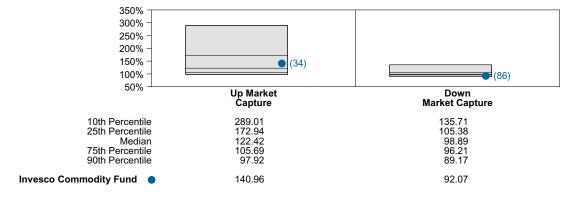
#### Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

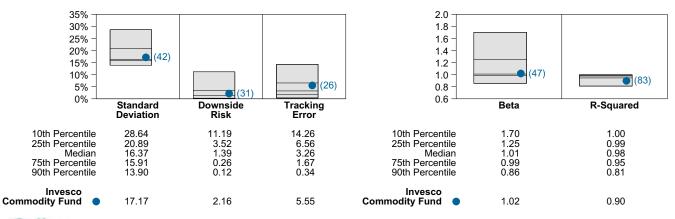
#### Risk Analysis vs Callan Commodities (Gross) Five Years Ended June 30, 2020



#### Market Capture vs Bloomberg Commodity Index Rankings Against Callan Commodities (Gross) Five Years Ended June 30, 2020



#### Risk Statistics Rankings vs Bloomberg Commodity Index Rankings Against Callan Commodities (Gross) Five Years Ended June 30, 2020





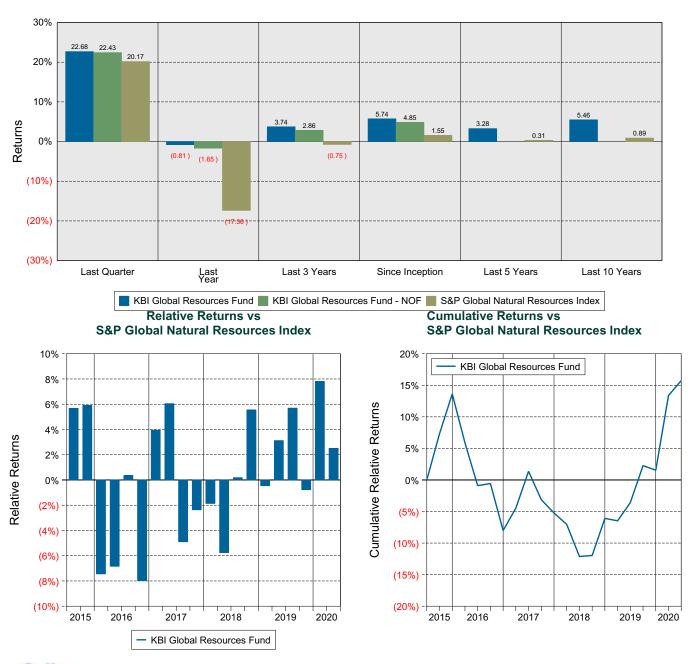
# **KBI Global Resources Fund** Period Ended June 30, 2020

#### **Investment Philosophy**

Kleinwort Benson Investors' environmental strategies provide investors with the opportunity to achieve strong long-term returns and potential portfolio diversification from investing in companies providing solutions to their greatest global resource challenges. There are compelling investment opportunities in companies providing solutions to resource scarcity across water, food and energy driven by five long term trends: inadequate supply of water, cleaner energy and arable land for farming; increasing demand for resources driven by population growth, industrialisation and urbanisation; increasing regulation and government support; increasing investment in Infrastructure to facilitate provision and management of resources; and increasing investment in technology to create solutions and facilitate the more efficient use of resources. KBI Global Resources Fund was funded in 3Q16. The first full quarter of performance is 4Q16. Prior performance is that of the manager's composite.

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

KBI Global Resources Fund's portfolio outperformed the S&P Global Natural Resources Index by 2.51% for the quarter and outperformed the S&P Global Natural Resources Index for the year by 16.55%.

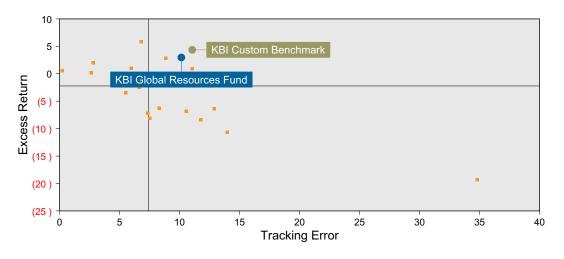


# **KBI Global Resources Fund Risk Analysis Summary**

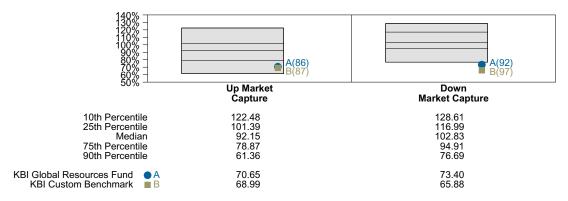
#### Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

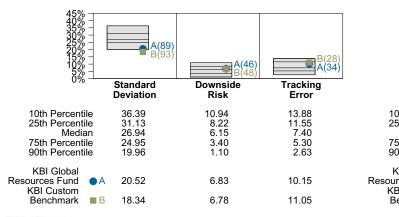
#### Risk Analysis vs Callan Global Natural Rsrcs Mut Funds (Gross) Five Years Ended June 30, 2020

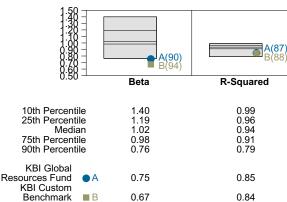


Market Capture vs S&P Global Natural Resources Index Rankings Against Callan Global Natural Rsrcs Mut Funds (Gross) Five Years Ended June 30, 2020



Risk Statistics Rankings vs S&P Global Natural Resources Index Rankings Against Callan Global Natural Rsrcs Mut Funds (Gross) Five Years Ended June 30, 2020





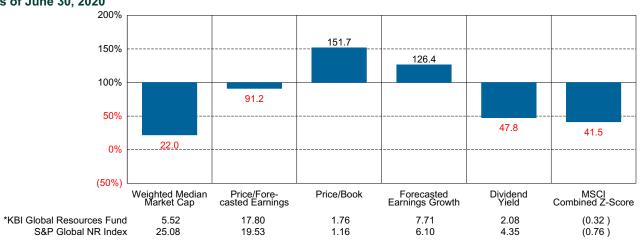


# **KBI Global Resources Fund Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

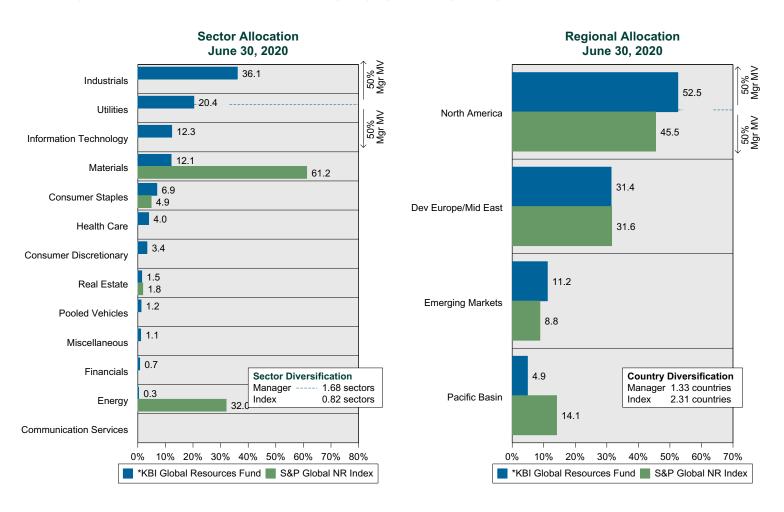
This graph compares the manager's portfolio characteristics relative to the benchmark's portfolio characteristics.

#### Portfolio Characteristics Relative to S&P Global NR Index as of June 30, 2020



#### **Sector Weights**

The graph below contrasts the manager's sector weights for the most recent quarter with those of the benchmark. The regional allocation chart also compares the manager's geographical region weights with those of the benchmark.

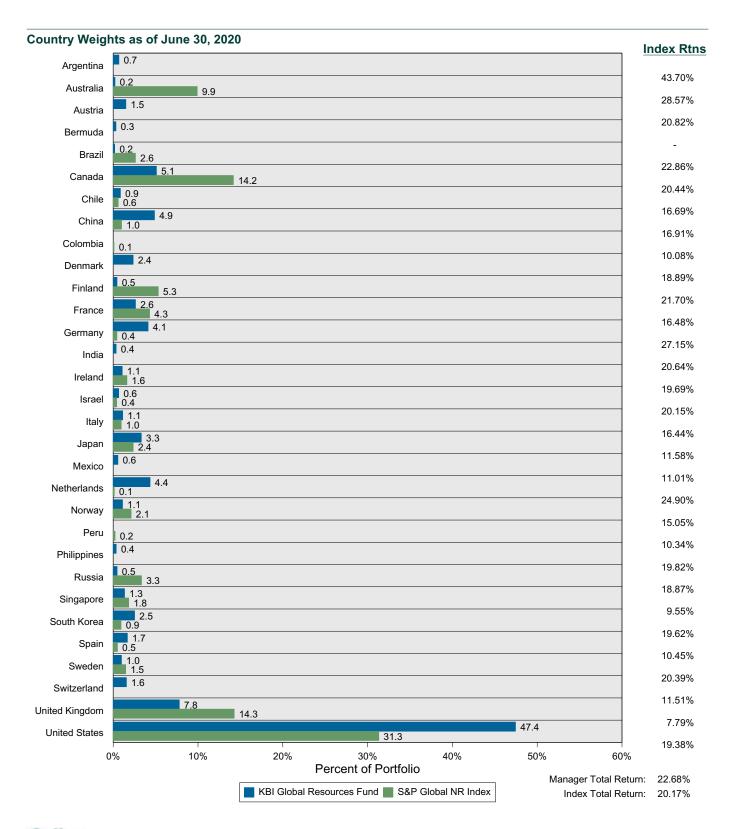




# **Country Allocation** KBI Global Resources Fund VS S&P Global NR Index

#### **Country Allocation**

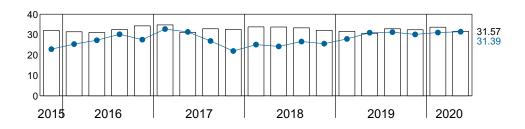
The chart below contrasts the portfolio's country allocation with that of the index as of June 30, 2020. This chart is useful because large deviations in country allocation relative to the index are often good predictors of tracking error in the subsequent guarter. To the extent that the portfolio allocation is similar to the index, the portfolio should experience more "index-like" performance. In order to illustrate the performance effect on the portfolio and index of these country allocations, the individual index country returns are also shown.



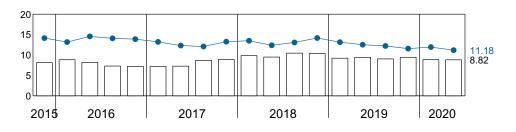


# Marin County Employees' Retirement Association **History of Ending Regional Weights** Period Ended June 30, 2020

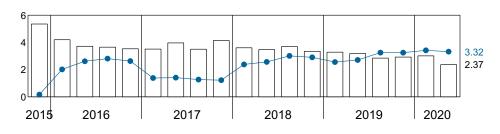
# **Dev Europe/Mid East**



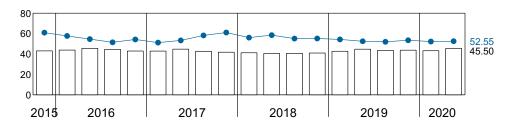
# **Emerging Markets**



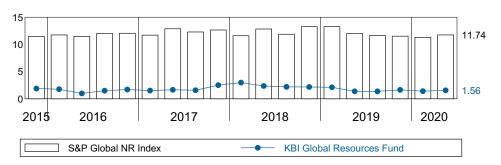
#### Japan



## **North America**



# **Pacific Basin**

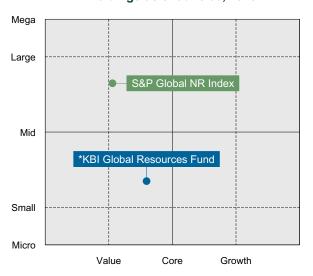




# **Current Holdings Based Style Analysis KBI Global Resources Fund** As of June 30, 2020

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

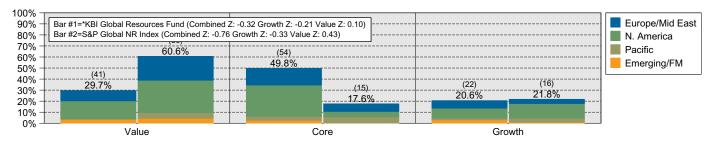
#### Style Map vs Callan Gbl Nat Res MF Holdings as of June 30, 2020



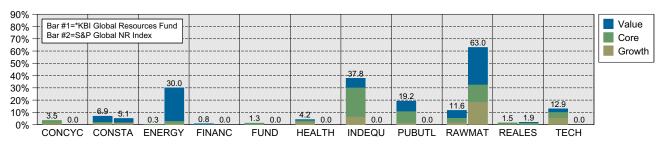
#### **Style Exposure Matrix** Holdings as of June 30, 2020

|                 | Value      | Core       | Growth     | Total        |
|-----------------|------------|------------|------------|--------------|
|                 | 60.6% (50) | 17.6% (15) | 21.8% (16) | 100.0% (81)  |
| Total           |            |            |            |              |
|                 | 29.7% (41) | 49.8% (54) | 20.6% (22) | 100.0% (117) |
| Emerging/<br>FM | 4.3% (5)   | 0.0% (0)   | 0.8% (2)   | 5.1% (7)     |
| <b>-</b> /      | 3.6% (8)   | 2.5% (4)   | 3.0% (3)   | 9.1% (15)    |
|                 | 5.3% (6)   | 5.6% (2)   | 3.8% (3)   | 14.7% (11)   |
| Pacific         | 0.170 (1)  | 0.070 (2)  | 1.0 % (2)  | 0.170 (0)    |
|                 | 0.1% (1)   | 3.5% (2)   | 1.5% (2)   | 5.1% (5)     |
| 14.741101104    | 29.3% (26) | 4.9% (5)   | 13.2% (7)  | 47.4% (38)   |
| N. America      | 16.5% (20) | 28.5% (32) | 9.1% (10)  | 54.1% (62)   |
| Mid East        | 21.8% (13) | 7.0% (8)   | 4.1% (4)   | 32.9% (25)   |
| Europe/         | 9.5% (12)  | 15.3% (16) | 6.9% (7)   | 31.7% (35)   |

# **Combined Z-Score Style Distribution** Holdings as of June 30, 2020



# **Sector Weights Distribution** Holdings as of June 30, 2020



<sup>\*6/30/20</sup> portfolio characteristics generated using most recently available holdings (3/31/20) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

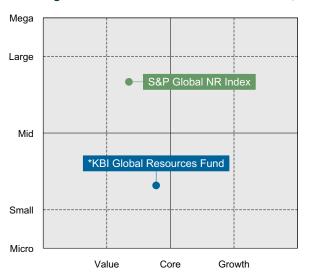


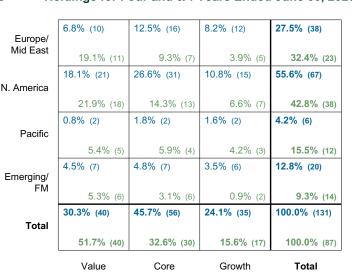
# **Historical Holdings Based Style Analysis KBI Global Resources Fund** For Four and 3/4 Years Ended June 30, 2020

This page analyzes the historical investment style of a portfolio utilizing a detailed holdings-based style analysis to determine average actual exposures to various region and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the average historical market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the average historical portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The next two style exposure charts illustrate the actual quarterly region/style and style only segment exposures of the portfolio through history.

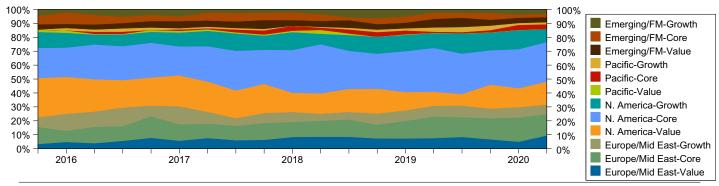
# Average Style Map vs Callan Gbl Nat Res MF Holdings for Four and 3/4 Years Ended June 30, 2020

## **Average Style Exposure Matrix** Holdings for Four and 3/4 Years Ended June 30, 2020

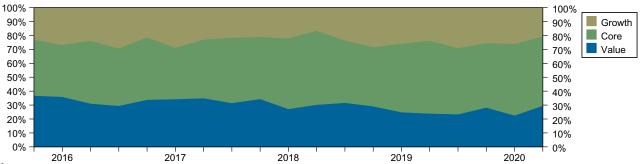




#### \*KBI Global Resources Fund Historical Region/Style Exposures



\*KBI Global Resources Fund Historical Style Only Exposures



\*6/30/20 portfolio characteristics generated using most recently available holdings (3/31/20) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.



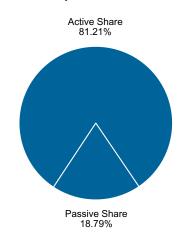
# **KBI Global Resources Fund** Active Share Analysis as of June 30, 2020 vs. S&P Global Natural Resources Index

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.

#### **Holdings-Level Active Share**

# Index Active Share 46.26% Passive Share 9.56% Non-Index Active Share 44.18%

#### **Sector Exposure Active Share**

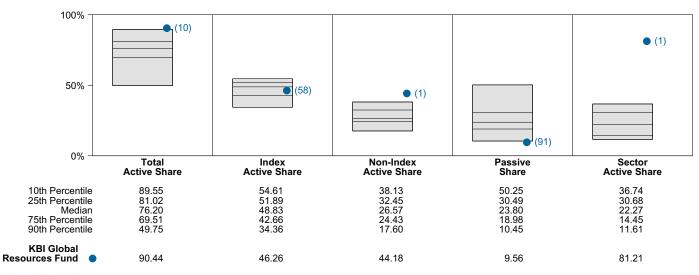


Total Active Share: 90.44%

Consumer Discretionary Consumer Staples Energy Financials Health Care Industrials Information Technology Materials **Pooled Vehicles** Real Estate Utilities Total

| Index<br>Active Share<br>Within Sector | Non-Index<br>Active Share<br>Within Sector | Total<br>Active Share<br>Within Sector | Index<br>Weight | Manager<br>Weight | Contribution to<br>Total Portfolio<br>Active Share |
|--|--|--|-----------------|-------------------|--|
| 0.00%                                  | 100.00%                                    | 100.00%                                | -               | 3.36%             | 1.68%  |
| 24.16%                                 | 16.83%                                     | 40.99%                                 | 4.89%           | 6.94%             | 2.01%  |
| 50.00%                                 | 50.00%                                     | 100.00%                                | 32.04%          | 0.33%             | 16.18%   |
| 0.00%                                  | 100.00%                                    | 100.00%                                | -               | 0.72%             | 0.36%  |
| 0.00%                                  | 100.00%                                    | 100.00%                                | -               | 3.98%             | 1.99%  |
| 0.00%                                  | 100.00%                                    | 100.00%                                | -               | 36.11%            | 18.06%   |
| 0.00%                                  | 100.00%                                    | 100.00%                                | -               | 12.33%            | 6.17%  |
| 65.94%                                 | 20.95%                                     | 86.89%                                 | 61.24%          | 12.11%            | 31.04%   |
| 0.00%                                  | 100.00%                                    | 100.00%                                | -               | 1.22%             | 0.61%  |
| 50.00%                                 | 50.00%                                     | 100.00%                                | 1.84%           | 1.47%             | 1.64%  |
| 0.00%                                  | 100.00%                                    | 100.00%                                | -               | 20.35%            | 10.18%   |
| 46.26%                                 | 44.18%                                     | 90.44%                                 | 100.00%         | 100.00%           | 89.90%   |

#### Active Share vs. Callan Gbl Nat Res MF





# Total Private Equity Period Ended March 31, 2020

## **Private Equity Allocation Overview**

The MCERA private equity portfolio was initiated in 2008 and currently utilizes two gatekeepers, Abbott Capital ("Abbott") and Pathway Capital Management ("Pathway"), to help the plan reach its desired private equity allocation of 8%. MCERA is invested in fund-of-funds vehicles.

|  | March 31, 2020  | Quarter<br>Change | December 31, 2019 |
|--|-----------------|-------------------|-------------------|
| Summary                                  | ·               |                   | ·                 |
| Vintage Years                            | 13 in 2008-2020 |                   | 13 in 2008-2020   |
| # Total Partnerships                     | 358             | 1                 | 357               |
| # Active Partnerships                    | 355             | 1                 | 354               |
| # Liquidated Partnerships                | 3               | -                 | 3                 |
| Changes in Value                         |                 |                   |                   |
| Capital Commitments                      | \$400,000,000   | -                 | \$400,000,000     |
| Paid-In Capital                          | \$341,520,282   | \$5,768,820       | \$335,751,462     |
| Uncalled Capital                         | \$58,539,067    | \$(5,768,820)     | \$64,307,887      |
| % Paid-In                                | 85.38%          | 1.44%             | 83.94%            |
| Distributed Capital                      | \$241,504,608   | \$6,558,171       | \$234,946,437     |
| Net Asset Value                          | \$265,943,305   | \$(26,675,303)    | \$292,618,608     |
| Total Realized and Unrealized Value      | \$507,447,913   | \$(20,117,132)    | \$527,565,045     |
| Ratios and Performance                   |                 |                   |                   |
| Distributions to Paid-In Capital (DPI)   | 0.71x           | 0.01x             | 0.70x             |
| Residual Value to Paid-In Capital (RVPI) | 0.78x           | (0.09)x           | 0.87x             |
| Total Value to Paid-In Capital (TVPI)    | 1.49x           | (0.09)x           | 1.57x             |
| Quartile Ranking                         | 2nd             |                   | 2nd               |
| Net IRR                                  | 11.42%          | (1.61%)           | 13.03%            |
| Additional Performance Metrics           |                 |                   |                   |
| Distribution Rate, as % of Beginning NAV |                 | 2.24%             |                   |
| Unrealized Gain/(Loss), Dollars          |                 | \$(25,885,951)    |                   |
| Unrealized Gain/(Loss), %                |                 | (8.85%)           |                   |

Quartile rankings against the All Private Equity, All Regions Refinitiv/Cambridge Database. Uncalled capital above does not reflect currency fluctuations for Pathway's investments in foreign partnerships.



# Total Private Equity Private Equity Investment Portfolio Quarterly Changes in Market Value

|         | Beg. of       | Capital        |              |         |                | Dist. of    | Return         | Dist. of     | End of        |
|---------|---------------|----------------|--------------|---------|----------------|-------------|----------------|--------------|---------------|
|         | Period        | + Contri-      | + Accounting | - Mgmt. | + Appre        | Income &    | - of           | - Recallable | = Period      |
|         | <u>Market</u> | <u>butions</u> | Income       | Fees    | <u>ciation</u> | Real. Gains | <u>Capital</u> | Capital      | <u>Market</u> |
| 03/2009 | 0             | 5,623,729      | (301,039)    | 558,424 | (649,009)      | 0           | 0              | 0            | 4,115,257     |
| 06/2009 | 4,115,257     | 225,000        | 10,022       | 331,250 | (68,925)       | 0           | 0              | 0            | 3,950,104     |
| 09/2009 | 3,950,104     | 1,378,170      | (15,473)     | 384,375 | (17,463)       | 0           | 0              | 0            | 4,910,963     |
| 12/2009 | 4,910,963     | 2,035,317      | (45,633)     | 384,375 | 310,671        | 0           | 0              | 0            | 6,826,943     |
| 03/2010 | 6,826,943     | 1,405,159      | (55,406)     | 384,375 | (106,094)      | 0           | 0              | 0            | 7,686,227     |
| 06/2010 | 7,686,227     | 1,225,000      | (19,095)     | 384,375 | (194,748)      | 0           | 0              | 0            | 8,313,009     |
| 09/2010 | 8,313,009     | 2,838,797      | (50,285)     | 437,500 | 411,669        | 0           | 0              | 0            | 11,075,690    |
| 12/2010 | 11,075,690    | 3,963,461      | (110,914)    | 437,500 | 702,011        | 0           | 0              | 0            | 15,192,748    |
| 03/2011 | 15,192,748    | 2,841,483      | (127,842)    | 437,500 | 678,042        | 0           | 0              | 0            | 18,146,931    |
| 06/2011 | 18,146,931    | 3,960,774      | (184,803)    | 437,500 | 996,942        | 133,755     | 69,654         | 0            | 22,278,935    |
| 09/2011 | 22,278,935    | 8,609,888      | (265,645)    | 437,500 | (195,435)      | 0           | 0              | 0            | 29,990,243    |
| 12/2011 | 29,990,243    | 5,617,948      | (175,287)    | 437,500 | 529,487        | 0           | 0              | 0            | 35,524,891    |
| 03/2012 | 35,524,891    | 6,281,785      | (173,125)    | 437,500 | 2,079,434      | 0           | 0              | 0            | 43,275,485    |
| 06/2012 | 43,275,485    | 7,874,800      | (113,404)    | 437,500 | 692,927        | 331,545     | 120,080        | 0            | 50,840,683    |
| 09/2012 | 50,840,683    | 4,558,302      | (303,027)    | 437,500 | 1,105,721      | 260,954     | 215,388        | 0            | 55,287,837    |
| 12/2012 | 55,287,837    | 11,334,284     | (41,281)     | 437,500 | 2,708,758      | 288,586     | 275,607        | 0            | 68,287,905    |
| 03/2013 | 68,287,905    | 5,239,926      | (120,123)    | 437,500 | 1,886,426      | 78,940      | 352,195        | 0            | 74,425,498    |
| 06/2013 | 74,425,498    | 5,359,974      | (147,222)    | 562,625 | 2,651,531      | 514,376     | 515,820        | 0            | 80,696,960    |
| 09/2013 | 80,696,960    | 7,768,201      | (226,298)    | 516,250 | 5,890,689      | 1,165,176   | 355,990        | 0            | 92,092,136    |
| 12/2013 | 92,092,136    | 12,666,640     | (54,150)     | 516,250 | 6,253,270      | 2,563,309   | 3,688,605      | 0            | 104,189,733   |
| 03/2014 | 104,189,733   | 10,332,824     | (204,331)    | 516,250 | 4,125,365      | 6,302,488   | 654,422        | 0            | 110,970,431   |
| 06/2014 | 110,970,431   | 10,513,534     | 75,076       | 516,250 | 7,884,217      | 746,471     | 2,533,431      | 0            | 125,647,106   |
| 09/2014 | 125,647,106   | 17,570,746     | 10,500       | 516,250 | 1,245,992      | 1,615,602   | 2,925,053      | 0            | 139,417,439   |
| 12/2014 | 139,417,439   | 10,833,803     | (61,667)     | 558,750 | 3,052,494      | 1,112,031   | 4,049,723      | 0            | 147,521,565   |
| 03/2015 | 147,521,565   | 8,258,958      | 22,076       | 558,750 | 3,915,369      | 1,080,998   | 4,004,433      | 0            | 154,073,787   |
| 06/2015 | 154,073,787   | 12,520,450     | (252,087)    | 558,750 | 7,392,432      | 2,171,067   | 5,209,351      | 0            | 165,795,414   |
| 09/2015 | 165,795,414   | 12,661,165     | 8,918        | 537,500 | 2,632,199      | 1,814,825   | 5,406,163      | 0            | 173,339,208   |
| 12/2015 | 173,339,208   | 10,950,390     | (73,852)     | 636,937 | 3,903,312      | 5,200,032   | 3,213,356      | 0            | 179,068,733   |
| 03/2016 | 179,068,733   | 4,401,061      | (299,677)    | 558,750 | 2,098,534      | 2,134,279   | 907,141        | 0            | 181,668,481   |
| 06/2016 | 181,668,481   | 10,147,317     | 56,802       | 609,194 | 7,769,013      | 384,668     | 1,481,019      | 0            | 197,166,732   |
| 09/2016 | 197,166,732   | 6,046,669      | 152,647      | 590,069 | 7,907,843      | 2,838,197   | 1,439,821      | 0            | 206,405,805   |
| 12/2016 | 206,405,805   | 9,423,568      | (337,203)    | 609,852 | 7,772,643      | 2,210,046   | 6,703,806      | 0            | 213,741,108   |
| 03/2017 | 213,741,108   | 6,022,843      | (48,597)     | 624,466 | 11,538,200     | 2,611,810   | 5,480,599      | 0            | 222,536,678   |
| 06/2017 | 222,536,678   | 5,942,110      | 39,415       | 654,116 | 13,245,307     | 4,835,151   | 9,091,365      | 59,349       | 227,123,528   |
| 09/2017 | 227,123,528   | 16,537,410     | (30,778)     | 637,141 | 9,591,347      | 5,248,683   | 7,736,243      | 0            | 239,599,440   |
| 12/2017 | 239,599,440   | 13,884,994     | 21,740       | 635,673 | 11,666,611     | 4,382,265   | 16,309,746     | 0            | 243,845,101   |
| 03/2018 | 243,845,101   | 7,150,727      | (163,332)    | 643,100 | 10,972,723     | 7,403,967   | 3,491,705      | 0            | 250,266,447   |
| 06/2018 | 250,266,447   | 11,444,547     | (144,165)    | 672,751 | 14,602,061     | 4,351,051   | 7,785,725      | 0            | 263,359,363   |
| 09/2018 | 263,359,363   | 7,431,280      | (238,296)    | 657,497 | 12,294,502     | 4,011,337   | 8,778,135      | 0            | 269,399,880   |
| 12/2018 | 269,399,880   | 14,191,664     | 3,385,950    | 656,029 | (1,352,804)    | 9,915,706   | 9,598,228      | 0            | 265,454,727   |
| 03/2019 | 265,454,727   | 5,829,912      | (283,332)    | 656,246 | 12,966,290     | 5,633,889   | 3,667,549      | 0            | 274,009,912   |
| 06/2019 | 274,009,912   | 7,676,263      | 82,950       | 663,197 | 15,115,571     | 5,061,949   | 6,031,822      | 0            | 285,127,728   |
| 09/2019 | 285,127,728   | 5,716,776      | (98,346)     | 649,492 | 4,630,383      | 3,987,114   | 9,749,615      | 0            | 280,990,321   |
| 12/2019 | 280,990,321   | 9,453,814      | (64,183)     | 648,025 | 15,541,711     | 4,095,571   | 8,559,460      | 0            | 292,618,608   |
| 03/2020 | 292,618,608   | 5,768,820      | (253,673)    | 631,679 | (25,000,599)   | 1,860,850   | 4,697,321      | 0            | 265,943,305   |
|         |               |                |              |         |                |             |                |              |               |



# Total Private Equity Private Equity Investment Portfolio Quarterly Changes in Market Value

| Beg. of<br>Period<br><u>Market</u> |             | + Accounting <u>Income</u> | - Mgmt.<br><u>Fees</u> | + Appre-    | Dist. of - Income & Real. Gains | Return<br>- of<br><u>Capital</u> | Dist. of - Recallable <u>Capital</u> | End of<br>= Period<br><u>Market</u> |
|------------------------------------|-------------|----------------------------|------------------------|-------------|---------------------------------|----------------------------------|--------------------------------------|-------------------------------------|
| 0                                  | 341,520,282 | (1,217,475)                | 24,031,513             | 191,176,619 | 96,346,688                      | 145,098,571                      | 59,349                               | 265,943,305                         |

Returns

Net Portfolio Cumulative IRR = 11.42%

Ratios

Capital Account = \$265,943,305

Total Value = \$507,447,913

Committed Capital = \$400,000,000

Paid In Capital = \$341,520,282

Remaining Commitment = \$58,539,067

PIC Multiple (Paid In Capital/Committed Capital) = 85.38%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$324,482,372 TVPI Investment Multiple (Total Value/Paid In Capital) = 1.49x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.71x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.78x

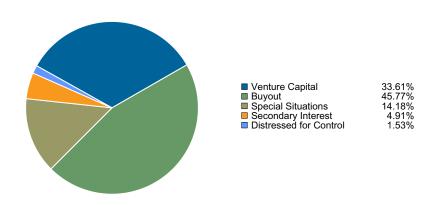
Uncalled capital above does not reflect currency fluctuations for Pathway's investments in foreign partnerships.



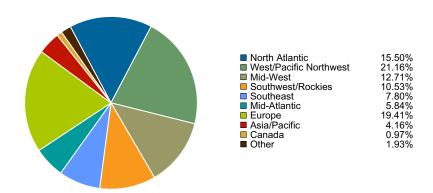
# Portfolio Exposure Mix Total Private Equity Period Ended March 31, 2020

The follow charts provide information on the portfolio mix with regards to Strategy, Geographic Region, and Industry.

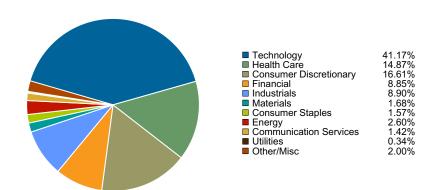
#### Strategy Mix by Net Asset Value



#### **Geographic Mix by Net Asset Value**



#### **Industry Mix by Net Asset Value**





# Abbott Fund VI, L.P. Period Ended March 31, 2020

## **Organization History**

Abbott is an independent registered investment adviser founded in 1986 to provide investors with private equity portfolio management. Abbott's investment philosophy focuses on three aspects of the business: 1) access to top-performing partnerships; 2) a rigorous selection process; and 3) a commitment to diversification.

#### **Private Equity Allocation Overview**

Abbott has managed fund-of-funds private equity investments for MCERA since 2008, which is when MCERA committed \$100 million to ACE VI. Abbott's model portfolios typically have the following allocation targets: Buyouts 50-80%; Venture Capital 10-30%; and, Special Situations 5-25%.

|  | March 31, 2020 | Quarter<br>Change | December 31, 2019 |
|--|----------------|-------------------|-------------------|
| Summary                                  |                |                   |                   |
| Vintage Years                            | 7 in 2008-2014 |                   | 7 in 2008-2014    |
| # Total Partnerships                     | 56             | -                 | 56                |
| # Active Partnerships                    | 54             | -                 | 54                |
| # Liquidated Partnerships                | 2              | -                 | 2                 |
| Changes in Value                         |                |                   |                   |
| Capital Commitments                      | \$100,000,000  | -                 | \$100,000,000     |
| Paid-In Capital                          | \$99,047,700   | -                 | \$99,047,700      |
| Uncalled Capital                         | \$952,300      | -                 | \$952,300         |
| % Paid-In                                | 99.05%         | -                 | 99.05%            |
| Distributed Capital                      | \$108,893,939  | \$3,500,000       | \$105,393,939     |
| Net Asset Value                          | \$52,498,371   | \$(10,542,640)    | \$63,041,011      |
| Total Realized and Unrealized Value      | \$161,392,310  | \$(7,042,640)     | \$168,434,950     |
| Ratios and Performance                   |                |                   |                   |
| Distributions to Paid-In Capital (DPI)   | 1.10x          | 0.04x             | 1.06x             |
| Residual Value to Paid-In Capital (RVPI) | 0.53x          | (0.11)x           | 0.64x             |
| Total Value to Paid-In Capital (TVPI)    | 1.63x          | (0.07)x           | 1.70x             |
| Quartile Ranking                         | 2nd            |                   | 2nd               |
| Net IRR                                  | 11.52%         | (1.04%)           | 12.56%            |
| Additional Performance Metrics           |                |                   |                   |
| Distribution Rate, as % of Beginning NAV |                | 5.55%             |                   |
| Unrealized Gain/(Loss), Dollars          |                | \$(7,042,640)     |                   |
| Unrealized Gain/(Loss), %                |                | (11.17%)          |                   |

Quartile rankings against the All Private Equity, All Regions Refinitiv/Cambridge Database.



# Abbott Fund VI, L.P. Private Equity Investment Portfolio Quarterly Changes in Market Value

|         | Beg. of       | Capital        |              |         |             | Dist. of    | Return         | End of        |
|---------|---------------|----------------|--------------|---------|-------------|-------------|----------------|---------------|
|         | Period        | + Contri-      | + Accounting | - Mgmt. | + Appre     | Income &    | - of           | = Period      |
|         | <u>Market</u> | <u>butions</u> | Income       | Fees    | ciation     | Real. Gains | <u>Capital</u> | <u>Market</u> |
| 03/2009 | 0             | 4,547,700      | (112,820)    | 318,750 | (604,525)   | 0           | 0              | 3,511,605     |
| 06/2009 | 3,511,605     | 0              | (2,729)      | 106,250 | (94,275)    | 0           | 0              | 3,308,351     |
| 09/2009 | 3,308,351     | 0              | 3,445        | 159,375 | (28,545)    | 0           | 0              | 3,123,876     |
| 12/2009 | 3,123,876     | 1,000,000      | (1,221)      | 159,375 | 162,943     | 0           | 0              | 4,126,223     |
| 03/2010 | 4,126,223     | 1,000,000      | (2,357)      | 159,375 | (100,250)   | 0           | 0              | 4,864,241     |
| 06/2010 | 4,864,241     | 1,000,000      | 2,059        | 159,375 | (220,726)   | 0           | 0              | 5,486,199     |
| 09/2010 | 5,486,199     | 1,000,000      | 14,193       | 212,500 | 226,639     | 0           | 0              | 6,514,531     |
| 12/2010 | 6,514,531     | 2,000,000      | 65           | 212,500 | 282,565     | 0           | 0              | 8,584,661     |
| 03/2011 | 8,584,661     | 2,000,000      | 2,326        | 212,500 | 383,955     | 0           | 0              | 10,758,442    |
| 06/2011 | 10,758,442    | 1,000,000      | 11,142       | 212,500 | 636,894     | 0           | 0              | 12,193,978    |
| 09/2011 | 12,193,978    | 3,000,000      | 3,939        | 212,500 | (189,135)   | 0           | 0              | 14,796,282    |
| 12/2011 | 14,796,282    | 3,000,000      | 12,355       | 212,500 | 280,998     | 0           | 0              | 17,877,135    |
| 03/2012 | 17,877,135    | 3,000,000      | 5,850        | 212,500 | 1,090,959   | 0           | 0              | 21,761,444    |
| 06/2012 | 21,761,444    | 2,000,000      | 67,498       | 212,500 | (67,270)    | 0           | 0              | 23,549,172    |
| 09/2012 | 23,549,172    | 3,000,000      | 752          | 212,500 | 206,348     | 0           | 0              | 26,543,772    |
| 12/2012 | 26,543,772    | 5,500,000      | 128,410      | 212,500 | 1,082,849   | 0           | 0              | 33,042,531    |
| 03/2013 | 33,042,531    | 1,500,000      | 98,277       | 212,500 | 464,582     | 0           | 0              | 34,892,890    |
| 06/2013 | 34,892,890    | 1,500,000      | 86,882       | 212,500 | 1,325,269   | 0           | 0              | 37,592,541    |
| 09/2013 | 37,592,541    | 2,500,000      | 29,707       | 212,500 | 1,762,681   | 1,000,000   | 0              | 40,672,429    |
| 12/2013 | 40,672,429    | 7,500,000      | 92,437       | 212,500 | 2,262,463   | 0           | 3,000,000      | 47,314,829    |
| 03/2014 | 47,314,829    | 7,000,000      | 85,886       | 212,500 | 1,924,080   | 4,000,000   | 0              | 52,112,295    |
| 06/2014 | 52,112,295    | 4,500,000      | 179,299      | 212,500 | 2,457,448   | 0           | 2,000,000      | 57,036,542    |
| 09/2014 | 57,036,542    | 8,500,000      | 106,723      | 212,500 | 1,674,877   | 0           | 2,000,000      | 65,105,642    |
| 12/2014 | 65,105,642    | 3,000,000      | 116,605      | 212,500 | 2,000,581   | 0           | 2,500,000      | 67,510,328    |
| 03/2015 | 67,510,328    | 4,000,000      | 213,714      | 212,500 | 1,898,768   | 0           | 3,500,000      | 69,910,310    |
| 06/2015 | 69,910,310    | 5,500,000      | 88,289       | 212,500 | 3,353,716   | 0           | 3,500,000      | 75,139,815    |
| 09/2015 | 75,139,815    | 4,000,000      | (2,949)      | 191,250 | 2,194,512   | 0           | 4,000,000      | 77,140,128    |
| 12/2015 | 77,140,128    | 3,500,000      | 121,976      | 191,250 | 2,631,973   | 3,278,722   | 2,221,278      | 77,702,827    |
| 03/2016 | 77,702,827    | 0              | 91,920       | 191,250 | 782,805     | 500,000     | 0              | 77,886,302    |
| 06/2016 | 77,886,302    | 2,500,000      | 310,111      | 191,250 | 3,654,142   | 0           | 1,000,000      | 83,159,305    |
| 09/2016 | 83,159,305    | 0              | 101,709      | 172,125 | 3,712,578   | 500,000     | 0              | 86,301,467    |
| 12/2016 | 86,301,467    | 1,500,000      | 170,302      | 172,125 | 2,223,778   | 0           | 5,000,000      | 85,023,422    |
| 03/2017 | 85,023,422    | 1,000,000      | 224,358      | 172,125 | 3,409,422   | 0           | 3,000,000      | 86,485,077    |
| 06/2017 | 86,485,077    | 500,000        | 286,985      | 172,125 | 4,125,279   | 0           | 6,000,000      | 85,225,216    |
| 09/2017 | 85,225,216    | 2,500,000      | 183,667      | 154,913 | 3,897,913   | 0           | 5,500,000      | 86,151,883    |
| 12/2017 | 86,151,883    | 2,000,000      | 195,453      | 154,913 | 3,947,600   | 0           | 11,500,000     | 80,640,023    |
| 03/2018 | 80,640,023    | 1,000,000      | 108,656      | 154,912 | 2,980,673   | 4,500,000   | 0              | 80,074,440    |
| 06/2018 | 80,074,440    | 500,000        | 196,285      | 154,913 | 4,537,413   | 0           | 4,500,000      | 80,653,225    |
| 09/2018 | 80,653,225    | 500,000        | 0            | 139,422 | 2,823,196   | 0           | 7,500,000      | 76,336,999    |
| 12/2018 | 76,336,999    | 500,000        | 0            | 139,422 | 1,828,076   | 3,082,577   | 2,917,423      | 72,525,653    |
| 03/2019 | 72,525,653    | 0              | (123)        | 139,421 | 2,694,551   | 2,157,386   | 2,342,614      | 70,580,660    |
| 06/2019 | 70,580,660    | 0              | 268,212      | 139,421 | 3,902,713   | 0           | 4,000,000      | 70,612,164    |
| 09/2019 | 70,612,164    | 250,000        | 91,196       | 125,479 | (24,429)    | 0           | 6,000,000      | 64,803,452    |
| 12/2019 | 64,803,452    | 250,000        | 106,538      | 125,479 | 2,400,439   | 0           | 4,393,939      | 63,041,011    |
| 03/2020 | 63,041,011    | 0              | 18,624       | 125,479 | (6,935,785) | 0           | 3,500,000      | 52,498,371    |
|         |               |                |              |         |             |             |                |               |



# Abbott Fund VI, L.P. Private Equity Investment Portfolio Quarterly Changes in Market Value

| Beg. of<br>Period<br><u>Market</u> | Capital<br>+ Contri-<br>butions | + Accounting Income | - Mgmt.<br><u>Fees</u> | + Appre-<br>ciation | Dist. of - Income & Real. Gains | Return<br>- of<br><u>Capital</u> | End of<br>= Period<br><u>Market</u> |
|------------------------------------|---------------------------------|---------------------|------------------------|---------------------|---------------------------------|----------------------------------|-------------------------------------|
| 0                                  | 99,047,700                      | 3,703,646           | 8,319,774              | 66,960,738          | 19,018,684                      | 89,875,255                       | 52,498,371                          |

Returns

Net Portfolio Cumulative IRR = 11.52%

Ratios

Capital Account = \$52,498,371 Total Value = \$161,392,310

Committed Capital = \$100,000,000

Paid In Capital = \$99,047,700 Remaining Commitment = \$952,300

PIC Multiple (Paid In Capital/Committed Capital) = 99.05%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$53,450,671

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.63x

DPI Realization Multiple (Distributions/Paid In Capital) = 1.10x

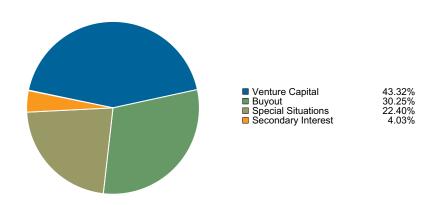
RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.53x



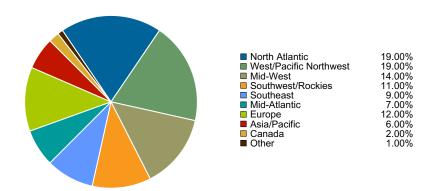
# Portfolio Exposure Mix Abbott Fund VI, L.P. Period Ended March 31, 2020

The follow charts provide information on the portfolio mix with regards to Strategy, Geographic Region, and Industry.

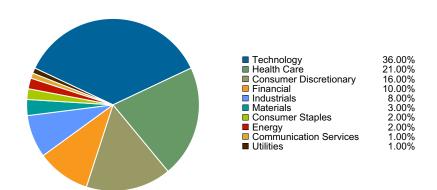
# Strategy Mix by Net Asset Value



#### **Geographic Mix by Net Asset Value**



#### **Industry Mix by Net Asset Value**





# **Abbott Fund VII, L.P.** Period Ended March 31, 2020

## **Organization History**

Abbott is an independent registered investment adviser founded in 1986 to provide investors with private equity portfolio management. Abbott's investment philosophy focuses on three aspects of the business: 1) access to top-performing partnerships; 2) a rigorous selection process; and 3) a commitment to diversification.

#### **Private Equity Allocation Overview**

Abbott has managed fund-of-funds private equity investments for MCERA since 2008. MCERA committed \$35 million to ACE VII in 2013. Abbott's model portfolio typically has the following allocation: Buyouts 25-40%; Venture Capital 25-40%; and, Special Situations 25-40%.

|  | March 31, 2020 | Quarter<br>Change | December 31, 2019 |
|--|----------------|-------------------|-------------------|
| Summary                                  | •              |                   | •                 |
| Vintage Years                            | 4 in 2014-2017 |                   | 4 in 2014-2017    |
| # Total Partnerships                     | 40             | -                 | 40                |
| # Active Partnerships                    | 39             | -                 | 39                |
| # Liquidated Partnerships                | 1              | -                 | 1                 |
| Changes in Value                         |                |                   |                   |
| Capital Commitments                      | \$35,000,000   | -                 | \$35,000,000      |
| Paid-In Capital                          | \$33,950,000   | -                 | \$33,950,000      |
| Uncalled Capital                         | \$1,050,000    | -                 | \$1,050,000       |
| % Paid-In                                | 97.00%         | -                 | 97.00%            |
| Distributed Capital                      | \$12,250,000   | -                 | \$12,250,000      |
| Net Asset Value                          | \$36,660,318   | \$(3,519,631)     | \$40,179,949      |
| Total Realized and Unrealized Value      | \$48,910,318   | \$(3,519,631)     | \$52,429,949      |
| Ratios and Performance                   |                |                   |                   |
| Distributions to Paid-In Capital (DPI)   | 0.36x          | -                 | 0.36x             |
| Residual Value to Paid-In Capital (RVPI) | 1.08x          | (0.10)x           | 1.18x             |
| Total Value to Paid-In Capital (TVPI)    | 1.44x          | (0.10)x           | 1.54x             |
| Quartile Ranking                         | 2nd            |                   | 2nd               |
| Net IRR                                  | 14.24%         | (3.87%)           | 18.10%            |
| Additional Performance Metrics           |                |                   |                   |
| Distribution Rate, as % of Beginning NAV |                | 0.00%             |                   |
| Unrealized Gain/(Loss), Dollars          |                | \$(3,519,631)     |                   |
| Unrealized Gain/(Loss), %                |                | (8.76%)           |                   |

Quartile rankings against the All Private Equity, All Regions Refinitiv/Cambridge Database.



# Abbott Fund VII, L.P. **Private Equity Investment Portfolio Quarterly Changes in Market Value**

|         | Beg. of       | Capital        |              |           |                | Dist. of    | Return         | End of        |
|---------|---------------|----------------|--------------|-----------|----------------|-------------|----------------|---------------|
|         | Period        | + Contri-      | + Accounting | - Mgmt.   | + Appre-       | - Income &  | - of           | = Period      |
|         | <u>Market</u> | <u>butions</u> | Income       | Fees      | <u>ciation</u> | Real. Gains | <u>Capital</u> | <u>Market</u> |
| 03/2014 | 0             | 87,500         | (2,298)      | 0         | (9,232)        | 0           | 0              | 75,970        |
| 06/2014 | 75,970        | 0              | (7,146)      | 0         | 42,004         | 0           | 0              | 110,828       |
| 09/2014 | 110,828       | 1,400,000      | (751)        | 0         | (48,585)       | 0           | 0              | 1,461,492     |
| 12/2014 | 1,461,492     | 612,500        | (85,245)     | 42,500    | (38,230)       | 0           | 0              | 1,908,017     |
| 03/2015 | 1,908,017     | 700,000        | 203          | 42,500    | (40,496)       | 0           | 0              | 2,525,224     |
| 06/2015 | 2,525,224     | 1,400,000      | (2,952)      | 42,500    | 107,255        | 0           | 0              | 3,987,027     |
| 09/2015 | 3,987,027     | 2,450,000      | 339          | 42,500    | 9,889          | 175,000     | 0              | 6,229,755     |
| 12/2015 | 6,229,755     | 2,625,000      | (5,533)      | 63,750    | 180,105        | 350,000     | 0              | 8,615,577     |
| 03/2016 | 8,615,577     | 1,400,000      | (507)        | 63,750    | 65,888         | 0           | 0              | 10,017,208    |
| 06/2016 | 10,017,208    | 2,275,000      | 42,684       | 63,750    | 405,171        | 0           | 175,000        | 12,501,313    |
| 09/2016 | 12,501,313    | 1,225,000      | (2,341)      | 63,750    | 335,684        | 350,000     | 0              | 13,645,906    |
| 12/2016 | 13,645,906    | 2,100,000      | 70,040       | 85,000    | 663,483        | 175,000     | 0              | 16,219,429    |
| 03/2017 | 16,219,429    | 1,400,000      | 2,343        | 85,000    | 604,250        | 0           | 1,050,000      | 17,091,022    |
| 06/2017 | 17,091,022    | 1,575,000      | 61,065       | 85,000    | 1,041,816      | 0           | 0              | 19,683,903    |
| 09/2017 | 19,683,903    | 3,150,000      | 43,842       | 85,000    | 740,792        | 0           | 525,000        | 23,008,537    |
| 12/2017 | 23,008,537    | 3,500,000      | 52,201       | 85,000    | 1,922,267      | 0           | 2,275,000      | 26,123,005    |
| 03/2018 | 26,123,005    | 1,225,000      | 33,563       | 85,000    | 1,338,683      | 0           | 700,000        | 27,935,251    |
| 06/2018 | 27,935,251    | 1,925,000      | 37,722       | 85,000    | 1,251,411      | 0           | 1,050,000      | 30,014,384    |
| 09/2018 | 30,014,384    | 0              | 0            | 85,000    | 1,933,848      | 0           | 0              | 31,863,232    |
| 12/2018 | 31,863,232    | 2,625,000      | 0            | 85,000    | 1,505,652      | 1,076,117   | 848,883        | 33,983,884    |
| 03/2019 | 33,983,884    | 0              | 1,752        | 85,000    | 1,561,518      | 0           | 0              | 35,462,154    |
| 06/2019 | 35,462,154    | 0              | 15,268       | 85,000    | 2,740,932      | 0           | 0              | 38,133,354    |
| 09/2019 | 38,133,354    | 700,000        | 6,632        | 85,000    | 1,202,542      | 0           | 1,400,000      | 38,557,528    |
| 12/2019 | 38,557,528    | 1,575,000      | 103,916      | 85,000    | 2,128,505      | 0           | 2,100,000      | 40,179,949    |
| 03/2020 | 40,179,949    | 0              | 11,999       | 85,000    | (3,446,630)    | 0           | 0              | 36,660,318    |
|         | 0             | 33,950,000     | 376,796      | 1,615,000 | 16,198,522     | 2,126,117   | 10,123,883     | 36,660,318    |

Returns Net Portfolio Cumulative IRR = 14.24%

Ratios

Capital Account = \$36,660,318

Total Value = \$48,910,318

Committed Capital = \$35,000,000

Paid In Capital = \$33,950,000

Remaining Commitment = \$1,050,000

PIC Multiple (Paid In Capital/Committed Capital) = 97.00%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$37,710,318

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.44x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.36x

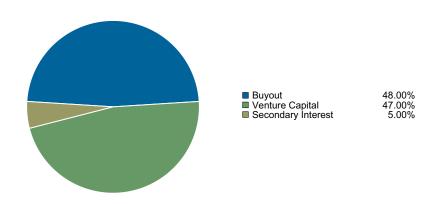
RVPI Residual Multiple (Capital Account/Paid In Capital) = 1.08x



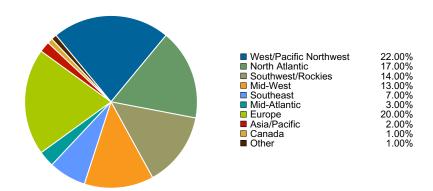
# Portfolio Exposure Mix Abbott Fund VII, L.P. Period Ended March 31, 2020

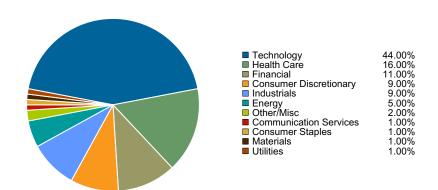
The follow charts provide information on the portfolio mix with regards to Strategy, Geographic Region, and Industry.

# Strategy Mix by Net Asset Value



# **Geographic Mix by Net Asset Value**







# Abbott Fund 2016, L.P. Period Ended March 31, 2020

#### **Organization History**

Abbott is an independent registered investment adviser founded in 1986 to provide investors with private equity portfolio management. Abbott's investment philosophy focuses on three aspects of the business: 1) access to top-performing partnerships; 2) a rigorous selection process; and 3) a commitment to diversification.

#### **Private Equity Allocation Overview**

Abbott has managed fund-of-funds private equity investments for MCERA since 2008. Abbott offers a recommended "core" portfolio, but allows clients to create their own customized portfolio by allocating capital across the following three strategy buckets: North America Private Equity; Ex-North America Private Equity; and, Venture Capital & Growth Equity. The AP 2016 model portfolio has the following recommended allocation: 45% to North America Private Equity (primarily buyout and control-oriented strategies); 25% to Ex-North America Private Equity (primarily buyout and control-oriented strategies); and, 30% to Venture and Growth Equity.

|  | March 31, 2020 | Quarter<br>Change | December 31, 2019 |
|--|----------------|-------------------|-------------------|
| Summary                                  |                |                   |                   |
| Vintage Years                            | 4 in 2016-2019 |                   | 4 in 2016-2019    |
| # Total Partnerships                     | 55             | -                 | 55                |
| # Active Partnerships                    | 55             | -                 | 55                |
| # Liquidated Partnerships                | 0              | -                 | 0                 |
| Changes in Value                         |                |                   |                   |
| Capital Commitments                      | \$50,000,000   | -                 | \$50,000,000      |
| Paid-In Capital                          | \$31,806,252   | \$2,241,250       | \$29,565,002      |
| Uncalled Capital                         | \$18,193,748   | \$(2,241,250)     | \$20,434,998      |
| % Paid-In                                | 63.61%         | 4.48%             | 59.13%            |
| Distributed Capital                      | \$2,800,000    | -                 | \$2,800,000       |
| Net Asset Value                          | \$32,045,052   | \$669,663         | \$31,375,389      |
| Total Realized and Unrealized Value      | \$34,845,052   | \$669,663         | \$34,175,389      |
| Ratios and Performance                   |                |                   |                   |
| Distributions to Paid-In Capital (DPI)   | 0.09x          | (0.01)x           | 0.09x             |
| Residual Value to Paid-In Capital (RVPI) | 1.01x          | (0.05)x           | 1.06x             |
| Total Value to Paid-In Capital (TVPI)    | 1.10x          | (0.06)x           | 1.16x             |
| Quartile Ranking                         | 2nd            |                   | 2nd               |
| Net IRR                                  | 6.43%          | (4.81%)           | 11.24%            |
| Additional Performance Metrics           |                |                   |                   |
| Distribution Rate, as % of Beginning NAV |                | 0.00%             |                   |
| Unrealized Gain/(Loss), Dollars          |                | \$(1,571,587)     |                   |
| Unrealized Gain/(Loss), %                |                | (5.01%)           |                   |

Quartile rankings against the All Private Equity, All Regions Refinitiv/Cambridge Database.



# Abbott Fund 2016, L.P. **Private Equity Investment Portfolio Quarterly Changes in Market Value**

|         | Beg. of       | Capital        |              |         |                | Dist. of    | Return         |   | End of        |
|---------|---------------|----------------|--------------|---------|----------------|-------------|----------------|---|---------------|
|         | Period        | + Contri-      | + Accounting | - Mgmt. | + Appre-       | - Income &  | - of           | = | Period        |
|         | <u>Market</u> | <u>butions</u> | Income       | Fees    | <u>ciation</u> | Real. Gains | <u>Capital</u> |   | <u>Market</u> |
| 03/2016 | 0             | 37,500         | (4,687)      | 0       | 0              | 0           | 0              |   | 32,813        |
| 06/2016 | 32,813        | 1,950,000      | (786)        | 0       | 41,420         | 0           | 0              |   | 2,023,447     |
| 09/2016 | 2,023,447     | 250,000        | (1,897)      | 0       | (531,113)      | 0           | 0              |   | 1,740,437     |
| 12/2016 | 1,740,437     | 662,500        | (152,726)    | 0       | 63,410         | 0           | 0              |   | 2,313,621     |
| 03/2017 | 2,313,621     | 483,125        | (1,727)      | 33,125  | 88,203         | 0           | 0              |   | 2,850,097     |
| 06/2017 | 2,850,097     | 745,625        | (6,482)      | 33,125  | 125,662        | 0           | 0              |   | 3,681,777     |
| 09/2017 | 3,681,777     | 2,258,125      | (5,592)      | 33,125  | (15,656)       | 0           | 0              |   | 5,885,529     |
| 12/2017 | 5,885,529     | 1,433,125      | (13,935)     | 33,125  | 238,162        | 0           | 0              |   | 7,509,756     |
| 03/2018 | 7,509,756     | 1,299,688      | (4,724)      | 49,688  | 75,644         | 0           | 750,000        |   | 8,080,676     |
| 06/2018 | 8,080,676     | 2,818,438      | (147)        | 49,688  | 311,710        | 0           | 0              | 1 | 1,160,989     |
| 09/2018 | 11,160,989    | 2,412,188      | 0            | 49,688  | 889,340        | 0           | 0              | 1 | 4,412,829     |
| 12/2018 | 14,412,829    | 4,024,688      | 0            | 49,688  | 572,005        | 312,606     | 162,394        | 1 | 8,484,834     |
| 03/2019 | 18,484,834    | 1,191,250      | 17,120       | 66,250  | 678,792        | 0           | 0              | 2 | 0,305,746     |
| 06/2019 | 20,305,746    | 4,116,250      | (3,606)      | 66,250  | 612,321        | 950,000     | 0              | 2 | 4,014,461     |
| 09/2019 | 24,014,461    | 2,128,750      | 5,381        | 66,250  | 435,544        | 0           | 625,000        | 2 | 5,892,886     |
| 12/2019 | 25,892,886    | 3,753,750      | 46,958       | 66,250  | 1,748,045      | 0           | 0              | 3 | 1,375,389     |
| 03/2020 | 31,375,389    | 2,241,250      | (3,030)      | 66,250  | (1,502,307)    | 0           | 0              | 3 | 2,045,052     |
|         | 0             | 31,806,252     | (129,880)    | 662,502 | 3,831,182      | 1,262,606   | 1,537,394      | 3 | 2,045,052     |

Returns

Net Portfolio Cumulative IRR = 6.43%

Ratios

Capital Account = \$32,045,052

Total Value = \$34,845,052

Committed Capital = \$50,000,000

Paid In Capital = \$31,806,252

Remaining Commitment = \$18,193,748

PIC Multiple (Paid In Capital/Committed Capital) = 63.61%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$50,238,800

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.10x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.09x

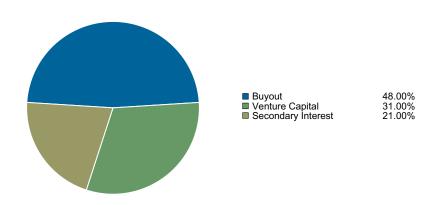
RVPI Residual Multiple (Capital Account/Paid In Capital) = 1.01x



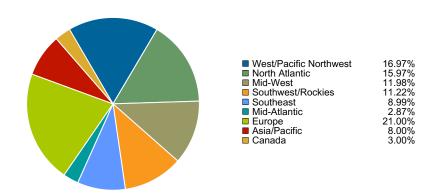
# Portfolio Exposure Mix Abbott Fund 2016, L.P. Period Ended March 31, 2020

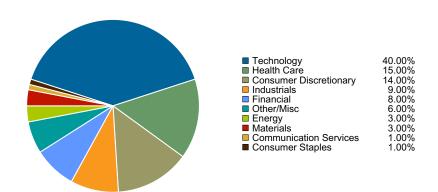
The follow charts provide information on the portfolio mix with regards to Strategy, Geographic Region, and Industry.

# Strategy Mix by Net Asset Value



# **Geographic Mix by Net Asset Value**







# Abbott Fund 2017, L.P. Period Ended March 31, 2020

# **Organization History**

Abbott is an independent registered investment adviser founded in 1986 to provide investors with private equity portfolio management. Abbott's investment philosophy focuses on three aspects of the business: 1) access to top-performing partnerships; 2) a rigorous selection process; and 3) a commitment to diversification.

#### **Private Equity Allocation Overview**

Abbott has managed fund-of-funds private equity investments for MCERA since 2008. Abbott offers a recommended "core" portfolio, but allows clients to create their own customized portfolio by allocating capital across the following three strategy buckets: North America Private Equity; Ex-North America Private Equity; and, Venture Capital & Growth Equity. The AP 2016 model portfolio has the following recommended allocation: 45% to North America Private Equity (primarily buyout and control-oriented strategies); 25% to Ex-North America Private Equity (primarily buyout and control-oriented strategies); and, 30% to Venture and Growth Equity.

|  | March 31, 2020 | Quarter<br>Change | December 31, 2019 |
|--|----------------|-------------------|-------------------|
| Summary                                  |                |                   |                   |
| Vintage Years                            | 4 in 2017-2020 |                   | 3 in 2017-2019    |
| # Total Partnerships                     | 62             | 1                 | 61                |
| # Active Partnerships                    | 62             | 1                 | 61                |
| # Liquidated Partnerships                | 0              | -                 | 0                 |
| Changes in Value                         |                |                   |                   |
| Capital Commitments                      | \$15,000,000   | -                 | \$15,000,000      |
| Paid-In Capital                          | \$6,255,002    | \$465,000         | \$5,790,002       |
| Uncalled Capital                         | \$8,744,998    | \$(465,000)       | \$9,209,998       |
| % Paid-In                                | 41.70%         | 3.10%             | 38.60%            |
| Distributed Capital                      | \$0            | -                 | \$0               |
| Net Asset Value                          | \$6,638,951    | \$242,757         | \$6,396,194       |
| Total Realized and Unrealized Value      | \$6,638,951    | \$242,757         | \$6,396,194       |
| Ratios and Performance                   |                |                   |                   |
| Distributions to Paid-In Capital (DPI)   | 0.00x          | -                 | 0.00x             |
| Residual Value to Paid-In Capital (RVPI) | 1.06x          | (0.04)x           | 1.10x             |
| Total Value to Paid-In Capital (TVPI)    | 1.06x          | (0.04)x           | 1.10x             |
| Quartile Ranking                         | 2nd            |                   | 2nd               |
| Net IRR                                  | 5.27%          | (5.18%)           | 10.46%            |
| Additional Performance Metrics           |                |                   |                   |
| Distribution Rate, as % of Beginning NAV |                | 0.00%             |                   |
| Unrealized Gain/(Loss), Dollars          |                | \$(222,243)       |                   |
| Unrealized Gain/(Loss), %                |                | (3.47%)           |                   |

Quartile rankings against the All Private Equity, All Regions Refinitiv/Cambridge Database.



# Abbott Fund 2017, L.P. **Private Equity Investment Portfolio Quarterly Changes in Market Value**

|         | Beg. of       | Capital        |   |            |         |   |                |                |   | End of        |
|---------|---------------|----------------|---|------------|---------|---|----------------|----------------|---|---------------|
|         | Period        | + Contri-      | + | Accounting | - Mgmt. | + | Appre-         | - Distri-      | = | Period        |
|         | <u>Market</u> | <u>butions</u> |   | Income     | Fees    |   | <u>ciation</u> | <u>butions</u> |   | <u>Market</u> |
| 06/2017 | 0             | 60,000         |   | 0          | 0       |   | 0              | 0              |   | 60,000        |
| 09/2017 | 60,000        | 375,000        |   | (5,136)    | 0       |   | (1,293)        | 0              |   | 428,571       |
| 12/2017 | 428,571       | 108,750        |   | (9,946)    | 0       |   | (22,104)       | 0              |   | 505,271       |
| 03/2018 | 505,271       | 0              |   | (585)      | 9,375   |   | (11,886)       | 0              |   | 483,425       |
| 06/2018 | 483,425       | 723,750        |   | 558        | 9,375   |   | 3,600          | 0              |   | 1,201,958     |
| 09/2018 | 1,201,958     | 718,125        |   | 8,956      | 9,375   |   | 38,774         | 0              |   | 1,958,438     |
| 12/2018 | 1,958,438     | 845,625        |   | 0          | 9,375   |   | 25,493         | 0              |   | 2,820,181     |
| 03/2019 | 2,820,181     | 576,563        |   | 135        | 14,063  |   | 105,110        | 0              |   | 3,487,926     |
| 06/2019 | 3,487,926     | 1,034,063      |   | (1,624)    | 14,063  |   | 106,013        | 0              |   | 4,612,315     |
| 09/2019 | 4,612,315     | 359,063        |   | 2,677      | 14,063  |   | 186,408        | 0              |   | 5,146,400     |
| 12/2019 | 5,146,400     | 989,063        |   | (849)      | 14,063  |   | 275,643        | 0              |   | 6,396,194     |
| 03/2020 | 6,396,194     | 465,000        |   | 4,430      | 18,750  |   | (207,923)      | 0              |   | 6,638,951     |
|         | 0             | 6,255,002      |   | (1,384)    | 112,502 |   | 497,835        | 0              |   | 6,638,951     |

Returns Net Portfolio Cumulative IRR = 5.27%

Ratios

Capital Account = \$6,638,951

Total Value = \$6,638,951

Committed Capital = \$15,000,000

Paid In Capital = \$6,255,002

Remaining Commitment = \$8,744,998

PIC Multiple (Paid In Capital/Committed Capital) = 41.70%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$15,383,949

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.06x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.00x

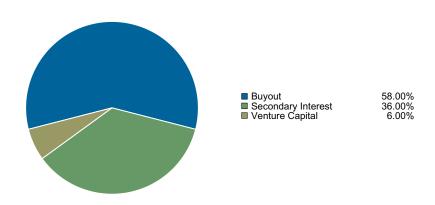
RVPI Residual Multiple (Capital Account/Paid In Capital) = 1.06x



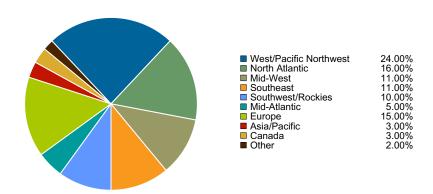
# Portfolio Exposure Mix Abbott Fund 2017, L.P. Period Ended March 31, 2020

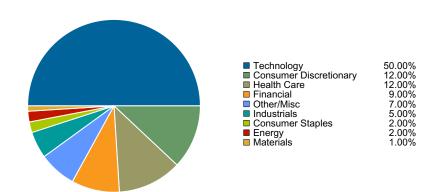
The follow charts provide information on the portfolio mix with regards to Strategy, Geographic Region, and Industry.

# Strategy Mix by Net Asset Value



# **Geographic Mix by Net Asset Value**







# Pathway Fund 2008, L.P. Period Ended March 31, 2020

# **Organization History**

Pathway Capital Management is an independent registered investment advisor wholly owned by senior professionals. Pathway was formed in 1991 to provide institutional investors with specialized investment and advisory services.

# **Private Equity Allocation Overview**

Pathway has managed fund-of-funds private equity investments for MCERA since 2008. MCERA committed \$100 million to PPEF 2008. The PPEF 2008 model portfolio has the following allocation targets: Buyouts 50-80%; Venture Capital 10-30%; and, Special Situations 5-25%.

|  | March 31, 2020 | Quarter<br>Change | December 31, 2019 |
|--|----------------|-------------------|-------------------|
| Summary                                  |                |                   |                   |
| Vintage Years                            | 7 in 2008-2014 |                   | 7 in 2008-2014    |
| # Total Partnerships                     | 34             | _                 | 34                |
| # Active Partnerships                    | 34             | -                 | 34                |
| # Liquidated Partnerships                | 0              | -                 | 0                 |
| Changes in Value                         |                |                   |                   |
| Capital Commitments                      | \$100,000,000  | -                 | \$100,000,000     |
| Paid-In Capital                          | \$97,417,252   | \$203,565         | \$97,213,687      |
| Uncalled Capital                         | \$2,582,748    | \$(203,565)       | \$2,786,313       |
| % Paid-In                                | 97.42%         | 0.20%             | 97.21%            |
| Distributed Capital                      | \$99,993,054   | \$1,885,535       | \$98,107,519      |
| Net Asset Value                          | \$56,516,380   | \$(9,015,528)     | \$65,531,908      |
| Total Realized and Unrealized Value      | \$156,509,434  | \$(7,129,993)     | \$163,639,427     |
| Ratios and Performance                   |                |                   |                   |
| Distributions to Paid-In Capital (DPI)   | 1.03x          | 0.02x             | 1.01x             |
| Residual Value to Paid-In Capital (RVPI) | 0.58x          | (0.09)x           | 0.67x             |
| Total Value to Paid-In Capital (TVPI)    | 1.61x          | x(80.0)           | 1.68x             |
| Quartile Ranking                         | 2nd            |                   | 2nd               |
| Net IRR                                  | 11.00%         | (1.11%)           | 12.10%            |
| Additional Performance Metrics           |                |                   |                   |
| Distribution Rate, as % of Beginning NAV |                | 2.88%             |                   |
| Unrealized Gain/(Loss), Dollars          |                | \$(7,333,558)     |                   |
| Unrealized Gain/(Loss), %                |                | (11.19%)          |                   |

Quartile rankings against the All Private Equity, All Regions Refinitiv/Cambridge Database. Uncalled capital above does not reflect currency fluctuations for Pathway's investments in foreign partnerships.



# Pathway Fund 2008, L.P. Private Equity Investment Portfolio Quarterly Changes in Market Value

|         | Beg. of       | Capital        |              |         |             | Dist. of    | Return         | End of        |
|---------|---------------|----------------|--------------|---------|-------------|-------------|----------------|---------------|
|         | Period        | + Contri-      | + Accounting | - Mgmt. | + Appre     | Income &    | - of           | = Period      |
|         | <u>Market</u> | <u>butions</u> | Income       | Fees    | ciation     | Real. Gains | <u>Capital</u> | <u>Market</u> |
| 03/2009 | 0             | 1,076,029      | (188,219)    | 239,674 | (44,484)    | 0           | 0              | 603,652       |
| 06/2009 | 603,652       | 225,000        | 12,751       | 225,000 | 25,350      | 0           | 0              | 641,753       |
| 09/2009 | 641,753       | 1,378,170      | (18,918)     | 225,000 | 11,082      | 0           | 0              | 1,787,087     |
| 12/2009 | 1,787,087     | 1,035,317      | (44,412)     | 225,000 | 147,728     | 0           | 0              | 2,700,720     |
| 03/2010 | 2,700,720     | 405,159        | (53,049)     | 225,000 | (5,844)     | 0           | 0              | 2,821,986     |
| 06/2010 | 2,821,986     | 225,000        | (21,154)     | 225,000 | 25,978      | 0           | 0              | 2,826,810     |
| 09/2010 | 2,826,810     | 1,838,797      | (64,478)     | 225,000 | 185,030     | 0           | 0              | 4,561,159     |
| 12/2010 | 4,561,159     | 1,963,461      | (110,979)    | 225,000 | 419,446     | 0           | 0              | 6,608,087     |
| 03/2011 | 6,608,087     | 841,483        | (130,168)    | 225,000 | 294,087     | 0           | 0              | 7,388,489     |
| 06/2011 | 7,388,489     | 2,960,774      | (195,945)    | 225,000 | 360,048     | 133,755     | 69,654         | 10,084,957    |
| 09/2011 | 10,084,957    | 5,609,888      | (269,584)    | 225,000 | (6,300)     | 0           | 0              | 15,193,961    |
| 12/2011 | 15,193,961    | 2,617,948      | (187,642)    | 225,000 | 248,489     | 0           | 0              | 17,647,756    |
| 03/2012 | 17,647,756    | 3,281,785      | (178,975)    | 225,000 | 988,475     | 0           | 0              | 21,514,041    |
| 06/2012 | 21,514,041    | 5,874,800      | (180,902)    | 225,000 | 760,197     | 331,545     | 120,080        | 27,291,511    |
| 09/2012 | 27,291,511    | 1,558,302      | (303,779)    | 225,000 | 899,373     | 260,954     | 215,388        | 28,744,065    |
| 12/2012 | 28,744,065    | 5,834,284      | (169,691)    | 225,000 | 1,625,909   | 288,586     | 275,607        | 35,245,374    |
| 03/2013 | 35,245,374    | 3,739,926      | (218,400)    | 225,000 | 1,421,844   | 78,940      | 352,195        | 39,532,608    |
| 06/2013 | 39,532,608    | 3,677,593      | (215,653)    | 225,000 | 1,326,781   | 514,376     | 515,820        | 43,066,134    |
| 09/2013 | 43,066,134    | 4,300,914      | (239,202)    | 225,000 | 3,962,432   | 165,176     | 355,990        | 50,344,112    |
| 12/2013 | 50,344,112    | 4,737,239      | (111,111)    | 225,000 | 3,973,657   | 2,563,309   | 688,605        | 55,466,984    |
| 03/2014 | 55,466,984    | 2,991,940      | (234,369)    | 225,000 | 2,184,033   | 2,184,287   | 603,888        | 57,395,414    |
| 06/2014 | 57,395,414    | 4,830,737      | (40,595)     | 225,000 | 5,287,891   | 700,955     | 519,113        | 66,028,379    |
| 09/2014 | 66,028,379    | 6,362,845      | (15,978)     | 225,000 | (442,225)   | 1,615,602   | 925,053        | 69,167,366    |
| 12/2014 | 69,167,366    | 5,447,108      | (15,809)     | 225,000 | 1,051,444   | 1,087,941   | 1,539,165      | 72,798,003    |
| 03/2015 | 72,798,003    | 2,649,114      | (104,192)    | 225,000 | 1,842,372   | 1,042,655   | 493,044        | 75,424,598    |
| 06/2015 | 75,424,598    | 3,272,435      | (221,462)    | 225,000 | 3,550,835   | 2,111,084   | 1,683,841      | 78,006,481    |
| 09/2015 | 78,006,481    | 4,176,250      | 120,879      | 225,000 | 343,727     | 1,544,796   | 1,341,251      | 79,536,290    |
| 12/2015 | 79,536,290    | 225,000        | 23,239       | 225,000 | 842,955     | 1,527,405   | 916,072        | 77,959,007    |
| 03/2016 | 77,959,007    | 935,586        | (201,156)    | 225,000 | 1,039,791   | 1,597,545   | 891,664        | 77,019,019    |
| 06/2016 | 77,019,019    | 1,815,241      | (105,542)    | 225,000 | 3,048,748   | 286,511     | 254,131        | 81,011,824    |
| 09/2016 | 81,011,824    | 225,000        | 310,669      | 225,000 | 3,247,256   | 1,794,669   | 1,352,657      | 81,422,423    |
| 12/2016 | 81,422,423    | 846,854        | (184,084)    | 223,533 | 3,704,271   | 1,787,524   | 1,582,132      | 82,196,274    |
| 03/2017 | 82,196,274    | 848,340        | (71,649)     | 202,500 | 6,172,475   | 2,361,427   | 1,367,307      | 85,214,206    |
| 06/2017 | 85,214,206    | 716,740        | (113,776)    | 202,500 | 6,346,721   | 4,585,804   | 2,811,765      | 84,563,821    |
| 09/2017 | 84,563,821    | 2,727,321      | (22,582)     | 202,500 | 3,260,373   | 4,951,070   | 1,552,892      | 83,822,471    |
| 12/2017 | 83,822,471    | 1,136,014      | 84,882       | 201,033 | 3,051,688   | 3,786,144   | 2,243,087      | 81,864,791    |
| 03/2018 | 81,864,791    | 1,816,033      | (63,700)     | 180,000 | 3,379,050   | 2,621,848   | 1,840,872      | 82,353,454    |
| 06/2018 | 82,353,454    | 362,321        | (90,180)     | 180,000 | 5,463,118   | 3,219,478   | 1,876,485      | 82,812,750    |
| 09/2018 | 82,812,750    | 180,000        | (36,719)     | 180,000 | 2,722,252   | 3,034,294   | 710,967        | 81,753,022    |
| 12/2018 | 81,753,022    | 760,714        | 2,454,418    | 178,533 | (4,976,858) | 4,073,203   | 4,979,613      | 70,759,948    |
| 03/2019 | 70,759,948    | 313,798        | (53,055)     | 157,500 | 3,169,127   | 2,287,579   | 883,462        | 70,861,276    |
| 06/2019 | 70,861,276    | 248,505        | 88,136       | 157,500 | 3,567,505   | 3,106,930   | 1,823,611      | 69,677,380    |
| 09/2019 | 69,677,380    | 830,811        | 26,806       | 157,500 | (427,650)   | 2,593,393   | 1,157,712      | 66,198,742    |
| 12/2019 | 66,198,742    | 313,110        | (57,898)     | 156,033 | 3,159,596   | 2,433,043   | 1,492,567      | 65,531,908    |
| 03/2020 | 65,531,908    | 203,565        | (82,745)     | 135,000 | (7,115,813) | 1,176,837   | 708,699        | 56,516,380    |
|         |               |                |              |         |             |             |                |               |



# Pathway Fund 2008, L.P. **Private Equity Investment Portfolio Quarterly Changes in Market Value**

| Beg. of<br>Period<br><u>Market</u> | + | Capital<br>Contri-<br><u>butions</u> | + | Accounting <u>Income</u> | - | Mgmt.<br><u>Fees</u> | + | Appre-     | - | Dist. of<br>Income &<br>Real. Gains | -  | Return<br>of<br><u>Capital</u> | = | End of<br>Period<br><u>Market</u> |
|------------------------------------|---|--------------------------------------|---|--------------------------|---|----------------------|---|------------|---|-------------------------------------|----|--------------------------------|---|-----------------------------------|
| 0                                  |   | 97,417,252                           |   | (1,495,972)              | ( | 9,503,805            | - | 70,091,959 |   | 61,848,666                          | 38 | 8,144,388                      |   | 56,516,380                        |

Returns

Net Portfolio Cumulative IRR = 11.00%

Ratios

Capital Account = \$56,516,380

Total Value = \$156,509,434 Committed Capital = \$100,000,000

Paid In Capital = \$97,417,252

Remaining Commitment = \$2,582,748

PIC Multiple (Paid In Capital/Committed Capital) = 97.42%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$59,099,128

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.61x

DPI Realization Multiple (Distributions/Paid In Capital) = 1.03x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.58x

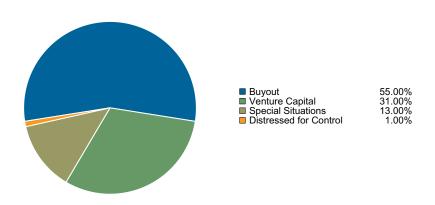
Uncalled capital above does not reflect currency flucations for Pathway's investments in foreign partnerships.



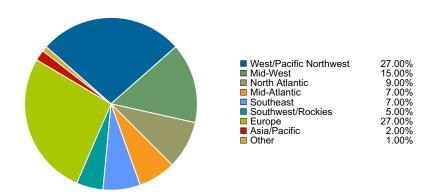
# Portfolio Exposure Mix Pathway Fund 2008, L.P. Period Ended March 31, 2020

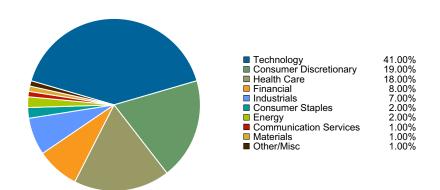
The follow charts provide information on the portfolio mix with regards to Strategy, Geographic Region, and Industry.

# Strategy Mix by Net Asset Value



# **Geographic Mix by Net Asset Value**







# Pathway Fund VII, L.P. Period Ended March 31, 2020

# **Organization History**

Pathway Capital Management is an independent registered investment advisor wholly owned by senior professionals. Pathway was formed in 1991 to provide institutional investors with specialized investment and advisory services.

# **Private Equity Allocation Overview**

Pathway has managed fund-of-funds private equity investments for MCERA since 2008. MCERA committed \$35 million to PPEF I-7 in 2013. The PPEF I-7 model portfolio has the following allocation targets: Buyouts 45-75%; Venture Capital 10-25%; and, Special Situations 10-40%.

|  | March 31, 2020 | Quarter<br>Change | December 31, 2019 |
|--|----------------|-------------------|-------------------|
| Summary                                  |                |                   |                   |
| Vintage Years                            | 5 in 2012-2016 |                   | 5 in 2012-2016    |
| # Total Partnerships                     | 35             | -                 | 35                |
| # Active Partnerships                    | 35             | -                 | 35                |
| # Liquidated Partnerships                | 0              | -                 | 0                 |
| Changes in Value                         |                |                   |                   |
| Capital Commitments                      | \$35,000,000   | -                 | \$35,000,000      |
| Paid-In Capital                          | \$32,691,871   | \$562,105         | \$32,129,766      |
| Uncalled Capital                         | \$2,308,129    | \$(562,105)       | \$2,870,234       |
| % Paid-In                                | 93.41%         | 1.61%             | 91.80%            |
| Distributed Capital                      | \$13,536,776   | \$1,049,388       | \$12,487,388      |
| Net Asset Value                          | \$35,601,146   | \$(3,139,959)     | \$38,741,105      |
| Total Realized and Unrealized Value      | \$49,137,922   | \$(2,090,571)     | \$51,228,493      |
| Ratios and Performance                   |                |                   |                   |
| Distributions to Paid-In Capital (DPI)   | 0.41x          | 0.03x             | 0.39x             |
| Residual Value to Paid-In Capital (RVPI) | 1.09x          | (0.12)x           | 1.21x             |
| Total Value to Paid-In Capital (TVPI)    | 1.50x          | (0.09)x           | 1.59x             |
| Quartile Ranking                         | 2nd            |                   | 2nd               |
| Net IRR                                  | 12.93%         | (2.45%)           | 15.38%            |
| Additional Performance Metrics           |                |                   |                   |
| Distribution Rate, as % of Beginning NAV |                | 2.71%             |                   |
| Unrealized Gain/(Loss), Dollars          |                | \$(2,652,676)     |                   |
| Unrealized Gain/(Loss), %                |                | (6.85%)           |                   |

Quartile rankings against the All Private Equity, All Regions Refinitiv/Cambridge Database. Uncalled capital above does not reflect currency fluctuations for Pathway's investments in foreign partnerships.



# Pathway Fund VII, L.P. **Private Equity Investment Portfolio Quarterly Changes in Market Value**

|         | Beg. of       | Capital        |              |           |                | Dist. of    | Return         | End of        |
|---------|---------------|----------------|--------------|-----------|----------------|-------------|----------------|---------------|
|         | Period        | + Contri-      | + Accounting | - Mgmt.   | + Appre-       | Income &    | - of           | = Period      |
|         | <u>Market</u> | <u>butions</u> | Income       | Fees      | <u>ciation</u> | Real. Gains | <u>Capital</u> | <u>Market</u> |
| 06/2013 | 0             | 182,380        | (18,451)     | 125,125   | (519)          | 0           | 0              | 38,285        |
| 09/2013 | 38,285        | 967,287        | (16,803)     | 78,750    | 165,576        | 0           | 0              | 1,075,595     |
| 12/2013 | 1,075,595     | 429,401        | (35,476)     | 78,750    | 17,150         | 0           | 0              | 1,407,920     |
| 03/2014 | 1,407,920     | 253,384        | (53,550)     | 78,750    | 26,483         | 118,201     | 50,535         | 1,386,752     |
| 06/2014 | 1,386,752     | 1,182,797      | (56,482)     | 78,750    | 96,874         | 45,516      | 14,318         | 2,471,357     |
| 09/2014 | 2,471,357     | 1,307,901      | (79,494)     | 78,750    | 61,925         | 0           | 0              | 3,682,939     |
| 12/2014 | 3,682,939     | 1,774,195      | (77,218)     | 78,750    | 38,699         | 24,090      | 10,558         | 5,305,217     |
| 03/2015 | 5,305,217     | 909,844        | (87,649)     | 78,750    | 214,725        | 38,343      | 11,389         | 6,213,655     |
| 06/2015 | 6,213,655     | 2,348,015      | (115,962)    | 78,750    | 380,626        | 59,983      | 25,510         | 8,662,091     |
| 09/2015 | 8,662,091     | 2,034,915      | (109,351)    | 78,750    | 84,071         | 95,029      | 64,912         | 10,433,035    |
| 12/2015 | 10,433,035    | 1,909,065      | (101,792)    | 78,750    | 246,958        | 43,905      | 76,006         | 12,288,605    |
| 03/2016 | 12,288,605    | 1,887,927      | (110,775)    | 78,750    | 191,514        | 34,968      | 15,477         | 14,128,076    |
| 06/2016 | 14,128,076    | 150,044        | (130,967)    | 78,750    | 554,488        | 98,157      | 51,888         | 14,472,846    |
| 09/2016 | 14,472,846    | 2,029,228      | (84,224)     | 78,750    | 821,245        | 174,979     | 66,907         | 16,918,459    |
| 12/2016 | 16,918,459    | 1,807,454      | (81,851)     | 78,750    | 828,814        | 142,641     | 113,096        | 19,138,389    |
| 03/2017 | 19,138,389    | 2,081,269      | (93,961)     | 78,750    | 785,709        | 192,947     | 51,419         | 21,588,290    |
| 06/2017 | 21,588,290    | 124,242        | (52,649)     | 78,750    | 1,040,561      | 249,347     | 129,638        | 22,242,709    |
| 09/2017 | 22,242,709    | 2,258,850      | (85,415)     | 78,750    | 1,120,174      | 193,750     | 118,323        | 25,145,495    |
| 12/2017 | 25,145,495    | 3,036,491      | (71,045)     | 78,750    | 1,650,270      | 454,549     | 272,344        | 28,955,568    |
| 03/2018 | 28,955,568    | 78,750         | (55,810)     | 78,750    | 1,653,540      | 264,138     | 166,666        | 30,122,494    |
| 06/2018 | 30,122,494    | 1,357,146      | (98,731)     | 78,750    | 1,749,616      | 692,146     | 352,027        | 32,007,602    |
| 09/2018 | 32,007,602    | 906,367        | (41,319)     | 78,750    | 1,521,755      | 768,198     | 324,453        | 33,223,004    |
| 12/2018 | 33,223,004    | 1,314,768      | 477,323      | 78,750    | (185,106)      | 865,317     | 497,493        | 33,388,429    |
| 03/2019 | 33,388,429    | 924,905        | (91,599)     | 78,750    | 2,427,342      | 1,147,344   | 163,679        | 35,259,304    |
| 06/2019 | 35,259,304    | 715,641        | (55,755)     | 78,750    | 2,445,674      | 575,314     | 192,795        | 37,518,005    |
| 09/2019 | 37,518,005    | 78,750         | 13,831       | 78,750    | 1,646,938      | 1,184,635   | 524,017        | 37,470,122    |
| 12/2019 | 37,470,122    | 78,750         | (30,705)     | 78,750    | 3,032,128      | 1,214,003   | 516,437        | 38,741,105    |
| 03/2020 | 38,741,105    | 562,105        | (47,390)     | 78,750    | (2,526,536)    | 580,275     | 469,113        | 35,601,146    |
|         | 0             | 32,691,871     | (1,393,270)  | 2,251,375 | 20,090,696     | 9,257,775   | 4,279,001      | 35,601,146    |

Returns Net Portfolio Cumulative IRR = 12.93%

Ratios

Capital Account = \$35,601,146

Total Value = \$49,137,922

Committed Capital = \$35,000,000

Paid In Capital = \$32,691,871

Remaining Commitment = \$2,308,129

PIC Multiple (Paid In Capital/Committed Capital) = 93.41%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$37,909,275

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.50x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.41x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 1.09x

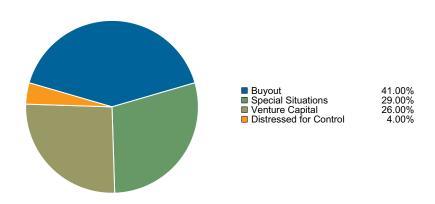
Uncalled capital above does not reflect currency flucations for Pathway's investments in foreign partnerships.



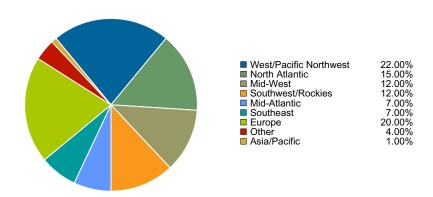
# **Portfolio Exposure Mix** Pathway Fund VII, L.P. Period Ended March 31, 2020

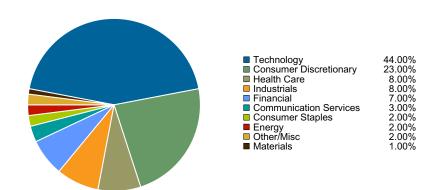
The follow charts provide information on the portfolio mix with regards to Strategy, Geographic Region, and Industry.

# Strategy Mix by Net Asset Value



# **Geographic Mix by Net Asset Value**







# Pathway Fund VIII, L.P. Period Ended March 31, 2020

# **Organization History**

Pathway Capital Management is an independent registered investment advisor wholly owned by senior professionals. Pathway was formed in 1991 to provide institutional investors with specialized investment and advisory services.

# **Private Equity Allocation Overview**

Pathway has managed fund-of-funds private equity investments for MCERA since 2008. MCERA committed \$50 million to PPEF I-8 in 2016. The PPEF I-8 model portfolio has the following allocation targets: Buyouts 45-75%; Venture Capital 10-25%; and, Special Situations 10-40%.

|  | March 31, 2020 | Quarter<br>Change | December 31, 2019 |
|--|----------------|-------------------|-------------------|
| Summary                                  |                |                   |                   |
| Vintage Years                            | 6 in 2015-2020 |                   | 6 in 2015-2020    |
| # Total Partnerships                     | 38             | -                 | 38                |
| # Active Partnerships                    | 38             | -                 | 38                |
| # Liquidated Partnerships                | 0              | -                 | 0                 |
| Changes in Value                         |                |                   |                   |
| Capital Commitments                      | \$50,000,000   | -                 | \$50,000,000      |
| Paid-In Capital                          | \$33,831,144   | \$1,981,887       | \$31,849,257      |
| Uncalled Capital                         | \$16,228,205   | \$(1,981,887)     | \$18,210,092      |
| % Paid-In                                | 67.66%         | 3.96%             | 63.70%            |
| Distributed Capital                      | \$3,379,288    | \$123,248         | \$3,256,040       |
| Net Asset Value                          | \$40,266,200   | \$(1,227,359)     | \$41,493,559      |
| Total Realized and Unrealized Value      | \$43,645,488   | \$(1,104,111)     | \$44,749,599      |
| Ratios and Performance                   |                |                   |                   |
| Distributions to Paid-In Capital (DPI)   | 0.10x          | (0.00)x           | 0.10x             |
| Residual Value to Paid-In Capital (RVPI) | 1.19x          | (0.11)x           | 1.30x             |
| Total Value to Paid-In Capital (TVPI)    | 1.29x          | (0.11)x           | 1.41x             |
| Quartile Ranking                         | 2nd            |                   | 2nd               |
| Net IRR                                  | 12.17%         | (5.13%)           | 17.30%            |
| Additional Performance Metrics           |                |                   |                   |
| Distribution Rate, as % of Beginning NAV |                | 0.30%             |                   |
| Unrealized Gain/(Loss), Dollars          |                | \$(3,085,998)     |                   |
| Unrealized Gain/(Loss), %                |                | (7.44%)           |                   |

Quartile rankings against the All Private Equity, All Regions Refinitiv/Cambridge Database. Uncalled capital above does not reflect currency fluctuations for Pathway's investments in foreign partnerships.



# Pathway Fund VIII, L.P. **Private Equity Investment Portfolio Quarterly Changes in Market Value**

|         | Beg. of       | Capital        |              |           |             | Dist. of    | Return         | Dist. of     | End of     |
|---------|---------------|----------------|--------------|-----------|-------------|-------------|----------------|--------------|------------|
|         | Period        | + Contri-      | - Accounting | - Mgmt.   | + Appre-    | - Income &  | - of           | - Recallable | = Period   |
|         | <u>Market</u> | <u>butions</u> | Income       | Fees      | ciation     | Real. Gains | <u>Capital</u> | Capital      | Market     |
| 12/2015 | 0             | 2,691,326      | (111,742)    | 78,187    | 1,320       | 0           | 0              | 0            | 2,502,717  |
| 03/2016 | 2,502,717     | 140,048        | (74,472)     | 0         | 18,536      | 1,766       | 0              | 0            | 2,585,063  |
| 06/2016 | 2,585,063     | 1,457,032      | (58,698)     | 50,444    | 65,044      | 0           | 0              | 0            | 3,997,997  |
| 09/2016 | 3,997,997     | 2,317,441      | (171,269)    | 50,444    | 322,194     | 18,549      | 20,257         | 0            | 6,377,113  |
| 12/2016 | 6,377,113     | 2,506,760      | (158,884)    | 50,444    | 288,886     | 104,881     | 8,577          | 0            | 8,849,973  |
| 03/2017 | 8,849,973     | 210,109        | (107,961)    | 52,966    | 478,140     | 57,436      | 11,873         | 0            | 9,307,986  |
| 06/2017 | 9,307,986     | 2,182,022      | (127,175)    | 75,665    | 565,668     | 0           | 149,962        | 59,349       | 11,643,525 |
| 09/2017 | 11,643,525    | 2,419,889      | (126,250)    | 75,665    | 587,214     | 103,863     | 40,028         | 0            | 14,304,822 |
| 12/2017 | 14,304,822    | 2,663,426      | (179,281)    | 75,665    | 799,463     | 141,572     | 19,315         | 0            | 17,351,879 |
| 03/2018 | 17,351,879    | 1,682,946      | (161,358)    | 78,187    | 1,508,468   | 17,981      | 34,167         | 0            | 20,251,600 |
| 06/2018 | 20,251,600    | 3,466,887      | (161,726)    | 100,887   | 1,194,338   | 439,427     | 7,214          | 0            | 24,203,571 |
| 09/2018 | 24,203,571    | 1,930,887      | (138,731)    | 100,887   | 2,317,537   | 0           | 0              | 0            | 28,212,377 |
| 12/2018 | 28,212,377    | 3,384,252      | 495,781      | 100,887   | (53,373)    | 480,611     | 182,979        | 0            | 31,274,560 |
| 03/2019 | 31,274,560    | 1,776,537      | (116,691)    | 100,887   | 2,151,073   | 35,770      | 267,962        | 0            | 34,680,860 |
| 06/2019 | 34,680,860    | 1,174,172      | (159,949)    | 100,887   | 1,608,524   | 410,151     | 11,308         | 0            | 36,781,261 |
| 09/2019 | 36,781,261    | 1,098,012      | (191,021)    | 100,887   | 1,608,257   | 209,086     | 42,886         | 0            | 38,943,651 |
| 12/2019 | 38,943,651    | 747,512        | (167,514)    | 100,887   | 2,449,869   | 339,876     | 39,196         | 0            | 41,493,559 |
| 03/2020 | 41,493,559    | 1,981,887      | (108,426)    | 100,887   | (2,876,685) | 103,738     | 19,510         | 0            | 40,266,200 |
|         | 0             | 33,831,144     | (1,825,367)  | 1,394,763 | 13,034,474  | 2,464,707   | 855,232        | 59,349       | 40,266,200 |

Returns Net Portfolio Cumulative IRR = 12.17%

Ratios

Capital Account = \$40,266,200

Total Value = \$43,645,488

Committed Capital = \$50,000,000

Paid In Capital = \$33,831,144

Remaining Commitment = \$16,228,205

PIC Multiple (Paid In Capital/Committed Capital) = 67.66%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$56,494,405

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.29x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.10x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 1.19x

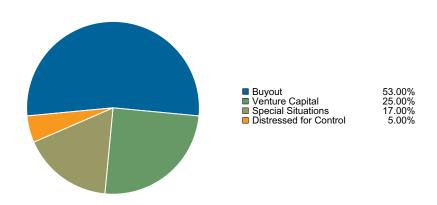
Uncalled capital above does not reflect currency fluctuations for Pathway's investments in foreign partnerships.



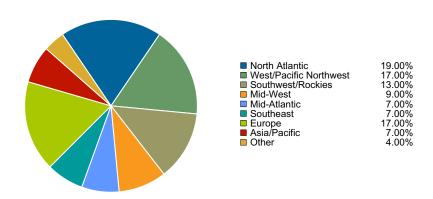
# Portfolio Exposure Mix Pathway Fund VIII, L.P. Period Ended March 31, 2020

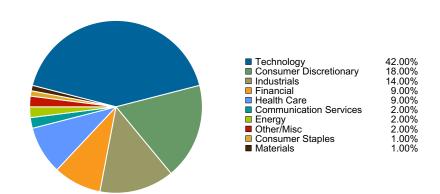
The follow charts provide information on the portfolio mix with regards to Strategy, Geographic Region, and Industry.

# Strategy Mix by Net Asset Value



# **Geographic Mix by Net Asset Value**







# Pathway Fund IX, L.P. Period Ended March 31, 2020

# **Organization History**

Pathway Capital Management is an independent registered investment advisor wholly owned by senior professionals. Pathway was formed in 1991 to provide institutional investors with specialized investment and advisory services.

# **Private Equity Allocation Overview**

Pathway has managed fund-of-funds private equity investments for MCERA since 2008. MCERA committed \$15 million to PPEF I-9 in 2017.

|  | March 31, 2020 | Quarter<br>Change | December 31, 2019 |
|--|----------------|-------------------|-------------------|
| Summary                                  |                |                   |                   |
| Vintage Years                            | 4 in 2017-2020 |                   | 4 in 2017-2020    |
| # Total Partnerships                     | 38             | -                 | 38                |
| # Active Partnerships                    | 38             | -                 | 38                |
| # Liquidated Partnerships                | 0              | -                 | 0                 |
| Changes in Value                         |                |                   |                   |
| Capital Commitments                      | \$15,000,000   | -                 | \$15,000,000      |
| Paid-In Capital                          | \$6,521,061    | \$315,012         | \$6,206,049       |
| Uncalled Capital                         | \$8,478,939    | \$(315,012)       | \$8,793,951       |
| % Paid-In                                | 43.47%         | 2.10%             | 41.37%            |
| Distributed Capital                      | \$651,551      | -                 | \$651,551         |
| Net Asset Value                          | \$5,716,887    | \$(142,606)       | \$5,859,493       |
| Total Realized and Unrealized Value      | \$6,368,438    | \$(142,606)       | \$6,511,044       |
| Ratios and Performance                   |                |                   |                   |
| Distributions to Paid-In Capital (DPI)   | 0.10x          | (0.01)x           | 0.10x             |
| Residual Value to Paid-In Capital (RVPI) | 0.88x          | (0.07)x           | 0.94x             |
| Total Value to Paid-In Capital (TVPI)    | 0.98x          | (0.07)x           | 1.05x             |
| Quartile Ranking                         | 3rd            |                   | 2nd               |
| Net IRR                                  | (2.34%)        | (8.13%)           | 5.79%             |
| Additional Performance Metrics           |                |                   |                   |
| Distribution Rate, as % of Beginning NAV |                | 0.00%             |                   |
| Unrealized Gain/(Loss), Dollars          |                | \$(457,618)       |                   |
| Unrealized Gain/(Loss), %                |                | (7.81%)           |                   |

Quartile rankings against the All Private Equity, All Regions Refinitiv/Cambridge Database. Uncalled capital above does not reflect currency fluctuations for Pathway's investments in foreign partnerships.



# Pathway Fund IX, L.P. **Private Equity Investment Portfolio Quarterly Changes in Market Value**

|         | Beg. of       | Capital        |              |         |           | Dist. of    | Return         |   | End of        |
|---------|---------------|----------------|--------------|---------|-----------|-------------|----------------|---|---------------|
|         | Period        | + Contri-      | + Accounting | - Mgmt. | + Appre-  | - Income &  | - of           | = | Period        |
|         | <u>Market</u> | <u>butions</u> | Income       | Fees    | ciation   | Real. Gains | <u>Capital</u> |   | <u>Market</u> |
| 06/2017 | 0             | 38,481         | (8,553)      | 6,951   | (400)     | 0           | 0              |   | 22,577        |
| 09/2017 | 22,577        | 848,224        | (13,312)     | 7,188   | 1,831     | 0           | 0              |   | 852,132       |
| 12/2017 | 852,132       | 7,187          | (36,589)     | 7,187   | 79,265    | 0           | 0              |   | 894,808       |
| 03/2018 | 894,808       | 48,310         | (19,374)     | 7,188   | 48,551    | 0           | 0              |   | 965,107       |
| 06/2018 | 965,107       | 291,005        | (27,946)     | 14,138  | 90,856    | 0           | 0              |   | 1,304,884     |
| 09/2018 | 1,304,884     | 783,713        | (30,483)     | 14,375  | 47,800    | 208,845     | 242,714        |   | 1,639,979     |
| 12/2018 | 1,639,979     | 736,618        | (41,572)     | 14,375  | (68,694)  | 25,275      | 9,443          |   | 2,217,238     |
| 03/2019 | 2,217,238     | 1,046,860      | (40,871)     | 14,375  | 178,776   | 5,810       | 9,832          |   | 3,371,986     |
| 06/2019 | 3,371,986     | 387,632        | (67,732)     | 21,326  | 131,890   | 19,554      | 4,108          |   | 3,778,788     |
| 09/2019 | 3,778,788     | 271,390        | (53,848)     | 21,563  | 2,773     | 0           | 0              |   | 3,977,540     |
| 12/2019 | 3,977,540     | 1,746,630      | (64,629)     | 21,563  | 347,485   | 108,649     | 17,321         |   | 5,859,493     |
| 03/2020 | 5,859,493     | 315,012        | (47,135)     | 21,563  | (388,920) | 0           | 0              |   | 5,716,887     |
|         | 0             | 6,521,061      | (452,044)    | 171,792 | 471,213   | 368,133     | 283,418        |   | 5,716,887     |

Returns

Net Portfolio Cumulative IRR = -2.34%

Ratios

Capital Account = \$5,716,887

Total Value = \$6,368,438

Committed Capital = \$15,000,000

Paid In Capital = \$6,521,061

Remaining Commitment = \$8,478,939

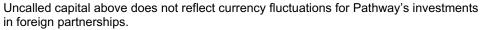
PIC Multiple (Paid In Capital/Committed Capital) = 43.47%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$14,195,826

TVPI Investment Multiple (Total Value/Paid In Capital) = 0.98x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.10x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.88x

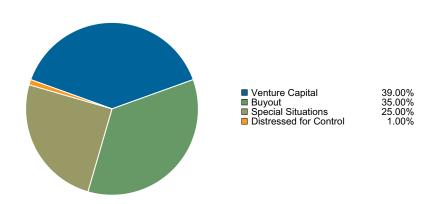




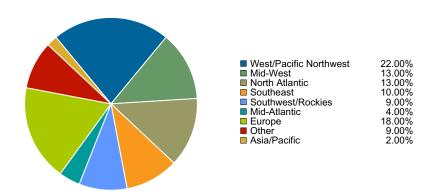
# Portfolio Exposure Mix Pathway Fund IX, L.P. Period Ended March 31, 2020

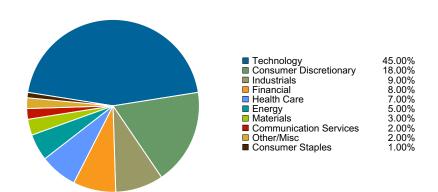
The follow charts provide information on the portfolio mix with regards to Strategy, Geographic Region, and Industry.

# Strategy Mix by Net Asset Value



# **Geographic Mix by Net Asset Value**







# Portfolio Breakdown Period Ended March 31, 2020

The table below summarizes mangers' breakdown by Strategy, Domestic & Global Geography and Industry.

|                        | Abbott Fund<br>VI, L.P. | Abbott Fund<br>VII, L.P. | Abbott Fund<br>2016, L.P. | Abbott Fund<br>2017, L.P. | Pathway<br>Fund<br>2008, L.P. | Pathway<br>Fund<br>VII, L.P. | Pathway<br>Fund<br>VIII, L.P. | Pathway<br>Fund<br>IX, L.P. | Total<br>Private<br>Equity |
|------------------------|-------------------------|--------------------------|---------------------------|---------------------------|-------------------------------|------------------------------|-------------------------------|-----------------------------|----------------------------|
| Strategy               |                         |                          |                           |                           |                               |                              |                               |                             |                            |
| Venture Capital        | 43%                     | 47%                      | 31%                       | 6%                        | 31%                           | 26%                          | 25%                           | 39%                         | 34%                        |
| Buyout                 | 30%                     | 48%                      | 48%                       | 58%                       | 55%                           | 41%                          | 53%                           | 35%                         | 46%                        |
| Special Situations     | 22%                     | -                        | -                         | -                         | 13%                           | 29%                          | 17%                           | 25%                         | 14%                        |
| Secondary Interest     | 4%                      | 5%                       | 21%                       | 36%                       | -                             | -                            | -                             | -                           | 5%                         |
| Distressed for Control | -                       | -                        | -                         | -                         | 1%                            | 4%                           | 5%                            | 1%                          | 2%                         |
| Domestic & Global Geo  | ography                 |                          |                           |                           |                               |                              |                               |                             |                            |
| North Atlantic         | 19%                     | 17%                      | 16%                       | 16%                       | 9%                            | 15%                          | 19%                           | 13%                         | 15%                        |
| West/Pacific Northwest | 19%                     | 22%                      | 17%                       | 24%                       | 27%                           | 22%                          | 17%                           | 22%                         | 21%                        |
| Mid-West               | 14%                     | 13%                      | 12%                       | 11%                       | 15%                           | 12%                          | 9%                            | 13%                         | 13%                        |
| Southwest/Rockies      | 11%                     | 14%                      | 11%                       | 10%                       | 5%                            | 12%                          | 13%                           | 9%                          | 10%                        |
| Southeast              | 9%                      | 7%                       | 9%                        | 11%                       | 7%                            | 7%                           | 7%                            | 10%                         | 8%                         |
| Mid-Atlantic           | 7%                      | 3%                       | 3%                        | 5%                        | 7%                            | 7%                           | 7%                            | 4%                          | 6%                         |
| Europe                 | 12%                     | 20%                      | 21%                       | 15%                       | 27%                           | 20%                          | 17%                           | 18%                         | 19%                        |
| Asia/Pacific           | 6%                      | 2%                       | 8%                        | 3%                        | 2%                            | 1%                           | 7%                            | 2%                          | 4%                         |
| Canada                 | 2%                      | 1%                       | 3%                        | 3%                        | -                             | -                            | -                             | -                           | 1%                         |
| Other                  | 1%                      | 1%                       | 0%                        | 2%                        | 1%                            | 4%                           | 4%                            | 9%                          | 2%                         |
| Industry               |                         |                          |                           |                           |                               |                              |                               |                             |                            |
| Technology             | 36%                     | 44%                      | 40%                       | 50%                       | 41%                           | 44%                          | 42%                           | 45%                         | 41%                        |
| Health Care            | 21%                     | 16%                      | 15%                       | 12%                       | 18%                           | 8%                           | 9%                            | 7%                          | 15%                        |
| Consumer Discretionary | 16%                     | 9%                       | 14%                       | 12%                       | 19%                           | 23%                          | 18%                           | 18%                         | 17%                        |
| Financial              | 10%                     | 11%                      | 8%                        | 9%                        | 8%                            | 7%                           | 9%                            | 8%                          | 9%                         |
| Industrials            | 8%                      | 9%                       | 9%                        | 5%                        | 7%                            | 8%                           | 14%                           | 9%                          | 9%                         |
| Materials              | 3%                      | 1%                       | 3%                        | 1%                        | 1%                            | 1%                           | 1%                            | 3%                          | 2%                         |
| Consumer Staples       | 2%                      | 1%                       | 1%                        | 2%                        | 2%                            | 2%                           | 1%                            | 1%                          | 2%                         |
| Energy                 | 2%                      | 5%                       | 3%                        | 2%                        | 2%                            | 2%                           | 2%                            | 5%                          | 3%                         |
| Communication Services | 1%                      | 1%                       | 1%                        | -                         | 1%                            | 3%                           | 2%                            | 2%                          | 1%                         |
| Utilities              | 1%                      | 1%                       | -                         | -                         | -                             | -                            | -                             | -                           | 0%                         |
| Other/Misc             | -                       | 2%                       | 6%                        | 7%                        | 1%                            | 2%                           | 2%                            | 2%                          | 2%                         |





Marin County Employees' Retirement Association Investment Management Fees As of June 30, 2020

| SSGA   | \$543,411,201                         | 5.00             | On the first \$50,000,000  | Per Tier<br>\$50,000,000        | \$25,000                          | 40.050                        |                       |
|--|---------------------------------------|------------------|--|---------------------------------|-----------------------------------|-------------------------------|-----------------------|
|  |                                       |                  |  |                                 | φ23,000                           | \$6,250                       | 5.00                  |
|  |                                       | 4.00             | \$50,000,000 to \$100,000,000  | \$50,000,000                    | \$20,000                          | \$5,000                       | 4.00                  |
|  |                                       | 2.00             | On balance over \$100,000,000  | \$443,411,201                   | \$88,682                          | \$22,171                      | 2.00                  |
|  |                                       |                  |  | Total:                          | \$133,682                         | \$33,421                      | 2.46                  |
| Dimensional                                      | \$209,280,047                         | 33.00            | On all assets  | \$209,280,047                   | \$690,624                         | \$172,656                     | 33.00                 |
|  | ,,,                                   |                  |  | Total:                          | \$690,624                         | \$172,656                     | 33.00                 |
| Morgan Stanley                                   | \$167,731,914                         | 75.00            | On the first \$25,000,000  | \$25,000,000                    | \$187,500                         | \$46,875                      | 75.00                 |
| l  |                                       | 65.00            | \$25,000,000 to \$75,000,000   | \$50,000,000                    | \$325,000                         | \$81,250                      | 68.33                 |
| I  |                                       | 60.00            | \$75,000,000 to \$100,000,000  | \$25,000,000                    | \$150,000                         | \$37,500                      | 66.25                 |
| <del> </del>                                     |                                       | 45.00            | On balance over \$100,000,000  | \$67,731,914                    | \$304,794<br><b>\$967,294</b>     | \$76,198<br><b>\$241,823</b>  | 57.67<br><b>57.67</b> |
|  |                                       |                  |  | Total:                          | \$907,294                         | \$241,823                     | 57.67                 |
| Artisan  | \$180,855,895                         | 80.00            | On all assets  | \$180,855,895<br><b>Total</b> : | \$1,446,847<br><b>\$1,446,847</b> | \$361,712<br><b>\$361,712</b> | 80.00<br><b>80.00</b> |
|  |                                       |                  |  | rotal.                          | \$1,440,647                       | \$301,712                     | 80.00                 |
| TimesSquare                                      | \$100,394,617                         | 85.00            | On all assets  | \$100,394,617                   | \$853,354                         | \$213,339                     | 85.00                 |
|  |                                       |                  |  | Total:                          | \$853,354                         | \$213,339                     | 85.00                 |
| Parametric EM (CIT)                              | \$89,414,557                          | 78.00            | On all assets  | \$89,414,557                    | \$697,434                         | \$174,358                     | 78.00                 |
|  |                                       |                  |  | Total:                          | \$697,434                         | \$174,358                     | 78.00                 |
| Wellington                                       | \$268,188,777                         | 30.00            | On the first \$25,000,000  | \$25,000,000                    | \$75,000                          | \$18,750                      | 30.00                 |
| I  |                                       | 25.00            | \$25,000,000 to \$50,000,000   | \$25,000,000                    | \$62,500                          | \$15,625                      | 27.50                 |
| I  |                                       | 22.00            | \$50,000,000 to \$100,000,000  | \$50,000,000                    | \$110,000                         | \$27,500                      | 24.75                 |
| <del> </del>                                     |                                       | 15.00            | On balance over \$100,000,000  | \$168,188,777                   | \$252,283                         | \$63,071<br><b>\$124,946</b>  | 18.64<br><b>18.64</b> |
|  |                                       |                  |  | Total:                          | \$499,783                         | \$124,946                     | 10.04                 |
| Western Asset                                    | \$147,766,558                         | 30.00            | On the first \$100,000,000   | \$100,000,000                   | \$300,000                         | \$75,000                      | 30.00                 |
|  |                                       | 15.00            | On balance over \$100,000,000  | \$47,766,558<br><b>Total</b> :  | \$71,650<br><b>\$371,650</b>      | \$17,912<br><b>\$92,912</b>   | 25.15<br><b>25.15</b> |
|  |                                       |                  |  |                                 |                                   |                               |                       |
| Colchester                                       | \$140,991,205                         | 60.00            | On the first \$25,000,000  | \$25,000,000                    | \$150,000                         | \$37,500                      | 60.00                 |
|  |                                       | 50.00<br>35.00   | \$25,000,000 to \$50,000,000<br>\$50,000,000 to \$150,000,000                        | \$25,000,000<br>\$90,991,205    | \$125,000<br>\$318,469            | \$31,250<br>\$79,617          | 55.00<br>42.09        |
|  |                                       | 30.00            | On balance over \$150,000,000  | \$0,991,203                     | \$310,409                         | \$79,017                      | 0.00                  |
|  |                                       |                  |  | Total:                          | \$593,469                         | \$148,367                     | 42.09                 |
| Invesco Commodities                              | \$38,396,983                          | 70.00            | On all assets  | \$38,396,983                    | \$268,779                         | \$67,195                      | 70.00                 |
|  | , , , , , , , , , , , , , , , , , , , |                  |  | Total:                          | \$268,779                         | \$67,195                      | 70.00                 |
| BlackRock TIPS                                   | \$40,903,273                          | 3.00             | On all assets  | \$40,903,273                    | \$12,271                          | \$3,068                       | 3.00                  |
| BIACKROCK TIFS                                   | φ40,903,213                           | 3.00             | Off all assets   | Total:                          | \$12,271                          | \$3,068                       | 3.00                  |
|  |                                       |                  |  |                                 |                                   |                               |                       |
| KBI Global Resources                             | \$43,568,544                          | 85.00            | On all assets  | \$43,568,544<br><b>Total</b> :  | \$370,333<br><b>\$370,333</b>     | \$92,583<br><b>\$92,583</b>   | 85.00<br><b>85.00</b> |
|  |                                       |                  |  | Total.                          | ψ57 0,555                         | \$32,303                      | 03.00                 |
| BlackRock REITS                                  | \$34,847,579                          | 6.00             | On all assets  | \$34,847,579                    | \$20,909                          | \$5,227                       | 6.00                  |
|  |                                       |                  |  | Total:                          | \$20,909                          | \$5,227                       | 6.00                  |
| Woodmont <sup>A</sup>                            | \$17,395,078                          | 0.00             | On all assets  | \$17,395,078                    | \$0                               | \$0                           | 0.00                  |
| I  |                                       |                  | Plus property management, leasing advisory, and property disposition fees            | Total:                          | \$0                               | \$0                           | 0.00                  |
| <u> </u>   |                                       |                  | (not included)   | Total.                          | \$0                               | \$0                           | 0.00                  |
| UDC Terrebull Decrees From 28                    | ¢110 717 000                          | 05.50            | On the first \$40,000,000  | \$10,000,000                    | \$0E E00                          | 602 075                       | 95.50                 |
| UBS Trumbull Property Fund <sup>B</sup>          | \$118,717,063                         | 95.50<br>82.50   | On the first \$10,000,000<br>\$10,000,000 to \$25,000,000                            | \$10,000,000<br>\$15,000,000    | \$95,500<br>\$123,750             | \$23,875<br>\$30,938          | 95.50<br>87.70        |
|  | 1                                     | 80.50            | \$25,000,000 to \$50,000,000   | \$25,000,000                    | \$201,250                         | \$50,313                      | 84.10                 |
| 1  | 1                                     | 79.00            | \$50,000,000 to \$100,000,000  | \$50,000,000                    | \$395,000                         | \$98,750                      | 81.55                 |
| 1  | 1                                     | 67.00            | \$100,000,000 to \$250,000,000   | \$18,717,063                    | \$125,404                         | \$31,351                      | 79.26                 |
| 1  | 1                                     | 60.00            | \$250,000,000 to \$400,000,000   | \$0                             | \$0                               | \$0                           | 0.00                  |
| I  |                                       | 56.00            | \$400,000,000 to \$600,000,000   | \$0                             | \$0                               | \$0                           | 0.00                  |
| <del>                                     </del> | Dhia basisting 5                      | 52.00            | On balance over \$ 600,000,000   | \$0<br>T-1-1-                   | \$0                               | \$0                           | 0.00                  |
| 1  |                                       |                  | nd suspended for 2 years starting 2Q18)<br>for 4 years (effective 1/1/20 - 12/31/23) | Total:                          | \$940,904<br>\$737,029            | \$235,226<br>\$184,257        | 79.26<br>62.08        |
|  |                                       |                  | ĺ  | 040.555.555                     |                                   |                               |                       |
| AEW Core Property Trust                          | \$104,155,826                         | 110.00<br>100.00 | On the first \$10,000,000<br>\$10,000,000 to \$25,000,000                            | \$10,000,000<br>\$15,000,000    | \$110,000<br>\$150,000            | \$27,500<br>\$37,500          | 110.00<br>104.00      |
| I  |                                       | 85.00            | \$10,000,000 to \$25,000,000<br>\$25,000,000 to \$50,000,000                         | \$15,000,000                    | \$150,000<br>\$212,500            | \$37,500<br>\$53,125          | 94.50                 |
| I  |                                       | 80.00            | \$50,000,000 to \$100,000,000  | \$50,000,000                    | \$400,000                         | \$100,000                     | 87.25                 |
|  | İ                                     | 75.00            | On balance over \$100,000,000  | \$4,155,826                     | \$31,169                          | \$7,792                       | 86.76                 |
|  |                                       |                  |  |                                 | 0000 000                          |                               | 00.70                 |
|  |                                       |                  |  | Total:                          | \$903,669                         | \$225,917                     | 86.76                 |
| AEW Partners V <sup>C</sup>                      | \$10,443                              | 125.00           | On net asset value   | **Total:                        | \$903,669<br>\$131                | \$225,917<br>\$33             | 125.00                |

|                                |                 |                | 0.1   |                               |                             |                             |                       |
|--------------------------------|-----------------|----------------|---|-------------------------------|-----------------------------|-----------------------------|-----------------------|
| Manager                        | Market Value    | BPS per Tier   | Tier Breaks   | Actual Amount<br>Per Tier     | Yearly                      | Quarterly                   | Annual BPS            |
| Abbott ACE VID                 | \$52,372,892    |                | Called Capital  | Per Her                       |                             |                             |                       |
|                                | 1. 7. 7.        |                | Fees On Committed Capital                                 |                               |                             |                             |                       |
|                                | \$100,000,000   | 100.00         | On the first \$25,000,000                                 | \$25,000,000                  | \$250,000                   | \$62,500                    | 100.00                |
|                                |                 | 90.00          | \$25,000,000 to \$50,000,000                              | \$25,000,000                  | \$225,000                   | \$56,250                    | 95.00                 |
|                                |                 | 75.00          | On balance over \$50,000,000                              | \$50,000,000                  | \$375,000                   | \$93,750                    | 85.00                 |
|                                |                 |                |   | Total:                        | \$850,000                   | \$212,500                   | 85.00                 |
| Abbott ACE VII <sup>E</sup>    | \$35,875,318    |                | Called Capital  |                               |                             |                             |                       |
| ADDUCTOL VII                   | 400,0:0,0:0     |                | Fees On Committed Capital                                 |                               |                             |                             |                       |
|                                | \$35,000,000    | 100.00         | On the first \$25,000,000                                 | \$25,000,000                  | \$62,500                    | \$15,625                    | 25.00                 |
|                                |                 | 90.00          | \$25,000,000 to \$50,000,000                              | \$10,000,000                  | \$22,500                    | \$5,625                     | 24.29                 |
|                                |                 | 75.00          | On balance over \$50,000,000                              | \$0                           | \$0                         | \$0                         | 0.00                  |
|                                |                 |                |   | Total:                        | \$85,000                    | \$21,250                    | 24.29                 |
| Abbott AP 2016 <sup>E</sup>    | \$34,070,052    |                | Called Capital  |                               |                             |                             |                       |
| ADDOTT AP 2016                 | \$34,070,032    |                | Fees On Committed Capital                                 |                               |                             |                             |                       |
|                                |                 |                | Assets stacked for tiered fees                            |                               |                             |                             |                       |
|                                | \$50,000,000    | 60.00          | On the first \$15,000,000                                 | \$15,000,000                  | \$90,000                    | \$22,500                    | 60.00                 |
|                                | ****,****,***   | 50.00          | On the next \$350,000,000                                 | \$35,000,000                  | \$175,000                   | \$43,750                    | 53.00                 |
|                                |                 |                |   | Total:                        | \$265,000                   | \$66,250                    | 53.00                 |
| _                              |                 |                |   |                               |                             |                             |                       |
| Abbott AP 2017 <sup>E</sup>    | \$7,013,951     |                | Called Capital  |                               |                             |                             |                       |
|                                |                 |                | Fees On Committed Capital                                 |                               |                             |                             |                       |
|                                |                 |                | Fee rate takes into account prior                         |                               |                             |                             |                       |
|                                | ₽4E 000 000     | 50.00          | commitments in last 10 years<br>On the first \$15,000,000 | ¢45 000 000                   | ¢75.000                     | ¢40.750                     | E0.00                 |
|                                | \$15,000,000    | 50.00          | On the lirst \$15,000,000                                 | \$15,000,000<br><b>Total:</b> | \$75,000<br><b>\$75,000</b> | \$18,750<br><b>\$18,750</b> | 50.00<br><b>50.00</b> |
|                                |                 |                |   | Total.                        | \$15,000                    | \$10,730                    | 30.00                 |
| Pathway PPEF 2008 <sup>F</sup> | \$54,600,710    |                | Called Capital  |                               |                             |                             |                       |
|                                | \$100,000,000   | 90.00          | Fees On Committed Capital                                 | \$100,000,000                 | \$900,000                   | \$225,000                   | 90.00                 |
|                                |                 |                |   | Total:                        | \$900,000                   | \$225,000                   | 90.00                 |
| Pothware PRESIDE               | \$34,787,722    |                | Called Capital  |                               |                             |                             |                       |
| Pathway PPEF I-7 <sup>F</sup>  | \$35,000,000    | 90.00          | Fees On Committed Capital                                 | \$35,000,000                  | \$315,000                   | \$78,750                    | 90.00                 |
|                                | ψ33,000,000     | 30.00          | 1 cos en committed capital                                | Total:                        | \$315,000                   | \$78,750                    | 90.00                 |
|                                |                 |                |   | T Ottali                      | <b>\$0.10,000</b>           | <b>V. 0,1 00</b>            |                       |
| Pathway PPEF I-8 <sup>F</sup>  | \$41,492,087    |                | Called Capital  |                               |                             |                             |                       |
|                                | \$50,000,000    | 90.00          | Fees On Committed Capital                                 | \$50,000,000                  | \$450,000                   | \$112,500                   | 90.00                 |
|                                |                 |                |   | Total:                        | \$450,000                   | \$112,500                   | 90.00                 |
| Pathway PPEF I-9 <sup>G</sup>  | \$6,391,548     |                | Called Capital  |                               |                             |                             |                       |
| I GUIWAY FFEF 1-9              | ψ0,001,040      | †              | Fees On Committed Capital                                 |                               |                             |                             |                       |
|                                |                 |                | Fee rate takes into account portion                       |                               |                             |                             |                       |
|                                | \$15,000,000    | 80.00          | of prior commitments                                      | \$15,000,000                  | \$120,000                   | \$30,000                    | 80.00                 |
|                                |                 |                | •   | Total:                        | \$120,000                   | \$30,000                    | 80.00                 |
|                                | 045.555         |                | Assessed Datainers  | 040.555                       | 010.000                     | 04                          |                       |
| Parametric Overlay             | \$18,000        | 20.00          | Annual Retainer   | \$18,000                      | \$18,000                    | \$4,500                     | 20.00                 |
|                                | \$65,775,916    | 20.00<br>10.00 | On the first \$25,000,000<br>On balance over \$25,000,000 | \$25,000,000<br>\$40,775,916  | \$50,000<br>\$40,776        | \$12,500<br>\$10,194        | 20.00<br>16.53        |
|                                |                 | 10.00          | On palatice over \$20,000,000                             | \$40,775,916<br><b>Total:</b> | \$108,776                   | \$27,194                    | 16.54                 |
| Total Fund:                    | \$2,578,409,756 |                |   | i otal.                       | \$11,736,033                | \$2,934,008                 | 0.46%                 |

The effective annual fee is an approximation based on the recent quarter market values and the managers' yearly fee schedules.

# Callan

A Woodmont's fees were revised and they no longer charge for advisory and asset management services. The property management fees are 2% of monthly collected rent receipts for single tenant buildings and 4% for multi-tenant buildings. Leasing advisory fees are 1% of lease rent for single-tentant buildings and 1% for multi-tenant buildings if no commission is paid by MCERA to an outside broker. Additionally, property disposition services have been added and vary by property.

an outside broker. Additionally, property disposition services have been added and vary by property.

BUBS receives a performance incentive that could increase fees by as much as 25 bps. This fee has been suspended for two years beginning 2Q18.

<sup>&</sup>lt;sup>C</sup>AEW's fee is now calculated based on the net asset value (no longer total committed capital of \$5mm).

DAbbott's fee is calculated based on the total committed capital (\$100mm for ACE VI), not the paid in amount. Fees are scaled in: 50% in year 1, 75% in year 2, and 100% in year 3. Fees decline by 10% after year 7, and each year thereafter.

EAbbott's fee is calculated based on the total committed capital (\$35mm for ACE VII, \$50mm for AP 2016, \$15mm for AP 2017), not the paid in amount. Fees are scaled in: 25% in year 1, 50% in year 2, 75% in year 3, and 100% in year 4. Fees decline by 10% after year 8, and each year thereafter. To the extent the term of the Fund is extended beyond the 12th anniversary, the fee will decline by 25% per year. No fees charged after 15 years. Fees for AP 2016 are tiered. MCERA's assets are stacked to determine the starting tier. Fee rate for AP 2017 is based on prior commitments over the last 10 years. The AP 2017 commitment is charged in the 50 bp, \$150-\$500 mm bracket. Management fees are waived in 2017 for AP 2017 (early closer discount).

F Pathway's fee is calculated based on the total committed capital (\$100mm for PPEF 2008, \$35mm for PPEF I-7, and \$50mm for PPEF I-8). Fees decline 10% per year after year 8.

<sup>&</sup>lt;sup>G</sup> Pathway's fee is calculated based on the total committed capital (\$15mm for PPEF I-9). Management fee rate takes into account a portion of prior commitments by the investor to prior PCM funds. The PPEF I-9 commitment is charged in the 80 bp, \$25-\$50 mm bracket. Fees are scaled in: 25% in year 1, 50% in year 2, 75% in year 3, and 100% in year 4. Fees decline 10% per year starting in year 9-15. After year 15, fee will remain 20% of full fee (\$25.5k) for as long as a capital account exists.

# Marin County Employees' Retirement Association Target History

| 30-Sep-2017 - 30-              | Jun-2020                                 |                | 30-Sep-2014 - 31-            | Dec-2014                            |                 |
|--------------------------------|--|----------------|------------------------------|-------------------------------------|-----------------|
| · ·                            | Russell 3000 Index                       | 32.00%         | ·                            | Russell 3000 Index                  | 36.50%          |
| Domestic Equity                |  |                | Domestic Equity              |                                     |                 |
| Intl Equity                    | MSCI ACWI xUS IMI Index                  | 22.00%         | Intl Equity                  | MSCI ACWI xUS IMI Index             | 22.00%          |
| Fixed Income<br>Fixed Income   | Barclay's Aggregate Index                | 11.50%         | Fixed Income<br>Fixed Income | Barclay's Aggregate Index           | 11.50%<br>5.75% |
| Fixed Income<br>Fixed Income   | Citi World Govt Bond (Unhedged)          | 5.75%          |                              | Citi World Govt Bond (Unhedged)     |                 |
|                                | Barclay's Intermediate Credit Index      | 5.75%          | Fixed Income                 | Barclay's Intermediate Credit Index | 5.75%           |
| Private Equity                 | Russell 3000 Index                       | 6.40%          | Private Equity               | Russell 3000 Index                  | 6.40%           |
| Private Equity                 | MSCI ACWI xUS IMI Index                  | 1.60%          | Private Equity               | MSCI ACWI xUS IMI Index             | 1.60%           |
| Real Assets                    | S&P Global Natural Resources (Net Div)   | 1.75%          | Real Assets                  | NCREIF Property Index               | 10.50%          |
| Real Assets                    | Bloomberg Commodity Index - Total Return | 1.75%          |                              |                                     | 100.00%         |
| Real Assets                    | S&P Dow Jones US Select REIT             | 1.75%          |                              |                                     |                 |
| Real Assets                    | Blmbg US TIPS Index                      | 1.75%          | 31-Mar-2014 - 30-            | Sep-2014                            |                 |
| Real Assets                    | NFI-ODCE Equal Weight Net                | 8.00%          | Domestic Equity              | Russell 3000 Index                  | 39.50%          |
|                                |  | 100.00%        | Intl Equity                  | MSCI ACWI xUS IMI Index             | 22.00%          |
|                                |  |                | Fixed Income                 | Barclay's Aggregate Index           | 11.50%          |
| 30-Sep-2016 - 30-9             | Sep-2017                                 |                | Fixed Income                 | Citi World Govt Bond (Unhedged)     | 5.75%           |
| Domestic Equity                | Russell 3000 Index                       | 32.00%         | Fixed Income                 | Barclay's Intermediate Credit Index | 5.75%           |
| Intl Equity                    | MSCI ACWI xUS IMI Index                  | 22.00%         | Private Equity               | Russell 3000 Index                  | 4.00%           |
| Fixed Income                   | Barclay's Aggregate Index                | 11.50%         | Private Equity               | MSCI ACWI xUS IMI Index             | 1.00%           |
| Fixed Income                   | Citi World Govt Bond (Unhedged)          | 5.75%          | Real Assets                  | NCREIF Property Index               | 10.50%          |
| Fixed Income                   | Barclay's Intermediate Credit Index      | 5.75%          | 110017100010                 | TOTAL Troporty maox                 |                 |
| Private Equity                 | Russell 3000 Index                       | 6.40%          |                              |                                     | 100.00%         |
| Private Equity                 | MSCI ACWI xUS IMI Index                  | 1.60%          | 00 1 . 0040 .                | M 004.4                             |                 |
| Real Assets                    | S&P Global Natural Resources (Net Div)   | 1.75%          | 30-Jun-2013 - 31-l           | Mar-2014                            |                 |
| Real Assets                    | Bloomberg Commodity Index - Total Return | 1.75%          | Domestic Equity              | Russell 3000 Index                  | 39.50%          |
| Real Assets                    | Blmbg US TIPS Index                      | 1.75%          | Intl Equity                  | MSCI ACWI xUS IMI Index             | 22.00%          |
| Real Assets                    | MSCI US REIT Index                       | 1.75%          | Fixed Income                 | Barclay's Aggregate Index           | 23.00%          |
| Real Assets                    | NFI-ODCE Equal Weight Net                | 8.00%          | Private Equity               | Russell 3000 Index                  | 4.00%           |
| 110017100010                   | o z o z z qua. rro.g rec                 |                | Private Equity               | MSCI ACWI xUS IMI Index             | 1.00%           |
|                                |  | 100.00%        | Real Assets                  | NCREIF Property Index               | 10.50%          |
| 04 5 0045 004                  | 0 0040                                   |                |                              | · •                                 | 100.00%         |
| 31-Dec-2015 - 30-5             | Sep-2016                                 |                |                              |                                     | 100.0070        |
| Domestic Equity                | Russell 3000 Index                       | 32.00%         | 30-Sep-2012 - 30-            | Jun-2013                            |                 |
| Intl Equity                    | MSCI ACWI xUS IMI Index                  | 22.00%         |                              |                                     | 00.000/         |
| Fixed Income                   | Barclay's Aggregate Index                | 11.50%         | Domestic Equity              | Russell 3000 Index                  | 38.00%          |
| Fixed Income                   | Barclay's Intermediate Credit Index      | 5.75%          | Intl Equity                  | MSCI ACWI xUS IMI Index             | 21.50%          |
| Fixed Income                   | Citi World Govt Bond (Unhedged)          | 5.75%          | Fixed Income                 | Barclay's Aggregate Index           | 26.00%          |
| Private Equity                 | Russell 3000 Index                       | 6.40%          | Private Equity               | Russell 3000 Index                  | 3.20%           |
| Private Equity                 | MSCI ACWI xUS IMI Index                  | 1.60%          | Private Equity               | MSCI ACWI xUS IMI Index             | 0.80%           |
| Real Assets                    | MSCI US REIT Index                       | 1.75%          | Real Assets                  | NCREIF Property Index               | 10.50%          |
| Real Assets                    | Blmbg US TIPS Index                      | 1.75%          |                              |                                     | 100.00%         |
| Real Assets                    | S&P Global Commodity and Resources Inde  | ex 1.75%       |                              |                                     |                 |
| Real Assets                    | Bloomberg Commodity Index - Total Return | 1.75%          | 30-Sep-2011 - 30-            | Sep-2012                            |                 |
| Real Assets                    | NFI-ODCE Equal Weight Net                | 8.00%          | Domestic Equity              | Russell 3000 Index                  | 40.00%          |
|                                |  | 100.00%        | Intl Equity                  | MSCI ACWI xUS IMI Index             | 21.50%          |
|                                |  | 100.0070       | Fixed Income                 | Barclay's Aggregate Index           | 26.00%          |
| 30-Jun-2015 - 31-E             | Dec-2015                                 |                | Private Equity               | Russell 3000 Index                  | 1.20%           |
|                                |  |                | Private Equity               | MSCI ACWI xUS IMI Index             | 0.80%           |
| Domestic Equity                | Russell 3000 Index                       | 32.00%         | Real Assets                  | NCREIF Property Index               | 10.50%          |
| Intl Equity                    | MSCI ACWI xUS IMI Index                  | 22.00%         | iteal Assets                 | NONEII Froperty Index               |                 |
| Fixed Income                   | Barclay's Aggregate Index                | 11.50%         |                              |                                     | 100.00%         |
| Fixed Income                   | Barclay's Intermediate Credit Index      | 5.75%          |                              |                                     |                 |
| Fixed Income                   | Citi World Govt Bond (Unhedged)          | 5.75%          | 30-Jun-2010 - 30-            | Sep-2011                            |                 |
| Private Equity                 | Russell 3000 Index                       | 6.40%          | Domestic Equity              | Russell 3000 Index                  | 41.50%          |
| Private Equity                 | MSCI ACWI xUS IMI Index                  | 1.60%          | Intl Equity                  | MSCI ACWI xUS IMI Index             | 21.50%          |
| Real Assets                    | MSCI US REIT Index                       | 1.75%          | Fixed Income                 | Barclay's Aggregate Index           | 26.00%          |
| Real Assets                    | Bloomberg Commodity Index - Total Return | 1.75%          | Private Equity               | Russell 3000 Index                  | 0.30%           |
| Real Assets                    | Blmbg US TIPS Index                      | 1.75%          | Private Equity               | MSCI ACWI xUS IMI Index             | 0.20%           |
| Real Assets                    | S&P Global Commodity and Resources Inde  |                | Real Assets                  | NCREIF Property Index               | 10.50%          |
| Real Assets                    | NFI-ODCE Equal Weight Net                | 8.00%          | 110017100010                 | TOTAL Property made                 |                 |
|                                |  | 100.00%        |                              |                                     | 100.00%         |
|                                |  |                | 24 Day 0000 -00              | L 2010                              |                 |
| 31-Dec-2014 - 30-              | Jun-2015                                 |                | 31-Dec-2008 - 30-            |                                     |                 |
|                                | Russell 3000 Index                       | 36.50%         | Domestic Equity              | S&P 500 Index                       | 35.50%          |
| Domestic Equity<br>Intl Equity |  |                | Domestic Equity              | Russell 2000 Index                  | 9.00%           |
|                                | MSCI ACWI xUS IMI Index                  | 22.00%         | Intl Equity                  | MSCI EAFE Index (USD Net Div)       | 20.00%          |
| Fixed Income                   | Barclay's Aggregate Index                | 11.50%         | Fixed Income                 | Barclay's Aggregate Index           | 23.00%          |
| Fixed Income                   | Citi World Govt Bond (Unhedged)          | 5.75%<br>5.75% | Private Equity               | Russell 3000 Index                  | 0.50%           |
| Fixed Income                   | Barclay's Intermediate Credit Index      | 5.75%          | Real Assets                  | NCREIF Property Index               | 12.00%          |
| Private Equity                 | Russell 3000 Index                       | 6.40%          |                              | <u> </u>                            | 100.00%         |
| Private Equity                 | MSCI ACWI xUS IMI Index                  | 1.60%          |                              |                                     | 100.00 /0       |
| Real Assets                    | NFI-ODCE Equal Weight Net                | 10.50%         | 31-Dec-2004 - 31-            | Dec-2008                            |                 |
|                                |  | 100.00%        |                              |                                     |                 |
|                                |  |                | Domestic Equity              | S&P 500 Index                       | 36.00%          |
|                                |  |                | Domestic Equity              | Russell 2000 Index                  | 9.00%           |
|                                |  |                | Intl Equity                  | MSCI EAFE Index (USD Net Div)       | 20.00%          |
|                                |  |                | Fixed Income                 | Barclay's Aggregate Index           | 23.00%          |
|                                |  |                | Real Assets                  | NCREIF Property Index               | 12.00%          |
|                                |  |                |                              |                                     | 100.00%         |



100.00%

# Marin County Employees' Retirement Association Target History

| 30-Jun-2001 - 31-Dec-2004 |                               |         |  |  |  |  |
|---------------------------|-------------------------------|---------|--|--|--|--|
| Domestic Equity           | S&P 500 Index                 | 36.00%  |  |  |  |  |
| Domestic Equity           | Russell 2000 Index            | 9.00%   |  |  |  |  |
| Intl Equity               | MSCI EAFE Index (USD Net Div) | 20.00%  |  |  |  |  |
| Fixed Income              | Barclay's Aggregate Index     | 23.00%  |  |  |  |  |
| Real Assets               | NCREIF Classic Index          | 12.00%  |  |  |  |  |
| •                         |                               | 100.00% |  |  |  |  |

| 31-Dec-1999 - 30-Jun-2001 |                               |         |  |  |  |  |
|---------------------------|-------------------------------|---------|--|--|--|--|
| Domestic Equity           | S&P 500 Index                 | 36.00%  |  |  |  |  |
| Domestic Equity           | Russell 2000 Index            | 9.00%   |  |  |  |  |
| Real Estate               | NCREIF Classic Index          | 12.00%  |  |  |  |  |
| Intl Equity               | MSCI EAFE Index (USD Net Div) | 20.00%  |  |  |  |  |
| Fixed Income              | Barclay's Aggregate Index     | 19.00%  |  |  |  |  |
| Fixed Income              | WGBI Hedged Benchmark         | 4.00%   |  |  |  |  |
|                           | ·                             | 100.00% |  |  |  |  |

| 30-Jun-1998 - 31-Dec-1999 |                               |         |  |  |  |
|---------------------------|-------------------------------|---------|--|--|--|
| Domestic Equity           | S&P 500 Value                 | 23.00%  |  |  |  |
| Domestic Equity           | S&P 500 Index                 | 10.00%  |  |  |  |
| Domestic Equity           | Russell 2000 Index            | 7.00%   |  |  |  |
| Domestic Equity           | S&P 500 Growth                | 5.00%   |  |  |  |
| Fixed Income              | Barclay's Aggregate Index     | 23.00%  |  |  |  |
| Real Estate               | NCREIF Classic Index          | 12.00%  |  |  |  |
| Intl Equity               | MSCI EAFE Index (USD Net Div) | 15.00%  |  |  |  |
| Fixed Income              | WGBI Hedged Benchmark         | 5.00%   |  |  |  |
|                           |                               | 100.00% |  |  |  |

| 30-Jun-1995 - 30-Jun-1998 |                                 |         |  |  |  |  |
|---------------------------|---------------------------------|---------|--|--|--|--|
| Domestic Equity           | S&P 500 Value                   | 23.00%  |  |  |  |  |
| Domestic Equity           | S&P 500 Index                   | 10.00%  |  |  |  |  |
| Domestic Equity           | Russell 2000 Index              | 7.00%   |  |  |  |  |
| Domestic Equity           | S&P 500 Growth                  | 5.00%   |  |  |  |  |
| Fixed Income              | Barclay's Aggregate Index       | 23.00%  |  |  |  |  |
| Real Estate               | NCREIF Classic Index            | 12.00%  |  |  |  |  |
| Intl Equity               | MSCI EAFE Index (USD Net Div)   | 15.00%  |  |  |  |  |
| Fixed Income              | Citi World Govt Bond (Unhedged) | 5.00%   |  |  |  |  |
|                           |                                 | 100.00% |  |  |  |  |



# Marin County Employees' Retirement Association Manager History

| Manager                                    | Asset Class   | Start Date | End Date   |
|--|---|------------|------------|
| SSGA                                       | Domestic Equity (Large Cap Core - Passive)  | 11/30/2010 |            |
| BlackRock (BGI)                            | Domestic Equity (Large Cap Core - Passive)  | 03/31/1999 | 10/31/2006 |
| BlackRock (BGI)                            | Domestic Equity (Large Cap Core - Alpha Tilt)                                     | 08/31/1996 | 09/30/2006 |
| Dodge & Cox                                | Domestic Equity (Large Cap Value)   | 04/30/1996 | 12/31/2012 |
| RCM  | Domestic Equity (Large Cap Growth)  | 08/31/2001 | 12/31/2012 |
| BlackRock (BGI)                            | Domestic Equity (Large Cap Growth - Passive)                                      | 02/29/1996 | 08/31/2001 |
| BlackRock (BGI)                            | Domestic Equity (Large Cap 130/30)  | 09/30/2006 | 11/30/2010 |
| DFA  | Domestic Equity (Small Cap Value)   | 10/31/1999 | 11/30/2018 |
| DFA  | Domestic Equity (Small Cap Core)  | 11/30/2018 |            |
| Columbus Circle                            | Domestic Equity (Small Cap Growth)  | 11/30/2009 | 11/30/2018 |
| Mazama Capital                             | Domestic Equity (Small Cap Growth)  | 04/30/2001 | 11/30/2009 |
| BlackRock (BGI)                            | Domestic Equity (Small Cap Growth - Passive)                                      | 01/31/2000 | 05/31/2001 |
| Analytic Investors                         | Domestic Equity (US Market Neutral)   | 03/31/2004 | 04/30/2011 |
| FIAM (Pyramis)                             | Domestic Equity (US Market Neutral)   | 12/31/2003 | 04/30/2011 |
| Numeric Investors                          | Domestic Equity (US Market Neutral)   | 09/30/2003 | 04/30/2011 |
| FirstQuadrant                              | Domestic Equity (Go Market Neutral)   | 07/31/2006 | 06/30/2010 |
|  | Domestic Equity (European Market Neutral)  Domestic Equity (Japan Market Neutral) |            | 06/30/2010 |
| Analytic Investors                         |   |            | 00/30/2010 |
| Morgan Stanley                             | International Equity (Value)  | 07/31/2001 |            |
| Artisan Partners                           | Interntional Equity (Growth)  | 12/31/2002 | 40/24/2002 |
| Montgomery Asset                           | International Equity (Growth)   | 01/31/2001 | 12/31/2002 |
| Putnam Investments                         | International Equity  | 12/31/2002 | 07/31/2005 |
| Zurich Scudder                             | International Equity  | 10/31/1996 | 07/31/2001 |
| TimesSquare Capital Management             | International Equity (Small Cap)  | 05/01/2019 |            |
| Fidelity Institutional Asset Management    | International Equity (Small Cap)  | 09/30/2006 | 04/30/2019 |
| AXA Rosenburg                              | International Equity (Small Cap Value)  | 09/30/2006 | 04/30/2010 |
| Parametric                                 | International Equity (Emerging Markets - Commingled Fund)                         | 10/31/2013 |            |
| Parametric                                 | International Equity (Emerging Markets - Mutual Fund)                             | 08/31/2010 | 11/30/2016 |
| Wellington Management                      | Fixed Income (Core Plus)  | 03/31/2012 |            |
| Wellington Management                      | Fixed Income (Core)   | 09/30/2002 | 03/31/2012 |
| Western Asset                              | Fixed Income (Intermediate Credit)  | 03/31/2014 |            |
| Western Asset                              | Fixed Income (Core Plus)  | 08/31/2001 | 03/31/2014 |
| Seneca                                     | Fixed Income (Core)   | 06/30/1995 | 09/30/2002 |
| Colchester                                 | Fixed Income (Global Unhedged)  | 02/28/2014 |            |
| BlackRock (BGI)                            | Fixed Income (Global Hedged)  | 06/30/1998 | 05/31/2001 |
| INVESCO                                    | Real Assets (Commodities)   | 05/31/2016 |            |
| BlackRock                                  | Real Assets (Commodities - Passive)   | 06/30/2015 | 05/31/2016 |
| KBI Global Investors                       | Real Assets (Global Natural Resource Equity)                                      | 09/30/2016 |            |
| SSGA                                       | Real Assets (Global Natural Resource Equity - Passive)                            | 06/30/2015 | 09/30/2016 |
| BlackRock                                  | Real Assets (REITS - Passive)   | 09/30/2017 |            |
| Vanguard                                   | Real Assets (REITS - Passive)   | 06/30/2015 | 09/30/2017 |
| BlackRock                                  | Real Assets (TIPS - Passive)  | 06/30/2015 |            |
| AEW Core Property Trust                    | Real Estate (Core)  | 06/30/2013 |            |
| UBS Trumbull Property Fund                 | Real Estate (Core)  | 06/30/2013 |            |
| Cornerstone Patriot Fund                   | Real Estate (Core)  | 09/30/2012 | 06/30/2013 |
| ING Clarion                                | Real Estate (Core)  | 04/30/2006 | 06/30/2012 |
| Woodmont                                   | Real Estate (Discretionary Separate Account)                                      | 06/30/1995 | 09/30/2015 |
| AEW Partners V Fund                        | Real Estate (Value Added)   | 03/31/2006 |            |
| RREEF America REIT III                     | Real Estate (Value Added)   | 06/30/2006 | 12/31/2017 |
| Abbott Fund VI, L.P.                       | Private Equity  | 03/31/2009 |            |
| Abbott Fund VII, L.P.                      | Private Equity  | 03/31/2014 |            |
| Abbott Fund 2016                           | Private Equity  | 03/31/2016 |            |
| Abbott Fund 2017                           | Private Equity  | 03/31/2017 |            |
| Pathway Private Equity 2008                | Private Equity  | 03/31/2017 |            |
| Pathway Private Equity 2008 Pathway PE I-7 | Private Equity  | 06/30/2013 |            |
|  |   |            |            |
| Pathway PE I-8                             | Private Equity  | 09/30/2015 |            |
| Pathway PE I-9                             | Private Equity  | 03/31/2017 |            |
| Parametric (Clifton) - Overlay             | Policy Implementation Overlay   | 08/31/2001 |            |
| Parametric (Clifton) - Overlay             | Alpha Transport - Bondized  | 11/30/2006 | 08/31/2010 |
| Parametric (Clifton) - Overlay             | Alpha Transport - Equitized   | 11/30/2006 | 04/30/2011 |



# **Equity Market Indicators**

The market indicators included in this report are regarded as measures of equity or fixed income performance results. The returns shown reflect both income and capital appreciation.

Russell 1000 Growth measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

Russell 1000 Value measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

Russell 2000 Growth contains those Russell 2000 securities with a greater than average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-earning ratios, lower dividend yields and higher forecasted growth values than the Value universe.

Russell 2000 Index is composed of the 2000 smallest stocks in the Russell 3000 Index, representing approximately 11% of the U.S. equity market capitalization.

Russell 2000 Value contains those Russell 2000 securities with a less than average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earning ratios, higher dividend yields and lower forecasted growth values than the Growth universe.

**Standard & Poor's 500 Index** is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries. The index is capitalization-weighted, with each stock weighted by its proportion of the total market value of all 500 issues. Thus, larger companies have a greater effect on the index.

**Standard & Poor's/Citi Growth Index** is a composite of the firms in the S&P 500 Index which, based on three growth and four value factors, exhibit stronger growth characteristics. The index is designed so that it represents roughly fifty percent of the market capitalization of the S&P 500 Index. Generally, companies in the Growth Index have higher growth rates of earnings, sales and return on equity than those in the Value Index. Like the full S&P 500 Index, the Growth Index is capitalization-weighted.

**Standard & Poor's/Citi Value Index** is a composite of the firms in the S&P 500 Index which, based on three growth and four value factors, exhibit stronger value characteristics. The index is designed so that it represents roughly fifty percent of the market capitalization of the S&P 500 Index. Generally, companies in the Value Index have higher dividend yields and book value, cash flow, and sales to price ratios than those in the Growth Index. Like the full S&P 500 Index, the Value Index is capitalization-weighted.



#### **Fixed Income Market Indicators**

The market indicators included in this report are regarded as measures of equity or fixed income performance results. The returns shown reflect both income and capital appreciation.

**90-Day U.S. Treasury Bills** provide a measure of riskless return. The rate of return is the average interest rate available on the beginning of each month for a Treasury Bill maturing in ninety days.

**Bloomberg Barclays 1-3 Year Government Index** is composed of agency and Treasury securities with maturities of one to three years.

**Bloomberg Barclays Aggregate Bond Index** is a combination of the Mortgage Backed Securities Index and the intermediate and long-term components of the Government/Credit Bond Index.

Bloomberg Barclays Capital Govt/Credit Bond Index is a composite of all publicly issued, fixed rate, non-convertible, domestic bonds. The issues are rated at least BBB, have a minimum outstanding principal of \$100 million for U.S. Government issues or \$50 million for other bonds, and have a maturity of at least one year. The index is capitalization-weighted.

**Bloomberg Barclays Govt/Credit Intermediate Index** is one of the components of the Government/Credit Index which includes only bonds with maturities between one to ten years.

**Citigroup Broad Investment-Grade Bond Index** is a composite of all institutionally traded U.S. Treasury, agency, mortgage, and corporate securities. The issues are rated BBB- or better, have remaining maturities of one year or longer and at least \$25 million outstanding. The index is capitalization-weighted.

Citigroup Government Bond Index is a composite that covers investments in all types of U.S. Government Debt outstanding. The index offers total returns on a broad base of government fixed-income securities with maturities of at least one year.

**Citigroup Long Term High-Grade Bond Index** is a composite of approximately 800 industrial, financial, and utility bonds. The issues are rated AA or AAA and have a maturity of at least 12 years. The index is weighted by the outstanding principal amount of each issue.



#### **International Equity Market Indicators**

The market indicators included in this report are regarded as measures of equity or fixed income performance results. The returns shown reflect both income and capital appreciation.

**FT-Actuaries World Index** is composed of at least 70% of the aggregate market value of every country's domestic exchange-listed companies' shares of stock, approximately 2400 common stocks. The index includes only markets, companies and securities where direct holdings of capital by foreign nationals is permissible. The index is capitalization-weighted; includes currency changes and is expressed in terms of U.S. dollars.

MSCI ACWI (All Country World Index) Index The MSCI ACWI (All Country World Index) Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. As of May 27, 2010 the MSCI ACWI consisted of 45 country indices comprising 24 developed and 21 emerging market country indices. The developed market country indices included are: Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States. The emerging market country indices included are: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey.

MSCI ACWI ex US Index The MSCI ACWI ex US(All Country World Index) Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets, excluding the US. As of May 27, 2010 the MSCI ACWI consisted of 45 country indices comprising 24 developed and 21 emerging market country indices. The developed market country indices included are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom. The emerging market country indices included are: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey.

**Morgan Stanley Capital International (MSCI) EAFE Index** is composed of approximately 1000 equity securities representing the stock exchanges of Europe, Australia, New Zealand and the Far East. The index is capitalization-weighted and is expressed in terms of U.S. dollars.

**Morgan Stanley Capital International (MSCI) Europe Index** is composed of approximately 600 equity securities representing the stock exchanges of 14 European countries. The index is capitalization-weighted and is expressed in terms of U.S. dollars.

Morgan Stanley Capital International (MSCI) Japan Index is composed of approximately 270 equity securities representing the stock exchanges of Japan. The index is capitalization-weighted and is expressed in terms of U.S. dollars.

**Morgan Stanley Capital International (MSCI) Pacific Index** is composed of approximately 350 equity securities representing the stock exchanges of Japan, Hong Kong, Singapore, Malaysia, plus approximately 70 Australian and New Zealand securities. The index is capitalization-weighted and is expressed in terms of U.S. dollars.

Morgan Stanley Capital International (MSCI) United Kingdom Index is composed of approximately 140 equity securities representing the stock exchanges of the United Kingdom. The index is capitalization-weighted and is expressed in terms of U.S. dollars.

Morgan Stanley Capital International (MSCI) World Index is composed of approximately 1500 equity securities representing the stock exchanges of the USA, Europe, Canada, Australia, New Zealand and the Far East. The index is capitalization-weighted; includes currency changes and is expressed in terms of U.S. dollars.



# **International Equity Market Indicators**

**Morgan Stanley Capital Intl (MSCI) Emerging Markets Free Index** is composed of about 549 equity securities representing the stock exchanges of 13 countries in Central Asia and the Far East, Latin America, Europe, and the Middle East. Only 20% of Korea's market capitalization is included in this index. The index is market capitalization-weighted and is expressed in terms of U.S. dollars.



# **Fixed Income Market Indicators**

**Bloomberg Barclays US TIPS Index** The Bloomberg Barclays US Government Inflation-Linked Bond Index measures the performance of the US Treasury Inflation Protected Securities ("TIPS") market. The index includes TIPS with one or more years remaining maturity with total outstanding issue size of \$500m or more.



#### **Callan Databases**

In order to provide comparative investment results for use in evaluating a fund's performance, Callan gathers rate of return data from investment managers. These data are then grouped by type of assets managed and by the type of investment manager. Except for mutual funds, the results are for tax-exempt fund assets. The databases, excluding mutual funds, represent investment managers who handle over 80% of all tax-exempt fund assets.

#### **Real Estate Funds**

Real estate funds consist of open or closed-end commingled funds. The returns are net of fees and represent the overall performance of commingled institutional capital invested in real estate properties.

**CAI Total Real Estate Funds** - The Total Real Estate Funds Database consists of both open and closed-end commingled funds managed by real estate firms.

#### **Other Funds**

**Public - Total** - consists of return and asset allocation information for public pension funds at the city, county and state level. The database is made up of Callan clients and non-clients.



#### **Callan Databases**

In order to provide comparative investment results for use in evaluating a fund's performance, Callan gathers rate of return data from investment managers. These data are then grouped by type of assets managed and by the type of investment manager. Except for mutual funds, the results are for tax-exempt fund assets. The databases, excluding mutual funds, represent investment managers who handle over 80% of all tax-exempt fund assets.

#### **Equity Funds**

Equity funds concentrate their investments in common stocks and convertible securities. The funds included maintain well-diversified portfolios.

Core Equity - Managers whose portfolio holdings and characteristics are similar to that of the broader market as represented by the Standard & Poor's 500 Index, with the objective of adding value over and above the index, typically from sector or issue selection. The core portfolio exhibits similar risk characteristics to the broad market as measured by low residual risk with Beta and R-Squared values close to 1.00 and combined growth and value z-score values close to 0.00.

Large Cap Growth - Managers who invest mainly in large companies that are expected to have above average prospects for long-term growth in earnings and profitability. Future growth prospects take precedence over valuation levels in the stock selection process. Invests in companies with P/E ratios, Price-to-Book values, Return-on-Assets values, Growth-in-Earnings values above the broader market. The companies typically have zero dividends or dividend yields below the broader market. Invests in securities which exhibit greater volatility than the broader market as measured by the securities' Beta and Standard Deviation. Portfolios have high growth z-scores and low value z-scores.

Large Cap Value - Managers who invest primarily in large companies believed to be currently undervalued in the general market and whose shares are priced below the market compared to their peers. Valuation issues take precedence over near term earnings prospects in the stock selection process. The Large Cap Value Style invests in companies with P/E ratios, Return-on-Equity values, and Price-to-Book values below the broader market and the middle capitalization segment. This style invests in securities with risk/reward profiles in the lower risk range of the medium capitalization market. Portfolios have low growth z-scores and high value z-scores.

**Small Capitalization (Growth)** - Managers who invest mainly in small companies that are expected to have above average prospects for long-term growth in earnings and profitability. Future growth prospects take precedence over valuation levels in the stock selection process. The Small Cap Growth Style invests in companies with P/E ratios, Price-to Book values, and Growth-in Earnings values above the broader market, in addition to the small capitalization market segment. The companies typically have zero dividends or dividend yields below the broader market. The securities exhibit greater volatility than the broader market as well as the small capitalization market segment as measured by the risk statistics values Beta and Standard Deviation. Portfolios have high growth z-scores and low value z-scores.

**Small Capitalization (Value)** - Managers who invest in small capitalization companies that are believed to be currently undervalued in the general market. Valuation issues take precedence over near-term earnings prospects in the stock selection process. The companies are expected to have a near-term earnings rebound and eventual realization of expected value. The Small Cap Value Style invests in companies with P/E ratios, Return-on-Equity values, and Price-to-Book values below the broader market in addition to the small capitalization market segment. This style invests in securities with dividend yields in the high range for the small capitalization market. The Small Cap Value Style invests in securities with risk/reward profiles in the lower risk range of the small capitalization market. Portfolios have low growth z-scores and high value z-scores.



# **Callan Databases**

In order to provide comparative investment results for use in evaluating a fund's performance, Callan gathers rate of return data from investment managers. These data are then grouped by type of assets managed and by the type of investment manager. Except for mutual funds, the results are for tax-exempt fund assets. The databases, excluding mutual funds, represent investment managers who handle over 80% of all tax-exempt fund assets.

### **Equity Funds**

Equity funds concentrate their investments in common stocks and convertible securities. The funds included maintain well-diversified portfolios.

Core International Equity Style Managers whose portfolio holdings and characteristics are similar to that of the broader developed market as represented by the MSCI EAFE Index, with the objective of adding value over and above the index, typically from country, sector, or issue selection. The Core portfolio is broadly diversified and exhibits similar risk characteristics to the developed market as measured by low residual risk with Beta and R-Squared values close to 1.00 and combined growth and value z-score values close to 0. Exposure to emerging markets and smaller capitalization stocks is limited.

**Non-U.S. Equity** A broad array of active managers who employ various strategies to invest assets in a well-diversified portfolio of non-U.S. equity securities. This group consists of all Core, Core Plus, Growth, and Value international products, as well as products using various mixtures of these strategies. Region-specific, index, emerging market, or small cap products are excluded.

### **Balanced Funds**

Balanced funds diversify their investments among common stocks, bonds, preferred stocks and money market securities. The funds included maintain well-diversified equity and fixed income portfolios.

**International Growth Style Group** International Growth Equity Style managers invest predominantly in companies that are expected to have above average prospects for long-term growth in earnings and profitability. Future growth prospects take precedence over valuation levels in stock selection. The International Growth Equity Style group consists of broad developed market mandates with incidental exposure to the emerging markets.

**International Value Style Group** International Value Equity Style managers invest predominantly in companies believed to be currently undervalued in the general market. The companies are expected to have a near-term earnings rebound and eventual realization of expected value. The International Value Equity Style group consists of broad developed market mandates with incidental exposure to the emerging markets.



# **Callan Databases**

In order to provide comparative investment results for use in evaluating a fund's performance, Callan gathers rate of return data from investment managers. These data are then grouped by type of assets managed and by the type of investment manager. Except for mutual funds, the results are for tax-exempt fund assets. The databases, excluding mutual funds, represent investment managers who handle over 80% of all tax-exempt fund assets.

### **Fixed Income Funds**

Fixed Income funds concentrate their investments in bonds, preferred stocks, and money market securities. The funds included maintain well-diversified portfolios.

**Core Bond** - Managers who construct portfolios to approximate the investment results of the Bloomberg Barclays Capital Government/Credit Bond Index or the Bloomberg Barclays Capital Aggregate Bond Index with a modest amount of variability in duration around the index. The objective is to achieve value added from sector and/or issue selection.

**Core Plus Bond** - Active managers whose objective is to add value by tactically allocating significant portions of their portfolios among non-benchmark sectors (e.g. high yield corporate, non-US\$ bonds, etc.) while maintaining majority exposure similar to the broad market.

**Defensive** - Managers whose objective is to minimize interest rate risk by investing predominantly in short to intermediate term securities. The average portfolio duration is similar to the duration of the Merrill Lynch 1-3 Year Bond Index.

**Extended Maturity** - Managers whose average portfolio duration is greater than that of the Bloomberg Barclays Capital Government/Credit Bond Index. These portfolios exhibit risk/return characteristics similar to the long-bond portion of the Bloomberg Barclays Capital Government/Credit Index, called the Bloomberg Barclays Capital Government/Credit Long Bond Index. Variations in bond portfolio characteristics are made to enhance performance results. This results in an aggressive risk/return profile that embraces interest rate risk in search of both high yields as well as capital gains.

Intermediate - Managers whose objective is to lower interest rate risk while retaining reasonable yield levels by investing primarily in intermediate term securities. The average portfolio duration is similar to that of the duration of the Bloomberg Barclays Capital Intermediate Government/Credit Bond Index.



### **Risk/Reward Statistics**

The risk statistics used in this report examine performance characteristics of a manager or a portfolio relative to a benchmark (market indicator) which assumes to represent overall movements in the asset class being considered. The main unit of analysis is the excess return, which is the portfolio return minus the return on a risk free asset (3 month T-Bill).

Alpha measures a portfolio's return in excess of the market return adjusted for risk. It is a measure of the manager's contribution to performance with reference to security selection. A positive alpha indicates that a portfolio was positively rewarded for the residual risk which was taken for that level of market exposure.

**Beta** measures the sensitivity of rates of portfolio returns to movements in the market index. A portfolio's beta measures the expected change in return per 1% change in the return on the market. If a beta of a portfolio is 1.5, a 1 percent increase in the return on the market will result, on average, in a 1.5 percent increase in the return on the portfolio. The converse would also be true.

**Downside Risk** stems from the desire to differentiate between "good risk" (upside volatility) and "bad risk" (downside volatility). Whereas standard deviation punishes both upside and downside volatility, downside risk measures only the standard deviation of returns below the target. Returns above the target are assigned a deviation of zero. Both the frequency and magnitude of underperformance affect the amount of downside risk.

**Excess Return Ratio** is a measure of risk adjusted relative return. This ratio captures the amount of active management performance (value added relative to an index) per unit of active management risk (tracking error against the index.) It is calculated by dividing the manager's annualized cumulative excess return relative to the index by the standard deviation of the individual quarterly excess returns. The Excess Return Ratio can be interpreted as the manager's active risk/reward tradeoff for diverging from the index when the index is mandated to be the "riskless" market position.

**Information Ratio** measures the manager's market risk-adjusted excess return per unit of residual risk relative to a benchmark. It is computed by dividing alpha by the residual risk over a given time period. Assuming all other factors being equal, managers with lower residual risk achieve higher values in the information ratio. Managers with higher information ratios will add value relative to the benchmark more reliably and consistently.

**R-Squared** indicates the extent to which the variability of the portfolio returns are explained by market action. It can also be thought of as measuring the diversification relative to the appropriate benchmark. An r-squared value of .75 indicates that 75% of the fluctuation in a portfolio return is explained by market action. An r-squared of 1.0 indicates that a portfolio's returns are entirely related to the market and it is not influenced by other factors. An r-squared of zero indicates that no relationship exists between the portfolio's return and the market.

Relative Standard Deviation is a simple measure of a manager's risk (volatility) relative to a benchmark. It is calculated by dividing the manager's standard deviation of returns by the benchmark's standard deviation of returns. A relative standard deviation of 1.20, for example, means the manager has exhibited 20% more risk than the benchmark over that time period. A ratio of .80 would imply 20% less risk. This ratio is especially useful when analyzing the risk of investment grade fixed-income products where actual historical durations are not available. By using this relative risk measure over rolling time periods one can illustrate the "implied" historical duration patterns of the portfolio versus the benchmark.

Residual Portfolio Risk is the unsystematic risk of a fund, the portion of the total risk unique to the fund (manager) itself and not related to the overall market. This reflects the "bets" which the manager places in that particular asset market. These bets may reflect emphasis in particular sectors, maturities (for bonds), or other issue specific factors which the manager considers a good investment opportunity. Diversification of the portfolio will reduce or eliminate the residual risk of that portfolio.



# **Risk/Reward Statistics**

**Rising Declining Periods** refer to the sub-asset class cycles vis-a-vis the broader asset class. This is determined by evaluating the cumulative relative sub-asset class index performance to that of the broader asset class index. For example, to determine the Growth Style cycle, the S&P 500 Growth Index (sub-asset class) performance is compared to that of the S&P 500 Index (broader asset class).

**Sharpe Ratio** is a commonly used measure of risk-adjusted return. It is calculated by subtracting the "risk-free" return (usually 3 Month Treasury Bill) from the portfolio return and dividing the resulting "excess return" by the portfolio's risk level (standard deviation). The result is a measure of return gained per unit of risk taken.

**Sortino Ratio** is a downside risk-adjusted measure of value-added. It measures excess return over a benchmark divided by downside risk. The natural appeal is that it identifies value-added per unit of truly bad risk. The danger of interpretation, however, lies in these two areas: (1) the statistical significance of the denominator, and (2) its reliance on the persistence of skewness in return distributions.

**Standard Deviation** is a statistical measure of portfolio risk. It reflects the average deviation of the observations from their sample mean. Standard deviation is used as an estimate of risk since it measures how wide the range of returns typically is. The wider the typical range of returns, the higher the standard deviation of returns, and the higher the portfolio risk. If returns are normally distributed (ie. has a bell shaped curve distribution) then approximately 2/3 of the returns would occur within plus or minus one standard deviation from the sample mean.

**Total Portfolio Risk** is a measure of the volatility of the quarterly excess returns of an asset. Total risk is composed of two measures of risk: market (non-diversifiable or systematic) risk and residual (diversifiable or unsystematic) risk. The purpose of portfolio diversification is to reduce the residual risk of the portfolio.

**Tracking Error** is a statistical measure of a portfolio's risk relative to an index. It reflects the standard deviation of a portfolio's individual quarterly or monthly returns from the index's returns. Typically, the lower the Tracking Error, the more "index-like" the portfolio.

**Treynor Ratio** represents the portfolio's average excess return over a specified period divided by the beta relative to its benchmark over that same period. This measure reflects the reward over the risk-free rate relative to the systematic risk assumed.

Note: Alpha, Total Risk, and Residual Risk are annualized.



# **Common Stock Portfolio Characteristics**

All Portfolio Characteristics are derived by first calculating the characteristics for each security, and then calculating the weighted average of these values for the portfolio.

**Diversification Ratio** - The ratio of the number of securities comprising the most concentrated half of the portfolio market value (see Issue Concentration) divided by the total number of portfolio securities (see Number of Securities). This value expresses to what extent a portfolio is equally weighted versus concentrated, given the number of names in the portfolio. This value can range from a high of 50% (equal weighted) to a low of 1% (half of the portfolio in 1% of the names).

**Dividend Yield** - The total amount of dividends paid out for a stock over the preceding twelve months divided by the closing price of a share of the common stock.

**Forecasted Long-Term Earnings Growth** - This growth rate is a measure of a company's expected long-term success in generating future year-over-year earnings growth. This growth rate is a market value weighted average of the consensus (mean) analysts' long-term earnings growth rate forecast for each company in the portfolio. The definition of long-term varies by analyst but is limited to a 3-8 year range. This value is expressed as the expected average annual growth of earnings in percent.

**Forecasted Price/Earnings Ratio** - This ratio is a forward-looking valuation measure of a company's common stock. It encapsulates the amount of earnings estimated for next year per dollar of current share price. This value is calculated by dividing the present stock price of each company in the portfolio by the consensus (mean) analysts' earnings forecasts for the next year. These earnings estimates are for recurring, non-extraordinary earnings per primary common share.

**Issue Diversification** - A measure of portfolio concentration in individual issues (securities). This number represents how many different securities (names) comprise the most concentrated half of the portfolio assets (half of the assets are in how many names?). This measure is useful in evaluating the concentration/diversification of portfolios made up of many issues but concentrated in a small subset of those issues (e.g. 100 stocks with 50% of assets in 10 stocks, Issue Diversification = 10).

Market Capitalization (weighted median) - The weighted median market cap is the point at which half of the market value of the portfolio is invested in stocks with a greater market cap, and consequently the other half is invested in stocks with a lower market cap.

**Number of Securities** - This is a simple portfolio diversification measure representing the number of unique non-cash securities (names) currently held in the portfolio. This measure does not address potential concentration of assets within these securities (see Issue Concentration).

**Price/Book Value** - The Price to Book Value is a measure of value for a company. It is equal to the market value of all the shares of common stock divided by the book value of the company. The book value is the sum of capital surplus, common stock, and retained earnings.

Relative Sector Variance - A measure illustrating how significantly a portfolio currently differs from the sector weights of the index. This measure is the sum of the differences (absolute value) between the portfolio and index sector weights across all sectors. The higher the number the more aggressive the deviation from the index sector weights, and vice versa. This relative risk measure can help explain the magnitude of past tracking error and potential future tracking error versus the index.



# **C.1**

# **Common Stock Portfolio Characteristics**

**Sector Concentration** - A measure of current portfolio diversification by economic sector (equity) or market sector (fixed income) to illustrate potential risk from concentrated sector exposures. The measure itself represents how few sectors contain half of the portfolio market value. A low number means the assets are concentrated in a few sectors and potentially highly exposed to the risks of those sectors.



### **Fixed Income Portfolio Characteristics**

All Portfolio Characteristics are derived by first calculating the characteristics for each security, and then calculating the market value weighted average of these values for the portfolio.

**Allocation by Sector** - Sector allocation is one of the tools which managers often use to add value without impacting the duration of the portfolio. The sector weights exhibit can be used to contrast a portfolio's weights with those of the index to identify any significant sector bets.

**Average Coupon** - The average coupon is the market value weighted average coupon of all securities in the portfolio. The total portfolio coupon payments per year are divided by the total portfolio par value.

**Average Moody's Rating for Total Portfolio** - A measure of the credit quality as determined by the individual security ratings. The ratings for each security, from Moody's Investor Service, are compiled into a composite rating for the whole portfolio. Quality symbols range from Aaa+ (highest investment quality - lowest credit risk) to C (lowest investment quality - highest credit risk).

Average Option Adjusted (Effective) Convexity - Convexity is a measure of the portfolio's exposure to interest rate risk. It is a measure of how much the duration of the portfolio will change given a change in interest rates. Generally, securities with negative convexities are considered to be risky in that changes in interest rates will result in disadvantageous changes in duration. When a security's duration changes it indicates that the stream of expected future cash-flows has changed, generally having a significant impact on the value of the security. The option adjusted convexity for each security in the portfolio is calculated using models developed by Lehman Brothers and Salomon Brothers which determine the expected stream of cash-flows for the security based on various interest rate scenarios. Expected cash-flows take into account any put or call options embedded in the security, any expected sinking-fund paydowns or any expected mortgage principal prepayments.

**Average Option Adjusted (Effective) Duration** - Duration is one measure of the portfolio's exposure to interest rate risk. Generally, the higher a portfolio's duration, the more that its value will change in response to interest rate changes. The option adjusted duration for each security in the portfolio is calculated using models developed by Lehman Brothers and Salomon Brothers which determine the expected stream of cash-flows for the security based on various interest rate scenarios. Expected cash-flows take into account any put or call options embedded in the security, any expected sinking-fund paydowns or any expected mortgage principal prepayments.

**Average Price** - The average price is equal to the portfolio market value divided by the number of securities in the portfolio. Portfolios with an average price above par will tend to generate more current income than those with an average price below par.

**Average Years to Expected Maturity** - This is a measure of the market-value-weighted average of the years to expected maturity across all of the securities in the portfolio. Expected years to maturity takes into account any put or call options embedded in the security, any expected sinking-fund paydowns or any expected mortgage principal prepayments.

**Average Years to Stated Maturity** - The average years to stated maturity is the market value weighted average time to stated maturity for all securities in the portfolio. This measure does not take into account imbedded options, sinking fund paydowns, or prepayments.

**Current Yield** - The current yield is the current annual income generated by the total portfolio market value. It is equal to the total portfolio coupon payments per year divided by the current total portfolio market value.



### **Fixed Income Portfolio Characteristics**

**Duration Dispersion** - Duration dispersion is the market-value weighted standard deviation of the portfolio's individual security durations around the total portfolio duration. The higher the dispersion, the more variable the security durations relative to the total portfolio duration ("barbellness"), and the smaller the dispersion, the more concentrated the holdings' durations around the overall portfolio's ("bulletness"). The purpose of this statistic is to gauge the "bulletness" or "barbellness" of a portfolio relative to its total duration and to that of its benchmark index.

**Effective Yield** - The effective yield is the actual total annualized return that would be realized if all securities in the portfolio were held to their expected maturities. Effective yield is calculated as the internal rate of return, using the current market value and all expected future interest and principal cash flows. This measure incorporates sinking fund paydowns, expected mortgage principal prepayments, and the exercise of any "in-the-money" imbedded put or call options.

**Weighted Average Life** - The weighted average life of a security is the weighted average time to payment of all remaining principal. It is calculated by multiplying each expected future principal payment amount by the time left to the payment. This amount is then divided by the total amount of principal remaining. Weighted average life is commonly used as a measure of the investment life for pass-through security types for comparison to non-pass-through securities.



### **General Terms**

**Private Equity:** Refers to equity and equity-related investments in companies that are not quoted on the stock exchange. Investments are typically illiquid in nature. Ownership is typically accessed through limited partnership interests.

Vintage Year: The year in which a private equity partnership makes its first investment.

**J Curve Effect:** A common phenomenon associated with a developing private equity program where the return during the first several years can be moderately negative prior to larger positive returns developing (hence the "J" representation). The actual curve is depicted by plotting the return generated by a private equity fund against time (from inception to termination). In the early years of a developing program the payment of management fees out of drawn down capital does not produce an equivalent book value. Consequently, a private equity fund will initially show a negative return. For more detailed information on the "J-Curve Effect" ask to see Callan's Whitepaper on the topic.

### **Cash Flow and Valuation Definitions**

Commitment: The amount of a limited partner's obligation to a private equity fund.

**Capital Contribution:** The amount of the commitment that has been called by the general partner for company investments and also fees and expenses. Capital contributed is also referred to as paid-in capital.

Recycling/Reinvestment and Recallable Cash Flows: Private equity vehicles are usually characterized by the prohibition (unless stipulated by agreement) to reinvest proceeds or allow redemptions. This means that unless otherwise agreed to, private equity funds must distribute proceeds from investments to limited partners and cannot reinvest that capital. In some cases, distributions are "recallable", that is, after the fund distributes proceeds to its investors, it can draw down the same capital again, which makes it possible for the fund to draw capital in excess of its total committed capital.

Distributions include both recallable and non-recallable distributions. This means that a recallable distribution must be treated as an actual distribution and, if and when that distribution is called again, it must be treated as additional paid-in capital but must not reduce unfunded commitments or change cumulative committed capital.

It should be noted that recallable distributions have an impact on the metric calculations. For example, this recallable feature means that cumulative paid-in capital can be higher than cumulative committed capital. It also means that, all other things being equal, the DPI, RVPI, and TVPI multiples will be lower for funds with recallable distributions as the denominator will be increased. It also means that the PIC multiple (paid-in capital to cumulative committed capital) will be higher for funds with recallable distributions, all other things being equal. (Source: GIPS Guidance Statement on Private Equity, January 2011)

Distribution: The returns of cash or securities that an investor in a private equity fund receives.

Market Value or Net Asset Value (NAV): The carrying value of the investments as determined by the general partner of a partnership in accordance with a limited partnership's valuation policy.

# **Major Components**

# **Venture Capital**

Seed Capital – An initial investment funding a start-up company's initial activities, such as business plan
development, initial management and employee hiring, prototype development, and product beta testing

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- Series A first round of institutional investment capital
- Series B second round of institutional investment capital
- Series C third round of institutional investment capital (Source: VCExperts)
- Early Stage Funding a company typically subsequent to its seed stage that has a founding or core senior management team, has proven its concept or completed its beta test, has minimal revenues, and no positive earnings or cash flows. (Source: VCExperts)
- Later Stage Financing for the expansion of a company that is producing, shipping its product, and increasing its sales volume. Later stage funds often provide the financing to help a company achieve critical mass in order to position its shareholders for an exit event (e.g., an IPO or strategic sale of the company). (Source: VCExperts)

# **Buyouts / Corporate Finance**

- Leveraged Buyout The acquisition of a company using a combination of equity and borrowed funds. Generally the target company's assets act as the collateral for the loans taken out by the acquiring group. The acquiring group then repays the loan from the cash flow of the acquired company. For example, a group of investors may borrow funds, using the assets of the company as collateral, in order to take ownership of a company. (Source: VCExperts)
- Management Buyout A private equity firm will often provide financing to enable current operating
  management to acquire a significant stake in the business they manage, along with the private equity firm
  providing significant equity and arranging other financing. (Source: VCExperts)
- Categorizations of Buyout Funds by Fund Size:

Small Buyout (\$0 to \$1 billion)

Medium Buyout (\$1 billion to \$3 billion) Large Buyout (\$3 billion to \$7 billion)

Mega Buyout (\$7 billion +)

**Mezzanine (Subordinated Debt):** An investment strategy that involves providing capital or financing that is below the senior debt and above the equity in terms of liquidation priority. Mezzanine is analogous to private high yield debt and typically includes preferred stock and warrants. The majority of return is provided through coupon payments and equity rights typically increase the return. Mezzanine debt is commonly structured as part of a Buyout transaction.

**Distressed Debt:** Investing in corporate bonds of companies that have either filed for bankruptcy or appear likely to do so in the near future. The strategy of distressed debt involves first becoming a major creditor of the target company by buying up a company's bonds at a deep discount to par. Securing a position as a key creditor allows for influence regarding the plan for reorganization of the company. In the event of liquidation distressed debt investors have a senior position to the equity holders for priority of repayment and normally recover the full par value of debt securities. Usually a reorganization allows the company to avoid or emerge from bankruptcy protection. In some instances distressed debt firms convert the debt obligations to equity in the company, and gain majority control of the newly capitalized business. (*Source: VCExperts*)

**Secondary Investing:** There is a private equity secondary market where investors in private equity funds can privately negotiate the sale of their interest(s) to a new buyer. Secondary funds are vehicles which buy (invest in)



secondary partnership interests purchased from pre-existing investors. Usually secondary purchases are made at a discount to the partnerships' stated valuation.

**Fund-of-Funds:** A vehicle established to invest in a diversified portfolio of private equity partnerships over a period of several vintage years. The underlying partnerships in turn invest the capital in companies. Investing in fund-of-funds can help spread the risk of investing in private equity because they invest the capital in a variety of funds and provide diversification by general partner, industry, geography, time and strategy. Fund-of-funds are specialist private equity investors and have existing relationships with general partner firms. Fund-of-funds may be able to provide investors with a route to investing in partnerships that would otherwise not be available to them. (*Source: VCExperts*)

### **Performance Metrics**

**DPI** = Distributions as a ratio of (divided by) paid-in capital (notionally a DPI ratio of 0.60 means that 60 cents has been distributed back to investors for every dollar contributed).

**RVPI** = Residual Value (NAV) as a ratio of (divided by) paid-in capital (notionally a RVPI ratio of 0.70 means that the remaining investment(s) is currently valued at 70 cents for every dollar contributed.

**TVPI** = Total Value (Distributions + Net Asset Value) as a ratio of (divided by) paid-in capital. Notionally a TVPI ratio of 1.30 means that the investment has created a total gain of 30 cent for every dollar contributed. TVPI is composed of both returned capital and residual value (e.g., DPI of 0.60 + RVPI of 0.70 = TVPI of 1.30).

**Public Market Equivalent (PME) TVPI:** A TVPI calculated by applying the called capital and distributed capital of the private equity investment as an equivalent purchase and sale of the chosen benchmark. The calculated net asset value (NAV) is then used to calculate the benchmark's RVPI, which is subsequently added to the investors actual DPI to get a benchmark TVPI. The figure is intended to evaluate the investor's total value if they had moved money in and out of the chose benchmark instead of the partnership.

Internal Rate of Return (IRR): The CFA Institute GIPS approved methodology to calculate return performance of private equity investments. The IRR calculates the rate of return since inception (implied interest rate earned) of an investment based on the amount and timing of capital contributions (money invested), distributions (money returned from investments), and the current unrealized value of investments. The IRR is a capital- or dollar-weighted calculation and accounts for the timing and size of flows. IRR differs from the time-weighted return (TWR) calculation employed with equity and fixed income investments, where a series of interim period (e.g., quarterly) returns are linked together in an equal-weighted manner to derive a percentage return unaffected by cash flows.

**Public Market Equivalent (PME) IRR:** An internal rate of return (IRR) calculated by applying the called capital and distributed capital of the private equity investment as an equivalent purchase and sale of the chosen benchmark. The calculated net asset value (NAV) is then used to calculate the benchmark's IRR. The figure is intended to evaluate the investor's return if they had moved money in and out of the chose benchmark instead of the partnership.

**Cash Yield:** Quarter's Distributed capital change divided by the quarter's beginning Net Asset Value. It values the percentage of realized appreciation/depreciation embedded in the NAV. For example, a cash yield of 5% means every dollar of residual value (NAV) has paid 5 cents to the investor this quarter.



- **\$ Unrealized Appreciation/ Depreciation** = Quarter's Total Value change minus the quarter's Distribution capital change minus the quarter's Paid-In capital change. The dollar amount values the unrealized appreciation/depreciation embedded in the Net Asset Value.
- **% Unrealized Appreciation/ Depreciation** = Unrealized Appreciation/ Depreciation in dollars divided by the quarter's starting Net Asset Value. It values the percentage of unrealized appreciation/depreciation embedded in the NAV. For example, unrealized appreciation of 2% means every dollar of residual value (NAV) has a gain of 2 cents that has yet to be paid to investors.
- **\$ Total Valuation Change** = Quarter's Distributed capital change minus the quarter's Paid-In capital during the quarter plus the quarter's change in Net Asset Value. It values the total dollar amount of both realized and unrealized gains/ losses that the investor received over the quarter.
- **% Total Valuation Change** = Total Valuation Change in dollars divided by the quarter's starting Net Asset Value. It values the percentage of both realized and unrealized gains/ losses that the investor received over the quarter. For example, total valuation change of 4% means every dollar of residual value (NAV) has a gain of 4 cents of which a portion has and a portion has not been paid to investors.

### **Database Metrics**

**Pooled IRR:** An IRR calculation that treats a database of multiple private equity partnerships (such as Thomson Reuters/Cambridge) as a single portfolio. The initial flow in the calculation represents the total market value of the database (if any). The subsequent cash inflows and outflows are incorporated, and the final cash flow is the ending valuation of the database holdings.

**TVPI Quartile:** Drawn from a database of multiple private equity partnerships, the quartile is a breakpoint return that separates the partnerships' TVPIs in a selected sample into 25% increments ranked from highest to lowest, e.g. 1<sup>st</sup> quartile is the highest 25% performing funds. Members may be separated into by specific vintage years and strategies.

**IRR Quartile:** Drawn from a database of multiple private equity partnerships, the quartile is a breakpoint return that separates the partnerships' IRRs in a selected sample into 25% increments ranked from highest to lowest, e.g. 1<sup>st</sup> quartile is the highest 25% performing funds. Members may be separated into by specific vintage years and strategies.



# Callan Associates Inc. Public Fund Database

Alaska Permanent Fund

Alaska State - Judicial Pension

Alaska State - Military Pension

Alaska State - Public Employees Ret.

Alaska State - Teachers Ret. Plan

**Anchorage Police & Fire** 

Arkansas Judicial

**Arkansas PERS** 

Aurora General Emp. Ret.

Charlotte Firefighters' Retirement System

Chicago Teachers

City of Atlanta

City of Fort Pierce

City of Milwaukee ERS

City of Norwalk

City of Tulsa

City of Valdez

City of Wyoming

**City Sanitation District of Orange County** 

**Cook County** 

**Dekalb County** 

**Denver Water** 

El Paso City Employees' Pension Fund

Firemen's Annuity & Benefit Fd of Chicago

Georgia Firefighter's Pension Fund

Georgia Interlocal

Georgia Municipal EBS

Georgia Workers' Compensation

Idaho State Treasurer's Office

Illinois Municipal Retirement Fund

**Lexington-Fayette Urban County Gov** 

Marin County Employees' Ret. Association

**MARTA OPEB Trust** 

Massachusetts Pension Re Inv Mgmt Board

**Medical University Retirement** 

Mendocino County Employees' Retirement

Minnesota State Board of Investment

Mississippi Public Employees' Retirement

**Nevada Judicial** 

**Nevada Legislators** 

Nevada Public Employees' Ret. System

**North Carolina Department of State** 

North Dakota Public Employee Ret

North Dakota State Investment Board

North Dakota Teachers Fund Ret

**NYC Employees Retirement System** 

Ohio STRS

Public Emp Ret System of Idaho

Santa Clara VTA/ATU Pension Fund

South Dakota Investment

State of Oregon - PERS

State of Wisconsin Investment Board

Town of Fairfield

**US Army NAF Employee Retirement** 

**University Health System Pension Trust** 

**University of Colorado Boulder** 

**University of Puerto Rico Retirement System** 

**Utah State Retirement System** 

Wichita Employees' Retirement

320 Other Public Funds\*

1

<sup>\*</sup> Callan's Public Fund Database is represented by both Callan and non-Callan clients. Certain information in the database is received from other database sources.



# **Education**

2nd Quarter 2020

# **Research and Educational Programs**

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

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

Coping with COVID-19: How Work Is Evolving for Investment Managers | Callan surveyed over 100 investment managers regarding how their irms were responding to the COVID-19 pandemic, focusing on ofice closures and reopenings, work-from-home approaches, business travel, and meetings. Respondents relected a wide variety of irms by location, employee size, assets under management, and ownership structure.

<u>Breaking Bad: Better Call Hedge Funds?</u> | In his latest *Hedge Fund Monitor*, Callan's Jim McKee discusses four opportunities for hedge fund investors arising from the market dislocations stemming from the COVID-19 pandemic.

Real Estate Indicators: Too Hot to Touch or Cool Enough to Handle? | Callan's Real Assets Consulting group identiie s seven indicators, based on spreads in real estate and ixe d income markets, that, combined with an understanding of prevailing market dynamics, have helped signal when the institutional real estate market is overheated or cooled.

# **Blog Highlights**

Guidance on Substantial Workforce Cuts and DC Plan Terminations | Employers that reduce their workforce or discontinue dein ed contribution (DC) plan eligibility for certain employee groups may experience an inadvertent "partial plan termination." If not properly managed, this event could result in a disqualiication of the entire plan.

'Social Washing' and How COVID-19 Has Emphasized the 'S' in ESG | While ESG-savvy investors are most likely familiar with "greenwashing," which refers to the misrepresentation of environmental impact, the term "social washing" has gained new prominence as the investment community evaluates corporations' responses to the sudden challenges presented by the coronavirus. Social washing refers to statements or policies that make a company appear more socially responsible than it actually is.

Nonproi ts and the Pandemic: What to Do Now | For nonproit s, this environment creates unique challenges, with many organizations not only contending with the health crisis but also the impact of portfolio returns on their organization's ability to fund grants, provide scholarships, and support programs and operations essential to their constituents. At the same time, these organizations face a potential decline in philanthropic contributions.

# **Quarterly Periodicals**

<u>Private Equity Trends</u>, <u>1Q20</u> | A high-level summary of private equity activity in the quarter through all the investment stages

<u>Active vs. Passive Charts, 1Q20</u> | A comparison of active managers alongside relevant benchmarks over the long term

Market Pulse Flipbook, 1Q20 | 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 Market Review, 1Q20</u> | Analysis and a broad overview of the economy and public and private market activity each quarter across a wide range of asset classes

Hedge Fund Quarterly, 1Q20 | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

Real Assets Reporter, 1Q20 | In this quarter's edition, we discuss the implications of the COVID-19 pandemic on the prospects for farmland investments. In addition, it includes analysis of the performance of real estate and other real assets in 1Q20.

# C.1

### **Events**

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

Please mark your calendar and look forward to upcoming invitations:

### **Upcoming Webinars**

# August 20

Credit Dislocation—Opportunities in Private Credit

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

# **Education: By the Numbers**

**50+** 

Unique pieces of research the Institute generates each year

**525** 

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

3,700

Total attendees of the "Callan College" since 1994

# **Education**

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

### Introduction to Investments—Virtual

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

# Next Session: October 13-15, 2020

Additional information including registration can be found at: www.callan.com/cc-introduction-virtual/

### Introduction to Investments—In Person

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

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



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

Greg Allen, CEO and Chief Research Ofice r







# Callan

Quarterly List as of June 30, 2020

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

Confidential - For Callan Client Use Only

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

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

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

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

| 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 |
| BrightSphere Investment Group                |
| Brown Brothers Harriman & Company            |
| Cambiar Investors, LLC                       |
| CapFinancial Partners, LLC                   |
| Capital Group                                |
| Carillon Tower Advisers                      |
| CastleArk Management, LLC                    |
| Causeway Capital Management LLC              |
| Chartwell Investment Partners                |
| ClearBridge Investments, LLC                 |



**Manager Name** Cohen & Steers Capital Management, Inc. Columbia Management Investments Columbus Circle Investors Credit Suisse Asset Management D.E. Shaw Investment Management, L.L.C. DePrince, Race & Zollo, Inc. Diamond Hill Capital Management, 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 State Investments Fisher Investments Fortress Investment Group Franklin Templeton Fred Alger Management, Inc. GAM (USA) Inc. GCM Grosvenor Glenmeade Investment Management, LP GlobeFlex Capital, L.P. Goldman Sachs Green Square Capital Advisors, LLC Guggenheim Investments **GW&K Investment Management** Harbor Capital Group Trust

Hartford Investment Management Co. Heitman LLC Hotchkis & Wiley Capital Management, LLC HPS Investment Partners, LLC Income Research + Management, Inc. Insight Investment Management Limited Intech Investment Management, LLC Callan

**Manager Name** 

Intercontinental Real Estate Corporation

Invesco

Investec Asset Management North America, Inc.

Ivy Investments

J.P. Morgan

Janus

Jennison Associates LLC

Jobs Peak Advisors

KeyCorp

Lazard Asset Management

Legal & General Investment Management America

Lincoln National Corporation

Longview Partners

Loomis, Sayles & Company, L.P.

Lord Abbett & Company

Los Angeles Capital Management

LSV Asset Management

MacKay Shields LLC

Macquarie Investment Management (MIM)

Manulife Investment Management

Marathon Asset Management, L.P.

McKinley Capital Management, LLC

Mellon

MetLife Investment Management

MFS Investment Management

MidFirst Bank

Mondrian Investment Partners Limited

Montag & Caldwell, LLC

Morgan Stanley Investment Management

Mountain Pacific Advisors, LLC

MUFG Union Bank, N.A.

Natixis Investment Managers

Neuberger Berman

**Newton Investment Management** 

Nikko Asset Management Co., Ltd.

Nile Capital Group LLC

Northern Trust Asset Management

Nuveen

P/E Investments

Pacific Investment Management Company

**Manager Name** 

Parametric Portfolio Associates LLC

Pathway Capital Management

Peregrine Capital Management, LLC

Perkins Investment Management

PFM Asset Management LLC

**PGIM Fixed Income** 

PineBridge Investments

PNC Capital Advisors, LLC

Polen Capital Management

Principal Global Investors

Putnam Investments, LLC

QMA LLC

**RBC Global Asset Management** 

Regions Financial Corporation

Robeco Institutional Asset Management, US Inc.

Rothschild & 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.

**Manager Name** 

Strategic Global Advisors

T. Rowe Price Associates, Inc.

The TCW Group, Inc.

Thompson, Siegel & Walmsley LLC

Thornburg Investment Management, Inc.

Tri-Star Trust Bank

**UBS Asset Management** 

**USAA Real Estate** 

VanEck

Versus Capital Group

Victory Capital Management Inc.

Virtus Investment Partners, Inc.

Vontobel Asset Management, Inc.

Voya

WCM Investment Management

WEDGE Capital Management

Wellington Management Company LLP

Wells Fargo Asset Management

Western Asset Management Company LLC

Westfield Capital Management Company, LP

William Blair & Company LLC



# Callan



Second Quarter 2020 Summary Investment Presentation

Jim Callahan, CFA
President

**Anne Heaphy**Senior Vice President

# Callan

**Economic and Capital Markets Review** 

# Stunning Recovery in Global Equity Markets in 2Q20

# V-shaped equity rebound, ahead of the global economy

# Global equity rally after March market bottom

- S&P -33% from peak (02/19/20) to low on 3/23/20.
- Sharp rebound since March, suggesting broad-based recovery, but YTD results concentrated in a few stocks.
- Fed cut rates to zero, commenced QE, instituted multiple facilities to backstop money markets, credit markets, and economy.
  - Fed expects to get paid back
  - Further fiscal stimulus expected
- Congress passed fiscal stimulus (CARES) to carry the economy through the crisis.
- Economic recovery will be uncertain as COVID-19 infections continue; re-openings may be reversed.

# Returns for Periods ended June 30, 2020

|                                     | 1 Quarter | 1 Year | 5 Years | 10 Years | 25 Years |
|-------------------------------------|-----------|--------|---------|----------|----------|
| U.S. Equity                         |           |        |         |          |          |
| Russell 3000                        | 22.03     | 6.53   | 10.03   | 13.72    | 9.28     |
| S&P 500                             | 20.54     | 7.51   | 10.73   | 13.99    | 9.27     |
| Russell 2000                        | 25.42     | -6.63  | 4.29    | 10.50    | 8.16     |
| Global ex-U.S. Equity               |           |        |         |          |          |
| MSCI World ex USA                   | 15.34     | -5.42  | 2.01    | 5.43     | 4.68     |
| MSCI Emerging Markets               | 18.08     | -3.39  | 2.86    | 3.27     |          |
| MSCI ACWI ex USA Small Cap          | 22.83     | -4.34  | 2.50    | 6.05     | 5.51     |
| Fixed Income                        |           |        |         |          |          |
| Bloomberg Barclays Aggregate        | 2.90      | 8.74   | 4.30    | 3.82     | 5.36     |
| 90-day T-Bill                       | 0.02      | 1.63   | 1.19    | 0.64     | 2.37     |
| Bloomberg Barclays Long Gov/Credit  | 6.23      | 18.91  | 8.98    | 7.84     | 7.72     |
| Bloomberg Barclays Global Agg ex-US | 3.38      | 0.71   | 2.89    | 1.98     | 3.73     |
| Real Estate                         |           |        |         |          |          |
| NCREIF Property                     | -0.99     | 2.69   | 6.77    | 9.70     | 9.15     |
| FTSE Nareit Equity                  | 11.82     | -13.04 | 4.06    | 9.05     | 9.48     |
| Alternatives                        |           |        |         |          |          |
| CS Hedge Fund                       | 6.20      | -0.73  | 1.55    | 3.83     | 7.49     |
| Cambridge Private Equity*           | -7.80     | 2.12   | 10.39   | 12.33    | 14.68    |
| Bloomberg Commodity                 | 5.08      | -17.38 | -7.69   | -5.82    | 0.75     |
| Gold Spot Price                     | 12.77     | 27.36  | 8.97    | 3.75     | 6.36     |
| Inflation - CPI-U                   | -0.12     | 0.65   | 1.56    | 1.69     | 2.12     |

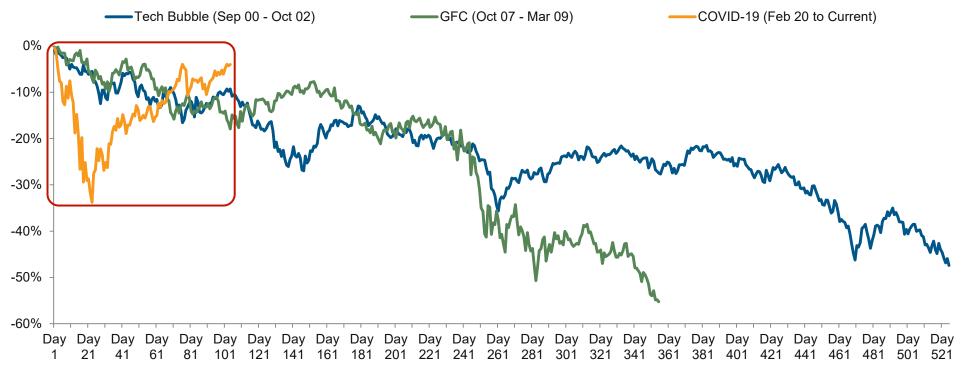
<sup>\*</sup>Cambridge PE data through 03/31/20 Sources: Bloomberg, Bloomberg Barclays, Callan, Cambridge, Credit Suisse, FTSE Russell, MSCI, NCREIF, S&P Dow Jones Indices



# **Unprecedented Shock to Global Capital Markets**

'Global Hurricane' in the form of a pandemic

S&P 500 Index Cumulative Returns
Market Peak-to-Trough for Recent Corrections vs.
Current Path of COVID-19 Correction Through 7/17/20



**Trading Days From Market Peak** 

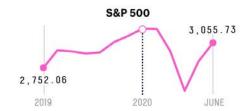
The sharpest and fastest equity market decline ever: 16 trading days to reach bear market; -33% after just 23 days.

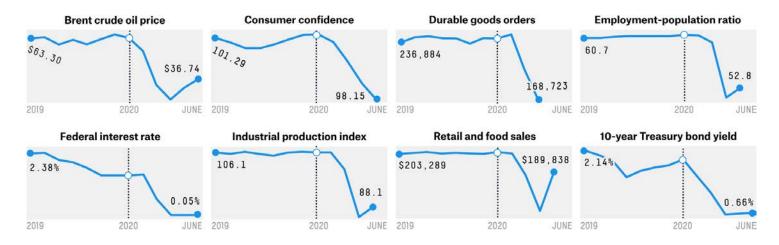


# Swift Recovery for Equities; Did Investors Get Ahead of Themselves?

# The stock market is up while most economic indicators are down

Various economic indicators, reported at one-month intervals, June 2019 through June 2020





# As of July 17, U.S. stock market recouped its YTD loss—how can that be?

Any economic indicator reported more frequently than once a month is charted here using data from the first day of each month.

- Supreme confidence in efficacy of monetary and fiscal policy.
- Apple, Alphabet (Google), Microsoft, Facebook, Amazon are up 35% in 2Q20 and made up 30% of the S&P 500 return, even though they represent 20% of market cap.

SOURCES: YAHOO FINANCE, OECD, FEDERAL RESERVE BANK OF ST. LOUIS

Stock market is not the economy



FiveThirtyEight

# **U.S. Equity: V-Shaped Snap Back**

# U.S. equity bounced back from March lows

- Best quarterly performance for S&P 500 since 1998
- Returns in excess of 30% for three sectors
- Tech a top performer—still
  - "FAAMG" stocks up 35%
- Energy stocks higher after production cuts buoyed oil prices

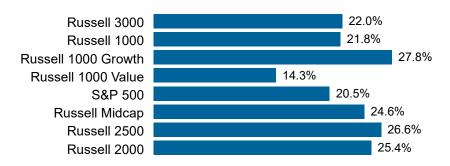
# Small cap outgains large cap

- One of three best quarters for Russell 2000 after worst quarterly performance in 1Q20
  - Still lags Russell 1000 on a YTD and trailing one-year basis
- Investment sentiment in favor of small cap after better-thanexpected economic data and Fed actions

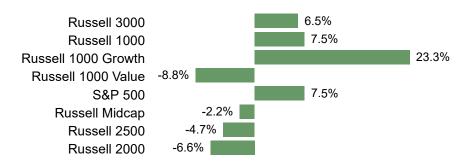
# Growth outpaces value across market capitalizations

 During both 1Q20 market decline as well as 2Q20 market recovery

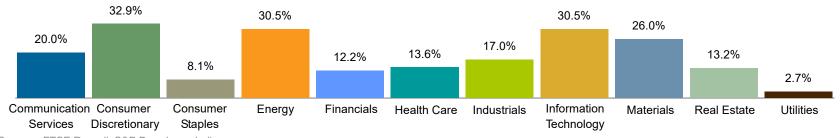
# **U.S. Equity: Quarterly Returns**



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



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



Sources: FTSE Russell, S&P Dow Jones Indices

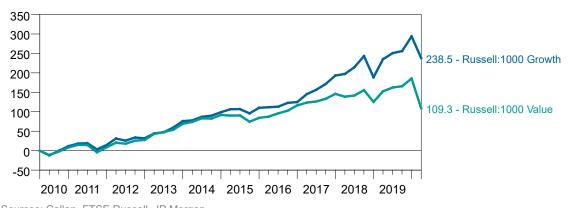


# Value vs. Growth

- Value indices continue to trade at a discount relative to growth on a current P/E vs 20-year average basis.
- Negative GDP environments historically favor value beta and cyclical companies.
- In periods of high unemployment and low GDP growth, small cap value has produced excess forward returns relative to the S&P 500.
- Higher interest rates, a steeper yield curve, economic growth, and improving consumer confidence are among the catalysts that could result in the value style outperforming.
- Universe of active deep value managers is narrow, and high expected volatility is a key consideration.

# Value vs. Growth relative valuations Relative fwd. P/E ratio of Value vs. Growth, z-score, Dec. 1997 - present Growth cheap/value expensive Jun. 30, 2020: -0.97 Value cheap/Growth expensive

# Cumulative Returns for 10 Years ended March 31, 2020



# Current P/E as % of 20-year average P/E

|       | Value  | Blend  | Growth |
|-------|--------|--------|--------|
| Large | 132.9% | 140.9% | 158.5% |
| Mid   | 139.3% | 148.5% | 192.2% |
| Small | 168.1% | 265.3% | _      |

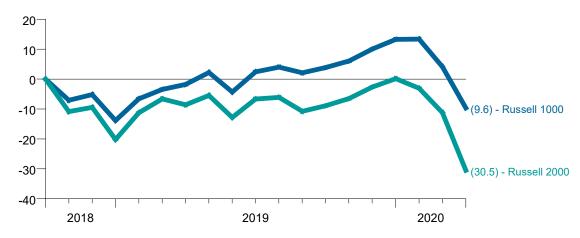
Sources: Callan, FTSE Russell, JP Morgan



# **Small Cap Has Trailed Large Cap This Year**

- Large caps outpaced small caps in 2020 due to safe-haven sentiment spurred by COVID-19.
- Small cap tends to outperform large cap following dislocations such as the one in 1Q20.
- Better economic data (e.g., lower unemployment, tighter high yield spreads) could provide a tailwind to small caps.
- Smaller cap stocks present an opportunity as the economy recovers and broadens out from large cap.

# **Monthly Cumulative Returns Since 2019**



# YTD Performance Across Market Cap and Style

|       | Value  | Broad  | Growth |
|-------|--------|--------|--------|
| Large | -17.3% | -4.3%  | 7.7%   |
| Mid   | -19.1% | -10.4% | 2.3%   |
| Small | -24.4% | -14.2% | -4.6%  |

Sources: Callan, FTSE Russell



# Global ex-U.S. Equity Performance

# Second quarter recovery

- Accommodative monetary policies, fiscal stimulus a boost for the market
- COVID-19 cases slowed; economies started reopening
- Strongest quarterly gains in more than a decade for emerging markets over optimism for a global recovery
- Small caps outperformed large as lockdowns eased and business confidence improved

# Cyclical sectors rebound

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

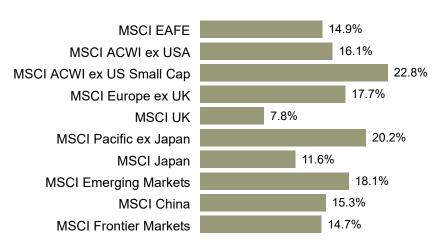
# U.S. dollar vs. other currencies

- Dollar flat relative to the British pound and Japanese yen
- Depreciated against euro, Australian dollar, and Canadian dollar as these regions successfully managed COVID-19

# Growth vs. value

- Growth continued to outperform value
  - Support from Technology (due to stay-at-home trends) and Health Care

# **Global Equity: Quarterly Returns**



# **Global Equity: One-Year Returns**



Source: MSCI



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

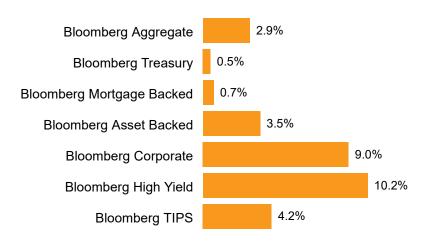
# Treasury yields were range-bound

- 10-year U.S. Treasury yield reached 0.91% in June before closing 2Q20 at 0.66%, down slightly from 1Q20
- Fed left rates at 0% 0.25% for the foreseeable future, anchoring the low end of the yield curve

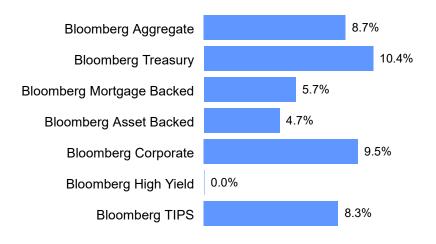
# Credit rallied due to spread narrowing

- Corporate credit rebounded amid improving investor confidence and economic data, but fallen angels continued to spark concern, with nearly half of the investment grade corporate market rated BBB
- Investment grade corporate spreads narrowed by 122 bps to 150 bps despite companies issuing record debt totaling \$1.4 trillion (+9.0%)
- High yield corporates posted double-digit returns (+10.2%)

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



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





Sources: Bloomberg Barclays

# **Global Fixed Income Performance**

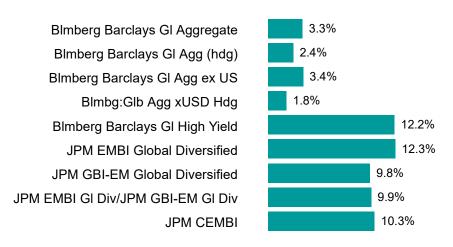
# Global ex-U.S. fixed income rose amid rate cuts

- Developed market sovereign bond yields ended the quarter lower amid rate cuts overseas; Global Agg ex-US (unhedged) index: +3.4%
- ECB expanded stimulus program announced in March from €750 billion to €1.35 trillion
- USD depreciated modestly against a basket of developed market currencies; flat versus the yen.

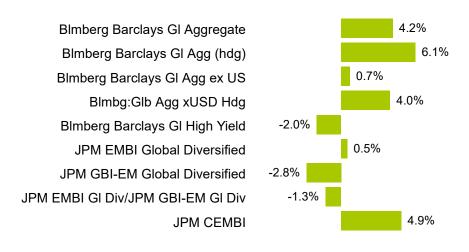
# **Emerging market debt made up ground**

- JPM EMBI Global Diversified (USD) posted strong returns (+12.3%) as oil prices rose and central bank liquidity measures took effect
- Within the local currency denominated benchmark JPM GBI-EM (+9.8%), returns were positive for the vast majority of constituents. Oil-sensitive economies rebounded to some degree, but remained down YTD.

# **Global Fixed Income: Quarterly Returns**



# **Global Fixed Income: Annual Returns**



Sources: Bloomberg Barclays, JPMorgan Chase



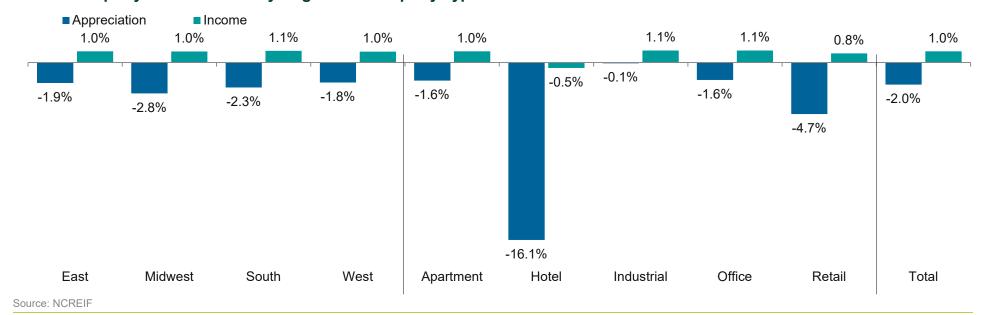
# **U.S. Private Real Estate Market Trends**

### Results

- Pandemic's continued impact reflected in 2Q results
- Income remains positive except in Hotel sector
- All sectors experienced negative appreciation, Industrial remains the best performer
- Dispersion of returns by manager within the ODCE Index due to both composition of underlying portfolios and valuation methodologies/approach
- Negative returns expected for 3Q and beyond

|                       | Last<br>Quarter | Last Year | Last 3<br>Years | Last 5<br>Years | Last 10<br>Years |
|-----------------------|-----------------|-----------|-----------------|-----------------|------------------|
| NCREIF ODCE           | -1.6%           | 2.2%      | 5.7%            | 7.3%            | 10.8%            |
| Appreciation          | -2.5%           | -1.8%     | 1.4%            | 2.9%            | 5.8%             |
| Income                | 0.9%            | 4.1%      | 4.2%            | 4.3%            | 4.8%             |
| NCREIF Property Index | -1.0%           | 2.7%      | 5.4%            | 6.8%            | 9.7%             |
| Appreciation          | -2.0%           | -1.7%     | 0.9%            | 2.1%            | 4.4%             |
| Income                | 1.0%            | 4.4%      | 4.5%            | 4.6%            | 5.2%             |

# NCREIF Property Index Returns by Region and Property Type



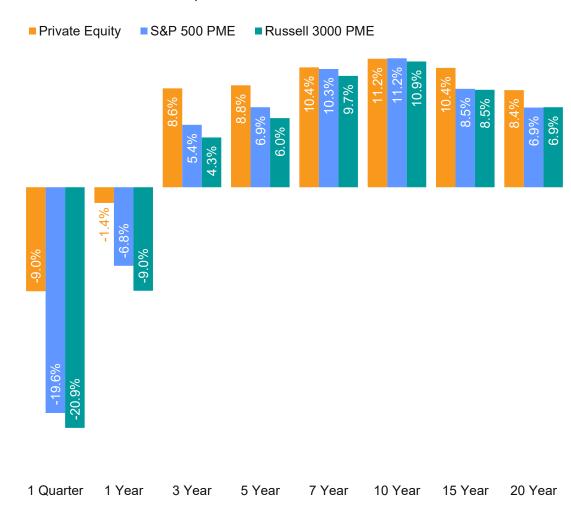


# **Private Equity Performance**

# Outperformance across a cycle

- Drop in private equity performance in 1Q20
- Decline far less severe than the sharp plunges in the public markets
- 10-year performance finally caught up to public equity returns
- Expected to exceed public markets as crisis deepens

# Net IRRs as of March 31, 2020



Source: MSCI

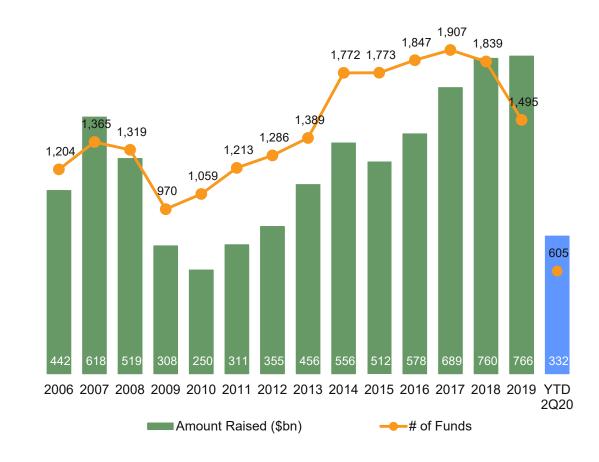


# **Private Equity Global Fundraising**

# Boom continues ... for now

- Fundraising strong through 2Q20
- Many upcoming fundraises pushed out to 2021 due to inability of funds to deploy capital over last few months
- Fundraising for rest of year expected to significantly slow

# **Annual Fundraising**



Source: PitchBook, includes private equity and private debt



# **Callan Periodic Table of Investment Returns**

| Annual Returns                 |                                |                                |                                |                                | Monthly Returns                |                                |                                |                                |                                |                                |                                |                                |
|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| 2014                           | 2015                           | 2016                           | 2017                           | 2018                           | 2019                           | Jan 2020                       | Feb 2020                       | Mar 2020                       | Apr 2020                       | May 2020                       | Jun 2020                       | YTD 2020                       |
| Real Estate                    | Large Cap<br>Equity            | Small Cap<br>Equity            | Emerging<br>Market Equity      | U.S. Fixed<br>Income           | Large Cap<br>Equity            | U.S. Fixed<br>Income           | U.S. Fixed<br>Income           | U.S. Fixed<br>Income           | Small Cap<br>Equity            | Small Cap<br>Equity            | Emerging<br>Market Equity      | U.S. Fixed<br>Income           |
| 15.02%                         | 1.38%                          | 21.31%                         | 37.28%                         | 0.01%                          | 31.49%                         | 1.92%                          | 1.80%                          | -0.59%                         | 13.74%                         | 6.51%                          | 7.35%                          | 6.14%                          |
| Large Cap<br>Equity            | U.S. Fixed<br>Income           | High Yield                     | Dev ex-U.S.<br>Equity          | High Yield                     | Small Cap<br>Equity            | Real Estate                    | Global ex-U.S.<br>Fixed Income | Global ex-U.S.<br>Fixed Income | Large Cap<br>Equity            | Large Cap<br>Equity            | Small Cap<br>Equity            | Global ex-U.S.<br>Fixed Income |
| 13.69%                         | 0.55%                          | 17.13%                         | 24.21%                         | -2.08%                         | 25.52%                         | 0.84%                          | -0.20%                         | -3.22%                         | 12.82%                         | 4.76%                          | 3.53%                          | 0.61%                          |
| U.S. Fixed<br>Income           | Real Estate                    | Large Cap<br>Equity            | Large Cap<br>Equity            | Global ex-U.S.<br>Fixed Income | Dev ex-U.S.<br>Equity          | Global ex-U.S.<br>Fixed Income | High Yield                     | High Yield                     | Emerging<br>Market Equity      | High Yield                     | Dev ex-U.S.<br>Equity          | Large Cap<br>Equity            |
| 5.97%                          | -0.79%                         | 11.96%                         | 21.83%                         | -2.15%                         | 22.49%                         | 0.76%                          | -1.41%                         | -11.46%                        | 9.16%                          | 4.41%                          | 3.42%                          | -3.08%                         |
| Small Cap<br>Equity            | Dev ex-U.S.<br>Equity          | Emerging<br>Market Equity      | Small Cap<br>Equity            | Large Cap<br>Equity            | Real Estate                    | High Yield                     | Emerging<br>Market Equity      | Large Cap<br>Equity            | Real Estate                    | Dev ex-U.S.<br>Equity          | Real Estate                    | High Yield                     |
| 4.89%                          | -3.04%                         | 11.19%                         | 14.65%                         | -4.38%                         | 21.91%                         | 0.03%                          | -5.27%                         | -12.35%                        | 7.06%                          | 4.25%                          | 2.57%                          | -3.80%                         |
| High Yield                     | Small Cap<br>Equity            | Real Estate                    | Global ex-U.S.<br>Fixed Income | Real Estate                    | Emerging<br>Market Equity      | Large Cap<br>Equity            | Large Cap<br>Equity            | Dev ex-U.S.<br>Equity          | Dev ex-U.S.<br>Equity          | Emerging<br>Market Equity      | Large Cap<br>Equity            | Emerging<br>Market Equity      |
| 2.45%                          | -4.41%                         | 4.06%                          | 10.51%                         | -5.63%                         | 18.44%                         | -0.04%                         | -8.23%                         | -14.12%                        | 6.97%                          | 0.77%                          | 1.99%                          | -9.78%                         |
| Emerging<br>Market Equity      | High Yield                     | Dev ex-U.S.<br>Equity          | Real Estate                    | Small Cap<br>Equity            | High Yield                     | Dev ex-U.S.<br>Equity          | Real Estate                    | Emerging<br>Market Equity      | High Yield                     | U.S. Fixed<br>Income           | Global ex-U.S.<br>Fixed Income | Dev ex-U.S.<br>Equity          |
| -2.19%                         | -4.47%                         | 2.75%                          | 10.36%                         | -11.01%                        | 14.32%                         | -1.94%                         | -8.24%                         | -15.40%                        | 4.51%                          | 0.47%                          | 1.01%                          | -11.49%                        |
| Global ex-U.S.<br>Fixed Income | Global ex-U.S.<br>Fixed Income | U.S. Fixed<br>Income           | High Yield                     | Dev ex-U.S.<br>Equity          | U.S. Fixed<br>Income           | Small Cap<br>Equity            | Small Cap<br>Equity            | Small Cap<br>Equity            | Global ex-U.S.<br>Fixed Income | Global ex-U.S.<br>Fixed Income | High Yield                     | Small Cap<br>Equity            |
| -3.08%                         | -6.02%                         | 2.65%                          | 7.50%                          | -14.09%                        | 8.72%                          | -3.21%                         | -8.42%                         | -21.73%                        | 2.04%                          | 0.30%                          | 0.98%                          | -12.98%                        |
| Dev ex-U.S.<br>Equity          | Emerging<br>Market Equity      | Global ex-U.S.<br>Fixed Income | U.S. Fixed<br>Income           | Emerging<br>Market Equity      | Global ex-U.S.<br>Fixed Income | Emerging<br>Market Equity      | Dev ex-U.S.<br>Equity          | Real Estate                    | U.S. Fixed<br>Income           | Real Estate                    | U.S. Fixed<br>Income           | Real Estate                    |
| -4.32%                         | -14.92%                        | 1.49%                          | 3.54%                          | -14.57%                        | 5.09%                          | -4.66%                         | -8.88%                         | -22.76%                        | 1.78%                          | 0.23%                          | 0.63%                          | -21.33%                        |

Sources: 

Bloomberg Barclays Aggregate 

Bloomberg Barclays Corp High Yield 

Bloomberg Barclays Global Aggregate ex US

FTSE EPRA Nareit Developed
 MSCI World ex USA
 MSCI Emerging Markets
 Russell 2000
 S&P 500



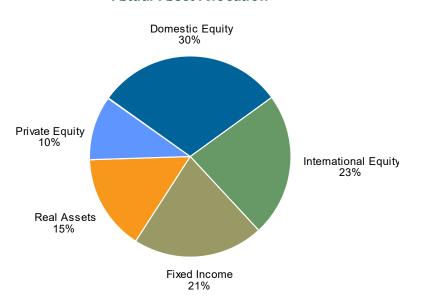
# Callan

**MCERA Total Fund Review** 

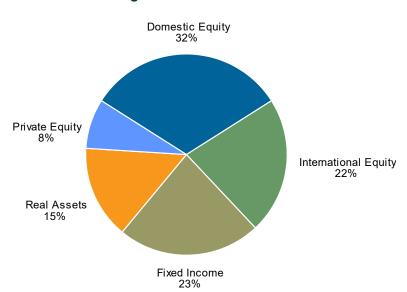
### **Total Fund Asset Allocation**

As of June 30, 2020

#### Actual Asset Allocation



#### Target Asset Allocation



|                      | \$Millions | Weight | Min    |        | Max    | Percent    | \$Millions |
|----------------------|------------|--------|--------|--------|--------|------------|------------|
| Asset Class          | Actual     | Actual | Target | Target | Target | Difference | Difference |
| Domestic Equity      | 775        | 30.1%  | 28.0%  | 32.0%  | 36.0%  | (1.9%)     | (50)       |
| International Equity | 596        | 23.1%  | 19.0%  | 22.0%  | 25.0%  | `1.1%´     | <b>2</b> 9 |
| Fixed Income         | 543        | 21.0%  | 20.0%  | 23.0%  | 26.0%  | (2.0%)     | (50)<br>11 |
| Real Assets          | 398        | 15.4%  | 12.0%  | 15.0%  | 18.0%  | 0.4%       | ` 11       |
| Private Equity       | 267        | 10.3%  | 0.0%   | 8.0%   | 12.0%  | 2.3%       | 60         |
| Total                | 2,578      | 100.0% |        | 100.0% |        |            |            |

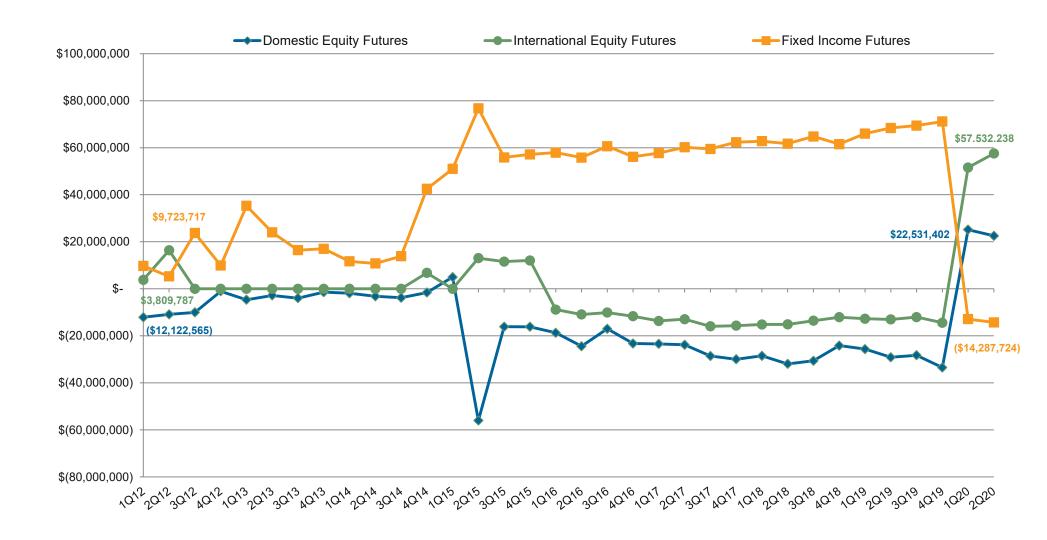


### **Total Fund Asset Distribution**

|   | June 30, 2      | 2020    |                |               | March 31,       | 2020    |
|---|-----------------|---------|----------------|---------------|-----------------|---------|
|   | Market Value    | Weight  | Net New Inv.   | Inv. Return   | Market Value    | Weight  |
| Domestic Equity                         | \$775,222,651   | 30.07%  | \$(11,842,169) | \$138,679,436 | \$648,385,384   | 28.01%  |
| SSGA S&P 500 Index Fund                 | 543,411,201     | 21.08%  | (2,543,114)    | 92,881,966    | 453,072,349     | 19.57%  |
| DFA Small Cap Core                      | 209,280,047     | 8.12%   | (723,197)      | 39,846,396    | 170,156,849     | 7.35%   |
| Parametric Domestic Equity Futures      | 22,531,402      | 0.87%   | (8,575,858)    | 5,951,074     | 25,156,186      | 1.09%   |
| International Equity                    | \$595,929,220   | 23.11%  | \$(2,354,147)  | \$93,622,953  | \$504,660,413   | 21.80%  |
| Morgan Stanley Value                    | 167,731,914     | 6.51%   | 0              | 26,147,420    | 141,584,494     | 6.12%   |
| Artisan Partners Growth                 | 180,855,895     | 7.01%   | 0              | 26,827,548    | 154,028,348     | 6.65%   |
| TimesSquare Intl Small Cap              | 100,394,617     | 3.89%   | (125,085)      | 18,515,024    | 82,004,677      | 3.54%   |
| Parametric Emerging Markets             | 89,414,557      | 3.47%   | 0              | 13,949,201    | 75,465,355      | 3.26%   |
| Parametric International Equity Futures | 57,532,238      | 2.23%   | (2,229,062)    | 8,183,760     | 51,577,540      | 2.23%   |
| Fixed Income                            | \$542,658,816   | 21.05%  | \$(4,802,423)  | \$35,625,191  | \$511,836,048   | 22.11%  |
| Wellington Core Plus                    | 268,188,777     | 10.40%  | (1,956,656)    | 15,039,825    | 255,105,608     | 11.02%  |
| Western Intermediate Credit             | 147,766,558     | 5.73%   | (1,342,975)    | 13,106,881    | 136,002,652     | 5.88%   |
| Colchester Global                       | 140,991,205     | 5.47%   | (145,118)      | 7,529,051     | 133,607,272     | 5.77%   |
| Parametric Fixed Income Futures         | -14,287,724     | (0.55%) | (1,357,674)    | (50,566)      | -12,879,484     | (0.56%) |
| Real Estate                             | \$240,278,410   | 9.32%   | \$(170,376)    | \$(2,898,469) | \$243,347,254   | 10.51%  |
| Woodmont                                | 17,395,078      | 0.67%   | Ó              | 0             | 17,395,078      | 0.75%   |
| UBS Trumbull Property Fund              | 118,717,063     | 4.60%   | (188,941)      | (2,954,369)   | 121,860,373     | 5.26%   |
| AEW Core Property Trust                 | 104,155,826     | 4.04%   | 18,564         | 55,627        | 104,081,635     | 4.50%   |
| AEW Partners V, LP **                   | 10,443          | 0.00%   | 0              | 274           | 10,169          | 0.00%   |
| Public Real Assets                      | \$157,716,379   | 6.12%   | \$(62,504)     | \$17,117,639  | \$140,661,243   | 6.08%   |
| INVESCO Commodities Fund                | 38,396,983      | 1.49%   | (62,504)       | 4,411,185     | 34,048,302      | 1.47%   |
| BlackRock TIPS Index Fund               | 40,903,273      | 1.59%   | Ó              | 1,733,656     | 39,169,617      | 1.69%   |
| KBI Global Resources Fund               | 43,568,544      | 1.69%   | 0              | 8,053,794     | 35,514,750      | 1.53%   |
| Blackrock REIT Index Fund               | 34,847,579      | 1.35%   | 0              | 2,919,004     | 31,928,575      | 1.38%   |
| Private Equity*                         | \$266,604,281   | 10.34%  | \$660,976      | \$0           | \$265,943,305   | 11.49%  |
| Abbott ACE VI*                          | 52,372,892      | 2.03%   | (125,479)      | 0             | 52,498,371      | 2.27%   |
| Abbott ACE VII*                         | 35,875,318      | 1.39%   | (785,000)      | 0             | 36,660,318      | 1.58%   |
| Abbott 2016*                            | 34,070,052      | 1.32%   | 2,025,000      | 0             | 32,045,052      | 1.38%   |
| Abbott 2017*                            | 7,013,951       | 0.27%   | 375,000        | 0             | 6,638,951       | 0.29%   |
| Pathway PPEF 2008*                      | 54,600,710      | 2.12%   | (1,915,670)    | 0             | 56,516,380      | 2.44%   |
| Pathway PE I-7*                         | 34,787,722      | 1.35%   | (813,424)      | 0             | 35,601,146      | 1.54%   |
| Pathway PE I-8*                         | 41,492,087      | 1.61%   | 1,225,887      | 0             | 40,266,200      | 1.74%   |
| Pathway PE I-9*                         | 6,391,548       | 0.25%   | 674,661        | 0             | 5,716,887       | 0.25%   |
| Total Fund                              | \$2,578,409,756 | 100.0%  | \$(18,570,642) | \$282,146,751 | \$2,314,833,648 | 100.0%  |



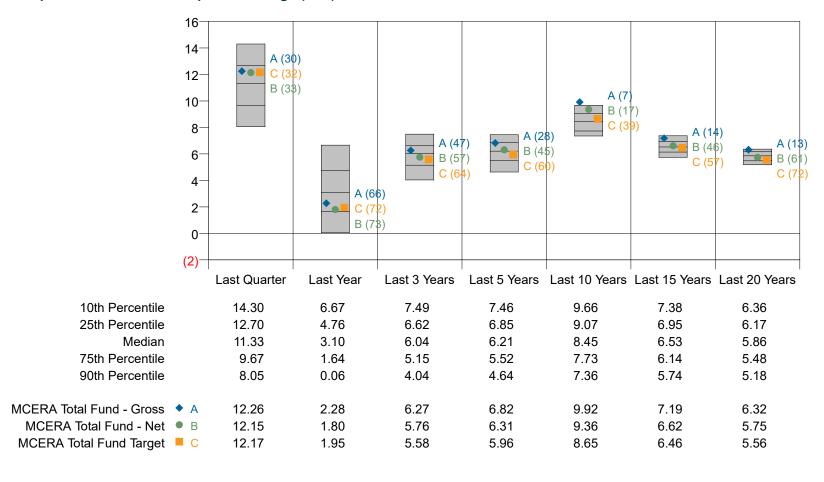
### Parametric Overlay Positions – Changes Over Time





### **Total Fund Performance - Annualized**

Returns for Periods Ended June 30, 2020 Group: Callan Public Fund Sponsor - Large (>1B)

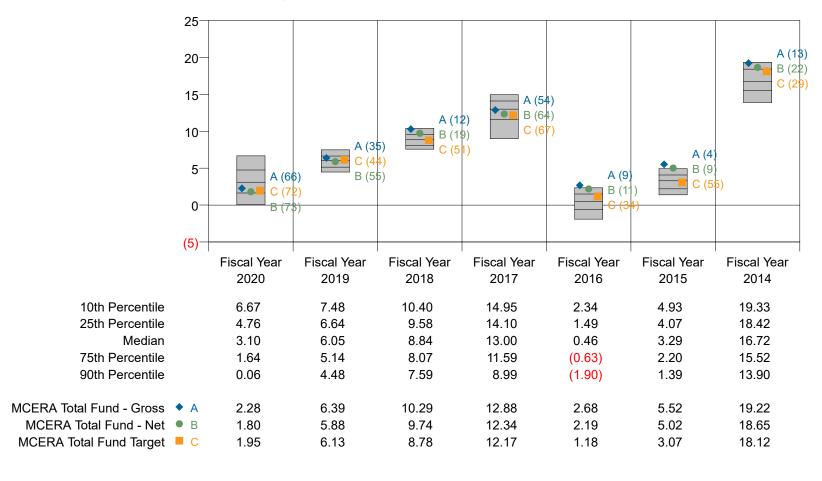


Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI Index, 11.5% Bloomberg Aggregate Index, 5.8% Bloomberg Intermediate Credit Index, 5.8% FTSE World Government Bond Index, 8.0% NCREIF NFI-ODCE Equal Weight Net, 1.8% Bloomberg Commodity Price Index, 1.8% S&P Global Natural Resources Index, 1.8% S&P DJ US Select REIT Index, 1.8% Bloomberg US TIPS Index, 6.4% Russell 3000 Index (Lagged)and 1.6% MSCI ACWI ex US IMI Index (Lagged).



### **Total Fund Performance – Fiscal Year**

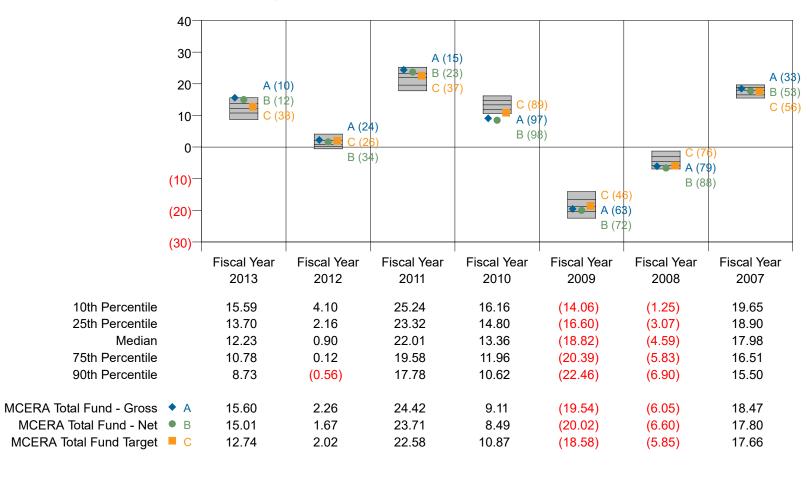
Fiscal Year Returns
Group: Callan Public Fund Sponsor - Large (>1B)





### **Total Fund Performance – Fiscal Year**

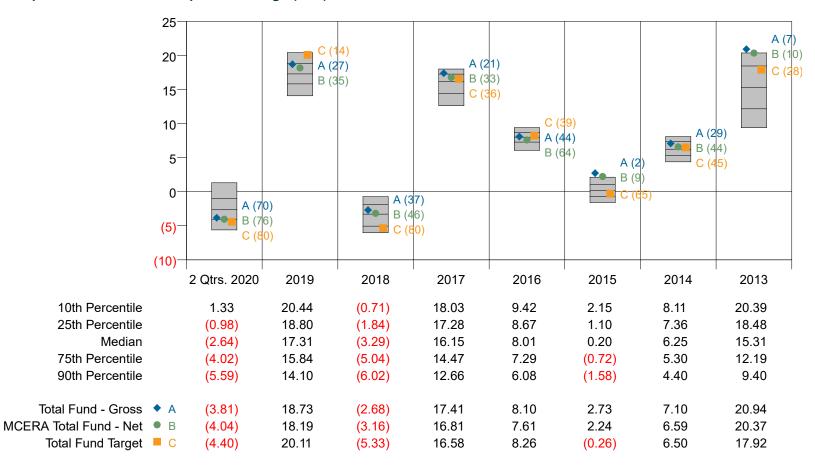
Fiscal Year Returns
Group: Callan Public Fund Sponsor - Large (>1B)





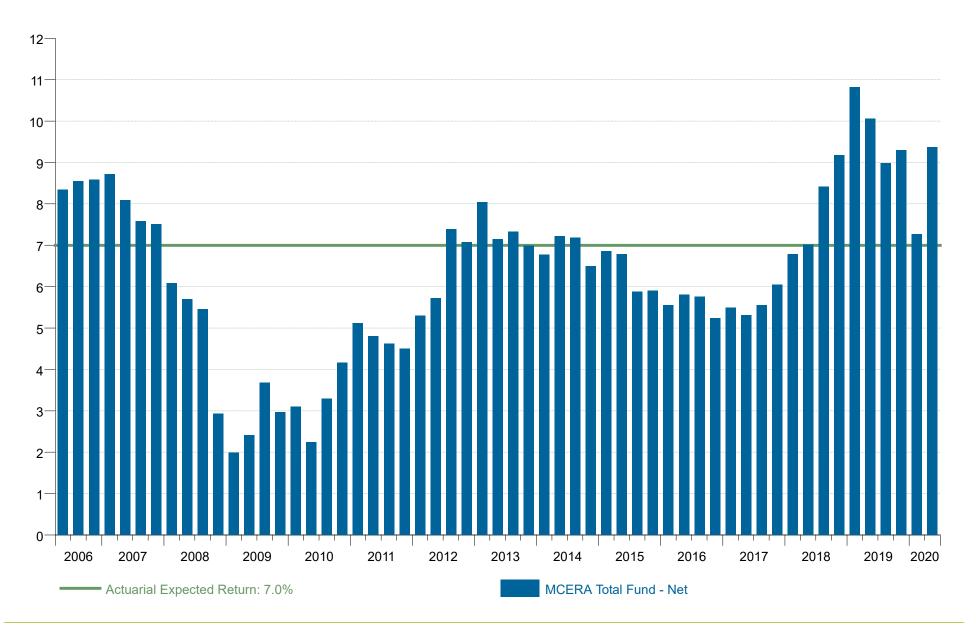
### **Total Fund Performance – Calendar Years**

Returns for Periods Ended June 30, 2020 Group: Callan Public Fund Sponsor - Large (>1B)





### **Annualized 10 Year Total Fund Net Returns (Quarterly Roll)**

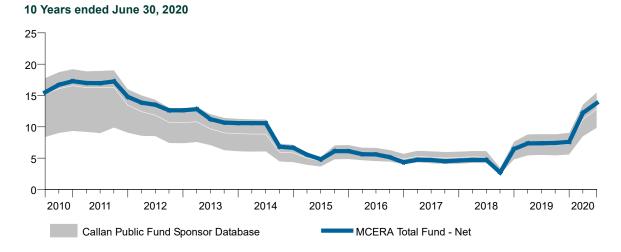




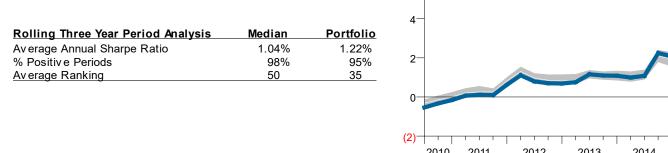
**Rolling 3 Year Standard Deviation** 

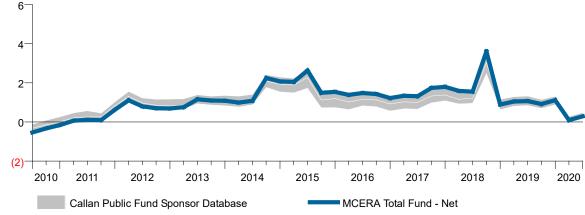
### **Total Fund - Volatility & Risk Adjusted Returns Comparison**

# Rolling Three Year Period AnalysisMedianPortfolioAverage Annual Standard Deviation8.61%9.24%% Positive Periods100%100%Average Ranking5040



#### Rolling 3 Year Sharpe Ratio 10 Years ended June 30, 2020

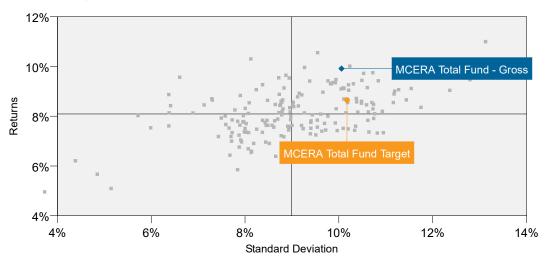




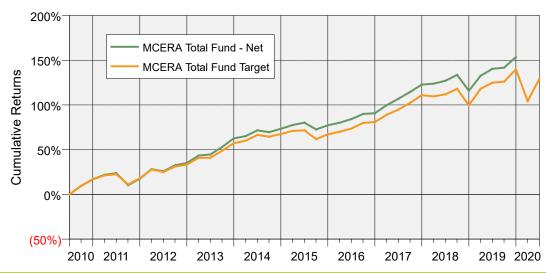


### **Total Fund – Cumulative Returns Relative to Target**

Ten Year Annualized Risk vs. Return As of June 30, 2020



Total Fund Cumulative Returns vs. Target 10 Years Ended June 30, 2020





### **Watchlist**

# Investment Manager Monitoring Summary Report Active Managers as of June 30, 2020

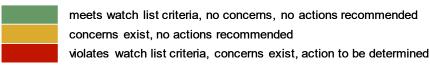
| Investment Manager                             | Organization/<br>Team | 3 Year<br>Performance<br>vs Benchmark | 3 Year<br>Performance<br>vs Peers | 5 Year<br>Performance<br>vs Benchmark | 5 Year<br>Performance<br>vs Peers | Qualify for<br>Watchlist? | Date Added |
|--|-----------------------|---------------------------------------|-----------------------------------|---------------------------------------|-----------------------------------|---------------------------|------------|
| DEA Small Can Care Equity                      |                       |                                       |                                   |                                       |                                   |                           |            |
| DFA Small Cap Core Equity Russell 2000 Index   |                       | N/A                                   | N/A                               | N/A                                   | N/A                               | No                        |            |
| Morgan Stanley International Value Equity      | ~                     |                                       |                                   |                                       |                                   |                           |            |
| MSCI EAFE Index                                |                       |                                       |                                   |                                       |                                   | No                        | 4Q17       |
| Artisan International Growth Equity            |                       |                                       |                                   |                                       |                                   |                           |            |
| MSCI EAFE Index                                |                       |                                       |                                   |                                       |                                   | Yes                       | 4Q17       |
| TimesSquare International Small Cap Equity     | ~                     |                                       |                                   |                                       |                                   |                           |            |
| MSCI FAFF Small Cap Index                      |                       | N/A                                   | N/A                               | N/A                                   | N/A                               | No                        |            |
| Parametric Emerging Markets Equity             | -                     |                                       |                                   |                                       |                                   |                           |            |
| MSCI Emerging Markets Index                    |                       |                                       |                                   |                                       |                                   | Yes                       | 1Q15       |
| Wellington Core Plus Fixed Income              | ~                     |                                       |                                   |                                       |                                   | No                        |            |
| Bloomberg Barclays Aggregate Index             |                       |                                       |                                   |                                       |                                   | NO                        |            |
| Western Asset Intermediate Credit Fixed Income |                       |                                       |                                   |                                       |                                   | No                        |            |
| Bloomberg Barclays Intermediate Credit Index   |                       |                                       |                                   |                                       |                                   | NO                        |            |
| Colchester Global Fixed Income                 | •                     |                                       |                                   |                                       |                                   | V                         | 2040       |
| FTSE World Government Bond Index               |                       |                                       |                                   |                                       |                                   | Yes                       | 3Q19       |
| Invesco Balanced Risk Commodity Fund           | ~                     |                                       |                                   | NI/A                                  | <b></b>                           | NI-                       |            |
| Bloomberg Commodity Index                      |                       |                                       |                                   | N/A                                   | N/A                               | No                        |            |
| KBI Global Natural Resources Fund              | ~                     |                                       | NI/A                              |                                       | NI/A                              | No                        |            |
| S&P Global Natural Resource Index              |                       |                                       | N/A                               | N/A                                   | N/A                               | No                        |            |
| UBS Trumbull Property Fund*                    |                       | N/A                                   | N/A                               | N/A                                   | N/A                               | Under                     | 4040       |
| NFI-ODCE Index                                 |                       | N/A                                   | N/A                               | N/A                                   | N/A                               | Review                    | 4Q19       |

<sup>\*</sup>UBS Trumbull Property Fund placed on watch for organizational concerns. Quantitative criteria for private market portfolios under review by Governance Committee.

#### **Quantitative Criteria**

If a manager trails its relevant benchmark by more than 100 basis points (net of fees) and ranks in the bottom quartile of its peer universe (gross of fees ranking) for the trailing three years, or if a manager trails its relevant benchmark (net of fees) or ranks below median of its peer universe (gross of fees ranking) for the trailing five years, then the manager may be placed on the Watchlist.

#### **Color Code**





# Watchlist

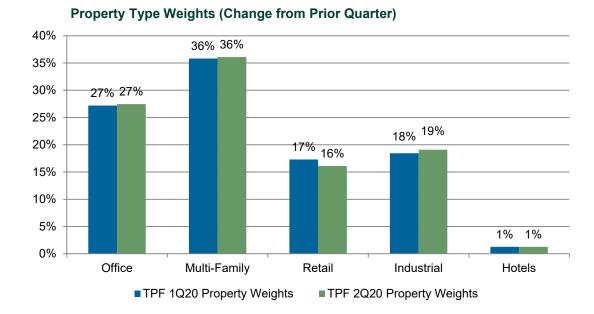
| Investment Manager                             | 3 Year Net Return<br>Trails Benchmark by <u>AND</u><br>more than 100 bps<br>(relative return<br>shown in bps) | 3 Year Gross<br>Return<br>Ranks<br>75th - 100th%   | <u>OR</u> | 5 Year Net<br>Return<br>Trails<br>Benchmark<br>(relative return<br>shown in bps) | <u>OR</u> | 5 Year Gross<br>Return<br>Ranks<br>50th - 100th% | Qualify for<br>Watchlist<br>(Quantitative)? |
|--|---|--|-----------|--|-----------|--|---|
| DFA Small Cap Core Equity                      |   |  |           |  |           |  |   |
| Russell 2000 Index                             | N/A   | N/A  |           | N/A  |           | N/A  | No  |
| Morgan Stanley International Value Equity      | 400   | 4-4  |           | 00   |           | 4-1  | NI-   |
| MSCI EAFE Index                                | 122   | 1st  |           | 68   |           | 1st  | No  |
| Artisan International Growth Equity            | 471   | 404  |           | 422  |           | 70   | V   |
| MSCI EAFE Index                                | 4/1   | 43rd   |           | 132  |           | 70   | Yes   |
| TimesSquare International Small Cap Equity     | N/A   | N/A  |           | N/A  |           | N/A  | No  |
| MSCI EAFE Small Cap Index                      | N/A   | IV/A   |           | IV/A   |           | N/A  | NO  |
| Parametric Emerging Markets Equity             | -535  | 84th   |           | -343   |           | 88th   | Yes   |
| MSCI Emerging Markets Index                    | -555  | 04111  |           | -343   |           | ooui   | res   |
| Wellington Core Plus Fixed Income              | 64  | 6  |           | 87   |           | 11th   | No  |
| Bloomberg Barclays Aggregate Index             | 04  | 6  | 87        |  | HUN       |  | No  |
| Western Asset Intermediate Credit Fixed Income | 40  | 04   |           |  |           | 4.   | NI  |
| Bloomberg Barclays Intermediate Credit Index   | 43  | 2nd  |           | 52   |           | 1st  | No  |
| Colchester Global Fixed Income                 | co  | C4-+   |           | -41  |           | 50th   | V   |
| FTSE World Government Bond Index               | -62   | 61st   |           | -4 I   |           | 58th   | Yes   |
| Invesco Balanced Risk Commodity Fund           | 200   | 474  |           | N1/A   |           | N1/A   | NI  |
| Bloomberg Commodity Index                      | 209   | 17th   |           | N/A  | N/A       |  | No  |
| KBI Global Natural Resources Fund              | 004   | <b>N</b> 1/0   |           | <b>N</b> 1/A   |           | N1/A   |   |
| S&P Global Natural Resource Index              | 361   | N/A  |           | N/A  |           | N/A  | No  |
| UBS Trumbull Property Fund                     | Quantitative criteria for pri   | Quantitative criteria for private markets portfolios under review by Governance Committee. |           |  |           |  |   |
| NCREIF NFI-ODCE Index                          |   | n watch due to or  |           |  |           |  | Review                                      |



### **UBS Trumbull Property Fund Snapshot**

As of June 30, 2020

| \$18.7 B      |
|---------------|
| \$15.1 B      |
| 18.2%         |
| 184           |
| 446           |
| \$8.3 billion |
| \$0 million   |
| \$0 million   |
|               |



- The Fund has a current redemption pool of \$8.3 billion. The Fund has indicated that redemption payments for the remainder of 2020 will be below its initial forecast of \$1.5 billion, and will depend on the length and severity of the COVID-19 pandemic.
  - -MCERA submitted a partial redemption request for \$20 million in January 2020.
- Redemption requests must be submitted at least 60 days prior to the end of the quarter and may be withdrawn no later than 14 days prior to the end of the quarter.
- In September 2019, the fund announced investors would have a choice between two fee incentives: loyalty incentive (discounted fees of 15% over 3 years or 25% over 4 years) and top-up incentive (\$0 base fee on additional dollars deposited). These are available for election until January 2021.
  - -The amount of client assets in the Loyalty Fee Program is \$4.2 billion.
  - -MCERA elected for the 4 year/25% discount loyalty incentive on approximately \$100 million NAV.



### **NFI-ODCE Funds - Net of Fee Returns**

As of June 30, 2020

| Fund             | Last<br>Quarter | Last<br>Year | Last<br>3 Years | Last<br>5 Years |
|------------------|-----------------|--------------|-----------------|-----------------|
| AEW              | -0.15%          | 1.29%        | 4.84%           | 6.40%           |
| AFL-CIO          | -0.63%          | 0.35%        | 4.16%           | 5.64%           |
| ARA              | -1.47%          | 2.21%        | 5.26%           | 6.33%           |
| ASB              | -0.77%          | 0.98%        | 4.32%           | 5.42%           |
| Barings          | -0.13%          | 3.76%        | 5.93%           | 7.37%           |
| BGO              | -2.82%          | 0.17%        | 4.50%           | 6.21%           |
| Blackrock        | -0.66%          | 3.59%        | 6.27%           | 7.99%           |
| CBRE             | -1.27%          | 3.72%        | 7.21%           | 9.11%           |
| Clarion          | -2.01%          | 2.40%        | 6.01%           | 7.37%           |
| DWS              | -0.58%          | 3.36%        | 5.86%           | 7.21%           |
| Everwest         | -1.96%          | 2.29%        | 4.68%           | 6.32%           |
| GSAM             | -3.43%          | -0.81%       | 4.54%           | 6.51%           |
| Heitman          | -1.72%          | -3.12%       | 2.64%           | 5.28%           |
| Intercontinental | -0.21%          | 4.89%        | 7.36%           | 8.80%           |
| Invesco          | -4.62%          | 0.57%        | 4.71%           | 6.36%           |
| JP Morgan        | -2.27%          | 1.24%        | 4.10%           | 5.81%           |
| LaSalle          | -1.49%          | 0.64%        | 4.92%           | 6.81%           |
| MetLife          | -1.08%          | 2.77%        | 6.63%           | 7.97%           |
| MSIM             | -1.85%          | 1.66%        | 5.69%           | 7.47%           |
| NYLIM            | -0.37%          | 2.56%        | 6.04%           | 7.94%           |
| PGIM             | -1.33%          | 2.56%        | 5.69%           | 7.15%           |
| Principal        | -1.52%          | 1.60%        | 5.40%           | 7.15%           |
| Stockbridge      | -1.08%          | 2.93%        | 5.95%           | 7.42%           |
| TA Realty        | -0.43%          | 5.42%        | -               | _               |
| UBS              | -2.61%          | -1.81%       | 1.36%           | 3.61%           |

### **Rent Collections**

AEW 2Q:

Multifamily: 97% Industrial: 92%

Office: 97%

Retail: 61%

#### **UBS 2Q:**

Multifamily: 94%

Industrial 94%

Office: 95%

Retail: 51%



### **NFI-ODCE Funds - Gross of Fee All Sector Returns**

As of June 30, 2020

| Fund             | Retail 2Q 2020 | Apartment 2Q 2020 | Industrial 2Q 2020 | Office 2Q 2020 |
|------------------|----------------|-------------------|--------------------|----------------|
| AEW              | -0.06%         | 0.21%             | 1.22%              | -0.69%         |
| AFL-CIO          | -4.26%         | 0.16%             | 1.16%              | 0.12%          |
| ARA              | -2.60%         | -1.36%            | 2.92%              | -2.69%         |
| ASB              | -1.77%         | -0.67%            | 1.09%              | -0.09%         |
| Barings          | -0.76%         | 0.10%             | 1.72%              | 0.52%          |
| BGO              | -1.57%         | -2.24%            | -0.48%             | -1.72%         |
| Blackrock        | -0.64%         | -0.65%            | 1.06%              | -0.36%         |
| CBRE             | -6.22%         | 0.60%             | 1.07%              | -0.21%         |
| Clarion          | -6.01%         | -1.03%            | 1.14%              | -1.52%         |
| DWS              | -3.72%         | -0.67%            | 1.97%              | 0.38%          |
| Everwest         | -5.13%         | -0.89%            | 4.03%              | -3.16%         |
| GSAM             | -4.03%         | -2.44%            | -0.48%             | -2.43%         |
| Heitman          | -8.29%         | -0.70%            | 2.16%              | -1.23%         |
| Intercontinental | -3.48%         | -1.03%            | 1.56%              | 0.65%          |
| Invesco          | -6.40%         | -3.00%            | 0.15%              | -3.18%         |
| JP Morgan        | -10.42%        | -0.44%            | 1.14%              | 1.20%          |
| LaSalle          | -3.38%         | -0.45%            | 1.31%              | -0.54%         |
| MetLife          | -5.63%         | -0.41%            | 0.86%              | -0.15%         |
| MSIM             | -9.23%         | 0.19%             | 0.91%              | -1.08%         |
| NYLIM            | -1.20%         | -0.28%            | 1.29%              | -0.60%         |
| PGIM             | -3.34%         | -0.26%            | 1.44%              | -1.29%         |
| Principal        | -2.33%         | -0.54%            | -2.33%             | -0.98%         |
| Stockbridge      | -4.87%         | -1.25%            | 1.96%              | -1.15%         |
| TA Realty        | -3.85%         | 0.18%             | 0.69%              | -0.24%         |
| UBS              | -5.34%         | -1.77%            | 0.26%              | -2.54%         |



# NFI-ODCE Funds - Gross of Fee Retail Returns (trailing 4 quarters)

As of June 30, 2020

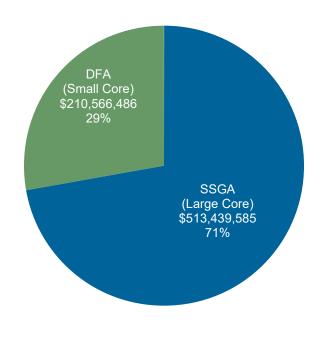
| Fund             | Fund Allocation<br>Weight | Retail 2Q 2020 | Retail 1Q 2020 | Retail 4Q 2019 | Retail 3Q 2019 |
|------------------|---------------------------|----------------|----------------|----------------|----------------|
| AEW              | 17.45%                    | -0.06%         | -8.01%         | -1.55%         | 0.95%          |
| AFL-CIO          | 15.10%                    | -4.26%         | -0.08%         | 0.90%          | -3.26%         |
| ARA              | 17.29%                    | -2.60%         | -0.09%         | 0.85%          | 0.62%          |
| ASB              | 18.27%                    | -1.77%         | -2.72%         | -0.05%         | -4.90%         |
| Barings          | 15.91%                    | -0.76%         | 0.56%          | 0.21%          | 0.47%          |
| BGO              | 9.64%                     | -1.57%         | 0.63%          | 1.18%          | 0.14%          |
| Blackrock        | 16.79%                    | -0.64%         | 1.03%          | 1.12%          | 1.92%          |
| CBRE             | 16.01%                    | -6.22%         | -2.30%         | 0.20%          | 0.67%          |
| Clarion          | 12.09%                    | -6.01%         | -1.04%         | -0.69%         | 0.08%          |
| DWS              | 17.63%                    | -3.72%         | -0.85%         | 0.13%          | -0.33%         |
| Everwest         | 22.00%                    | -5.13%         | -0.05%         | -0.22%         | 1.04%          |
| GSAM             | 11.30%                    | -4.03%         | -0.33%         | 1.53%          | 2.01%          |
| Heitman          | 16.80%                    | -8.29%         | -14.08%        | -12.18%        | -0.51%         |
| Intercontinental | 2.20%                     | -3.48%         | 2.00%          | 0.57%          | 1.37%          |
| Invesco          | 14.10%                    | -6.40%         | -0.22%         | -0.53%         | 0.34%          |
| JP Morgan        | 23.17%                    | -10.42%        | -0.63%         | 0.67%          | -1.44%         |
| LaSalle          | 14.98%                    | -3.38%         | -1.10%         | 0.45%          | -1.06%         |
| MetLife          | 12.25%                    | -5.63%         | -1.96%         | 0.99%          | -0.10%         |
| MSIM             | 12.70%                    | -9.23%         | -5.21%         | -1.08%         | -0.47%         |
| NYLIM            | 3.34%                     | -1.20%         | -0.98%         | 0.44%          | 1.87%          |
| PGIM             | 13.85%                    | -3.34%         | 0.21%          | 0.07%          | 0.75%          |
| Principal        | 14.11%                    | -2.33%         | -1.62%         | -0.15%         | 0.77%          |
| Stockbridge      | 17.50%                    | -4.87%         | 0.86%          | -0.02%         | 0.66%          |
| TA Realty        | 7.05%                     | -3.85%         | 0.98%          | 1.49%          | 1.27%          |
| UBS              | 16.09%                    | -5.34%         | -2.90%         | -5.29%         | 0.96%          |



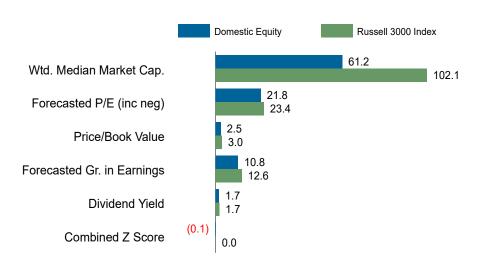
# Callan

**MCERA Asset Class Review** 

### **Domestic Equity Composite**



#### Portfolio Characteristics as of June 30, 2020

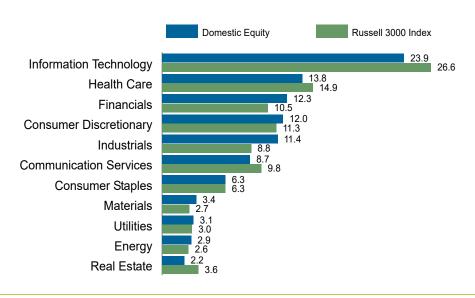


#### Style Exposure Matrix Holdings as of June 30, 2020



|         | Value       | Core         | Growth       | Total         |
|---------|-------------|--------------|--------------|---------------|
| เบเสเ   | 19 4% (905) | 34 3% (1159) | 46 3% (903)  | 100 0% (2967) |
| Total   | 20.0% (724) | 35.4% (761)  | 44.6% (607)  | 100.0% (2092) |
| 1111010 | 0.2% (345)  | 0.2% (395)   | 0.1% (150)   | 0.5% (890)    |
| Micro   | 1.0% (305)  | 0.9% (220)   | 0.3% (86)    | 2.3% (611)    |
|         | 1.5% (336)  | 2.0% (480)   | 1.7% (371)   | 5.2% (1187)   |
| Small   | 4.6% (233)  | 7.6% (334)   | 7.3% (292)   | 19.5% (859)   |
|         | 4.0% (151)  | 4.2% (175)   | 6.5% (268)   | 14.6% (594)   |
| Mid     | 2.9% (115)  | 3.2% (100)   | 5.6% (131)   | 11.7% (346)   |
|         | 13.7% (73)  | 27.8% (109)  | 38.1% (114)  | 79.6% (296)   |
| Large   | 11.6% (71)  | 23.6% (107)  | 31.3% (98)   | 66.6% (276)   |
|         | 44.00( (74) | 00.00( (407) | 04.00/. (00) | 00.00/ (070)  |

#### Sector Allocation as of June 30, 2020





### **Domestic Equity Composite**

#### Returns and Rankings for Periods Ended June 30, 2020

#### Last Last 3 Last 5 Last 10 Quarter Last Year Years Years Years **Domestic Equity - Net** 12.79 21.56 2.59 8.32 8.50 **Domestic Equity Target** 22.03 6.53 10.04 10.03 13.72 Large Cap Equity - Net 20.66 7.56 10.69 10.73 13.77 SSGA - Net 20.53 7.43 10.69 10.73 S&P 500 Index 20.54 7.51 10.73 10.73 13.99 Ranking vs. Large Cap Equity 57 49 48 46 **Small Cap Equity - Net** 23.76 (10.02)1.59 2.59 10.12 **DFA Small Core - Net** 23.36 (11.70)Russell 2000 Index 25.42 (6.63)2.01 4.29 10.50 67 Ranking vs. Small Cap Equity 63

#### **Returns and Rankings for Calendar Years**

|                              | 2 Qtrs. |       |         |       |       |        |
|------------------------------|---------|-------|---------|-------|-------|--------|
|                              | 2020    | 2019  | 2018    | 2017  | 2016  | 2015   |
| Domestic Equity - Net        | (6.44)  | 28.75 | (5.34)  | 20.60 | 13.10 | (0.95) |
| Domestic Equity Target       | (3.48)  | 31.02 | (5.24)  | 21.13 | 12.74 | 0.48   |
|                              |         |       |         |       |       |        |
| Large Cap Equity - Net       | (3.07)  | 31.63 | (4.59)  | 21.86 | 12.01 | 1.43   |
| SSGA - Net                   | (3.13)  | 31.43 | (4.39)  | 21.82 | 12.00 | 1.41   |
| S&P 500 Index                | (3.08)  | 31.49 | (4.38)  | 21.83 | 11.96 | 1.38   |
| Ranking vs. Large Cap Equity | 50      | 43    | 46      | 51    | 35    | 50     |
| Small Cap Equity - Net       | (15.45) | 21.86 | (8.79)  | 17.50 | 15.99 | (6.82) |
| DFA Small Core - Net         | (17.00) | 21.80 |         |       |       |        |
| Russell 2000 Index           | (12.98) | 25.52 | (11.01) | 14.65 | 21.31 | (4.41) |
| Ranking vs. Small Cap Equity | 66      | 69    |         |       |       |        |

• The domestic equity composite modestly underperformed the index in the second quarter. The small cap overweight was positive as small cap stocks outperformed large cap stocks. However, DFA's relative performance trailed its benchmark. Their exclusion of lower quality stocks and more expensive stocks hurt as those securities outperformed.

The Domestic Equity Target is comprised of 51.1% S&P/BARRA Value, 22.2% S&P 500, 15.6% Russell 2000 and 11.1% S&P/BARRA Growth through 12/31/1999, 80% S&P 500 and 20% Russell 2000 from 12/31/1999 to 06/30/2010, and 100% Russell 3000 from 06/30/2010 to present.



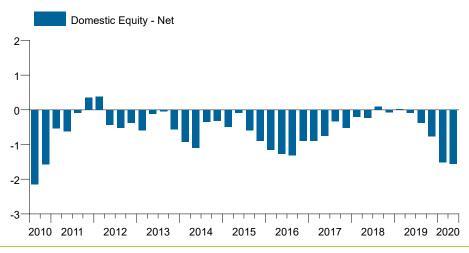
### **Domestic Equity Composite**

Rolling 3 Year Tracking Error vs. Domestic Equity Target 10 Years ended June 30, 2020

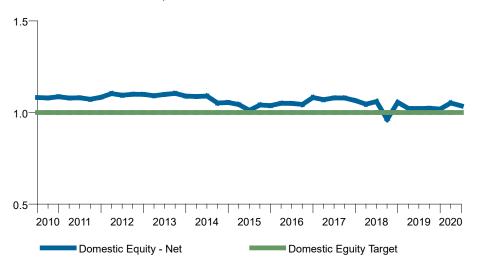


Rolling 3 Year Relative Returns vs. Domestic Equity Target

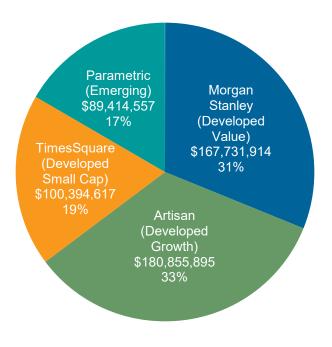
10 Years ended June 30, 2020



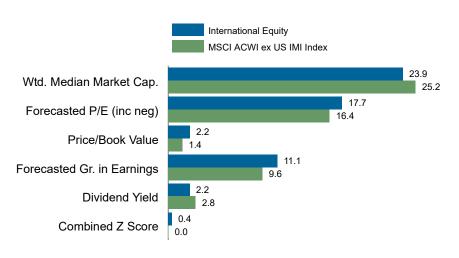
# Rolling 3 Year Relative Standard Deviation vs. Domestic Equity Target 10 Years ended June 30, 2020







#### Portfolio Characteristics as of June 30, 2020

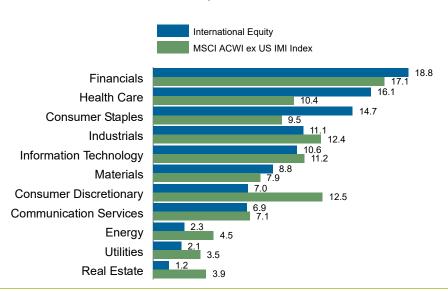


#### Region & Style Exposure Matrix Holdings as of June 30, 2020

#### -- International Equity



#### Sector Allocation as of June 30, 2020





#### Returns and Rankings for Periods Ended June 30, 2020

|  | Last    | Last    | Last 3 | Last 5 | Last 10 |
|--|---------|---------|--------|--------|---------|
|  | Quarter | Year    | Years  | Years  | Years   |
| International Equity - Net                 | 18.52   | (2.50)  | 2.26   | 2.99   | 7.05    |
| International Equity Target                | 16.96   | (4.74)  | 0.96   | 2.30   | 5.11    |
| Morgan Stanley - Net                       | 18.30   | 0.00    | 2.03   | 2.73   | 6.49    |
| MSCI EAFE Index                            | 14.88   | (5.13)  | 0.81   | 2.05   | 5.73    |
| Ranking vs. Non-US Developed Value Equity  | 12      | 2       | 1      | 1      | 11      |
| Artisan - Net                              | 17.42   | (0.09)  | 5.52   | 3.37   | 8.26    |
| MSCI EAFE Index                            | 14.88   | (5.13)  | 0.81   | 2.05   | 5.73    |
| Ranking vs. Non-US Developed Growth Equity | 70      | 69      | 43     | 70     | 22      |
| TimesSquare - Net                          | 22.58   | (3.08)  |        |        |         |
| MSCI EAFE Small Cap                        | 19.88   | (3.52)  | 0.53   | 3.81   | 8.02    |
| TimesSquare - Gross (unlinked)             | 28      | 38      |        |        |         |
| Parametric EM - Net                        | 18.48   | (14.86) | (3.45) | (0.57) |         |
| MSCI Emerging Markets Index                | 18.08   | (3.39)  | 1.90   | 2.86   | 3.27    |
| Ranking vs. Emerging Markets Equity        | 57      | 86      | 84     | 88     |         |

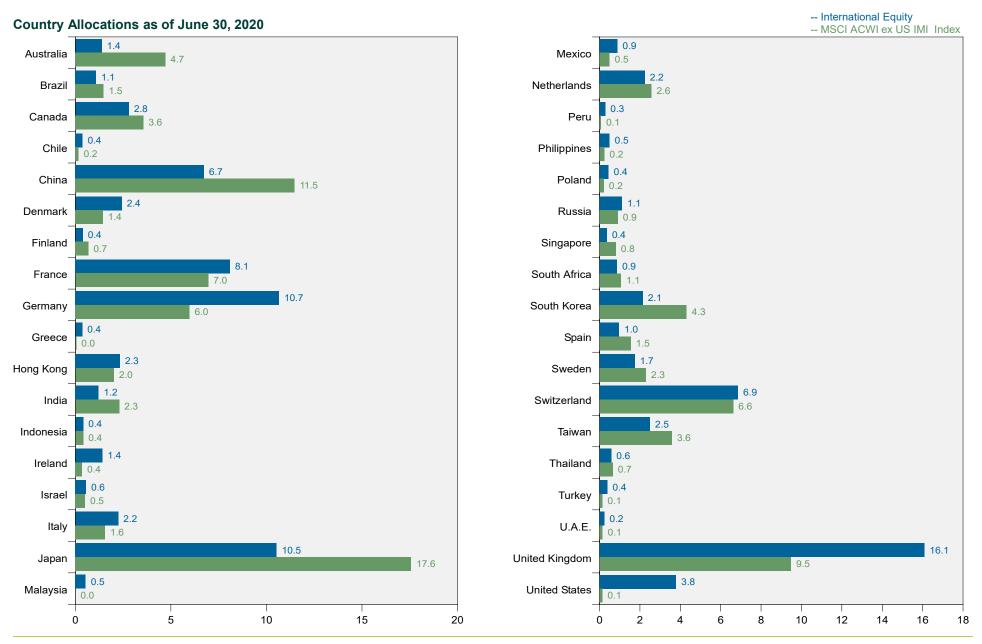
#### Returns and Rankings for Periods Ended June 30, 2020

|  | 2 Qtrs. |       |         |       |        |
|--|---------|-------|---------|-------|--------|
|  | 2020    | 2019  | 2018    | 2017  | 2016   |
| International Equity - Net                 | (8.88)  | 23.52 | (13.51) | 28.92 | (0.61) |
| International Equity Target                | (11.24) | 21.63 | (14.76) | 27.81 | 4.41   |
| Morgan Stanley - Net                       | (5.47)  | 20.92 | (13.46) | 25.42 | (1.45) |
| MSCI EAFE Index                            | (11.34) | 22.01 | (13.79) | 25.03 | 1.00   |
| Ranking vs. Non-US Developed Value Equity  | 1       | 33    | 14      | 41    | 95     |
| Artisan - Net                              | (7.73)  | 29.61 | (10.56) | 31.24 | (9.41) |
| MSCI EAFE Index                            | (11.34) | 22.01 | (13.79) | 25.03 | 1.00   |
| Ranking vs. Non-US Developed Growth Equity | 70      | 26    | 13      | 25    | 99     |
| TimesSquare - Net                          | (12.29) |       |         |       |        |
| MSCI EAFE Small Cap                        | (13.11) | 24.96 | (17.89) | 33.01 | 2.18   |
| TimesSquare - Gross (unlinked)             | 40      |       |         |       |        |
| Parametric EM - Net                        | (17.31) | 12.61 | (13.57) | 27.62 | 12.95  |
| MSCI Emerging Markets Index                | (9.78)  | 18.44 | (14.57) | 37.28 | 11.19  |
| Ranking vs. Emerging Markets Equity        | 86      | 83    | 25      | 83    | 22     |

- The International Equity composite outperformed on a relative basis.
  - Morgan Stanley: strong stock selection within consumer staples, energy, and health care contributed to performance.
- Artisan: positive stock selection within financials and health care was beneficial. Exposure to a few U.S. headquartered companies that derive a significant amount of revenue overseas (such as Amazon) also contributed to returns.
- TimesSquare: Japan was the strongest regional performer, mainly due to strong health care and consumer staples stock selection.
- Parametric: smaller cap stocks helped performance as did allocations to countries, such as Argentina, that benefited from the rebound in oil prices.

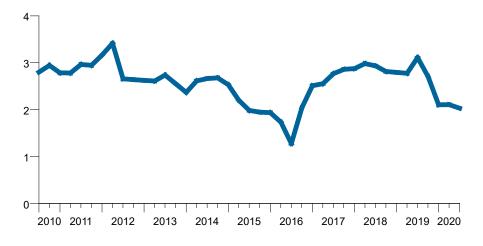
The International Equity Target is comprised of 100% MSCI EAFE Index through 06/30/2010, and 100% MSCI ACWI ex-US IMI Index thereafter.



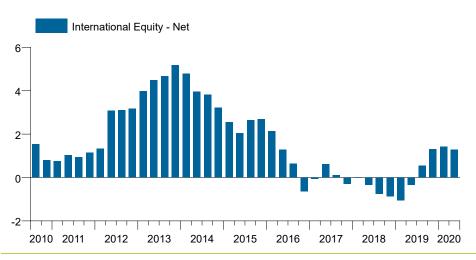




Rolling 3 Year Tracking Error vs. Int'l Equity Target 10 Years Ended June 30, 2020



Rolling 3 Year Relative Returns vs. Int'l Equity Target 10 Years ended June 30, 2020

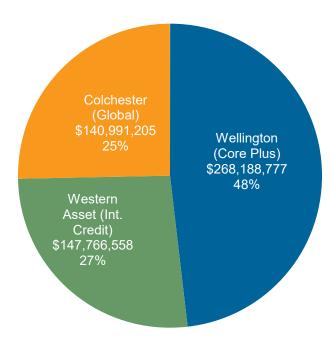


# Rolling 3 Year Relative Standard Deviation vs. Int'l Equity Target 10 Years ended June 30, 2020

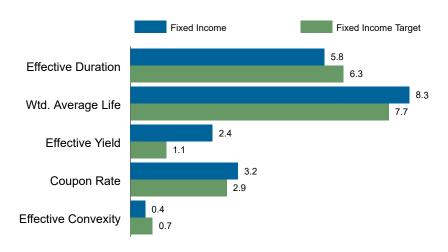




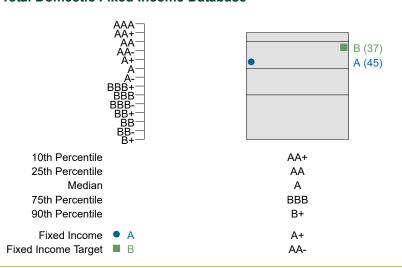
### **Fixed Income Composite**



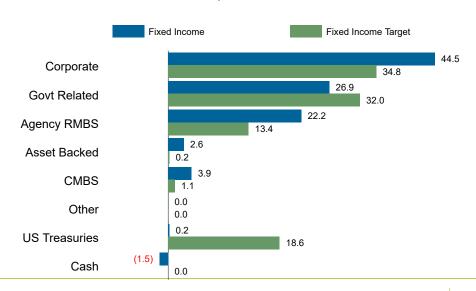
#### Portfolio Characteristics as of June 30, 2020



#### Quality Rating as of June 30, 2020 Total Domestic Fixed Income Database



#### Sector Allocation as of June 30, 2020





### **Fixed Income Composite**

#### Returns and Rankings for Periods Ended June 30, 2020

|   | Last<br>Quarter | Last<br>Year | Last 3<br>Years | Last 5<br>Years | Last 10<br>Years |
|---|-----------------|--------------|-----------------|-----------------|------------------|
| Fixed Income - Net                        | 6.92            | 8.92         | 5.39            | 4.69            | 4.38             |
| Fixed Income Target                       | 3.63            | 7.29         | 4.90            | 4.15            | 3.45             |
| Wellington - Net                          | 5.86            | 9.87         | 5.96            | 5.17            | 4.80             |
| Bloomberg Aggregate Index                 | 2.90            | 8.74         | 5.32            | 4.30            | 3.82             |
| Ranking vs. Core Plus Fixed Income        | 51              | 7            | 6               | 11              | 40               |
| Western Asset - Net                       | 9.60            | 7.86         | 5.30            | 4.69            | 4.77             |
| Bloomberg Intermediate Credit Index       | 6.67            | 6.97         | 4.88            | 4.18            | 4.18             |
| Ranking vs. Intermediate Fixed Income     | 1               | 12           | 2               | 1               | 1                |
| Colchester - Net                          | 5.53            | 3.66         | 3.36            | 3.29            |                  |
| FTSE World Government Bond Index          | 2.04            | 4.60         | 3.98            | 3.70            | 2.37             |
| Ranking vs. Global Fixed Income (Uhedged) | 43              | 57           | 61              | 58              |                  |

#### **Returns and Rankings for Calendar Years**

|   | 2 Qtrs. |      |        |      |      |        |
|---|---------|------|--------|------|------|--------|
|   | 2020    | 2019 | 2018   | 2017 | 2016 | 2015   |
| Fixed Income - Net                        | 6.50    | 8.65 | (0.35) | 5.14 | 4.26 | (0.89) |
| Fixed Income Target                       | 5.17    | 8.21 | (0.17) | 4.55 | 2.70 | (0.39) |
| Wellington - Net                          | 6.87    | 9.94 | (0.37) | 4.90 | 4.72 | 0.09   |
| Bloomberg Aggregate Index                 | 6.14    | 8.72 | 0.01   | 3.54 | 2.65 | 0.55   |
| Ranking vs. Core Plus Fixed Income        | 10      | 44   | 43     | 41   | 43   | 51     |
| Western Asset - Net                       | 5.35    | 9.78 | (0.37) | 4.12 | 4.89 | 0.95   |
| Bloomberg Intermediate Credit Index       | 4.16    | 9.52 | 0.01   | 3.67 | 3.68 | 0.90   |
| Ranking vs. Intermediate Fixed Income     | 42      | 1    | 99     | 2    | 1    | 59     |
| Colchester - Net                          | 1.48    | 7.56 | (0.90) | 8.20 | 3.87 | (5.95) |
| FTSE World Government Bond Index          | 4.08    | 5.90 | (0.84) | 7.49 | 1.60 | (3.57) |
| Ranking vs. Global Fixed Income (Uhedged) | 63      | 58   | 18     | 35   | 15   | 90     |

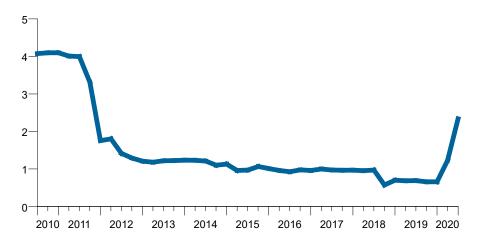
- The Fixed Income composite handily outperformed its target in the second quarter.
  - Wellington: overweights to mortgage backed securities, investment grade credit, bank loans and high yield all benefited performance.
  - Western Asset: in a reversal from the first quarter, the portfolio's overweight to low quality holdings and energy were the largest contributors to performance over the quarter.
  - Colchester: also in a reversal from the first quarter, currency exposure was the largest contributor particularly for oil producing countries such as the Norwegian Krone and Swedish Krona.

Fixed Income Target is comprised of 100% Bloomberg Aggregate Index until 03/31/2014 and 50% Bloomberg Aggregate Index, 25% Bloomberg Intermediate Credit Index, and 25% FTSE World Government Bond Index thereafter.

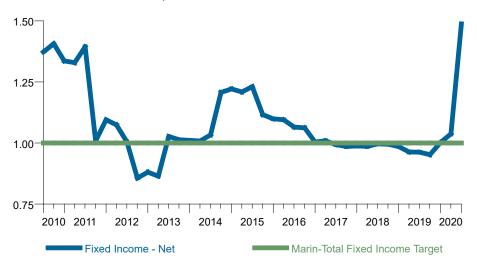


### **Fixed Income Composite**

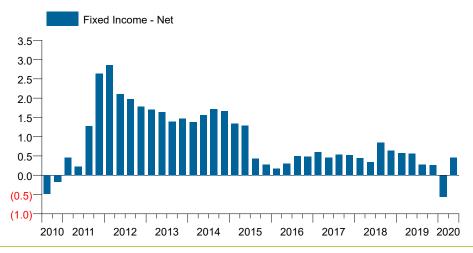
Rolling 3 Year Tracking Error vs. Fixed Income Target 10 Years Ended June 30, 2020



Rolling 3 Year Relative Standard Deviation vs. Fixed Income Target 10 Years ended June 30, 2020

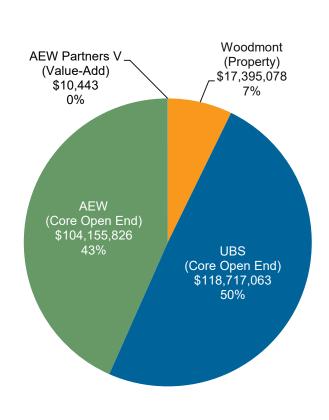


Rolling 3 Year Relative Returns vs. Fixed Income Target 10 Years ended June 30, 2020

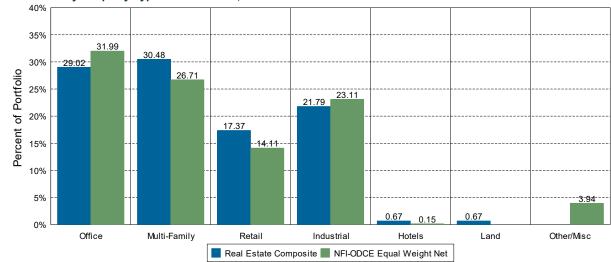




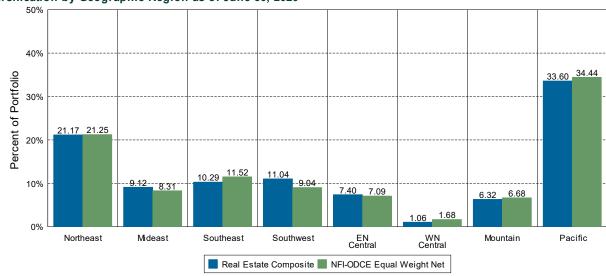
### **Real Estate Composite**



#### Diversification by Property Type as of June 30, 2020



#### Diversification by Geographic Region as of June 30, 2020





### **Real Estate Composite**

#### Returns and Rankings for Periods Ended June 30, 2020

|                                  | Last    |           | Last 3 | Last 5 | Last 10 |
|----------------------------------|---------|-----------|--------|--------|---------|
|                                  | Quarter | Last Year | Years  | Years  | Years   |
| Real Estate - Net                | (1.36)  | 0.03      | 2.98   | 6.51   | 10.54   |
| Real Estate Target               | (1.47)  | 1.70      | 5.09   | 6.72   | 9.82    |
| AEW Core Property Trust - Net    | (0.17)  | 1.23      | 4.76   | 6.31   |         |
| NFI-ODCE Equal Wt Net Index      | (1.47)  | 1.70      | 5.09   | 6.72   | 9.95    |
| Ranking vs. Core Open End Funds  | 35      | 81        | 74     | 68     |         |
| UBS Trumbull Property Fund - Net | (2.58)  | (1.80)    | 1.35   | 3.59   |         |
| NFI-ODCE Equal Wt Net Index      | (1.47)  | 1.70      | 5.09   | 6.72   | 9.95    |
| Ranking vs. Core Open End Funds  | 89      | 93        | 100    | 98     |         |

#### **Returns and Rankings for Calendar Years**

|                                  | 2 Qtrs.         |        |      |      |      |       |
|----------------------------------|-----------------|--------|------|------|------|-------|
|                                  | 2020            | 2019   | 2018 | 2017 | 2016 | 2015  |
| Real Estate - Net                | (1.29)          | 0.64   | 6.46 | 5.66 | 7.14 | 28.12 |
| Real Estate Target               | (0.77)          | 5.18   | 7.30 | 6.92 | 8.36 | 14.18 |
|                                  |                 |        |      |      |      |       |
| AEW Core Property Trust - Net    | (1.20)          | 5.29   | 6.77 | 6.99 | 7.51 | 12.71 |
| NFI-ODCE Equal Wt Net Index      | (0.77)          | 5.18   | 7.30 | 6.92 | 8.36 | 14.18 |
| Ranking vs. Core Open End Funds  | 72              | 71     | 75   | 46   | 82   | 78    |
| UBS Trumbull Property Fund - Net | (2.34)          | (2.88) | 6.12 | 5.32 | 6.16 | 11.79 |
| NFI-ODCE Equal Wt Net Index      | (2.37) $(0.77)$ | 5.18   | 7.30 | 6.92 | 8.36 | 14.18 |
| •                                | ( - /           |        |      |      |      |       |
| Ranking vs. Core Open End Funds  | 84              | 97     | 86   | 88   | 90   | 83    |

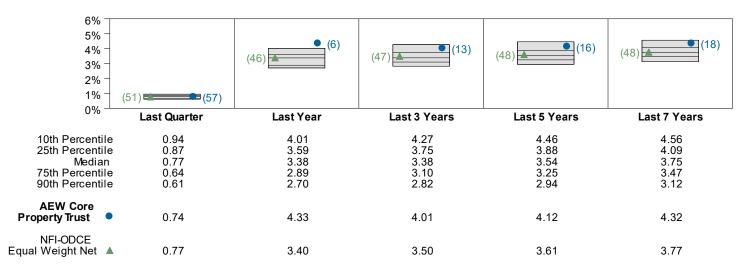
- The AEW Core Property Trust's current leverage is 25.3% (NFI-ODCE leverage: 22%) and has an occupancy rate of 95.2%.
  - The industrial sector continues to lead performance for AEW while the retail, multi-family, and office sectors posted a negative appreciation return in the second quarter.
- The UBS Trumbull Property Fund's current leverage is 18.2% and has an occupancy rate of 91.9%.
- UBS' performance this quarter was mainly impacted by negative appreciation for office, hotel, and retail assets.

The Real Estate Target is comprised of the NCREIF Classic Index through 12/31/2004, NCREIF Total Property Index through 12/31/2014, and the NFI-ODCE Equal Weight Net thereafter.

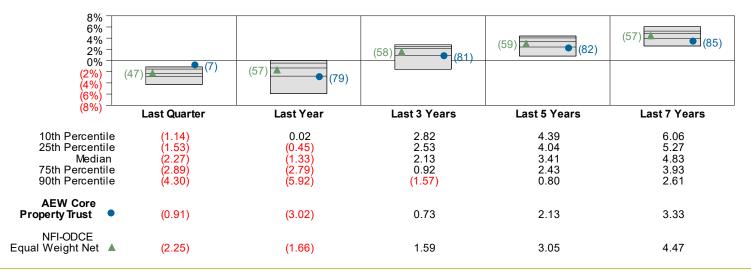


### **AEW Income and Appreciation Returns**

# Income Rankings vs Callan Real Estate ODCE Periods ended June 30, 2020



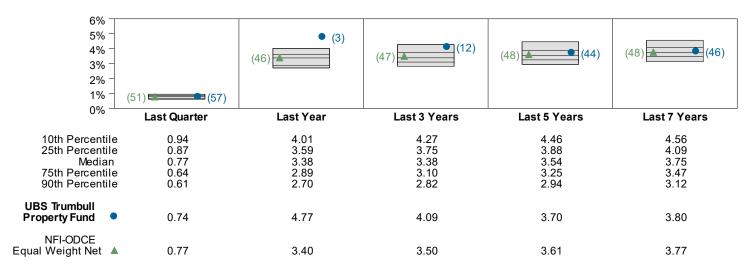
# Appreciation Rankings vs Callan Real Estate ODCE Periods ended June 30, 2020



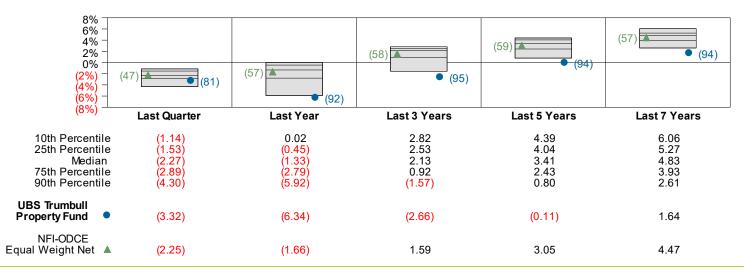


### **UBS Income and Appreciation Returns**

# Income Rankings vs Callan Real Estate ODCE Periods ended June 30, 2020

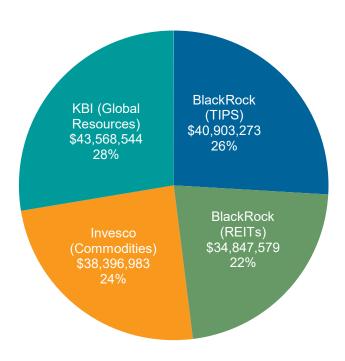


# Appreciation Rankings vs Callan Real Estate ODCE Periods ended June 30, 2020





### **Real Assets Composite**



- The BlackRock TIPS and REITs Funds are passive.
- The Invesco Balanced Risk Commodities Fund outperformed primarily due to its overweight in energy and allocations to precious metals.
- All three strategies within the KBI Global Resources Solutions Fund (energy solutions, water, and agribusiness) outperformed the S&P Global Natural Resources Index with the energy efficiency and renewable energy sub-segments contributing greatly to returns.

#### Returns and Rankings for Periods Ended June 30, 2020

|                                      | Last Quarter | Last Year | Last 3 Years | Last 4 Years |
|--------------------------------------|--------------|-----------|--------------|--------------|
| Real Assets - Net                    | 12.06        | (5.29)    | 1.14         | 0.86         |
| Real Assets Target                   | 9.65         | (10.20)   | (0.26)       | 0.06         |
| BlackRock TIPS Index Fund - Net      | 4.42         | 8.39      | 5.17         | 3.74         |
| Bloomberg US TIPS Index              | 4.24         | 8.28      | 5.05         | 3.60         |
| Ranking vs. Real Returns Database    | 53           | 13        | 12           | 1            |
| BlackRock REITs Index Fund - Net     | 9.13         | (17.69)   | (1.69)       | (1.74)       |
| S&P Dow Jones US Select REIT Index   | 9.11         | (17.71)   | (1.99)       | (2.10)       |
| MSCI US REIT Index                   | 11.70        | (12.87)   | 0.08         | (0.40)       |
| Ranking vs. Real Estate Mutual Funds | 89           | 97        | 89           | 93           |
| Invesco Commodities Fund - Net       | 12.77        | (14.04)   | (4.05)       | (5.36)       |
| Bloomberg Commodity Index            | 5.08         | (17.38)   | (6.14)       | (6.23)       |
| Ranking vs. Commodities Funds        | 48           | 1         | 33           | 35           |
| KBI Global Resources - Net           | 22.43        | (1.65)    | 2.86         | 5.23         |
| S&P Global Natural Resources Index   | 20.17        | (17.36)   | (0.75)       | 2.91         |
| KBI Custom Benchmark                 | 20.21        | 3.67      | 5.60         | 7.36         |

#### **Returns and Rankings Calendar Years**

|                                      | 2 Qtrs. 2020 | 2019  | 2018    | 2017  |
|--------------------------------------|--------------|-------|---------|-------|
| Real Assets - Net                    | (9.37)       | 15.51 | (7.97)  | 9.59  |
| Real Assets Target                   | (13.13)      | 14.08 | (7.27)  | 7.95  |
| BlackRock TIPS Index Fund - Net      | 6.10         | 8.49  | (1.15)  | 3.21  |
| Bloomberg US TIPS Index              | 6.01         | 8.43  | (1.26)  | 3.01  |
| Ranking vs. Real Returns Database    | 14           | 13    | 27      | 1     |
| BlackRock REITS Index Fund - Net     | (21.99)      | 23.08 | (4.22)  | 6.01  |
| S&P Dow Jones US Select REIT Index   | (22.01)      | 23.10 | (4.22)  | 3.76  |
| MSCI US REIT Index                   | (18.45)      | 25.84 | (4.57)  | 5.07  |
| Ranking vs. Real Estate Mutual Funds | 95           | 89    | 25      | 42    |
| Invesco Commodities Fund - Net       | (16.04)      | 5.49  | (11.61) | 5.35  |
| Bloomberg Commodity Index            | (19.40)      | 7.69  | (11.25) | 1.70  |
| Ranking vs. Commodities Funds        | 32           | 57    | 28      | 28    |
| KBI Global Resources - Net           | (8.61)       | 24.81 | (14.59) | 24.61 |
| S&P Global Natural Resources Index   | (19.47)      | 16.41 | (13.08) | 21.98 |
| KBI Custom Benchmark                 | (5.73)       | 28.74 | (13.77) | 21.96 |

The Real Assets Target is comprised of 25% Bloomberg US TIPS Index, 25% Bloomberg Commodity Index, 25% S&P Dow Jones US Select REIT Index, and 25% S&P Global Natural Resources Index. The KBI Custom Benchmark consists of 1/3 each: S-Network Global Water Index, Wilderhill New Energy Global Innovation Index, and Dax Global Agribusiness Index.



### **Private Equity Portfolio**

- 85% Paid-In through 3/31/20.
- When ranked against the Thomson-Cambridge Private Equity Database, MCERA is ranked in the second quartile for Total Value to Paid-In (TVPI) basis.
- The total portfolio is well diversified by vintage year and investment type.

|  | March 31, 2020        | Quarter<br>Change     | December 31, 2019     |
|--|-----------------------|-----------------------|-----------------------|
| Summary                                  |                       |                       |                       |
| Vintage Years                            | 13 in 2008-2020       |                       | 13 in 2008-2020       |
| # Total Partnerships                     | 358                   | 1                     | 357                   |
| # Active Partnerships                    | 355                   | 1                     | 354                   |
| # Liquidated Partnerships                | 3                     | -                     | 3                     |
| Changes in Value                         |                       |                       |                       |
| Capital Commitments                      | \$400,000,000         | -                     | \$400,000,000         |
| Paid-In Capital                          | \$341,520,282         | \$5,768,820           | \$335,751,462         |
| Uncalled Capital                         | \$58,539,067          | \$(5,768,820)         | \$64,307,887          |
| % Paid-In                                | 85.38%                | 1. <b>44</b> %        | 83.94%                |
| Distributed Capital                      | \$241,504,608         | \$6,558,171           | \$234,946,437         |
| Net Asset Value                          | \$265,943,305         | \$(26,675,303)        | \$292,618,608         |
| Total Realized and Unrealized Value      | <b>\$5</b> 07,447,913 | <b>\$(20,117,132)</b> | <b>\$</b> 527,565,045 |
| Ratios and Performance                   |                       |                       |                       |
| Distributions to Paid-In Capital (DPI)   | 0.71x                 | 0.01x                 | 0.70x                 |
| Residual Value to Paid-In Capital (RVPI) | 0.78x                 | (0.09)x               | 0.87x                 |
| Total Value to Paid-In Capital (TVPI)    | 1. <b>49</b> x        | (0.09)x               | 1.57x                 |
| Quartile Ranking                         | 2nd                   |                       | 2nd                   |
| Net IRR                                  | 11. <b>42</b> %       | (1.61%)               | 13.03%                |
| Additional Performance Metrics           |                       |                       |                       |
| Distribution Rate, as % of Beginning NAV |                       | 2.24%                 |                       |
| Unrealized Gain/(Loss), Dollars          |                       | \$(25,885,951)        |                       |
| Unrealized Gain/(Loss), %                |                       | (8.85%)               |                       |

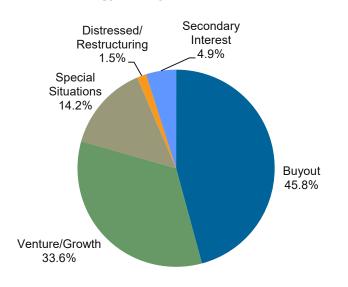
Quartile Rankings against the All Private Equity, All Regions Refinitiv/Cambridge Database.

Uncalled capital above does not reflect currency fluctuations for Pathway's investments in foreign partnerships.

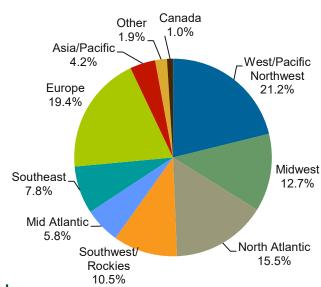


### **Private Equity Portfolio Exposure**

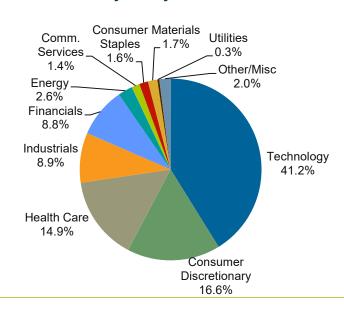
#### **Strategy Mix by Net Asset Value**



#### **Geographic Mix by Net Asset Value**

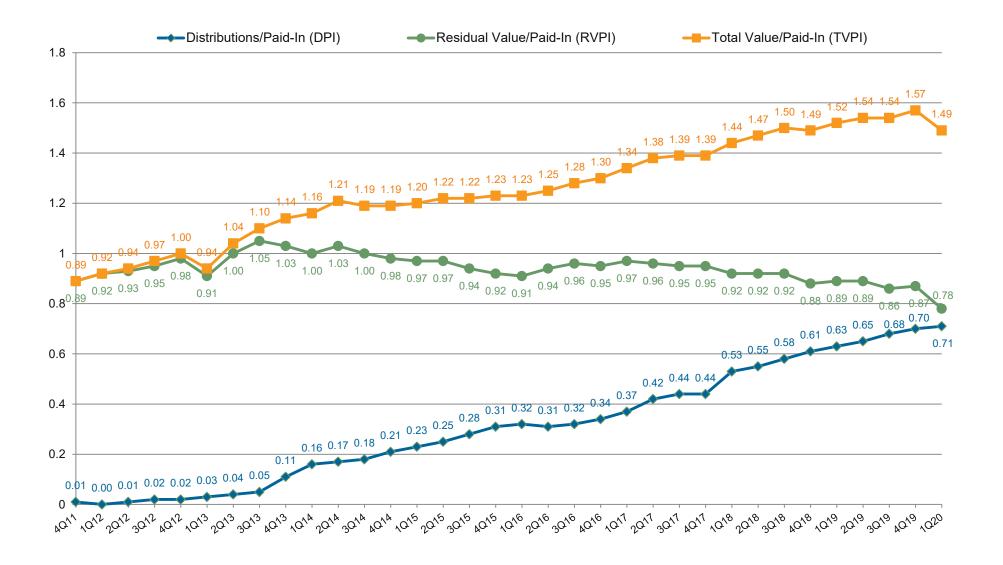


#### **Industry Mix by Net Asset Value**





### **Private Equity Ratios – Changes Over Time**





# Callan

**Appendix** 

#### SSGA S&P 500 Index Portfolio

Inception Date: 12/31/2010

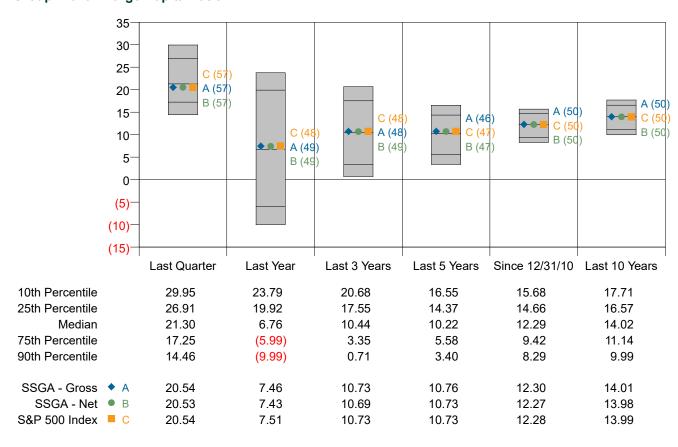
Strategy AUM: \$512.2B

Vehicle AUM: \$50.9B

Fee Schedule:

0.03% on all assets

Returns for Periods Ended June 30, 2020 Group: Callan Large Capitalization





## **DFA Small Cap Core Equity**

Inception Date: 12/31/2018

Strategy AUM: \$20.2B

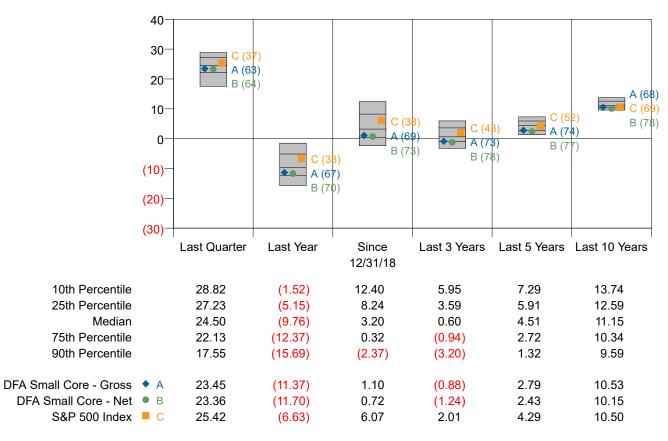
Vehicle AUM: \$1.8B

Fee Schedule:

0.33% on all assets

Returns for Periods Ended June 30, 2020

**Group: Callan Small Cap Core** 





## **Morgan Stanley International Value Equity**

Inception Date: 9/30/2001 Strategy AUM: \$10.4B

Vehicle AUM: \$2.0B

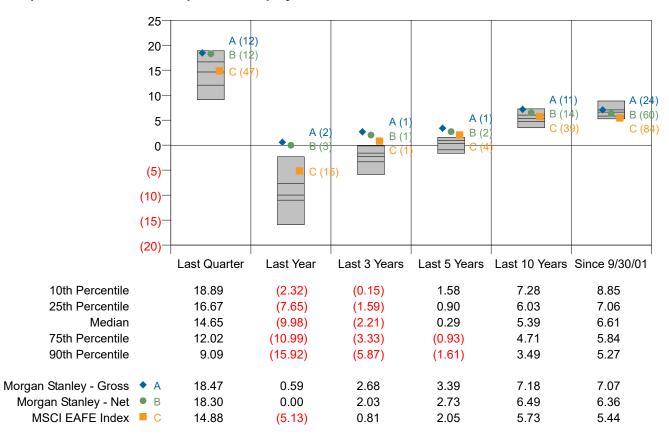
Fee Schedule:

0.75% on the first \$25 million0.65% on the next \$50 million

0.60% on the next \$25 million

0.45% on the balance

Returns for Periods Ended June 30, 2020 Group: Callan Non-US Developed Value Equity





## **Artisan International Growth Equity**

Inception Date: 12/31/2002

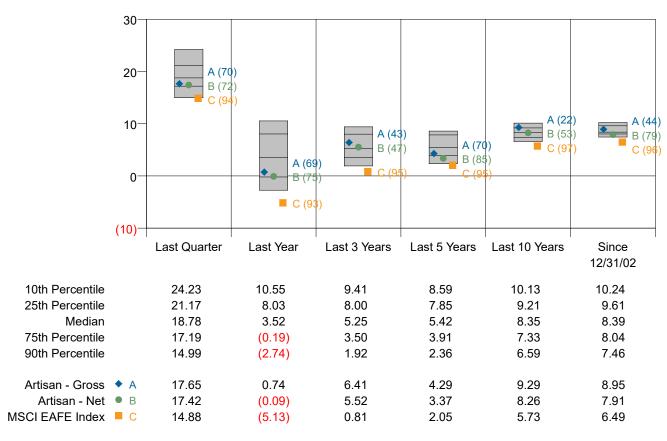
Strategy AUM: \$20.0B

Vehicle AUM: \$1.3B

Fee Schedule:

0.80% on all assets

Returns for Periods Ended June 30, 2020 Group: Callan Non-US Broad Growth Equity





## **TimesSquare International Small Cap Equity**

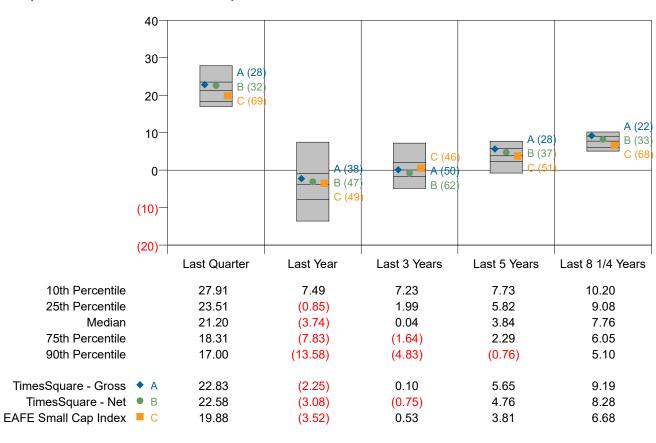
Inception Date: 3/31/2019

Strategy AUM: \$2.9B Vehicle AUM: \$170M

Fee Schedule:

0.85% on all assets

Returns for Periods Ended June 30, 2020 Group: Callan International Small Cap





## **Parametric Emerging Markets Equity**

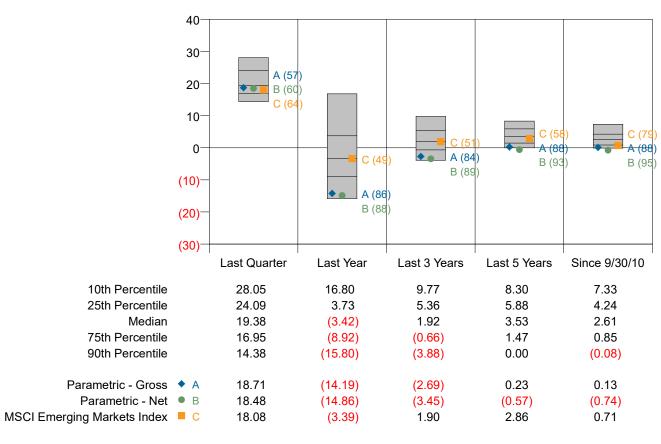
Inception Date: 9/30/2010

Strategy AUM: \$3.8B Vehicle AUM: \$948M

Fee Schedule:

0.78% on all assets

Returns for Periods Ended June 30, 2020 Group: Emerging Markets Equity DB





## **Wellington Core Plus Fixed Income**

Inception Date: 9/30/2002 (Core)
Inception Date: 3/31/2012 (Core Plus)

Strategy AUM: \$11.0B

Vehicle AUM: \$9.1B

Fee Schedule:

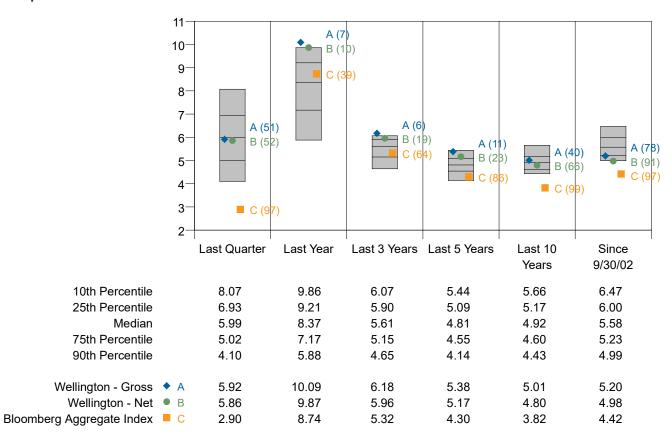
0.30% on the first \$25 million

0.25% on the next \$25 million

0.22% on the next \$50 million

0.15% on the balance

Returns for Periods Ended June 30, 2020 Group: Callan Core Plus Fixed Income





#### Western Asset Intermediate Credit Fixed Income

Inception Date: 9/30/2001 (Core Plus)

Inception Date: 3/31/2014 (Int. Credit)

Strategy AUM: \$19.7B

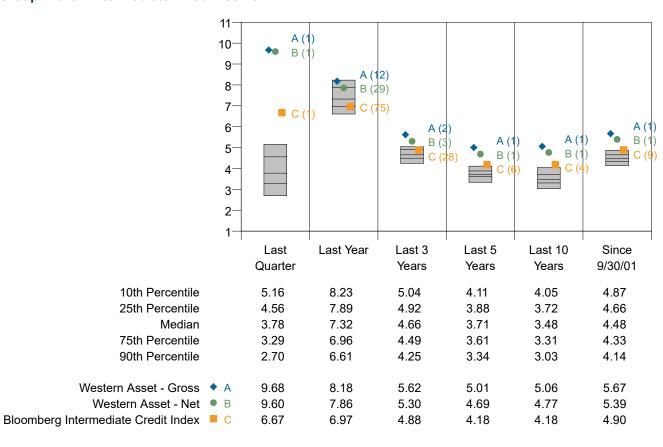
Vehicle AUM: \$17.1B

Fee Schedule:

0.30% on the first \$100 million

0.15% on the balance

Returns for Periods Ended June 30, 2020 Group: Callan Intermediate Fixed Income





#### **Colchester Global Fixed Income**

Inception Date: 3/31/2014

Strategy AUM: \$23.0B

Vehicle AUM: \$4.5B

Fee Schedule:

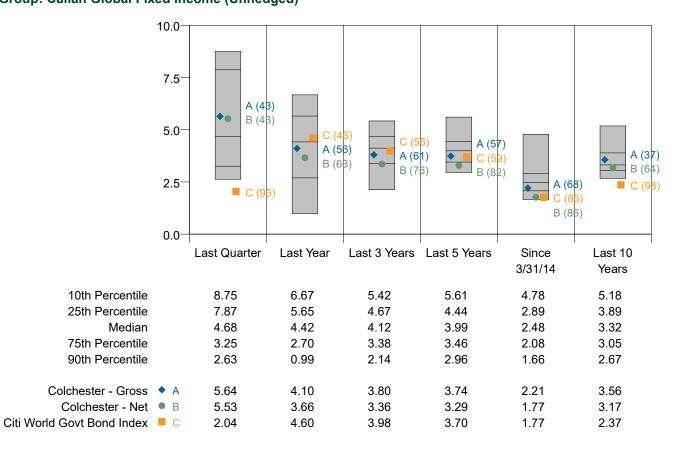
0.60% on the first \$25 million

0.50% on the next \$25 million

0.35% on the next \$100 million

0.30% on the balance

Returns for Periods Ended June 30, 2020 Group: Callan Global Fixed Income (Unhedged)





#### **UBS Trumbull Property Fund**

Inception Date: 3/31/2013

Fund NAV: \$15.1B

Fee Schedule:

0.955% on the first \$10 million

0.825% on the next \$15 million

0.805% on the next \$25 million

0.79% on the next \$50 million

0.67% on the next \$150 million

0.60% on the next \$150 million

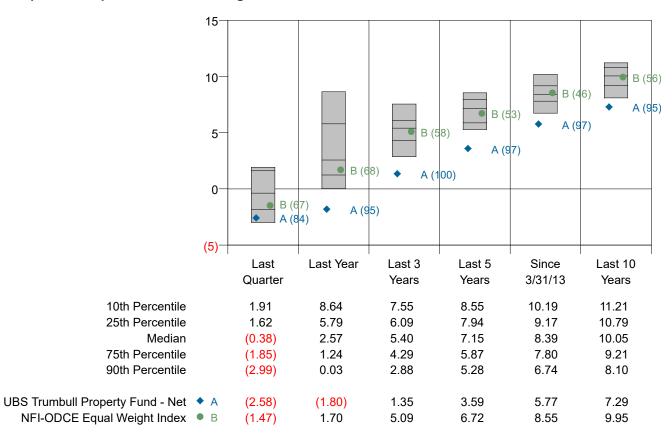
0.56% on the next \$200 million

0.52% on the balance

25% Loyalty Incentive Fee for 4 years Effective 1/1/20

Returns for Periods Ended June 30, 2020

**Group: Callan Open End Core Cmmingled Real Est** 





#### **AEW Core Property Trust**

Inception Date: 3/31/2013

Fund NAV: \$7.2B

Fee Schedule:

1.10% on the first \$10 million

1.00% on the next \$15 million

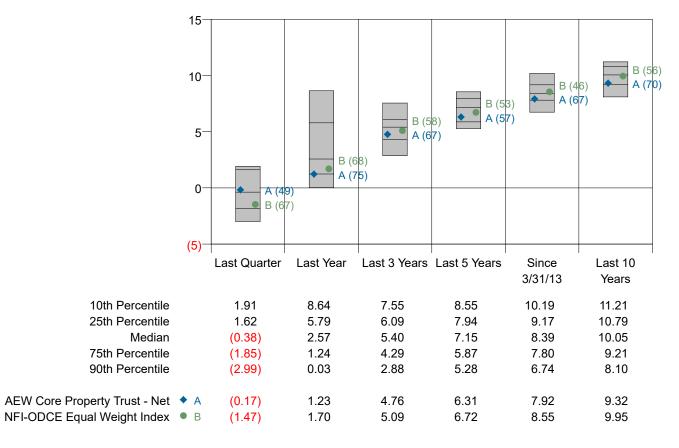
0.85% on the next \$25 million

0.80% on the next \$50 million

0.75% on the balance

Returns for Periods Ended June 30, 2020

**Group: Callan Open End Core Cmmingled Real Est** 





#### **BlackRock TIPS Index Fund**

Inception Date: 6/30/2015

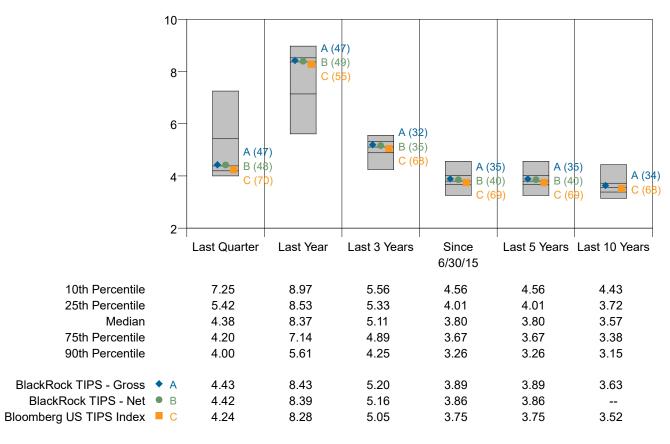
Strategy AUM: \$40.8B Vehicle AUM: \$11.9B

Fee Schedule:

0.03% on all assets

Returns for Periods Ended June 30, 2020

**Group: Real Returns Database** 





#### BlackRock REITs Index Fund

Inception Date: 9/30/2017

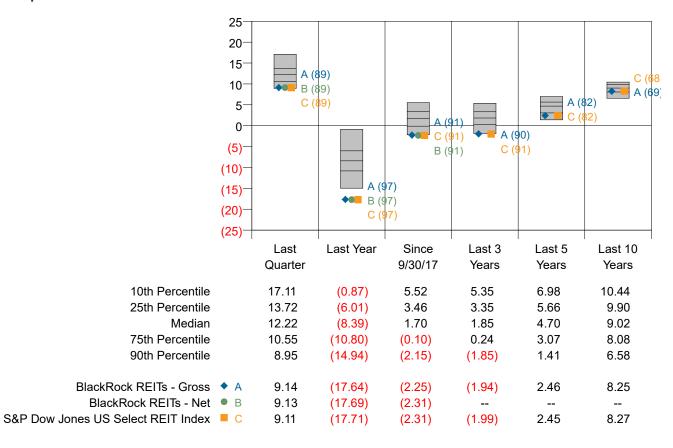
Strategy AUM: \$1.5M

Vehicle AUM: \$1.5M

Fee Schedule:

0.06% on all assets

Returns for Periods Ended June 30, 2020 Group: Callan Real Estate Mutual Funds





#### **Invesco Balanced Risk Commodities Fund**

Inception Date: 6/30/2016

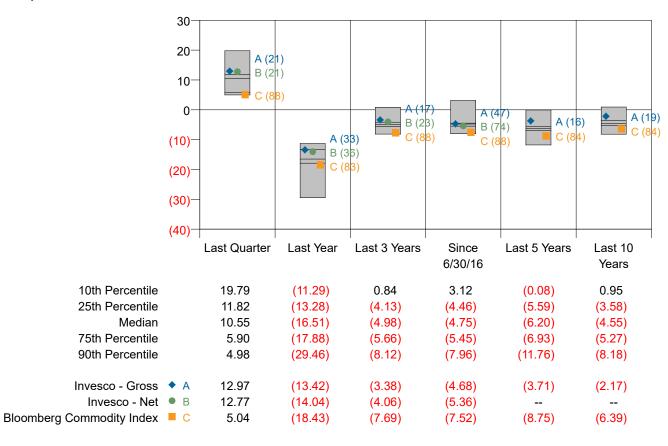
Strategy AUM: \$1.3B Vehicle AUM: \$0.4B

Fee Schedule:

0.70% on all assets

Returns for Periods Ended June 30, 2020

**Group: Callan Commodities** 





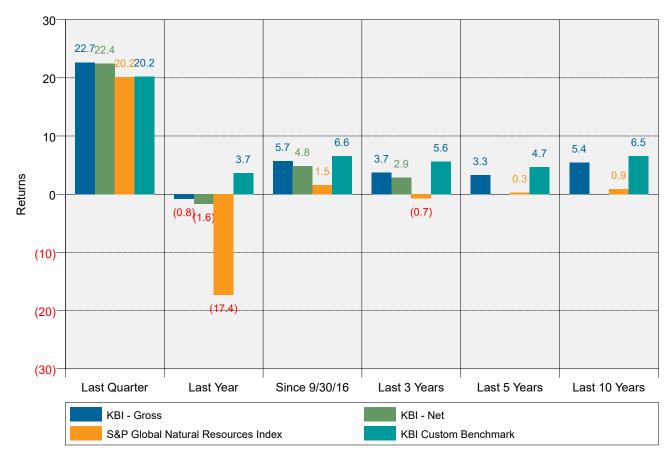
#### **KBI Global Resources Fund**

Inception Date: 9/30/2016 Strategy AUM: \$260.9M Vehicle AUM: \$65.3M

Fee Schedule:

0.85% on all assets

#### Returns for Periods Ended June 30, 2020







## Marin County Employees' Retirement Association Defined Benefit Plan

| Managers  | August Market<br>Value         | Fiscal Year<br>To Date<br>7/1/20 - 8/31/20 | Calendar Year<br>To Date<br>1/1/20 - 8/31/20 |
|---|--------------------------------|--|--|
| Domestic Equity Russell 3000 Index                            | \$826,818,763                  | <b>11.8%</b><br>13.3%                      | <b>4.1%</b><br>9.4%                          |
| Large Cap Equity SSgA S&P 500 Index Fund S&P 500 Index        | \$580,437,855<br>\$613,869,159 | 13.2%<br>13.2%<br>13.2%                    | 9.7%<br>9.7%<br>9.7%                         |
| Parametric S&P 500 Futures                                    | -\$33,431,304                  |  |  |
| Small Cap Equity Dimensional Fund Advisors Russell 2000 Index | \$246,380,908<br>\$226,189,068 | 8.2%<br>8.2%<br>8.6%                       | -10.2%<br>-10.2%<br>-5.5%                    |
| Parametric Russell 2000 Futures                               | \$20,191,840                   |  |  |
| International Equity  MSCI ACWI ex-US IMI Index               | \$597,669,027                  | <b>8.5%</b><br>9.3%                        | <b>-1.9%</b><br>-3.0%                        |
| Morgan Stanley Artisan Partners  MSCI EAFE Index              | \$176,944,037<br>\$201,525,141 | <b>5.4%</b><br><b>11.4%</b><br>7.6%        | -0.4%<br>2.8%<br>-4.6%                       |
| TimesSquare  MSCI EAFE Small Cap Index                        | \$110,103,259                  | <b>9.7%</b><br>11.1%                       | <b>-3.5%</b><br>-3.5%                        |
| Parametric Emerging Markets  MSCI Emerging Markets Index      | \$95,896,368                   | <b>7.3%</b><br>11.3%                       | <b>-11.3%</b> 0.5%                           |
| Parametric International Futures                              | \$13,200,223                   |  |  |
| Fixed Income Blended Benchmark                                | \$634,773,819                  | <b>2.4</b> % 1.5%                          | <b>7.6%</b> 6.7%                             |
| <b>Wellington</b> Bloomberg Barclays US Aggregate Index       | \$270,521,501                  | <b>1.3%</b><br>0.7%                        | <b>8.2%</b> 6.9%                             |
| Western Asset Bloomberg Barclays US Intermediate Credit Index | \$149,683,431                  | <b>1.8%</b><br>1.4%                        | <b>7.3%</b> 5.6%                             |
| Colchester FTSE World Government Bond Index                   | \$148,293,645                  | <b>5.2%</b><br>3.1%                        | <b>6.7%</b> 7.4%                             |
| Parametric Fixed Income Futures                               | \$66,275,242                   |  |  |

All market values and returns shown are preliminary and subject to revision.

## Callan

Preliminary Performance Summary (Net of Fees)

# Marin County Employees' Retirement Association Defined Benefit Plan

| Managers   | August Market<br>Value  | Fiscal Year<br>To Date<br>7/1/20 - 8/31/20 | Calendar Year<br>To Date<br>1/1/20 - 8/31/20 |
|--|---|--|--|
| Public Real Assets Blended Benchmark   | \$171,968,629   | <b>9.0%</b><br>7.0%                        | <b>-2.6%</b><br>-7.9%                        |
| BlackRock TIPS Index Fund Barclays US TIPS Index   | \$42,315,671  | <b>3.4%</b><br>3.4%                        | <b>9.8%</b> 9.6%                             |
| BlackRock REIT Index Fund DJ S&P US Select REIT Index  | \$36,262,176  | <b>4.1%</b><br>4.1%                        | <b>-18.8%</b><br>-18.8%                      |
| Invesco Balanced Risk Commodities Fund Bloomberg Commodities Index   | \$43,223,093  | <b>12.6%</b><br>12.9%                      | <b>-5.5%</b><br>-9.0%                        |
| KBI Global Resources Fund<br>S&P Global Natural Resources Index  | \$50,167,688  | <b>15.0%</b><br>7.5%                       | <b>5.1%</b> -13.5%                           |
| Real Estate(1) NFI-ODCE Equal Weight Net(1)  | \$240,278,410   | <b>-1.0%</b><br>-1.0%                      | <b>-1.8%</b><br>-1.8%                        |
| Woodmont UBS Trumbull Property Fund AEW Core Property Trust AEW Partners V, LP   | \$17,395,078<br>\$118,717,063<br>\$104,155,826<br>\$10,443  | -1.7%<br>-0.1%                             | -2.5%<br>-0.9%                               |
| Private Equity(2) Abbott ACE VI Abbott ACE VII ACE Fund 2016 Abbott Fund 2017 Pathway PPEF 2008 Pathway PPEF I-7 Pathway PPEF I-8 Pathway PPEF I-9 | \$266,604,280<br>\$52,372,892<br>\$35,875,318<br>\$34,070,052<br>\$7,013,951<br>\$54,600,710<br>\$34,787,722<br>\$41,492,087<br>\$6,391,548 | 0.0%<br>-<br>-<br>-<br>-<br>-<br>-         | -8.6%<br>-<br>-<br>-<br>-<br>-<br>-<br>-     |
| Total Fund   | \$2,738,112,927   | 6.5%                                       | 1.2%   |

<sup>(1)</sup>Market values as of June 30, 2020. YTD and FYTD returns use MCERA's pro-rata performance of prior quarter. (2)Market values as of June 30, 2020. YTD and FYTD returns use MCERA's pro-rata performance of prior quarter. All market values and returns shown are preliminary and subject to revision.