# Callan

March 31, 2020
Pennsylvania SERS

Investment Measurement Service
Quarterly Review

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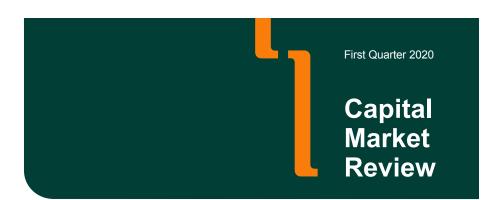
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# Pandemic Impact: What Happened?

**ECONOMY** 

The speed at which the response to the pandemic PAGE shut down the economy and affected the capital markets was unprecedented. We hit bear market territory for the U.S. stock market in 16 days. The sudden drop in economic activity matched the depth and speed of the market drop.

# Results Reflect Initial **Impact of COVID-19**

INSTITUTIONAL INVESTORS

All four primary types institutional inves-PAGE tors experienced sharp declines in the first quarter and smaller drops for the 12 months ending March 31. Over the last 20 years, all plan types have produced returns in a narrow range of 5.1%-5.3%.

# **Record Plunge Amid Extreme Volatility**

**EQUITY** 

U.S. equities experienced extreme vola-PAGE tility and near-record declines, in terms of speed. Large caps did relatively better; the Russell 2000 experienced its worst quarter ever. Growth continued to perform better vs. value across all market capitalizations.

# **Market Driven by Search for Safety**

FIXED INCOME

Treasuries rallied investors sought safety. PAGE The yield curve steepened as the Fed cut rates. Investment grade and high yield bonds saw record outflows. Global fixed income fell across the board, with the pain especially intense for emerging market debt.

# **Private RE Positive:** Real Assets Hammered

**REAL ESTATE/REAL ASSETS** 

Private real estate rose. due to income gains. PAGE Returns are expected to fall in 2Q20 and beyond. Global REITs underperformed equities and bonds. Infrastructure saw record fundraising. Almost all real assets saw GFC-level drops, especially energy-related sectors.

# **Activity Declines as Public Equity Drops**

PRIVATE EQUITY

The public equity market decline slowed every aspect of private equity transaction activity. Valuations are likely to decline when first quarter numbers become available in early July. But historically, private equity has proven resilient in weathering downturns.

# **Notable Losses Amid** Wider Market Plunge

HEDGE FUNDS/MACs

The Credit Suisse Hedge Fund Index lost 9.0% PAGE in the first quarter. The Callan Hedge Fund-of-Funds Peer Group slumped 8.1%, net of all fees and expenses. And representing 50 of the largest, broadly diversified hedge funds, the Callan Institutional Hedge Fund Peer Group fell 6.3%.

# **Index Posts Highest Return Since 2009**

**DEFINED CONTRIBUTION** 

gained 21.9% in 2019, PAGE while the Age 45 Target Date Fund rose 24.0%. TDFs saw the biggest inflows for the quarter, while U.S. large cap equity saw the largest outflows. The allocation to equity hit 70.2%, the highest since the third quarter of 2018.

The Callan DC Index

# **Broad Market Quarterly Returns**









Sources: Bloomberg Barclays, FTSE Russell, MSCI

# What Just Happened?

### **ECONOMY** | Jay Kloepfer

The unprecedented response to the COVID-19 pandemic touched every actor in the global economy: consumers, workers, businesses, shareholders and business owners, renters, property owners, nonprofits, and governments at every level. The worldwide lockdown hit travel, transportation, and retail first, and spending collapsed in March as shelter-in-place orders and steep job losses restricted expenditures. Tax revenues plunged across all levels of government while demand for (and supply of) certain services ballooned. The Federal Reserve and central banks around the globe stepped in at record speed to revive and expand many of the policies developed during the Global Financial Crisis, to provide liquidity and support for financial markets that were seizing up in uncertainty. Governments rushed to offer massive fiscal stimulus to backstop the economy.

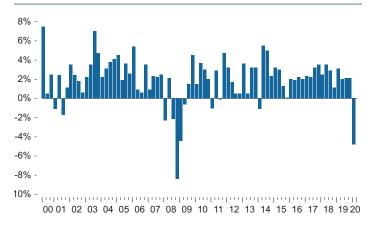
All these actions were taken to address the economic impact of the shutdown. However, these policies can only address the symptoms of the economic dislocation. At its core, this event is a global health crisis, and its resolution depends on the containment of the spread of the virus and a vaccine. The full return of the economy depends on the confidence that we are safe to resume jobs, travel, consumption, and daily interaction. Until then, the global economy will be hampered in ways we can only partly anticipate; the unmeasurable risk of the global health crisis will dominate for some time.

The speed with which the response to the pandemic shut down the economy and devastated confidence in the capital markets was remarkable. We hit bear market territory for the U.S. stock market—defined as a decline of 20%—in 16 days, the second-fastest drop in history (dating back to the Great Depression), only missing the record by a day. We hit a bottom on March 23, when the U.S. market was down almost 34%. Equity markets around the globe were down by at least the same amount.

The U.S. economy finished February in pretty good shape, trending to a GDP growth rate for the first quarter of just above 2% annualized, with unemployment at a generational low of

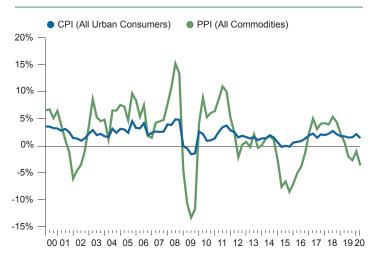
### **Quarterly Real GDP Growth**

(20 Years)



Source: Bureau of Economic Analysis

#### Inflation Year-Over-Year



Source: Bureau of Labor Statistics

3.5%. In a matter of weeks, as efforts to address the spread of the virus were enacted quickly, the sudden drop in economic activity matched the depth and speed of the stock market drop. The national emergency was declared March 13, most shelter-in-place orders came over the next couple of weeks, and the economic impact was sudden and severe.

Initial unemployment claims came in at 211,000 the first week of March, at trend for the year, and moved up to 282,000 in the second week, normally an alarming increase of 34%. However,

claims then shot up to 3.3 million the next week and doubled again to 6.9 million the following week. While my commentary is focused on the first quarter, it is important to note that through the fourth week of April, claims have reached almost 30 million in just six weeks. Economic activity hit a serious bump after March 13, with 21/2 weeks left in the quarter. The loss in this short period to GDP pulled growth from 2% as March began to a fall of 4.8% for the first quarter, a swing of almost 7% in less than three weeks. This was the largest quarterly decline since the fourth quarter of 2008.

As large and surprising as the first quarter drop may be, a much steeper plunge is in store for the U.S. and the rest of the global economy in the second quarter. Consensus projections are for second quarter GDP to fall by up to 35% (annual rate), and for consumption to fall by more than 40%. These numbers would be cartoonish, if they weren't so dire.

The pullback in business activity, employment, labor income, and subsequently in consumption is without modern parallel, and the usual measures of gauging economic activity must be viewed through a new lens to gain meaning. Percent changes in GDP around a cataclysmic event like this are difficult to grasp and not very helpful; a more useful approach will be to compare levels now and in the future versus pre-COVID. Percent change is more useful in describing an economy moving smoothly through normal cycles of expansion and recession.

On a hopeful note, in the words of Dr. Anthony Fauci, "this pandemic will be over, I promise." The monetary and fiscal response is massive and is keeping markets liquid. The S&P 500 was down 20% through March, but has retreated to a loss

### The Long-Term View

	2020	Р	eriods	Ended	3/31/20
Index	1st Qtr	Year			25 Yrs
U.S. Equity					
Russell 3000	-20.9	-9.1	5.8	10.1	8.8
S&P 500	-19.6	-7.0	6.7	10.5	8.9
Russell 2000	-30.6	-24.0	-0.2	6.9	7.6
Global ex-U.S. Equity					
MSCI EAFE	-22.8	-14.4	-0.6	2.7	4.0
MSCI ACWI ex USA	-23.4	-15.6	-0.6	2.1	
MSCI Emerging Markets	-23.6	-17.7	-0.4	0.7	
MSCI ACWI ex USA Small Cap	-29.0	-21.2	-0.8	2.8	4.6
Fixed Income					
Bloomberg Barclays Agg	3.1	8.9	3.4	3.9	5.5
90-Day T-Bill	0.6	2.3	1.2	0.6	2.4
Bloomberg Barclays Long G/C	6.2	19.3	6.0	8.1	7.9
Bloomberg Barclays GI Agg ex US	-2.7	0.7	2.0	1.4	3.8
Real Estate					
NCREIF Property	0.7	5.3	7.6	10.2	9.3
FTSE Nareit Equity	-27.3	-21.3	-0.3	7.4	9.2
Alternatives					
CS Hedge Fund	-9.0	-4.3	0.2	3.0	7.4
Cambridge PE*	5.7	16.6	12.8	13.7	15.3
Bloomberg Commodity	-23.3	-22.3	-7.8	-6.7	0.6
Gold Spot Price	4.8	23.0	6.2	3.7	5.8
Inflation – CPI-U	0.4	1.5	1.8	1.7	2.2

<sup>\*</sup>Data for most recent period lags by a quarter. Data as of Dec. 31, 2019. Sources: Bloomberg, Bloomberg Barclays, Bureau of Economic Analysis, Credit Suisse, FTSE Russell, MSCI, NCREIF, S&P Dow Jones Indices, Refinitiv/Cambridge

of 12% year-to-date through April, and the index is now at a level comparable to both September 2019 and one year ago. Finally, we will adapt and learn to live and work safely, just as we learned to fly safely after 9/11.

### **Recent Quarterly Economic Indicators**

	1Q20	4Q19	3Q19	2Q19	1Q19	4Q18	3Q18	2Q18
Employment Cost–Total Compensation Growth	2.8%	2.7%	2.8%	2.7%	2.8%	2.9%	2.8%	2.8%
Nonfarm Business–Productivity Growth	-2.5%	1.2%	-0.3%	2.6%	3.8%	0.5%	1.6%	2.0%
GDP Growth	-4.8%	2.1%	2.1%	2.0%	3.1%	1.1%	2.9%	3.5%
Manufacturing Capacity Utilization	73.5%	75.0%	75.4%	75.5%	76.4%	77.0%	76.9%	76.4%
Consumer Sentiment Index (1966=100)	96.4	97.2	93.8	98.4	94.5	98.2	98.1	98.3

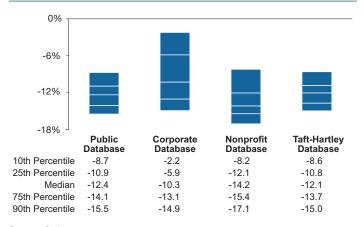
Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan

# **Results Reflect the Initial Impact of the Pandemic**

### **INSTITUTIONAL INVESTORS**

- All four primary types of institutional investors experienced sharp declines in the first quarter and smaller drops for the 12 months ending March 31. A quarterly rebalanced 60% S&P 500/40% Bloomberg Barclays Aggregate portfolio declined 10.9% during the quarter and 0.4% over the year. Equities, represented by the S&P 500 Index, experienced a much-sharper decline of 19.6%.
- Over the one-year period, corporate defined benefit (DB)
   plans showed the smallest decline, nonprofits the sharpest.
- Over longer time periods, corporate DB plans have been the best performers. But over the last 20 years, all plan types have produced returns in a narrow range of 5.1%-5.3%, in line with the performance of the blended equities/ fixed income benchmark.
- Entering the year, the primary fear for institutional investors was an equity market downturn. Those fears were of course realized.
- In the wake of the pandemic-induced bear market, investors are turning their attention to rebalancing their portfolios and managing liquidity needs.

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



Source: Callan

- Investors are also reevaluating the purpose and implementation of all diversifiers, including real assets, hedge funds and liquid alternatives, fixed income, and private assets.
- At this point, the depth and magnitude of the downturn and the recession remain unknown.

### Callan Database Median and Index Returns\* for Periods Ended 3/31/20

Database Group	Quarter	Year	3 Years	5 Years	10 Years	15 Years
Public Database	-12.35	-4.10	3.19	3.88	6.41	5.77
Corporate Database	-10.29	-0.77	4.24	4.29	6.88	6.08
Nonprofit Database	-14.17	-5.81	2.50	3.21	6.08	5.67
Taft-Hartley Database	-12.05	-4.07	3.36	4.23	6.83	5.68
All Institutional Investors	-12.53	-4.24	3.20	3.81	6.55	5.80
Large (>\$1 billion)	-10.98	-2.61	3.88	4.25	6.89	6.06
Medium (\$100mm - \$1bn)	-12.48	-4.31	3.31	3.94	6.52	5.77
Small (<\$100 million)	-13.48	-5.01	2.78	3.36	6.21	5.66

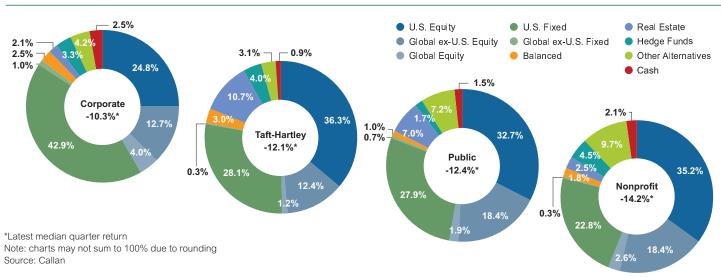
<sup>\*</sup>Returns less than one year are not annualized.

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)

- Our counsel to investors: stay the course, rebalance, manage liquidity, evaluate portfolio segments and strategies for impairment or unexpected performance, and watch for opportunities, both inside your portfolio and across the markets.
- Not surprisingly, the coronavirus pandemic and related market upheaval dominated the attention of investors:
  - Risk management and volatility were common concerns for all institutional investors.
  - Public DB plans: Rebalancing was a recurring theme, as was the related issue of liquidity. Across nearly all asset classes, plans showed limited interest in making changes to their strategic allocations.
  - Corporate DB plans: Many were trying to address the challenges caused by changes in their funded status. A large share of plans continued to implement the process of de-risking. The decline in rates since October 2018 demonstrated the benefit to de-risking with respect to matching interest rate risk. The plunge in rates through March 2020 obscures the impact of spread widening: the effect on funded status and LDI match is uncertain and variable.
- **DC plans**: Sponsors focused on communication to help participants affected by the economic shutdown. They were also trying to determine the effects of the SECURE and CARES Acts. Both make major changes to the regulatory environment for DC plans. While fees continued to be the top issue, concerns about plans' investment structures climbed. The active/passive debate continues, but it is more muted and likely to stay that way as plans focus on the impact of the coronavirus pandemic.
- Nonprofits: A key concern for some of these organizations was the impact of an economic slowdown on the organization: less tuition for colleges and fewer donations for churches. Nonprofits also had little interest in changing their strategic allocations, although there was interest in alternative beta/enhanced index products and unconstrained fixed income.
- Investors are already discussing opportunities in fixed income coming from the market dislocation and the policy response around the globe. The biggest question to answer: If opportunistic fixed income is to be pursued, from where do you fund it? Do you expect it to outperform equity? Do you risk up your fixed income in response to a zero interest rate policy that is back in place?

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



# **Equity**

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

During the 1st quarter of 2020, the COVID-19 pandemic coupled with an oil price war between Saudi Arabia and Russia spurred extreme global market volatility, which was further exacerbated by the realization that a shelter-in-place mandate was required to overcome the spread of the disease, subsequently inducing an all-but-certain global recession.

### Large cap ► Russell 2000: -30.6% | Russell 1000: -20.2%

- Cyclicals were punished while Technology, Staples, and Health Care were more resilient.
- Energy (-50.5%) plunged as demand declined and OPEC and Russia refused to cut production, driving down oil prices globally.
- Financials (-31.9%) and Industrials (-27.0%) fell sharply as interest rates were cut by the Fed in an emergency session, combined with expectations of a steep GDP decline because of COVID-19.
- Technology fared the best (-11.9%). The FAAMG stocks had an average return of -7.9% in 1Q, led by Amazon (+5.5%) and Microsoft (+0.3%); Health Care (-12.7%) and Consumer Staples (-12.7%) also held up better than the index average.

### Large cap outpaced small cap for the quarter

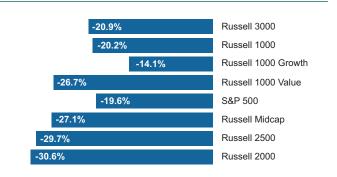
- The Russell 2000 (-30.6%) experienced its worst quarter on record.
- The perceived safety of larger companies combined with more acute exposure to COVID-19 impact (e.g., restaurants, hotels, airlines, REITs) drove the sell-off.

 The performance of the Russell 2000 Value (-35.7%) was driven by its exposure to Energy (especially exploration and production companies) and Financials (banks).

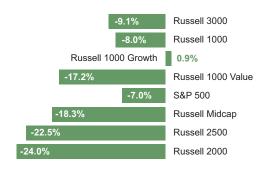
### Growth outpaces value across market capitalizations

- The spread between Russell 1000 Growth (-14.1%) and Russell 2000 Value (-35.7%) was one of the widest ever.
- Russell MidCap Value (-0.8%) and Russell 2000 Value (-2.4%) now have negative annualized returns over a trailing five-year time period.

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

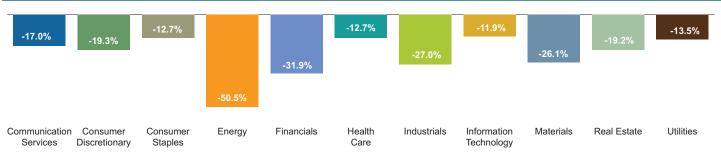


### U.S. Equity: One-Year Returns



Sources: FTSE Russell and S&P Dow Jones Indices

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



Source: S&P Dow Jones Indices

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

The COVID-19 pandemic coupled with the oil price war between Saudi Arabia and Russia injected significant volatility into the global equity markets, with most major indices entering bear market territory.

Global/Developed ex-U.S. ► MSCI EAFE: -22.8% | MSCI World ex USA: -23.3% | MSCI ACWI ex USA: -23.4% | MSCI Japan: -16.8% | MSCI Pacific ex Japan: -27.6%

- Fears of the pandemic and a global recession stoked the worst quarterly sell off since 2008 as economic activity halted worldwide.
- The oil price war further exacerbated the market meltdown, bidding up safe-haven assets and currencies.
- The U.S. dollar outperformed the euro, the British pound, and other major currencies, while underperforming the Swiss franc and Japanese yen.
- Every sector posted negative returns, led by cyclicals like travel-related industries, Energy, and Financials given the state of the economy and oil prices.
- Defensive sectors generally were under less pressure as demand for basic necessities to function (i.e., e-commerce and mobility) and combat the pandemic (i.e., diagnostics and treatment) helped stabilize Health Care, Consumer Staples, and Information Technology.
- Factor performance in developed ex-U.S. markets reflected risk aversion, including beta, size, and volatility.

### **Emerging Markets** ► *MSCI Emerging Markets Index: -23.6%*

- Decisive actions to contain the pandemic and stimulate the economy allowed China to outperform every developed and developing country.
- A looming global recession and the collapse in oil prices decimated commodities-levered economies like Brazil, South Africa, and Russia.
- Every sector posted negative returns, led by cyclicals such as travel-related industries, Energy, and Financials.
- Defensive sectors generally were under less pressure as demand for basic necessities and for diagnostics and treatment helped stabilize Health Care, Consumer Staples, and Information Technology.

# Global ex-U.S. Small Cap ► MSCI World ex USA Small Cap: -28.4% | MSCI EM Small Cap: -31.4%

- "Risk-off" market environment challenged small cap relative to large cap in both developed and emerging markets.
- Growth significantly outperformed value both within developed and emerging markets, supported by strong performance in Health Care, Consumer Staples, and Information Technology.

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

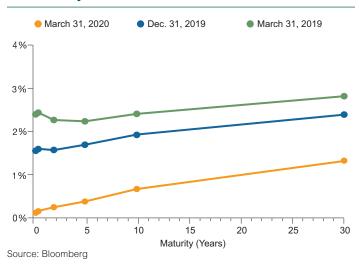
### Treasuries rallied as investors sought safety

- The 10-year U.S. Treasury yield reached a low in March of 0.31% before closing the quarter at 0.70%, down sharply from the 2019 year-end level of 1.92%.
- The Treasury yield curve steepened as the Fed cut rates to 0%-0.25%.
- TIPS underperformed nominal Treasuries as expectations for inflation sank. The 10-year breakeven spread ended the quarter at 87 basis points, down sharply from 177 bps at year-end.

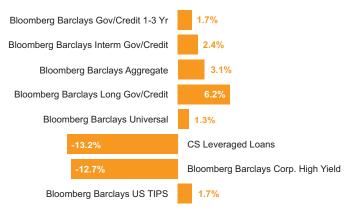
### Investors spurned credit risk

- Investment grade and high yield bond funds experienced record outflows as investors flocked to cash.
- Investment grade corporate spreads widened by 149 bps to 272 bps, representing the hardest hit sector in the Bloomberg Barclays US Aggregate Bond Index, particularly within Industrials, where several well-known issuers were downgraded to below investment grade, including Occidental Petroleum and Ford.
- The quality bias was evident as BBB-rated credit (-7.4%) underperformed single A or higher (+0.5%).
- CCC-rated high yield corporates (-20.6%) lagged BB-rated corporates (-10.2%).
- Energy (-38.9%) was the lowest-performing high yield bond sub-sector as oil prices collapsed.
- Most securitized sectors underperformed U.S. Treasuries.
- Bloomberg Barclays CMBS (+1.2%) and Bloomberg Barclays MBS (+2.8%) gained, while Bloomberg Barclays ABS declined (-0.2%).

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

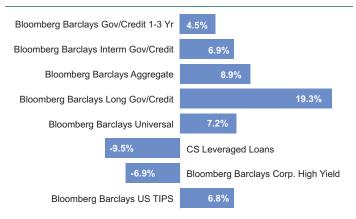


### **U.S. Fixed Income: Quarterly Returns**



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**

### Most indices fell by double digits

- Developed market sovereign bond yields ended the quarter slightly higher even as central banks stepped in to provide support to their economies; the European Central Bank launched a €750 billion stimulus program and the Bank of England cut interest rates.
- The U.S. dollar rose against the Australian dollar, British pound, and euro as investors sought safety within the greenback.

### EM debt plummeted in the risk-off environment

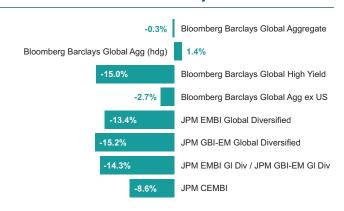
- Within the dollar-denominated benchmark, returns were mixed amongst its 60+ constituents.
- Within the local currency-denominated benchmark, several local market returns in Latin America dropped about 20% (Brazil, Mexico, and Colombia), and South Africa plunged 29% as oil-sensitive economies suffered from the fall in oil prices.

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



Source: Bloomberg Barclays

### Global ex-U.S. Fixed Income: Quarterly Returns



Sources: Bloomberg Barclays and JPMorgan Chase

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



Sources: Bloomberg Barclays and JPMorgan Chase

# Private RE Returns Positive, but Likely to Change; Real Assets Hammered

### REAL ESTATE/REAL ASSETS | Sally Haskins and David Welsch

### Private real estate results positive due to income

- Initial impact of pandemic reflected in 1Q20 results
- Positive return due to income
- Industrial real estate performed well.
- Retail depreciation accelerated this quarter.
- The dispersion of returns by manager within the NCREIF ODCE Index was due to the composition of underlying portfolios but also valuation methodologies and approaches.
- Negative returns expected for the second quarter and beyond.

### How the pandemic is affecting fundamentals

- Vacancy rates for all property types in the U.S. are or will be impacted.
- There has been limited change in net operating income, but the second quarter will show declines.
- April rent collections show malls severely impacted followed by other types of retail. Class A/B urban apartments are relatively strong, followed by certain types of industrial and office.
- Supply was in check prior to the pandemic.
- Construction is limited to finishing up existing projects but has been hampered by shelter-in-place orders and material shortages.
- New construction will be basically halted in future guarters except for pre-leased properties.
- Transaction volumes were healthy in the first part of the quarter, but dropped off at quarter end and ground to a halt thereafter, with deals being canceled even when there were material non-refundable deposits.
- Cap rates remained steady during the quarter. The spread between cap rates and 10-year Treasuries is relatively high, leading some market participants to speculate that cap rates will not adjust much. Price discovery is happening and there are limited transactions.
- Callan believes the pandemic may cause a permanent repricing of risk across property types. Property types with more reliable cash flows will experience less of a change in cap rates; however, those with less reliable cash flows will see greater adjustments.

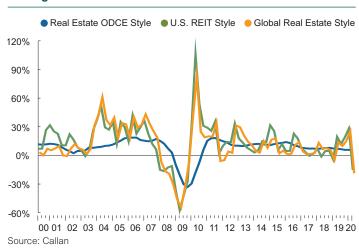
### Global REITs underperformed vs. equities and bonds

- Global REITs plunged 28.5% in 1Q20 compared to a 21% drop for global equities (MSCI World).
- U.S. REITs fell 27.3% in 1Q20, lagging the S&P 500 Index, which was off 19.6%.
- Globally REITs are trading at a significant discount to NAV; in most regions the discount is at a five-year low.
- All property types except for data centers, cell towers, and life science are trading at the bottom of their range.

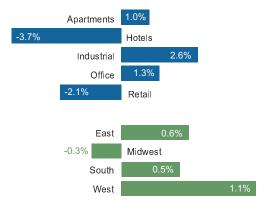
### Infrastructure sees near-record fundraising

1Q20 was the third-largest guarter for closed-end infrastructure fundraising. The closed-end fund market continues to expand, with infrastructure debt, emerging markets, and

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



### Sector Quarterly Returns by Property Type and Region



Source: NCREIF

### REAL ESTATE/REAL ASSETS (Continued)

sector-specific strategies (e.g., communications and renewables). Investor interest in mezzanine or debt-focused funds has increased.

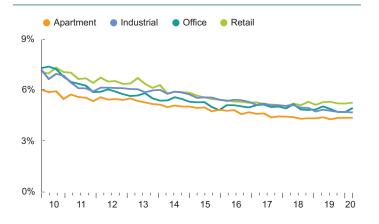
- Open-end funds raised significant capital in 2019, and the universe of investable funds continues to increase as the sector matures.
- In 2020 assets with guaranteed/contracted revenue or more inelastic demand patterns (e.g., renewables, telecoms, utilities) fared better than assets with GDP/demand-based revenue (e.g., airports, seaports, midstream-related).

### Real assets buffeted by COVID-19

- Real asset returns were significantly challenged during the first guarter of 2020 as almost the entire space (except gold

- and TIPS) experienced performance not seen since the Global Financial Crisis.
- The MLP space (Alerian MLP Index: -57%) and energyrelated stocks (S&P 1200 Energy Index: -44%) were among the worst hit as Russia and Saudi Arabia engaged in an oil price war smack in the middle of a global pandemic that was already poised to cripple near-term energy demand.
- One silver lining, pun intended, was gold, which served its usual safe-haven role during the depths of March and throughout the first quarter; the Bloomberg Gold sub-Index rose 4.5% in the first quarter while equities of most companies tasked with mining the shiny metal were not so fortunate (GDX-Van Eck Gold Miners ETF: -14.5%).

### **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 3/31/20

Private Real Assets	Quarter	Year to Date	Year	3 Years	5 Years	10 Years	15 Years
Real Estate ODCE Style	1.5	1.5	5.6	6.7	8.2	10.6	6.5
NFI-ODCE (value wt net)	0.8	0.8	3.9	5.9	7.5	10.4	6.5
NCREIF Property	0.7	0.7	5.3	6.4	7.6	10.2	8.1
NCREIF Farmland	-0.1	-0.1	2.6	5.2	6.3	10.7	13.1
NCREIF Timberland	0.1	0.1	1.3	2.5	2.8	4.5	6.4
Public Real Estate							
Global Real Estate Style	-25.2	-25.2	-18.7	-0.4	0.5	6.4	5.7
FTSE EPRA Nareit Developed	-28.5	-28.5	-24.0	-3.8	-2.1	4.4	
Global ex-U.S. Real Estate Style	-24.8	-24.8	-18.0	0.6	0.1	5.4	5.3
FTSE EPRA Nareit Dev ex US	-27.7	-27.7	-23.0	-2.1	-1.5	3.4	
U.S. REIT Style	-23.1	-23.1	-15.2	-0.4	1.4	8.6	7.2
EPRA Nareit Equity REITs	-27.3	-27.3	-21.3	-3.1	-0.3	7.4	6.2

\*Returns less than one year are not annualized.

Sources: Callan, FTSE Russell, NCREIF

# Over the Cliff

### PRIVATE EQUITY | Gary Robertson

The impact of the COVID-19 virus on the capital markets in late February has introduced a period of price uncertainty and a pull-back in lending. Transaction activity is expected to slow for the remainder of 2020. New fundraising is also being delayed. General partners are focused more on existing portfolio company health and less on starting new company platforms.

Fundraising 

Based on preliminary data, first quarter private equity partnerships holding final closes totaled \$119 billion, down 37% from the fourth quarter. New partnerships formed totaled 223, off 28%. Callan expects fundraising to continue to slow as 2020 progresses. (Unless otherwise noted, all data come from PitchBook.)

**Buyouts** New buyout transactions declined notably, albeit from strong levels. Funds closed 1,677 investments with \$103 billion in disclosed deal value, a 27% decline in count and a 41% dip in dollar value from the fourth quarter. The largest investment was the \$14.3 billion take-private of Zayo Group, a digital communications infrastructure and services provider, by Digital Colony and EQT, along with a consortium of co-investors.

VC Investments ► New investments in venture capital companies totaled 5,868 rounds of financing, down 16%, with \$64 billion of announced value, off just 2%. The largest investment

#### Funds Closed 1/1/2020 to 3/31/2020

Strategy	No. of Funds	Amt (\$mm)	Share
Venture Capital	119	30,155	25%
Growth Equity	20	14,289	12%
Buyouts	56	52,736	44%
Mezzanine Debt	1	434	0%
Distressed	0	0	0%
Energy	2	4,475	4%
Secondary and Other	14	8,053	7%
Fund-of-Funds	11	8,836	7%
Totals	223	118,978	100%

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

was a \$3 billion round in Gojek, a ride-hailing and personal courier company serving Southeast Asia.

**Exits** ► There were 422 private M&A exits of private equitybacked companies, a drop of 23%. Disclosed values plunged 69% to \$55 billion. There were 11 private equity-backed IPOs in the first quarter, down 67%, which raised an aggregate \$6 billion, lower by 14%.

Venture-backed M&A exits totaled 354 with disclosed value of \$23 billion. The number of sales declined 12% from the fourth quarter, and announced value was unchanged. There were 50 VC-backed IPOs, lower by 34%, and the combined float totaled \$6 billion, a drop of 14%.

### Private Equity Performance (%) (Pooled Horizon IRRs through 9/30/2019\*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years
All Venture	-0.37	13.01	14.56	14.39	14.83	11.41	11.02
Growth Equity	1.32	12.76	16.02	12.77	14.03	13.41	13.13
All Buyouts	1.43	8.85	15.32	12.83	14.59	13.65	12.04
Mezzanine	0.87	6.02	10.86	10.00	10.85	10.58	8.60
Credit Opportunities	-0.36	0.61	7.73	5.49	10.47	9.28	9.90
Control Distressed	1.05	4.38	8.86	7.83	11.17	10.52	10.58
All Private Equity	0.92	9.59	14.41	12.33	14.03	12.72	11.72
S&P 500	1.70	4.25	13.39	10.84	13.24	9.01	6.33
Russell 3000	1.16	2.92	12.83	10.44	13.08	9.10	6.72

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.

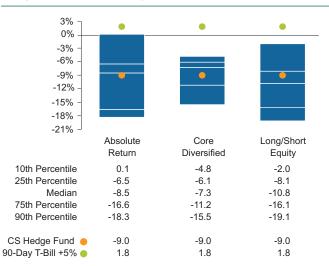
# **Breaking Bad**

### HEDGE FUNDS/MACs | Jim McKee

Crushing fragile hopes of continuing economic strength coming into 2020, the COVID-19 pandemic coupled with a sudden oil market collapse forced investors to recalibrate their measures of risk across all capital markets. As investors ran for safe havens, Treasuries soared while equities cratered.

Representing a paper portfolio of hedge fund interests without implementation costs, the Credit Suisse Hedge Fund Index (CS HFI) lost 9.0% in the first quarter. As a proxy for live hedge fund portfolios, the median manager in the Callan Hedge Fund-of-Funds Peer Group slumped 8.1%, net of all fees and expenses. Representing 50 of the largest, broadly diversified hedge funds with low-beta exposure to equity markets, the median manager in the Callan Institutional Hedge Fund Peer Group fell 6.3%.

### **Hedge Fund-of-Funds Style Group Returns**



Sources: Callan, Credit Suisse, and Federal Reserve

#### Callan Peer Group Median and Index Returns\* for Periods Ended 3/31/2020

Hedge Fund Universe	Quarter	Year	3 Years	5 Years	10 Years	15 Years
Callan Fund-of-Funds Peer Group	-8.1	-4.9	0.5	0.7	3.1	3.8
Callan Absolute Return FOF Style	-8.5	-6.7	0.1	0.8	3.1	3.3
Callan Core Diversified FOF Style	-7.3	-4.3	0.4	0.4	3.0	3.5
Callan Long/Short Equity FOF Style	-10.8	-6.5	0.4	0.8	3.6	4.6
Credit Suisse Hedge Fund	-9.0	-4.3	0.4	0.2	3.0	4.0
CS Convertible Arbitrage	-5.3	-1.3	0.9	2.4	3.2	3.7
CS Distressed	-10.8	-11.5	-2.2	-0.8	2.5	3.9
CS Emerging Markets	-10.5	-6.2	0.7	1.8	3.2	5.1
CS Equity Market Neutral	-5.3	-6.2	-1.0	-0.3	0.9	-1.1
CS Event-Driven Multi	-18.8	-14.9	-4.1	-3.4	0.6	3.1
CS Fixed Income Arb	-5.8	-2.2	1.7	2.5	4.4	3.3
CS Global Macro	-8.1	-1.1	1.1	0.6	3.6	5.4
CS Long/Short Equity	-11.2	-5.4	1.4	1.1	3.6	4.8
CS Managed Futures	0.0	5.7	2.0	-2.0	1.4	3.0
CS Multi-Strategy	-6.5	-2.6	1.0	2.2	5.0	5.2
CS Risk Arbitrage	-6.8	-4.1	0.8	1.8	1.9	3.2
HFRI Asset Wtd Composite	-10.0	-6.1	0.2	0.4	3.1	
90-Day T-Bill + 5%	1.8	7.3	6.8	6.2	5.6	6.4

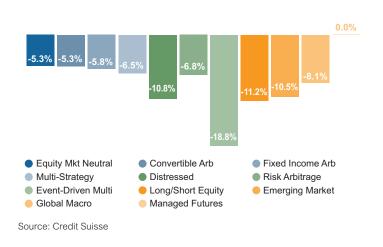
\*Net of fees. Sources: Callan, Credit Suisse, Hedge Fund Research

Within CS HFI, the worst-performing index was Event-Driven Multi-Strategy (-18.8%), reflecting its material exposure to soft deals particularly vulnerable to shifting market sentiments and crowded trades. The next group of poorly performing strategies included Long/Short Equity (-11.2%), Distressed (-10.8%), and Emerging Markets (-10.5%). Despite low net exposures, risk-on arbitrage strategies like Equity Market Neutral (-5.3%), Convertible Arbitrage (-5.3%), and Fixed-Income Arbitrage (-5.8%) suffered the next level of losses due to widened spreads from derisking or being net long with illiquidity. The best-performing strategy last quarter was Managed Futures (+0.0%).

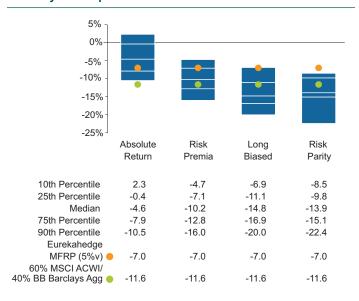
Within the Callan Hedge FOF Group, net exposures to illiquidity and equity-related risks primarily determined performance in the first quarter. The median Callan Long/Short Equity FOF dropped 10.8%, with its net equity exposure driving the loss. Similarly, the median Callan Absolute Return FOF sank 8.5%. The Core Diversified FOF (-7.3%) suffered the least of the FOF style groups.

Within Callan's database of liquid alternative solutions, the median managers of Callan Multi-Asset Class (MAC) style groups were all negative, gross of fees. The median Callan Risk Premia MAC dropped 10.2% as managers reduced gross exposures to their factors to keep within volatility targets. Targeting equal risk-weighted allocations to major asset classes with leverage, the Callan Risk Parity MAC fell 13.9%, trailing its 60% MSCI ACWI/40% Bloomberg Barclays US Aggregate Bond Index (-12.0%). Given a usually long equity bias within its dynamic asset allocation mandate, the Callan Long-Biased MAC (-14.8%) also trailed the 60%/40% benchmark. As the most conservative MAC style focused on nondirectional strategies of long and short asset class exposures, Callan Absolute Return MAC slipped 4.6%.

### Credit Suisse Hedge Fund Strategy Returns



### **MAC Style Group Returns**



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

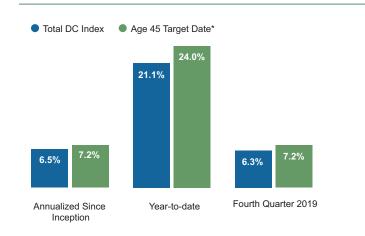
# **Index Posts Highest Return Since 2009**

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

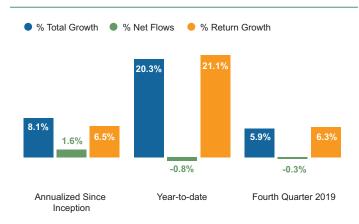
- The Callan DC Index™ rose 6.3% in the final quarter of 2019, the fourth consecutive quarter of gains, and jumped 21.1% for the year, the highest since 2009. The Age 45 Target Date Fund had a larger fourth-quarter (7.2%) and fullyear gain (24.0%).
- The Index's growth in balances in the fourth guarter (5.9%) marked the fourth straight quarter of growth. Investment returns (6.3%) drove the growth, while net flows (-0.3%) detracted.
- Target date funds (TDFs) experienced the largest inflows (53.8%). After garnering the most flows in the previous quarter, U.S. fixed income again saw significant inflows (36.5%). U.S. large cap equity (-38.5%) had the largest outflows.
- Fourth-quarter turnover (i.e., net transfer activity) increased to 0.38% from the previous quarter's 0.35%, well below the historical average (0.60%).
- The allocation to equity within the Index increased to 70.2%, the highest since the third quarter of 2018.
- The share of assets allocated to stable value decreased to 9.8%. The allocation to U.S. fixed income (6.1%) also fell despite positive flows; the asset class's relative underperformance was the primary driver of the decrease.
- TDFs experienced the largest increase in asset allocation (30.4%), due to large inflows and solid performance.
- The prevalence of real return/TIPS within DC plans increased by 3.4 percentage points from the previous guarter to 38.5%.
- The presence of company stock (21.5%) remains near historic lows. Brokerage window prevalence (41.4%) remains near all-time highs.
- For plans with more than \$1 billion in assets, the average asset-weighted fee decreased by 4 basis points to 0.29%. Plans with less than \$500 million in assets saw a fee decrease of 2 bps, while the fee for plans with assets between \$500 million and \$1 billion remained steady at 0.36%.

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 (Fourth Quarter 2019)**

(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	53.80%
U.S. Fixed Income	36.52%
U.S. Smid Cap	-18.02%
U.S. Large Cap	-38.48%
Total Turnover**	0.38%

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

Note: DC Index inception date is January 2006.

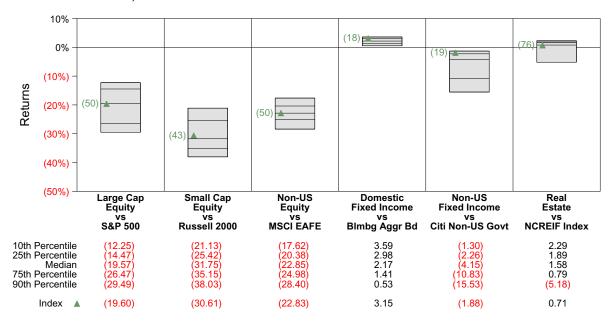
- $^{\ast}\,$  The Age 45 Fund transitioned from the average 2035 TDF to the 2040 TDF in June 2018.
- \*\* Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

# Market Overview Active Management vs Index Returns

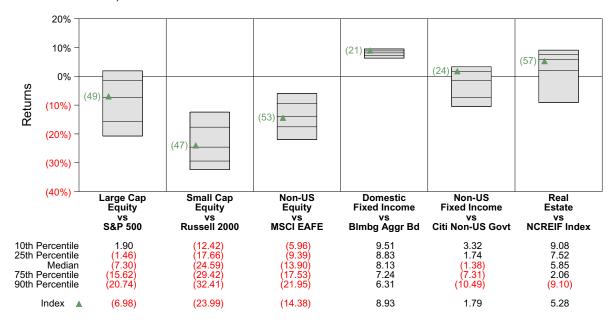
#### **Market Overview**

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 March 31, 2020



### Range of Separate Account Manager Returns by Asset Class One Year Ended March 31, 2020





### **ASSET ALLOCATION AND PERFORMANCE**

### **Asset Allocation and Performance**

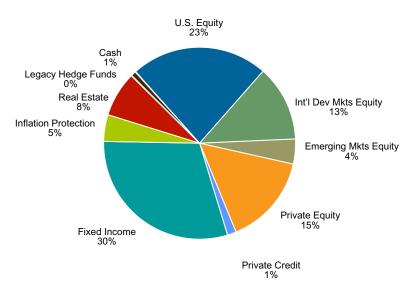
This section begins with an overview of the fund's asset allocation at the broad asset class level. This is followed by a top down performance attribution analysis which analyzes the fund's performance relative to the performance of the fund's policy target asset allocation. The fund's historical performance is then examined relative to funds with similar objectives. Performance of each asset class is then shown relative to the asset class performance of other funds. Finally, a summary is presented of the holdings of the fund's investment managers, and the returns of those managers over various recent periods.



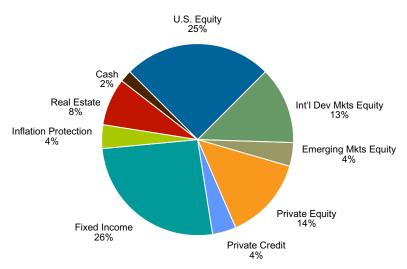
# **Actual vs Target Asset Allocation** As of March 31, 2020

The first chart below shows the Fund's asset allocation as of March 31, 2020. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

#### **Actual Asset Allocation**



## **Target Asset Allocation**

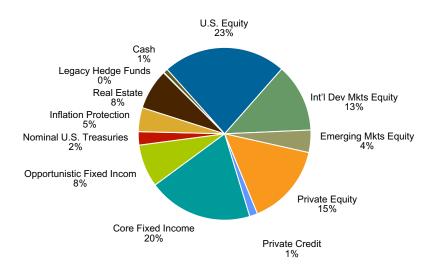


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
U.S. Equity	6,232,203	23.1%	25.0%	(1.9%)	(514,841)
Int'l Dev Mkts Equity	3,463,065	12.8%	13.0%	(0.2%)	(45,398)
Emerging Mkts Equity	1,124,214	4.2%	4.0%	0.2%	44,686
Private Equity	4,124,190	15.3%	14.0%	1.3%	345,845
Private Credit	403,189	1.5%	4.0%	(2.5%)	(676, 339)
Fixed Income	8,105,717	30.0%	26.0%	4.0%	1,088,790
Inflation Protection	1,226,904	4.5%	4.0%	0.5%	147,377
Real Estate	2,060,267	7.6%	8.0%	(0.4%)	(98,787)
Legacy Hedge Funds	30,415	0.1%	0.0%	0.1%	30,415
Cash	218,016	0.8%	2.0%	(1.2%)	(321,748)
Total	26.988.179	100.0%	100.0%		

# Actual Asset Allocation As of March 31, 2020

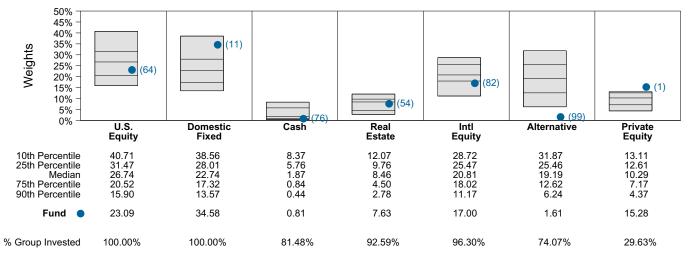
The first chart below shows the Fund's asset allocation as of March 31, 2020. The second chart ranks the fund's asset allocation versus the Callan Public Fund Spons- V Lg DB (>10B).

#### **Actual Asset Allocation**



Asset Class	\$000s Actual	Weight Actual
U.S. Equity	6,232,203	23.1%
Int'l Dev Mkts Equity	3,463,065	12.8%
Emerging Mkts Equity	1,124,214	4.2%
Private Equity	4,124,190	15.3%
Private Credit	403,189	1.5%
Core Fixed Income	5,282,773	19.6%
Opportunistic Fixed Incom	2,153,821	8.0%
Nominal U.S. Treasuries	667,348	2.5%
Inflation Protection	1,226,904	4.5%
Real Estate	2,060,267	7.6%
Legacy Hedge Funds	30,415	0.1%
Cash	218,016	0.8%
Total	26,986,405	100.0%

### Asset Class Weights vs Callan Public Fund Spons- V Lg DB (>10B)



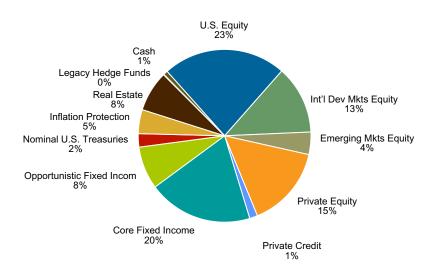
\*Excludes transition accounts



# Actual Asset Allocation As of March 31, 2020

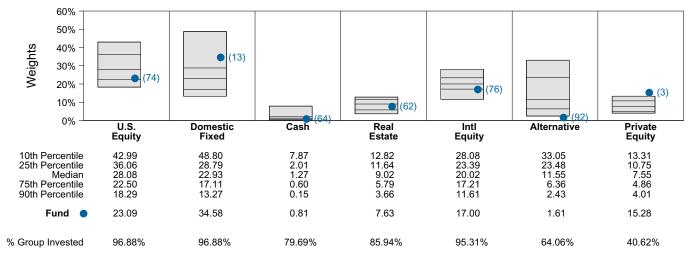
The first chart below shows the Fund's asset allocation as of March 31, 2020. The second chart ranks the fund's asset allocation versus the Callan Public Fund Spons - Large (>1B).

#### **Actual Asset Allocation**



Asset Class	\$000s Actual	Weight Actual
U.S. Equity	6,232,203	23.1%
Int'l Dev Mkts Equity	3,463,065	12.8%
Emerging Mkts Equity	1,124,214	4.2%
Private Equity	4,124,190	15.3%
Private Credit	403,189	1.5%
Core Fixed Income	5,282,773	19.6%
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Real Estate	2,060,267	7.6%
Legacy Hedge Funds	30,415	0.1%
Cash	218,016	0.8%
Total	26,986,405	100.0%

## Asset Class Weights vs Callan Public Fund Spons - Large (>1B)



\*Excludes transition accounts



### **Quarterly Total Fund Absolute Attribution - March 31, 2020**

0%

5%

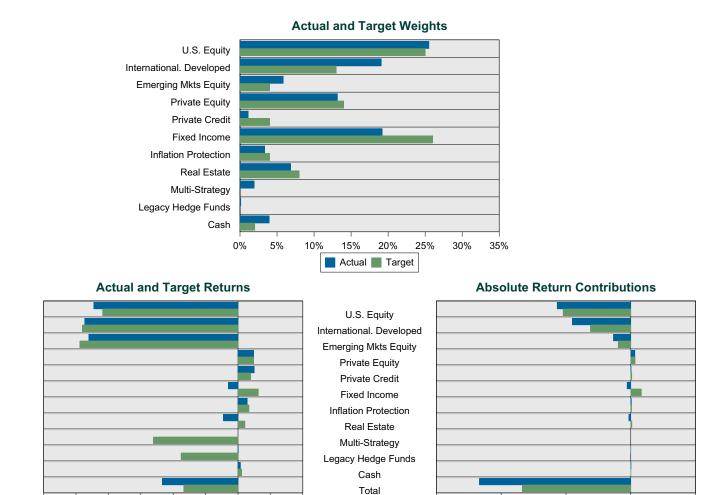
Total Fund Return (11.69%)

10%

(30%) (25%) (20%) (15%) (10%) (5%)

Actual Target

The following analysis approaches Total Fund Attribution from the perspective of Absolute Return Contribution. Absolute return attribution quantifies the contribution of each asset class to total fund absolute performance as well as target performance. Absolute return contribution is a function of both the size of the exposure (\$ weight) to each asset class as well as the actual return of each asset class.



### Absolute Attribution Effects for Quarter ended March 31, 2020

(15%)

(10%)

**Target Return** 

(5%)

Actual Target

(8.38%)

	Effective Actual Weight	Actual Return	Absolute Return Contribution	Effective Target Weight	Target Return	Target Return Contribution	Return Contribution Difference
U.S. Equity	26%	(22.27%)	(5.68%)	25%	(20.90%)	(5.22%)	(0.46%)
International. Developed	19%	(23.66%)	(4.51%)	13%	(24.00%)	(3.12%)	(1.39%)
Emerging Mkts Equity	6%	(23.00%)	(1.35%)	4%	(24.40%)	(0.98%)	(0.37%)
Private Equity	13%	2.40%	0.32%	14%	2.40%	`0.34%´	(0.02%)
Private Credit	1%	2.47%	0.03%	4%	1.97%	0.08%	(0.05%)
Fixed Income	19%	(1.49%)	(0.29%)	26%	3.15%	0.82%	(1.10%)
Inflation Protection	3%	`1.43%´	0.05%	4%	1.69%	0.07%	(0.02%)
Real Estate	7%	(2.26%)	(0.15%)	8%	1.08%	0.09%	(0.24%)
Multi-Strategy	2%	`0.00%	`0.00%	0%	(13.05%)	0.00%	`0.00%
Legacy Hedge Funds	0%	0.05%	0.00%	0%	`(8.79%)	0.00%	0.00%
Cash	4%	0.38%	0.02%	2%	0.57%	0.01%	0.00%

<sup>\*</sup> Current Quarter Target = 26.0% Blmbg Aggregate, 25.0% Russell 3000 Index, 14.0% Private Equity, 13.0% MSCI World ex US IMI, 7.2% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 4.0% MSCI EM IMI, 4.0% Blmbg:TIPS, 4.0% S&P:LSTA Lev Loan lagged 3 months+1.0%, 2.0% 3-month Treasury Bill, 0.8% FTSE EP/NA US Index lagged 3 months, 0.0% HFRI Fund of Funds Compos and 0.0% S&P:LSTA Lev Loan.



(3.31%)

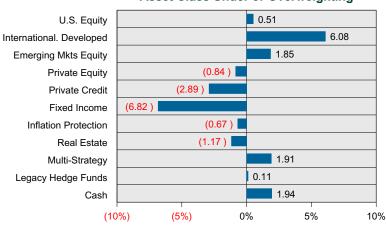
0%

5%

### Quarterly Total Fund Relative Attribution - March 31, 2020

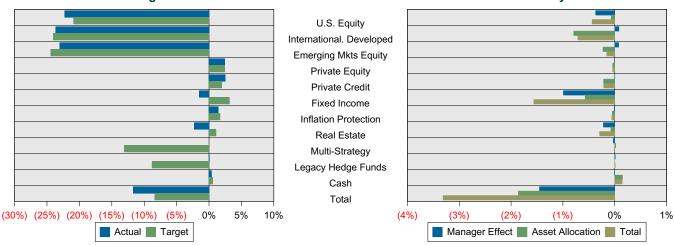
The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation 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**

# **Relative Attribution by Asset Class**



#### Relative Attribution Effects for Quarter ended March 31, 2020

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
U.S. Equity	26%	25%	(22.27%)	(20.90%)	(0.37%)	(0.07%)	(0.44%)
International, Developed	19%	13%	(23.66%)	(24.00%)	0.08%	(0.79%)	(0.71%)
Emerging Mkts Equity	6%	4%	(23.00%)	(24.40%)	0.08%	(0.23%)	(0.15%)
Private Equity	13%	14%	2.40%	2.40%	0.00%	(0.04%)	(0.04%)
Private Credit	1%	4%	2.47%	1.97%	0.00%	(0.22%)	(0.21%)
Fixed Income	19%	26%	(1.49%)	3.15%	(0.99%)	(0.57%)	(1.56%)
Inflation Protection	3%	4%	1.43%	1.69%	(0.01%)	(0.05%)	(0.06%)
Real Estate	7%	8%	(2.26%)	1.08%	(0.22%)	(0.07%)	(0.29%)
Multi-Strategy	2%	0%	0.00%	(13.05%)	(0.03%)	0.02%	(0.01%)
Legacy Hedge Funds	0%	0%	0.05%	(8.79%)	0.01%	0.00%	0.01%
Cash	4%	2%	0.38%	0.57%	(0.01%)	0.15%	0.14%
Total			(11.69%) =	(8.38%) +	(1.45%) +	(1.86%)	(3.31%)

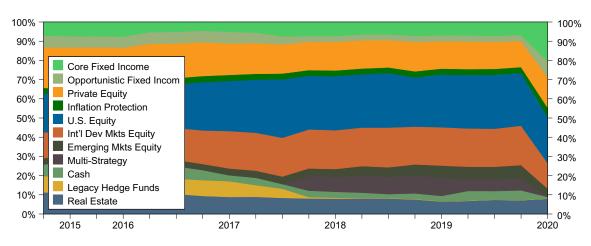
<sup>\*</sup> Current Quarter Target = 26.0% Blmbg Aggregate, 25.0% Russell 3000 Index, 14.0% Private Equity, 13.0% MSCI World ex US IMI, 7.2% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 4.0% MSCI EM IMI, 4.0% Blmbg:TIPS, 4.0% S&P:LSTA Lev Loan lagged 3 months+1.0%, 2.0% 3-month Treasury Bill, 0.8% FTSE EP/NA US Index lagged 3 months, 0.0% HFRI Fund of Funds Compos and 0.0% S&P:LSTA Lev Loan.



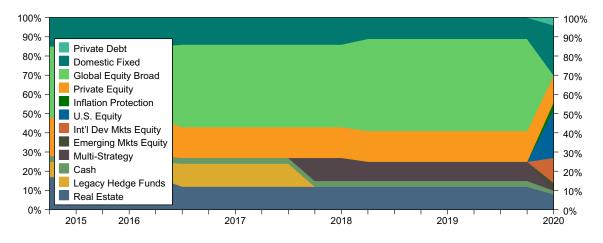
## **Actual vs Target Historical Asset Allocation**

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- V Lg DB (>10B).

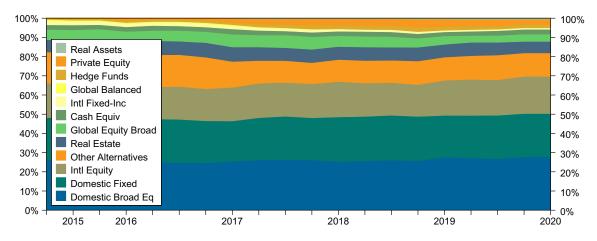
### **Actual Historical Asset Allocation**



### **Target Historical Asset Allocation**



# Average Callan Public Fund Spons- V Lg DB (>10B) Historical Asset Allocation



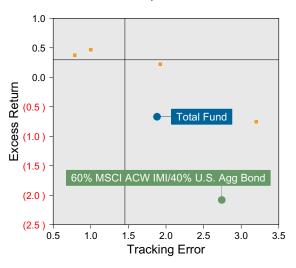


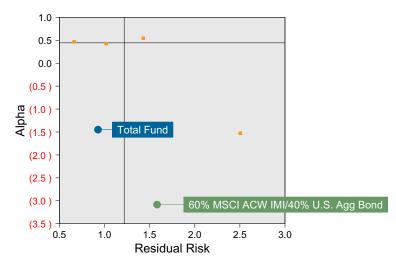
# Total Fund Total Fund vs Target Risk Analysis

#### **Risk Analysis**

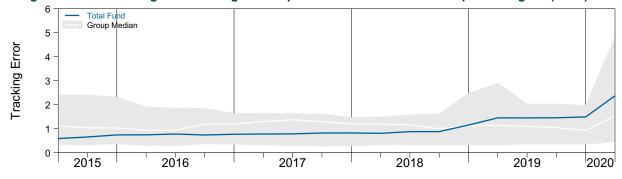
The graphs below analyze the performance and risk of the fund relative to the appropriate target mix. This relative performance is compared to a peer group of funds wherein each member fund is measured against its own target mix. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the target. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns over time compared to the range of tracking error patterns for the peer group. The last two charts show the ranking of the fund's risk statistics versus the peer group.

# Risk Analysis vs Callan Public Fund Spons- V Lg DB (>10B) Five Years Ended March 31, 2020

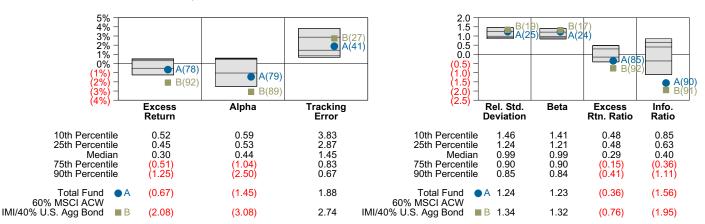




### Rolling 12 Quarter Tracking Error vs Targets Compared to Callan Public Fund Spons- V Lg DB (>10B)



Risk Statistics Rankings vs Targets Rankings Against Callan Public Fund Spons- V Lg DB (>10B) Five Years Ended March 31, 2020

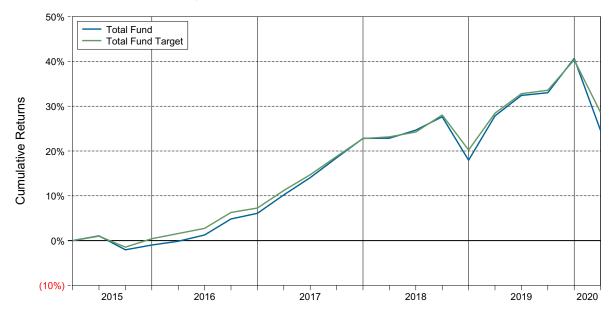




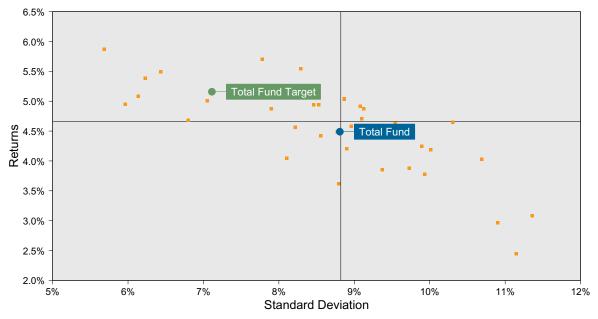
## **Cumulative Performance Relative to Target**

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- V Lg DB (>10B).

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



### Five Year Annualized Risk vs Return

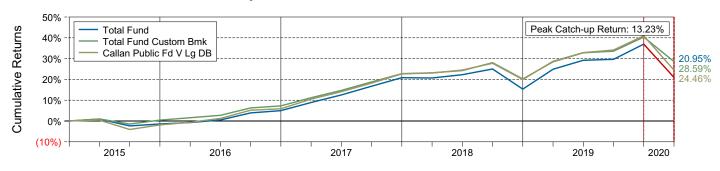


Squares represent membership of the Callan Public Fund Spons- V Lg DB (>10B)

# Total Fund Drawdown Analysis for Five Years Ended March 31, 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**

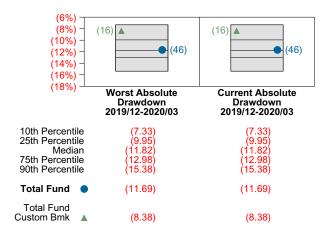


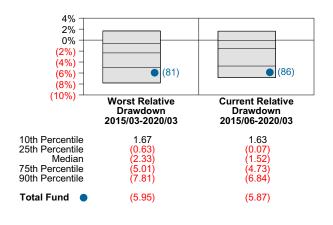
	worst Absolute Drawdown					Current Absolute Drawdown					
	Return	Years	Period	Index	Peers	Return	Years	Period	Index	Peers	
Total Fund	(11.69)%	0.25	2019/12-2020/03	(8.38)%	(11.70)%	(11.69)%	0.25	2019/12-2020/03	(8.38)%	(11.70)%	
Recovery from Trough	-	-	-	-	-	-	-	-	-	-	
Total Fund Custom Bmk	(8.38)%	0.25	2019/12-2020/03			(8.38)%	0.25	2019/12-2020/03			
Callan Public Fd V Lg DB	(11.70)%	0.25	2019/12-2020/03			(11.70)%	0.25	2019/12-2020/03			

#### Relative Cumulative Drawdown Analysis vs. Total Fund Custom Bmk **Cumulative Relative Returns** Peak Catch-up Rel Rtn: 6.24% Total Fund Callan Public Fd V Lg DB (1%)(2%)(3%)(3.21%)(4%)(5%) (6%) (5.95%)(7%)2015 2016 2017 2018 2019 2020

	Worst Relative Drawdown				Current Relative Drawdown			
	Rel Rtn	Years	Period	Peers	Rel Rtn	Years	Period	Peers
Total Fund	(5.95)%	5.00	2015/03-2020/03	(3.21)%	(5.87)%	4.75	2015/06-2020/03	(2.67)%
Recovery from Trough	-	-	-	-	-	-	-	-
Callan Public Fd V Lg DB	(3.63)%	0.25	2019/12-2020/03		(3.63)%	0.25	2019/12-2020/03	

Drawdown Rankings vs. Total Fund Custom Bmk Rankings against Callan Public Fund Spons- V Lg DB (>10B) Five Years Ended March 31, 2020





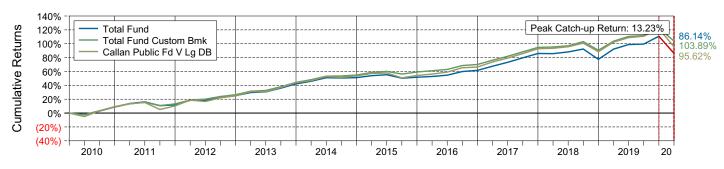


### **Total Fund**

### Drawdown Analysis for Ten Years Ended March 31, 2020

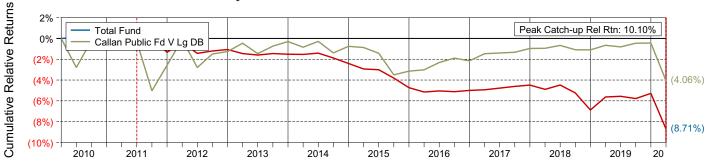
The following analysis focuses on downside risk by looking at cumulative drawdowns experienced from peak-to-trough for the portfolio, index, and peer group. Drawdown is measured from the "high-water mark" of cumulative return to the subsequent "trough". The first chart illustrates the Worst Absolute 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**



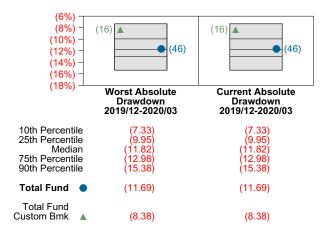
	Worst Absolute Drawdown					Current Absolute Drawdown					
	Return	Years	Period	Index	Peers	Return	Years	Period	Index	Peers	
Total Fund	(11.69)%	0.25	2019/12-2020/03	(8.38)%	(11.70)%	(11.69)%	0.25	2019/12-2020/03	(8.38)%	(11.70)%	
Recovery from Trough Total Fund Custom Bmk	(8.38)%	0.25	- 2019/12-2020/03	-	-	(8.38)%	0.25	- 2019/12-2020/03	-	-	
Callan Public Fd V Lg DB	(11.70)%	0.25	2019/12-2020/03			(11.70)%	0.25	2019/12-2020/03			

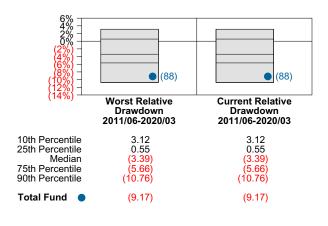
# Relative Cumulative Drawdown Analysis vs. Total Fund Custom Bmk



	Worst Relative Drawdown				Current Relative Drawdown				
	Rel Rtn	Years	Period	Peers	Rel Rtn	Years	Period	Peers	
Total Fund	(9.17)%	8.75	2011/06-2020/03	(3.76)%	(9.17)%	8.75	2011/06-2020/03	(3.76)%	
Recovery from Trough	-	-	-	-	-	-	-	-	
Callan Public Fd V Lg DB	(5.63)%	0.75	2010/12-2011/09		(4.66)%	9.25	2010/12-2020/03		

Drawdown Rankings vs. Total Fund Custom Bmk Rankings against Callan Public Fund Spons- V Lg DB (>10B) Ten Years Ended March 31, 2020



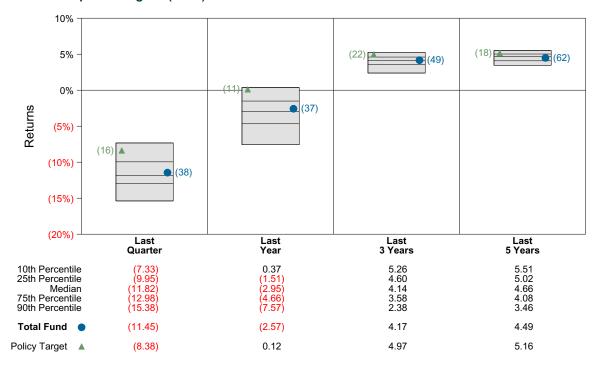




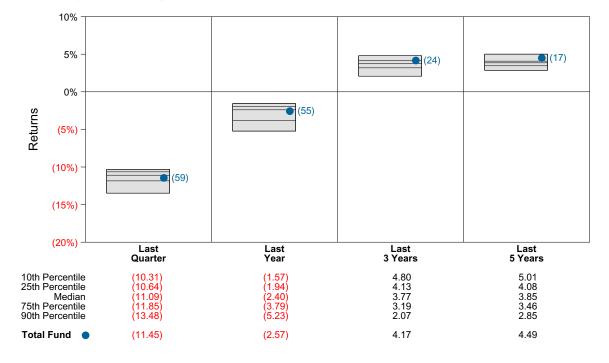
### **Total Fund Ranking**

The first two charts show the ranking of the Total Fund's performance relative to that of the Callan Public Fund Spons- V Lg DB (>10B) for periods ended March 31, 2020. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

### Callan Public Fund Spons- V Lg DB (>10B)



### **Asset Allocation Adjusted Ranking**



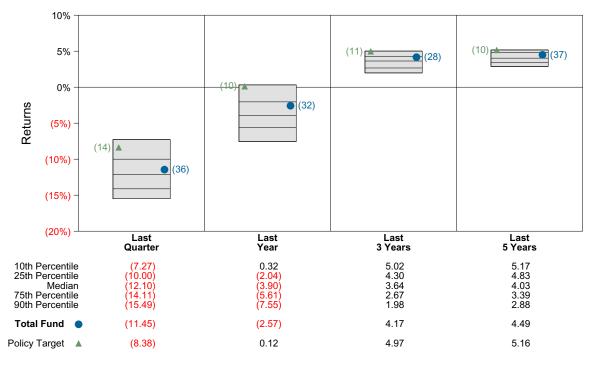
<sup>\*</sup> Current Quarter Target = 26.0% Blmbg Aggregate, 25.0% Russell 3000 Index, 14.0% Private Equity, 13.0% MSCI World ex US IMI, 7.2% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 4.0% MSCI EM IMI, 4.0% Blmbg:TIPS, 4.0% S&P:LSTA Lev Loan lagged 3 months+1.0%, 2.0% 3-month Treasury Bill, 0.8% FTSE EP/NA US Index lagged 3 months, 0.0% HFRI Fund of Funds Compos and 0.0% S&P:LSTA Lev Loan.



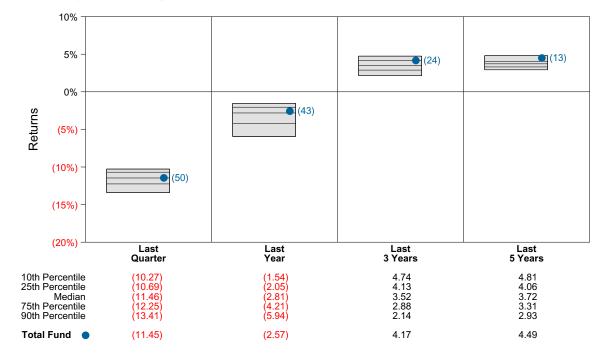
### **Total Fund Ranking**

The first two charts show the ranking of the Total Fund's performance relative to that of the Callan Public Fund Spons - Large (>1B) for periods ended March 31, 2020. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

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



### **Asset Allocation Adjusted Ranking**



<sup>\*</sup> Current Quarter Target = 26.0% Blmbg Aggregate, 25.0% Russell 3000 Index, 14.0% Private Equity, 13.0% MSCI World ex US IMI, 7.2% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 4.0% MSCI EM IMI, 4.0% Blmbg:TIPS, 4.0% S&P:LSTA Lev Loan lagged 3 months+1.0%, 2.0% 3-month Treasury Bill, 0.8% FTSE EP/NA US Index lagged 3 months, 0.0% HFRI Fund of Funds Compos and 0.0% S&P:LSTA Lev Loan.



### Total Fund Period Ended March 31, 2020

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

- Total Fund's portfolio posted a (11.45)% return for the quarter placing it in the 38 percentile of the Callan Public Fund Spons- V Lg DB (>10B) group for the quarter and in the 37 percentile for the last year.
- Total Fund's portfolio underperformed the Total Fund Custom Benchmark by 3.07% for the quarter and underperformed the Total Fund Custom Benchmark for the year by 2.69%.

#### **Quarterly Asset Growth**

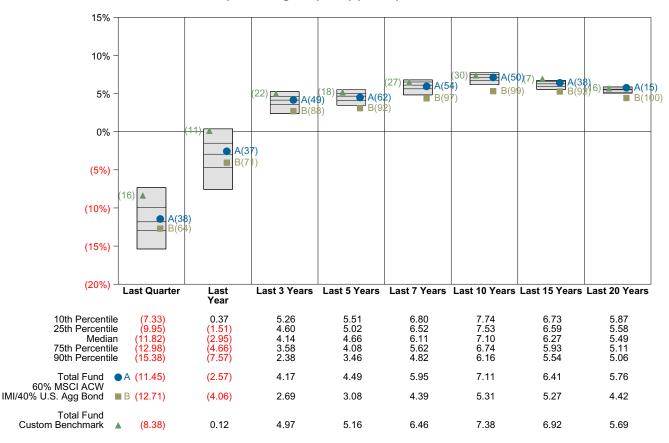
 Beginning Market Value
 \$30,886,127,343

 Net New Investment
 \$-378,963,706

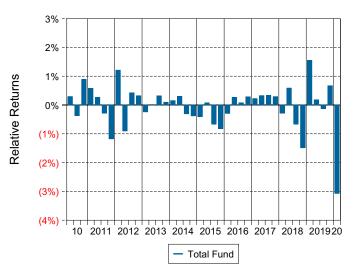
 Investment Gains/(Losses)
 \$-3,518,984,435

 Ending Market Value
 \$26,988,179,202

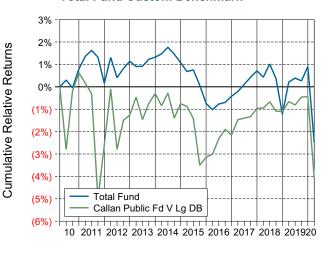
#### Performance vs Callan Public Fund Spons- V Lg DB (>10B) (Gross)



## Relative Returns vs Total Fund Custom Benchmark



## Cumulative Returns vs Total Fund Custom Benchmark





### Total Fund Period Ended March 31, 2020

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

- Total Fund's portfolio posted a (11.45)% return for the quarter placing it in the 36 percentile of the Callan Public Fund Spons - Large (>1B) group for the quarter and in the 32 percentile for the last year.
- Total Fund's portfolio underperformed the Total Fund Custom Benchmark by 3.07% for the quarter and underperformed the Total Fund Custom Benchmark for the year by 2.69%.

#### **Quarterly Asset Growth**

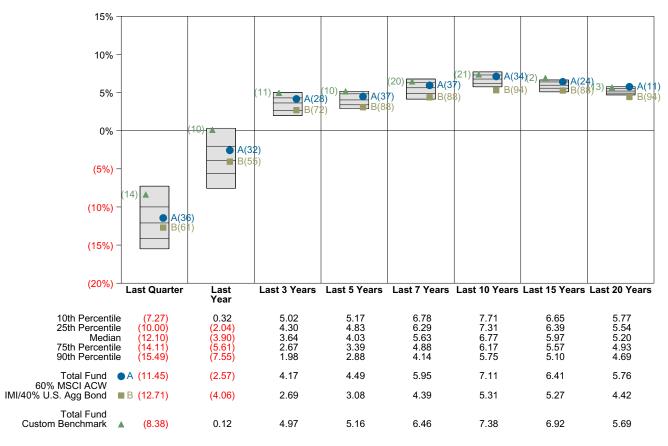
 Beginning Market Value
 \$30,886,127,343

 Net New Investment
 \$-378,963,706

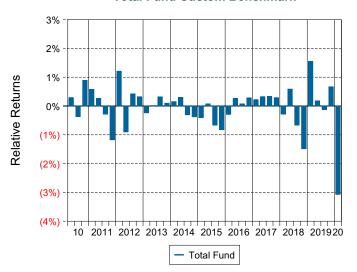
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 \$-3,518,984,435

 Ending Market Value
 \$26,988,179,202

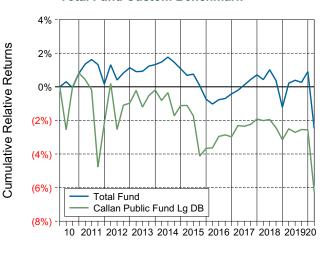
#### Performance vs Callan Public Fund Spons - Large (>1B) (Gross)



## Relative Returns vs Total Fund Custom Benchmark



## Cumulative Returns vs Total Fund Custom Benchmark

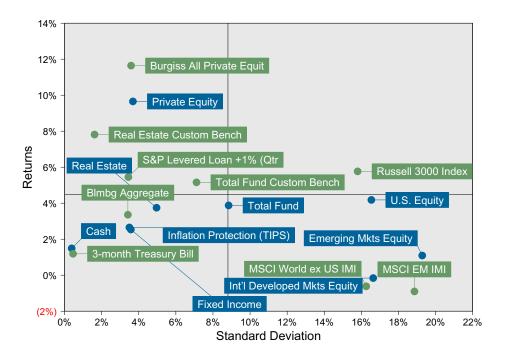




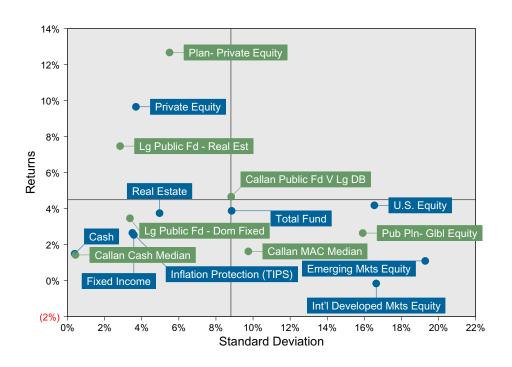
#### **Asset Class Risk and Return**

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

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



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





## **Investment Manager Asset Allocation**

The table below contrasts the distribution of assets across the Fund's investment managers as of March 31, 2020, with the distribution as of December 31, 2019.

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

		N	larch 31, 20	020		De	19	
	Market Value	% of Total	(min)	Target	(max)	Market Value	% of Total	Target
	\$(000)	Weight	Weight	\$(000)	Weight	Weight		
U.S. Equity	\$6,232,203	23.09%	20.00%	25.00%	30.00%	\$8,016,584	25.96%	-
Int'l Developed Markets Equity	\$3,463,065	12.83%	8.00%	13.00%	18.00%	\$5,984,277	19.38%	-
Emerging Mkts Equity	\$1,124,214	4.17%	0.00%	4.00%	8.00%	\$2,026,904	6.56%	-
Private Equity (1)	\$4,124,190	15.28%	0.00%	14.00%	0.00%	\$3,936,535	12.75%	-
Buyouts	2,086,630	7.73%				1,910,502	6.19%	
Special Situations	434,596	1.61%				514,508	1.67%	
Growth Equity	895,627	3.32%				763,661	2.47%	
Keystone Legacy (2)	707,337	2.62%				747,864	2.42%	
Private Credit (1)	\$403,189	1.49%	0.00%	4.00%	0.00%	\$298,315	0.97%	-
Fixed Income	\$8,105,717	30.03%	21.00%	26.00%	31.00%	\$4,375,547	14.17%	11.00%
Core Fixed Income	5,282,773	19.57%				1,994,145	6.46%	
Opportunistic Fixed Income	2,153,821	7.98%				911,329	2.95%	
Nominal U.S. Treasuries	667,348	2.47%				596,944	1.93%	
Inflation Protection (TIPS)	\$1,226,904	4.55%	1.00%	4.00%	7.00%	\$873,130	2.83%	-
Real Estate (1)	\$2,060,267	7.63%	0.00%	8.00%	0.00%	\$2,085,504	6.75%	12.00%
Core/Core Plus Real Estate Funds	741,349	2.75%				734,576	2.38%	
Value Add/Opportunistic SMA	638,955	2.37%				623,328	2.02%	
Value Add/Opportunistic Funds	460,237	1.71%				438,083	1.42%	
REITS	213,984	0.79%				283,625	0.92%	
Legacy Real Assets	5,743	0.02%				5,893	0.02%	
Legacy Hedge Funds	\$30,415	0.11%	-	-	-	\$36,118	0.12%	-
Cash	\$218,016	0.81%	0.00%	2.00%	7.00%	\$1,471,400	4.76%	3.00%
Total Fund	\$26,988,179	100.0%		100.0%		\$30,886,127	100.0%	100.0%

<sup>(1)</sup> Private Equity, Real Estate, and Private Debt Market Values have a 1 Qtr lag
(2) As of 7/31/2018, Keystone Legacy SPV consists of 163 non-core funds, prior performance in previous sub-asset classes



The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Market Value \$(mm)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Net Performance	+ (/					
Total Fund Total Fund Custom Benchmark(1) Public Market Equiv Benchmark(2) 60/40 Index(3)	\$26,988 - - -	100.00% - - -	(11.69%) (8.38%) (7.50%) (12.71%)	(3.15%) 0.12% 3.01% (4.06%)	<b>3.56%</b> 4.97% 5.75% 2.69%	3.88% 5.16% 5.56% 3.08%
U.S. Equity Russell 3000 Index	\$6,232 -	23.09% -	<b>(22.27%)</b> (20.90%)	<b>(11.69%)</b> (9.13%)	<b>2.34%</b> 4.00%	<b>4.18%</b> 5.77%
International Developed Markets Equity MSCI World Ex US IMI	\$3,463 -	12.83% -	<b>(23.66%)</b> (24.00%)	<b>(14.54%)</b> (15.48%)	<b>(1.11%)</b> (2.29%)	<b>(0.16%)</b> (0.62%)
Emerging Mkts Equity MSCI EM IMI	\$1,124 -	4.17% -	<b>(23.00%)</b> (24.40%)	<b>(15.60%)</b> (18.91%)	<b>(0.71%)</b> (2.53%)	<b>1.09%</b> (0.90%)
Private Equity  Burgiss Private Equity Index (Qtr lag)  Global Equity +3% (Qtr lag)(4)	\$4,124 - -	15.28% - -	<b>2.40%</b> 4.36% 9.37%	<b>10.97%</b> 12.70% 33.99%	<b>12.07%</b> 13.68% 17.79%	<b>9.65%</b> 11.64% 14.48%
Private Credit S&P Levered Loan Index +1% (Qtr lag)	\$403 -	1.49% -	<b>2.47%</b> 1.97%	<b>9.77%</b> 9.65%	<b>-</b> 5.35%	<b>-</b> 5.45%
Fixed Income U.S. Agg Bond Index	\$8,106 -	30.03% -	<b>(1.49%)</b> 3.15%	<b>4.07%</b> 8.93%	<b>3.12%</b> 4.82%	<b>2.54%</b> 3.36%
Inflation Protection (TIPS) U.S. TIPS Index	\$1,227 -	4.55% -	<b>1.43%</b> 1.69%	<b>6.41%</b> 6.85%	<b>3.45%</b> 3.46%	<b>2.65%</b> 2.67%
Real Estate Real Estate Custom Bench (Qtr lag)(5) CPI + 3% (Qtr lag)	\$2,060 - -	7.63% - -	(2.26%) 1.08% 0.82%	<b>3.99%</b> 7.02% 5.29%	<b>2.62%</b> 6.56% 5.10%	<b>3.75%</b> 7.81% 4.82%
Cash 3-month Treasury Bill	\$218 -	0.81% -	<b>0.38%</b> 0.57%	<b>2.07%</b> 2.25%	<b>2.02%</b> 1.83%	<b>1.49%</b> 1.19%

<sup>(5)</sup> As of 03/31/2019 benchmark consists of 90% NCREIF ODCE Index and 10% FTSE NAREIT Index with a one quarter lag. Prior to 03/31/2019, benchmark history was provided by RVK.



<sup>(1)</sup> Total Fund Custom Benchmark returns provided by RVK prior to 12/31/2018. As of 01/01/2020,

benchmark consists of: 26% Bloomberg US Agg Bond Index, 14% SERS Private Equity Composite, 25% Russell 3000 Index,

<sup>13%</sup> MSCI World ex US IMI Index, 8% Real Estate Custom Benchmark, 4% S&P/LSTA Leveraged Loan Index + 1% (Qtr lag),

<sup>4%</sup> MSCI Emerging Markets IMI Index, 4% Bloomberg US TIPS Index, 2% ICE BofAML 3 Mo US T-Bill Index,

<sup>(2)</sup> Public Market Equivalent Benchmark returns provided by RVK prior to 12/31/2018. As of 01/01/2020,

benchmark consists of: 26% Russell 3000, 25% Bloomberg U.S. Agg Bond Index, 13% MSCI World ex US Index,

<sup>10.5%</sup> Russell 3000+ 3% (Qtr lag), 8% CPI+3% (Qtr Lag), 4% S&P/LSTA Levered Loan Index +1% (Qtr lag),

<sup>4%</sup> Bloomberg US TIPS Index, 4% MSCI Emerging Markets Index, 3.5% MSCI World ex US +3% (Qtr lag),

<sup>2%</sup> ICE BofAML 3 Mo US T-Bill Index

<sup>(3)</sup> Benchmark consists of 60% MSCI ACW IM Index, 40% Bloomberg U.S. Agg Bond Index

<sup>(4)</sup> As of 01/01/2020 benchmark consists of 25% MSCI World ex US and 75% Russell 3000 + 3% with a 1 quarter lag.

Benchmark performance represents the historical benchmark (Russell 3000 +3% Qtr lag) linked to the current benchmark.

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Last 10 Years	Last 15 Years	Last 20 Years	Last 25 Years	Since Inception	
Net Performance						
Total Fund	6.41%	5.62%	4.99%	7.65%	9.14%	
Total Fund Custom Benchmark(1)	7.38%	6.92%	<b>4.99%</b> 5.69%	8.13%	9.14%	(1/81)
Public Market Equiv Benchmark(2)	7.83%	7.21%	5.91%	8.30%	-	
60/40 Index(3)	5.31%	5.27%	4.42%	6.15%	-	
U.S. Equity	9.49%	6,27%	4.61%	8.31%	9.95%	(1/81)
Russell 3000 Index	10.15%	7.50%	4.91%	8.81%		(1/81)
International Developed Markets Equity	3.64%	3.03%	_	_	4.75%	(1/02)
MSCI World ex US IMI	2.61%	3.23%	2.16%	4.20%		(1/02)
Emerging Mkts Equity	0.53%	3.17%	-	-	5.90%	(1/02)
MSCI EM IMI	0.48%	5.36%	4.84%	3.83%		(1/02)
Private Equity	10.95%	10.90%	7.88%	13.65%	10.90%	(1/86)
Burgiss Private Equity Index (Qtr lag)	12.84%	12.31%	9.87%	15.25%	16.85%	(1/86)
Global Equity +3% (Qtr lag)(4)	16.71%	12.48%	9.86%	13.70%	14.69%	(1/86)
Private Credit	-	_	-	-	8.95%	(12/17
S&P Levered Loan Index +1% (Qtr lag)	6.01%	5.78%	5.89%	-	5.49%	(12/17)
Fixed Income	4.25%	4.96%	5.58%	6.13%	8.30%	(1/81)
U.S. Agg Bond Index	3.88%	4.40%	5.08%	5.49%	7.67%	(1/81)
Inflation Protection (TIPS)	2.54%	3.44%	-	-	3.30%	(2/03)
U.S. TIPS Index	3.48%	3.92%	5.37%	-	4.33%	(2/03)
Real Estate	7.30%	5.03%	6.53%	7.68%	8.26%	(3/84)
Real Estate Custom Bench (Qtr lag)(5)	10.36%	6.91%	7.70%	-	-	
CPI +3% (Qtr lag)	4.76%	5.02%	5.14%	5.18%	5.62%	(3/84)
Cash	0.90%	1.70%	2.24%	2.78%		(1/87)
3-month Treasury Bill	0.64%	1.39%	1.74%	2.43%	3.26%	(1/87)

<sup>(5)</sup> As of 03/31/2019 benchmark consists of 90% NCREIF ODCE Index and 10% FTSE NAREIT Index with a one quarter lag. Prior to 03/31/2019, benchmark history was provided by RVK.



<sup>(1)</sup> Total Fund Custom Benchmark returns provided by RVK prior to 12/31/2018. As of 01/01/2020,

benchmark consists of: 26% Bloomberg US Agg Bond Index, 14% SERS Private Equity Composite, 25% Russell 3000 Index,

<sup>13%</sup> MSCI World ex US IMI Index, 8% Real Estate Custom Benchmark, 4% S&P/LSTA Leveraged Loan Index + 1% (Qtr lag),

<sup>4%</sup> MSCI Emerging Markets IMI Index, 4% Bloomberg US TIPS Index, 2% ICE BofAML 3 Mo US T-Bill Index,

<sup>(2)</sup> Public Market Equivalent Benchmark returns provided by RVK prior to 12/31/2018. As of 01/01/2020,

benchmark consists of: 26% Russell 3000, 25% Bloomberg U.S. Agg Bond Index, 13% MSCI World ex US Index,

<sup>10.5%</sup> Russell 3000+ 3% (Qtr lag), 8% CPI+3% (Qtr Lag), 4% S&P/LSTA Levered Loan Index +1% (Qtr lag),

<sup>4%</sup> Bloomberg US TIPS Index, 4% MSCI Emerging Markets Index, 3.5% MSCI World ex US +3% (Qtr lag),

<sup>2%</sup> ICE BofAML 3 Mo US T-Bill Index

<sup>(3)</sup> Benchmark consists of 60% MSCI ACW IM Index, 40% Bloomberg U.S. Agg Bond Index

<sup>(4)</sup> As of 01/01/2020 benchmark consists of 25% MSCI World ex US and 75% Russell 3000 + 3% with a 1 quarter lag.

Benchmark performance represents the historical benchmark linked to the current benchmark.

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Market Value \$(mm)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Net Performance- Domestic Equity	Φ(111111)	weight	Quarter	I Cai	I ears	Ieais
U.S. Equity Russell 3000 Index (1)	\$6,232 -	100.00% -	<b>(22.27%)</b> (20.90%)	<b>(11.69%)</b> (9.13%)	<b>2.34%</b> 4.00%	<b>4.18%</b> 5.77%
MCM Russell 1000 Index Russell 1000 Index	5,036 -	80.80% -	(20.22%) (20.22%)	(8.05%) (8.03%)	4.66% 4.64%	6.26% 6.22%
MCM Russell 2000 Core Index Russell 2000 Index	242 -	3.88%	(30.62%) (30.61%)	(23.99%) (23.99%)	(4.66%) (4.64%)	- (0.25%)
MCM Russell 2000 Val Index Russell 2000 Value Index	400	6.42% -	(35.61%) (35.66%)	(29.58%) (29.64%)	(9.53%) (9.51%)	(2.42%)
Emerald Asset Management Russell 2000 Growth Index	555 -	8.90% -	(24.58%) (25.76%)	(18.76%) (18.58%)	1.60% 0.10%	- 1.70%

<sup>\*</sup>Market values may not sum as a result of accounts funded within the quarter or accounts in the process of liquidation. The market values and performance of such accounts are included within their relevant composites. (1) Benchmark history is a blend of current and past benchmark indices. History prior to 12/31/2018 is provided by RVK.



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	Last	Last Last Last Last 10 15 20		Last	Cin a a	
	Years	Years	20 Years	25 Years	Since Inception	
Net Performance- Domestic Equity	2 0 0 1 0	2 2 2 3 2 2				
U.S. Equity	9.49%	6.27%	4.61%	8.31%	<b>9.95%</b> (1/81)	
Russell 3000 Index (1)	10.15%	7.50%	4.91%	8.73%	10.31% (1/81)	
MCM Russell 1000 Index	-	-	-	-	11.23% (1/12)	
Russell 1000 Index	10.39%	7.63%	4.88%	8.94%	11.26% (1/12)	
MCM Russell 2000 Core Index	-	-	-	-	(2.70%) (12/16)	
Russell 2000 Index	6.90%	5.71%	5.28%	7.57%	(2.68%) (12/16)	
MCM Russell 2000 Val Index	-	-	-	-	(7.54%) (12/16)	
Russell 2000 Value Index	4.79%	4.11%	6.83%	8.06%	(7.52%) (12/16)	
Emerald Asset Management	-	_	_	-	3.32% (12/16)	
Russell 2000 Growth Index	8.89%	7.17%	3.55%	6.62%	2.08% (12/16)	

<sup>\*</sup>Market values may not sum as a result of accounts funded within the quarter or accounts in the process of liquidation. The market values and performance of such accounts are included within their relevant composites. (1) Benchmark history is a blend of current and past benchmark indices. History prior to 12/31/2018 is provided by RVK.



The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Market Value \$(mm)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Net Performance- International Equity						
International Dev Mkts Equity MSCI World ex US IMI	\$3,463 -	75.49% -	<b>(23.66%)</b> (24.00%)	<b>(14.54%)</b> (15.48%)	<b>(1.11%)</b> (2.29%)	<b>(0.16%)</b> (0.62%)
Walter Scott & Partners(1) MSCI World	476 -	10.38% -	(16.41%) (21.05%)	(5.13%) (10.39%)	8.43% 1.92%	8.12% 3.25%
BlackRock MSCI World Ex US Index MSCI World ex US	2,576 -	56.16% -	(23.21%) (23.26%)	(14.55%) (14.89%)	(2.07%)	(0.76%)
FIS Group Non-U.S. Small Cap MSCI ACWI ex US Small Cap	154 -	3.35% -	(28.26%) (29.01%)	(18.96%) (21.18%)	<del>-</del> (4.89%)	(0.81%)
Harris Assoc Int'l SCV MSCI World ex US Sm Cap MSCI World ex US Sm Value	248 - -	5.41% - -	(36.99%) (28.39%) (31.70%)	(26.06%) (19.04%) (23.16%)	(9.42%) (3.60%) (6.39%)	(4.15%) 0.39% (1.63%)
Emerging Mkts Equity MSCI EM IMI	\$1,124 -	24.51% -	<b>(23.00%)</b> (24.40%)	<b>(15.60%)</b> (18.91%)	<b>(0.71%)</b> (2.53%)	1. <b>09</b> % (0.90%)
Macquarie Emg Mkts Equity MSCI EM	350 -	7.63% -	(25.16%) (23.60%)	(17.05%) (17.69%)	(0.85%) (1.62%)	1.52% (0.36%)
Martin Currie Emg Mkts Equity MSCI EM	380	8.28% -	(22.31%) (23.60%)	(11.93%) (17.69%)	2.30% (1.62%)	3.07% (0.36%)
BlackRock Emg Mkts Index MSCI EM	151 -	3.29% -	(23.66%) (23.60%)	(17.90%) (17.69%)	- (1.62%)	(0.36%)
Leading Edge Emg Mkts Fund MSCI EM	174 -	3.80%	(26.31%) (23.60%)	(19.42%) (17.69%)	- (1.62%)	(0.36%)
GlobeFlex Emerging Small Cap MSCI EM Small Cap	69 -	1.51% -	(28.34%) (31.37%)	(25.07%) (28.98%)	(6.88%) (9.64%)	(4.05%) (5.17%)

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<sup>(1)</sup> Walter Scott since inception returns were contained in the Global Mandates composite prior to 12/31/2019.

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Last 10 Years	Last 15 Years	Last 20 Years	Last 25 Years	Since Inception
Net Performance- International Equity					•
International Dev Mkts Equity	<b>3.64%</b>	<b>3.03%</b>	-	-	<b>4.75%</b> (1/02) 4.89% (1/02)
MSCI World ex US IMI	2.61%	3.23%	2.16%	4.20%	
Walter Scott & Partners(1) MSCI World	8.99%	-	-	-	7.90% (10/06)
	6.57%	5.33%	3.22%	6.18%	4.35% (10/06)
BlackRock MSCI World Ex US Index	-	3.06%	-	-	(3.63%) (6/17)
MSCI World ex US	2.43%		2.07%	4.12%	(4.03%) (6/17)
FIS Group Non-U.S. Small Cap	-	-	-	-	(16.24%) (10/18)
MSCI ACWI ex US Small Cap	2.79%	4.28%	4.70%	4.57%	(17.91%) (10/18)
Harris Assoc Int'l SCV	2.43%	4.49%	-	-	7.82% (7/03)
MSCI World ex US Sm Cap	3.95%	4.01%	-	-	7.26% (7/03)
MSCI World ex US Sm Value	2.74%	3.64%	6.26%	5.42%	7.03% (7/03)
Emerging Mkts Equity MSCI EM IMI	<b>0.53%</b> 0.48%	<b>3.17%</b> 5.36%	<b>-</b> 4.84%	- 3.83%	<b>5.90%</b> (1/02) <b>7.99%</b> (1/02)
Macquarie Emg Mkts Equity MSCI EM	- 0.69%	- 5.45%	- -	- -	0.67% (5/13) (0.52%) (5/13)
Martin Currie Emg Mkts Equity MSCI EM	- 0.69%	- 5.45%	- -	- -	1.68% (1/14) (0.29%) (1/14)
BlackRock Emg Mkts Index	-	-	-	-	(4.13%) (7/17)
MSCI EM	0.69%	5.45%	-		(3.91%) (7/17)
Leading Edge Emg Mkts Fund	-	-	-	-	(8.20%) (11/18)
MSCI EM	0.69%	5.45%	-		(5.92%) (11/18)
GlobeFlex Emerging Small Cap	(1.34%)	-	-	-	(0.91%) (8/13)
MSCI EM Small Cap		4.68%	4.67%	2.77%	(2.65%) (8/13)

<sup>\*</sup>Market values may not sum as a result of accounts funded within the quarter or accounts in the process of liquidation. The market values and performance of such accounts are included within their relevant composites.



<sup>(1)</sup> Walter Scott since inception returns were contained in the Global Mandates composite prior to 12/31/2019.

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Market Value \$(mm)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Net Performance - Private Equity						
Private Equity	\$4,124	91.09%	2.40%	10.97%	12.07%	9.65%
Burgiss Private Equity Index (Qtr lag)	-	-	4.36%	12.70%	13.68%	11.64%
Global Equity +3% (Qtr lag)(1)	-	-	9.37%	33.99%	17.79%	14.48%
Buyouts	2,087	46.09%	3.18%	12.85%	12.95%	11.49%
Burgiss Buyout Index (Qtr lag)	-	-	4.41%	12.04%	13.50%	12.07%
Special Situations	435	9.60%	5.42%	17.41%	15.44%	9.65%
Burgiss Special Situations Idx (Qtr lag)	-	-	2.24%	5.70%	7.05%	6.35%
Growth Equity	896	19.78%	1.67%	15.22%	17.82%	11.04%
Burgiss Venture Capital Index (Qtr lag)	-	-	5.67%	18.45%	18.25%	13.69%
Keystone Legacy(2)	707	15.62%	(0.29%)	(0.16%)	-	-
Private Credit	\$403	8.91%	2.47%	9.77%	-	_
S&P Levered Loan Index +1% (Qtr lag)	-	-	1.97%	9.65%	5.35%	5.45%

<sup>(2)</sup> As of 7/31/2018, Keystone Legacy SPV consists of 163 non-core funds, prior performance in previous sub-asset classes



 $<sup>(1)</sup> As of 01/01/2020 \ benchmark \ consists \ of 25\% \ MSCI \ World \ ex \ US \ and \ 75\% \ Russell \ 3000 + 3\% \ with \ a \ 1 \ quarter \ lag.$ 

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Last 10	Last 15	Last 20	Last 25	Since	
	Years	Years	Years	Years	Inception	
Net Performance - Private Equity						
Private Equity	10.95%	10.90%	7.88%	13.65%	<b>10.90%</b> (	(1/86)
Burgiss Private Equity Index (Qtr lag)	12.84%	12.31%	9.87%	15.25%	16.85% (	(1/86)
Global Equity + 3% (Qtr lag)(1)	16.71%	12.48%	9.86%	13.70%	14.69% (	(1/86)
Buyouts	13.01%	13.24%	10.61%	16.31%	13.12% (	(4/86)
Burgiss Buyout Index (Qtr lag)	12.88%	13.02%	11.49%	13.84%	19.53% (	(9/86)
Special Situations	10.97%	11.75%	12.15%	12.47%	12.50% (	(1/95)
Burgiss Special Situations Idx (Qtr lag)	8.97%	8.25%	9.55%	10.51%	10.51%	(6/95)
Growth Equity	10.31%	7.10%	0.68%	8.18%	7.10% (	(1/86)
Burgiss Venture Capital Index (Qtr lag)	15.19%	11.39%	5.01%	15.86%	13.71% (	(1/86)
Keystone Legacy(2)	-	-	-	-	(3.28%)	(7/18)
Private Credit	-	_	_		<b>8.95%</b> (	(12/17)
S&P Levered Loan Index +1% (Qtr lag)	6.01%	5.78%	5.89%	-	`	(12/17)

<sup>(2)</sup> As of 7/31/2018, Keystone Legacy SPV consists of 163 non-core funds, prior performance in previous sub-asset classes



<sup>(1)</sup> As of 01/01/2020 benchmark consists of 25% MSCI World ex US and 75% Russell 3000 + 3% with a 1 quarter lag.

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Market Value \$(mm)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Net Performance - Fixed Income						
Fixed Income	\$8,106	57.67%	<b>(1.49%)</b>	<b>4.07%</b>	<b>3.12%</b>	<b>2.54%</b> 3.36%
Blmbg Aggregate	-	-	3.15%	8.93%	4.82%	
Core Fixed Income	\$5,283	37.58%	<b>1.70%</b>	<b>7.75%</b>	<b>4.54%</b>	<b>3.32%</b>
Blmbg Aggregate	-	-	3.15%	8.93%	4.82%	3.36%
PIMCO Core Bond Fund	667	4.75%	(0.62%)	5.07%	3.89%	2.92%
Blmbg Agg ex Treasury		-	(0.19%)	6.04%	4.10%	3.10%
Mellon Bond-Index	4,421	31.45%	3.15%	8.84%	4.79%	3.31%
Blmbg Aggregate (1)	-	-	3.15%	8.93%	4.82%	3.36%
BMO (TCH) Corp FI	195	1.39%	(4.83%)	3.84%	3.52%	2.94%
Blmbg Credit	-	-	(3.14%)	5.10%	4.19%	3.28%
Nominal U.S. Treasuries	\$667	4.75%	<b>11.77%</b>	<b>18.11%</b>	<b>7.48%</b>	<b>4.41%</b>
Blmbg US Treas Bell 10Y	-	-	11.93%	18.26%	7.30%	4.10%
PIMCO US Treasuries	667	4.75%	11.77%	18.11%	7.63%	4.71%
Blmbg US Treas Bell 10Y		-	11.93%	18.26%	7.30%	4.10%

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	Last 10 Years	Last 15 Years	Last 20 Years	Last 25 Years	Since Inception
Net Performance - Fixed Income					
Fixed Income Blmbg Aggregate	<b>4.25%</b> 3.88%	<b>4.96%</b> 4.40%	<b>5.58%</b> 5.08%	<b>6.13%</b> 5.49%	<b>8.30%</b> (1/81) 7.67% (1/81)
Core Fixed Income	<b>4.42%</b>	<b>4.71%</b>	<b>-</b>	<b>-</b>	<b>4.89%</b> (1/02) 4.60% (1/02)
Blmbg Aggregate	3.88%	4.40%	5.08%	5.49%	
PIMCO Core Bond Fund	3.88%	-	-	-	2.69% (1/13)
Blmbg Agg ex Treasury		4.46%	-	-	3.01% (1/13)
Mellon Bond-Index	3.79%	4.29%	5.00%	5.57%	7.17% (4/84)
Blmbg Aggregate (1)	3.88%	4.40%	5.13%	5.64%	7.44% (4/84)
BMO (TCH) Corp FI	4.73%	4.87%	-	-	5.57% (11/00)
Blmbg Credit	4.75%	4.95%	5.73%	6.03%	5.67% (11/00)
Nominal U.S. Treasuries	<b>-</b>	-	<b>-</b>	<b>-</b>	<b>3.85%</b> (9/11) 3.89% (9/11)
Blmbg US Treas Bell 10Y	5.27%	5.07%	5.46%	5.74%	
PIMCO US Treasuries	-	-	-	-	4.06% (9/11)
Blmbg US Treas Bell 10Y	5.27%	5.07%	5.46%	5.74%	3.89% (9/11)

<sup>\*</sup>Market values may not sum as a result of accounts funded within the quarter or accounts in the process of liquidation. The market values and performance of such accounts are included within their relevant composites. (1) Benchmark history is a blend of current and past benchmark indices. History prior to 12/31/2018 is provided by RVK.



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	Market Value \$(mm)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Net Performance - Fixed Income						
Opportunistic Fixed Income	\$2,154	100.00%	(11.45%)	(6.43%)	(0.39%)	0.65%
BAAM Keystone(1)	830	38.56%	(14.37%)	(8.86%)	(0.05%)	0.88%
HFRI FOF Comp Index		-	(8.79%)	(5.48%)	(0.04%)	0.00%
Brandywine Global Opp FI	183	8.48%	(10.74%)	(5.27%)	(0.14%)	0.24%
FTSE Wrld Gov't Bond Index	-	-	2.00%	6.17%	4.27%	2.96%
Eaton Vance GMARA(2)	196	9.10%	(8.08%)	1.43%	-	-
3 Mo LIBOR Index +6%	-	-	1.85%	8.09%	8.04%	7.47%
Fidelity HY CMBS	286	13.29%	(16.13%)	(11.68%)	(0.85%)	0.55%
Bloomberg US CMBS Ex AAA Index		-	(7.45%)	(2.11%)	2.75%	2.63%
SEI Str. Credit: HY Bank Loans(3)(4)	344	15.99%	2.16%	2.31%	5.76%	6.61%
FTSE:HY Corp (1 month lag)	-	-	0.36%	5.49%	4.61%	4.88%
Stone Harbor Glbl HY	183	8.51%	(11.99%)	(6.73%)	0.29%	1.79%
FTSE High Yield Market Index	-	-	(13.09%)	(7.64%)	0.47%	2.46%
Stone Harbor EMD	131	6.07%	(17.65%)	(13.11%)	(2.61%)	1.55%
JPM Emg Mkts Bond Global Index	-		(11.76%)	(5.28%)	0.44%	2.85%

<sup>(4)</sup> SEI HY Bank Loans has a 1 month lag in valuation.



<sup>(1)</sup> Blackstone Keystone since inception returns were included in the Legacy Hedge Fund composite through 9/30/2017 and in the Multistrategy composite through 12/31/2019.

<sup>(2)</sup> Eaton Vance since inception returns were included in the Multi-Strategy Composite through 12/31/2019.

<sup>(3)</sup> SEI HY Bank Loans since inception returns were included in the Fixed Income composite through 9/30/2017 and in the Multistrategy composite through 12/31/2019.

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Last 10 Years	Last 15 Years	Last 20 Years	Last 25 Years	Since Inception
Net Performance - Fixed Income					<u>-</u>
Opportunistic Fixed Income	-	-	-	-	<b>2.73%</b> (10/12)
BAAM Keystone(1)	-	-	-	-	5.21% (7/12)
HFRI FOF Comp Index	1.75%	2.13%	2.58%	4.71%	2.36% (7/12)
Brandywine Global Opp FI	-	-	-	-	2.63% (2/11)
FTSE Wrld Gov't Bond Index	2.19%	3.04%	4.31%	4.30%	1.68% (2/11)
Eaton Vance GMARA(2)	-	-	-	-	(1.10%) (6/18)
3 Mo LIBOR Index +6%	6.90%	7.77%	8.02%	8.74%	8.32% (6/18)
Fidelity HY CMBS	7.92%	5.36%	7.16%	-	7.64% (4/97)
Bloomberg US CMBS Ex AAA Index	6.15%	0.41%	-	-	-
SEI Str. Credit: HY Bank Loans(3)(4) FTSE:HY Corp (1 month lag)	9.98%	-	-	-	11.69% (5/08)
	6.98%	6.62%	6.88%	7.21%	7.44% (5/08)
Stone Harbor Glbl HY	4.74%	5.60%	-	-	6.76% (7/00)
FTSE High Yield Market Index	5.36%	5.95%	6.33%	6.64%	6.34% (7/00)
Stone Harbor EMD	3.86%	5.97%	-	-	5.97% (4/05)
JPM Emg Mkts Bond Global Index	4.82%	6.28%	7.51%	9.93%	6.28% (4/05)

<sup>(4)</sup> SEI HY Bank Loans has a 1 month lag in valuation.



<sup>(1)</sup> Blackstone Keystone since inception returns were included in the Legacy Hedge Fund composite through 9/30/2017 and in the Multi-Strategy composite through 12/31/2019.

<sup>(2)</sup> Eaton Vance since inception returns were included in the Multi-Strategy composite through 12/31/2019.

<sup>(3)</sup> SEI HY Bank Loans since inception returns were included in the Fixed Income composite through 9/30/2017 and in the Multi-Strategy composite through 12/31/2019.

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	Market Value	Ending	a Last	Last	Last 3	Last 5
	\$(mm)	Weight	Quarter	Year Years		Years
Net Performance - Inflation Protection						
Inflation Protection (TIPS) Blmbg US TIPS	\$1,227 -	100.00% -	<b>1.43%</b> 1.69%	<b>6.41%</b> 6.85%	<b>3.45%</b> 3.46%	<b>2.65%</b> 2.67%
NISA Inv Adv TIPS BImbg US TIPS (1)	530 -	43.22%	1.71% 1.69%	6.74% 6.85%	3.45% 3.46%	2.67% 2.67%
Brown Brothers TIPS Blmbg US TIPS	578 -	47.12% -	1.98% 1.69%	7.25% 6.85%	3.49% 3.46%	2.78% 2.67%
New Century Global TIPS Blmbg Wld Gov I-L Undhdg	118 -	9.66% -	(1.48%) (2.40%)	2.66% 1.61%	3.13% 2.74%	2.18% 1.97%

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	Last 10	Last 15	Last 20	Last 25	Since
	Years	Years	Years	Years	Inception
Net Performance - Inflation Protection					
Inflation Protection (TIPS)	2.54%	3.44%	-	_	<b>3.30%</b> (2/03)
Blmbg US TIPS	3.48%	3.92%	5.37%	-	4.33% (2/03)
NISA Inv Adv TIPS	2.36%	-	-	-	3.22% (4/07)
Blmbg US TIPS (1)	2.36%	3.20%	4.82%	-	3.22% (4/07)
Brown Brothers TIPS	-	-	-	-	1.88% (2/12)
Blmbg US TIPS	3.48%	3.92%	5.37%	-	1.68% (2/12)
New Century Global TIPS	-	-	-	-	1.92% (2/12)
Blmbg Wld Gov I-L Undhdg	3.04%	3.49%	5.21%	-	1.46% (2/12)

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	Market Value \$(mm)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Net Performance - Real Estate						
Real Estate	\$2,060	100.00%	(2.26%)	3.99%	2.62%	3.75%
Real Estate Custom Benchmark	-	-	1.08%	7.02%	6.56%	7.81%
CPI +3% (Qtr lag)	-	-	0.82%	5.29%	5.10%	4.82%
Core/Core Plus Real Estate Funds	741	35.98%	1.08%	4.03%	5.90%	7.92%
NCREIF ODCE Index (Qtr lag)	-	-	1.30%	5.18%	6.46%	8.34%
Value Add/Opportunistic SMA	639	31.01%	0.54%	11.06%	0.73%	2.53%
NCREIF ODCE Index (Qtr lag)	-	-	1.30%	5.18%	6.46%	8.34%
Value Add/Opportunistic Funds	460	22.34%	2.62%	6.93%	8.04%	7.33%
NCREIF ODCE Index (Qtr lag)	-	-	1.30%	5.18%	6.46%	8.34%
Legacy Real Assets	6	0.28%	(0.86%)	10.98%	(0.77%)	(0.40%)
CPI +3% (Qtr lag)	-	-	0.82%	5.29%	5.10%	4.82%
REITS	214	10.39%	(24.63%)	(17.86%)	(1.77%)	(0.75%)
FTSE NAREIT US Index (Qtr lag)	-	-	(0.96%)	24.34%	7.49%	6.60%

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	Last 10 Years	Last 15 Years	Last 20 Years	Last 25 Years	Since Inception	
Net Performance - Real Estate		100.0			шоорион	
Real Estate	7.30%	5.03%	6.53%	7.68%	8.26%	(3/84)
Real Estate Custom Benchmark (Qtr lag)	10.36%	6.91%	7.70%	-	-	
CPI +3% (Qtr lag)	4.76%	5.02%	5.14%	5.18%	5.62% (	(3/84)
Core/Core Plus Real Estate Funds	10.68%	7.28%	7.65%	8.77%	7.08% (	(9/86)
NCREIF ODCE Index (Qtr lag)	10.52%	6.63%	7.01%	7.80%	6.00%	(9/86)
Value Add/Opportunistic SMA	5.86%	3.87%	4.81%	6.31%	5.15% (	(6/88)
NCREIF ODCE Index (Qtr lag)	10.52%	6.63%	7.01%	7.80%	6.04%	(6/88)
Value Add/Opportunistic Funds	11.09%	6.11%	7.70%	8.83%	7.86%	(3/84)
NCREIF ODCE Index (Qtr lag)	10.52%	6.63%	7.01%	7.80%	6.26%	(3/84)
Legacy Real Assets	(0.31%)	1.72%	2.13%	4.02%	4.37%	(3/93)
CPI +3% (Qtr lag)	4.76%	5.02%	5.14%	5.18%	5.21%	(3/93)
REITS	5.72%	5.28%	9.03%	-	8.60%	(4/96)
FTSE NAREIT US Index (Qtr lag)	11.60%	7.58%	10.98%	11.03%	10.59%	(4/96)

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	Market Value \$(mm)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Gross Performance	. ,					
Total Fund Total Fund Estimated Gross History (1) Total Fund Custom Benchmark Public Market Equiv Benchmark 60/40 Index	<b>\$26,988</b> 26,988	<b>100.00%</b> 100.00% - - -	(11.45%) (11.45%) (8.38%) (7.50%) (12.71%)	(2.57%) 0.12% 3.01% (4.06%)	4.17% 4.97% 5.75% 2.69%	- 4.49% 5.16% 5.56% 3.08%
U.S. Equity Russell 3000 Index	\$6,232 -	23.09% -	<b>(22.25%)</b> (20.90%)	<b>(11.61%)</b> (9.13%)	<b>2.42%</b> 4.00%	<b>4.31%</b> 5.77%
International. Developed Markets Equity MSCI World ex US IMI	\$3,463 -	12.83% -	<b>(23.58%)</b> (24.00%)	<b>(14.38%)</b> (15.48%)	<b>(0.94%)</b> (2.29%)	<b>0.04%</b> (0.62%)
Emerging Mkts Equity MSCI EM IMI	\$1,124 -	4.17% -	<b>(22.90%)</b> (24.40%)	<b>(15.21%)</b> (18.91%)	<b>(0.19%)</b> (2.53%)	1.59% (0.90%)
Private Equity  Burgiss Private Equity Index (Qtr lag)  Global Equity +3% (Qtr lag)	\$4,124	15.28%	<b>3.36%</b>	-	-	-
	-	-	4.36%	12.70%	13.68%	11.64%
	-	-	9.37%	33.99%	17.79%	14.48%
Private Credit	\$403	1.49%	<b>3.64%</b>	-	-	<u>.</u>
S&P Levered Loan Index +1% (Qtr Lag)	-	-	1.97%	9.65%	-	
Fixed Income	\$8,106	30.03%	(1.39%)	<b>4.34%</b>	<b>3.35%</b>	<b>2.80%</b>
Blmbg Aggregate	-		3.15%	8.93%	4.82%	3.36%
Inflation Protection (TIPS) Blmbg US TIPS	\$1,227	4.55%	<b>1.49%</b>	<b>6.60%</b>	<b>3.59%</b>	<b>2.79%</b>
	-	-	1.69%	6.85%	3.46%	2.67%
Real Estate Real Estate Custom Benchmark (Qtr lag) CPI +3% (Qtr lag)	\$2,060	7.63%	(1.10%)	-	-	-
	-	-	1.08%	7.02%	6.56%	7.81%
	-	-	0.82%	5.29%	5.10%	4.82%
Cash	\$218	0.81%	<b>0.38%</b>	<b>2.07%</b>	<b>2.02%</b>	<b>1.49%</b>
3-month Treasury Bill	-	-	0.57%	2.25%	1.83%	1.19%

<sup>(1)</sup> Total Fund Estimated Gross History is calculated by BNY Mellon using a gross-up methodology through 12/31/19. Starting 01/31/2020 gross performance is calculated for all asset classes and the Total Fund, including Private Equity, Private Credit, and Real Estate, for which gross history was not previously calculated.



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Gross Performance  Total Fund  Total Fund Estimated Gross History (1)  Total Fund Custom Benchmark  Public Market Equiv Benchmark  60/40 Index	- 7.11% 7.38% 7.83% 5.31%	- 6.41% 6.92% 7.21% 5.27%	- 5.76% 5.69% 5.91%	- - 8.13%	(11.45%) (1/20)
Total Fund Estimated Gross History (1) Total Fund Custom Benchmark Public Market Equiv Benchmark	7.11% 7.38% 7.83%	6.41% 6.92% 7.21%	5.76% 5.69%	-	
Total Fund Estimated Gross History (1) Total Fund Custom Benchmark Public Market Equiv Benchmark	7.38% 7.83%	6.92% 7.21%	5.69%		
Total Fund Custom Benchmark Public Market Equiv Benchmark	7.38% 7.83%	6.92% 7.21%	5.69%	0 120/	7.87% (1/96)
			5.010/	0.1370	7.63% (1/96)
			5.91%	8.30%	7.81% (1/96)
			4.42%	6.15%	5.79% (1/96)
U.S. Equity	9.63%	6.43%	4.74%	8.42%	<b>10.02%</b> (1/81)
Russell 3000 Index	10.15%	7.50%	4.91%	8.81%	10.41% (1/81)
International Davidened Markets Equity	3.90%	3.34%			<b>5.07%</b> (1/02)
International. Developed Markets Equity  MSCI World ex US IMI	3.90% 2.61%	3.23%	<b>-</b> 2.16%	<b>-</b> 4.20%	<b>5.07%</b> (1/02) 4.89% (1/02)
IVISCI WOND EX US IIVII	2.0176	3.23%	2.10%	4.20%	4.09 % (1/02)
Emerging Mkts Equity	0.95%	3.58%	-	-	<b>6.25%</b> (1/02)
MSCI EM IMI	0.48%	5.36%	4.84%	3.83%	7.99% (1/02)
Private Equity	_	-	-		<b>3.36%</b> (1/20)
Burgiss Private Equity Index (Qtr lag)	12.84%	12.31%	9.87%	15.25%	4.36% (1/20)
Global Equity +3% (Qtr lag)	16.71%	12.48%	9.86%	13.70%	9.37% (1/20)
Private Credit	-	-	-		<b>3.64%</b> (1/20)
S&P Levered Loan Index +1% (Qtr Lag)	6.01%	5.78%	5.89%	-	1.97% (1/20)
Fixed Income	4.51%	5.21%	5.83%	6.36%	<b>7.58%</b> (1/85)
Blmbg Aggregate	3.88%	4.40%	5.08%	5.49%	6.85% (1/85)
Inflation Protection (TIPS)	2.67%	3.57%	_	_	<b>3.43%</b> (2/03)
BImbg US TIPS	3.48%	3.92%	5.37%	-	4.33% (2/03)
Real Estate	_	_	-	_	<b>(1.10%)</b> (1/20)
Real Estate Custom Benchmark (Qtr lag)	- 10.36%	<b>-</b> 6.91%	<b>-</b> 7.70%	-	1.08% (1/20)
CPI +3% (Qtr lag)	4.76%	5.02%	5.14%	5.18%	0.82% (1/20)
Cash	0.91%	1.72%	2.07%	2.79%	<b>4.01%</b> (1/87)
3-month Treasury Bill	0.64%	1.39%	1.74%	2.43%	3.26% (1/87)

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	Market Value \$(mm)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Gross Performance- Domestic Equity	φ(111111)	weight	Quarter	i eai	I ears	I ears
U.S. Equity Russell 3000 Index(1)	\$6,232 -	100.00% -	<b>(22.25%)</b> (20.90%)	<b>(11.61%)</b> (9.13%)	<b>2.42%</b> 4.00%	<b>4.31%</b> 5.77%
MCM Russell 1000 Index Russell 1000 Index	5,036 -	80.80% -	(20.22%) (20.22%)	(8.04%) (8.03%)	4.67% 4.64%	6.27% 6.22%
MCM Russell 2000 Core Index Russell 2000 Index	242	3.88%	(30.61%) (30.61%)	(23.97%) (23.99%)	(4.64%) (4.64%)	- (0.25%)
MCM Russell 2000 Val Index Russell 2000 Value Index	400	6.42% -	(35.60%) (35.66%)	(29.55%) (29.64%)	(9.51%) (9.51%)	- (2.42%)
Emerald Asset Management Russell 2000 Growth Index	555 -	8.90% -	(24.41%) (25.76%)	(18.30%) (18.58%)	2.10% 0.10%	- 1.70%

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	Last	Last	Last	Last	Sim an
	10	15	20	25	Since
	Years	Years	Years	Years	Inception
Gross Performance- Domestic Equity					
U.S. Equity	9.63%	6.43%	4.74%	8.42%	<b>10.02%</b> (1/81)
Russell 3000 Index(1)	10.15%	7.50%	4.91%	8.73%	10.31% (1/81)
MCM Russell 1000 Index	-	-	-	-	11.24% (1/12)
Russell 1000 Index	10.39%	7.63%	4.88%	8.94%	11.26% (1/12)
MCM Russell 2000 Core Index	-	-	-	-	(2.68%) (12/16)
Russell 2000 Index	6.90%	5.71%	5.28%	7.57%	(2.68%) (12/16)
MCM Russell 2000 Val Index	-	-	-	-	(7.52%) (12/16)
Russell 2000 Value Index	4.79%	4.11%	6.83%	8.06%	(7.52%) (12/16)
Emerald Asset Management	-	-	-	-	3.80% (12/16)
Russell 2000 Growth Index	8.89%	7.17%	3.55%	6.62%	2.08% (12/16)

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	Market Value \$(mm)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Gross Performance - International Equity						
Int'l Developed Mkts Equity MSCI World ex US IMI	\$3,463 -	75.49% -	<b>(23.58%)</b> (24.00%)	<b>(14.38%)</b> (15.48%)	<b>(0.94%)</b> (2.29%)	<b>0.04%</b> (0.62%)
Walter Scott & Partners (2)	476	10.38%	(16.12%)	(4.53%)	8.94%	8.60%
MSCI World	-	-	(21.05%)	(10.39%)	1.92%	3.25%
BlackRock MSCI World Ex US Index	2,576	56.16%	(23.20%)	(14.53%)	(2.07%)	-
MSCI World ex US	-	-	(23.26%)	(14.89%)		(0.76%)
FIS Group Non-U.S. Small Cap MSCI ACWI ex US Small Cap	154 -	3.35% -	(28.11%) (29.01%)	(18.56%) (21.18%)	(4.89%)	(0.81%)
Harris Assoc Int'l SCV	248	5.41%	(36.70%)	(25.25%)	(8.68%)	(3.44%)
MSCI World ex US Sm Cap	-	-	(28.39%)	(19.04%)	(3.60%)	0.39%
Emerging Mkts Equity MSCI EM IMI	\$1,124 -	<b>24.51%</b> -	<b>(22.90%)</b> (24.40%)	<b>(15.21%)</b> (18.91%)	<b>(0.19%)</b> (2.53%)	1.59% (0.90%)
Macquarie Emg Mkts Equity	350	7.63%	(25.05%)	(16.60%)	(0.24%)	2.11%
MSCI EM	-	-	(23.60%)	(17.69%)	(1.62%)	(0.36%)
Martin Currie Emg Mkts Equity MSCI EM	380	8.28%	(22.21%)	(11.35%)	3.04%	3.69%
	-	-	(23.60%)	(17.69%)	(1.62%)	(0.36%)
BlackRock Emg Mkts Index	151	3.29%	(23.58%)	(17.74%)	-	(0.36%)
MSCI EM	-	-	(23.60%)	(17.69%)	(1.62%)	
Leading Edge Emg Mkts Fund MSCI EM	174 -	3.80%	(26.17%) (23.60%)	(18.99%) (17.69%)	(1.62%)	(0.36%)
GlobeFlex Emerging Small Cap	69	1.51%	(28.10%)	(24.33%)	(6.22%)	(3.41%)
MSCI EM Small Cap	-	-	(31.37%)	(28.98%)	(9.64%)	(5.17%)

<sup>(2)</sup> Walter Scott since inception returns were contained in the Global Mandates composite prior to 12/31/2019.



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<sup>(1)</sup> Benchmark history is a blend of current and past benchmark indices. History prior to 12/31/2018 is provided by RVK.

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	Last 10 Years	Last 15 Years	Last 20 Years	Last 25 Years	Since Inception
Gross Performance - International Equity	10010	100.0	10010	10010	oopo
Int'l Developed Mkts Equity	<b>3.90%</b>	<b>3.34%</b>	-	-	<b>5.07%</b> (1/02) 4.89% (1/02)
MSCI World ex US IMI	2.61%	3.23%	2.16%	4.20%	
Walter Scott & Partners (2)	9.46%	-	-	-	8.36% (10/06)
MSCI World	6.57%	5.33%	3.22%	6.18%	4.35% (10/06)
BlackRock MSCI World Ex US Index	-	-	-	-	(3.62%) (6/17)
MSCI World ex US	2.43%	3.06%	2.07%	4.12%	(4.03%) (6/17)
FIS Group Non-U.S. Small Cap	-	-	-	-	(15.96%) (10/18)
MSCI ACWI ex US Small Cap	2.79%	4.28%	4.70%	4.57%	(17.91%) (10/18)
Harris Assoc Int'l SCV	3.16%	5.25%	-	-	8.58% (7/03)
MSCI World ex US Sm Cap	3.95%	4.01%	-		7.26% (7/03)
Emerging Mkts Equity MSCI EM IMI	<b>0.95%</b> 0.48%	<b>3.58%</b> 5.36%	- 4.84%	- 3.83%	<b>6.25%</b> (1/02) 7.99% (1/02)
Macquarie Emg Mkts Equity	-	-	-	-	1.34% (5/13) (0.52%) (5/13)
MSCI EM	0.69%	5.45%	-	-	
Martin Currie Emg Mkts Equity	-	-	-	-	2.22% (1/14) (0.29%) (1/14)
MSCI EM	0.69%	5.45%	-	-	
BlackRock Emg Mkts Index	-	-	<del>-</del>	-	(4.03%) (7/17)
MSCI EM	0.69%	5.45%	-	-	(3.91%) (7/17)
Leading Edge Emg Mkts Fund	-	-	-	-	(7.86%) (11/18)
MSCI EM	0.69%	5.45%	-	-	(5.92%) (11/18)
GlobeFlex Emerging Small Cap	-	-	-	-	(0.31%) (8/13) (2.65%) (8/13)
MSCI EM Small Cap	(1.34%)	4.68%	4.67%	2.77%	



<sup>\*</sup>Market values may not sum as a result of accounts funded within the quarter or accounts in the process of liquidation. The market values and performance of such accounts are included within their relevant composites.

<sup>(1)</sup> Benchmark history is a blend of current and past benchmark indices. History prior to 12/31/2018 is provided by RVK. (2) Walter Scott since inception returns were contained in the Global Mandates composite prior to 12/31/2019.

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Market Value \$(mm)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Gross Performance - Private Equity						
Private Equity	\$4,124	91.09%	3.36%	-	-	-
Burgiss All Private Equity (Qtr Lag)	-	-	4.36%	12.70%	13.68%	11.64%
Global Equity +3% (Qtr lag)(1)	-	-	9.37%	33.99%	17.79%	14.48%
Buyouts	2,087	46.09%	4.36%	-	-	-
Burgiss Buyout Index (Qtr Lag)	-	-	4.41%	12.04%	13.50%	12.07%
Special Situations	435	9.60%	5.61%	-	-	-
Burgiss Special Sits Index (Qtr Lag)	-	-	2.24%	5.70%	7.05%	6.35%
Growth Equity	896	19.78%	3.16%	-	-	-
Burgiss Venture Capital Idx (Qtr Lag)	-	-	5.67%	18.45%	18.25%	13.69%
Keystone Legacy(2)	707	15.62%	(0.17%)	-	-	-
Private Credit	\$403	8.91%	3.64%	-	-	
S&P Levered Loan Index + 1% (Qtr Lag)	-	-	1.97%	9.65%	5.35%	5.45%

<sup>(1)</sup> As of 01/01/2020 benchmark is 25% MSCI World ex US Index and 75% Russell 3000 + 3% with a 1 Qtr lag. (2) As of 7/31/2018, Keystone Legacy SPV consists of 163 non-core funds, prior performance in previous sub-asset classes



The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Market Value \$(mm)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Gross Performance - Fixed Income	, ,					
Fixed Income	\$8,106	57.67%	<b>(1.39%)</b>	<b>4.34%</b>	<b>3.35%</b>	<b>2.80%</b>
Blmbg Aggregate	-	-	3.15%	8.93%	4.82%	3.36%
Core Fixed Income	\$5,283	37.58%	<b>1.74%</b>	<b>7.89%</b>	<b>4.65%</b>	<b>3.44%</b>
Blmbg Aggregate	-	-	3.15%	8.93%	4.82%	3.36%
PIMCO Core Bond Fund	667	4.75%	(0.54%)	5.32%	4.09%	3.11%
Bloomberg Agg ex. Treasury	-	-	(0.19%)	6.04%	4.10%	3.10%
Mellon Bond Index	4,421	31.45%	3.16%	8.88%	4.82%	3.33%
Blmbg Aggregate(1)	-	-	3.15%	8.93%	4.82%	3.36%
BMO (TCH) Corp FI	195	1.39%	(4.72%)	4.18%	3.78%	3.22%
Blmbg Credit	-	-	(3.14%)	5.10%	4.19%	3.28%
Nominal U.S. Treasuries	\$667	4.75%	<b>11.82%</b>	<b>18.28%</b>	<b>7.59%</b>	<b>4.52%</b>
Blmbg:Treas Bellwethr 10Y	-	-	11.93%	18.26%	7.30%	4.10%
PIMCO US Treasuries	667	4.75%	11.82%	18.28%	7.73%	4.82%
Blmbg:Treas Bellwethr 10Y		-	11.93%	18.26%	7.30%	4.10%

<sup>(1)</sup> Benchmark history is a blend of current and past benchmark indices. History prior to 12/31/2018 is provided by RVK.



The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Last 10 Years	Last 15 Years	Last 20 Years	Last 25 Years	Since Inception
Gross Performance - Fixed Income					
Fixed Income	4.51%	5.21%	5.83%	6.36%	<b>7.58%</b> (1/85)
Blmbg Aggregate	3.88%	4.40%	5.08%	5.49%	6.85% (1/85)
Core Fixed Income	4.59%	4.88%	-	-	<b>5.06%</b> (1/02)
Blmbg Aggregate	3.88%	4.40%	5.08%	5.49%	4.60% (1/02)
PIMCO Core Bond Fund	-	-	-	-	2.87% (1/13)
Bloomberg Agg ex. Treasury	3.88%	4.46%	-	-	3.01% (1/13)
Mellon Bond Index	3.82%	4.33%	5.05%	5.62%	5.31% (9/93)
Blmbg Aggregate(1)	3.88%	4.40%	5.08%	5.49%	5.24% (9/93)
BMO (TCH) Corp FI	5.00%	5.14%	-	-	5.86% (12/00)
Blmbg Credit	4.75%	4.95%	5.73%	6.03%	5.63% (12/00)
Nominal U.S. Treasuries	-	-	-	-	<b>3.95%</b> (9/11)
Blmbg:Treas Bellwethr 10Y	5.27%	5.07%	5.46%	5.74%	3.89% (9/11)
PIMCO US Treasuries	-	-	-	-	4.15% (9/11)
Blmbg:Treas Bellwethr 10Y	5.27%	5.07%	5.46%	5.74%	3.89% (9/11)



The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Market Value \$(mm)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Gross Performance - Fixed Income						
Opportunistic Fixed Income	\$2,154	100.00%	(11.28%)	(5.91%)	0.17%	1.28%
BAAM Keystone(1)(5)	830	38.56%	(14.25%)	(8.32%)	0.15%	1.00%
HFRI Fund of Funds Compos		-	(8.79%)	(5.48%)	(0.04%)	0.00%
Brandywine Global Opp FI	183	8.48%	(10.57%)	(4.81%)	0.30%	0.65%
FTSE WGBI	-	-	2.00%	6.17%	4.27%	2.96%
Eaton Vance GMARA(2)	196	9.10%	(8.00%)	1.93%	-	-
3 Month LIBOR + 6%	-	-	1.85%	8.09%	8.04%	7.47%
Fidelity HY CMBS	286	13.29%	(16.01%)	(11.14%)	( <mark>0.24%)</mark>	1.21%
Blmbg:Universal CMBS xAaa		-	(7.45%)	(2.11%)	2.75%	2.63%
SEI St. Credit: HY Bank Loans(3)(4)	344	15.99%	2.60%	3.65%	6.75%	7.64%
FTSE:HY Corp (1 month lag)	-	-	0.36%	5.49%	4.61%	4.88%
Stone Harbor Glbl HY	183	8.51%	(11.81%)	(6.26%)	0.73%	2.23%
FTSE:HY Corp	-	-	(13.09%)	(7.64%)	0.47%	2.46%
Stone Harbor EMD	131	6.07%	(17.47%)	(12.66%)	(2.18%)	1.98%
JPM EMBI Global	-	-	(11.76%)	(5.28%)	0.44%	2.85%

<sup>(5)</sup> Blackstone Keystone performance is shown Net of Fees.



<sup>(1)</sup> Blackstone Keystone since inception returns are included in the Legacy Hedge Fund composite through 9/30/2017 and in the Multi-Strategy composite through 12/31/2019.

<sup>(2)</sup> Eaton Vance GMARA since inception returns are included in the Multi-Strategy composite through 12/31/2019.

<sup>(3)</sup> SEI HY Bank Loans since inception returns are included in the Fixed Income composite through 9/30/2017 and in the Multi-Strategy composite through 12/31/2019.

<sup>(4)</sup> SEI HY Bank Loans has a 1 month lag in valuation.

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Market Value \$(mm)	Ending Weight	Last 10 Years	Last 15 Years	Last 20 Years	Last 25 Years	Since Inception
Gross Performance - Fixed Income							•
Opportunistic Fixed Income	\$2,154	100.00%	-	-	-	-	<b>3.39%</b> (10/12)
BAAM Keystone(1)(5)	830	38.56%	-	-	-	-	5.29% (7/12)
HFRI Fund of Funds Compos		-	1.75%	2.13%	2.58%	4.71%	2.36% (7/12)
Brandywine Global Opp FI	183	8.48%	-	-	-	-	3.03% (2/11)
FTSE WGBI	-	-	2.19%	3.04%	4.31%	4.30%	1.68% (2/11)
Eaton Vance GMARA(2)	196	9.10%	-	-	-	-	(0.83%) (6/18)
3 Month LIBOR + 6%		-	6.90%	7.77%	8.02%	8.74%	8.32% (6/18)
Fidelity HY CMBS Blmbg:Universal CMBS xAaa	286	13.29% -	8.61% 6.15%	6.05% 0.41%	7.85% -	- -	8.32% (4/97)
SEI St. Credit: HY Bank Loans(3)(4) FTSE:HY Corp (1 month lag)	344	15.99% -	11.00% 6.98%	- 6.62%	- 6.88%	- 7.21%	12.74% (5/08) 7.44% (5/08)
Stone Harbor Glbl HY	183	8.51%	5.21%	6.06%	-	-	6.96% (7/00)
FTSE:HY Corp	-	-	5.36%	5.95%	6.33%	6.64%	6.34% (7/00)
Stone Harbor EMD	131	6.07%	4.30%	6.42%	-	-	6.42% (4/05)
JPM EMBI Global	-		4.82%	6.28%	7.51%	9.93%	6.28% (4/05)



Blackstone Keystone since inception returns are included in the Legacy Hedge Fund composite through 9/30/2017 and in the Multi-Strategy composite through 12/31/2019.
 Eaton Vance GMARA since inception returns are included in the Multi-Strategy composite through 12/31/2019.
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 SEI HY Bank Loans has a 1 month lag in valuation.
 Blackstone Keystone performance is shown Net of Fees.

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Market Value \$(mm)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Gross Performance - Inflation Protecti	on					
Inflation Protection (TIPS) Blmbg US TIPS	\$1,227 -	100.00% -	<b>1.49%</b> 1.69%	<b>6.60%</b> 6.85%	<b>3.59%</b> 3.46%	<b>2.79%</b> 2.67%
NISA Inv Adv TIPS	530	43.22%	1.76%	6.91%	3.57%	2.78%
Blmbg US TIPS(1)	-		1.69%	6.85%	3.46%	2.67%
Brown Brothers TIPS	578	47.12%	2.03%	7.41%	3.63%	2.91%
Blmbg US TIPS	-	-	1.69%	6.85%	3.46%	2.67%
New Century Global TIPS	118	9.66%	(1.37%)	3.01%	3.40%	2.44%
Blmbg:Wld Infl-Lnk Unhdg	-	-	(2.40%)	1.61%	2.74%	1.97%



The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 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.

	Last 10	Last 15	Last 20	Last 25	Since
	Years	Years	Years	Years	Inception
Gross Performance - Inflation Protection					
Inflation Protection (TIPS)	2.67%	3.57%	-	_	<b>3.43%</b> (2/03)
Blmbg US TIPS	3.48%	3.92%	5.37%	-	4.33% (2/03)
NISA Inv Adv TIPS	2.47%	-	-	-	3.32% (4/07)
Blmbg US TIPS(1)	3.48%	3.92%	5.37%	-	4.06% (4/07)
Brown Brothers TIPS	-	-	-	-	2.00% (2/12)
Blmbg US TIPS	3.48%	3.92%	5.37%	-	1.68% (2/12)
New Century Global TIPS	-	-	-	-	2.17% (2/12)
Blmbg:Wld Infl-Lnk Unhdg	3.04%	3.49%	5.21%	-	1.46% (2/12)

<sup>(1)</sup> Benchmark history is a blend of current and past benchmark indices. History prior to 12/31/2018 is provided by RVK.



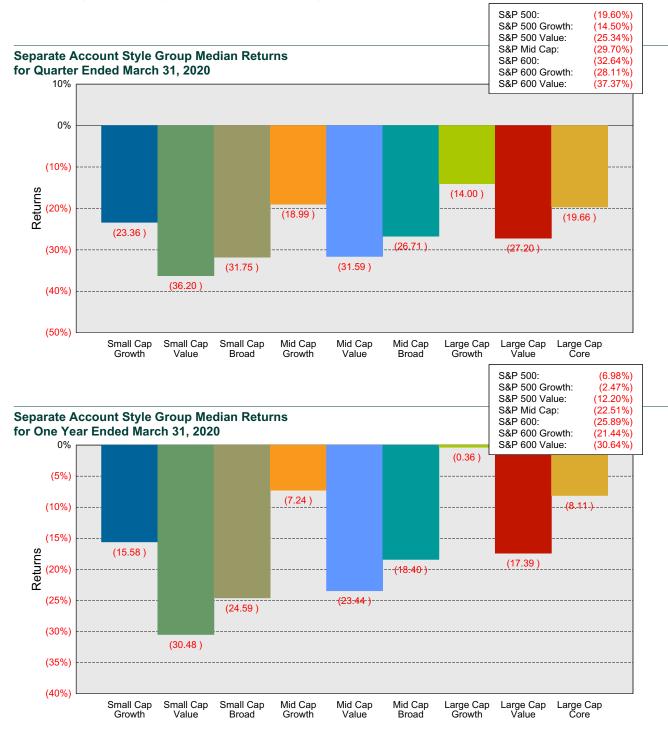
The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	Market Value	Ending	Last	Last	Last 3	Last 5
Gross Performance - Real Estate	\$(mm)	Weight	Quarter	Year	Years	Years
Real Estate	\$2,060	100.00%	(1.10%)	-	-	-
Real Estate Custom Benchmark (Qtr lag)		-	1.08%	7.02%	6.56%	7.81%
CPI + 3% (Qtr lag)	-	-	0.82%	5.29%	5.10%	4.82%
Core/Core Plus Real Estate Funds	741	35.98%	1.55%	-	-	-
NCREIF ODCE Index (Qtr lag)	-	-	1.30%	5.18%	6.46%	8.34%
Value Add/Opportunistic SMA	639	31.01%	2.80%	-	-	-
NCREIF ODCE Index (Qtr lag)	-	-	1.30%	5.18%	6.46%	8.34%
Value Add/Opportunistic Funds	460	22.34%	4.15%	_	_	-
NCREIF ODCE Index (Qtr lag)	-	-	1.30%	5.18%	6.46%	8.34%
Legacy Real Assets	6	0.28%	(0.71%)	_	_	-
CPI + 3% (Qtr lag)	-	-	0.82%	5.29%	5.10%	4.82%
REITS	214	10.39%	(24.48%)	_	_	-
FTSE NAREIT US RE Index (Qtr lag)	-	-	(0.96%)	24.34%	7.49%	6.60%



# Domestic Equity Active Management Overview

The S&P 500 Index plunged 19.6% in the first quarter, its worst quarterly return since the Global Financial Crisis. After falling more than 30% from peak to trough in just a few weeks, the Index rallied 20% going into quarter-end as investors were heartened by the prospect of a \$2 trillion stimulus package. Notably, the decline marked the fastest bear market (defined as 20% drop in prices) in history 16 days from the high mark hit on February 19. Every sector experienced double-digit declines, with Information Technology (-11.9%), Consumer Staples (-12.7%), and Health Care (-12.7%) feeling the least pain. Financials (-31.9%) and Energy (-50.5%) fell the most. Financials were hurt by sharp declines in interest rates, and Energy's performance reflected plummeting oil prices. Oil prices tumbled 66%, with WTI Crude ending the quarter at \$20.48, down from roughly \$60 at the start of the year. From a style viewpoint, growth significantly outperformed value (Russell 1000 Growth: -14.1%; Russell 1000 Value: -26.7%). Growth indices benefited from Technology exposure while Value struggled with relatively heavy weights in Energy and Financials. Large cap (Russell 1000: -20.2%) outperformed small cap (Russell 2000:-30.6%). Small value (Russell 2000 Value: -35.7%) saw the sharpest decline.



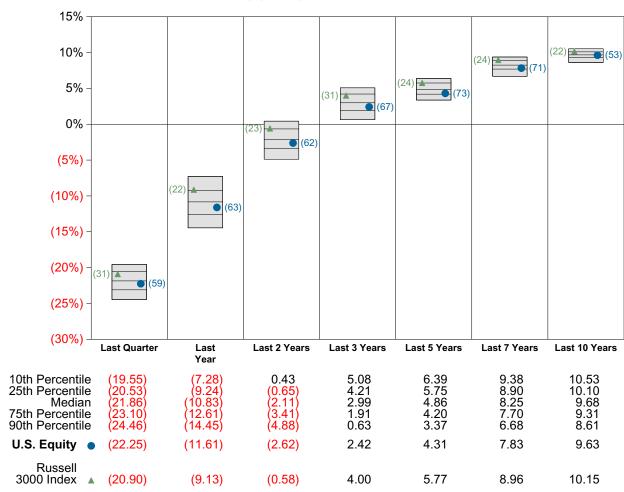


#### U.S. Equity Period Ended March 31, 2020

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

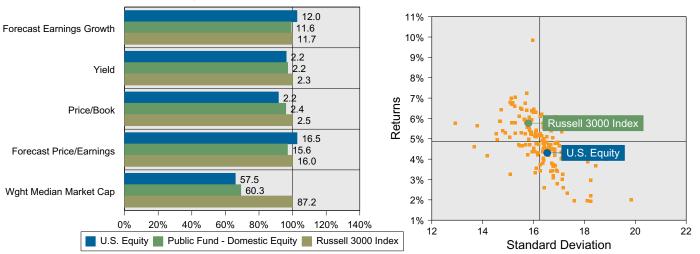
- U.S. Equity's portfolio posted a (22.25)% return for the quarter placing it in the 59 percentile of the Public Fund -Domestic Equity group for the quarter and in the 63 percentile for the last year.
- U.S. Equity's portfolio underperformed the Russell 3000 Index by 1.35% for the quarter and underperformed the Russell 3000 Index for the year by 2.48%.

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



### Portfolio Characteristics as a Percentage of the Russell 3000 Index

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



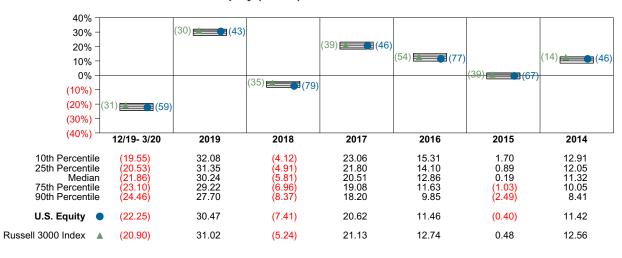


#### U.S. Equity Return Analysis Summary

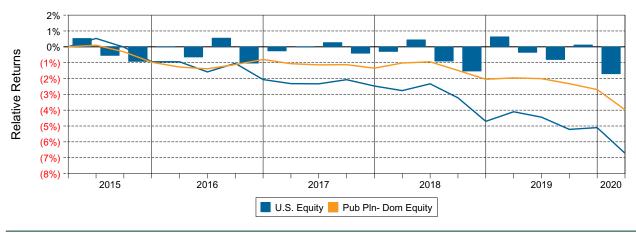
#### **Return Analysis**

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 cumulative 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.

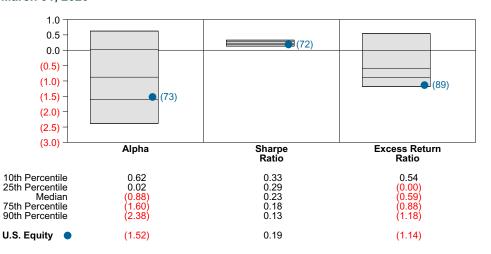
#### Performance vs Public Fund - Domestic Equity (Gross)



#### Cumulative and Quarterly Relative Return vs Russell 3000 Index



Risk Adjusted Return Measures vs Russell 3000 Index Rankings Against Public Fund - Domestic Equity (Gross) Five Years Ended March 31, 2020



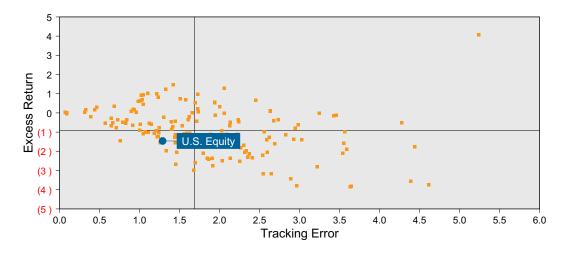


#### U.S. Equity Risk Analysis Summary

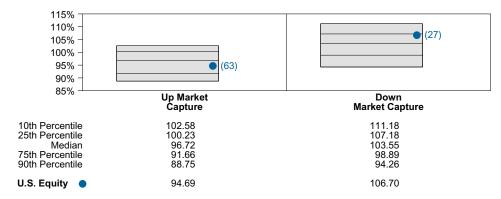
#### **Risk Analysis**

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.

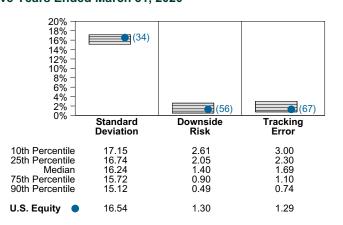
### Risk Analysis vs Public Fund - Domestic Equity (Gross) Five Years Ended March 31, 2020

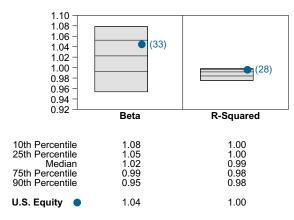


Market Capture vs Russell 3000 Index Rankings Against Public Fund - Domestic Equity (Gross) Five Years Ended March 31, 2020



Risk Statistics Rankings vs Russell 3000 Index Rankings Against Public Fund - Domestic Equity (Gross) Five Years Ended March 31, 2020



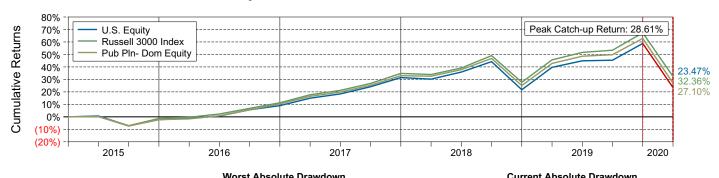




### U.S. Equity Drawdown Analysis for Five Years Ended March 31, 2020

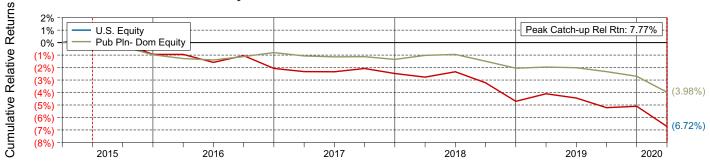
The following analysis focuses on downside risk by looking at cumulative drawdowns experienced from peak-to-trough for the portfolio, index, and peer group. Drawdown is measured from the "high-water mark" of cumulative return to the subsequent "trough". The first chart illustrates the Worst Absolute 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**



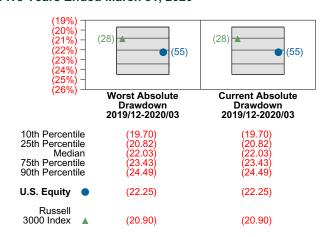
	Worst Absolute Drawdown				Current Absolute Diawdown					
	Return	Years	Period	Index	Peers	Return	Years	Period	Index	Peers
U.S. Equity	(22.25)%	0.25	2019/12-2020/03	(20.90)%	(21.94)%	(22.25)%	0.25	2019/12-2020/03	(20.90)%	(21.94)%
Recovery from Trough	-	-	-	-	-	-	-	-	-	-
Russell 3000 Index	(20.90)%	0.25	2019/12-2020/03			(20.90)%	0.25	2019/12-2020/03		
Pub Pln- Dom Equity	(21.94)%	0.25	2019/12-2020/03			(21.94)%	0.25	2019/12-2020/03		

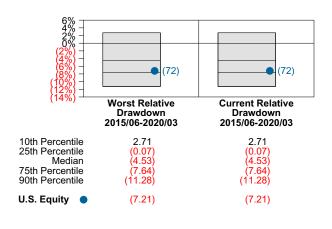
#### Relative Cumulative Drawdown Analysis vs. Russell 3000 Index



	Worst Relative Drawdown				Current Relative Drawdown			
	Rel Rtn	Years	Period	Peers	Rel Rtn	Years	Period	Peers
U.S. Equity	(7.21)%	4.75	2015/06-2020/03	(4.07)%	(7.21)%	4.75	2015/06-2020/03	(4.07)%
Recovery from Trough	-	-	-	-	-	-	-	-
Pub Pln- Dom Equity	(4.07)%	4.75	2015/06-2020/03		(4.07)%	4.75	2015/06-2020/03	

Drawdown Rankings vs. Russell 3000 Index Rankings against Public Fund - Domestic Equity Five Years Ended March 31, 2020







# Current Holdings Based Style Analysis U.S. Equity As of March 31, 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.

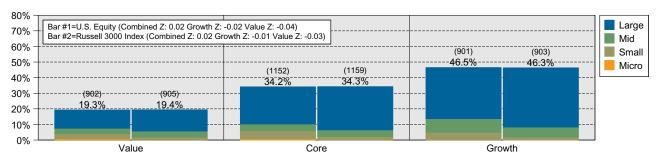
### Style Map vs Pub Pln- Dom Equity Holdings as of March 31, 2020



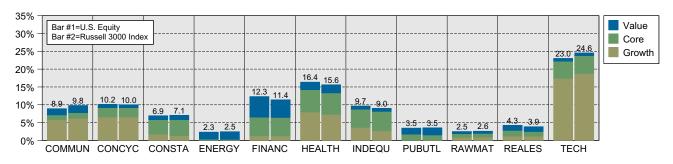
### Style Exposure Matrix Holdings as of March 31, 2020

	Value	Core	Growth	Total
Total	19.4% (905)	34.3% (1159)	46.3% (903)	100.0% (2967)
Tatal	19.3% (902)	34.2% (1152)	46.5% (901)	100.0% (2955)
	0.2% (345)	0.2% (395)	0.1% (150)	0.5% (890)
Micro	0.7% (342)	0.7% (385)	0.2% (149)	1.6% (876)
	1.5% (336)	2.0% (480)	1.7% (371)	5.2% (1187)
Small	3.2% (335)	5.2% (484)	4.8% (370)	13.2% (1189)
IVIIG	4.0% (151)	4.2% (175)	6.5% (268)	14.6% (594)
Mid	3.5% (152)	4.3% (175)	8.7% (268)	16.5% (595)
Large	13.7% (73)	27.8% (109)	38.1% (114)	79.6% (296)
Largo	11.8% (73)	24.0% (108)	32.9% (114)	68.7% (295)

### Combined Z-Score Style Distribution Holdings as of March 31, 2020



#### Sector Weights Distribution Holdings as of March 31, 2020

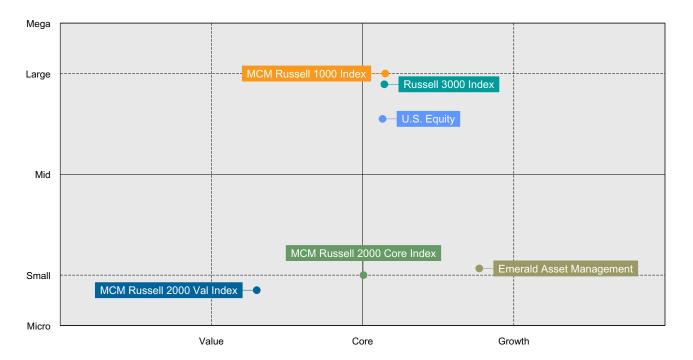




#### **Holdings Based Style Analysis** For One Quarter Ended March 31, 2020

This page analyzes and compares the investment styles of multiple portfolios using a detailed holdings-based style analysis methodology. The size component of style is measured by the weighted median market capitalization of the holdings. The value/core/growth style dimension is captured by the "Combined Z-Score" of the portfolio. This score is based on eight fundamental factors used in the MSCI stock style scoring system. The table below gives a more detailed breakdown of several relevant style metrics on the portfolios.

Style Map Holdings for One Quarter Ended March 31, 2020



	Weight	Wtd Median	Combined	Growth	Value	Number of	Security
	%	Mkt Cap	Z-Score	Z-Score	Z-Score	Securities D	iversification
MCM Russell 2000 Val Index	6.42%	1.30	(0.70)	(0.28)	0.42	1383	174.30
MCM Russell 2000 Core Index	< 3.88%	1.65	(0.07)	(0.13)	(0.05)	1981	284.75
Emerald Asset Management	8.90%	2.19	0.48	0.00	(0.47)	119	28.67
MCM Russell 1000 Index	80.80%	96.46	0.03	(0.00)	(0.03)	997	52.54
U.S. Equity	100.00%	57.48	0.02	(0.02)	(0.04)	2980	90.92
Russell 3000 Index	-	87.19	0.02	(0.01)	(0.03)	2995	61.09

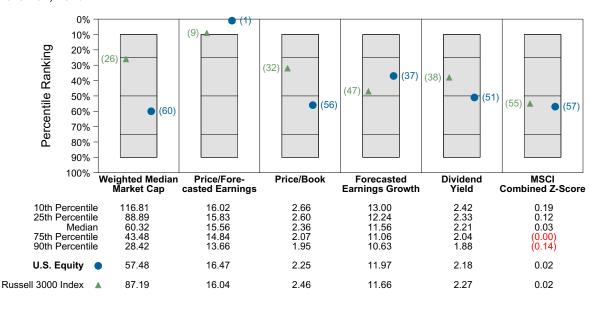


### U.S. Equity Equity Characteristics Analysis Summary

#### **Portfolio Characteristics**

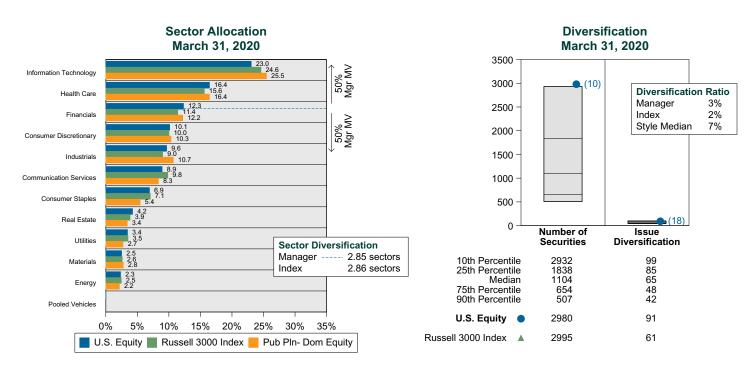
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### Portfolio Characteristics Percentile Rankings Rankings Against Public Fund - Domestic Equity as of March 31, 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.





#### **U.S. Equity** Active Share Analysis as of March 31, 2020 vs. Russell 3000 Index

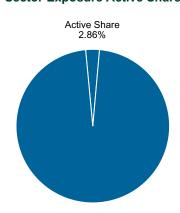
Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes 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 13.67% Non-Index Active Share 0.08%

Passive Share 86.25%

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



Passive Share 97.14%

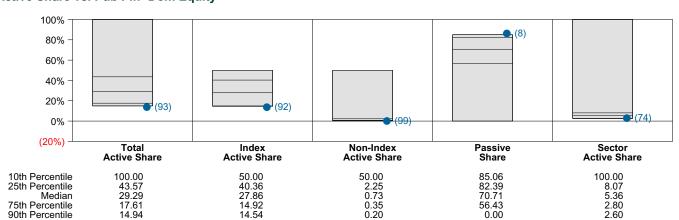
Total Active Share: 13.75%

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

Index Active Share Within Sector	Non-Index Active Share Within Sector	Total Active Share Within Sector	Index Weight	Manager Weight	Contribution to Total Portfolio Active Share
5.37%	0.00%	5.37%	9.83%	8.94%	0.91%
14.43%	0.00%	14.43%	10.01%	10.13%	1.41%
12.16%	0.00%	12.16%	7.06%	6.93%	0.91%
8.91%	0.79%	9.70%	2.46%	2.34%	0.28%
18.23%	0.05%	18.28%	11.42%	12.32%	1.87%
18.22%	0.23%	18.45%	15.62%	16.44%	2.65%
18.54%	0.00%	18.54%	9.02%	9.65%	1.52%
8.55%	0.06%	8.61%	24.60%	23.05%	2.72%
10.78%	0.00%	10.78%	2.60%	2.51%	0.31%
0.00%	100.00%	100.00%	-	0.00%	0.00%
0.00%	100.00%	100.00%	-	0.01%	0.01%
20.73%	0.00%	20.73%	3.86%	4.24%	0.72%
12.05%	0.00%	12.05%	3.52%	3.44%	0.44%
13.67%	0.08%	13.75%	100.00%	100.00%	13.75%

#### Active Share vs. Pub Pln- Dom Equity

13.75



0.08

86.25

13.67



U.S. Equity

2.86

#### MCM Russell 1000 Index Period Ended March 31, 2020

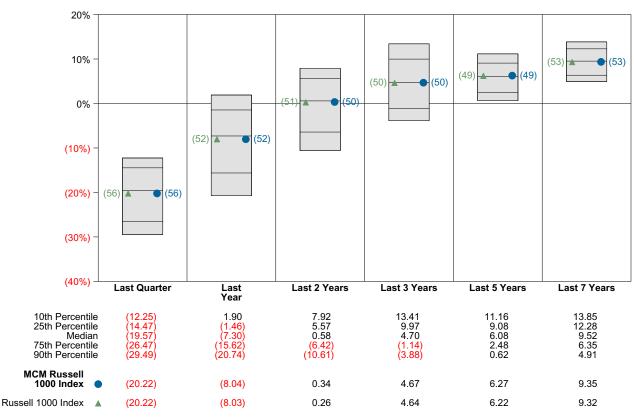
#### **Investment Philosophy**

The Russell 1000 Stock Index Fund attempts to replicate the performance and portfolio characteristics of the Russell 1000 Index.

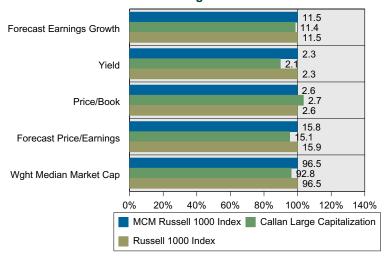
#### **Quarterly Summary and Highlights**

- MCM Russell 1000 Index's portfolio posted a (20.22)% return for the quarter placing it in the 56 percentile of the Callan Large Capitalization group for the quarter and in the 52 percentile for the last year.
- MCM Russell 1000 Index's portfolio underperformed the Russell 1000 Index by 0.00% for the quarter and underperformed the Russell 1000 Index for the year by 0.01%.

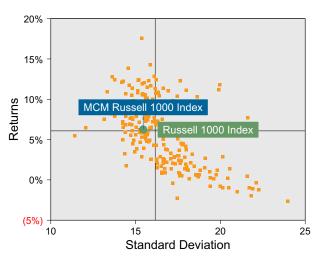
#### Performance vs Callan Large Capitalization (Gross)



### Portfolio Characteristics as a Percentage of the Russell 1000 Index



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



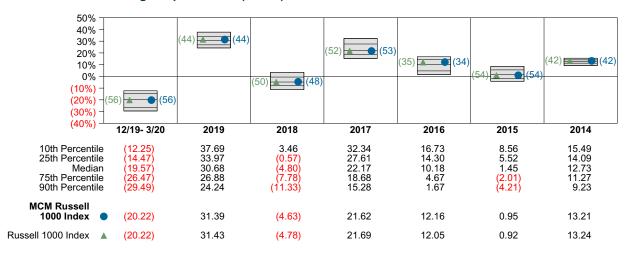


#### MCM Russell 1000 Index Return Analysis Summary

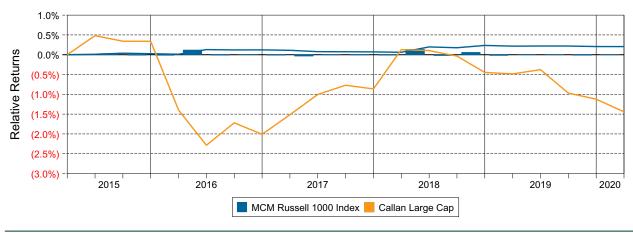
#### **Return Analysis**

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 cumulative 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.

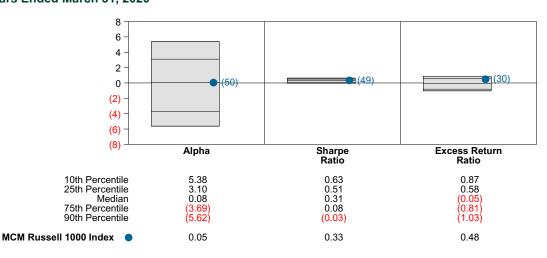
#### Performance vs Callan Large Capitalization (Gross)



#### **Cumulative and Quarterly Relative Return vs Russell 1000 Index**



Risk Adjusted Return Measures vs Russell 1000 Index Rankings Against Callan Large Capitalization (Gross) Five Years Ended March 31, 2020



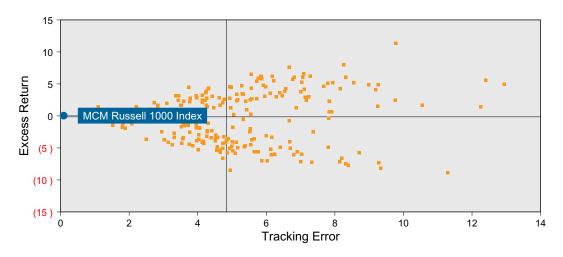


### MCM Russell 1000 Index Risk Analysis Summary

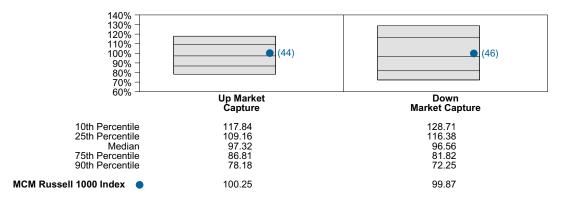
#### **Risk Analysis**

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.

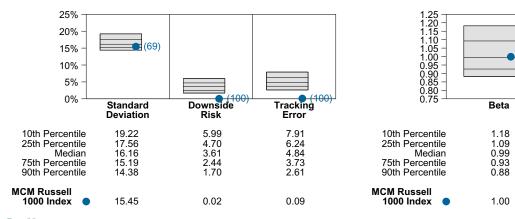
### Risk Analysis vs Callan Large Capitalization (Gross) Five Years Ended March 31, 2020



Market Capture vs Russell 1000 Index Rankings Against Callan Large Capitalization (Gross) Five Years Ended March 31, 2020



Risk Statistics Rankings vs Russell 1000 Index Rankings Against Callan Large Capitalization (Gross) Five Years Ended March 31, 2020



(1)

R-Squared

0.97

0.95

0.88

0.81

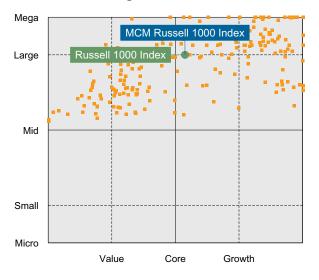
1.00

(49)

# Current Holdings Based Style Analysis MCM Russell 1000 Index As of March 31, 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.

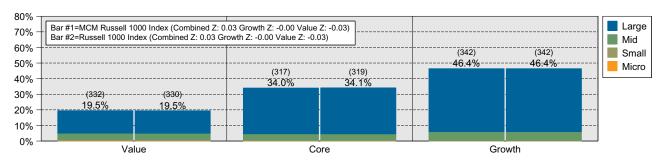
### Style Map vs Callan Large Cap Holdings as of March 31, 2020



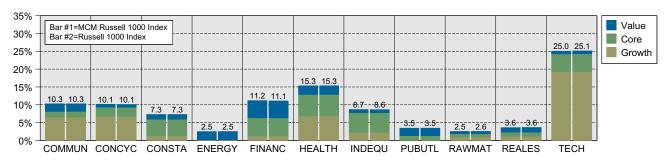
### Style Exposure Matrix Holdings as of March 31, 2020

Total	19.5% (330)	34.1% (319)	46.4% (342)	100.0% (991)
Tatal	19.5% (332)	34.0% (317)	46.4% (342)	100.0% (991)
	0.0% (1)	0.0% (3)	0.0% (1)	0.0% (5)
Micro	(1)	(2)	212 / 5 (1)	(1)
	0.0% (1)	0.0% (2)	0.0% (1)	0.0% (4)
Small	0.7% (106)	0.5% (65)	0.2% (21)	1.4% (192)
0 !!	0.7% (107)	0.5% (65)	0.2% (21)	1.4% (193)
	4.2% (150)	4.0% (142)	5.9% (206)	14.1% (498)
Mid				
	4.2% (151)	4.1% (142)	5.8% (206)	14.1% (499)
Large	14.5% (73)	29.5% (109)	40.4% (114)	84.5% (296)
Lorgo	14.6% (73)	29.5% (108)	40.4% (114)	84.5% (295)

### Combined Z-Score Style Distribution Holdings as of March 31, 2020



#### Sector Weights Distribution Holdings as of March 31, 2020





#### MCM Russell 2000 Core Index Period Ended March 31, 2020

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

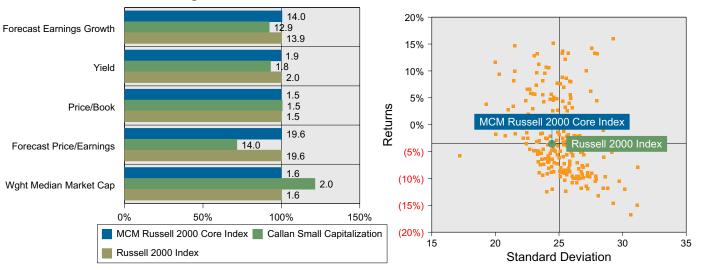
- MCM Russell 2000 Core Index's portfolio posted a (30.61)% return for the quarter placing it in the 43 percentile of the Callan Small Capitalization group for the quarter and in the 46 percentile for the last year.
- MCM Russell 2000 Core Index's portfolio outperformed the Russell 2000 Index by 0.01% for the quarter and outperformed the Russell 2000 Index for the year by 0.02%.

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



### Portfolio Characteristics as a Percentage of the Russell 2000 Index

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



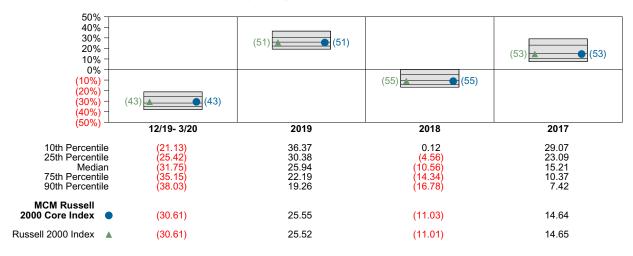


### MCM Russell 2000 Core Index Return Analysis Summary

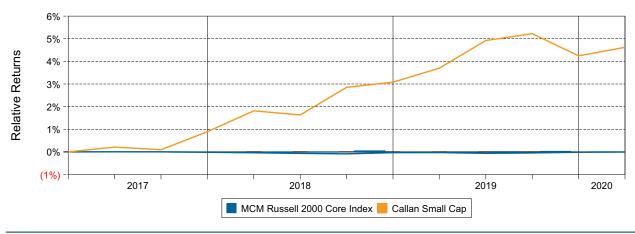
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The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative 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.

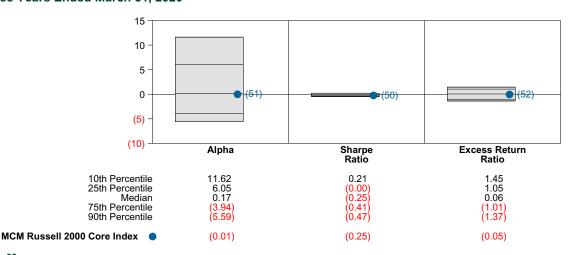
#### Performance vs Callan Small Capitalization (Gross)



#### Cumulative and Quarterly Relative Return vs Russell 2000 Index



Risk Adjusted Return Measures vs Russell 2000 Index Rankings Against Callan Small Capitalization (Gross) Three Years Ended March 31, 2020



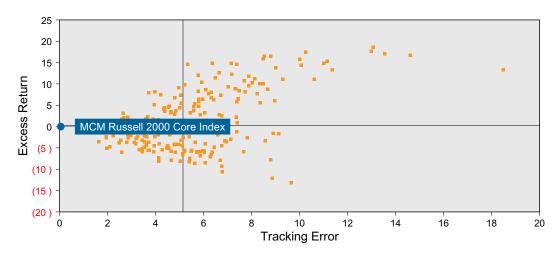


### MCM Russell 2000 Core Index Risk Analysis Summary

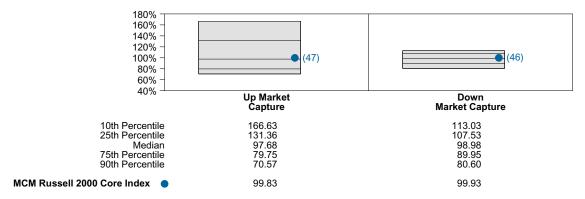
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The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows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

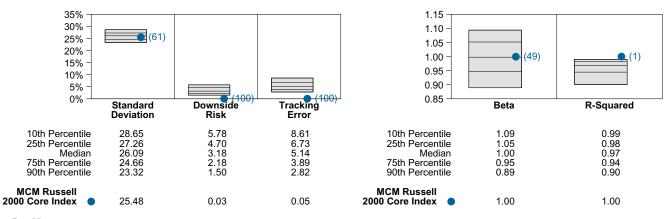
#### Risk Analysis vs Callan Small Capitalization (Gross) Three Years Ended March 31, 2020



Market Capture vs Russell 2000 Index Rankings Against Callan Small Capitalization (Gross) Three Years Ended March 31, 2020



Risk Statistics Rankings vs Russell 2000 Index Rankings Against Callan Small Capitalization (Gross) Three Years Ended March 31, 2020

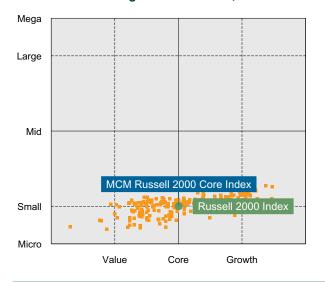




# Current Holdings Based Style Analysis MCM Russell 2000 Core Index As of March 31, 2020

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.

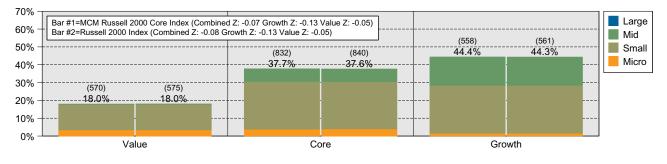
#### Style Map vs Callan Small Cap Holdings as of March 31, 2020



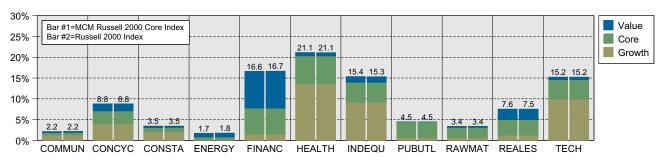
### Style Exposure Matrix Holdings as of March 31, 2020

	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)
	0.2% (1)	7.1% (33)	16.0% (62)	23.3% (96)
Mid				
	0.2% (1)	7.1% (33)	15.9% (62)	23.3% (96)
	14.3% (228)	26.6% (417)	26.8% (349)	67.8% (994)
Small				
	14.4% (230)	26.6% (415)	26.7% (350)	67.8% (995)
	3.4% (341)	3.9% (382)	1.6% (147)	8.9% (870)
Micro				
	3.4% (344)	3.9% (392)	1.7% (149)	9.0% (885)
	, ,	/- (/	. ,	,
	18.0% (570)	37.7% (832)	44.4% (558)	100.0% (1960)
Total	18.0% (570)	` ′	44.4% (558)	100.0% (1960)
Total	18.0% (570) 18.0% (575)	` ′	44.4% (558) 44.3% (561)	100.0% (1960) 100.0% (1976)

### Combined Z-Score Style Distribution Holdings as of March 31, 2020



#### Sector Weights Distribution Holdings as of March 31, 2020



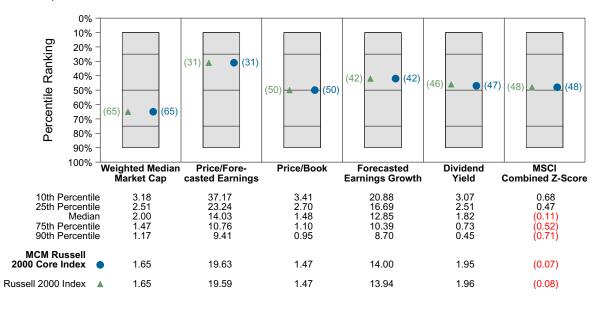


### MCM Russell 2000 Core Index Equity Characteristics Analysis Summary

#### **Portfolio Characteristics**

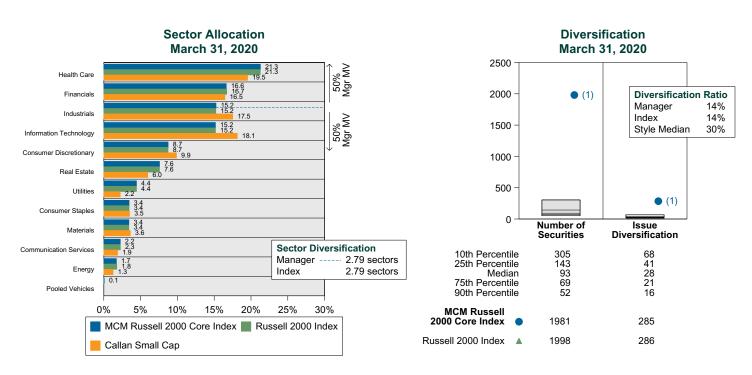
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Capitalization as of March 31, 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.





#### MCM Russell 2000 Val Index Period Ended March 31, 2020

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

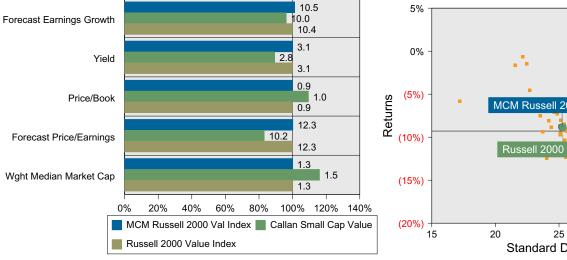
- MCM Russell 2000 Val Index's portfolio posted a (35.60)% return for the quarter placing it in the 40 percentile of the Callan Small Cap Value group for the quarter and in the 42 percentile for the last year.
- MCM Russell 2000 Val Index's portfolio outperformed the Russell 2000 Value Index by 0.06% for the quarter and outperformed the Russell 2000 Value Index for the year by 0.09%.

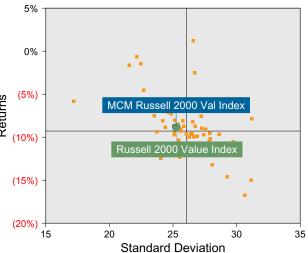
#### Performance vs Callan Small Cap Value (Gross)



#### Portfolio Characteristics as a Percentage of the Russell 2000 Value Index

Callan Small Cap Value (Gross) Annualized Three and One-Quarter Year Risk vs Return





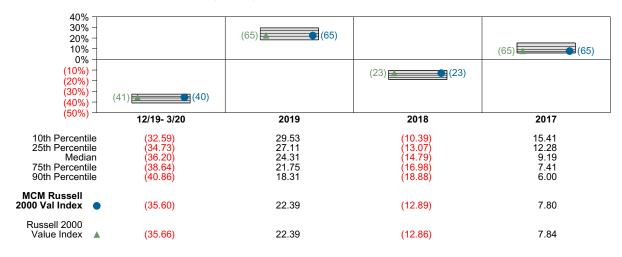


### MCM Russell 2000 Val Index Return Analysis Summary

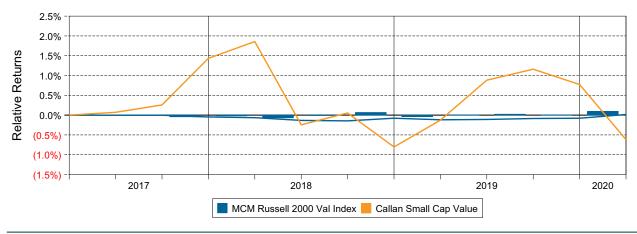
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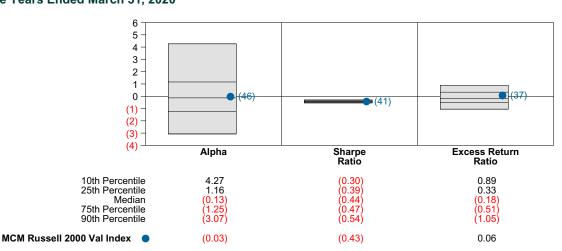
#### Performance vs Callan Small Cap Value (Gross)



#### Cumulative and Quarterly Relative Return vs Russell 2000 Value Index



Risk Adjusted Return Measures vs Russell 2000 Value Index Rankings Against Callan Small Cap Value (Gross) Three Years Ended March 31, 2020



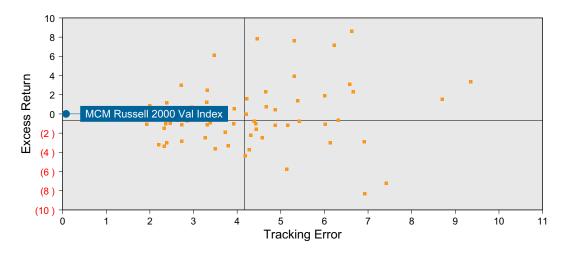


### MCM Russell 2000 Val Index Risk Analysis Summary

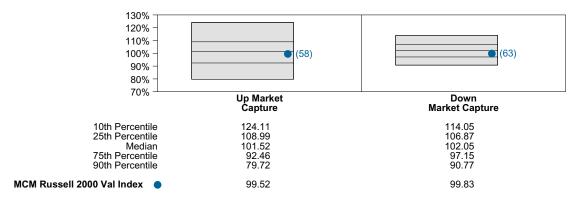
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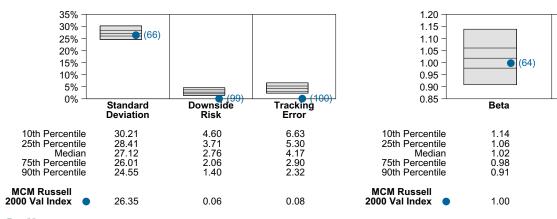
#### Risk Analysis vs Callan Small Cap Value (Gross) Three Years Ended March 31, 2020



Market Capture vs Russell 2000 Value Index Rankings Against Callan Small Cap Value (Gross) Three Years Ended March 31, 2020



Risk Statistics Rankings vs Russell 2000 Value Index Rankings Against Callan Small Cap Value (Gross) Three Years Ended March 31, 2020





**L**(1)

R-Squared

0.99

0.99

0.98

0.97

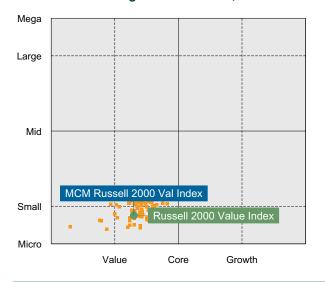
0.96

1.00

# Current Holdings Based Style Analysis MCM Russell 2000 Val Index As of March 31, 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.

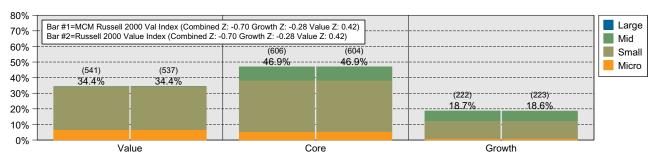
### Style Map vs Callan Small Cap Value Holdings as of March 31, 2020



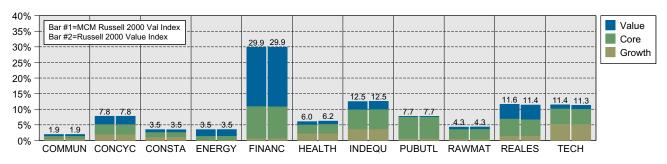
### Style Exposure Matrix Holdings as of March 31, 2020

	Value	Core	Growth	Total
iotai	34.4% (537)	46.9% (604)	18.6% (223)	100.0% (1364)
Total	34.4% (541)	46.9% (606)	18.7% (222)	100.0% (1369)
	6.6% (325)	5.4% (273)	0.9% (68)	12.9% (666)
Micro	6.6% (328)	5.4% (269)	0.9% (66)	12.9% (663)
	27.5% (211)	32.8% (311)	11.4% (138)	71.8% (660)
Small	27.4% (212)	32.9% (317)	11.5% (139)	71.9% (668)
	0.3% (1)	8.7% (20)	6.3% (17)	15.3% (38)
Mid	0.3% (1)	8.6% (20)	6.3% (17)	15.2% (38)
3	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)

### Combined Z-Score Style Distribution Holdings as of March 31, 2020



#### Sector Weights Distribution Holdings as of March 31, 2020



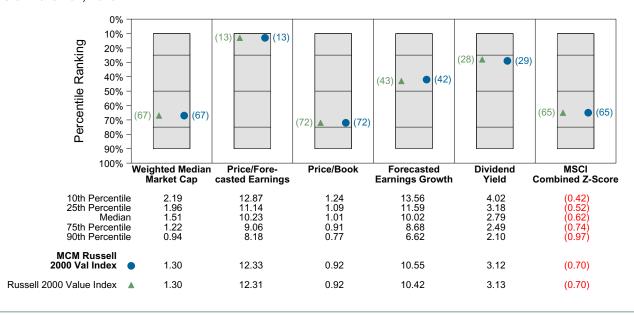


### MCM Russell 2000 Val Index Equity Characteristics Analysis Summary

#### **Portfolio Characteristics**

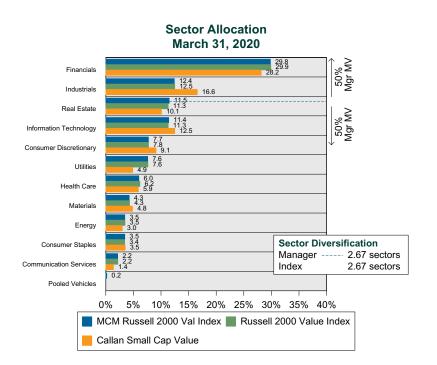
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

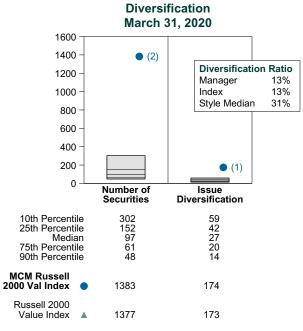
#### Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Cap Value as of March 31, 2020



#### **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.







### Emerald Asset Management Period Ended March 31, 2020

#### **Investment Philosophy**

Emerald is dedicated to fundamental, bottom-up research designed to identify unrecognized, under-researched and undervalued growth companies.

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

- Emerald Asset Management's portfolio posted a (24.41)% return for the quarter placing it in the 64 percentile of the Callan Small Cap Growth group for the quarter and in the 67 percentile for the last year.
- Emerald Asset Management's portfolio outperformed the Russell 2000 Growth Index by 1.36% for the quarter and outperformed the Russell 2000 Growth Index for the year by 0.28%.

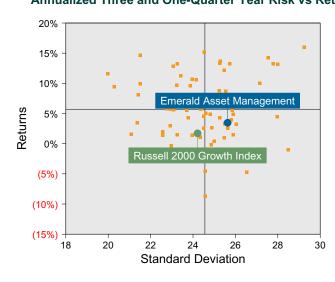
#### Performance vs Callan Small Cap Growth (Gross)



#### Relative Return vs Russell 2000 Growth Index

#### 5% 4% 3% 2% Relative Returns 1% 0% (1%) (2%)(3%)(4%)(5%)2017 2018 2019 2020 **Emerald Asset Management**

### Callan Small Cap Growth (Gross) Annualized Three and One-Quarter Year Risk vs Return



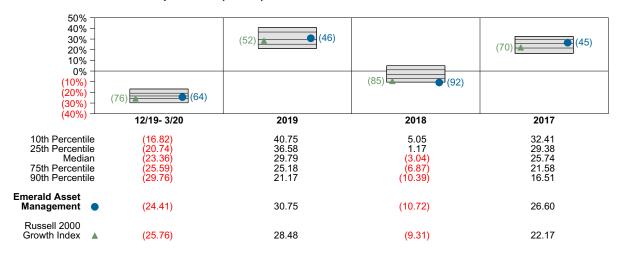


### **Emerald Asset Management Return Analysis Summary**

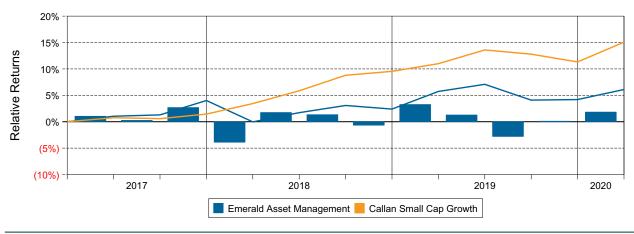
#### **Return Analysis**

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 cumulative 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.

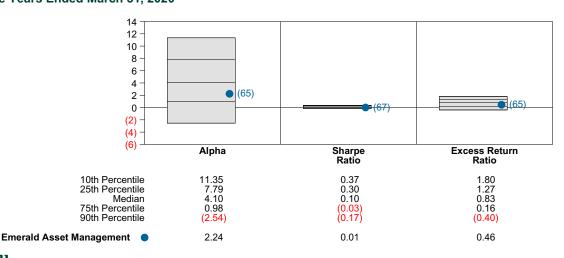
#### Performance vs Callan Small Cap Growth (Gross)



#### Cumulative and Quarterly Relative Return vs Russell 2000 Growth Index



Risk Adjusted Return Measures vs Russell 2000 Growth Index Rankings Against Callan Small Cap Growth (Gross) Three Years Ended March 31, 2020



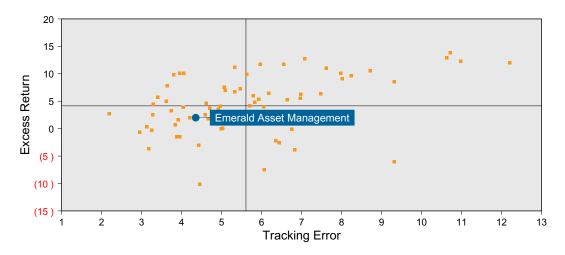


#### **Emerald Asset Management Risk Analysis Summary**

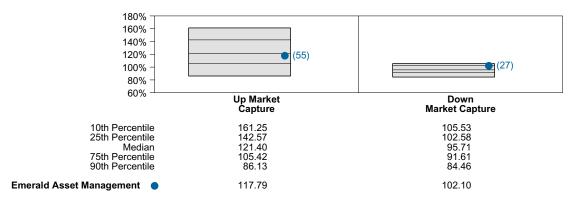
#### **Risk Analysis**

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.

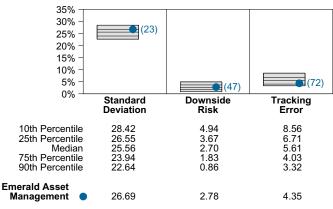
#### Risk Analysis vs Callan Small Cap Growth (Gross) Three Years Ended March 31, 2020

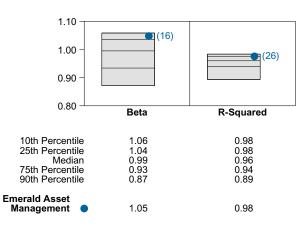


Market Capture vs Russell 2000 Growth Index Rankings Against Callan Small Cap Growth (Gross) Three Years Ended March 31, 2020



Risk Statistics Rankings vs Russell 2000 Growth Index Rankings Against Callan Small Cap Growth (Gross) Three Years Ended March 31, 2020



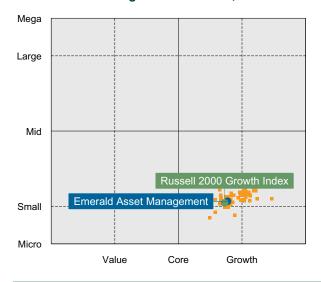




#### Current Holdings Based Style Analysis Emerald Asset Management As of March 31, 2020

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.

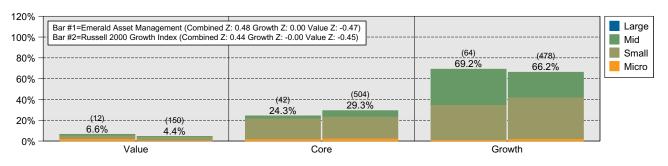
### Style Map vs Callan Small Cap Growth Holdings as of March 31, 2020



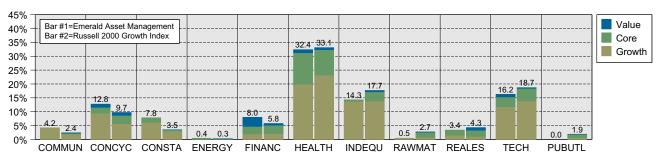
### Style Exposure Matrix Holdings as of March 31, 2020

Micro	2.2% (7)	2.1% (6)	1.2% (4)	5.5% (17)
	3.6% (63) 2.2% (7)	21.0% (262) 2.1% (6)	39.8% (298) 1.2% (4)	64.3% (623) 5.5% (17)
Small	3.3% (4)	19.9% (32)	33.8% (37)	57.0% (73)
Mid	0.2% (1)	5.7% (20)	24.2% (56)	30.0% (77)
J	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0) 37.5% (28)
Large	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)

### Combined Z-Score Style Distribution Holdings as of March 31, 2020



#### Sector Weights Distribution Holdings as of March 31, 2020



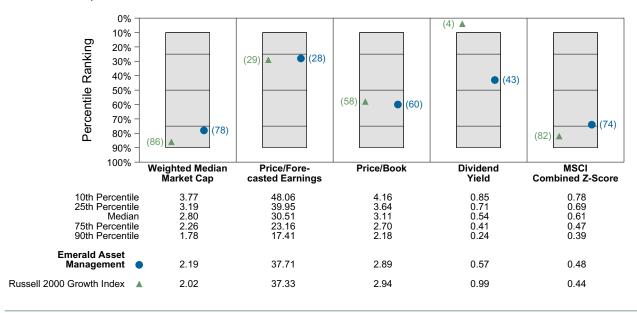


### **Emerald Asset Management Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

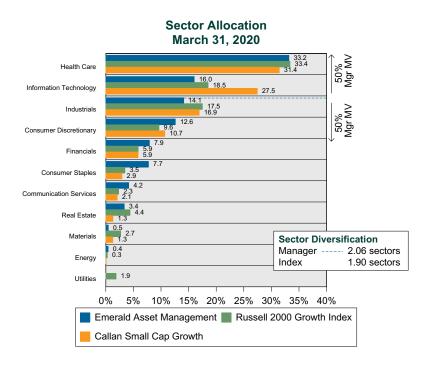
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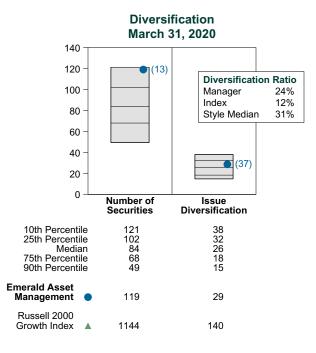
#### Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Cap Growth as of March 31, 2020



#### **Sector Weights**

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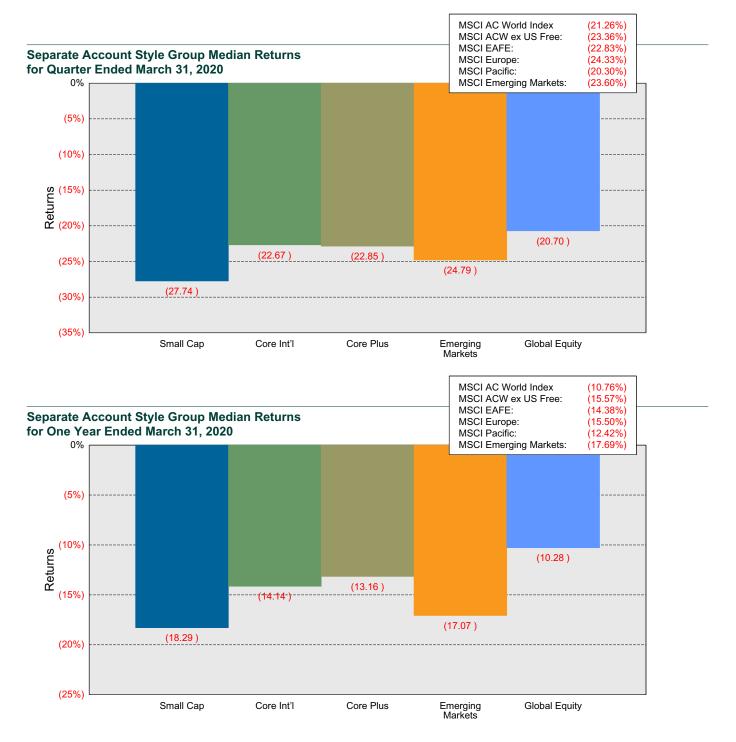




### International Equity Active Management Overview

Global ex-U.S. equity indices fell sharply in the first quarter; the MSCI ACWI ex-USA Index dropped 23.4%. Across developed markets, Canada (-28%), the U.K. (-30%), and Australia (-34%) were among the worst performers while Japan (-17%) fared better, in relative terms. Modest appreciation of the U.S. dollar versus a basket of developed market currencies acted as a headwind for U.S. investors. As in the U.S., growth (MSCI ACWI ex-USA Growth: -18%) outperformed value (MSCI ACWI ex-USA Value: -29%). Also mirroring performance in the U.S., Health Care (-9%) was a top-performing sector while Energy (-38%) was the worst.

Emerging markets equities (MSCI EM: -23.6%) also sold off with currency depreciation being a key driver. Collectively, Latin American countries fell 46% in U.S. dollar terms and 32% in local currency terms. Russia dropped 36% in U.S. dollars (-22% local) and South Africa fell 41% (-24% local). India sank 32% (-27% local) while China performed relatively well, down only 10% in the quarter in U.S. dollar terms.

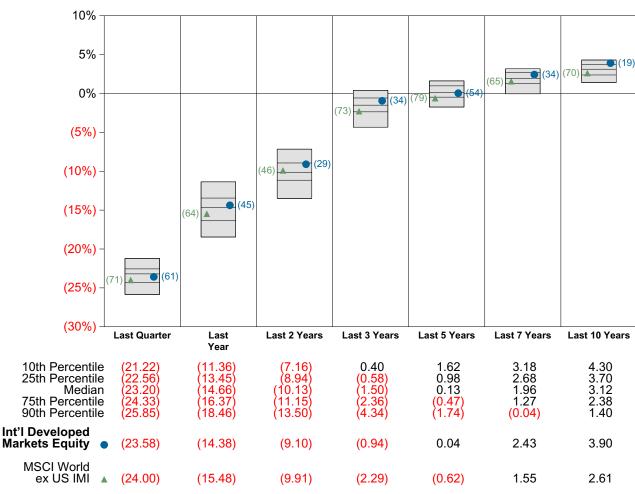


#### Int'l Developed Markets Equity Period Ended March 31, 2020

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

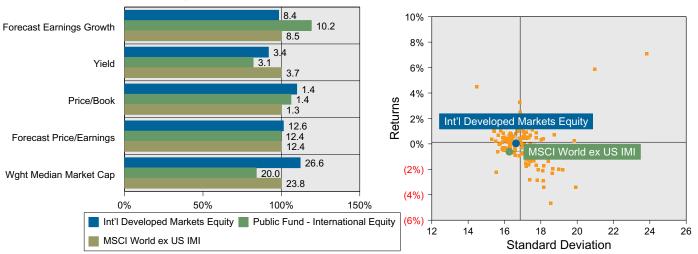
- Int'l Developed Markets Equity's portfolio posted a (23.58)% return for the quarter placing it in the 61 percentile of the Public Fund International Equity group for the quarter and in the 45 percentile for the last year.
- Int'l Developed Markets Equity's portfolio outperformed the MSCI World ex US IMI by 0.42% for the quarter and outperformed the MSCI World ex US IMI for the year by 1.10%.

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



### Portfolio Characteristics as a Percentage of the MSCI World ex US IMI

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



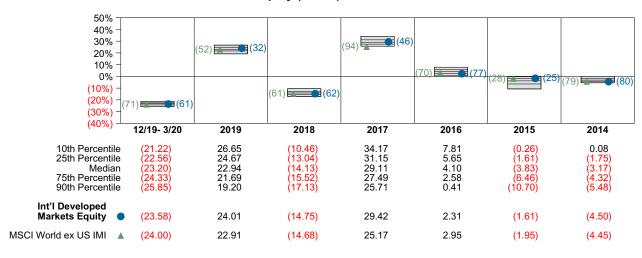


#### Int'l Developed Markets Equity **Return Analysis Summary**

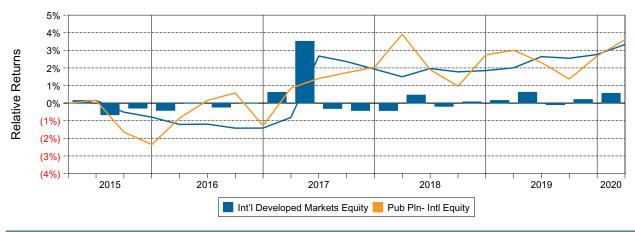
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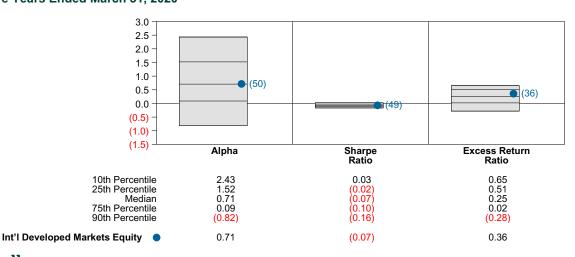
#### Performance vs Public Fund - International Equity (Gross)



#### Cumulative and Quarterly Relative Return vs MSCI World ex US IMI



Risk Adjusted Return Measures vs MSCI World ex US IMI Rankings Against Public Fund - International Equity (Gross) Five Years Ended March 31, 2020



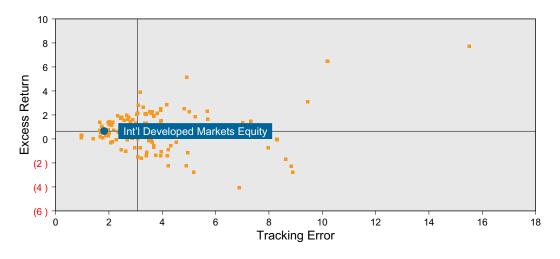


#### Int'l Developed Markets Equity **Risk Analysis Summary**

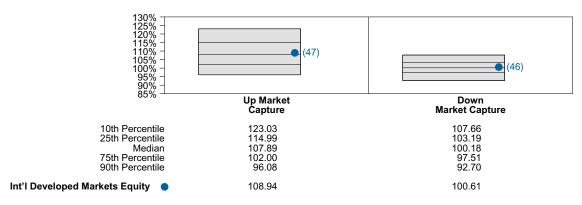
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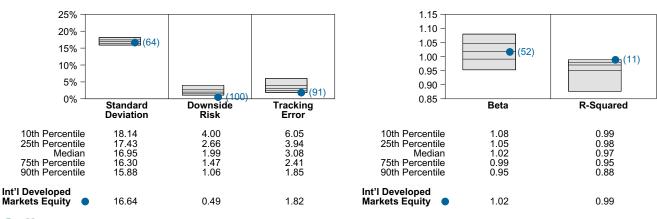
#### Risk Analysis vs Public Fund - International Equity (Gross) Five Years Ended March 31, 2020



Market Capture vs MSCI World ex US IMI Index (USD Net Div) Rankings Against Public Fund - International Equity (Gross) Five Years Ended March 31, 2020



Risk Statistics Rankings vs MSCI World ex US IMI Index (USD Net Div) Rankings Against Public Fund - International Equity (Gross) Five Years Ended March 31, 2020

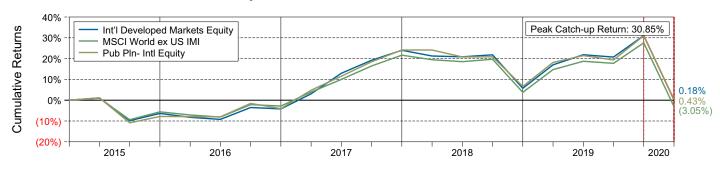




#### Int'l Developed Markets Equity Drawdown Analysis for Five Years Ended March 31, 2020

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**

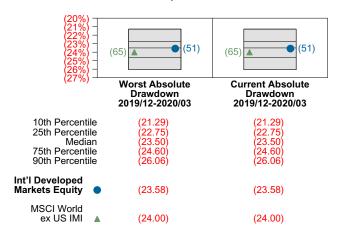


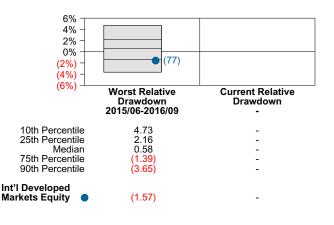
	Worst Absolute Drawdown				Current Absolute Drawdown					
	Return	Years	Period	Index	Peers	Return	Years	Period	Index	Peers
Int'l Developed Markets Equit	y (23.58)%	0.25	2019/12-2020/03	(24.00)%	(23.32)%	(23.58)%	0.25	2019/12-2020/03	(24.00)%	(23.32)%
Recovery from Trough	-	-	-	-	-	-	-	-	-	-
MSCI World ex US IMI	(24.00)%	0.25	2019/12-2020/03			(24.00)%	0.25	2019/12-2020/03		
Pub Pln- Intl Equity	(23.32)%	0.25	2019/12-2020/03			(23.32)%	0.25	2019/12-2020/03		

#### Relative Cumulative Drawdown Analysis vs. MSCI World ex US IMI **Sumulative Relative Returns** Int'l Developed Markets Equity Pub Pln- Intl Equity 3.33% 2% 1% 0% (1%)(2%) (3%)(4%)2015 2016 2017 2018 2019 2020

	Worst Relative Drawdown				Current Relative Drawdown			
	Rel Rtn	Years	Period	Peers	Rel Rtn	Years	Period	Peers
Int'l Developed Markets Equity	y (1.57)%	1.25	2015/06-2016/09	0.42%	-	-	-	-
Recovery from Trough	4.16%	0.75	2016/09-2017/06	0.82%	-	-	-	-
Pub Pln- Intl Equity	(2.84)%	0.50	2018/03-2018/09		(0.31)%	2.00	2018/03-2020/03	

Drawdown Rankings vs. MSCI World ex US IMI Rankings against Public Fund - International Equity Five Years Ended March 31, 2020



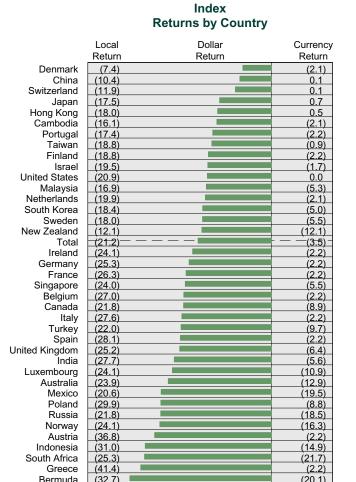




#### Int'l Developed Markets Equity vs MSCI World ex US IMI Attribution for Quarter Ended March 31, 2020

#### 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.



(60%) (50%) (40%) (30%) (20%) (10%) 0%

Index Return

#### (Portfolio - Index) Index Portfolio Weight Weight Denmark 1.7 1.9 China 0.1 Switzerland 8.1 20.7 Japan 23.0 Hong Kong 3.0 3.7 Cambodia 0.0 0.0 Portugal 0.2 0.2 Taiwan 0.2 0.0 Finland 0.9 1.6 Israel 0.7 0.5 **United States** 0.0 0.7 Malaysia 0.0 0.0 Netherlands 3.4 3.3 South Korea 0.0 0.7 Sweden 2.9 2.4 New Zealand 0.3 0.4 Total Ireland 0.5 0.5 Germany 7.5 7.1 9.3 9.3 France Singapore 1.2 Belgium 1.0 0.9 Canada 9.1 8.2 Italy 23 26 Turkey 0.0 0.0 Spain 2.5 2.7 United Kingdom <u> 15.3</u> 14.5 India 0.0 0.1 Luxembourg 0.0 0.2 Australia 6.3 6.2 Mexico 0.0 0.3 Poland 0.0 0.0 Russia Norway 8.0 0.9 Austria 0.3 0.5

**Beginning Relative Weights** 

#### Attribution Factors for Quarter Ended March 31, 2020 5% 0.12 0.30 0% Percent Return (5%)(10%)(15%)(20%) (25%)(23.58) (24.00)(30%)

Country Selection

(22.4)

10%

Indonesia

Greece

Brazil

Bermuda

South Africa

0.0

0.0

0.0

0.0

0.0

Currency Selection

(2%)

(1%)

0%

Security Selection

(3%)



Brazil

(36.6

Portfolio Return

0.3

0.0

0.1

0.0

0.1

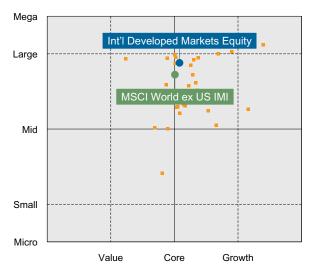
2%

1%

# **Current Holdings Based Style Analysis** Int'l Developed Markets Equity As of March 31, 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.

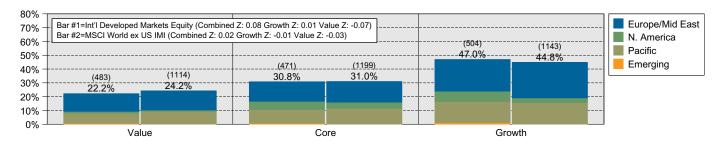
## Style Map vs Pub Pln- Intl Equity Holdings as of March 31, 2020



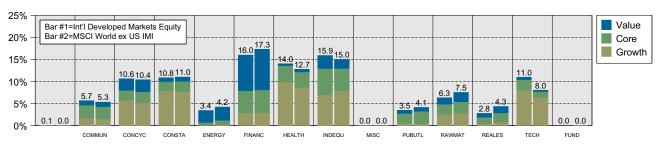
## **Style Exposure Matrix** Holdings as of March 31, 2020

	12.9% (199)	14.3% (189)	23.1% (185)	50.3% (573)
Europe/				
Mid East	14.0% (455)	15.0% (491)	25.7% (447)	54.7% (1393)
	1.3% (31)	6.0% (48)	7.5% (47)	14.7% (126)
N. America	, ,	, ,	, ,	` '
	0.9% (95)	4.4% (118)	3.4% (84)	8.7% (297)
	7.6% (226)	10.0% (189)	15.3% (204)	32.8% (619)
Pacific	, ,	, ,	, ,	, ,
	9.3% (564)	11.6% (589)	15.7% (612)	36.6% (1765)
	0.4% (27)	0.6% (45)	1.2% (68)	2.2% (140)
Emerging	, ,		, ,	, ,
	0.0% (0)	0.0% (1)	0.0% (0)	0.0% (1)
	22.2% (483)	30.8% (471)	47.0% (504)	100.0% (1458)
Total				
	24.2% (1114)	31.0% (1199)	44.8% (1143)	100.0% (3456)
	Value	Core	Growth	Total

## **Combined Z-Score Style Distribution** Holdings as of March 31, 2020



## **Sector Weights Distribution** Holdings as of March 31, 2020

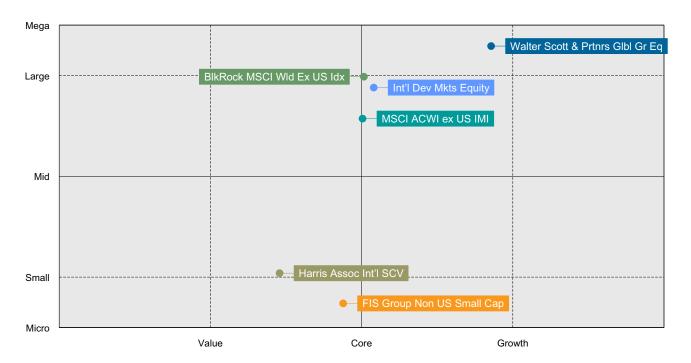




## **International Holdings Based Style Analysis** For One Quarter Ended March 31, 2020

This page analyzes and compares the investment styles of multiple portfolios using a detailed holdings-based style analysis methodology. The size component of style is measured by the weighted median market capitalization of the holdings. The value/core/growth style dimension is captured by the "Combined Z-Score" of the portfolio. This score is based on eight fundamental factors used in the MSCI stock style scoring system. The table below gives a more detailed breakdown of several relevant style metrics on the portfolios.

Style Map Holdings for One Quarter Ended March 31, 2020



	Weight	Wtd Median	Combined	Growth	Value	Number of	Security
	%	Mkt Cap	Z-Score	Z-Score	Z-Score	Securities D	Diversification
Walter Scott & Prtnrs Glbl Gr	Eq3.75%	80.25	0.71	0.16	(0.56)	50	17.87
BlkRock MSCI Wld Ex US Idx	74.39%	28.61	0.03	(0.01)	(0.04)	1010	117.08
Harris Assoc Int'l SCV	7.16%	2.11	(0.50)	(0.12)	0.38	60	16.89
FIS Group Non US Small Cap	4.44%	1.30	(0.10)	0.04	0.14	503	93.28
Int'l Dev Mkts Equity	100.00%	26.65	0.08	0.01	(0.07)	1566	136.69
MSCI ACWI ex US IMI	-	21.02	0.02	(0.01)	(0.03)	6589	230.60

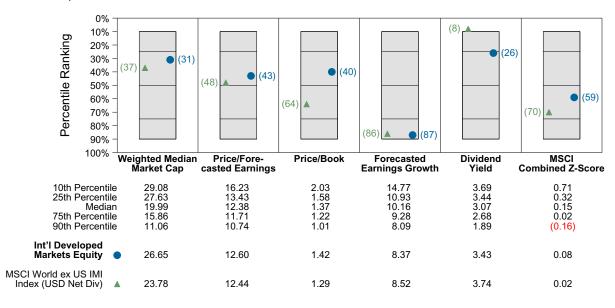


# Int'l Developed Markets Equity **Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

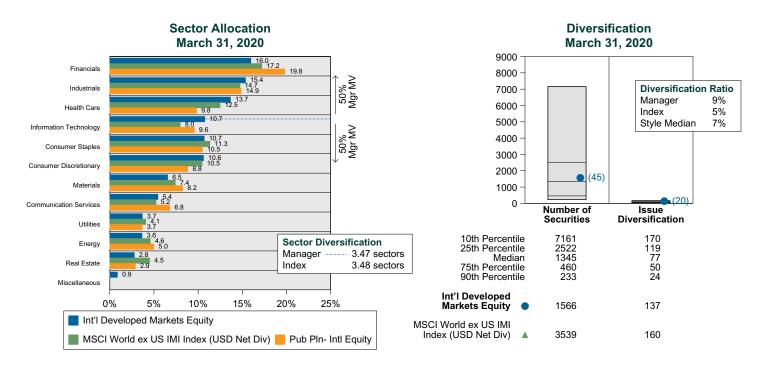
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Portfolio Characteristics Percentile Rankings** Rankings Against Public Fund - International Equity as of March 31, 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.

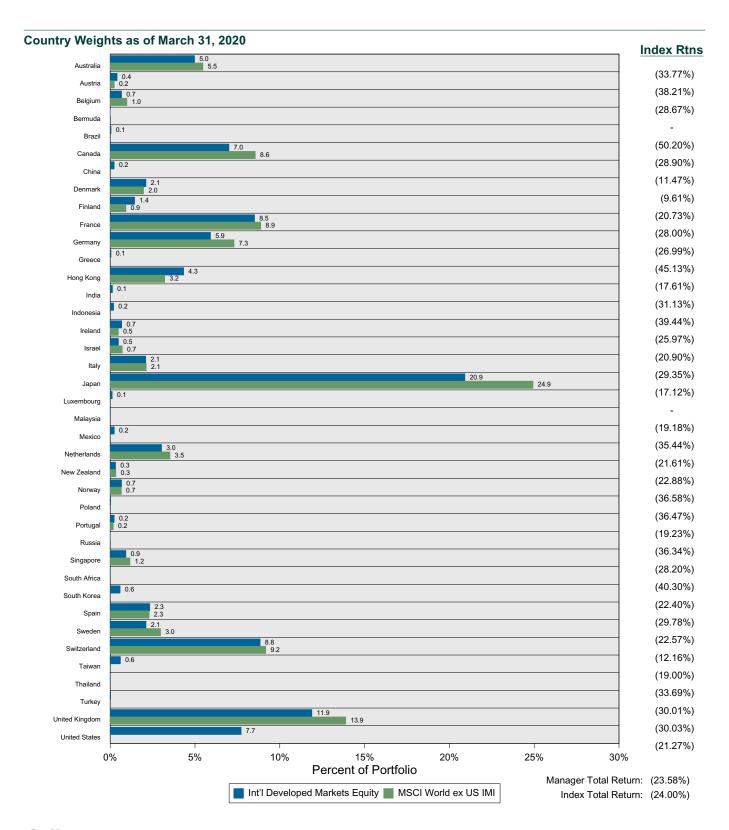




# **Country Allocation** Int'l Developed Markets Equity VS MSCI World ex US IMI Index (USD Net Div)

#### **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of March 31, 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.





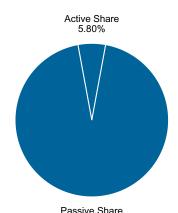
# Int'l Developed Markets Equity Active Share Analysis as of March 31, 2020 vs. MSCI World ex US IMI Index (USD Net Div)

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 18.17% Non-Index Active Share 7.29% Passive Share 74.54%

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



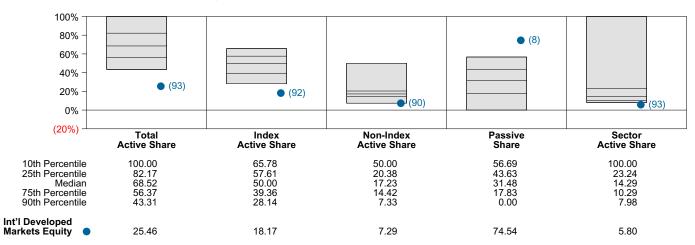
94.20%

Total Active Share: 25.46%

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

Index Active Share Within Sector	Non-Index Active Share Within Sector	Total Active Share Within Sector	Index Weight	Manager Weight	Contribution to Total Portfolio Active Share
15.37%	9.25%	24.62%	5.23%	5.44%	1.25%
19.09%	8.14%	27.23%	10.46%	10.61%	2.74%
14.96%	5.47%	20.44%	11.32%	10.69%	2.43%
10.99%	1.50%	12.50%	4.58%	3.64%	0.61%
11.48%	2.95%	14.44%	17.21%	15.97%	2.88%
14.11%	9.05%	23.17%	12.49%	13.67%	2.82%
26.93%	3.29%	30.22%	14.74%	15.36%	4.39%
25.57%	17.50%	43.07%	7.97%	10.75%	3.49%
18.75%	6.90%	25.64%	7.42%	6.55%	2.06%
50.00%	50.00%	100.00%	-	0.86%	0.39%
100.00%	0.00%	100.00%	-	-	0.00%
38.06%	4.04%	42.10%	4.51%	2.78%	1.37%
16.35%	5.47%	21.82%	4.07%	3.68%	0.98%
18.17%	7.29%	25.46%	100.00%	100.00%	25.42%

## Active Share vs. Pub Pln- Intl Equity





## Walter Scott & Prtnrs Glbl Gr Eq Period Ended March 31, 2020

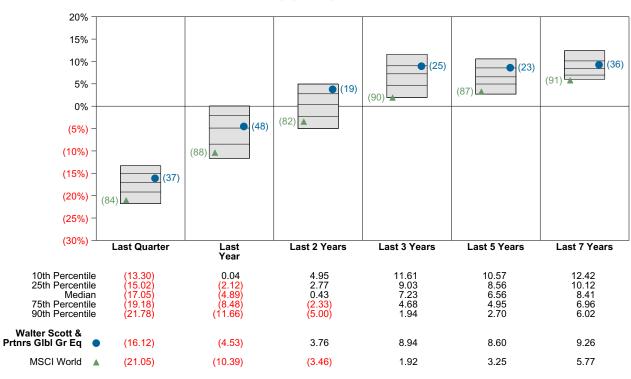
#### **Investment Philosophy**

Walter Scott believes that the objective for all long term investors is to maintain and enhance the real after inflation purchasing power of their assets. This is most likely to be achieved by investing in companies with high rates of internal wealth generation which in time translates into total return for the investor. Thus, the firm's research efforts are directed towards identifying companies that meet its investment criteria. Their research process combines historic and forecasted financial analysis with business and management analysis at the company level.

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

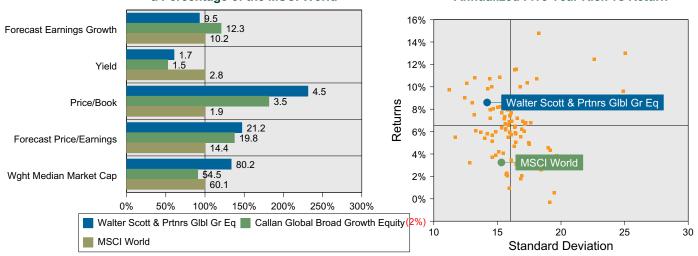
- Walter Scott & Prtnrs Glbl Gr Eq's portfolio posted a (16.12)% return for the quarter placing it in the 37 percentile of the Callan Global Broad Growth Equity group for the quarter and in the 48 percentile for the last year.
- Walter Scott & Prtnrs Glbl Gr Eq's portfolio outperformed the MSCI World by 4.93% for the guarter and outperformed the MSCI World for the year by 5.86%.

#### Performance vs Callan Global Broad Growth Equity (Gross)



### Portfolio Characteristics as a Percentage of the MSCI World

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



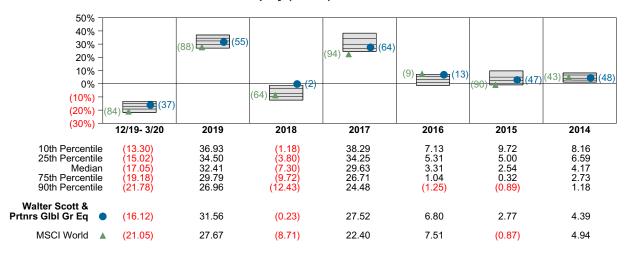


# Walter Scott & Prtnrs Glbl Gr Eq **Return Analysis Summary**

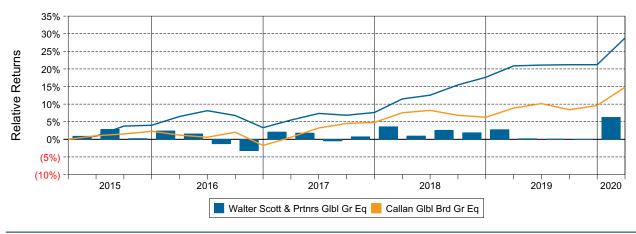
#### **Return Analysis**

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 cumulative 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.

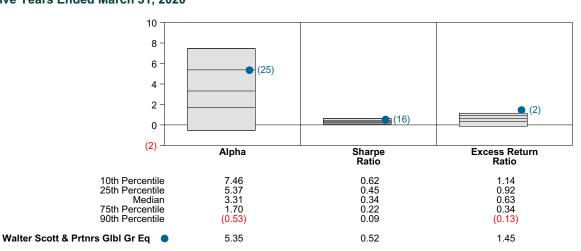
## Performance vs Callan Global Broad Growth Equity (Gross)



## **Cumulative and Quarterly Relative Return vs MSCI World**



Risk Adjusted Return Measures vs MSCI World Rankings Against Callan Global Broad Growth Equity (Gross) Five Years Ended March 31, 2020



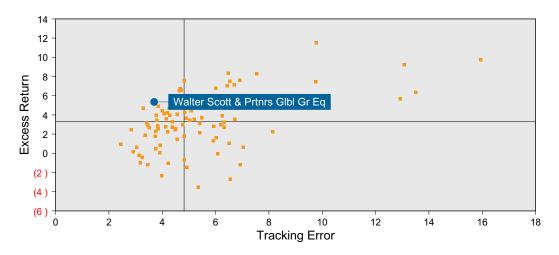


# Walter Scott & Prtnrs Glbl Gr Eq **Risk Analysis Summary**

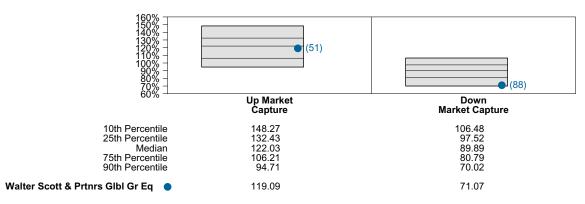
#### Risk Analysis

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.

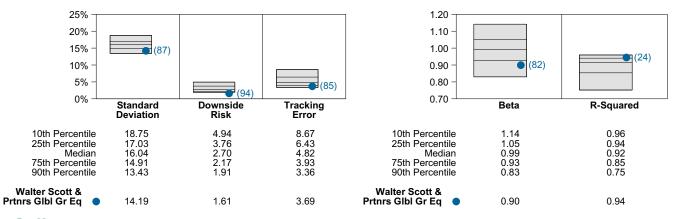
## Risk Analysis vs Callan Global Broad Growth Equity (Gross) Five Years Ended March 31, 2020



Market Capture vs MSCI World Index (USD Net Div) Rankings Against Callan Global Broad Growth Equity (Gross) Five Years Ended March 31, 2020



Risk Statistics Rankings vs MSCI World Index (USD Net Div) Rankings Against Callan Global Broad Growth Equity (Gross) Five Years Ended March 31, 2020

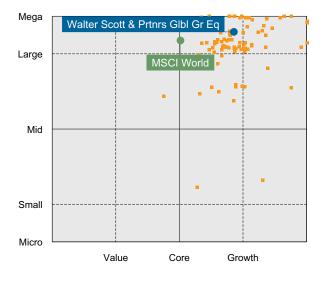




# **Current Holdings Based Style Analysis** Walter Scott & Prtnrs Glbl Gr Eq As of March 31, 2020

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.

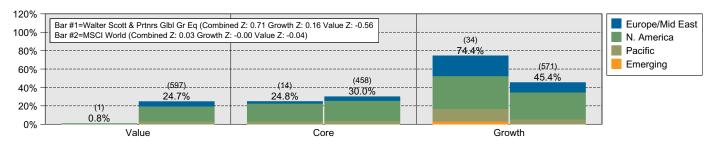
## Style Map vs Callan Glbl Brd Gr Eq Holdings as of March 31, 2020



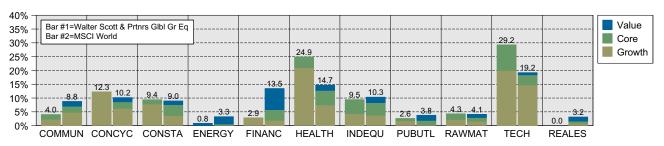
## **Style Exposure Matrix** Holdings as of March 31, 2020

	/0 (00.1)	331373 (133)	Growth	Total
Total	24.7% (597)	30.0% (458)	45.4% (571)	100.0% (1626)
Tatal	0.8% (1)	24.8% (14)	74.4% (34)	100.0% (49)
	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Emerging	, ,	, ,	, ,	, ,
	0.0% (0)	0.0% (0)	3.0% (1)	3.0% (1)
	3.2% (160)	3.9% (136)	5.5% (173)	12.6% (469)
Pacific	0.0% (0)	3.3% (3)	13.9% (6)	17.3% (9)
	16.4% (294)	21.7% (206)	29.5% (219)	67.6% (719)
N. America	10 10/	0.4.70/	00 50/	07.00/
	0.8% (1)	19.3% (10)	35.5% (15)	55.7% (26)
Europe/ Mid East	5.1% (143)	4.3% (116)	10.4% (179)	19.8% (438)
Furanc/	0.0% (0)	2.1% (1)	21.9% (12)	24.0% (13)

## **Combined Z-Score Style Distribution** Holdings as of March 31, 2020



## **Sector Weights Distribution** Holdings as of March 31, 2020



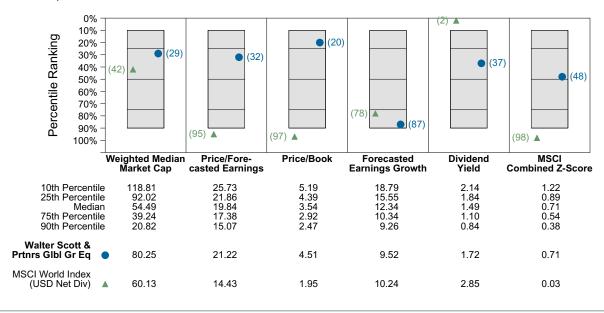


# Walter Scott & Prtnrs Glbl Gr Eq **Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

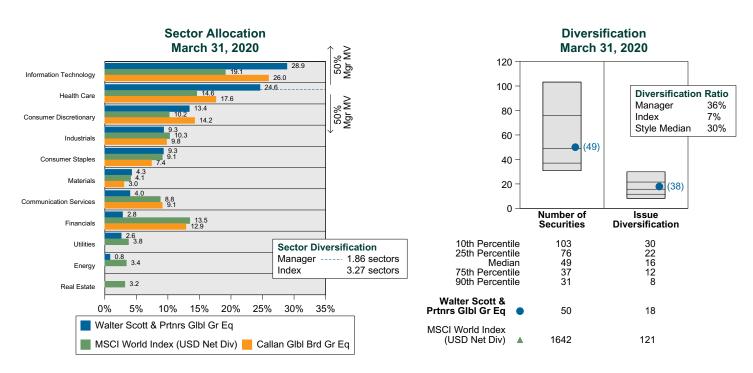
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Global Broad Growth Equity as of March 31, 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.





## BlackRock MSCI World Ex US Index Period Ended March 31, 2020

#### **Investment Philosophy**

The objective of the World ex-U.S. Index Fund is to track the performance of the MSCI World ex-U.S. Index. The Fund fully replicates the index, holding every stock in the index in its market capitalization weight to ensure close tracking and minimize transaction costs.

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

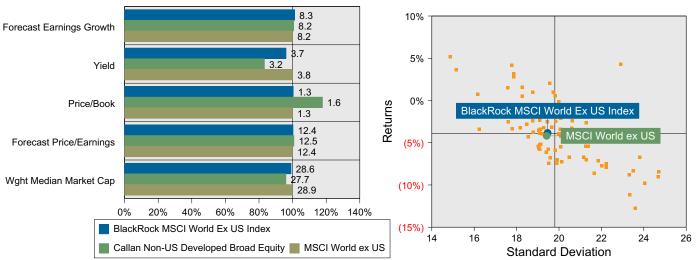
- BlackRock MSCI World Ex US Index's portfolio posted a (23.20)% return for the quarter placing it in the 55 percentile of the Callan Non-US Developed Broad Equity group for the quarter and in the 53 percentile for the last year.
- BlackRock MSCI World Ex US Index's portfolio outperformed the MSCI World ex US by 0.06% for the quarter and outperformed the MSCI World ex US for the year by 0.36%.

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



## Portfolio Characteristics as a Percentage of the MSCI World ex US

## Callan Non-US Developed Broad Equity (Gross) Annualized Two and Three-Quarter Year Risk vs Return





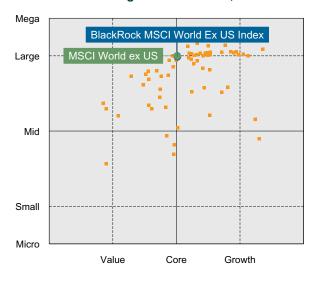
# **Current Holdings Based Style Analysis** BlackRock MSCI World Ex US Index As of March 31, 2020

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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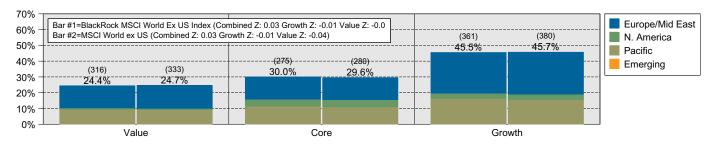
## Style Map vs Callan NonUS Dev Broad Eq Holdings as of March 31, 2020



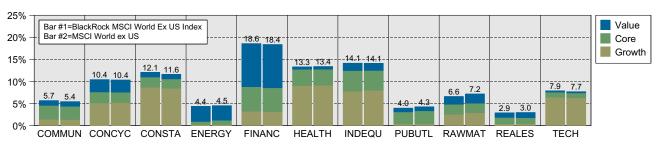
## **Style Exposure Matrix** Holdings as of March 31, 2020

	Value	Core	Growth	Total
	24.7% (333)	29.6% (280)	45.7% (380)	100.0% (993)
Total				
	24.4% (316)	30.0% (275)	45.5% (361)	100.0% (952)
	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Emerging				
	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
	9.2% (163)	11.0% (133)	15.6% (173)	35.7% (469)
Pacific				
	9.4% (161)	11.5% (132)	16.3% (173)	37.3% (466)
	0.9% (23)	4.6% (32)	3.5% (34)	8.9% (89)
America				
	0.9% (20)	4.4% (31)	3.3% (31)	8.6% (82)
Mid East	14.6% (147)	14.0% (115)	26.7% (173)	<b>55.4</b> % (435)
Europe/	14.1% (135)	14.1% (112)	25.9% (157)	54.2% (404)

## **Combined Z-Score Style Distribution** Holdings as of March 31, 2020



## **Sector Weights Distribution** Holdings as of March 31, 2020



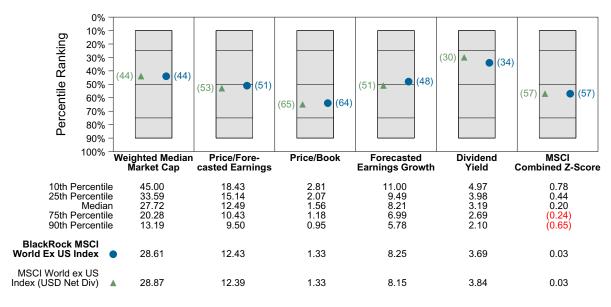


# BlackRock MSCI World Ex US Index **Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

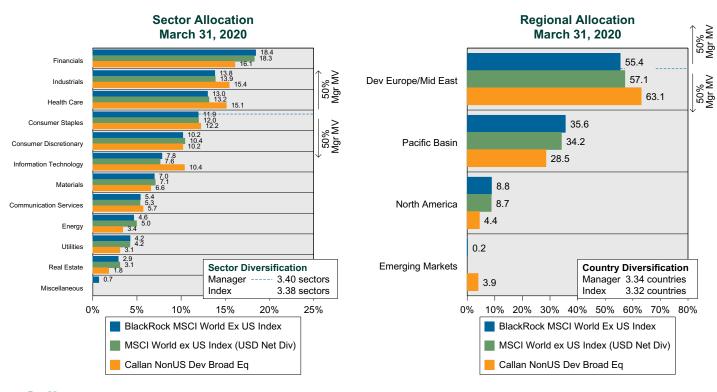
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Non-US Developed Broad Equity as of March 31, 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.

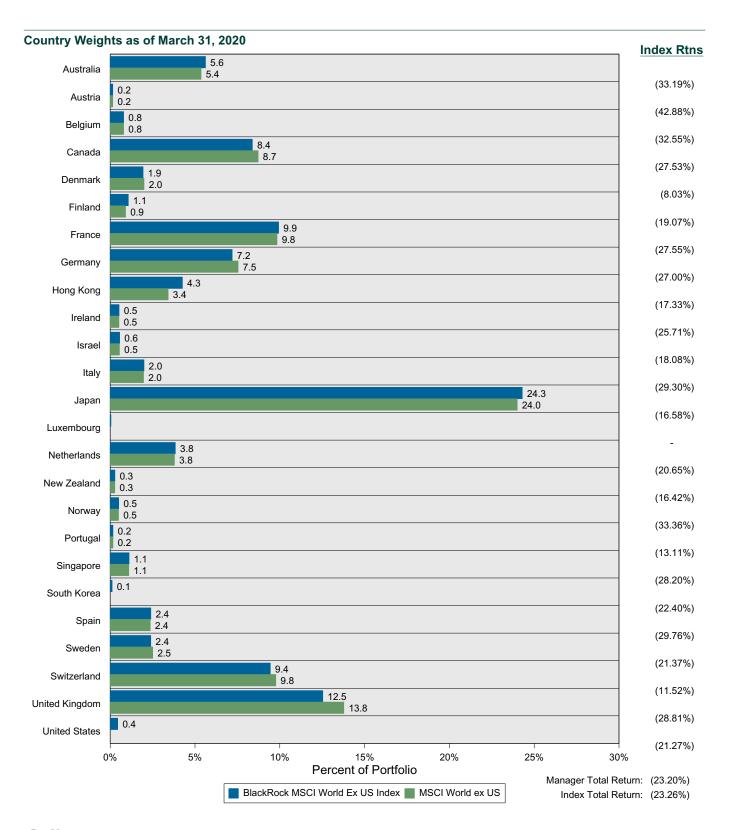




# **Country Allocation** BlackRock MSCI World Ex US Index VS MSCI World ex US Index (USD Net Div)

#### **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of March 31, 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.



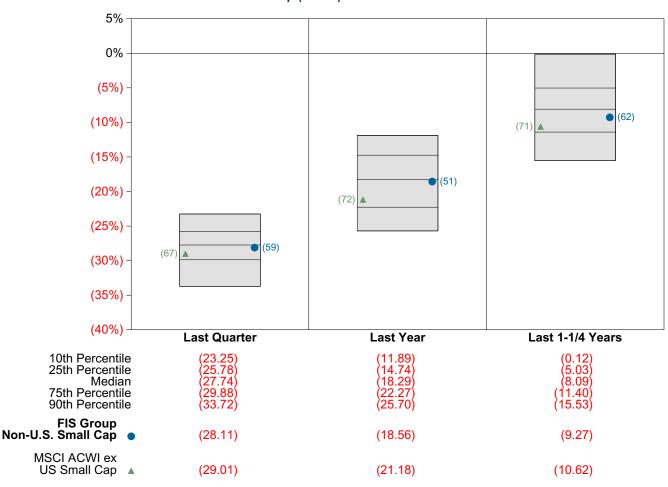


# FIS Group Non-U.S. Small Cap Period Ended March 31, 2020

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

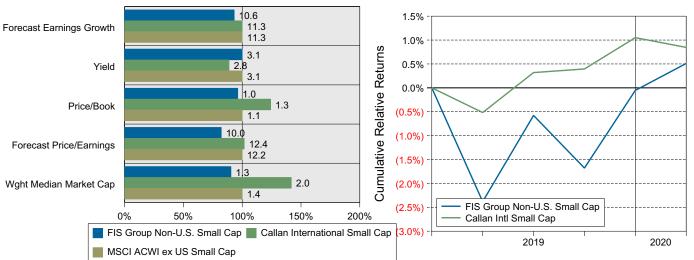
- FIS Group Non-U.S. Small Cap's portfolio posted a (28.11)% return for the guarter placing it in the 59 percentile of the Callan International Small Cap group for the quarter and in the 51 percentile for the last year.
- FIS Group Non-U.S. Small Cap's portfolio outperformed the MSCI ACWI ex US Small Cap by 0.89% for the quarter and outperformed the MSCI ACWI ex US Small Cap for the year by 2.62%.

## Performance vs Callan International Small Cap (Gross)



## Portfolio Characteristics as a Percentage of the MSCI ACWI ex US Small Cap

## **Cumulative Returns vs** MSCI ACWI ex US Small Cap

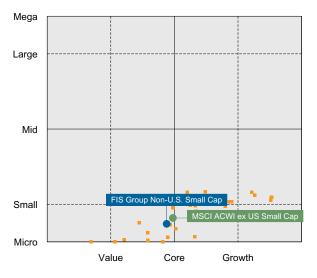




# **Current Holdings Based Style Analysis** FIS Group Non-U.S. Small Cap As of March 31, 2020

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.

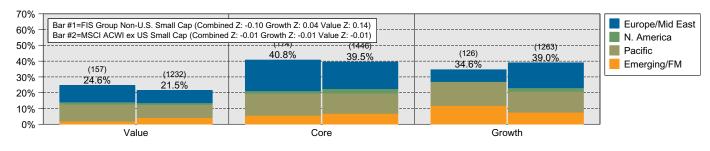
## Style Map vs Callan Intl Small Cap Holdings as of March 31, 2020



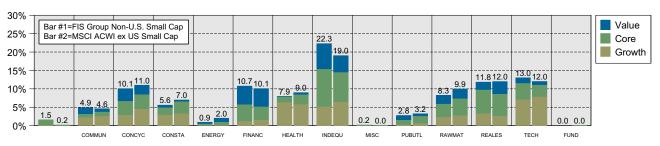
## **Style Exposure Matrix** Holdings as of March 31, 2020

	Value	Core	Growth	Total
	21.5% (1232)	39.5% (1446)	39.0% (1263)	100.0% (3941)
Total				
	24.6% (157)	40.8% (174)	34.6% (126)	100.0% (457)
Emerging/ FM	4.2% (451)	6.8% (525)	7.6% (500)	18.5% (1476)
	1.9% (25)	5.6% (41)	11.8% (65)	19.3% (131)
	8.3% (401)	12.8% (458)	13.2% (439)	34.3% (1298)
Pacific	10.070 (07)	13.5 % (39)	13.0 % (34)	33.7 /6 (100)
	10.8% (67)	13.9% (59)	15.0% (34)	39.7% (160)
N. America	1.1% (72)	2.8% (87)	2.3% (50)	6.2% (209)
N. America	1.4% (8)	1.7% (7)	0.1% (2)	3.2% (17)
Europe/ Mid East	7.9% (308)	17.1% (376)	15.9% (274)	40.9% (958)
	10.6% (57)	19.6% (67)	7.6% (25)	37.8% (149)

## **Combined Z-Score Style Distribution** Holdings as of March 31, 2020



## **Sector Weights Distribution** Holdings as of March 31, 2020



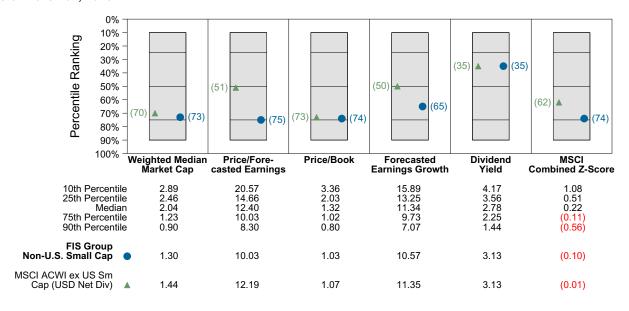


# FIS Group Non-U.S. Small Cap **Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

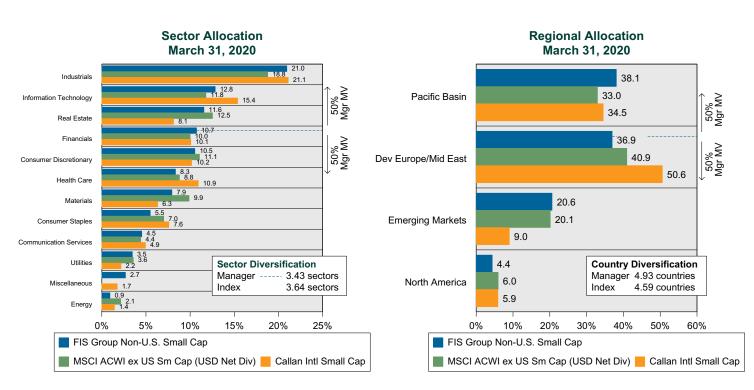
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Portfolio Characteristics Percentile Rankings** Rankings Against Callan International Small Cap as of March 31, 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.

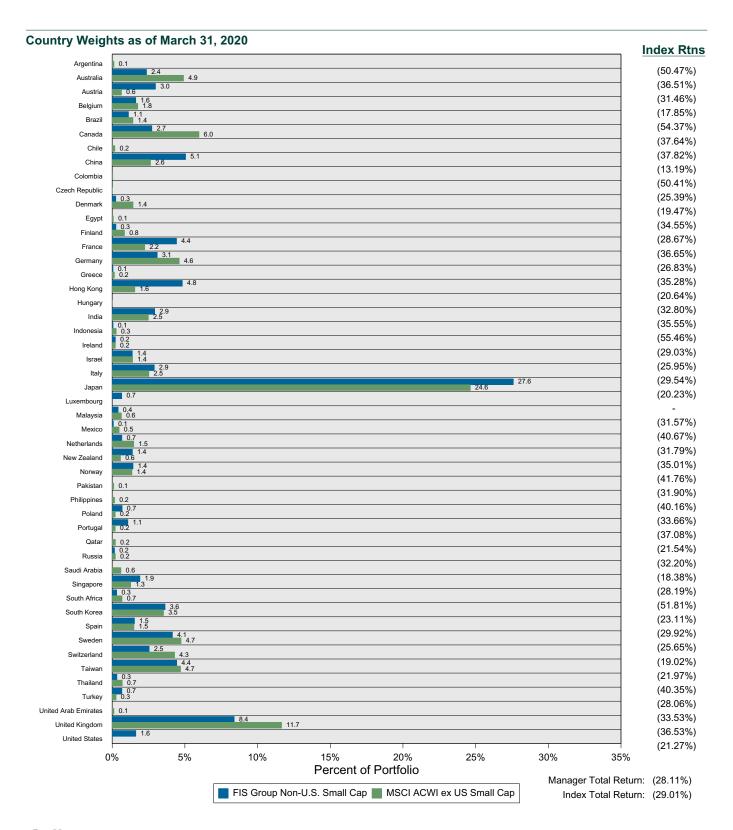




# **Country Allocation** FIS Group Non-U.S. Small Cap VS MSCI ACWI ex US Sm Cap (USD Net Div)

#### **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of March 31, 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.





## Harris Assoc Int'l SCV Period Ended March 31, 2020

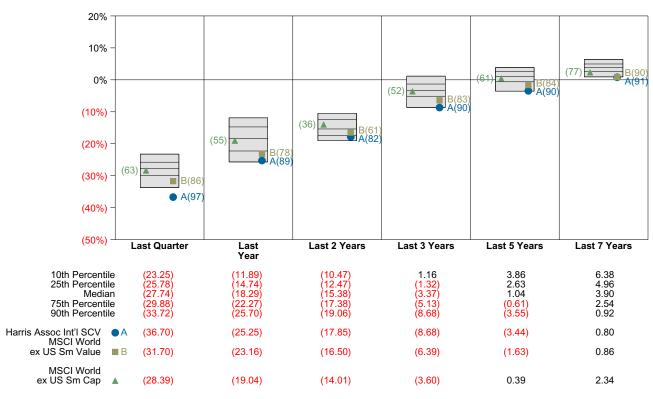
#### **Investment Philosophy**

The team seeks to invest in companies that trade at a substantial discount to their underlying business values and are run by managers who think and act as owners. Portfolio managers believe that purchasing a quality business at a discount to its underlying value minimizes risk while providing substantial profit potential.

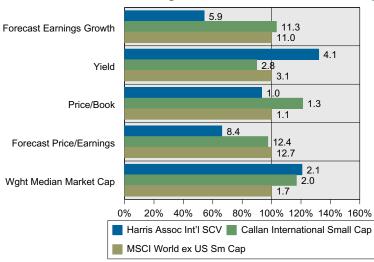
## **Quarterly Summary and Highlights**

- Harris Assoc Int'l SCV's portfolio posted a (36.70)% return for the quarter placing it in the 97 percentile of the Callan International Small Cap group for the quarter and in the 89 percentile for the last year.
- Harris Assoc Int'l SCV's portfolio underperformed the MSCI World ex US Sm Cap by 8.31% for the quarter and underperformed the MSCI World ex US Sm Cap for the year by 6.22%.

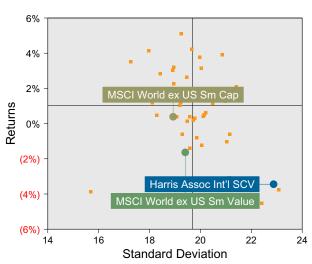
## Performance vs Callan International Small Cap (Gross)



## Portfolio Characteristics as a Percentage of the MSCI World ex US Sm Cap



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



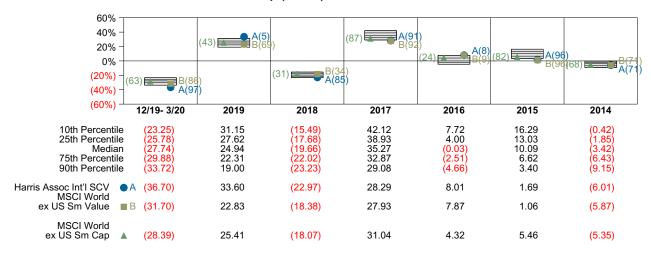


# Harris Assoc Int'l SCV **Return Analysis Summary**

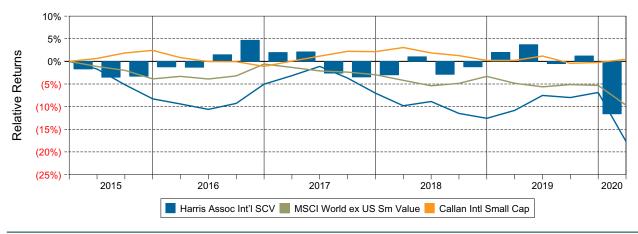
#### **Return Analysis**

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 cumulative 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.

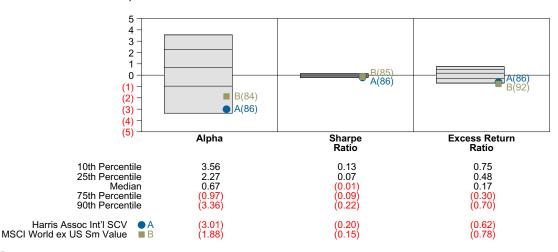
#### Performance vs Callan International Small Cap (Gross)



## Cumulative and Quarterly Relative Return vs MSCI World ex US Sm Cap



Risk Adjusted Return Measures vs MSCI World ex US Sm Cap Rankings Against Callan International Small Cap (Gross) Five Years Ended March 31, 2020



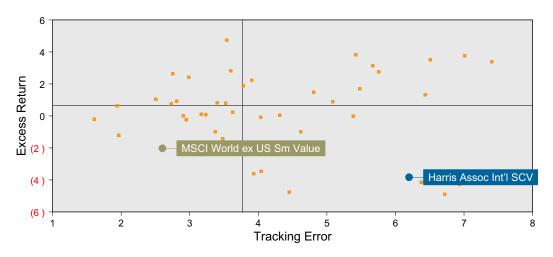


# Harris Assoc Int'l SCV **Risk Analysis Summary**

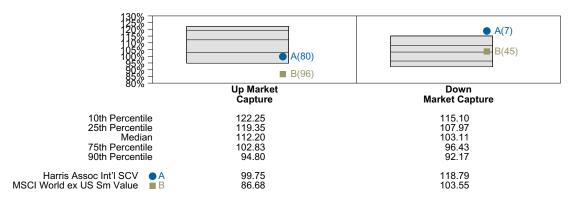
#### Risk Analysis

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.

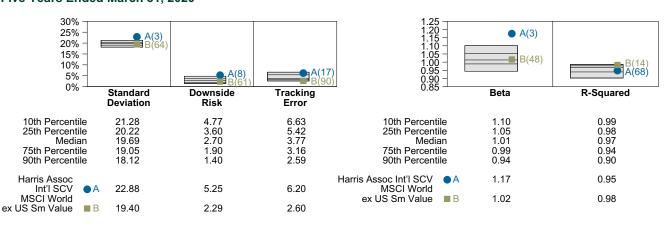
## Risk Analysis vs Callan International Small Cap (Gross) Five Years Ended March 31, 2020



Market Capture vs MSCI World ex US Small Cap (USD Net Div) Rankings Against Callan International Small Cap (Gross) Five Years Ended March 31, 2020



Risk Statistics Rankings vs MSCI World ex US Small Cap (USD Net Div) Rankings Against Callan International Small Cap (Gross) Five Years Ended March 31, 2020





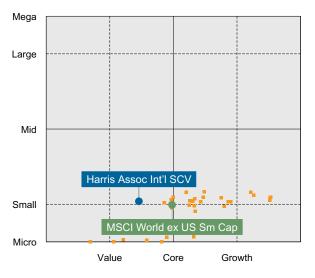
# **Current Holdings Based Style Analysis** Harris Assoc Int'l SCV As of March 31, 2020

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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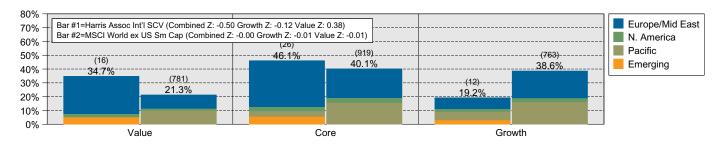
## Style Map vs Callan Intl Small Cap Holdings as of March 31, 2020



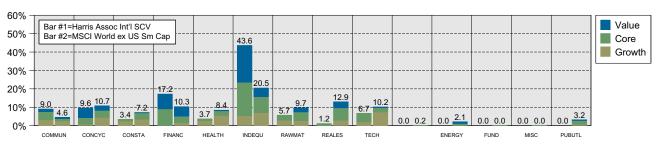
## **Style Exposure Matrix** Holdings as of March 31, 2020

	Value	Core	Growth	Total
	21.3% (781)	40.1% (919)	38.6% (763)	100.0% (2463)
Total				
	34.7% (16)	46.1% (26)	19.2% (12)	100.0% (54)
	0.0% (0)	0.0% (1)	0.0% (0)	0.0% (1)
Emerging				
	5.1% (2)	5.7% (4)	3.1% (2)	13.8% (8)
	10.2% (401)	15.7% (456)	16.2% (439)	42.1% (1296)
Pacific				
	0.4% (1)	4.0% (4)	6.1% (3)	10.5% (8)
	1.3% (72)	3.5% (86)	2.8% (50)	7.6% (208)
America				
	2.1% (1)	3.0% (2)	2.0% (1)	7.1% (4)
Mid East	9.8% (308)	20.9% (376)	19.6% (274)	<b>50.2</b> % (958)
Europe/	27.1% (12)	33.4% (16)	8.0% (6)	68.5% (34)

## **Combined Z-Score Style Distribution** Holdings as of March 31, 2020



## **Sector Weights Distribution** Holdings as of March 31, 2020



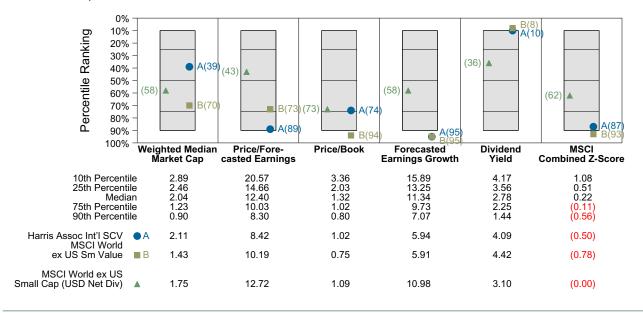


# Harris Assoc Int'l SCV **Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

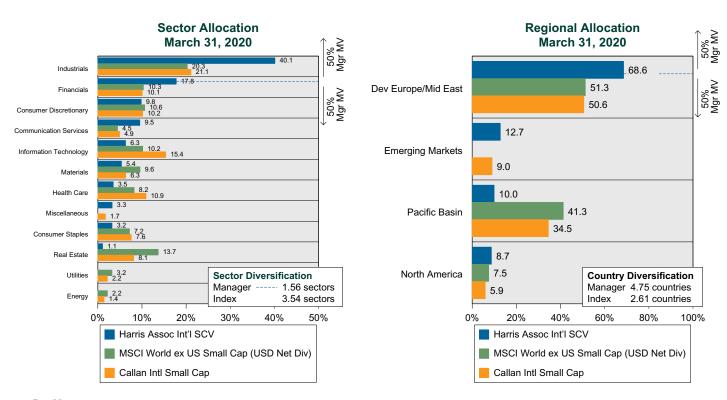
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Portfolio Characteristics Percentile Rankings** Rankings Against Callan International Small Cap as of March 31, 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.

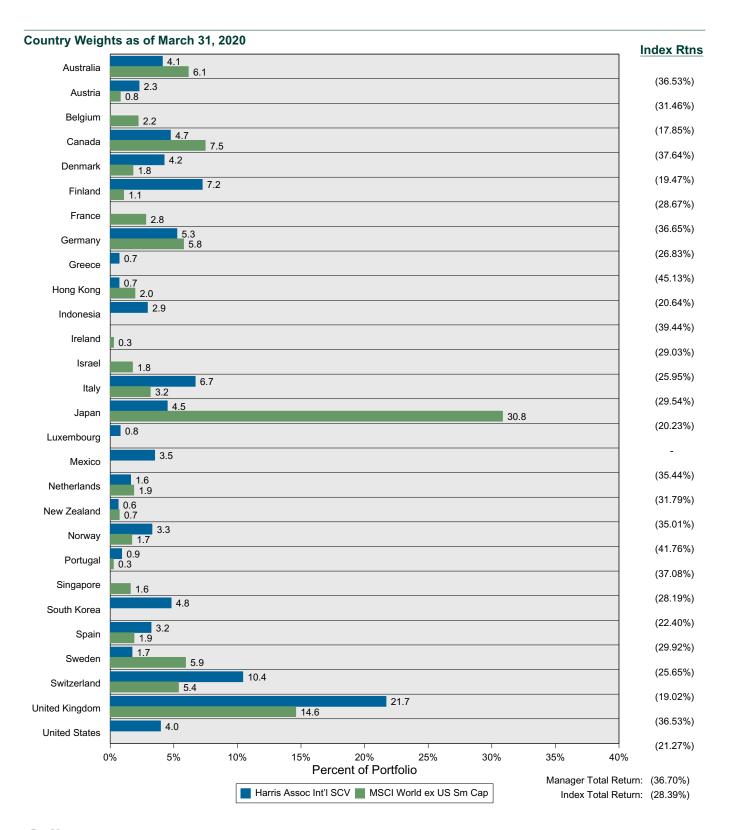




# **Country Allocation** Harris Assoc Int'l SCV VS MSCI World ex US Small Cap (USD Net Div)

#### **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of March 31, 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.



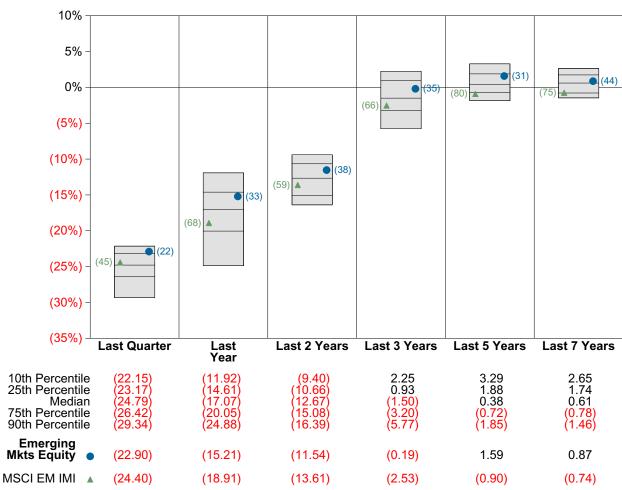


## **Emerging Mkts Equity** Period Ended March 31, 2020

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

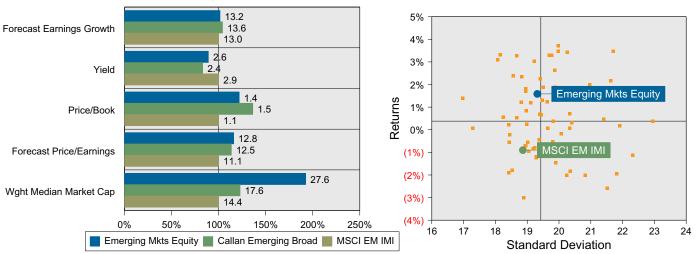
- Emerging Mkts Equity's portfolio posted a (22.90)% return for the quarter placing it in the 22 percentile of the Callan Emerging Broad group for the quarter and in the 33 percentile for the last year.
- Emerging Mkts Equity's portfolio outperformed the MSCI EM IMI by 1.50% for the quarter and outperformed the MSCI EM IMI for the year by 3.70%.

## Performance vs Callan Emerging Broad (Gross)



## Portfolio Characteristics as a Percentage of the MSCI EM IMI

#### Callan Emerging Broad (Gross) Annualized Five Year Risk vs Return



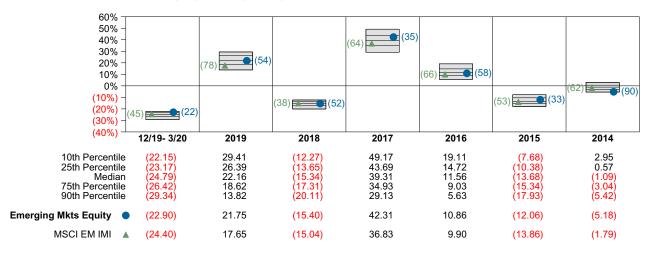


# **Emerging Mkts Equity Return Analysis Summary**

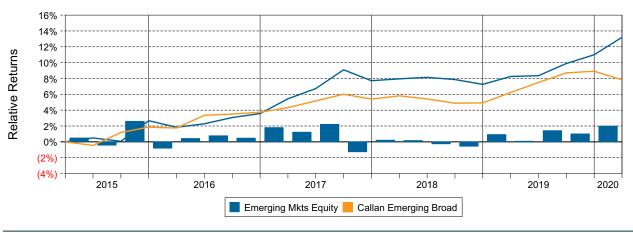
#### **Return Analysis**

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 cumulative 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.

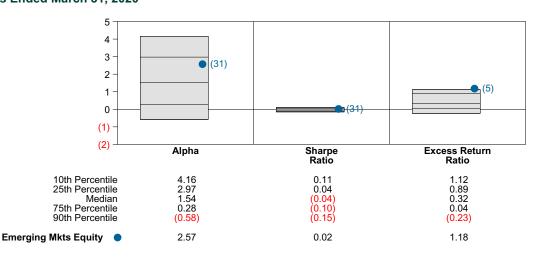
## Performance vs Callan Emerging Broad (Gross)



## **Cumulative and Quarterly Relative Return vs MSCI EM IMI**



Risk Adjusted Return Measures vs MSCI EM IMI Rankings Against Callan Emerging Broad (Gross) Five Years Ended March 31, 2020



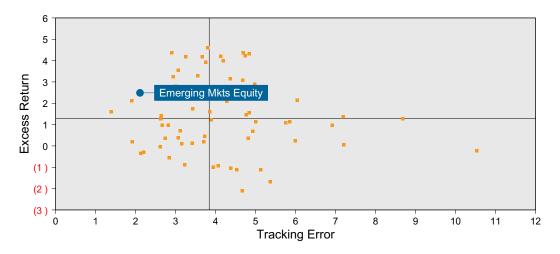


# **Emerging Mkts Equity Risk Analysis Summary**

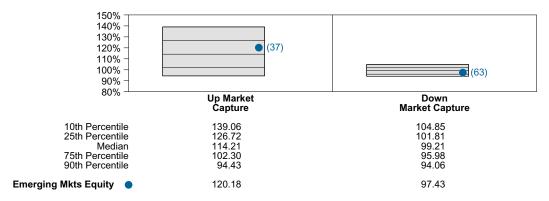
#### Risk Analysis

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.

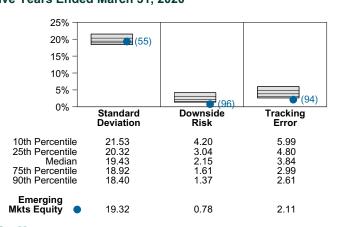
## Risk Analysis vs Callan Emerging Broad (Gross) Five Years Ended March 31, 2020

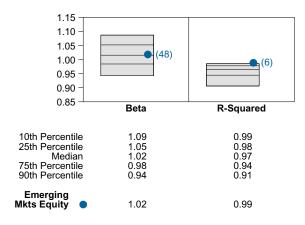


## Market Capture vs MSCI EM IMI Index (USD Net Div) Rankings Against Callan Emerging Broad (Gross) Five Years Ended March 31, 2020



## Risk Statistics Rankings vs MSCI EM IMI Index (USD Net Div) Rankings Against Callan Emerging Broad (Gross) Five Years Ended March 31, 2020



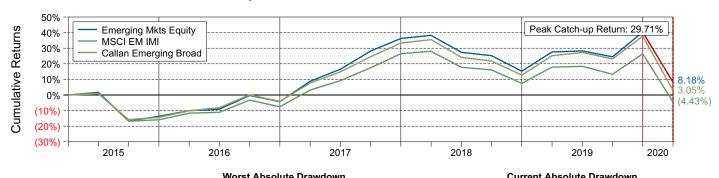




# **Emerging Mkts Equity** Drawdown Analysis for Five Years Ended March 31, 2020

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**

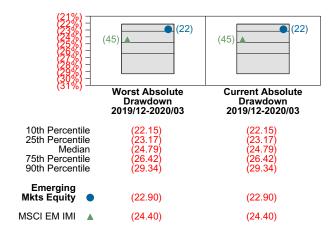


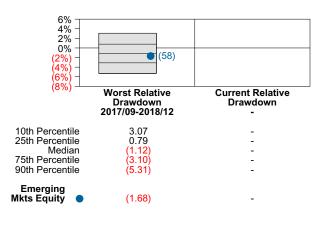
					Current Absolute Diawdown					
	Return	Years	Period	Index	Peers	Return	Years	Period	Index	Peers
Emerging Mkts Equity	(22.90)%	0.25	2019/12-2020/03	(24.40)%	(25.16)%	(22.90)%	0.25	2019/12-2020/03	(24.40)%	(25.16)%
Recovery from Trough	-	-	-	-	-	-	-	-	-	-
MSCI EM IMI	(25.37)%	2.00	2018/03-2020/03			(25.37)%	2.00	2018/03-2020/03		
Callan Emerging Broad	(25.16)%	0.25	2019/12-2020/03			(25.16)%	0.25	2019/12-2020/03		

#### Relative Cumulative Drawdown Analysis vs. MSCI EM IMI **Cumulative Relative Returns** 16% **Emerging Mkts Equity** 14% 13.20% 12% Callan Emerging Broad 10% 8% 7.83% 6% 4% 2% 0% (2%) (4%)2015 2016 2017 2018 2019 2020

	Worst Relative Drawdown				Current Relative Drawdown			
	Rel Rtn	Years	Period	Peers	Rel Rtn	Years	Period	Peers
Emerging Mkts Equity	(1.68)%	1.25	2017/09-2018/12	(1.03)%	-	-	-	-
Recovery from Trough	2.45%	0.75	2018/12-2019/09	3.61%	-	-	-	-
Callan Emerging Broad	(1.06)%	1.00	2017/09-2018/09		(1.00)%	0.25	2019/12-2020/03	

Drawdown Rankings vs. MSCI EM IMI Rankings against Callan Emerging Broad Five Years Ended March 31, 2020



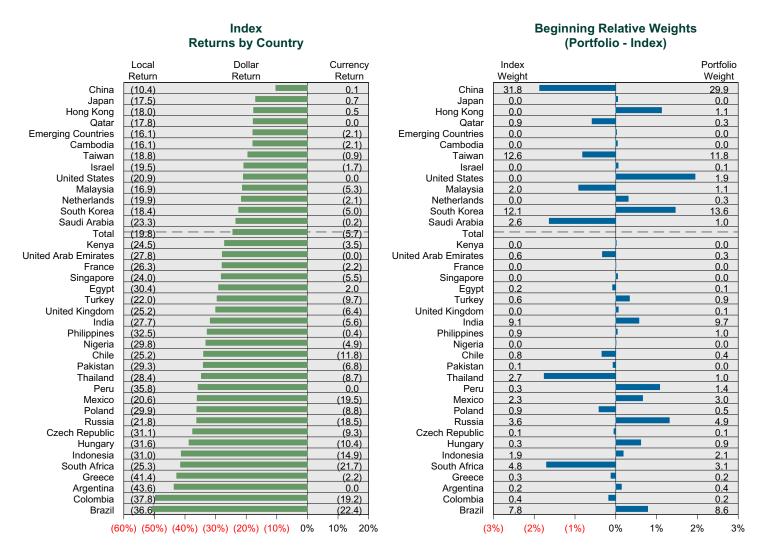


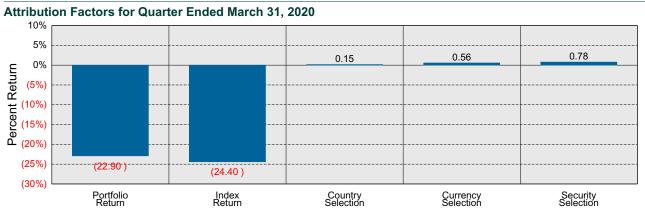


# **Emerging Mkts Equity vs MSCI EM IMI** Attribution for Quarter Ended March 31, 2020

#### 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 Emerging Mkts Equity** As of March 31, 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 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.

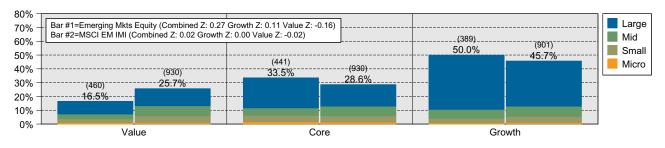
## Style Map vs Callan Emerging Broad Holdings as of March 31, 2020



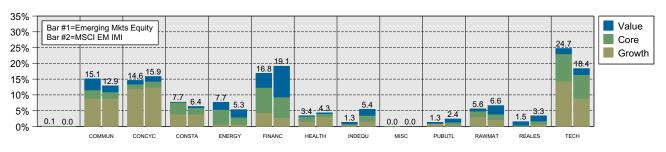
## **Style Exposure Matrix** Holdings as of March 31, 2020

	Value	Core	Growth	Total
	25.7% (930)	28.6% (930)	45.7% (901)	100.0% (2761)
Total				
	16.5% (460)	33.5% (441)	50.0% (389)	100.0% (1290)
	1.0% (332)	1.4% (321)	1.0% (260)	3.4% (913)
Micro				
	1.1% (36)	1.6% (32)	0.7% (24)	3.5% (92)
	4.8% (338)	4.5% (338)	4.5% (339)	13.8% (1015)
Small				
	2.6% (205)	4.6% (147)	3.3% (118)	10.6% (470)
	7.3% (183)	7.0% (196)	7.4% (210)	21.7% (589)
Mid				
	3.5% (147)	5.3% (175)	6.4% (161)	15.3% (483)
	12.5% (77)	15.7% (75)	32.9% (92)	61.1% (244)
Large	, ,	, ,	, ,	, ,
	9.4% (72)	21.9% (87)	39.4% (86)	70.7% (245)

## **Combined Z-Score Style Distribution** Holdings as of March 31, 2020



## **Sector Weights Distribution** Holdings as of March 31, 2020

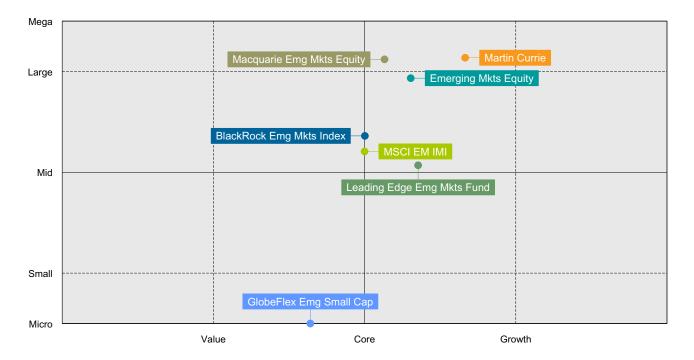




## **International Holdings Based Style Analysis** For One Quarter Ended March 31, 2020

This page analyzes and compares the investment styles of multiple portfolios using a detailed holdings-based style analysis methodology. The size component of style is measured by the weighted median market capitalization of the holdings. The value/core/growth style dimension is captured by the "Combined Z-Score" of the portfolio. This score is based on eight fundamental factors used in the MSCI stock style scoring system. The table below gives a more detailed breakdown of several relevant style metrics on the portfolios.

Style Map Holdings for One Quarter Ended March 31, 2020



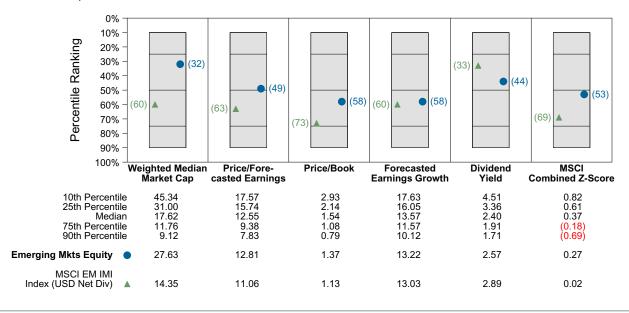
	Weight %	Wtd Median Mkt Cap	Combined Z-Score	Growth Z-Score	Value Z-Score	Number of Securities D	Security Diversification
BlackRock Emg Mkts Index	13.42%	17.17	0.02	0.01	(0.01)	1380	64.95
Leading Edge Emg Mkts Fund	15.50%	11.85	0.31	0.17	(0.14)	215	29.96
Macquarie Emg Mkts Equity	31.12%	50.08	0.13	(0.03)	(0.15)	87	10.06
Martin Currie	33.79%	52.86	0.56	0.26	(0.30)	45	8.20
GlobeFlex Emg Small Cap	6.17%	0.44	(0.32)	0.06	0.38	144	24.09
Emerging Mkts Equity	100.00%	27.63	0.27	0.11	(0.16)	1643	25.11
MSCI EM IMI	-	14.35	0.02	0.00	(0.02)	3050	92.14

# **Emerging Mkts Equity Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

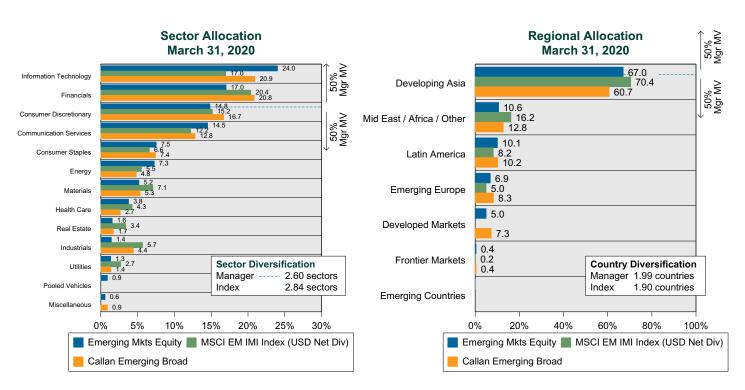
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Emerging Broad as of March 31, 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.

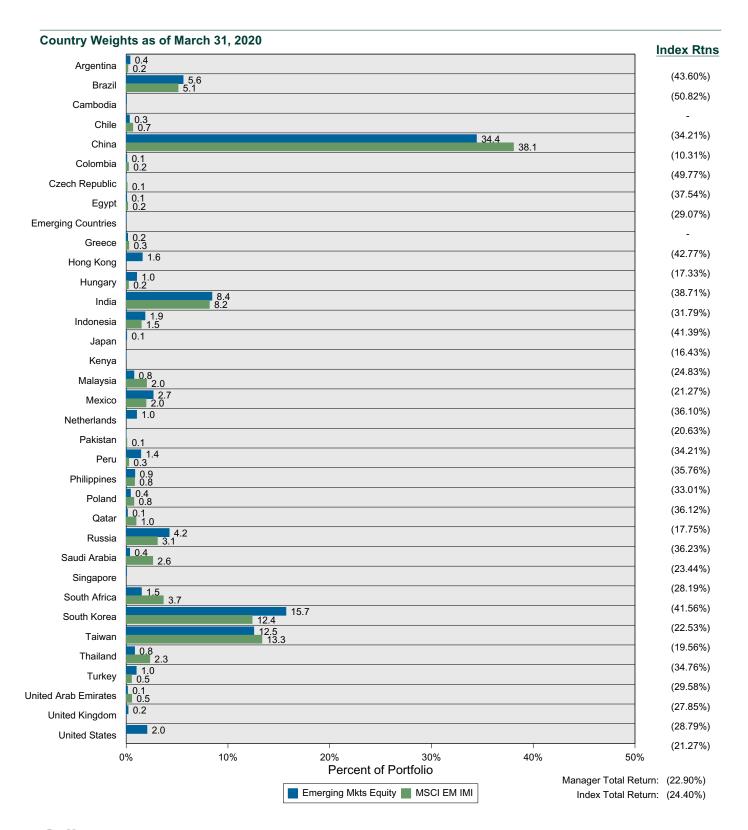




# **Country Allocation Emerging Mkts Equity VS MSCI EM IMI Index (USD Net Div)**

#### **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of March 31, 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.





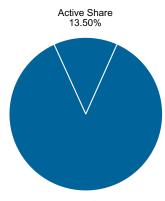
# **Emerging Mkts Equity** Active Share Analysis as of March 31, 2020 vs. MSCI EM IMI Index (USD Net Div)

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 46.29% Non-Index Active Share 6.87% Passive Share 46.84%

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



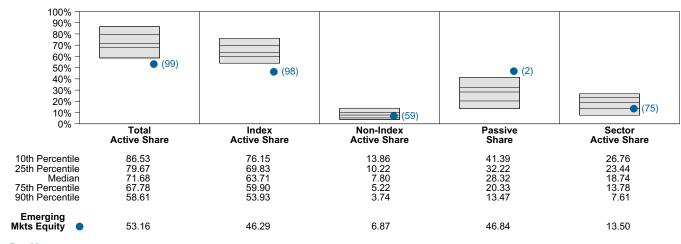
Passive Share 86.50%

Total Active Share: 53.16%

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

Index Active Share Within Sector	Non-Index Active Share Within Sector	Total Active Share Within Sector	Index Weight	Manager Weight	Contribution to Total Portfolio Active Share
47.53%	2.15%	49.69%	12.22%	14.52%	6.29%
36.24%	3.92%	40.16%	15.17%	14.83%	5.91%
59.00%	5.21%	64.21%	6.60%	7.53%	4.54%
40.18%	6.55%	46.73%	5.53%	7.27%	2.70%
47.82%	14.74%	62.56%	20.39%	17.03%	11.81%
64.06%	5.15%	69.21%	4.25%	3.78%	2.80%
44.56%	7.34%	51.89%	5.68%	1.44%	2.59%
33.85%	5.31%	39.16%	16.98%	24.01%	8.35%
61.53%	3.76%	65.30%	7.08%	5.19%	4.17%
0.00%	100.00%	100.00%	-	0.58%	0.23%
0.00%	100.00%	100.00%	-	0.91%	0.45%
60.00%	3.25%	63.24%	3.39%	1.56%	1.76%
67.73%	1.41%	69.13%	2.71%	1.35%	1.49%
46.29%	6.87%	53.16%	100.00%	100.00%	53.07%

## Active Share vs. Callan Emerging Broad





## BlackRock Emg Mkts Index Period Ended March 31, 2020

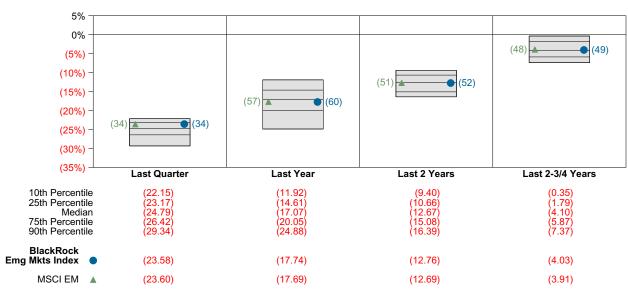
#### **Investment Philosophy**

As with all indexing strategies, the objective of the Emerging Markets Index Funds is to match the performance of the benchmark, the MSCI EMF indexes. BlackRock's objective in managing the fund is to deliver a high quality and cost-effective index-based portfolio available to institutional investors. BlackRock's goal in the management of its emerging market country funds is to provide cost-effective and risk controlled exposure with close benchmark tracking. As such, country selection is dictated by the index, and BlackRock's funds approximate the sector and industry breakdowns of the respective country index. The team seeks to construct its country funds using the widest possible range of index constituent stocks to allow for replication of index returns while minimizing transaction costs. Therefore stock selection and weighting is generally dictated by the composition of the index. However, where investment restrictions exist, BlackRock may choose to use alternative investment approaches. In general, BlackRock aims to cover a significant percentage of the security market capitalization of each country index.

## **Quarterly Summary and Highlights**

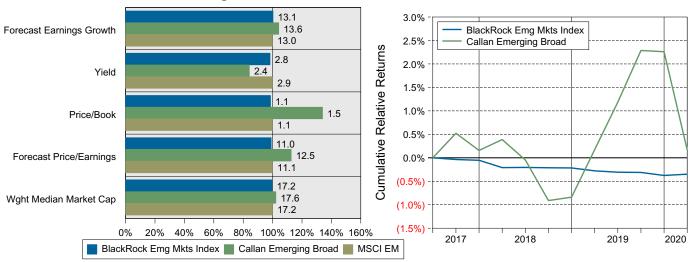
- BlackRock Emg Mkts Index's portfolio posted a (23.58)% return for the quarter placing it in the 34 percentile of the Callan Emerging Broad group for the quarter and in the 60 percentile for the last year.
- BlackRock Emg Mkts Index's portfolio outperformed the MSCI EM by 0.02% for the quarter and underperformed the MSCI EM for the year by 0.06%.

## Performance vs Callan Emerging Broad (Gross)



## **Portfolio Characteristics as** a Percentage of the MSCI EM

## **Cumulative Returns vs MSCI EM**

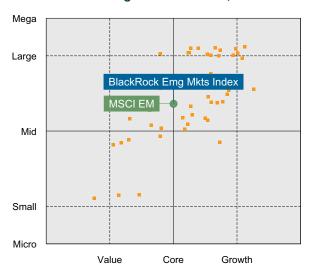




# **Current Holdings Based Style Analysis** BlackRock Emg Mkts Index As of March 31, 2020

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 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.

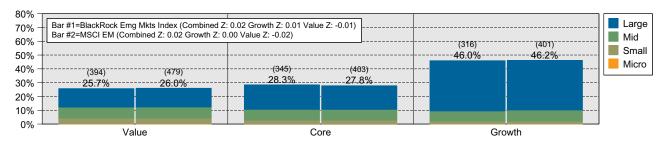
## Style Map vs Callan Emerging Broad Holdings as of March 31, 2020



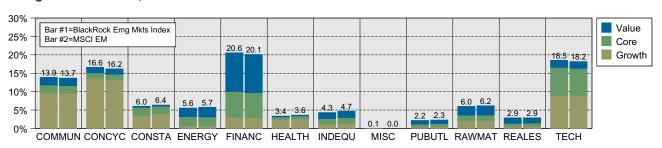
## **Style Exposure Matrix** Holdings as of March 31, 2020

	Value	Core	Growth	Total
	26.0% (479)	27.8% (403)	46.2% (401)	100.0% (1283)
Total	2011 /0 (001)	20.070 (0.0)	1010 /0 (010)	(1000)
	25.7% (394)	28.3% (345)	46.0% (316)	100.0% (1055)
	0.0% (5)	0.2% (3)	0.0% (3)	0.3% (11)
Micro				
	0.0% (5)	0.3% (3)	0.0% (2)	0.3% (10)
	4.2% (215)	2.6% (131)	2.1% (99)	8.9% (445)
Small				
	4.2% (187)	2.6% (112)	2.1% (86)	8.9% (385)
	8.0% (182)	7.6% (194)	8.0% (207)	23.6% (583)
Mid				
	7.9% (139)	7.7% (162)	7.3% (154)	22.9% (455)
	13.7% (77)	17.3% (75)	36.1% (92)	67.2% (244)
Large				
	13.6% (63)	17.8% (68)	36.6% (74)	67.9% (205)

## **Combined Z-Score Style Distribution** Holdings as of March 31, 2020



## **Sector Weights Distribution** Holdings as of March 31, 2020



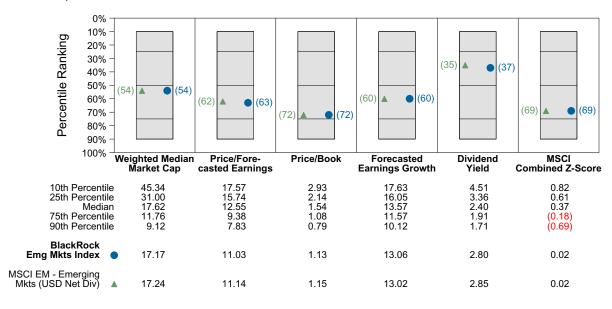


# BlackRock Emg Mkts Index **Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

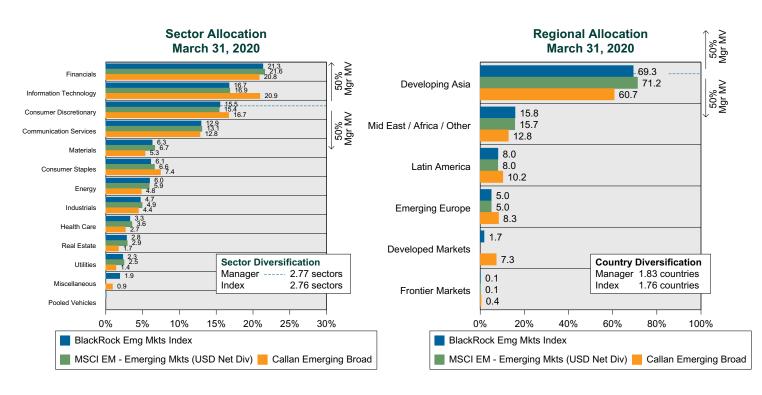
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Emerging Broad as of March 31, 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.

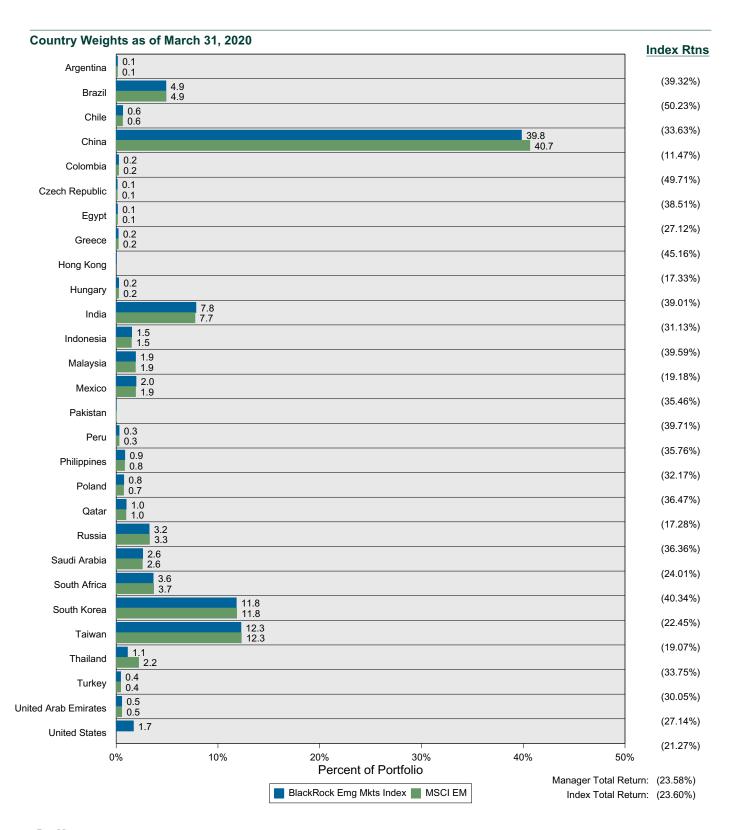




# **Country Allocation** BlackRock Emg Mkts Index VS MSCI EM - Emerging Mkts (USD Net Div)

## **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of March 31, 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.



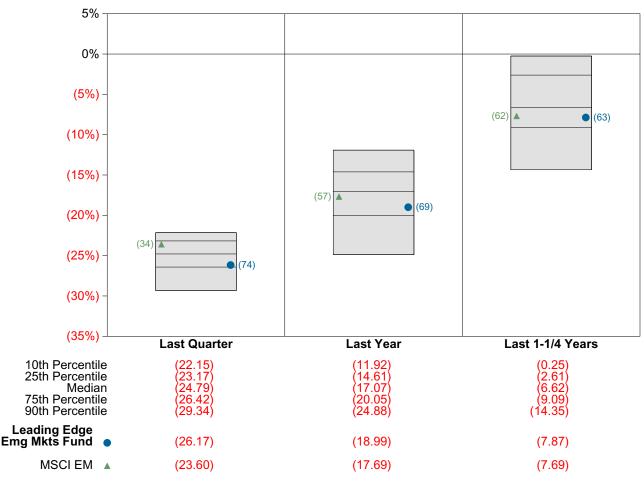


## Leading Edge Emg Mkts Fund Period Ended March 31, 2020

## **Quarterly Summary and Highlights**

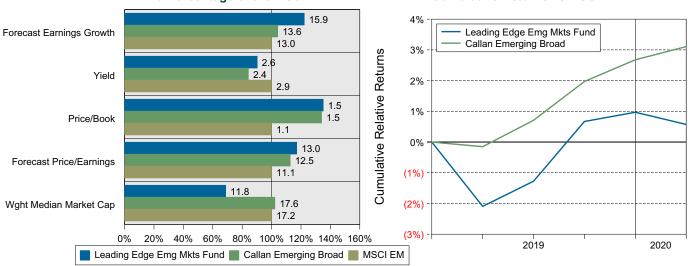
- Leading Edge Emg Mkts Fund's portfolio posted a (26.17)% return for the guarter placing it in the 74 percentile of the Callan Emerging Broad group for the quarter and in the 69 percentile for the last year.
- Leading Edge Emg Mkts Fund's portfolio underperformed the MSCI EM by 2.57% for the quarter and underperformed the MSCI EM for the year by 1.31%.

# Performance vs Callan Emerging Broad (Gross)



## Portfolio Characteristics as a Percentage of the MSCI EM

## **Cumulative Returns vs MSCI EM**

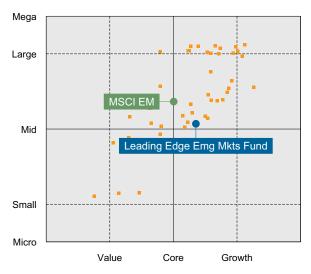




# **Current Holdings Based Style Analysis** Leading Edge Emg Mkts Fund As of March 31, 2020

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 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.

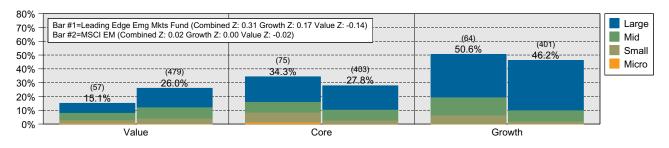
## Style Map vs Callan Emerging Broad Holdings as of March 31, 2020



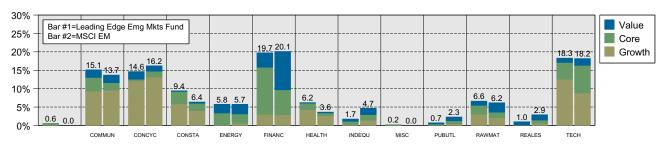
## **Style Exposure Matrix** Holdings as of March 31, 2020

	Value	Core	Growth	Total
	26.0% (479)	27.8% (403)	46.2% (401)	100.0% (1283)
Total				
	15.1% (57)	34.3% (75)	50.6% (64)	100.0% (196)
	0.0% (5)	0.2% (3)	0.0% (3)	0.3% (11)
Micro				
	0.6% (4)	1.2% (5)	0.1% (1)	1.9% (10)
	4.2% (215)	2.6% (131)	2.1% (99)	8.9% (445)
Small				
	2.4% (15)	7.3% (22)	6.3% (19)	16.0% (56)
	8.0% (182)	7.6% (194)	8.0% (207)	23.6% (583)
Mid				
	5.3% (22)	7.7% (21)	13.0% (20)	26.0% (63)
	13.7% (77)	17.3% (75)	36.1% (92)	67.2% (244)
Large	( ),	,		(,,,
	6.9% (16)	18.1% (27)	31.1% (24)	56.1% (67)

## **Combined Z-Score Style Distribution** Holdings as of March 31, 2020



## **Sector Weights Distribution** Holdings as of March 31, 2020



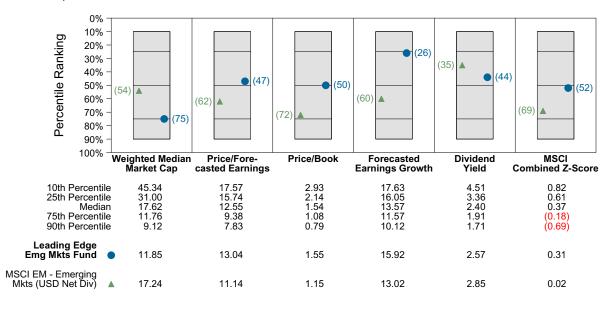


# Leading Edge Emg Mkts Fund **Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

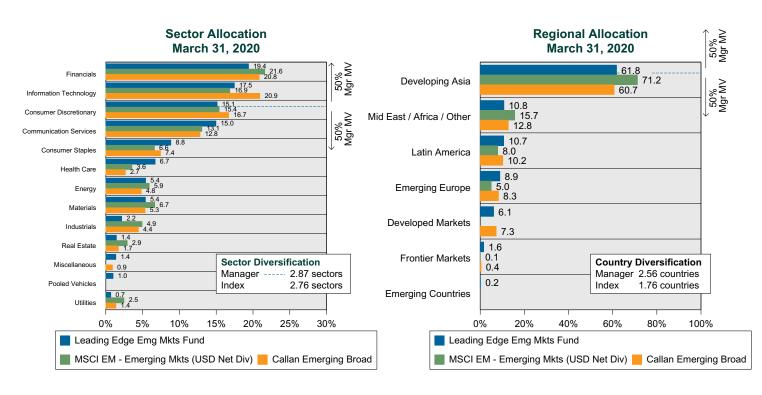
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Emerging Broad as of March 31, 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.

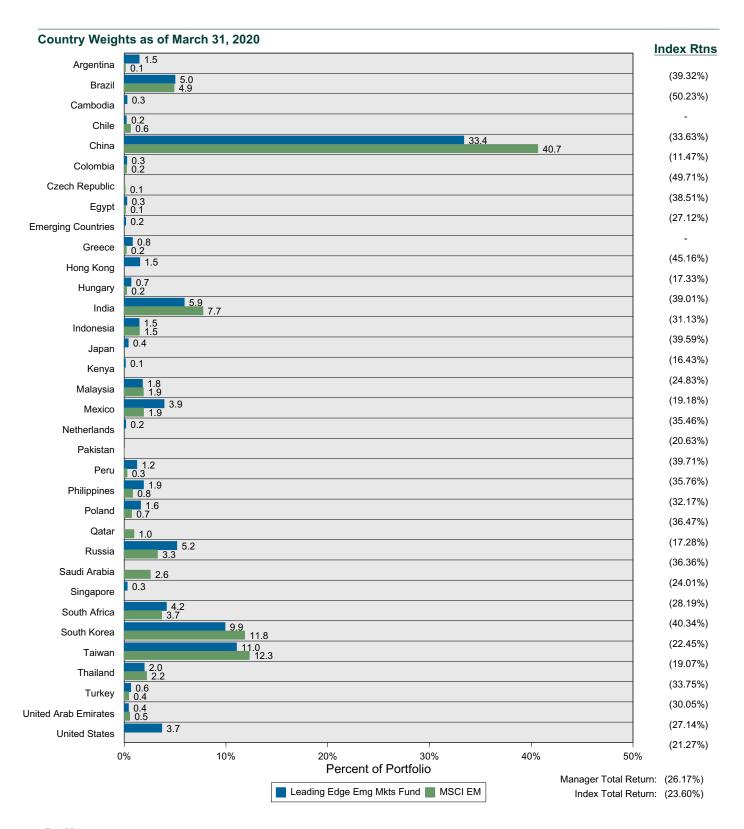




# **Country Allocation** Leading Edge Emg Mkts Fund VS MSCI EM - Emerging Mkts (USD Net Div)

## **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of March 31, 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.





# Macquarie Emerging Markets Equity Period Ended March 31, 2020

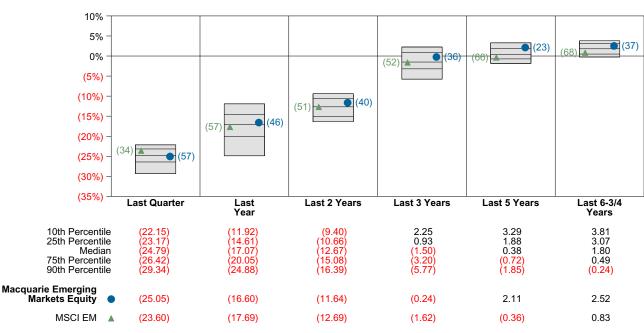
#### **Investment Philosophy**

Macquarie believes that market price and intrinsic business value are correlated in the long-run and short-term divergences offer disciplined, bottom-up, fundamental investors, attractive risk-adjusted opportunities. The team defines intrinsic value as the appropriately discounted value of a business' cash flow stream. They buy only when the business trades at a significant discount to their intrinsic value estimate. The team focuses resources on franchises, defined as those companies with high potential to earn excess returns above their cost of capital over the long-run. The team aims to capture market inefficiencies by: 1. Judging a franchise's sustainability and secular growth prospects better than the market 2. Maintaining a long-term, structural bias to capture franchises oversold due to temporary setbacks 3. Exploiting public market and private market valuation discrepancies 4. Buying assets below their replacement costs.

## **Quarterly Summary and Highlights**

- Macquarie Emerging Markets Equity's portfolio posted a (25.05)% return for the quarter placing it in the 57 percentile of the Callan Emerging Broad group for the quarter and in the 46 percentile for the last year.
- Macquarie Emerging Markets Equity's portfolio underperformed the MSCI EM by 1.45% for the quarter and outperformed the MSCI EM for the year by 1.09%.

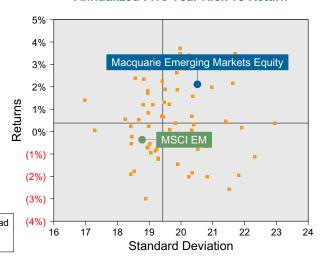
## Performance vs Callan Emerging Broad (Gross)



# Portfolio Characteristics as a Percentage of the MSCI EM



# Callan Emerging Broad (Gross) Annualized Five Year Risk vs Return



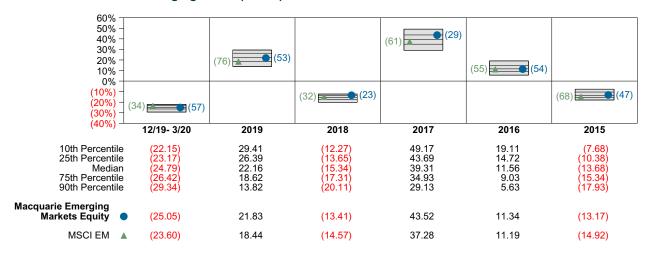


# **Macquarie Emerging Markets Equity Return Analysis Summary**

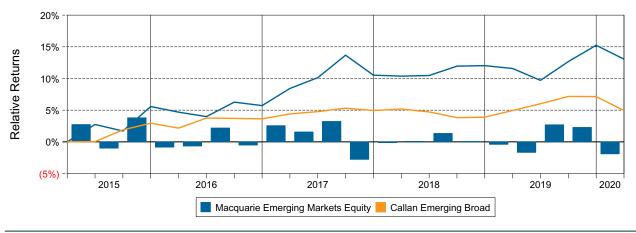
## **Return Analysis**

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 cumulative 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.

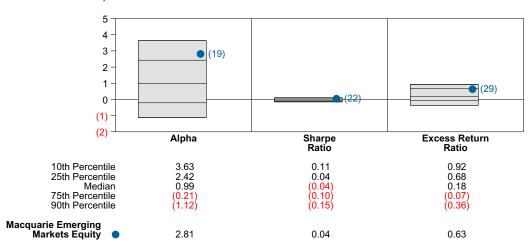
## Performance vs Callan Emerging Broad (Gross)



## **Cumulative and Quarterly Relative Return vs MSCI EM**



Risk Adjusted Return Measures vs MSCI EM Rankings Against Callan Emerging Broad (Gross) Five Years Ended March 31, 2020



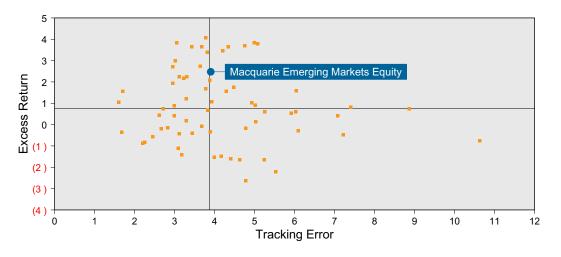


## **Macquarie Emerging Markets Equity Risk Analysis Summary**

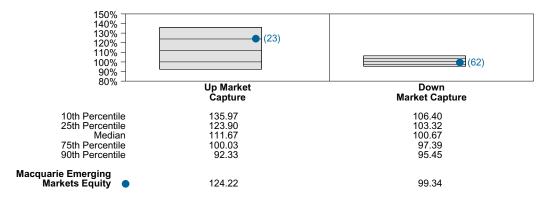
#### Risk Analysis

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.

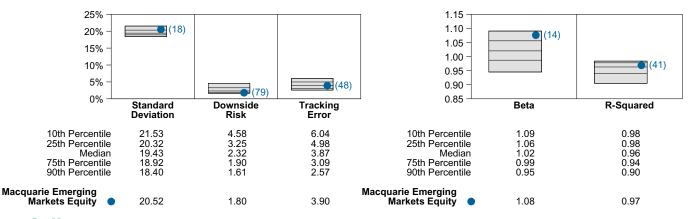
## Risk Analysis vs Callan Emerging Broad (Gross) Five Years Ended March 31, 2020



Market Capture vs MSCI EM - Emerging Mkts (USD Net Div) Rankings Against Callan Emerging Broad (Gross) Five Years Ended March 31, 2020



Risk Statistics Rankings vs MSCI EM - Emerging Mkts (USD Net Div) Rankings Against Callan Emerging Broad (Gross) Five Years Ended March 31, 2020

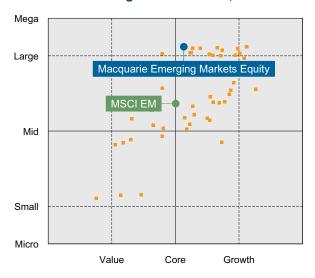




# **Current Holdings Based Style Analysis Macquarie Emerging Markets Equity** As of March 31, 2020

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 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.

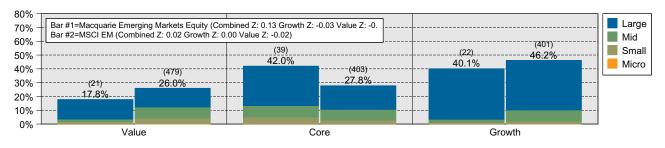
## Style Map vs Callan Emerging Broad Holdings as of March 31, 2020



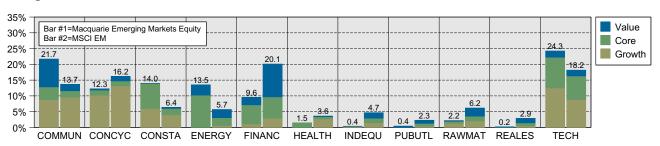
## **Style Exposure Matrix** Holdings as of March 31, 2020

	Value	Core	Growth	Total
	26.0% (479)	27.8% (403)	46.2% (401)	100.0% (1283)
Total	17.070 (21)	42.070 (33)	40.170 (22)	100.070 (02)
	17.8% (21)	42.0% (39)	40.1% (22)	100.0% (82)
	0.0% (5)	0.2% (3)	0.0% (3)	0.3% (11)
Micro				
	0.3% (3)	0.3% (1)	0.3% (2)	0.8% (6)
	4.2% (215)	2.6% (131)	2.1% (99)	8.9% (445)
Small				
	1.4% (3)	4.7% (8)	0.9% (2)	7.0% (13)
	8.0% (182)	7.6% (194)	8.0% (207)	23.6% (583)
Mid				
	1.9% (6)	8.4% (13)	2.2% (6)	12.5% (25)
	13.7% (77)	17.3% (75)	36.1% (92)	67.2% (244)
Large			, ,	` '
	14.3% (9)	28.7% (17)	36.8% (12)	79.7% (38)

## **Combined Z-Score Style Distribution** Holdings as of March 31, 2020



## **Sector Weights Distribution** Holdings as of March 31, 2020



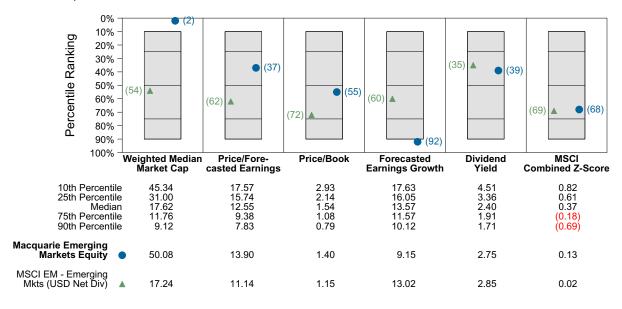


# **Macquarie Emerging Markets Equity Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

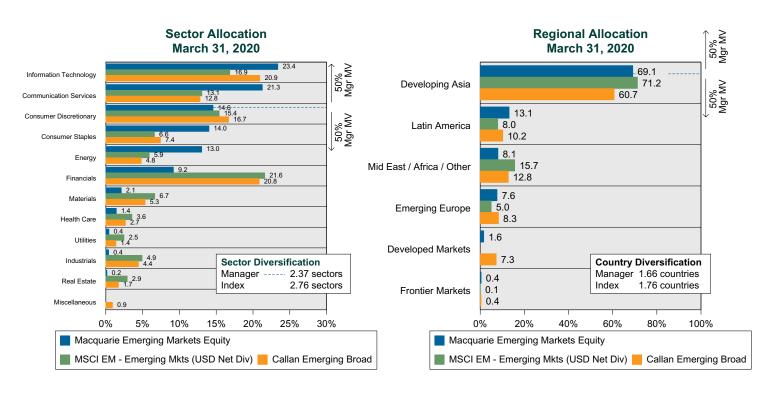
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Emerging Broad as of March 31, 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.

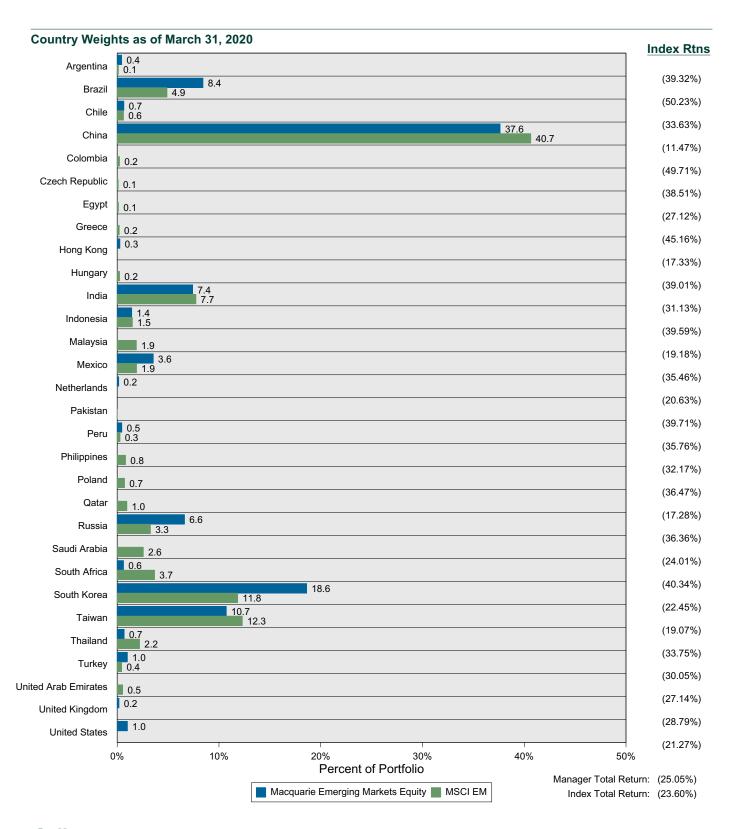




# **Country Allocation** Macquarie Emerging Markets Equity VS MSCI EM - Emerging Mkts (USD Net Div)

## **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of March 31, 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.





# **Martin Currie** Period Ended March 31, 2020

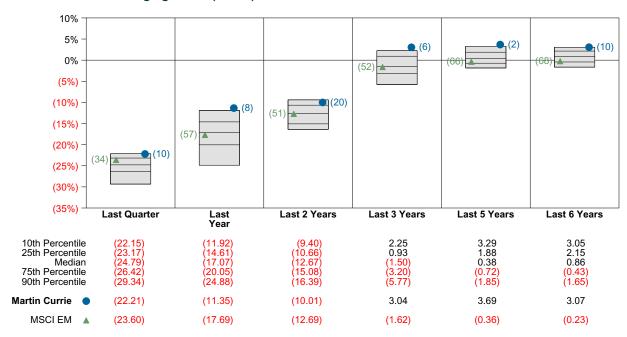
#### **Investment Philosophy**

The Martin Currie GEMs team builds long-term, high conviction stock-focused portfolios, driven by fundamental research within an appropriate risk framework. Their primary belief with regard to GEMs investing is that sustainable cash flows and the effective allocation of capital are the main determinants of share-price movement over the long term. They seek to identify those emerging-market companies that can sustain cash-flow growth and generate returns in excess of their cost of capital. They believe that it takes a long time for the success of a business model to become fully apparent, so they typically invest with a three-to-five-year horizon. The Martin Currie GEMs team believes that an assessment of a company environmental, social and governance (ESG) performance, or sustainability, can help identify those business models that are most likely to sustain high returns and resist competitive pressures.

## **Quarterly Summary and Highlights**

- Martin Currie's portfolio posted a (22.21)% return for the quarter placing it in the 10 percentile of the Callan Emerging Broad group for the quarter and in the 8 percentile for the last year.
- Martin Currie's portfolio outperformed the MSCI EM by 1.39% for the quarter and outperformed the MSCI EM for the year by 6.34%.

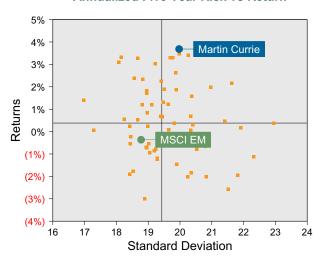
## Performance vs Callan Emerging Broad (Gross)



## Portfolio Characteristics as a Percentage of the MSCI EM



## Callan Emerging Broad (Gross) Annualized Five Year Risk vs Return



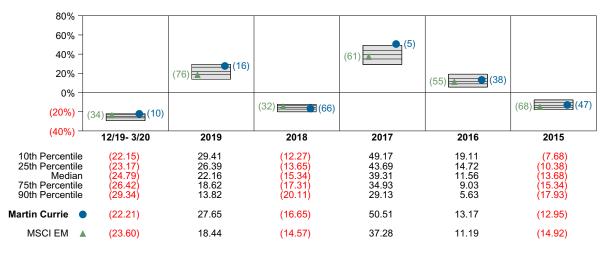


# **Martin Currie Return Analysis Summary**

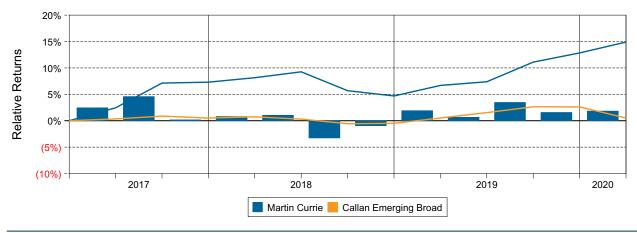
## **Return Analysis**

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 cumulative 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.

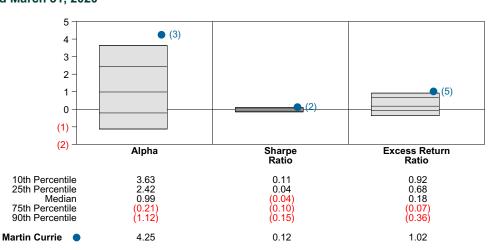
## Performance vs Callan Emerging Broad (Gross)



## **Cumulative and Quarterly Relative Return vs MSCI EM**



Risk Adjusted Return Measures vs MSCI EM Rankings Against Callan Emerging Broad (Gross) Five Years Ended March 31, 2020



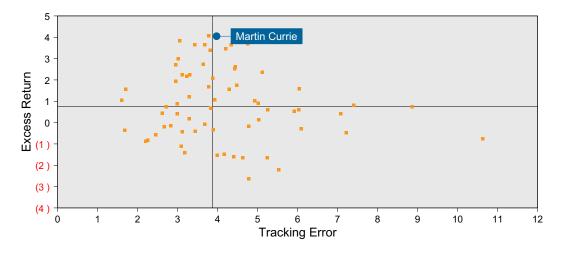


# **Martin Currie Risk Analysis Summary**

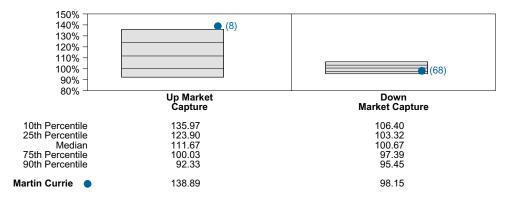
#### Risk Analysis

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.

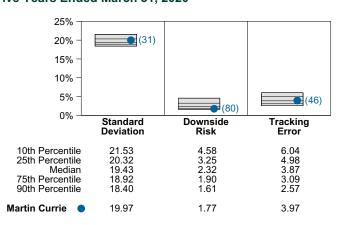
## Risk Analysis vs Callan Emerging Broad (Gross) Five Years Ended March 31, 2020

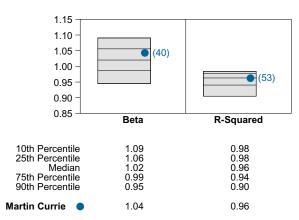


Market Capture vs MSCI EM - Emerging Mkts (USD Net Div) Rankings Against Callan Emerging Broad (Gross) Five Years Ended March 31, 2020



Risk Statistics Rankings vs MSCI EM - Emerging Mkts (USD Net Div) Rankings Against Callan Emerging Broad (Gross) Five Years Ended March 31, 2020



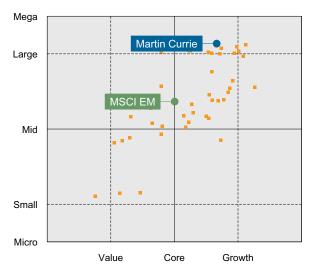




# **Current Holdings Based Style Analysis Martin Currie** As of March 31, 2020

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 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.

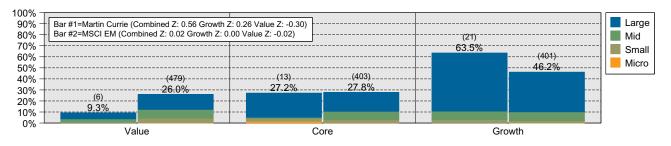
## Style Map vs Callan Emerging Broad Holdings as of March 31, 2020



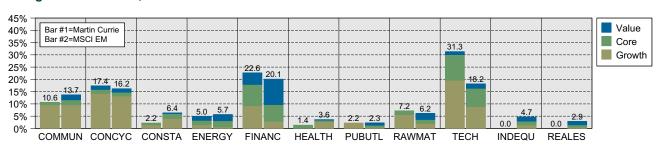
## **Style Exposure Matrix** Holdings as of March 31, 2020

	Value	Core	Growth	Total
	26.0% (479)	27.8% (403)	46.2% (401)	100.0% (1283)
Total				
	9.3% (6)	27.2% (13)	63.5% (21)	100.0% (40)
	0.0% (5)	0.2% (3)	0.0% (3)	0.3% (11)
Micro				
	0.0% (0)	1.6% (1)	0.0% (0)	1.6% (1)
	4.2% (215)	2.6% (131)	2.1% (99)	8.9% (445)
Small				
	0.8% (1)	2.7% (3)	3.0% (3)	6.4% (7)
	8.0% (182)	7.6% (194)	8.0% (207)	23.6% (583)
Mid				
	2.9% (3)	0.9% (1)	7.8% (3)	11.6% (7)
	13.7% (77)	17.3% (75)	36.1% (92)	67.2% (244)
Large	, ,		, ,	, ,
	5.6% (2)	22.1% (8)	52.8% (15)	80.4% (25)

## **Combined Z-Score Style Distribution** Holdings as of March 31, 2020



## **Sector Weights Distribution** Holdings as of March 31, 2020



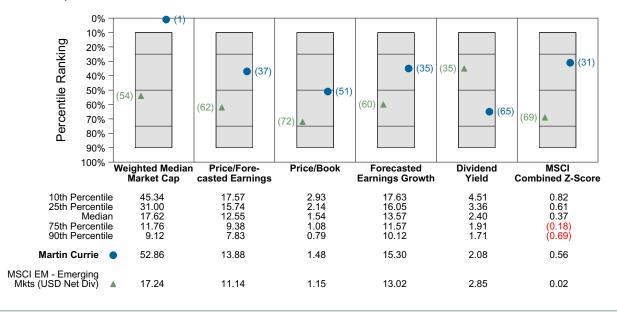


# **Martin Currie Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

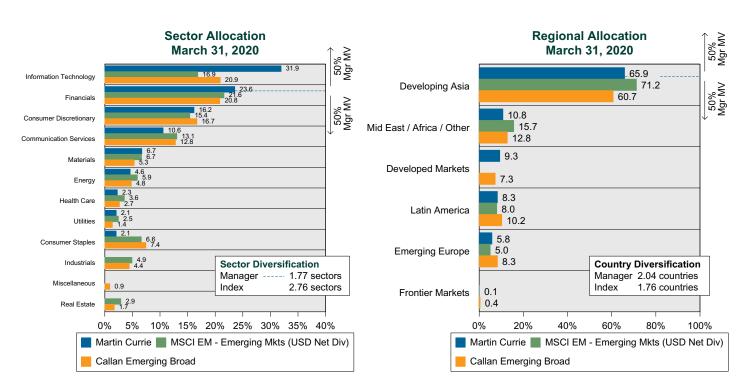
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Emerging Broad as of March 31, 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.

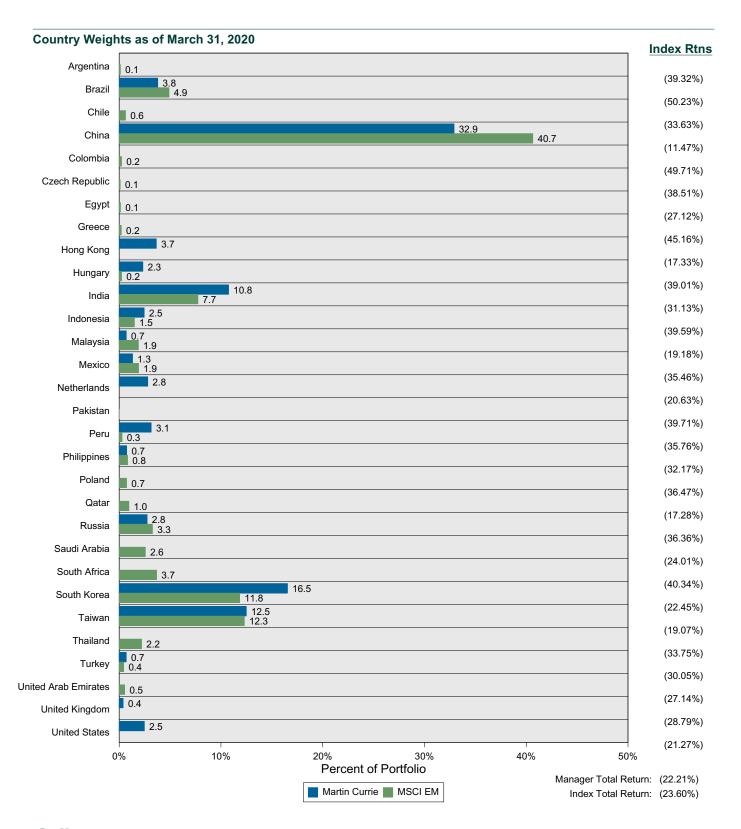




# **Country Allocation** Martin Currie VS MSCI EM - Emerging Mkts (USD Net Div)

## **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of March 31, 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.





# GlobeFlex Emerging Small Cap Period Ended March 31, 2020

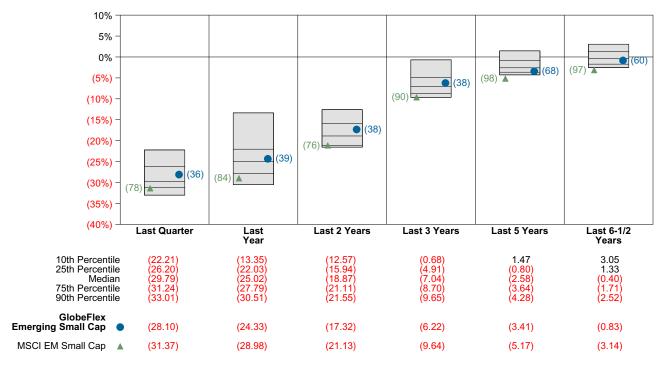
#### **Investment Philosophy**

GlobeFlex is an active equity manager focused on bottom-up, stock selection. Their philosophy is based on the early identification of fundamental growth before it is recognized by other investors, defined by: Business Improvement: Finding companies with accelerating business conditions to identify early signs of growth; Management Quality: Evaluating the long-term growth sustainability through in-depth analysis of prospective operating performance and management's skill to increase shareholder wealth; and Relative Value: Recognizing accelerating business conditions early, buying and holding companies below fair market value given future growth prospects.

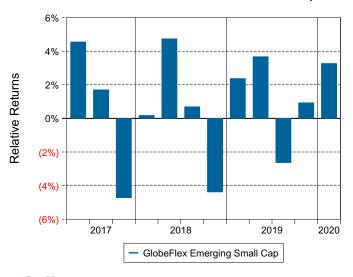
## **Quarterly Summary and Highlights**

- GlobeFlex Emerging Small Cap's portfolio posted a (28.10)% return for the quarter placing it in the 36 percentile of the Callan Emerging Small group for the quarter and in the 39 percentile for the last year.
- GlobeFlex Emerging Small Cap's portfolio outperformed the MSCI EM Small Cap by 3.27% for the quarter and outperformed the MSCI EM Small Cap for the year by 4.65%.

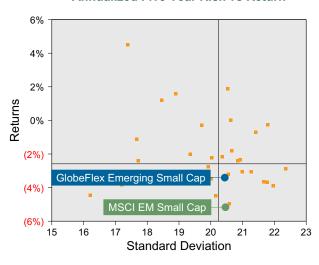
## Performance vs Callan Emerging Small (Gross)



#### Relative Return vs MSCI EM Small Cap



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



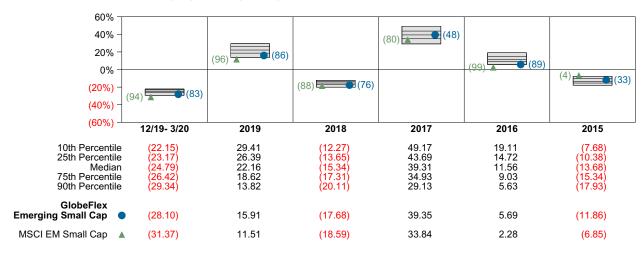


# **GlobeFlex Emerging Small Cap Return Analysis Summary**

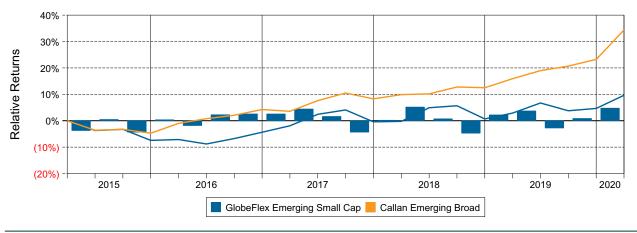
## **Return Analysis**

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 cumulative 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.

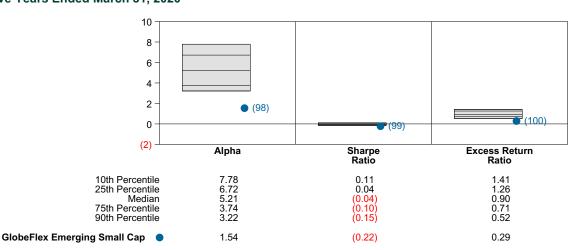
## Performance vs Callan Emerging Broad (Gross)



## Cumulative and Quarterly Relative Return vs MSCI EM Small Cap



Risk Adjusted Return Measures vs MSCI EM Small Cap Rankings Against Callan Emerging Broad (Gross) Five Years Ended March 31, 2020



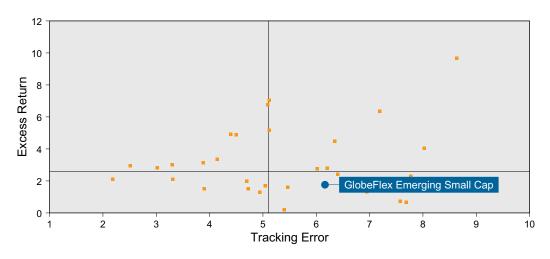


# **GlobeFlex Emerging Small Cap Risk Analysis Summary**

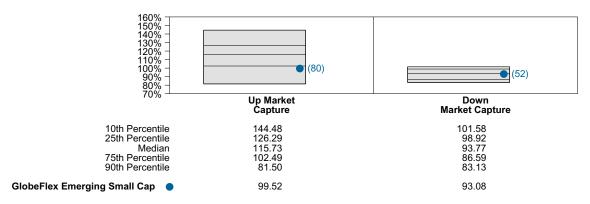
#### Risk Analysis

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.

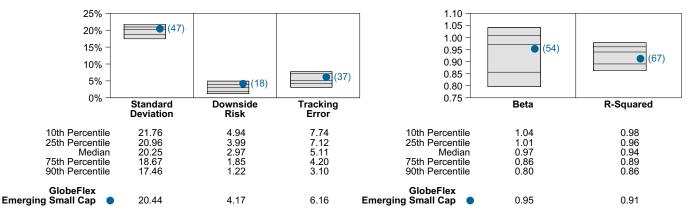
## Risk Analysis vs Callan Emerging Small (Gross) Five Years Ended March 31, 2020



Market Capture vs MSCI EM Small Cap Index (USD Net Div) Rankings Against Callan Emerging Small (Gross) Five Years Ended March 31, 2020



Risk Statistics Rankings vs MSCI EM Small Cap Index (USD Net Div) Rankings Against Callan Emerging Small (Gross) Five Years Ended March 31, 2020

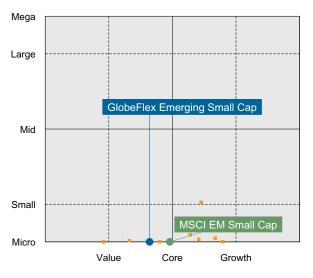




# **Current Holdings Based Style Analysis GlobeFlex Emerging Small Cap** As of March 31, 2020

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 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.

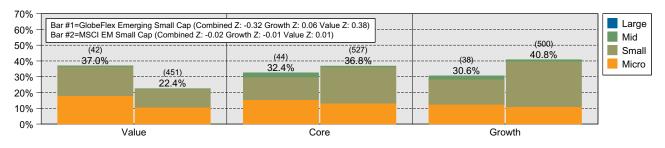
## Style Map vs Callan Emerging Small Holdings as of March 31, 2020



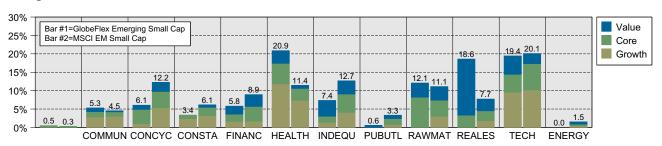
## **Style Exposure Matrix** Holdings as of March 31, 2020

	22.4% (451)	36.8% (527)	40.8% (500)	100.0% (1478)
Total	37.0% (42)	32.4% (44)	30.6% (38)	100.0% (124)
	10.7% (327)	13.2% (318)	11.0% (257)	34.9% (902)
Micro				
	18.0% (25)	15.5% (23)	12.5% (20)	45.9% (68)
	11.5% (123)	23.1% (207)	28.8% (240)	63.5% (570)
Small	18.6% (16)	14.3% (20)	15.9% (17)	48.8% (53)
	0.2% (1)	0.5% (2)	1.0% (3)	1.7% (6)
Mid	0.20/ (4)	0.59/ (0)	1.00/ (0)	4 70/ (0)
	0.4% (1)	2.6% (1)	2.2% (1)	5.2% (3)
Large	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)

## **Combined Z-Score Style Distribution** Holdings as of March 31, 2020



## **Sector Weights Distribution** Holdings as of March 31, 2020



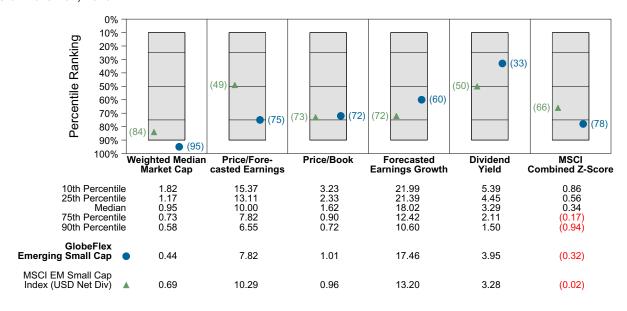


# GlobeFlex Emerging Small Cap **Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

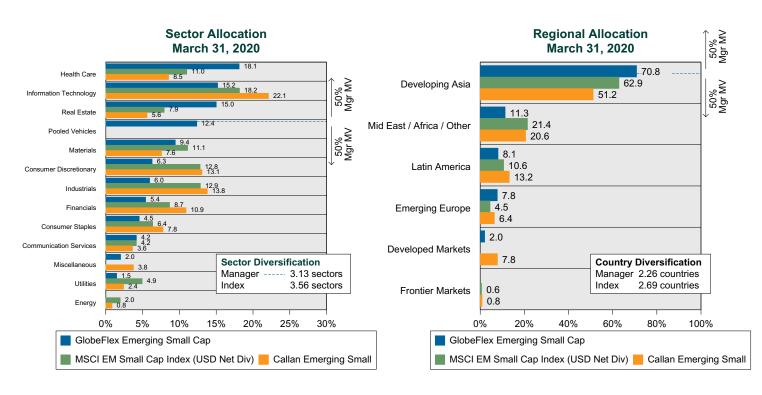
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Emerging Small as of March 31, 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.

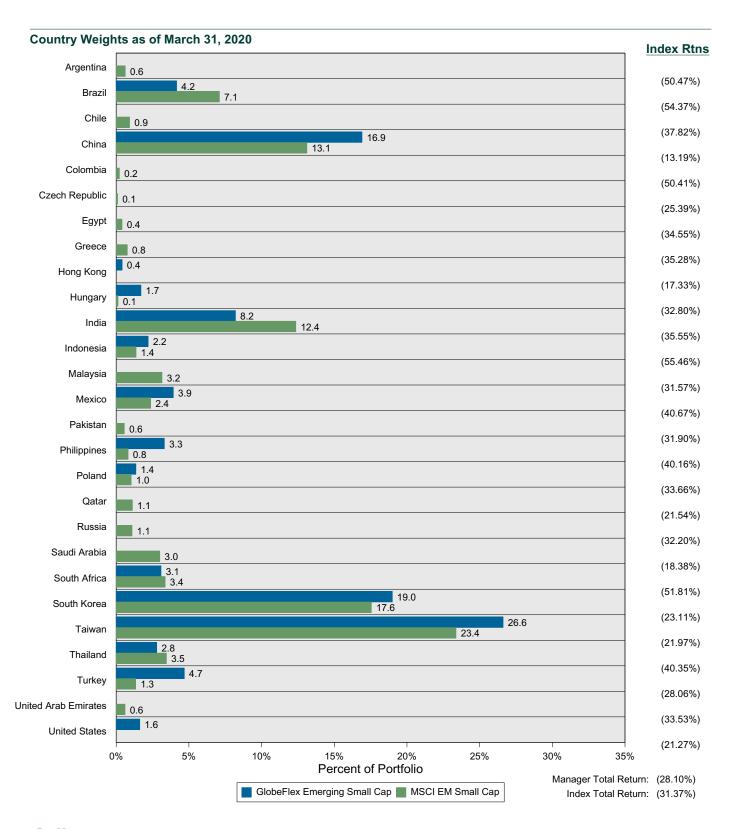




# **Country Allocation** GlobeFlex Emerging Small Cap VS MSCI EM Small Cap Index (USD Net Div)

## **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of March 31, 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.

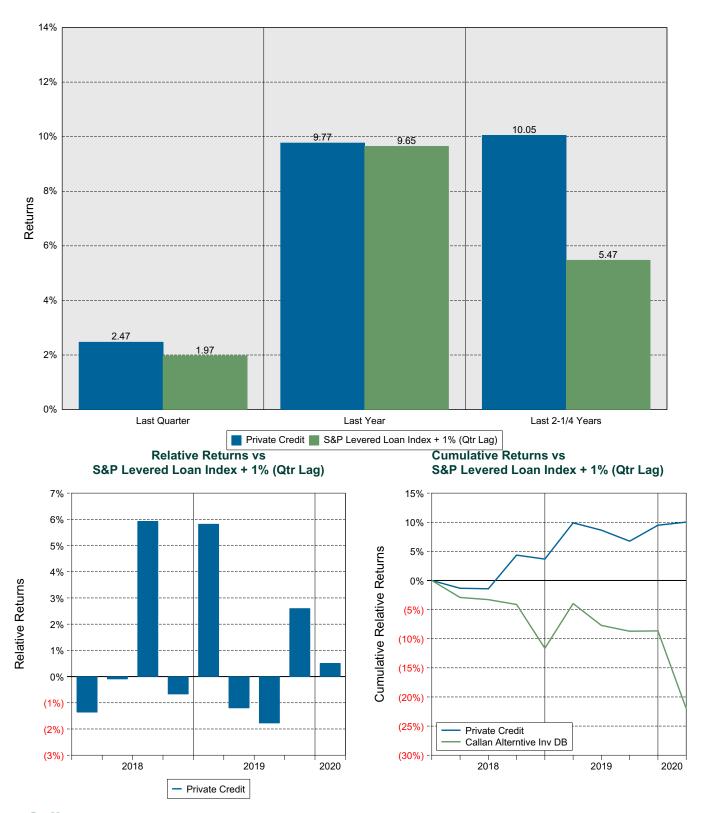




# **Private Credit** Period Ended March 31, 2020

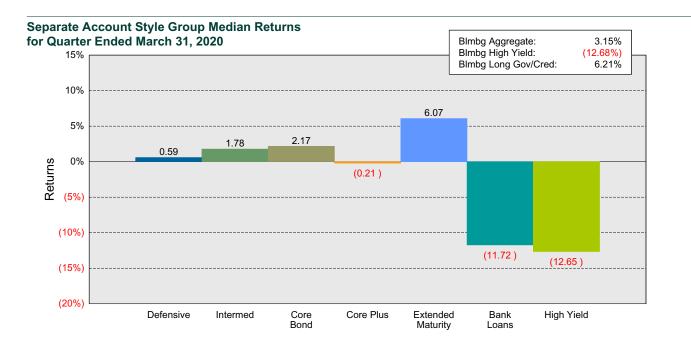
## **Quarterly Summary and Highlights**

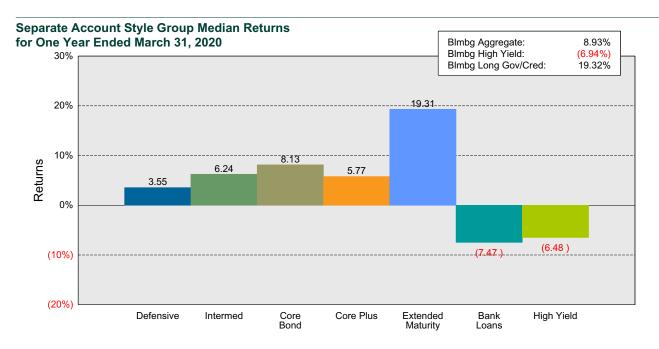
- Private Credit's portfolio posted a 2.47% return for the quarter placing it in the 4 percentile of the Callan Alternative Investments DB group for the quarter and in the 8 percentile for the last year.
- Private Credit's portfolio outperformed the S&P Levered Loan Index + 1% (Qtr Lag) by 0.50% for the quarter and outperformed the S&P Levered Loan Index + 1% (Qtr Lag) for the year by 0.12%.



# Domestic Fixed Income Active Management Overview

U.S. Treasury yields fell to record lows in March as investors sought safety and the Fed cut rates to 0%-0.25%. The 10-year U.S. Treasury yield reached a low in March of 0.31% before closing the quarter at 0.70%, down sharply from the year-end level of 1.92%. Most sectors underperformed U.S. Treasuries, hurt both by challenging liquidity conditions as well as a flight to safety. While the Bloomberg Barclays US Aggregate Bond Index rose 3.1% for the quarter, results were driven largely by performance of the Treasury sector (+8.2%). Corporates (-3.6%) and most securitized sectors underperformed U.S. Treasuries. The quality bias was evident in the return for the AAA-rated component (+5.8%) versus BBBs (-7.4%). TIPS (Bloomberg Barclays TIPS: +1.7%) sharply underperformed nominal Treasuries as expectations for inflation sank. The 10-year breakeven spread ended the quarter at 87 bps, down sharply from 177 bps at year-end. High yield corporate bonds (Bloomberg Barclays High Yield: -12.7%) fell sharply and ended the quarter with a yield-to-worst of 9.4% though it topped 10% in mid-March, the highest level since the GFC. Excluding the beleaguered Energy sector, high yield fell 9.1%. Leveraged loans performed even worse (S&P LSTA: -13.0%) and both high yield and loans experienced heavy outflows.

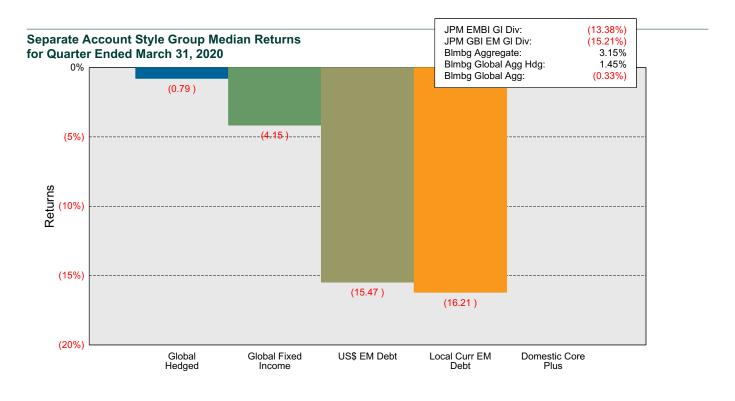


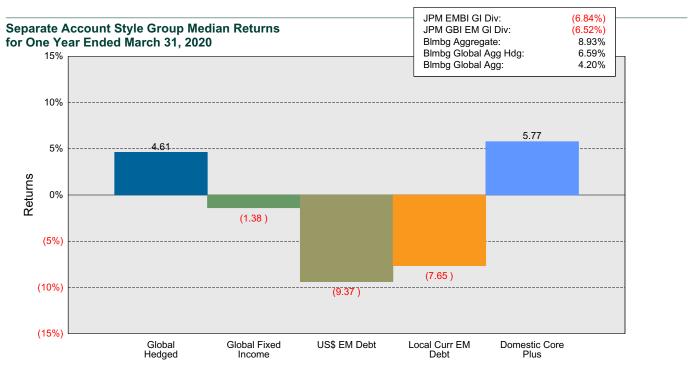




# **Global Fixed Income Active Management Overview**

Developed ex-U.S. market returns were relatively flat in broad terms. The Bloomberg Barclays Global Aggregate ex-US Index fell 2.7% unhedged but rose 0.5% on a hedged basis as the U.S. dollar strengthened modestly against a basket of currencies. Emerging market debt underperformed in the risk-off environment. The U.S. dollar-denominated JPM EMBI Global Diversified Index dropped 13.4%, with returns varying across its 60+ constituents. Emerging market currencies were also under pressure. Local currency emerging market debt, as measured by the JPM GBI-EM Global Diversified Index, fell 15.2% in the quarter, with several local market returns in Latin America dropping about 20% (Brazil, Mexico, and Colombia) and South Africa down 29%.





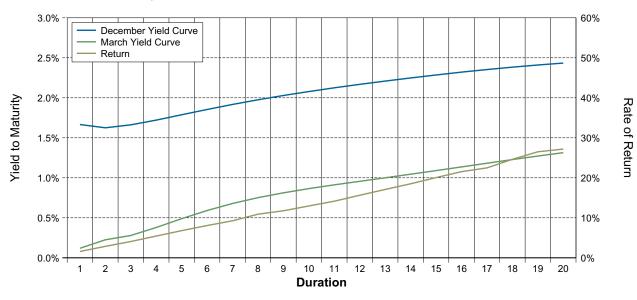


## **Bond Market Environment**

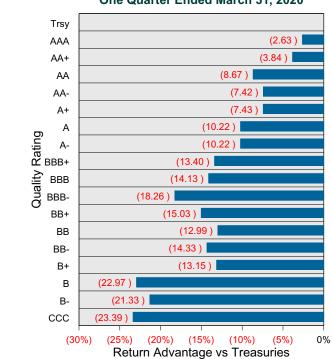
#### **Factors Influencing Bond Returns**

The charts below are designed to give you an overview of the factors that influenced bond market returns for the quarter. The first chart shows the shift in the Treasury yield curve and the resulting returns by duration. The second chart shows the average return premium (relative to Treasuries) for bonds with different quality ratings. The final chart shows the average return premium of the different sectors relative to Treasuries. These sector premiums are calculated after differences in quality and term structure have been accounted for across the sectors. They are typically explained by differences in convexity, sector specific supply and demand considerations, or other factors that influence the perceived risk of the sector.

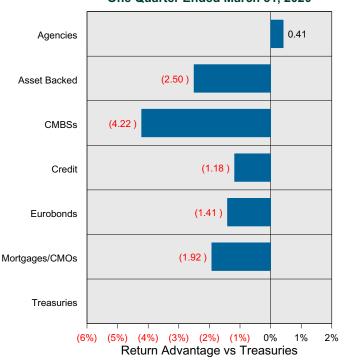
## Yield Curve Change and Rate of Return One Quarter Ended March 31, 2020



**Duration Adjusted Return Premium to Quality** One Quarter Ended March 31, 2020



**Quality and Duration Adjusted Return Premium by Sector** One Quarter Ended March 31, 2020

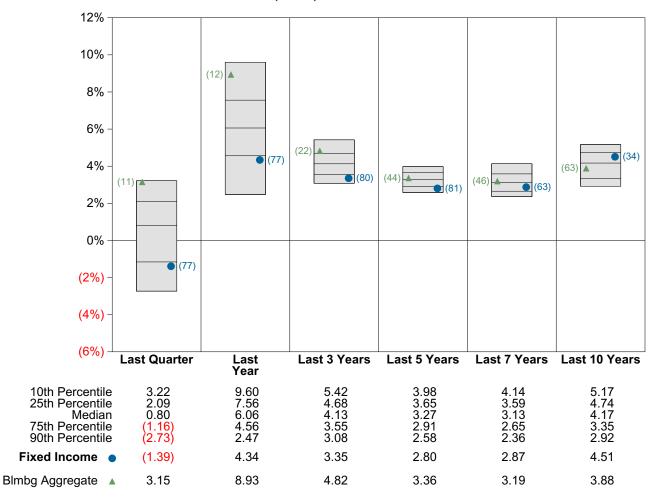


# **Fixed Income** Period Ended March 31, 2020

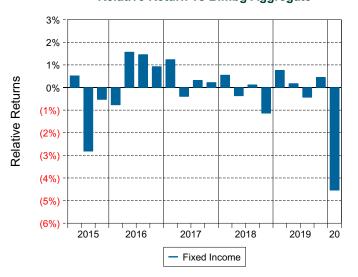
## **Quarterly Summary and Highlights**

- Fixed Income's portfolio posted a (1.39)% return for the quarter placing it in the 77 percentile of the Public Fund -Domestic Fixed group for the quarter and in the 77 percentile for the last year.
- Fixed Income's portfolio underperformed the Blmbg Aggregate by 4.54% for the quarter and underperformed the Blmbg Aggregate for the year by 4.60%.

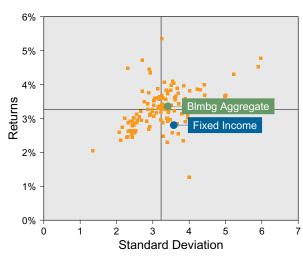
## Performance vs Public Fund - Domestic Fixed (Gross)



## Relative Return vs Blmbg Aggregate



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



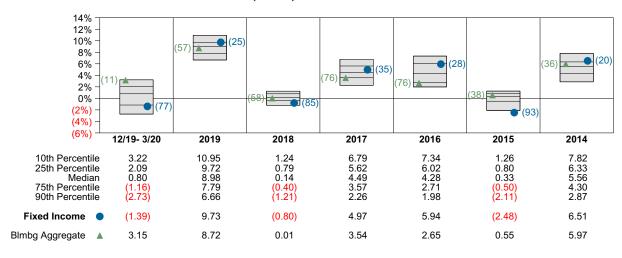


# **Fixed Income Return Analysis Summary**

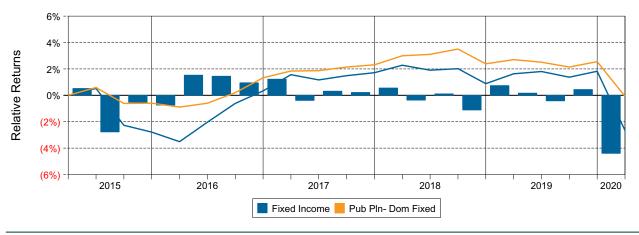
## **Return Analysis**

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 cumulative 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.

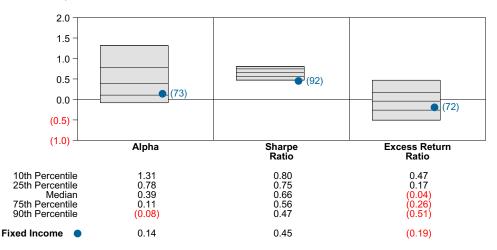
## Performance vs Public Fund - Domestic Fixed (Gross)



## **Cumulative and Quarterly Relative Return vs Blmbg Aggregate**



Risk Adjusted Return Measures vs Blmbg Aggregate Rankings Against Public Fund - Domestic Fixed (Gross) Five Years Ended March 31, 2020

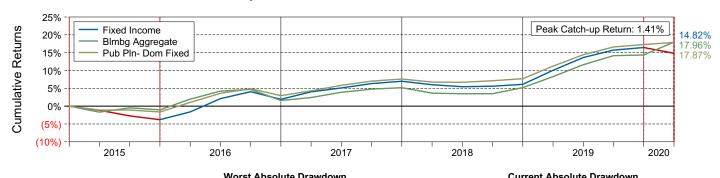




# **Fixed Income** Drawdown Analysis for Five Years Ended March 31, 2020

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**

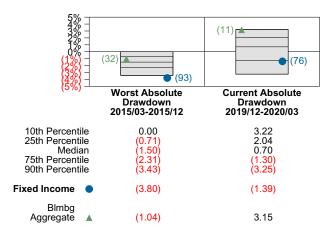


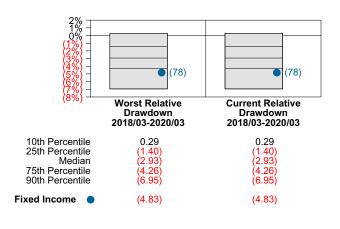
	Worst Absolute Diawdown				Current Absolute Diawdown					
	Return	Years	Period	Index	Peers	Return	Years	Period	Index	Peers
Fixed Income	(3.80)%	0.75	2015/03-2015/12	(1.04)%	(1.63)%	(1.39)%	0.25	2019/12-2020/03	3.15%	0.50%
Recovery from Trough	6.13%	0.50	2015/12-2016/06	5.31%	5.31%	-	-	-	-	-
Blmbg Aggregate	(2.18)%	0.50	2016/09-2017/03			-	-	-		
Pub Pln- Dom Fixed	(1.63)%	0.75	2015/03-2015/12			-	-	-		

#### Relative Cumulative Drawdown Analysis vs. Blmbg Aggregate **Cumulative Relative Returns** Peak Catch-up Rel Rtn: 5.07% Fixed Income 4% 3% Pub Pln- Dom Fixed 2% 1% (0.08%)0% (1%) (2%)(2.66%)(3%)(4%)(5%)2015 2016 2017 2018 2019 2020

	Worst Relative Drawdown			Current Relative Drawdown				
	Rel Rtn	Years	Period	Peers	Rel Rtn	Years	Period	Peers
Fixed Income	(4.83)%	2.00	2018/03-2020/03	(2.98)%	(4.83)%	2.00	2018/03-2020/03	(2.98)%
Recovery from Trough	-	-	-	-	-	-	-	-
Pub Pln- Dom Fixed	(3.46)%	1.50	2018/09-2020/03		(3.46)%	1.50	2018/09-2020/03	

Drawdown Rankings vs. Blmbg Aggregate Rankings against Public Fund - Domestic Fixed Five Years Ended March 31, 2020





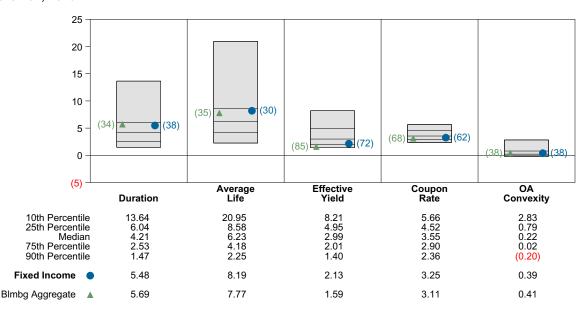


## **Fixed Income Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

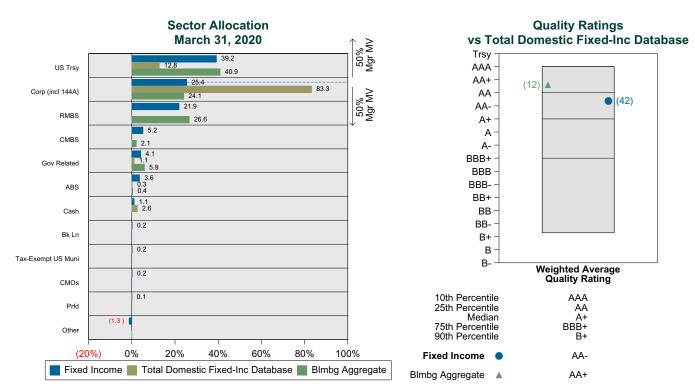
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

### **Fixed Income Portfolio Characteristics** Rankings Against Total Domestic Fixed-Inc Database as of March 31, 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.

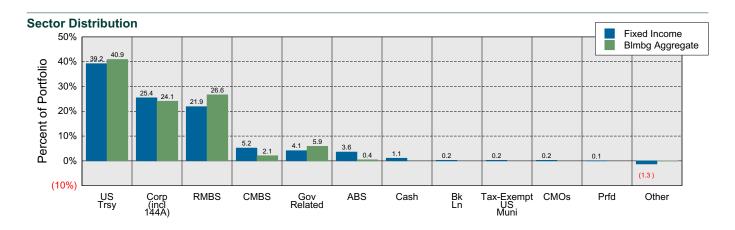


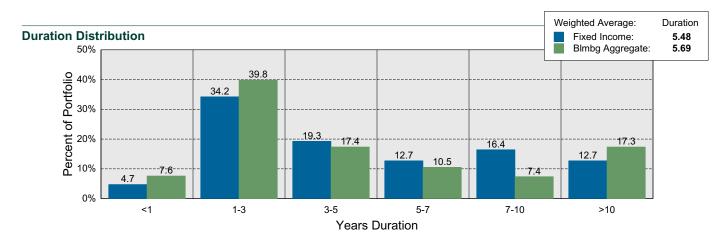


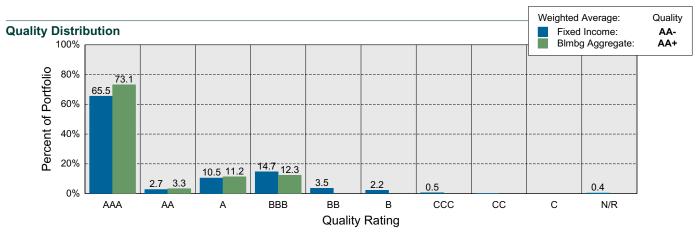
# **Fixed Income Portfolio Characteristics Summary** As of March 31, 2020

## **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.







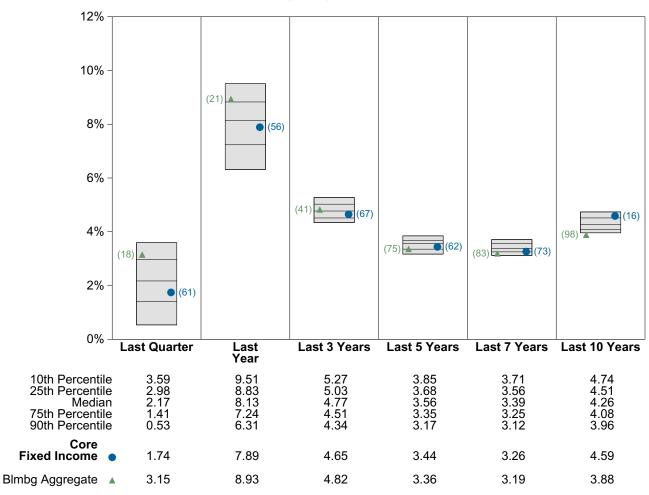


## **Core Fixed Income** Period Ended March 31, 2020

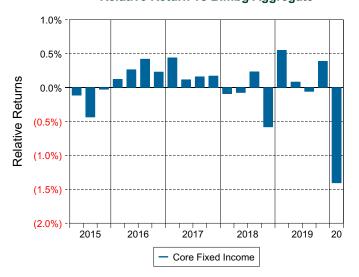
### **Quarterly Summary and Highlights**

- Core Fixed Income's portfolio posted a 1.74% return for the quarter placing it in the 61 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 56 percentile for the last year.
- Core Fixed Income's portfolio underperformed the Blmbg Aggregate by 1.41% for the quarter and underperformed the Blmbg Aggregate for the year by 1.04%.

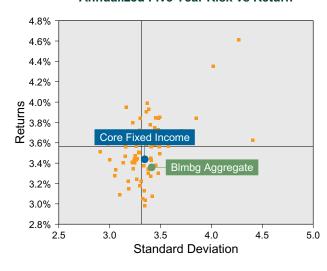
## Performance vs Callan Core Bond Fixed Income (Gross)



### Relative Return vs Blmbg Aggregate



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



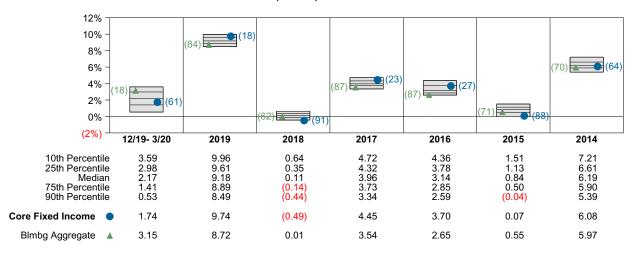


## **Core Fixed Income Return Analysis Summary**

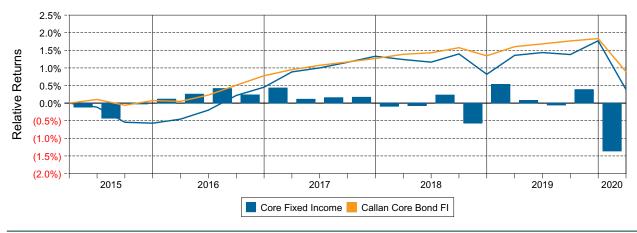
#### **Return Analysis**

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 cumulative 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.

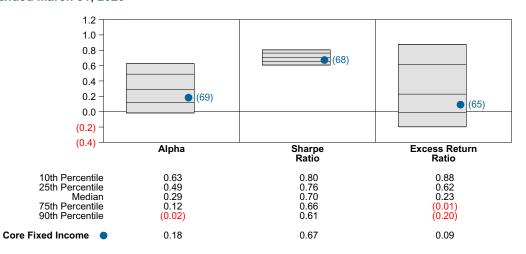
#### Performance vs Callan Core Bond Fixed Income (Gross)



### **Cumulative and Quarterly Relative Return vs Blmbg Aggregate**



Risk Adjusted Return Measures vs Blmbg Aggregate Rankings Against Callan Core Bond Fixed Income (Gross) Five Years Ended March 31, 2020



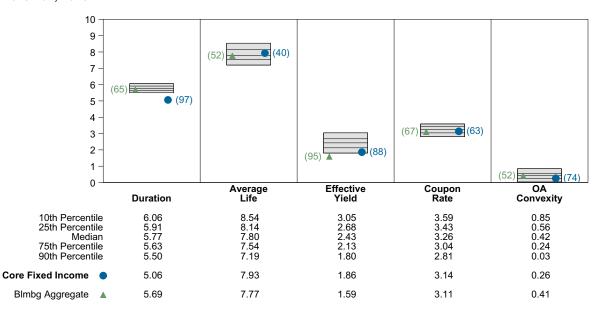


## **Core Fixed Income Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

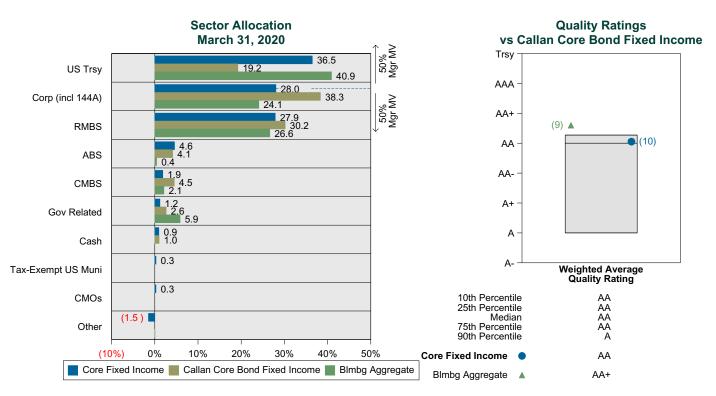
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Fixed Income Portfolio Characteristics** Rankings Against Callan Core Bond Fixed Income as of March 31, 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.

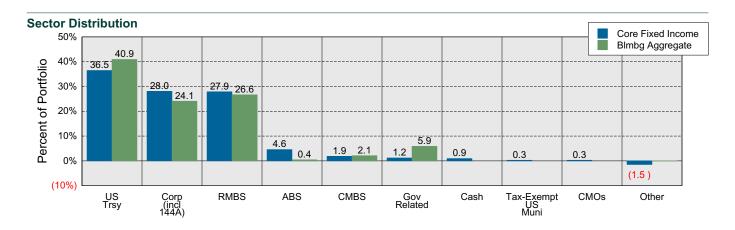


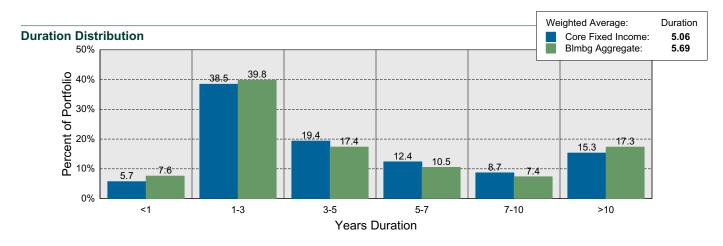


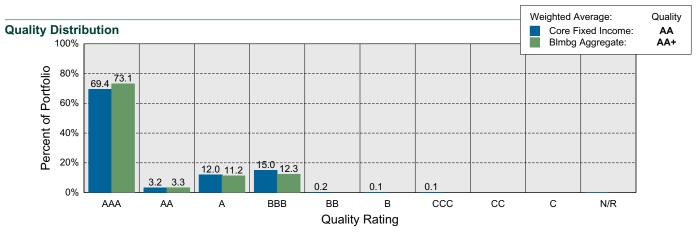
# **Core Fixed Income Portfolio Characteristics Summary** As of March 31, 2020

# **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.









## **MCM Bond Index** Period Ended March 31, 2020

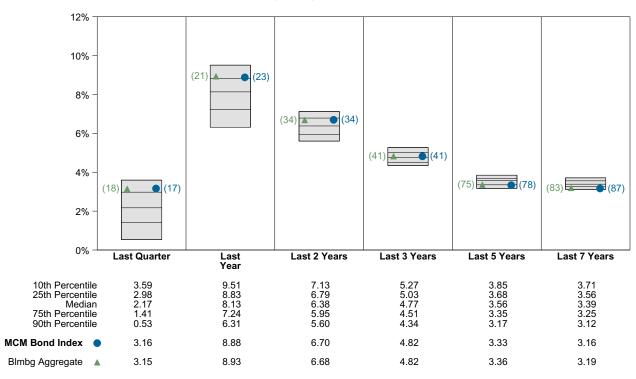
#### **Investment Philosophy**

Fixed income indexing offers a cost-effective, sensible investment approach to gaining diversified market exposure and receiving competitive relative returns over the long-term. Mellon Capital's Aggregate Bond Index Strategy employs a stratified sampling approach that has consistently added value with very little tracking error versus the Barclays Capital Aggregate Bond Index. We emphasize low turnover (low transaction costs) and strict risk control in the structuring of our portfolios.

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

- MCM Bond Index's portfolio posted a 3.16% return for the quarter placing it in the 17 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 23 percentile for the last year.
- MCM Bond Index's portfolio outperformed the Blmbg Aggregate by 0.01% for the quarter and underperformed the Blmbg Aggregate for the year by 0.05%.

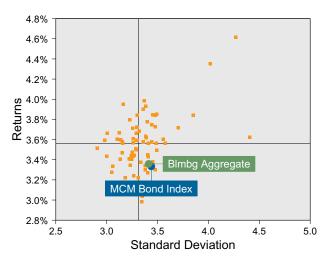
### Performance vs Callan Core Bond Fixed Income (Gross)



#### Relative Return vs Blmbg Aggregate



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



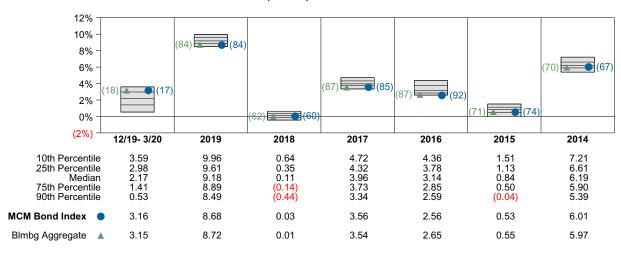


# **MCM Bond Index Return Analysis Summary**

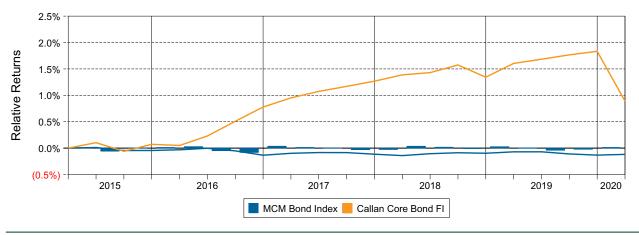
#### **Return Analysis**

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 cumulative 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.

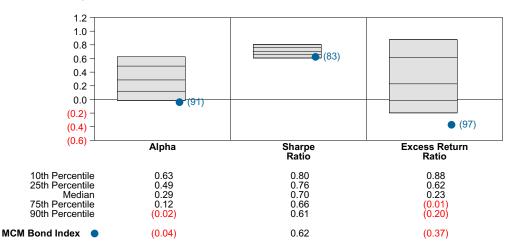
### Performance vs Callan Core Bond Fixed Income (Gross)



## **Cumulative and Quarterly Relative Return vs Blmbg Aggregate**



Risk Adjusted Return Measures vs Blmbg Aggregate Rankings Against Callan Core Bond Fixed Income (Gross) Five Years Ended March 31, 2020



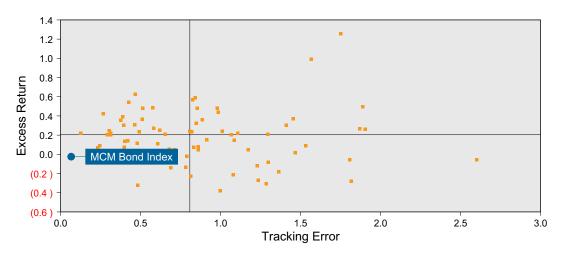


## **MCM Bond Index Risk Analysis Summary**

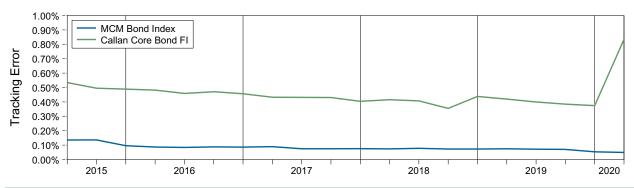
#### Risk Analysis

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.

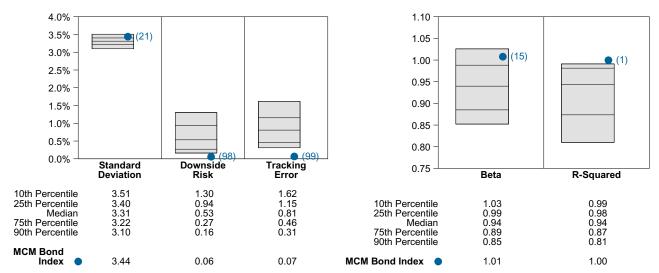
## Risk Analysis vs Callan Core Bond Fixed Income (Gross) Five Years Ended March 31, 2020



Rolling 12 Quarter Tracking Error vs Bloomberg Barclays Aggregate



Risk Statistics Rankings vs Bloomberg Barclays Aggregate Rankings Against Callan Core Bond Fixed Income (Gross) Five Years Ended March 31, 2020





## **MCM Bond Index Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

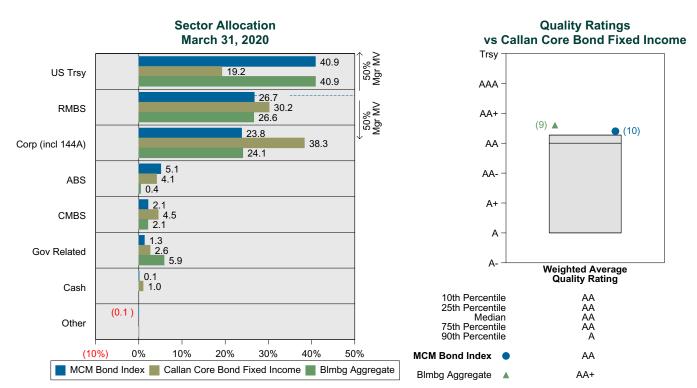
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Fixed Income Portfolio Characteristics** Rankings Against Callan Core Bond Fixed Income as of March 31, 2020



#### **Sector Allocation and Quality Ratings**

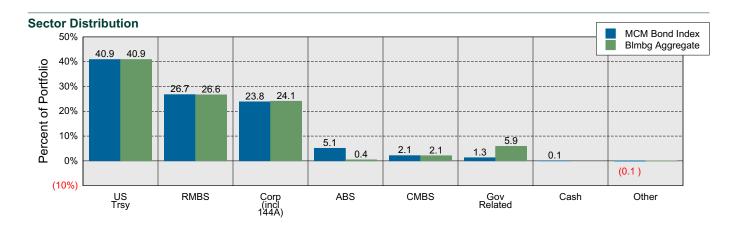
The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.

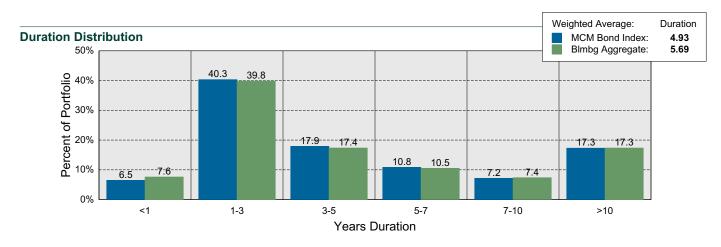


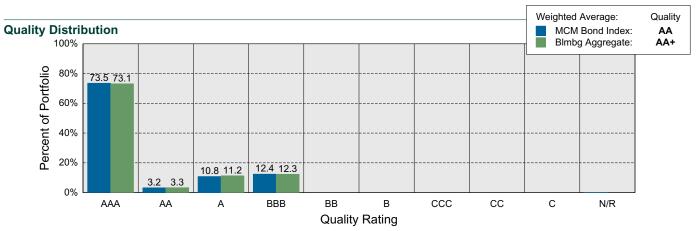
# **MCM Bond Index Portfolio Characteristics Summary** As of March 31, 2020

# **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.







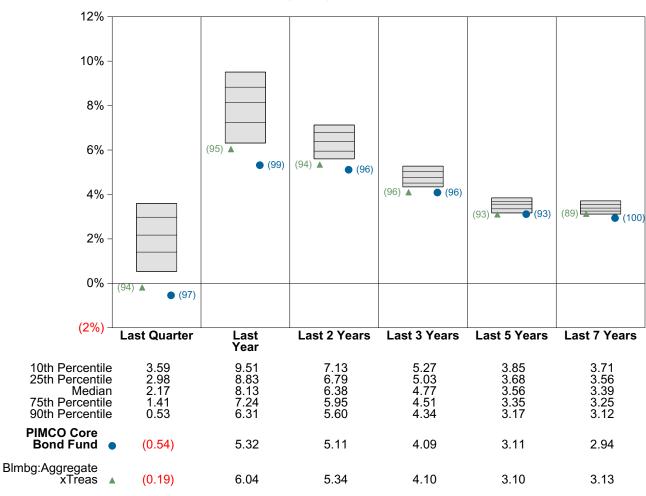


## **PIMCO Core Bond Fund** Period Ended March 31, 2020

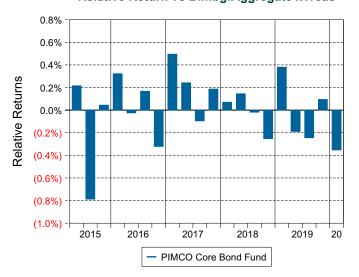
### **Quarterly Summary and Highlights**

- PIMCO Core Bond Fund's portfolio posted a (0.54)% return for the guarter placing it in the 97 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 99 percentile for the last year.
- PIMCO Core Bond Fund's portfolio underperformed the Blmbg:Aggregate xTreas by 0.35% for the quarter and underperformed the Blmbg:Aggregate xTreas for the year by 0.72%.

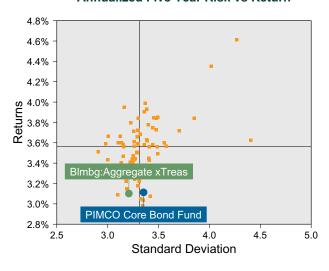
### Performance vs Callan Core Bond Fixed Income (Gross)



### Relative Return vs Blmbg:Aggregate xTreas



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

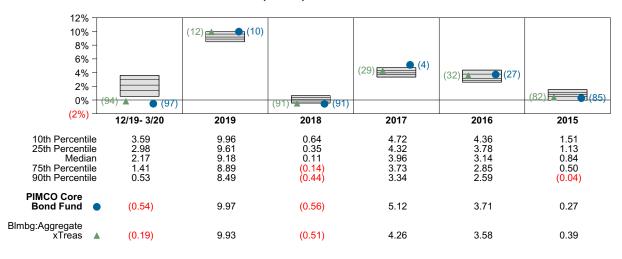


# **PIMCO Core Bond Fund Return Analysis Summary**

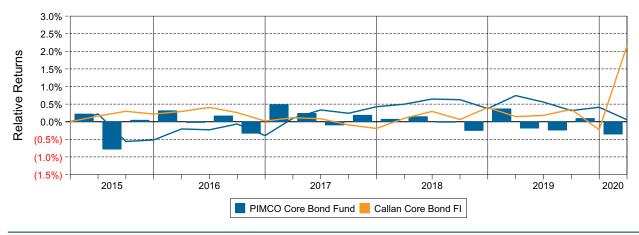
#### **Return Analysis**

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 cumulative 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.

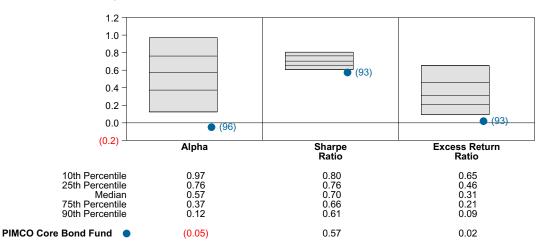
#### Performance vs Callan Core Bond Fixed Income (Gross)



### Cumulative and Quarterly Relative Return vs Blmbg:Aggregate xTreas



Risk Adjusted Return Measures vs Blmbg:Aggregate xTreas Rankings Against Callan Core Bond Fixed Income (Gross) Five Years Ended March 31, 2020



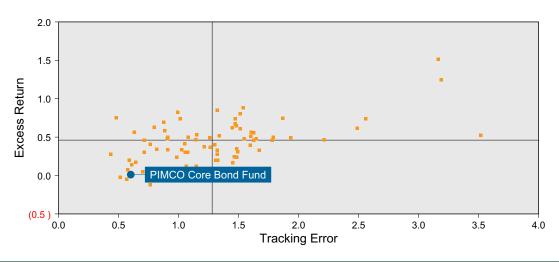


## **PIMCO Core Bond Fund Risk Analysis Summary**

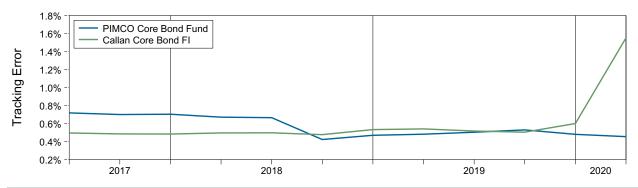
#### Risk Analysis

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 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.

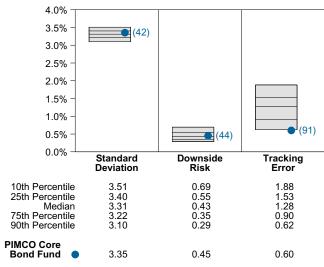
## Risk Analysis vs Callan Core Bond Fixed Income (Gross) Five Years Ended March 31, 2020

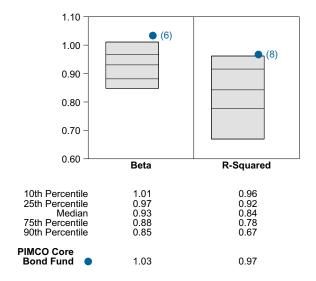


Rolling 12 Quarter Tracking Error vs Bloomberg Barclays Aggregate xTreasury



Risk Statistics Rankings vs Bloomberg Barclays Aggregate xTreasury Rankings Against Callan Core Bond Fixed Income (Gross) Five Years Ended March 31, 2020





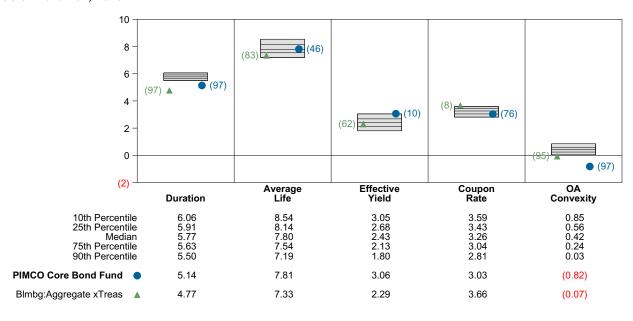


# **PIMCO Core Bond Fund Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

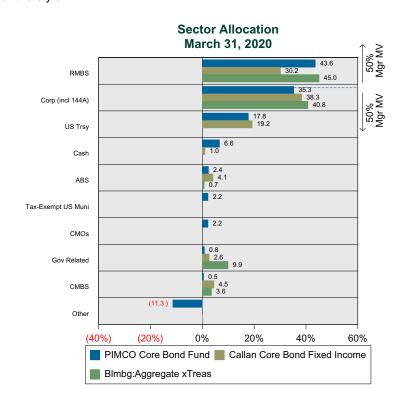
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

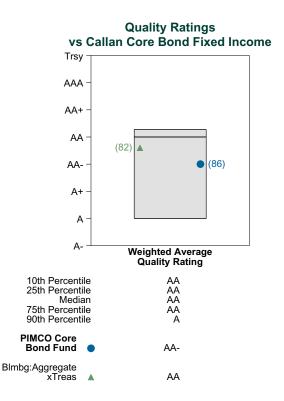
## **Fixed Income Portfolio Characteristics** Rankings Against Callan Core Bond Fixed Income as of March 31, 2020



#### **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.



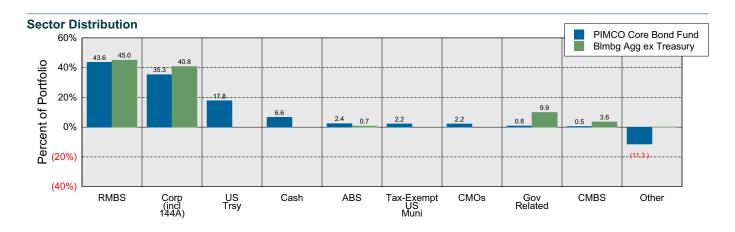


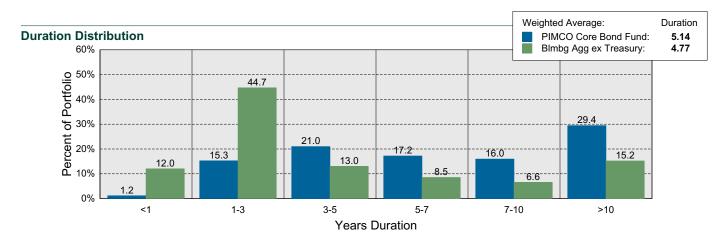


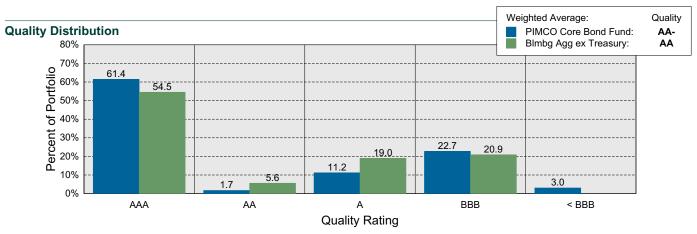
# **PIMCO Core Bond Fund Portfolio Characteristics Summary** As of March 31, 2020

# **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.









## Taplin, Canida & Habacht Corp Fl Period Ended March 31, 2020

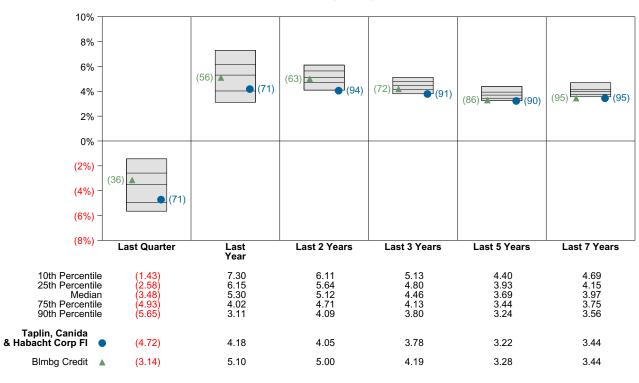
### **Investment Philosophy**

Taplin's philosophy in managing credit accounts is to add value above the benchmark index by following a strict relative value discipline, emphasizing debt securities valued too cheaply relative to the issuers fundamental creditworthiness. Yield curve positioning adds further value by focusing on the most attractive portions of the yield curve. Portfolios are constructed within a narrow duration band relative to their benchmark indices. This approach minimizes market timing and emphasizes attractive sector and issue spread opportunities within the credit universe.

### **Quarterly Summary and Highlights**

- Taplin, Canida & Habacht Corp FI's portfolio posted a (4.72)% return for the quarter placing it in the 71 percentile of the Callan Investment Grade Credit Fixed Inc group for the guarter and in the 71 percentile for the last year.
- Taplin, Canida & Habacht Corp FI's portfolio underperformed the Blmbg Credit by 1.58% for the quarter and underperformed the Blmbg Credit for the year by 0.92%.

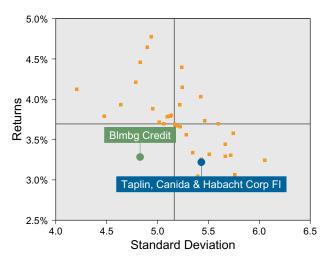
#### Performance vs Callan Investment Grade Credit Fixed Inc (Gross)



#### Relative Return vs Blmbg Credit



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



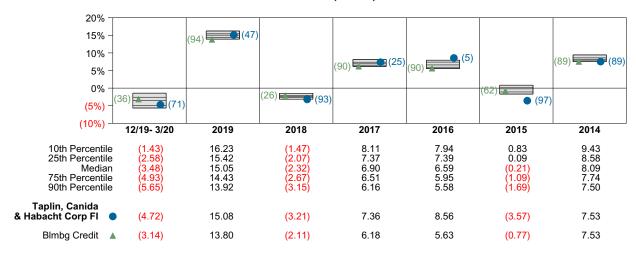


## Taplin, Canida & Habacht Corp Fl **Return Analysis Summary**

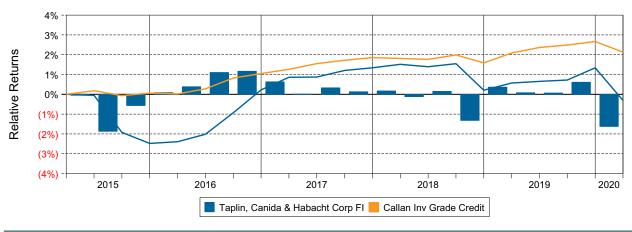
#### **Return Analysis**

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 cumulative 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.

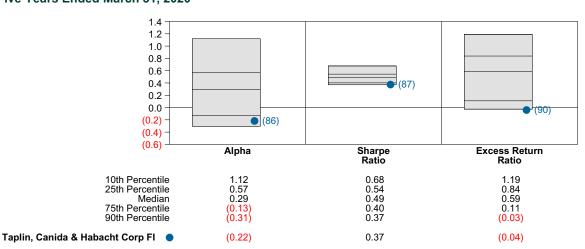
#### Performance vs Callan Investment Grade Credit Fixed Inc (Gross)



### **Cumulative and Quarterly Relative Return vs Blmbg Credit**



Risk Adjusted Return Measures vs Blmbg Credit Rankings Against Callan Investment Grade Credit Fixed Inc (Gross) Five Years Ended March 31, 2020



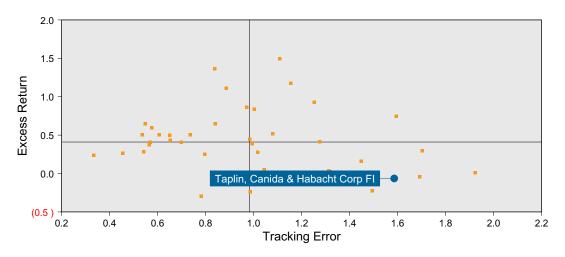


## Taplin, Canida & Habacht Corp Fl **Risk Analysis Summary**

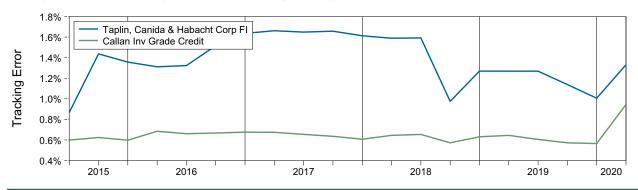
#### Risk Analysis

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.

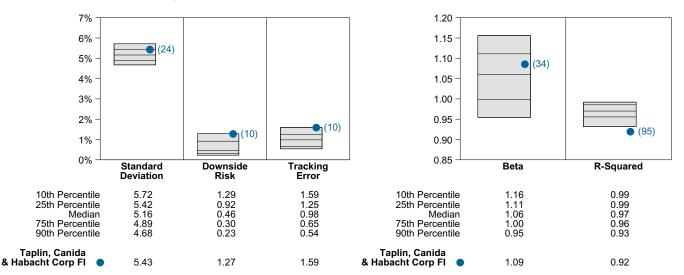
## Risk Analysis vs Callan Investment Grade Credit Fixed Inc (Gross) Five Years Ended March 31, 2020



Rolling 12 Quarter Tracking Error vs Bloomberg Barclays Credit



Risk Statistics Rankings vs Bloomberg Barclays Credit Rankings Against Callan Investment Grade Credit Fixed Inc (Gross) Five Years Ended March 31, 2020

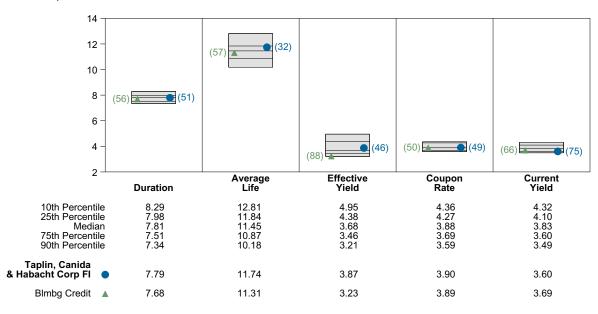


## Taplin, Canida & Habacht Corp Fl **Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

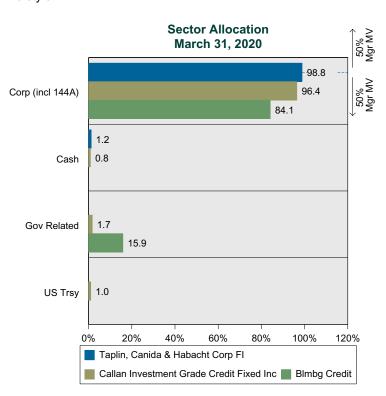
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

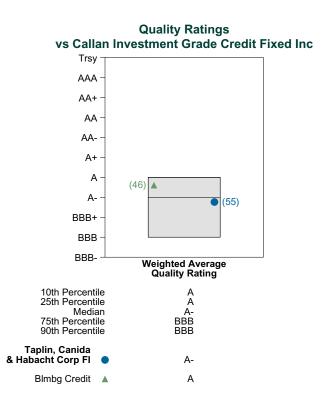
### **Fixed Income Portfolio Characteristics** Rankings Against Callan Investment Grade Credit Fixed Inc as of March 31, 2020



#### **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.







# Taplin, Canida & Habacht Corp Fl **Portfolio Characteristics Summary** As of March 31, 2020

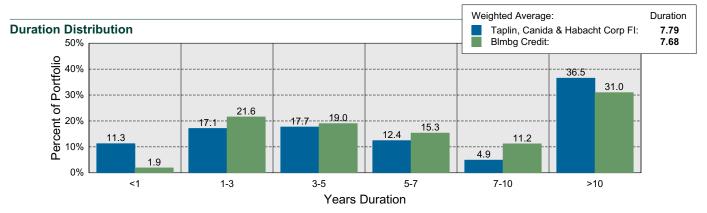
## **Portfolio Structure Comparison**

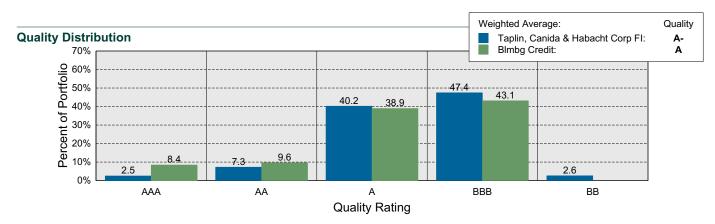
The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.



# Taplin, Canida & Habacht Corp Fl

# **Blmbg Credit**



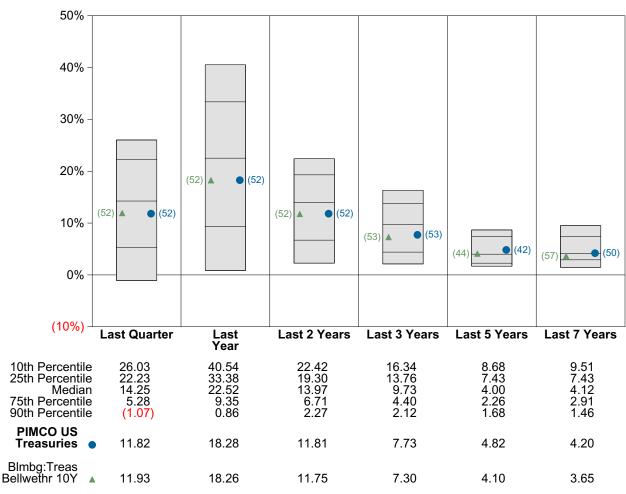


## **PIMCO US Treasuries** Period Ended March 31, 2020

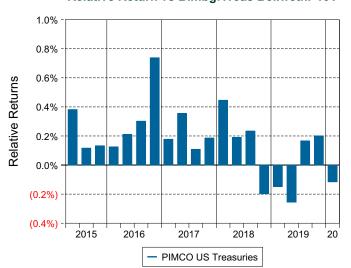
### **Quarterly Summary and Highlights**

- PIMCO US Treasuries's portfolio posted a 11.82% return for the quarter placing it in the 52 percentile of the Callan US Treas Bond Funds group for the guarter and in the 52 percentile for the last year.
- PIMCO US Treasuries's portfolio underperformed the Blmbg:Treas Bellwethr 10Y by 0.12% for the quarter and outperformed the Blmbg:Treas Bellwethr 10Y for the year by 0.02%.

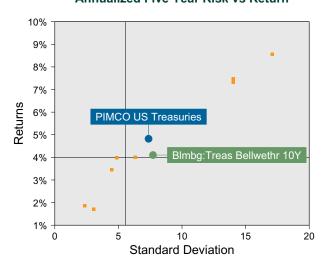
# Performance vs Callan US Treas Bond Funds (Gross)



### Relative Return vs Blmbg:Treas Bellwethr 10Y



### Callan US Treas Bond Funds (Gross) Annualized Five Year Risk vs Return

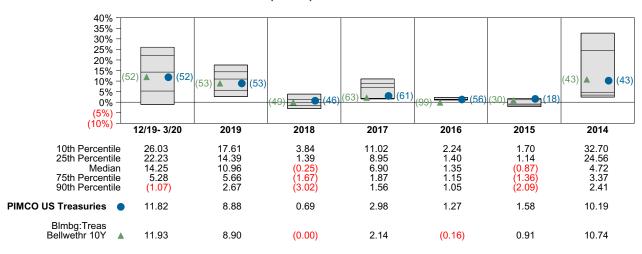


# **PIMCO US Treasuries Return Analysis Summary**

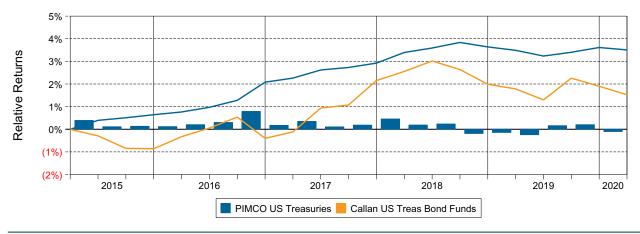
#### **Return Analysis**

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 cumulative 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.

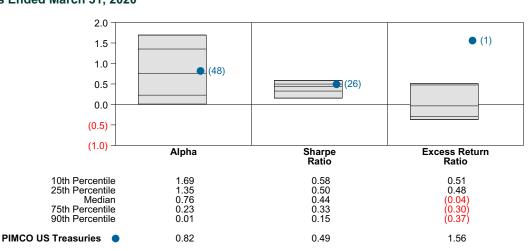
## Performance vs Callan US Treas Bond Funds (Gross)



### Cumulative and Quarterly Relative Return vs Blmbg:Treas Bellwethr 10Y



Risk Adjusted Return Measures vs Blmbg:Treas Bellwethr 10Y Rankings Against Callan US Treas Bond Funds (Gross) Five Years Ended March 31, 2020

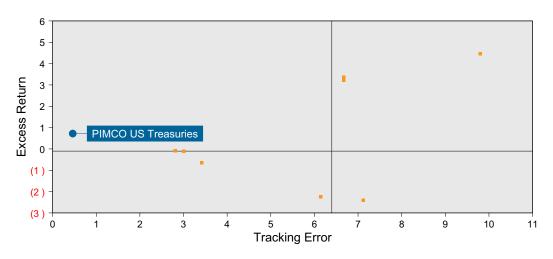


# **PIMCO US Treasuries Risk Analysis Summary**

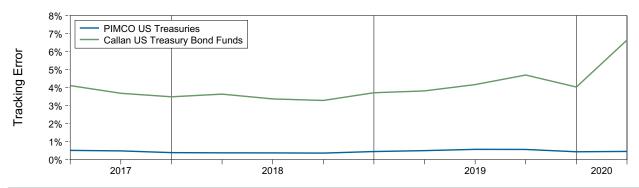
#### Risk Analysis

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.

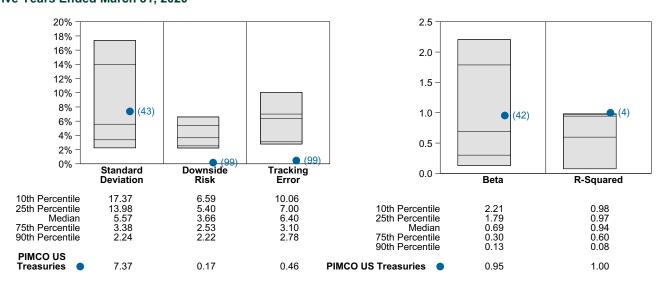
## Risk Analysis vs Callan US Treasury Bond Funds (Gross) Five Years Ended March 31, 2020



Rolling 12 Quarter Tracking Error vs Bloomberg Barclays Treas Bellwethr 10Y



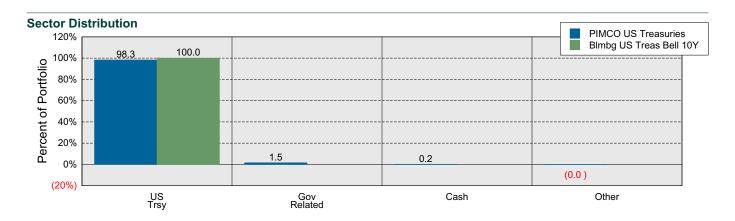
Risk Statistics Rankings vs Bloomberg Barclays Treas Bellwethr 10Y Rankings Against Callan US Treasury Bond Funds (Gross) Five Years Ended March 31, 2020

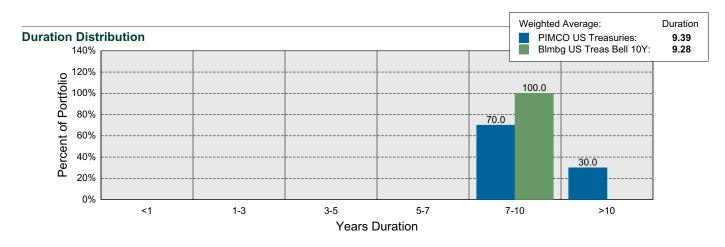


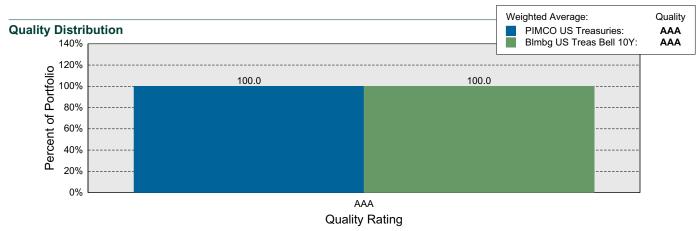
# **PIMCO US Treasuries Portfolio Characteristics Summary** As of March 31, 2020

## **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.





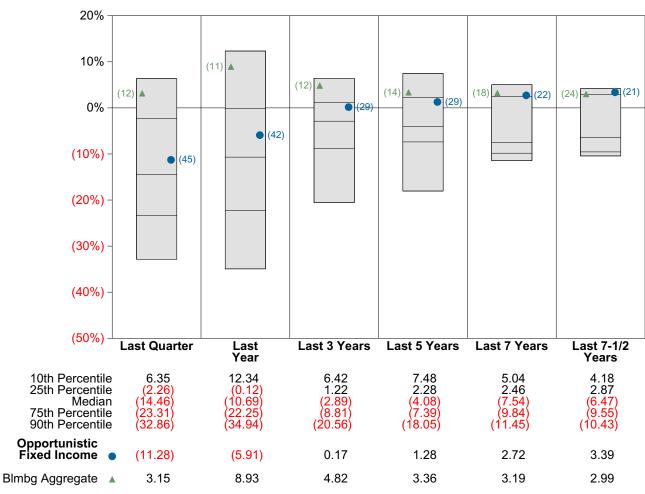


## **Opportunistic Fixed Income** Period Ended March 31, 2020

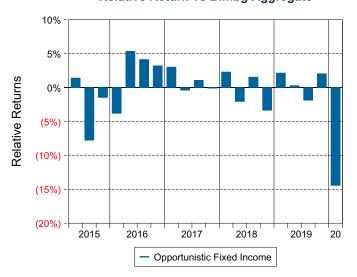
### **Quarterly Summary and Highlights**

- Opportunistic Fixed Income's portfolio posted a (11.28)% return for the quarter placing it in the 45 percentile of the Callan Alternative Investments DB group for the quarter and in the 42 percentile for the last year.
- Opportunistic Fixed Income's portfolio underperformed the Blmbg Aggregate by 14.43% for the quarter and underperformed the Blmbg Aggregate for the year by 14.85%.

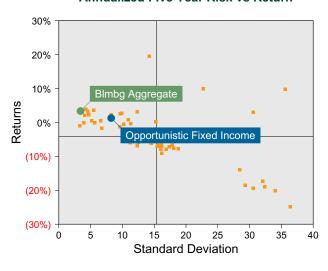
## Performance vs Callan Alternative Investments DB (Gross)



### Relative Return vs Blmbg Aggregate



## Callan Alternative Investments DB (Gross) Annualized Five Year Risk vs Return



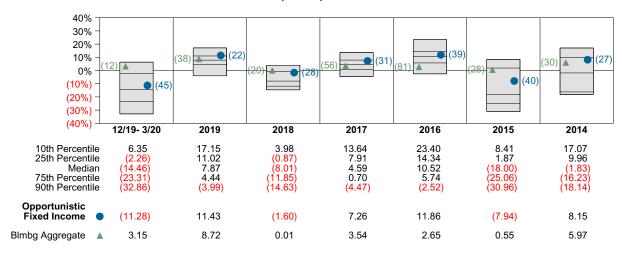


# **Opportunistic Fixed Income Return Analysis Summary**

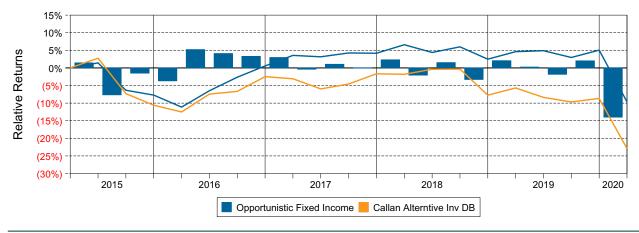
#### **Return Analysis**

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 cumulative 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.

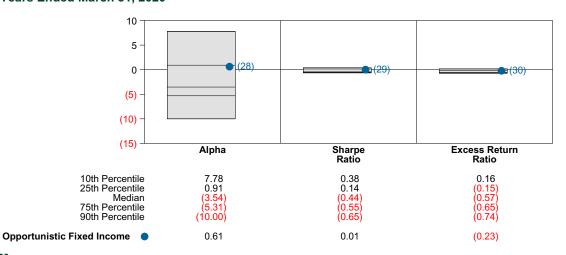
## Performance vs Callan Alternative Investments DB (Gross)



## Cumulative and Quarterly Relative Return vs Blmbg Aggregate



Risk Adjusted Return Measures vs Blmbg Aggregate Rankings Against Callan Alternative Investments DB (Gross) Five Years Ended March 31, 2020



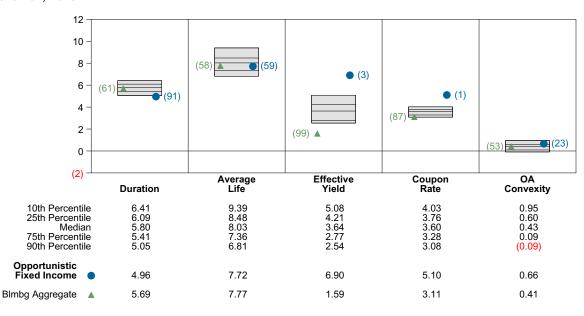


## **Opportunistic Fixed Income Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

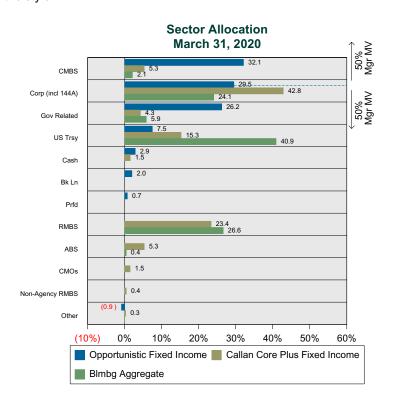
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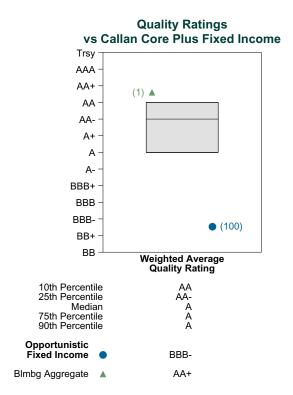
### **Fixed Income Portfolio Characteristics** Rankings Against Callan Core Plus Fixed Income as of March 31, 2020



#### **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.



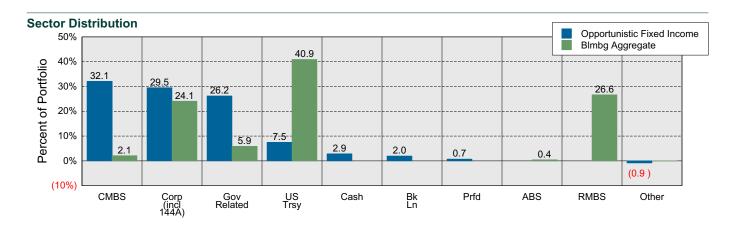


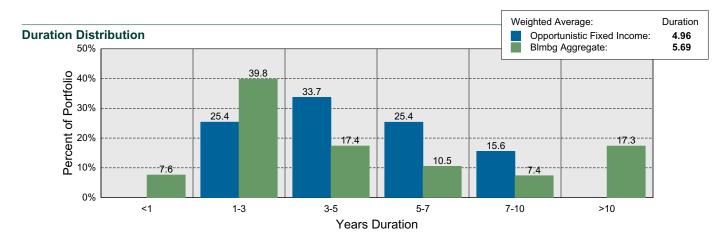


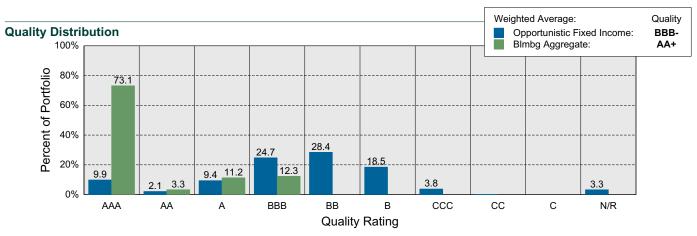
# **Opportunistic Fixed Income Portfolio Characteristics Summary** As of March 31, 2020

# **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.







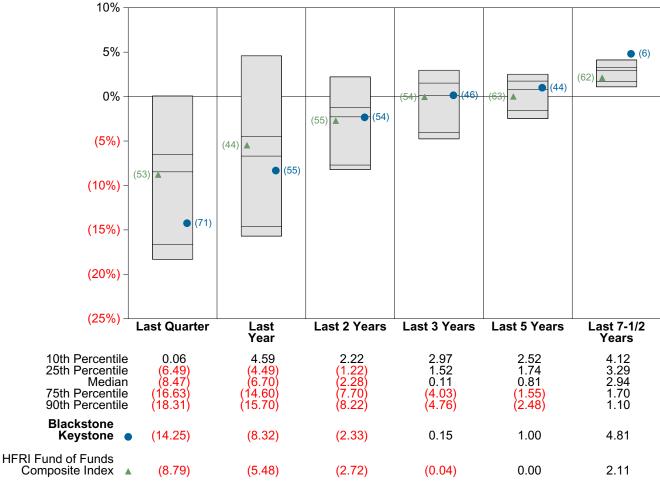


## **Blackstone Keystone** Period Ended March 31, 2020

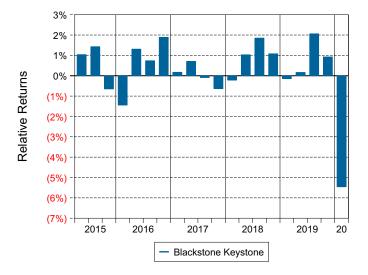
### **Quarterly Summary and Highlights**

- Blackstone Keystone's portfolio posted a (14.25)% return for the quarter placing it in the 71 percentile of the Callan Absolute Rtn Hedge Fund of Funds group for the quarter and in the 55 percentile for the last year.
- Blackstone Keystone's portfolio underperformed the HFRI Fund of Funds Composite Index by 5.46% for the quarter and underperformed the HFRI Fund of Funds Composite Index for the year by 2.84%.

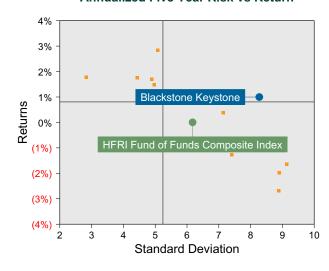
## Performance vs Callan Absolute Rtn Hedge Fund of Funds (Net)



## Relative Returns vs **HFRI Fund of Funds Composite Index**



### Callan Absolute Rtn Hedge Fund of Funds (Net) Annualized Five Year Risk vs Return



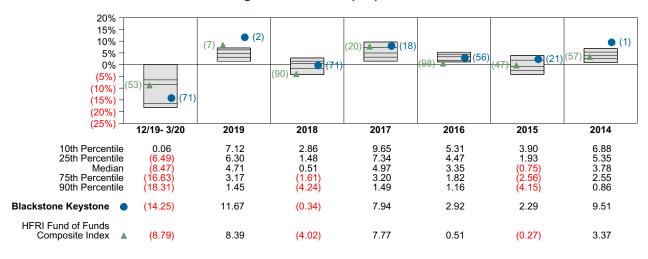


## **Blackstone Keystone Return Analysis Summary**

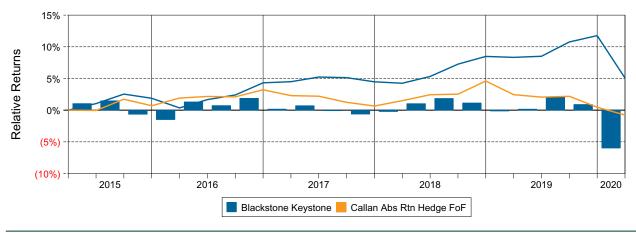
#### **Return Analysis**

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 cumulative 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.

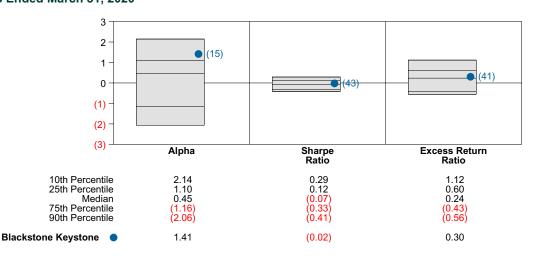
#### Performance vs Callan Absolute Rtn Hedge Fund of Funds (Net)



### Cumulative and Quarterly Relative Return vs HFRI Fund of Funds Composite Index



Risk Adjusted Return Measures vs HFRI Fund of Funds Composite Index Rankings Against Callan Absolute Rtn Hedge Fund of Funds (Net) Five Years Ended March 31, 2020



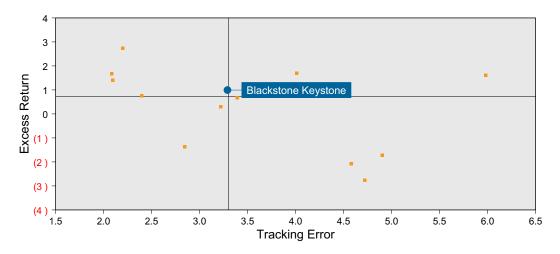


# **Blackstone Keystone Risk Analysis Summary**

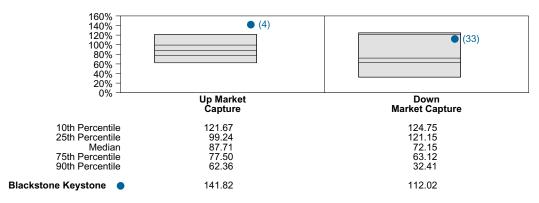
#### Risk Analysis

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.

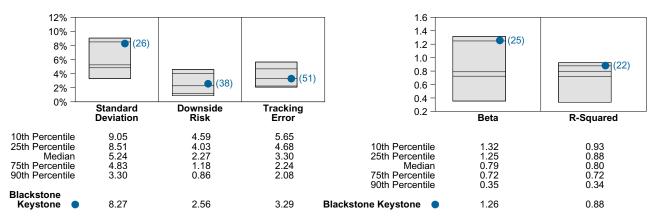
### Risk Analysis vs Callan Absolute Rtn Hedge Fund of Funds (Net) Five Years Ended March 31, 2020



### Market Capture vs HFRI Fund of Funds Composite Index Rankings Against Callan Absolute Rtn Hedge Fund of Funds (Net) Five Years Ended March 31, 2020



### Risk Statistics Rankings vs HFRI Fund of Funds Composite Index Rankings Against Callan Absolute Rtn Hedge Fund of Funds (Net) Five Years Ended March 31, 2020





# **Brandywine Global Opp** Period Ended March 31, 2020

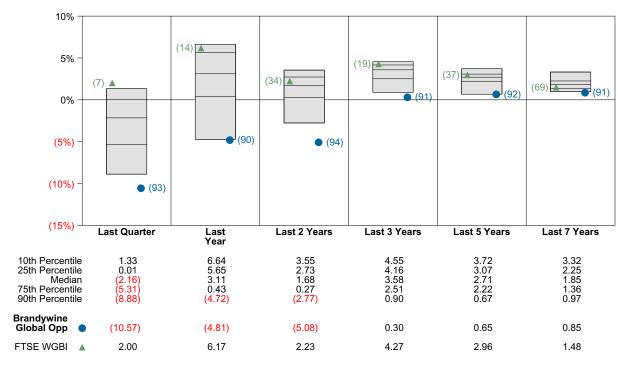
#### **Investment Philosophy**

Brandywine's Global Opportunistic Fixed Income philosophy is a value-driven, active, strategic approach. This strategy allows for a 0-15% allocation to emerging markets and for a 0-15% allocation to high yield debt. Value is defined as a combination of above-average real interest rates and an under-valued currency. They concentrate investments where existing economic and market conditions can enable that value to be realized in an intermediate time frame. They capture excess returns through strategic investment in countries, sectors, and securities, rather than by maintaining minimum, core commitments.

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

- Brandywine Global Opp's portfolio posted a (10.57)% return for the quarter placing it in the 93 percentile of the Callan Global Fixed Income (Unhedged) group for the quarter and in the 90 percentile for the last year.
- Brandywine Global Opp's portfolio underperformed the FTSE WGBI by 12.57% for the guarter and underperformed the FTSE WGBI for the year by 10.98%.

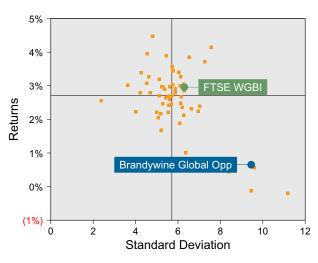
### Performance vs Callan Global Fixed Income (Unhedged) (Gross)



# Relative Return vs FTSE WGBI



#### Callan Global Fixed Income (Unhedged) (Gross) Annualized Five Year Risk vs Return



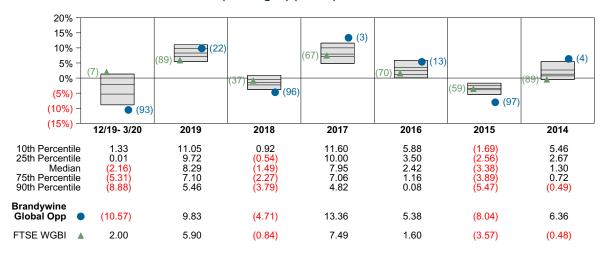


# **Brandywine Global Opp Return Analysis Summary**

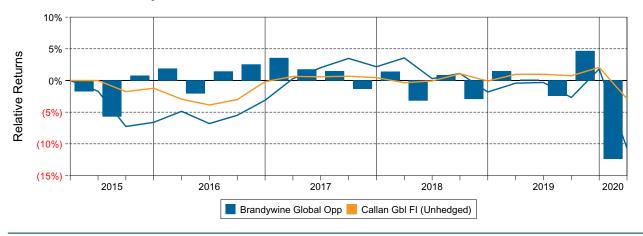
#### **Return Analysis**

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 cumulative 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.

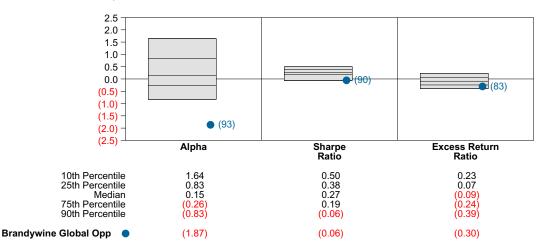
### Performance vs Callan Global Fixed Income (Unhedged) (Gross)



### **Cumulative and Quarterly Relative Return vs FTSE WGBI**



Risk Adjusted Return Measures vs FTSE WGBI Rankings Against Callan Global Fixed Income (Unhedged) (Gross) Five Years Ended March 31, 2020

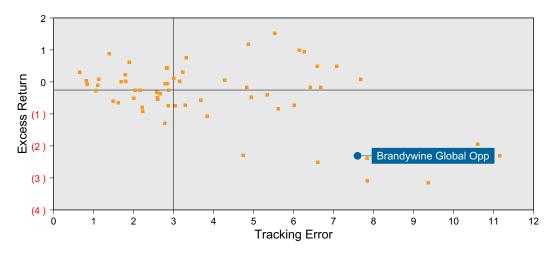


# **Brandywine Global Opp Risk Analysis Summary**

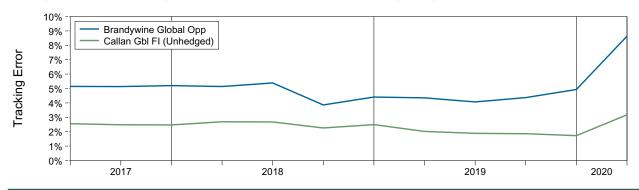
#### Risk Analysis

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.

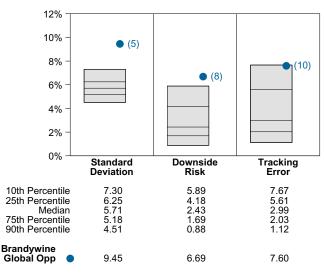
### Risk Analysis vs Callan Global Fixed Income (Unhedged) (Gross) Five Years Ended March 31, 2020

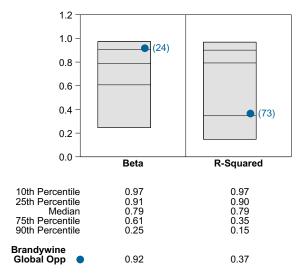


Rolling 12 Quarter Tracking Error vs FTSE World Gov Bond Index (WGBI)



Risk Statistics Rankings vs FTSE World Gov Bond Index (WGBI) Rankings Against Callan Global Fixed Income (Unhedged) (Gross) Five Years Ended March 31, 2020





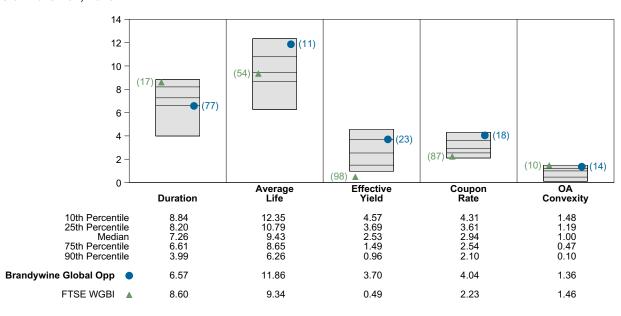


# **Brandywine Global Opp Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

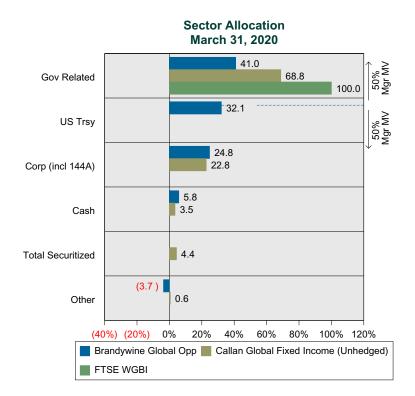
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

### **Fixed Income Portfolio Characteristics** Rankings Against Callan Global Fixed Income (Unhedged) as of March 31, 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.



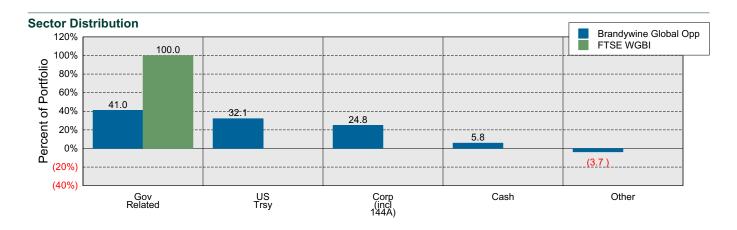
# **Quality Ratings** vs Callan Global Fixed Income (Unhedged) Trsy AAA AA+ AA (23) AA-Α+ (79) Α A-BBB+ BBB BBB-Weighted Average Quality Rating 10th Percentile 25th Percentile Median 75th Percentile BBB 90th Percentile Brandywine Global Opp Α FTSE WGBI AΑ

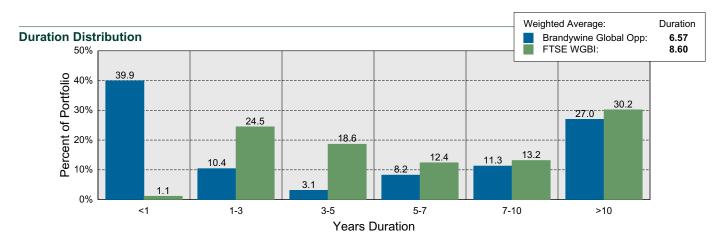


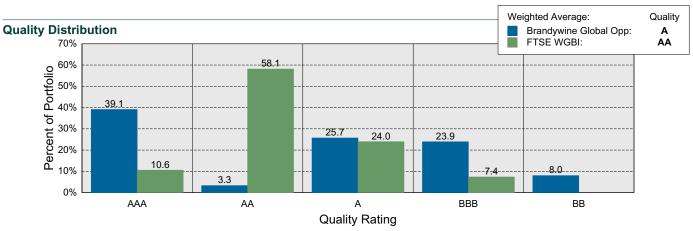
# **Brandywine Global Opp Portfolio Characteristics Summary** As of March 31, 2020

### **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.





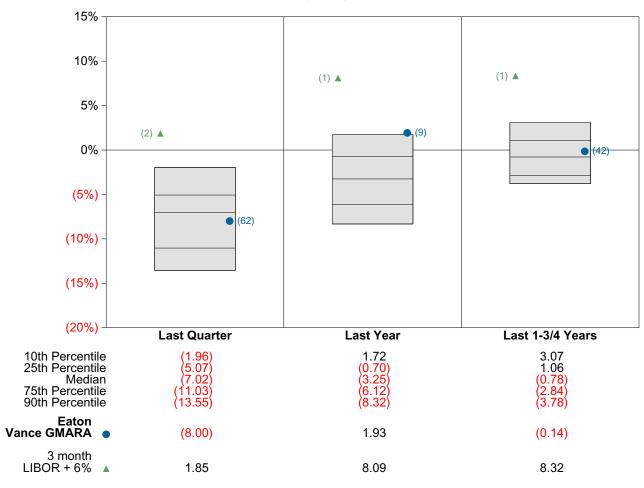


# **Eaton Vance GMARA** Period Ended March 31, 2020

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

- Eaton Vance GMARA's portfolio posted a (8.00)% return for the quarter placing it in the 62 percentile of the Callan Unconstrained Fixed Income group for the quarter and in the 9 percentile for the last year.
- Eaton Vance GMARA's portfolio underperformed the 3 month LIBOR + 6% by 9.85% for the quarter and underperformed the 3 month LIBOR + 6% for the year by 6.16%.

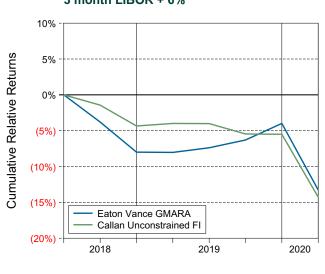
# Performance vs Callan Unconstrained Fixed Income (Gross)



### Relative Return vs 3 month LIBOR + 6%

# 6% Relative Returns 0% (2%) (4%) (10%)(12%) -2018 2019 2020 Eaton Vance GMARA

### **Cumulative Returns vs** 3 month LIBOR + 6%





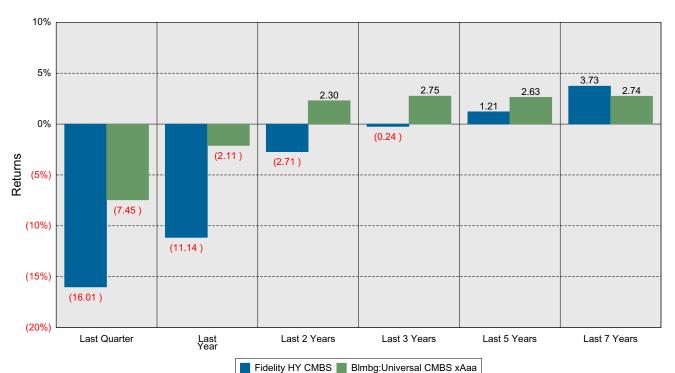
# Fidelity HY CMBS Period Ended March 31, 2020

#### **Investment Philosophy**

FIAM believes that unsurpassed bottom-up research on more CMBS issues than other investors will yield premiums relative to others.

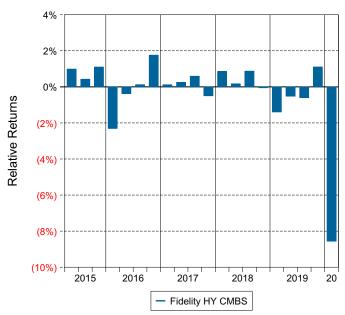
# **Quarterly Summary and Highlights**

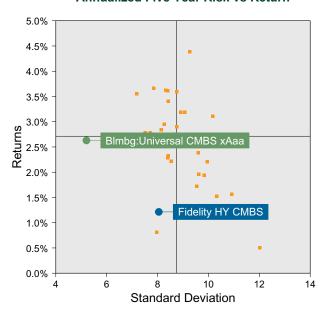
- Fidelity HY CMBS's portfolio posted a (16.01)% return for the quarter placing it in the 76 percentile of the Callan Global Fixed High Yield group for the quarter and in the 87 percentile for the last year.
- Fidelity HY CMBS's portfolio underperformed the Blmbg:Universal CMBS xAaa by 8.56% for the guarter and underperformed the Blmbg:Universal CMBS xAaa for the year by 9.04%.



Relative Returns vs Blmbg:Universal CMBS xAaa

Callan Global Fixed High Yield (Gross) **Annualized Five Year Risk vs Return** 





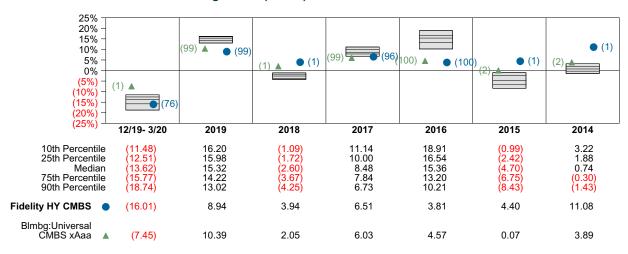


# Fidelity HY CMBS **Return Analysis Summary**

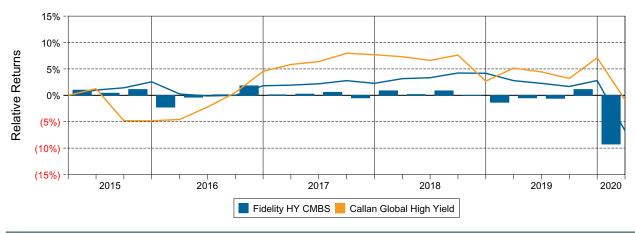
#### **Return Analysis**

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 cumulative 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.

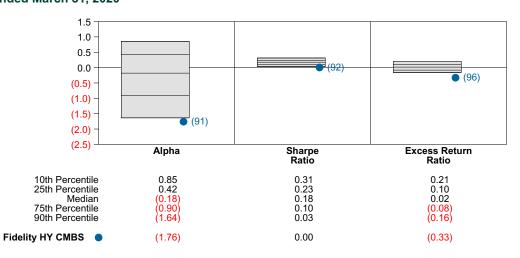
### Performance vs Callan Global Fixed High Yield (Gross)



#### Cumulative and Quarterly Relative Return vs Blmbg:Universal CMBS xAaa



Risk Adjusted Return Measures vs Blmbg:Universal CMBS xAaa Rankings Against Callan Global Fixed High Yield (Gross) Five Years Ended March 31, 2020



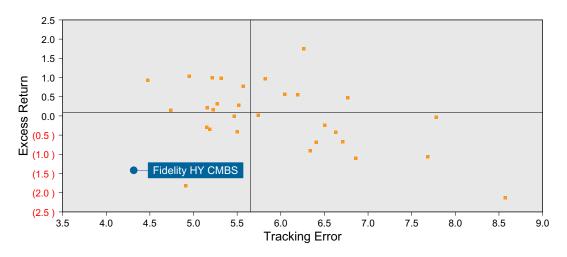


# Fidelity HY CMBS **Risk Analysis Summary**

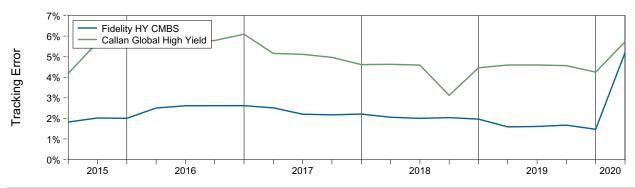
#### Risk Analysis

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.

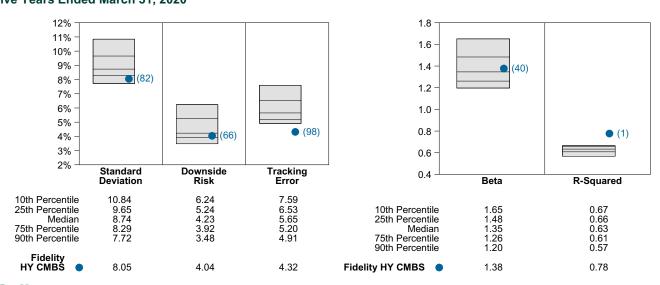
### Risk Analysis vs Callan Global Fixed High Yield (Gross) Five Years Ended March 31, 2020



Rolling 12 Quarter Tracking Error vs Bloomberg Barclays Universal CMBS xAaa



Risk Statistics Rankings vs Bloomberg Barclays Universal CMBS xAaa Rankings Against Callan Global Fixed High Yield (Gross) Five Years Ended March 31, 2020

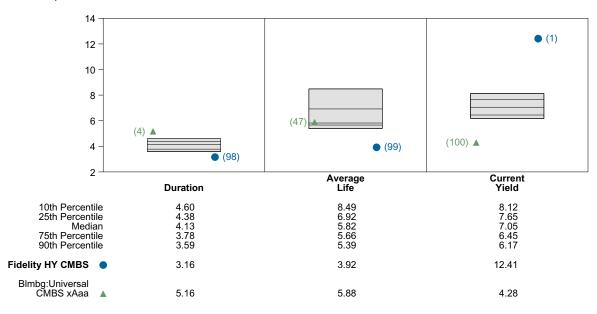


# **Fidelity HY CMBS Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

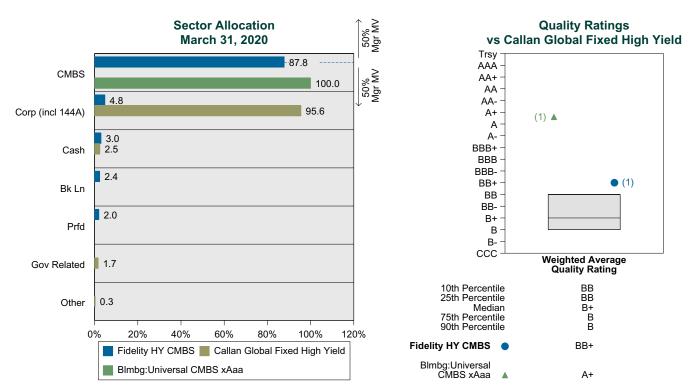
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

### **Fixed Income Portfolio Characteristics** Rankings Against Callan Global Fixed High Yield as of March 31, 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.

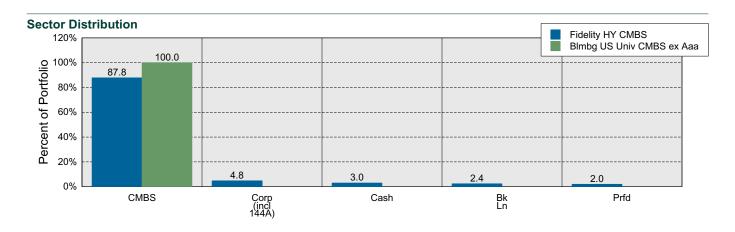


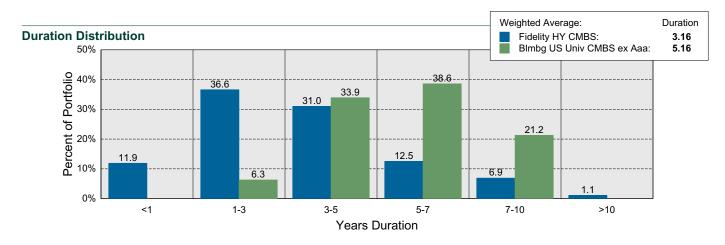


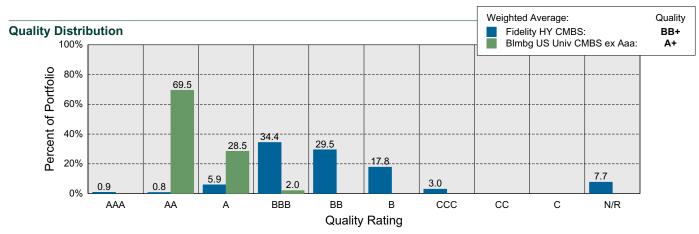
# **Fidelity HY CMBS Portfolio Characteristics Summary** As of March 31, 2020

# **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.





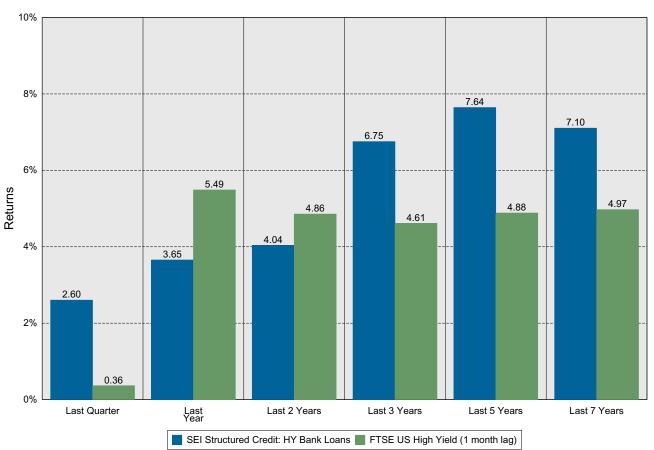




# **SEI Structured Credit: HY Bank Loans** Period Ended March 31, 2020

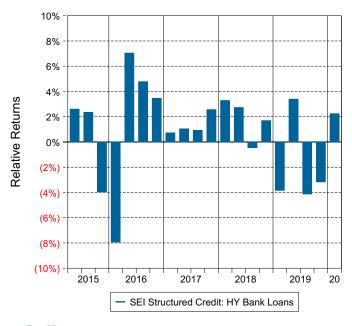
#### **Quarterly Summary and Highlights**

- SEI Structured Credit: HY Bank Loans's portfolio posted a 2.60% return for the quarter placing it in the 1 percentile of the Callan Multi-Sector Credit group for the quarter and in the 2 percentile for the last year.
- SEI Structured Credit: HY Bank Loans's portfolio outperformed the FTSE US High Yield (1 month lag) by 2.24% for the quarter and underperformed the FTSE US High Yield (1 month lag) for the year by 1.83%.



Relative Returns vs FTSE US High Yield (1 month lag)

Callan Multi-Sector Credit (Gross) Annualized Five Year Risk vs Return





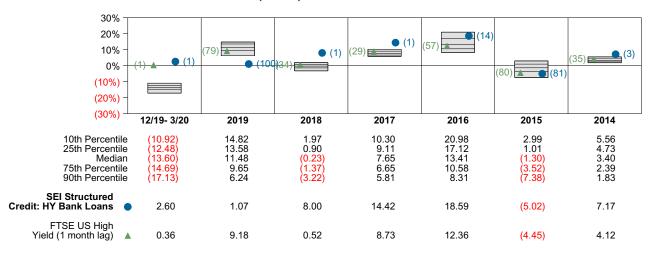


# **SEI Structured Credit: HY Bank Loans Return Analysis Summary**

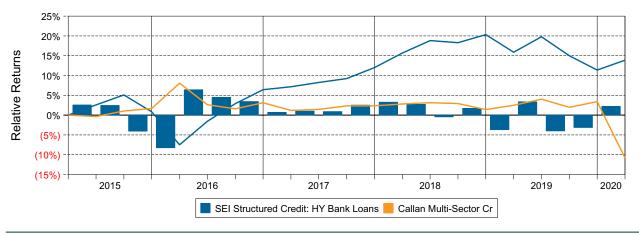
#### **Return Analysis**

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 cumulative 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.

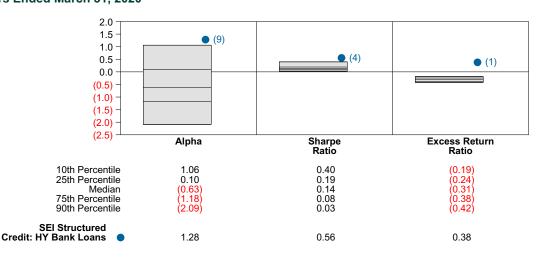
### Performance vs Callan Multi-Sector Credit (Gross)



# Cumulative and Quarterly Relative Return vs FTSE US High Yield (1 month lag)



Risk Adjusted Return Measures vs FTSE US High Yield (1 month lag) Rankings Against Callan Multi-Sector Credit (Gross) Five Years Ended March 31, 2020



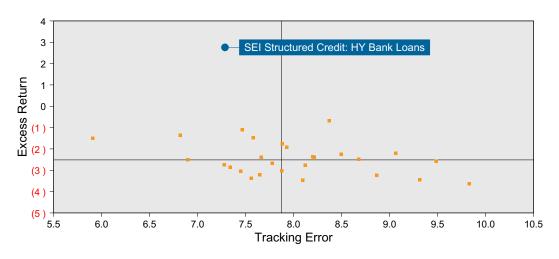


# **SEI Structured Credit: HY Bank Loans Risk Analysis Summary**

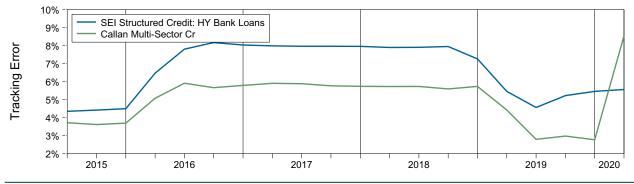
#### **Risk Analysis**

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.

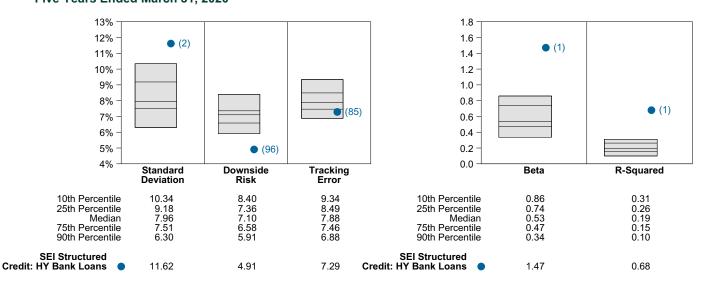
### Risk Analysis vs Callan Multi-Sector Credit (Gross) Five Years Ended March 31, 2020



Rolling 12 Quarter Tracking Error vs FTSE US High Yield (1 month lag)



Risk Statistics Rankings vs FTSE US High Yield (1 month lag) Rankings Against Callan Multi-Sector Credit (Gross) Five Years Ended March 31, 2020



# **Stone Harbor EMD** Period Ended March 31, 2020

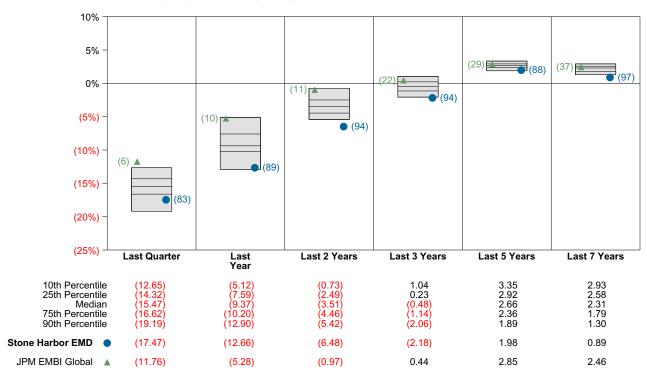
#### **Investment Philosophy**

Stone Harbor believes that a disciplined credit and relative value approach will best capture what the investment team views as a secular trend towards the expansion and development of the emerging debt markets. The team also believes that investing in a diversified portfolio of improving emerging markets debt instruments will result in strong, long-term performance. Also, they believe the key to successfully generating excess returns is through a process of rigorous credit analysis. The team's active style of investment management is characterized by fundamental credit analysis.

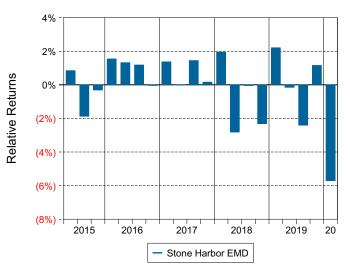
### **Quarterly Summary and Highlights**

- Stone Harbor EMD's portfolio posted a (17.47)% return for the quarter placing it in the 83 percentile of the Callan Emerging Debt USD group for the quarter and in the 89 percentile for the last year.
- Stone Harbor EMD's portfolio underperformed the JPM EMBI Global by 5.71% for the quarter and underperformed the JPM EMBI Global for the year by 7.38%.

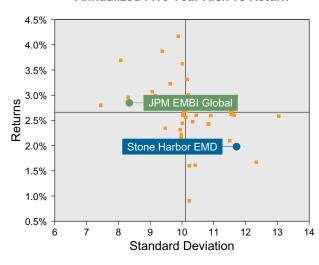
### Performance vs Callan Emerging Debt USD (Gross)



#### Relative Return vs JPM EMBI Global



#### Callan Emerging Debt USD (Gross) Annualized Five Year Risk vs Return



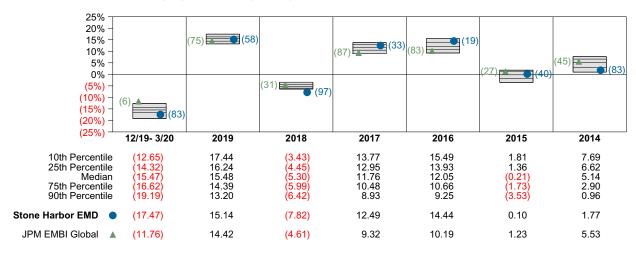


# **Stone Harbor EMD Return Analysis Summary**

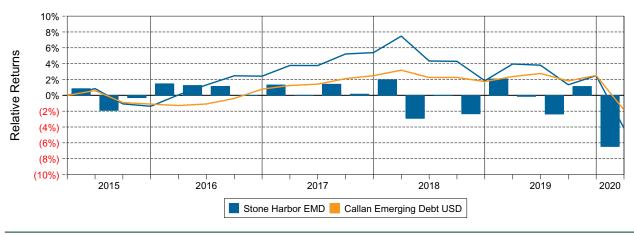
#### **Return Analysis**

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 cumulative 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.

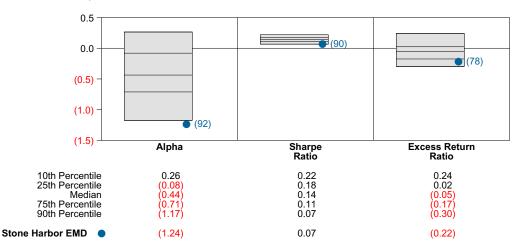
### Performance vs Callan Emerging Debt USD (Gross)



# **Cumulative and Quarterly Relative Return vs JPM EMBI Global**



Risk Adjusted Return Measures vs JPM EMBI Global Rankings Against Callan Emerging Debt USD (Gross) Five Years Ended March 31, 2020



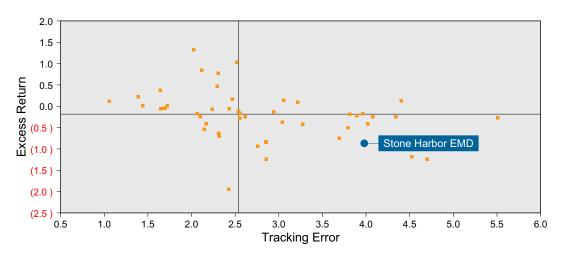


# **Stone Harbor EMD Risk Analysis Summary**

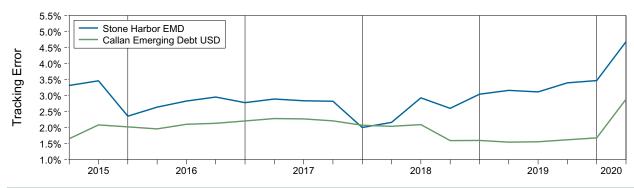
#### Risk Analysis

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.

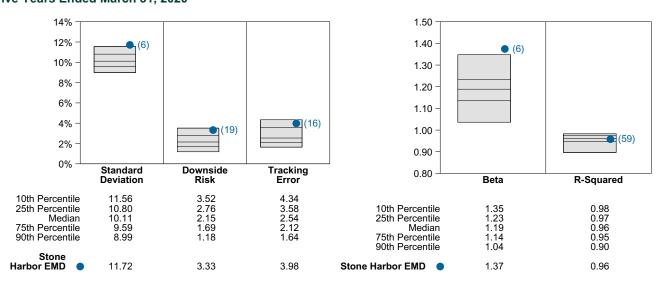
### Risk Analysis vs Callan Emerging Debt USD (Gross) Five Years Ended March 31, 2020



Rolling 12 Quarter Tracking Error vs JPM Emerging Mkts Bond Global



Risk Statistics Rankings vs JPM Emerging Mkts Bond Global Rankings Against Callan Emerging Debt USD (Gross) Five Years Ended March 31, 2020

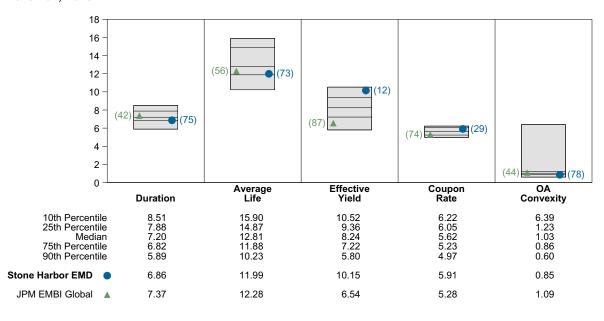


# **Stone Harbor EMD Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

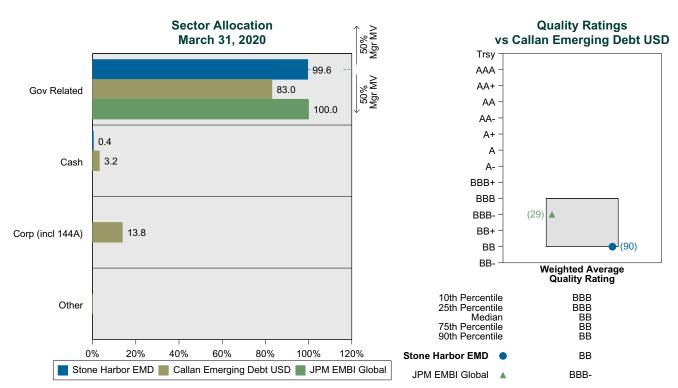
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

### **Fixed Income Portfolio Characteristics** Rankings Against Callan Emerging Debt USD as of March 31, 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.

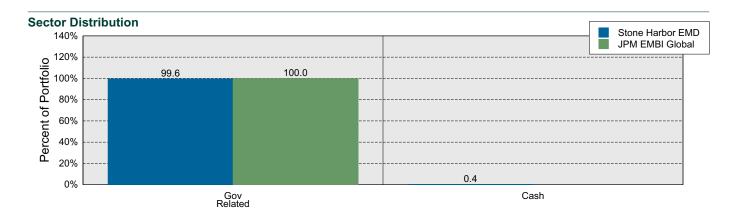


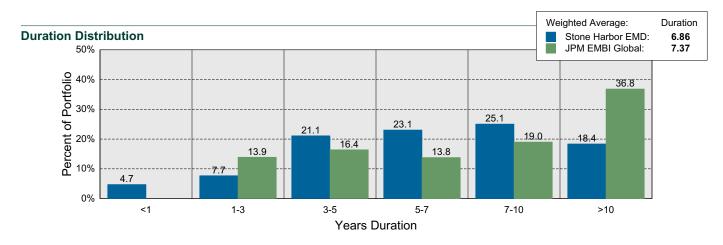


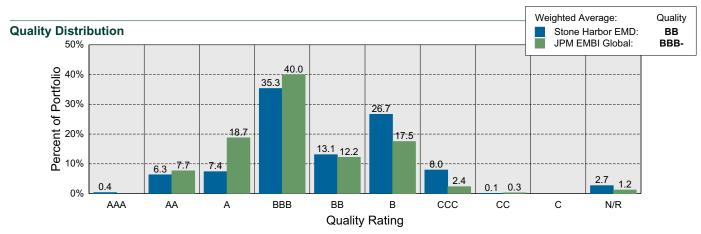
# **Stone Harbor EMD Portfolio Characteristics Summary** As of March 31, 2020

### **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.







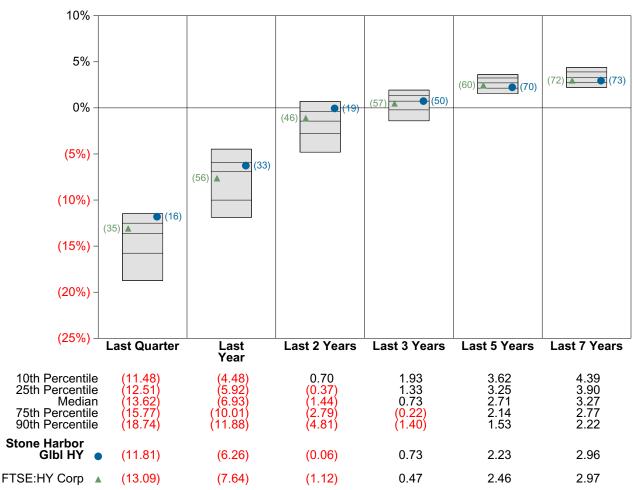


# Stone Harbor GlbI HY Period Ended March 31, 2020

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

- Stone Harbor Glbl HY's portfolio posted a (11.81)% return for the guarter placing it in the 16 percentile of the Callan Global Fixed High Yield group for the quarter and in the 33 percentile for the last year.
- Stone Harbor Glbl HY's portfolio outperformed the FTSE:HY Corp by 1.28% for the quarter and outperformed the FTSE:HY Corp for the year by 1.38%.

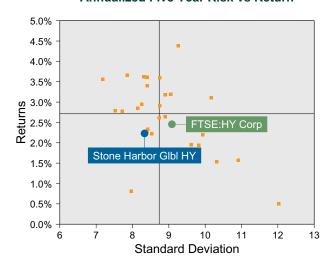
# Performance vs Callan Global Fixed High Yield (Gross)



### Relative Return vs FTSE:HY Corp



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



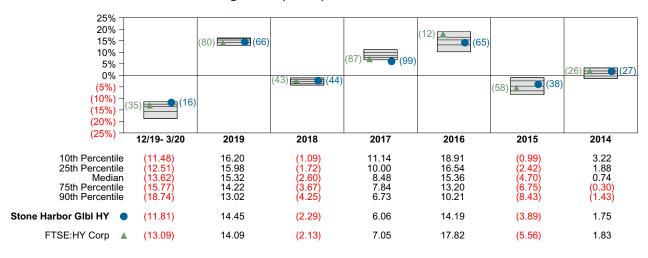


# Stone Harbor GlbI HY **Return Analysis Summary**

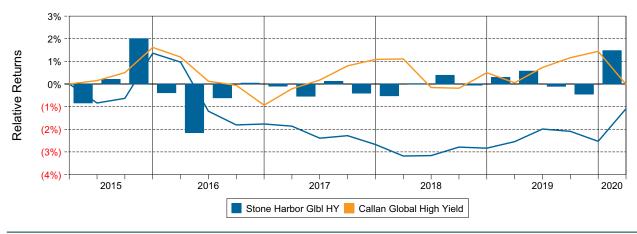
#### **Return Analysis**

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 cumulative 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.

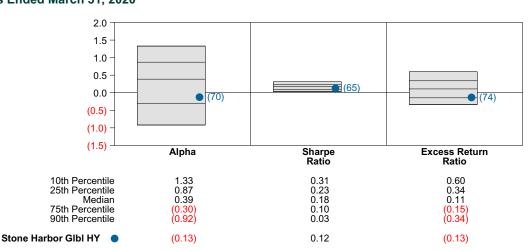
### Performance vs Callan Global Fixed High Yield (Gross)



#### Cumulative and Quarterly Relative Return vs FTSE:HY Corp



Risk Adjusted Return Measures vs FTSE:HY Corp Rankings Against Callan Global Fixed High Yield (Gross) Five Years Ended March 31, 2020



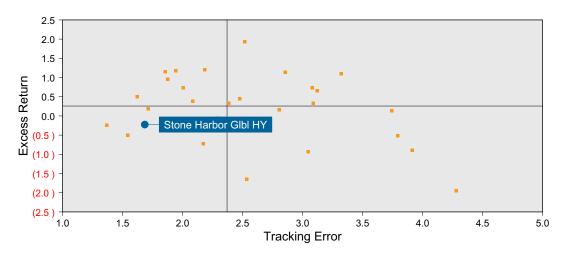


# Stone Harbor GlbI HY **Risk Analysis Summary**

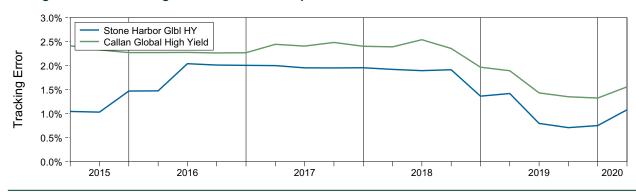
#### Risk Analysis

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.

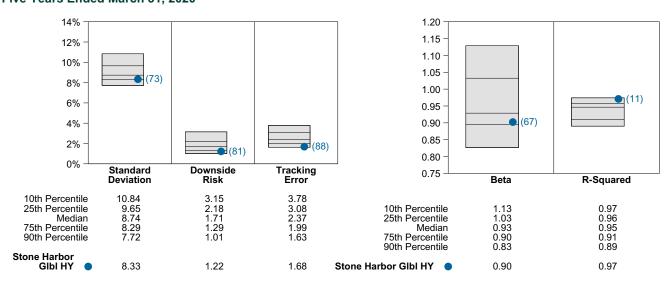
### Risk Analysis vs Callan Global Fixed High Yield (Gross) Five Years Ended March 31, 2020



### Rolling 12 Quarter Tracking Error vs FTSE HY Corporate



Risk Statistics Rankings vs FTSE HY Corporate Rankings Against Callan Global Fixed High Yield (Gross) Five Years Ended March 31, 2020

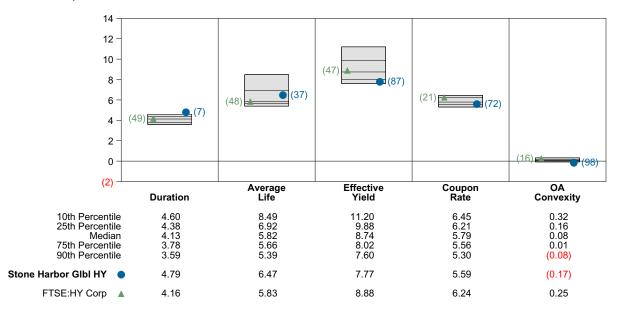


# **Stone Harbor GlbI HY Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

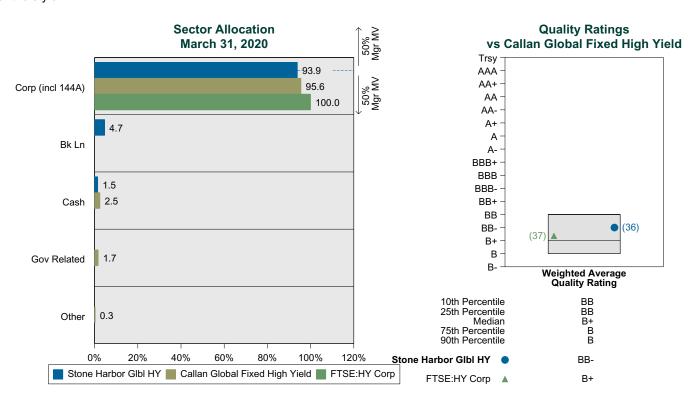
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

### **Fixed Income Portfolio Characteristics** Rankings Against Callan Global Fixed High Yield as of March 31, 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.





# Stone Harbor GlbI HY **Portfolio Characteristics Summary** As of March 31, 2020

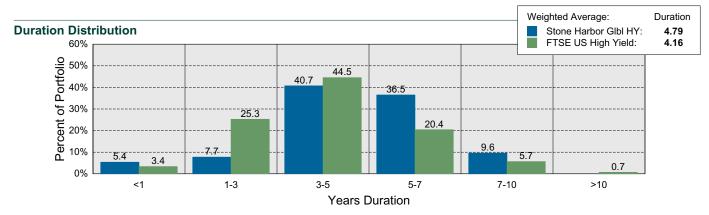
### **Portfolio Structure Comparison**

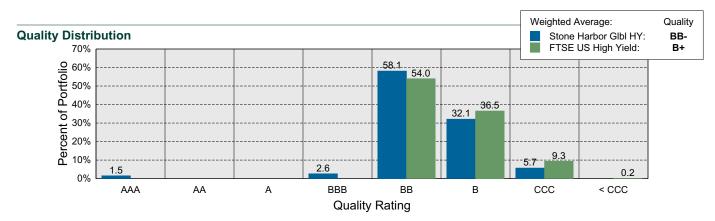
The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.



# **Stone Harbor GlbI HY**

# FTSE US High Yield



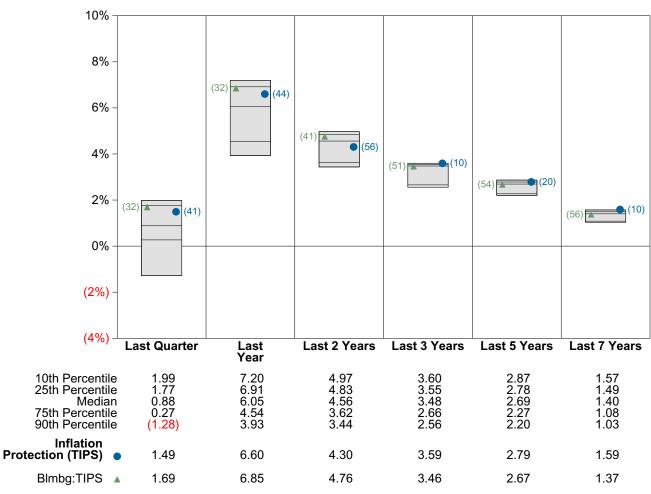


# Inflation Protection (TIPS) Period Ended March 31, 2020

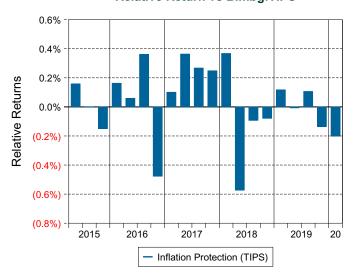
#### **Quarterly Summary and Highlights**

- Inflation Protection (TIPS)'s portfolio posted a 1.49% return for the guarter placing it in the 41 percentile of the Callan Inflation Linked Bonds group for the quarter and in the 44 percentile for the last year.
- Inflation Protection (TIPS)'s portfolio underperformed the BImbg:TIPS by 0.20% for the quarter and underperformed the Blmbg:TIPS for the year by 0.25%.

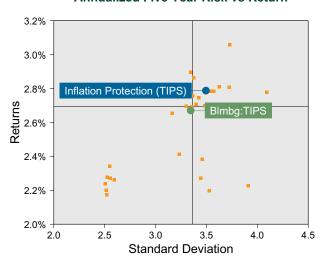
# Performance vs Callan Inflation Linked Bonds (Gross)



### Relative Return vs Blmbg:TIPS



### Callan Inflation Linked Bonds (Gross) **Annualized Five Year Risk vs Return**



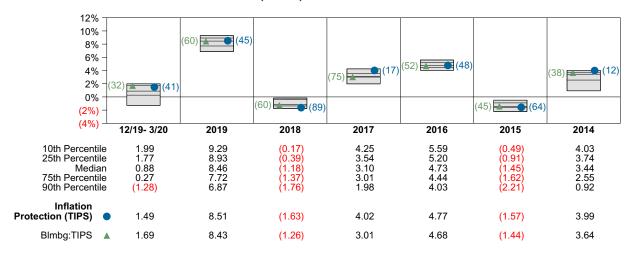


# Inflation Protection (TIPS) **Return Analysis Summary**

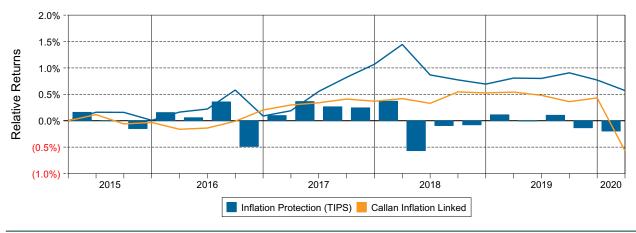
#### **Return Analysis**

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 cumulative 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.

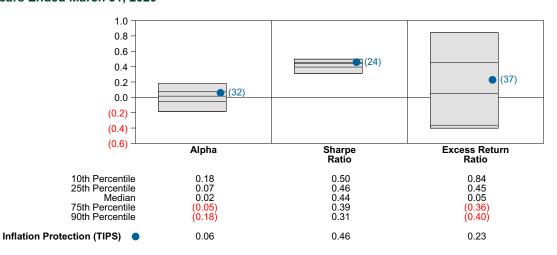
### Performance vs Callan Inflation Linked Bonds (Gross)



# Cumulative and Quarterly Relative Return vs Blmbg:TIPS



Risk Adjusted Return Measures vs Blmbg:TIPS Rankings Against Callan Inflation Linked Bonds (Gross) Five Years Ended March 31, 2020



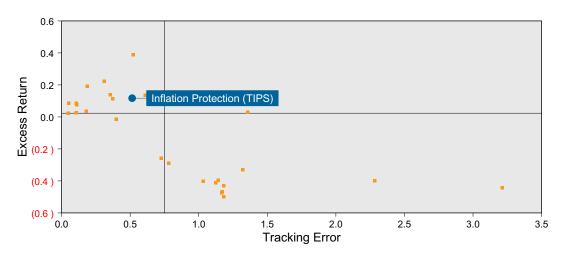


# Inflation Protection (TIPS) **Risk Analysis Summary**

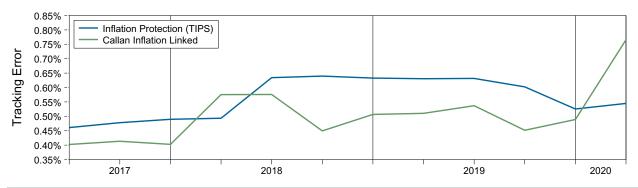
#### Risk Analysis

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.

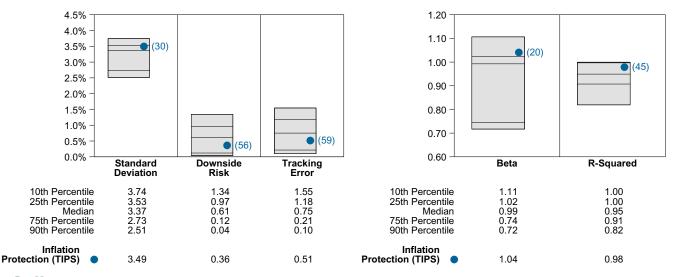
### Risk Analysis vs Callan Inflation Linked Bonds (Gross) Five Years Ended March 31, 2020



Rolling 12 Quarter Tracking Error vs Bloomberg Barclays TIPS



Risk Statistics Rankings vs Bloomberg Barclays TIPS Rankings Against Callan Inflation Linked Bonds (Gross) Five Years Ended March 31, 2020

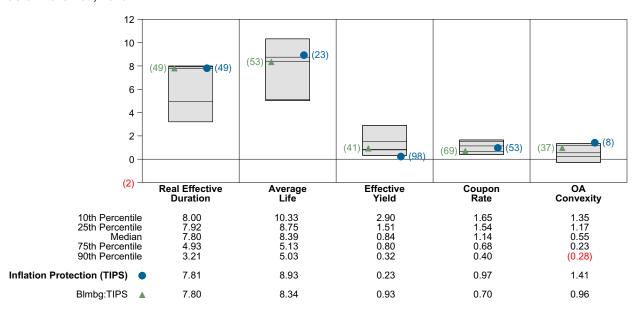


# Inflation Protection (TIPS) **Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

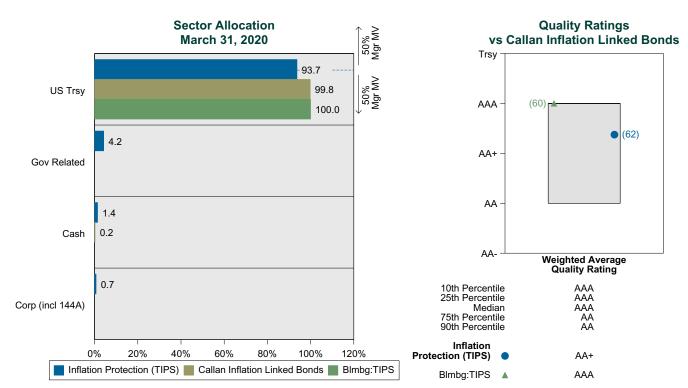
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

### **Fixed Income Portfolio Characteristics Rankings Against Callan Inflation Linked Bonds** as of March 31, 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.

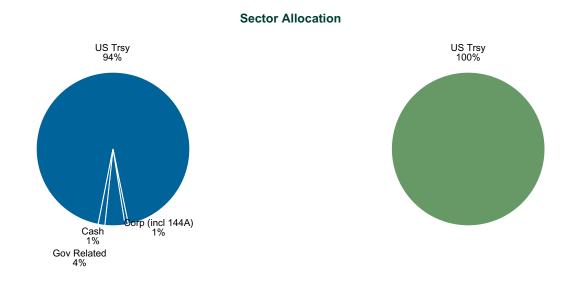




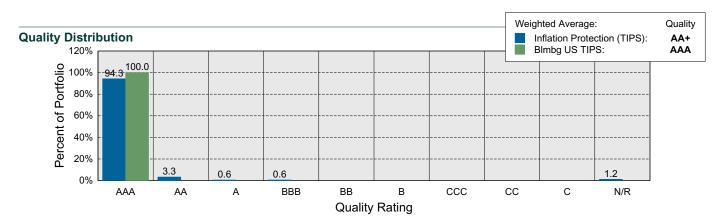
# Inflation Protection (TIPS) **Portfolio Characteristics Summary** As of March 31, 2020

### **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.



#### **Inflation Protection (TIPS) Blmbg US TIPS** Weighted Average: Real Duration **Duration Distribution** Inflation Protection (TIPS): 7.81 Blmbg US TIPS: 7.80 50% Percent of Portfolio 32.7 32.0 29.2 30% 22.3 22 2 20% 17:3 16.2 13.1 -8.6 6.5 0% 3-5 <1 1-3 5-7 7-10 >10 Years Duration



# **Brown Brothers TIPS** Period Ended March 31, 2020

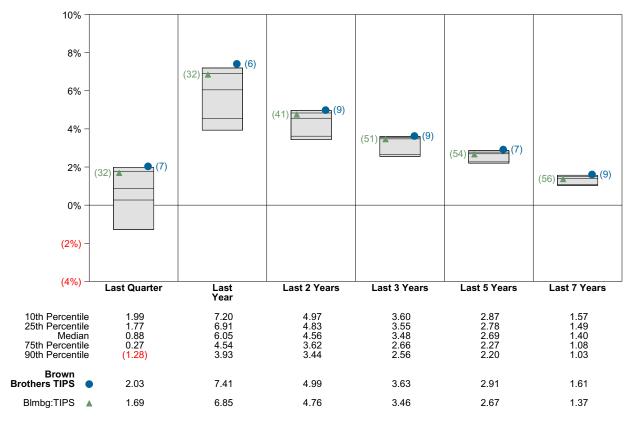
#### **Investment Philosophy**

The BBH U.S. TIPS strategy seeks to capture a range of fundamentally-based and technically-based opportunities in the inflation-indexed securities market.

# **Quarterly Summary and Highlights**

- Brown Brothers TIPS's portfolio posted a 2.03% return for the quarter placing it in the 7 percentile of the Callan Inflation Linked Bonds group for the quarter and in the 6 percentile for the last year.
- Brown Brothers TIPS's portfolio outperformed the Blmbg:TIPS by 0.34% for the quarter and outperformed the Blmbg:TIPS for the year by 0.56%.

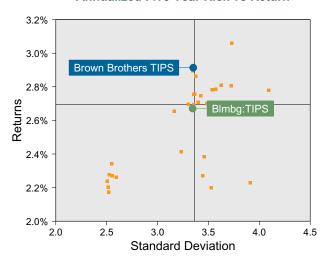
# Performance vs Callan Inflation Linked Bonds (Gross)



# Relative Return vs Blmbg:TIPS



#### Callan Inflation Linked Bonds (Gross) **Annualized Five Year Risk vs Return**



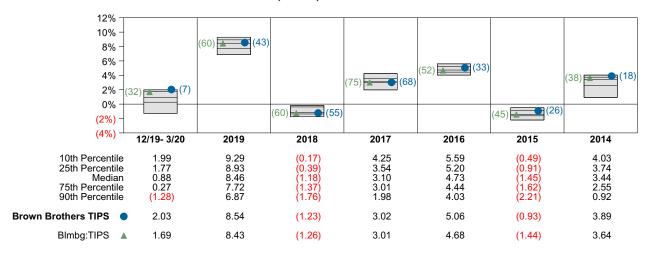


# **Brown Brothers TIPS Return Analysis Summary**

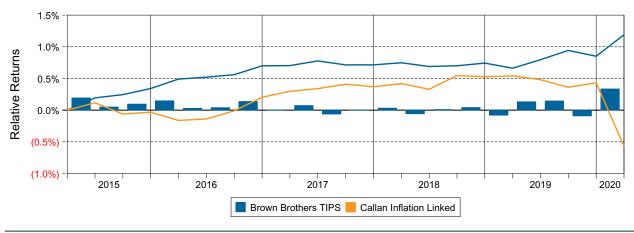
#### **Return Analysis**

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 cumulative 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.

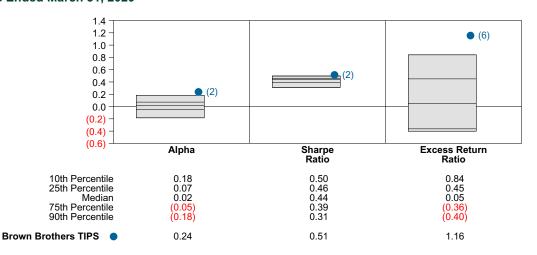
### Performance vs Callan Inflation Linked Bonds (Gross)



### Cumulative and Quarterly Relative Return vs Blmbg:TIPS



Risk Adjusted Return Measures vs Blmbg:TIPS Rankings Against Callan Inflation Linked Bonds (Gross) Five Years Ended March 31, 2020



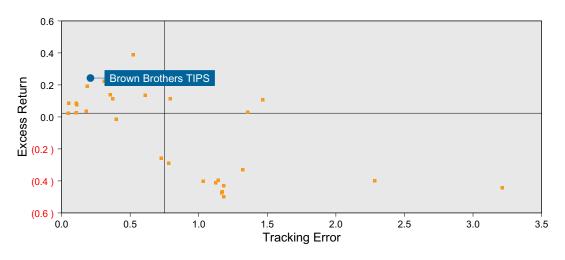


# **Brown Brothers TIPS Risk Analysis Summary**

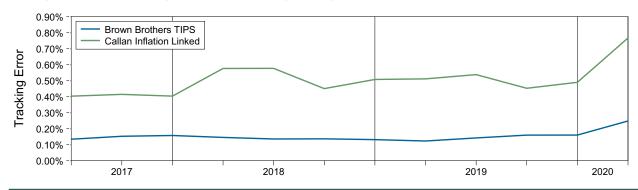
#### Risk Analysis

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.

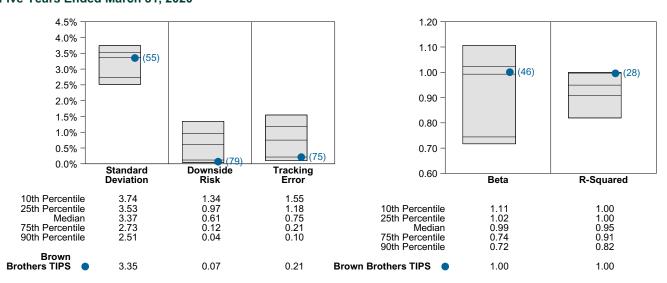
### Risk Analysis vs Callan Inflation Linked Bonds (Gross) Five Years Ended March 31, 2020



Rolling 12 Quarter Tracking Error vs Bloomberg Barclays TIPS



Risk Statistics Rankings vs Bloomberg Barclays TIPS Rankings Against Callan Inflation Linked Bonds (Gross) Five Years Ended March 31, 2020

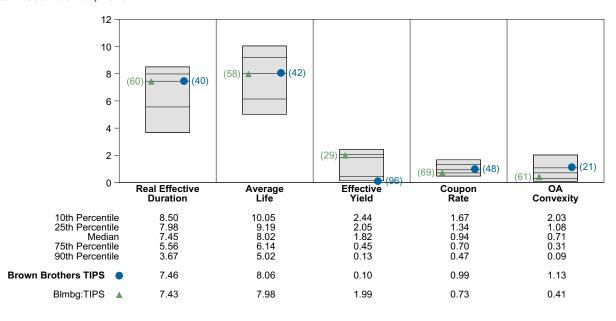


# **Brown Brothers TIPS Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

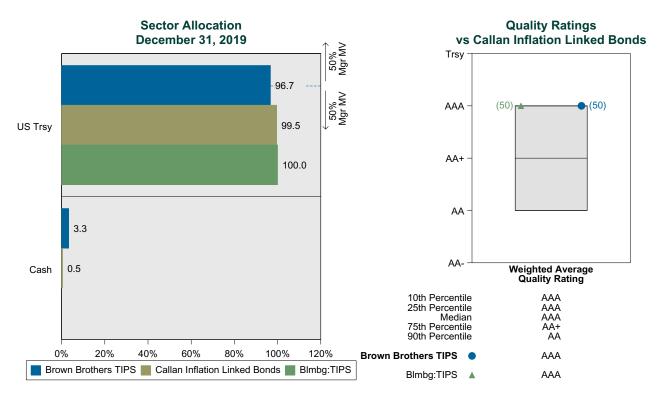
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

### **Fixed Income Portfolio Characteristics Rankings Against Callan Inflation Linked Bonds** as of December 31, 2019



# **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.





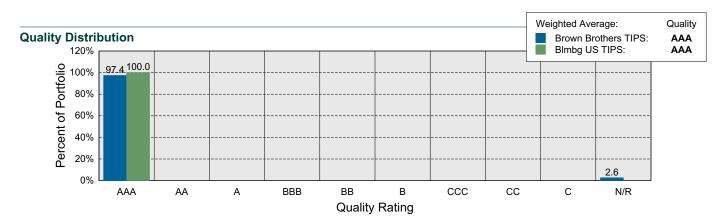
# **Brown Brothers TIPS Portfolio Characteristics Summary** As of March 31, 2020

### **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.



#### **Brown Brothers TIPS Blmbg US TIPS** Real Duration Weighted Average: **Duration Distribution** Brown Brothers TIPS: 8.37 Blmbg US TIPS: 7.80 50% Dercent of Portfolio 36.1 29.2 24.7 22.2 20.4 -17:3 16.2 9.8 -8.6-6.5 6.4 0% 3-5 7-10 <1 1-3 5-7 >10 Years Duration



## **NISA Inv Adv TIPS** Period Ended March 31, 2020

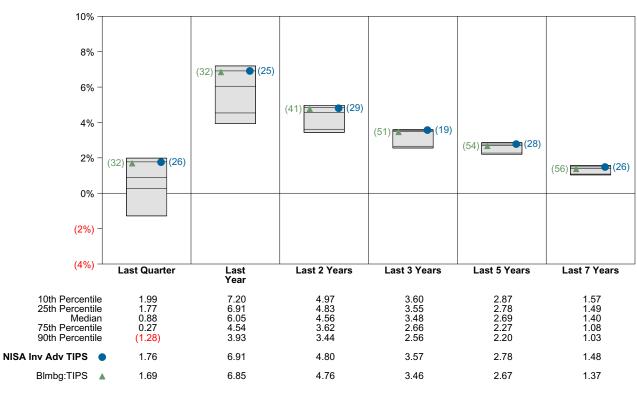
#### **Investment Philosophy**

NISA believes that markets offer opportunities to capitalize on moderate inefficiencies for predictable gains. The team applies a fundamental approach and strategy to all fixed income portfolios, regardless of benchmark. Central to their investment philosophy is the following: practice active trading, hold high average credit quality, maintain tight duration collars, and avoid large exposure to any one entity.

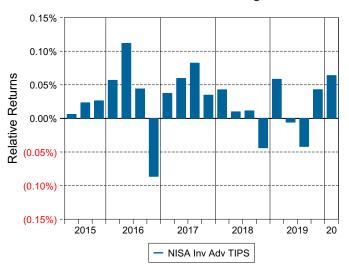
### **Quarterly Summary and Highlights**

- NISA Inv Adv TIPS's portfolio posted a 1.76% return for the guarter placing it in the 26 percentile of the Callan Inflation Linked Bonds group for the quarter and in the 25 percentile for the last year.
- NISA Inv Adv TIPS's portfolio outperformed the BImbg:TIPS by 0.06% for the quarter and outperformed the Blmbg:TIPS for the year by 0.06%.

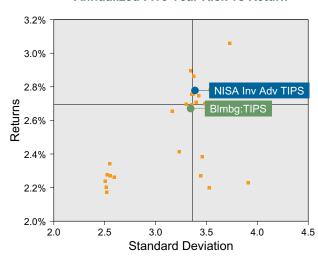
### Performance vs Callan Inflation Linked Bonds (Gross)



### Relative Return vs Blmbg:TIPS



### Callan Inflation Linked Bonds (Gross) Annualized Five Year Risk vs Return

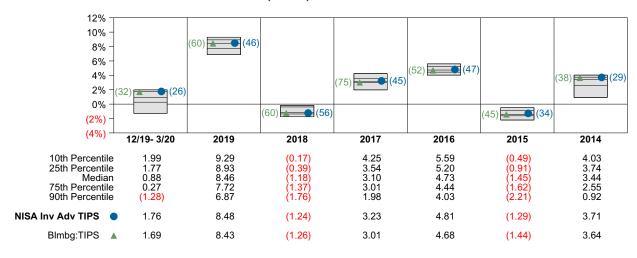


## **NISA Inv Adv TIPS Return Analysis Summary**

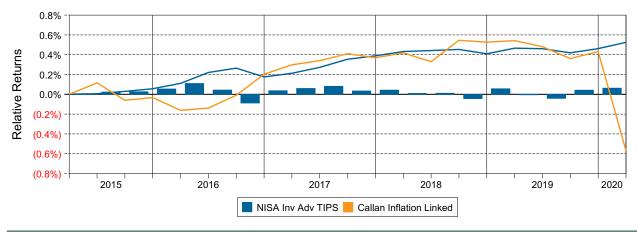
### **Return Analysis**

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 cumulative 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.

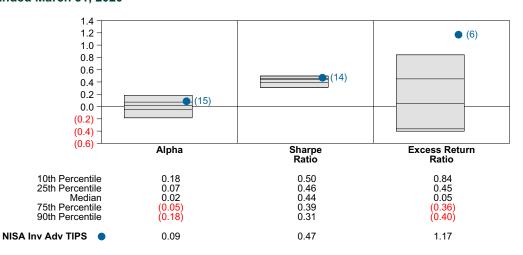
### Performance vs Callan Inflation Linked Bonds (Gross)



## Cumulative and Quarterly Relative Return vs Blmbg:TIPS



Risk Adjusted Return Measures vs Blmbg:TIPS Rankings Against Callan Inflation Linked Bonds (Gross) Five Years Ended March 31, 2020



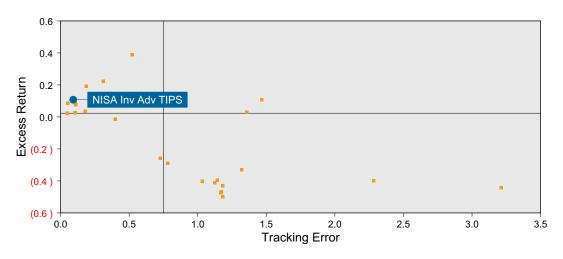


# **NISA Inv Adv TIPS Risk Analysis Summary**

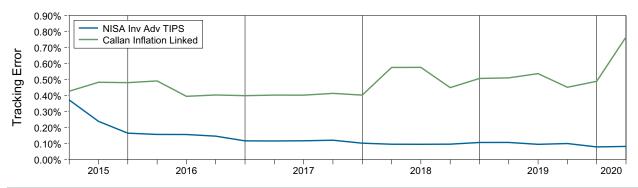
#### Risk Analysis

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.

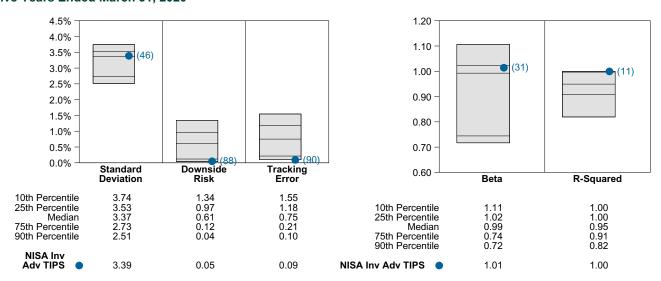
### Risk Analysis vs Callan Inflation Linked Bonds (Gross) Five Years Ended March 31, 2020



Rolling 12 Quarter Tracking Error vs Bloomberg Barclays TIPS



Risk Statistics Rankings vs Bloomberg Barclays TIPS Rankings Against Callan Inflation Linked Bonds (Gross) Five Years Ended March 31, 2020

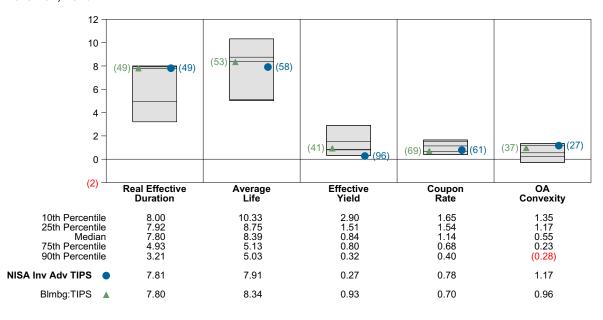


## **NISA Inv Adv TIPS Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

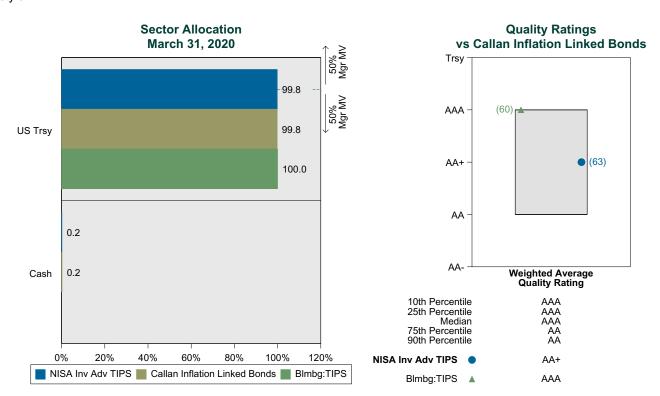
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

### **Fixed Income Portfolio Characteristics Rankings Against Callan Inflation Linked Bonds** as of March 31, 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.



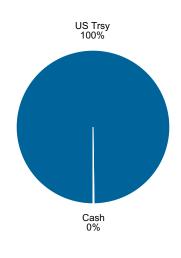


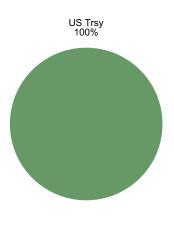
# **NISA Inv Adv TIPS Portfolio Characteristics Summary** As of March 31, 2020

### **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.

### **Sector Allocation**





**NISA Inv Adv TIPS** 

**BImbg US TIPS** 

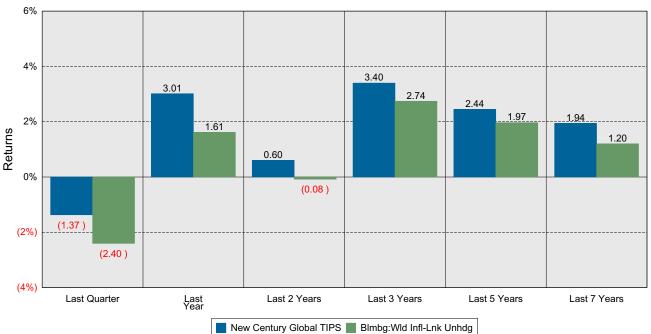
## **New Century Global TIPS** Period Ended March 31, 2020

#### **Investment Philosophy**

New Century Advisors believes there are five main sources of excess return that an active manager can capture in the Global Inflation Linked Bond Product: duration management, county selection, currency management, yield curve positioning, and nominal/linker relative value. New Century Advisors approach to adding value in each case is the same, a three pronged approach combining fundamental analysis, technical analysis and human judgment.

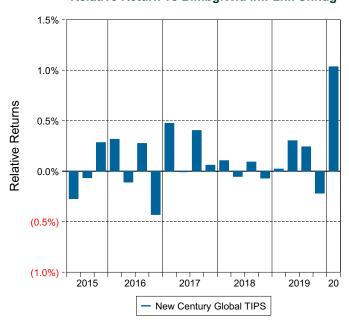
### **Quarterly Summary and Highlights**

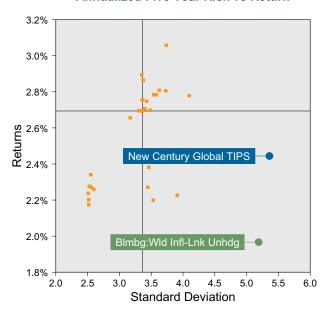
- New Century Global TIPS's portfolio posted a (1.37)% return for the quarter placing it in the 90 percentile of the Callan Inflation Linked Bonds group for the quarter and in the 92 percentile for the last year.
- New Century Global TIPS's portfolio outperformed the Blmbg:Wld Infl-Lnk Unhdg by 1.03% for the quarter and outperformed the Blmbg:Wld Infl-Lnk Unhdg for the year by 1.40%.



## Relative Return vs Blmbg:Wld Infl-Lnk Unhdg

## Callan Inflation Linked Bonds (Gross) **Annualized Five Year Risk vs Return**





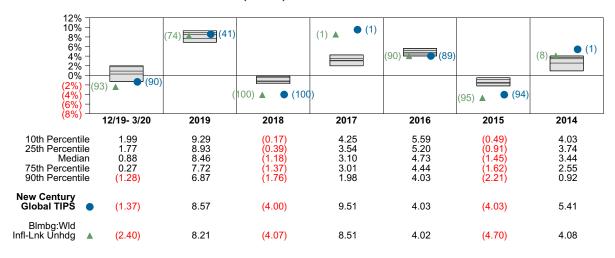


## **New Century Global TIPS Return Analysis Summary**

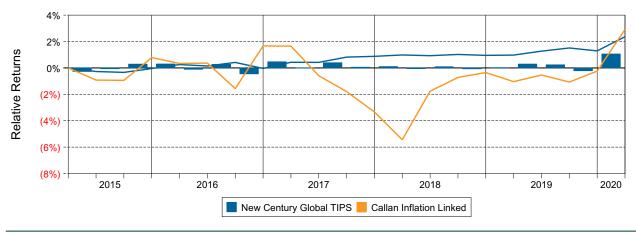
### **Return Analysis**

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 cumulative 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.

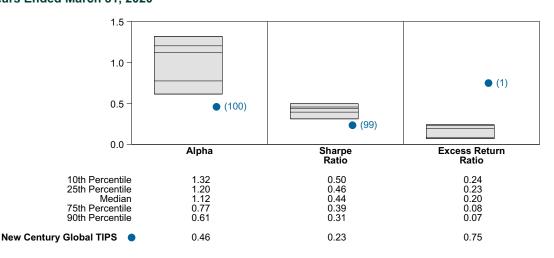
### Performance vs Callan Inflation Linked Bonds (Gross)



## Cumulative and Quarterly Relative Return vs Blmbg:Wld Infl-Lnk Unhdg



Risk Adjusted Return Measures vs Blmbg:Wld Infl-Lnk Unhdg Rankings Against Callan Inflation Linked Bonds (Gross) Five Years Ended March 31, 2020



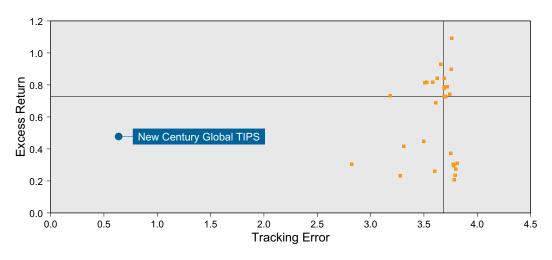


## **New Century Global TIPS Risk Analysis Summary**

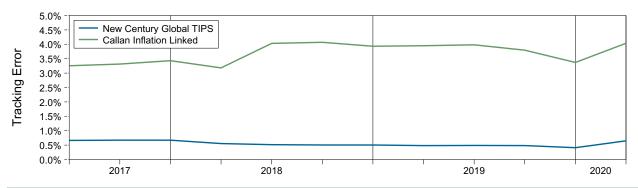
#### Risk Analysis

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.

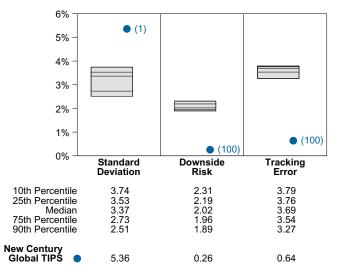
### Risk Analysis vs Callan Inflation Linked Bonds (Gross) Five Years Ended March 31, 2020

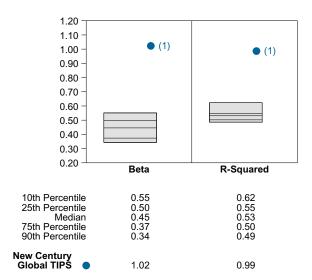


Rolling 12 Quarter Tracking Error vs Bloomberg Barclays World Infl-Lnk Unhdg



Risk Statistics Rankings vs Bloomberg Barclays World Infl-Lnk Unhdg Rankings Against Callan Inflation Linked Bonds (Gross) Five Years Ended March 31, 2020



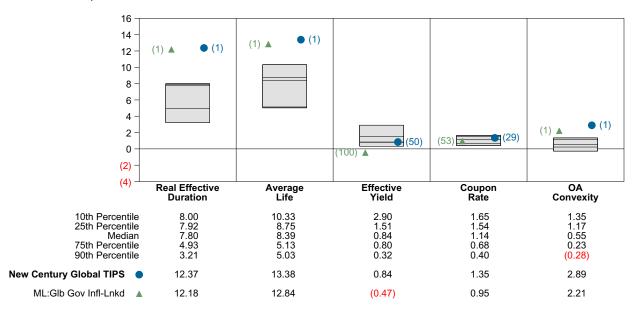


## **New Century Global TIPS Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

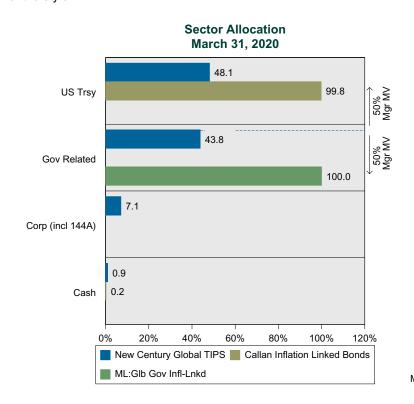
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

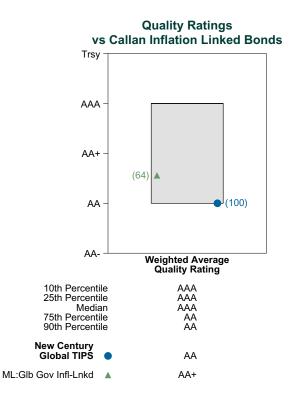
### **Fixed Income Portfolio Characteristics Rankings Against Callan Inflation Linked Bonds** as of March 31, 2020



### 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.



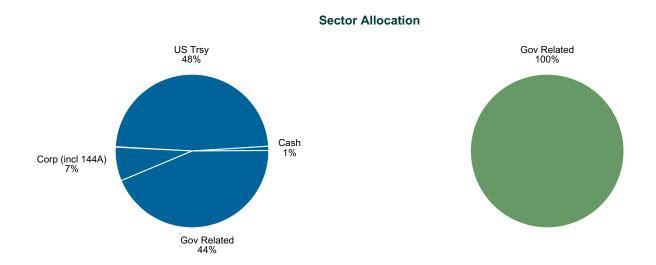




# **New Century Global TIPS Portfolio Characteristics Summary** As of March 31, 2020

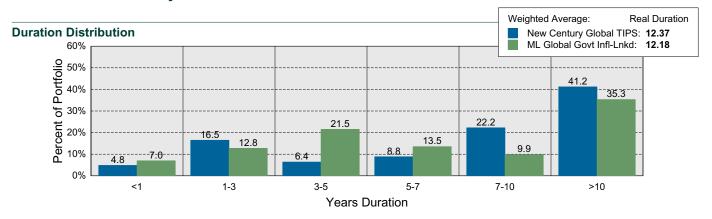
## **Portfolio Structure Comparison**

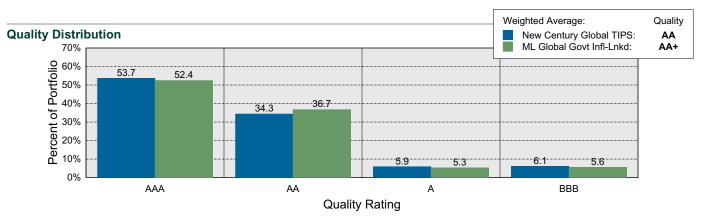
The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.



## **New Century Global TIPS**

## ML Global Govt Infl-Lnkd







1st 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**

### 2020 National Workshop Summary: Turbocharging DC Plans

In this workshop, Connie Lee, Jana Steele, and James Veneruso described ways in which defined contribution plan sponsors can improve participant outcomes, including plan design strategies and investment implementation steps.

**2019 Nuclear Decommissioning Funding Study** | Callan's annual study offers insights into the status of nuclear decommissioning funding to make peer comparisons more accurate and relevant.

## 2020 National Workshop Summary: Diversifying Alternatives

In this workshop, presenters Pete Keliuotis, Catherine Beard, and Ashley DeLuce discussed three lesser-known alternatives strategies: specialty lending, emerging market private equity, and insurance-linked strategies.

**2020 DC Trends Survey** | Callan's 2020 Defined Contribution Trends Survey is designed to provide a benchmark for sponsors to evaluate their plans compared to peers, and to offer insights to help sponsors improve their plans and the outcomes for their participants.

#### How Sponsors Can Harness DC Plan Data for Better Outcomes

Defined contribution (DC) plans are designed to help participants achieve the most beneficial outcomes. But participants' choices may not necessarily reflect asset allocation best practices. Sponsors can help participants by analyzing how investment options are used and make adjustments based on those observations.

<u>The Callan Periodic Table of Investment Returns</u> | We offer our Periodic Table Collection and the Callan Periodic Table of Investment Returns (Key Indices: 2000-2019).

Callan's 2020-2029 Capital Market Assumptions | Callan develops capital market assumptions to help clients with their long-term strategic planning. This year, we reduced our fixed income

assumptions to reflect lower starting yields following the Fed pivot in policy, but we held constant our real equity return over inflation.

**2020 National Workshop Summary: Fee Study** | In this 2020 workshop, presenters Butch Cliff, Mark Stahl, and Brady O'Connell discussed the major themes of our *2019 Investment Management Fee Study* and their impact on the institutional investor community.

An Introduction to Our New Hedge Fund Peer Group | The Callan Institutional Hedge Fund Peer Group is designed to help institutional investors better understand alpha-oriented solutions that can diversify their existing stock and bond exposures, and it represents the available pool of hedge fund talent that investors will want to consider, or at least compare with their existing hedge fund portfolios.

### **Quarterly Periodicals**

<u>Private Equity Trends, 4Q19</u> | A high-level summary of private equity activity in the quarter through all the investment stages

Active vs. Passive Charts, 4Q19 | A comparison of active managers alongside relevant benchmarks over the long term

Market Pulse Flipbook, 4Q19 | A quarterly market reference guide covering trends in the U.S. economy, developments for institutional investors, and the latest data on the capital markets

Capital Market Review, 4Q19 | Analysis and a broad overview of the economy and public and private market activity each quarter across a wide range of asset classes

<u>Hedge Fund Quarterly, 4Q19</u> | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

Real Assets Reporter, 4Q19 | Data and insights on real estate and other real assets investment topics.

#### **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**

May 21 – Hedge Fund Overview July 8 – China Update

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

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

Unique pieces of research the Institute generates each year

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

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

### **Education**

Through the "Callan College," the Callan Institute offers educational sessions for industry professionals involved in the investment decision-making process. It was founded in 1994 to provide both clients and non-clients with basic- to intermediate-level instruction.

#### Introduction to Investments for Institutional Investors

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

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

#### **Alternative Investments for Institutional Investors**

Alternative investments like private equity, hedge funds, and real estate can play a key role in any portfolio. In this one-day session, Callan experts will provide instruction about the importance of allocations to alternatives, and how to integrate, evaluate, and monitor them.

Learn from some of Callan's senior consultants and experts, including Pete Keliuotis, the head of Alternatives Consulting. The session will cover private equity, private credit, hedge funds, real estate, and real assets; why invest in alternatives; risk/return characteristics and liquidity; designing and implementing an alternatives program; and trends and case studies.

Tuition is \$2,000 per person and includes instruction, all materials, and breakfast and lunch with the instructors.

Additional information including dates and registration can be found at: https://www.callan.com/callan-college-alternatives-2/



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

Greg Allen, CEO and Chief Research Officer



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

Confidential - For Callan Client Use Only

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





