# Callan

Pennsylvania SERS

Investment Measurement Service
Quarterly Review

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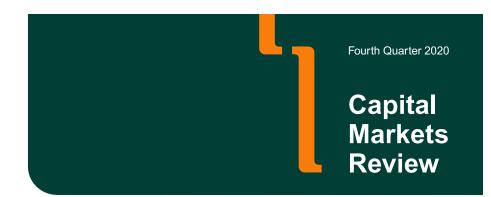


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# Uneven Recovery Ahead for Years

ECONOMY

The path to recovery in the U.S. and most developed economies from the pandemic will likely see the level of GDP regain its pre-pandemic peak in mid-2021, but the job markets in those countries are not likely to regain their pre-pandemic totals until well into 2022.

# Robust Quarter Powers Strong 2020

INSTITUTIONAL INVESTORS

Institutional investors saw strong gains in 4Q20 and positive results for 2020, despite the pandemic-induced headwinds. While results for 2020 lagged a 60% stocks/40% bonds benchmark, over longer periods investors' returns were on par with the benchmark.

# Vaccine Hopes Fuel Double-Digit Gains

EQUITY

The S&P 500 hit a record high in 4Q20, and was up 12.1% for the quarter and 18.4% for the year. Value outperformed growth in 4Q, but trailed for the year by a wide margin. Vaccine hopes fueled double-digit returns broadly across developed and emerging markets.

# **Investors Continue Their Hunt for Yield**

FIXED INCOME

The 10-year U.S. Treasury yield closed 4Q20 at PAGE 0.93%, up 24 bps from 3Q20 but off from the year-end level of 1.92%. Corporate credit outperformed treasuries as investors hunted for yield. Low rates and asset purchase programs continued to prop up the global bond market.

# Hotels, Retail Face Pandemic Headwinds

REAL ESTATE/REAL ASSETS

Hotels and Retail are the most challenged sectors while Office faces uncertainty; Industrial remains the best performer. Global REITs gained 13.5% compared to 14.0% for global equities. U.S. REITs rose 11.6%, but they lagged the S&P 500 Index (+12.1%).

# Roller-Coaster Ride Ends on a High Note

PRIVATE EQUITY

Private equity fared quite well in 2020, all things considered. Diminished activity in 2Q and 3Q mixed with strong gains in 1Q and 4Q. Private equity activity showed tolerable declines for most private M&A measures, but the IPO market had a gangbuster year.

# Healthy Returns amid Volatile Markets

HEDGE FUNDS/MACs

The vigorous but volatile market conditions enabled healthy hedge fund profits from both alpha and beta. The median managers of Callan Multi-Asset Class style groups generated positive returns, gross of fees, consistent with their underlying risk exposures.

# Second Straight Quarterly Gain

DEFINED CONTRIBUTION

The Callan DC Index's gain of 6.0% in 3Q20 comes two quarters after the 15.0% plunge it experienced in 1Q20. The Index is now positive for

1Q20. The Index is now positive for the year. The Age 45 TDF posted a larger gain, due to its higher equity allocation. Balances also rose, solely from investment returns.

# **Broad Market Quarterly Returns**

U.S. Equity
Russell 3000



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



U.S. Fixed Income
Bloomberg Barclays Agg



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



Sources: Bloomberg Barclays, FTSE Russell, MSCI

# An Uneven Recovery and an Unreliable Narrator

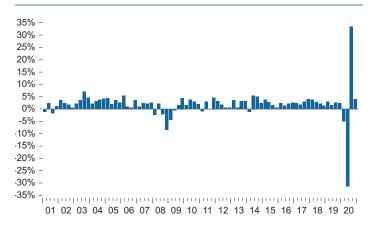
## **ECONOMY** | Jay Kloepfer

The U.S. economy grew at a 4% rate in the fourth quarter of 2020 but finished the year with a 3.5% decline in GDP compared to 2019, the steepest recession in 75(!) years. The plunge in economic activity in 2Q and the sharp rebound in 3Q put into guestion the reliability of economic data, and GDP in particular, in telling the tale of the true economic impact of the pandemic. The way countries measure GDP varies, especially when it comes to the output of the government sector. Reported GDP plunged in the U.K. far more than in continental Europe or the U.S., but the difference had to do with the valuation of the change in government output. In the U.S., we value government output in large part by looking at how much is spent on government services. Teachers, civil servants, and public health care workers were still paid, even though their activities were severely altered, so government output changed little. In the U.K. and France, data such as the number of hospital procedures, doctor's visits, and pupils in school are used, and this activity fell sharply. Did economic activity really fall farther in the U.K., or are the data not telling the full story?

The labor market data also seem to reveal a tale of two cities or do they? The difference in the benefits offered by different countries to those dislocated by the pandemic are substantial, and seriously bias economic measures such as the number of people employed and unemployment rates. In many euro zone countries, pandemic relief came in the form of subsidies to companies to keep their employees on the payroll. In the U.S., companies furloughed or let go of employees, and the states and federal government used the unemployment benefits system along with direct grants to households via stimulus payments to support these dislocated workers. As a result, unemployment in the U.S. spiked to almost 15% in April, while the unemployment rate in many euro zone countries barely moved. Another complication is that the unemployment rate in the U.S. suggests more slack than there may be in practice. A clue to this mismatch in the data between unemployment and potential capacity is in the data tracking those seeking work. In the U.S., the number seeking jobs usually tracks the unemployment rate very

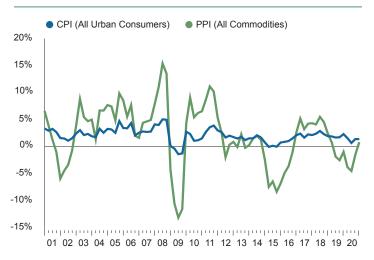
# **Quarterly Real GDP Growth**

(20 Years)



Source: Bureau of Economic Analysis

#### Inflation Year-Over-Year



Source: Bureau of Labor Statistics

closely. During the pandemic, the number of job seekers barely increased while the unemployment rate quadrupled, suggesting workers are expecting to be rehired into their former jobs or in their former industry.

This focus on the labor market is important for clues as to how the economy will recover and who has been the most affected by the pandemic-induced recession. Since consumption is 70% of GDP in the U.S., the direct tie between employment and income and then spending is vital; that tie has been

blurred by the massive stimulus provided both here and in our trading partners. Stimulus payments directly to industries and individuals, as well as expanded unemployment benefits, have buoyed spending both by consumers within countries and on our traded goods between countries, and prevented an even steeper economic decline than this worst-in-seven-decades experience. Total employment in the U.S. fell by 22 million between January and April, and we have generated 12 million jobs since April to replace them. The problem for the continued recovery is that we are still short millions of jobs, and the rate of job recovery plateaued in October 2020 and remained flat through December.

Employment loss by industry has been wildly variable, and points up just how different the economic impact has been from the stock market's incredible recovery. The sectors that drove the stock market rebound since March-information technology, communications, the sectors of consumer goods and wholesale/retail trade driven by Amazon-suffered little if any employment decline, and in fact employ far fewer people than the sectors that are underrepresented in the stock market and suffered the biggest job losses. Employment in leisure and hospitality fell by 8.2 million during March and April, increased by 4.9 million from May to November, and then declined by over half a million in December as stricter shelter-in-place rules were reinstated prior to the holiday season in many states. Since February 2020, employment in leisure and hospitality is down by 3.9 million, or 22.9 percent. The other big losses were in state and local government, services, manufacturing, and education. These sectors employ many lower-paid, lowerskilled, and part-time workers and often feature a high concentration of female employees. Income inequality during the pandemic has been exacerbated as a result.

The Long-Term View

		Pe	riods E	nded 1	2/31/20
Index	4Q20	Year	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	14.7	20.9	15.4	13.8	9.7
S&P 500	12.2	18.4	15.2	13.9	9.6
Russell 2000	31.4	20.0	13.3	11.2	9.1
Global ex-U.S. Equity					
MSCI EAFE	16.1	7.8	7.5	5.5	5.0
MSCI ACWI ex USA	17.0	10.7	8.9	4.9	
MSCI Emerging Markets	19.7	18.3	12.8	3.6	
MSCI ACWI ex USA Small Cap	18.6	14.2	9.4	6.0	6.5
Fixed Income					
Bloomberg Barclays Agg	0.7	7.5	4.4	3.8	5.2
90-Day T-Bill	0.0	0.7	1.2	0.6	2.3
Bloomberg Barclays Long G/C	1.7	16.1	9.4	8.2	7.4
Bloomberg Barclays GI Agg ex US	5.1	10.1	4.9	2.0	4.0
Real Estate					
NCREIF Property	1.2	1.6	5.9	9.0	9.1
FTSE Nareit Equity	11.6	-8.0	4.8	8.3	9.6
Alternatives					
CS Hedge Fund	6.4	6.4	4.1	3.8	7.3
Cambridge PE*	10.4	17.9	13.9	13.8	15.1
Bloomberg Commodity	10.2	-3.1	1.0	-6.5	1.0
Gold Spot Price	0.0	24.4	12.3	2.9	6.6
Inflation – CPI-U	0.1	1.4	2.0	1.7	2.1

\*Data for most recent period lags by a quarter. Data as of 9/30/20. Sources: Bloomberg, Bloomberg Barclays, Bureau of Economic Analysis, Credit Suisse, FTSE Russell, MSCI, NCREIF, Refinitiv/Cambridge, S&P Dow Jones Indices

The path to recovery in the U.S. and most developed economies will likely see the level of GDP regain its pre-pandemic peak in mid-2021, but the job markets are not likely to regain their prepandemic job counts until well into 2022, restraining consumer spending and the overall global recovery.

### **Recent Quarterly Economic Indicators**

	4Q20	3Q20	2Q20	1Q20	4Q19	3Q19	2Q19	1Q19
Employment Cost–Total Compensation Growth	2.5%	2.4%	2.7%	2.8%	2.7%	2.8%	2.7%	2.8%
Nonfarm Business–Productivity Growth	-4.8%	5.1%	10.6%	-0.3%	1.6%	0.3%	2.0%	3.7%
GDP Growth	4.0%	33.4%	-32.9%	-5.0%	2.4%	2.6%	1.5%	2.9%
Manufacturing Capacity Utilization	72.7%	70.8%	63.2%	73.9%	75.0%	75.4%	75.5%	76.4%
Consumer Sentiment Index (1966=100)	79.8	75.6	74.0	96.4	97.2	93.8	98.4	94.5

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

# **Robust Quarterly Gains Power Strong 2020 Returns**

#### INSTITUTIONAL INVESTORS

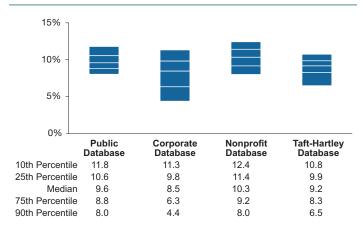
#### **Performance**

- All investor types saw robust gains in 4Q20, easily outpacing a 60% stocks/40% bonds benchmark, which rose 7.5%.
- The robust quarterly results pushed their gains for the year into double digits, outpacing global ex-U.S. equities and fixed income, although falling below the 60%/40% benchmark.
- Long-term results continue to be on par with the 60%/40% benchmark and better than bonds or global ex-U.S. equities.
- Nonprofits set the pace for the quarter, while corporate defined benefit (DB) plans top the leader board for most longer-term periods.
- Public DB plans were the best performers over 20 years, but results for all plan types fell in a narrow range.

#### **Broad Issues**

- Many institutional investors are re-examining portfolios to adjust for the new environment.
- They are also re-evaluating all asset classes, not just the diversifiers, including fixed income; public equity; hedge funds and liquid alternatives; private equity, private credit, and the notion of private capital; and real assets.
- But the key issue is what to do about fixed income in the lower yield environment.
- Liquidity needs ease but remain top of mind for investors.

# **Quarterly Returns, Callan Database Groups**



Source: Callan

- Investors are also wrestling with whether to rebalance out of growth managers, and U.S. equity, as both growth and large cap U.S. equity crushed value and global ex-U.S. equity. The key question: Rebalance, or ride the risks of style tilt and manager concentration?
- As noted, real assets are under serious review, within DC as well as DB plans. The source of the discomfort is the underperformance of segments like energy, MLPs, and commodities.
- Investors are also trying to determine what can serve as an equity diversifier equal to bonds with the return of zero interest rates.

### Callan Database Median and Index Returns\* for Periods Ended 12/31/20

Database Group	Quarter	Year-to-date	Year	3 Years	5 Years	10 Years
Public Database	9.6	11.7	11.7	8.2	9.4	8.1
Corporate Database	8.5	13.7	13.7	9.2	10.1	8.5
Nonprofit Database	10.3	12.3	12.3	8.3	9.6	8.1
Taft-Hartley Database	9.2	11.1	11.1	8.3	9.5	8.5
All Institutional Investors	9.5	12.3	12.3	8.5	9.6	8.3
Large (>\$1 billion)	9.3	12.4	12.4	8.6	9.7	8.4
Medium (\$100mm - \$1bn)	9.4	12.3	12.3	8.6	9.7	8.3
Small (<\$100 million)	9.7	12.1	12.1	8.2	9.5	8.0

<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.

#### **Corporate DB Plans**

- The plunge in Treasury rates in March 2020 obscured the impact of spread widening. The funded status for corporate DB plans moving down their LDI glidepaths did not take the hit many suffered in the GFC.
- The plunge has not yet derailed the commitment to de-risking, but moves to STRIPS for extra duration are now in question.
- There is likely to be an uptick in termination and risk transfer, and consideration of a pause to further de-risking if rates start to rise.

#### **DC Plans**

- Fees continued to be the top issue for DC plan sponsors, as has been true for many quarters.
- DC glidepaths saw an increase in private markets exposures, and higher equity allocations in the mid-career and path landing point (age 80). Greater diversification helps manage the risk with greater return-seeking strategies, while more passive exposure is used to manage fees.
- There was a flurry of rulemaking from the Trump administration in its final months, and many DC plan sponsors and recordkeepers have been moving rapidly to track all the changes, and the potential for them to be undone by the incoming administration.
- DC plan sponsors and recordkeepers are both working rapidly to address lessons learned from the pandemic to alter participant-facing services like enrollment and financial counseling, making them more digital-first.

Recordkeeper consolidation activity picked up in 4Q20. This will likely point to an increase in recordkeeper searches in the near term.

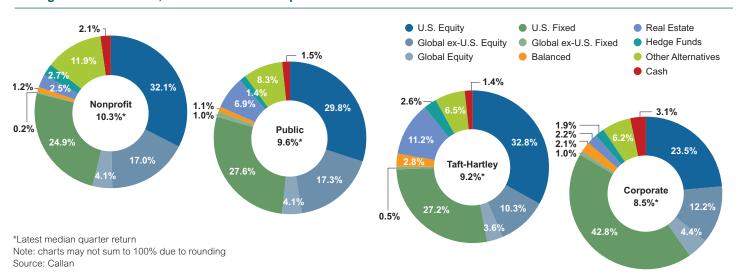
#### **Public DB Plans**

- There was a surge in public plan asset allocation reviews and capital markets discussions.
- The "V-shaped" recovery in equities helped calm fears.
- But there are great concerns about lower capital markets assumptions over the next 10 years, which are seriously challenging expectations for funding and solvency; this is a decades-long problem, made worse by the pandemic.
- ROA assumptions have been reduced but face further downward pressure. Weaker return assumptions may derail the expressed desire to bring in risk; there is growing interest in 30-year assumptions to justify more balanced portfolios.
- Liquidity needs and drawdown risks are top of mind. Stress testing is at the forefront of asset/liability studies, focusing on funding, contributions, liquidity, and solvency.

### **Nonprofits**

- Subdued expectations for capital markets returns are challenging both the risk tolerance of endowments/foundations and the sustainability of established spending rates.
- There is growing dissatisfaction with private real assets, hedge funds, and the presence of any fixed income; significant portfolio reconstruction is on the table.

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



# **Equity**

# **U.S. Equities**

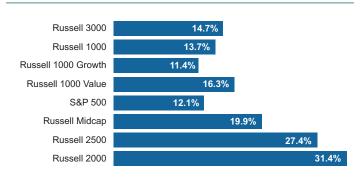
# Record highs in 2020

- The S&P 500 Index hit a record high in 4Q20. The Index was up 12.1% for the guarter, bringing the 2020 gain to 18.4%.
- Since its March low, the S&P is up over 70%, with all sectors posting increases greater than 40%.
- 4Q winner: Energy (+28%), but down 34% for the year
- Top 2020 sector: Technology with 44% gain (+12% in 4Q)
- Pandemic has cast a pall over certain sectors while rewarding others: online retail soared 69% in 2020, while hotels/ cruise lines, airlines, and retail REITs dropped ~30%.
- Apple, Microsoft, Amazon, Facebook, and Alphabet made up 22% of S&P 500 market cap at year-end, and for 2020, accounted for 12.1% of 18.4% Index return.

#### 4Q saw shift in market trends

- In 4Q, value outperformed growth across the cap spectrum driven by vaccine progress, political clarity, and further stimulus. For the year, however, value trails growth by a significant margin due to Tech's outperformance.
- Fueled by the prospect of an economic recovery, small cap outperformed large in 4Q but was even on the year. Small value was the best performer for the quarter, but 2020 gain is a mere 4.6%.
- 4Q experienced a shift in YTD 2020 trends, attributed to expectations of broader economic recovery from the vaccine roll-out and the presidential election outcome.
- Cyclical sectors such as Energy, Financials, Industrials, and Materials outperformed during the quarter.

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



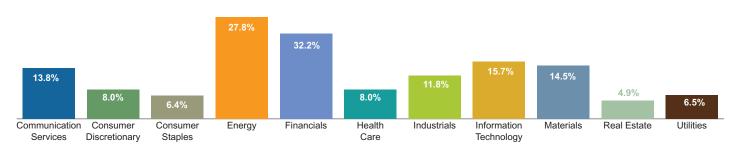
## U.S. Equity: One-Year Returns



Sources: FTSE Russell and S&P Dow Jones Indices

 Although stocks with the highest P/E's significantly outperformed for the year, the trend shifted after the vaccine announcement and stocks with zero earnings estimates or P/E's less than 10 shot up.

# **Quarterly Performance of Industry Sectors**



Source: S&P Dow Jones Indices

# Global/Global ex-U.S. Equity

# Vaccine rollouts extend and expand risk-on rally

- Prospects of global economic recovery propelled by COVID-19 vaccination fueled double-digit returns broadly across developed and emerging markets.
- Expectations of reverting back to normal economic activity by late 2021 enabled risk assets to thrive.
- Emerging markets outperformed developed markets, led by Latam—specifically Brazil.
- Small cap outperformed large as business confidence improved with news of vaccination.

# Market rotates to cyclicals

- Positive outlook on reflation trade stoked Energy, Materials, and Financials to drive the market.
- Beta and volatility led factor performance due to market rotation.

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

U.S. dollar continued to lose ground as appetite for risk increased with the expectation that a path to global economic recovery is on the horizon.

## Growth vs. value

Value topped growth as sentiment shifted to cyclical sectors.

### 4Q20 belonged to value; does it have staying power?

- COVID-19 benefited value as the quarter brought news of successful vaccines.
- Financials, Travel, and Energy rebounded.
- MSCI World Growth (+12.4%) trailed MSCI World Value (+15.2%) over the three-month period.
- Even with this divergence of style in 4Q20, growth still outpaced value globally by over 35% for the full year.

#### Potential tailwinds for value

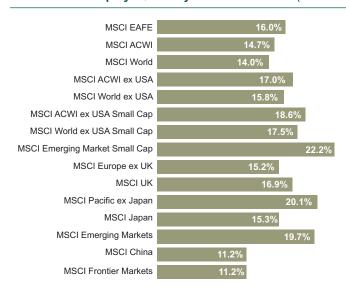
- Higher interest rates on the heels of potentially higher inflation with government stimulus and businesses reopening
- Continued rebound of discretionary spending in areas neglected in 2020 as markets reopen: lodging, travel

#### The good news

- Recent dollar weakness supports emerging markets.
- Could continue in 2021, driven by wider U.S. fiscal deficit plus stronger emerging market currencies

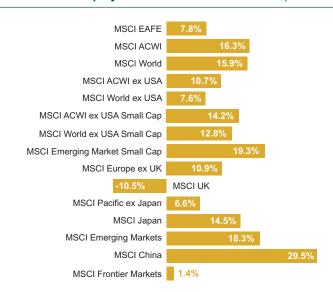
# Global ex-U.S. Equity: Quarterly Returns

(U.S. Dollar)



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

(U.S. Dollar)



Source: MSCI

# **Fixed Income**

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

# Treasury yields rose

- The 10-year U.S. Treasury yield closed 4Q20 at 0.93%, up
   24 bps from 3Q20 but off from the year-end level of 1.92%.
- TIPS outperformed nominal U.S. Treasuries as 10-year breakeven spreads widened from 163 bps to 199 bps.
- No rate hikes are expected until at least 2023.

## **Bloomberg Barclays Aggregate gained slightly**

- Corporate credit outperformed treasuries as investors continued to hunt for yield.
- Corporate credit ended the year up 9.9% despite record issuance in 2020.

# High yield bonds gained on the quarter as rally extended

- High yield bonds outperformed investment grade (IG) securities in 4Q, returning 6.5%, but trailed IG for the year.
- Leveraged loans gained 3.6% as demand remained strong to finish the year.

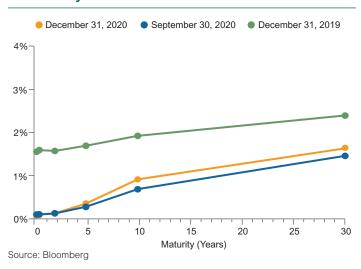
### Munis boosted by favorable supply/demand dynamics

- Municipals outperformed Treasuries for the quarter, but remained down for the year.
- Tax-exempt issuance was muted amid strong demand.
- Lower quality outperformed for the quarter; however, higher quality outperformed for the year.

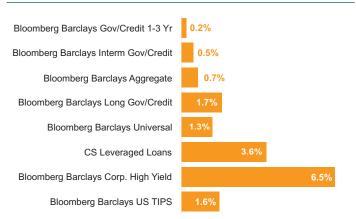
#### U.S. credit attractive to non-U.S. investors

- Central banks globally are adopting a "lower for longer" mindset toward rates.
- 89% of positive yields globally are in the U.S., spurring demand for U.S. corporate credit.
- Lower LIBOR rates have decreased currency hedging costs;
   combined with a steep Treasury curve, that makes U.S. credit attractive to non-U.S. investors.

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

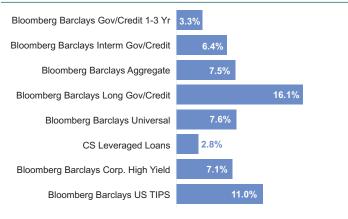


# **U.S. Fixed Income: Quarterly Returns**



Sources: Bloomberg Barclays and Credit Suisse

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



Sources: Bloomberg Barclays and Credit Suisse

### FIXED INCOME (Continued)

### Implications of U.S. rates rising in 4Q

- U.S. Treasury rates rose in 4Q, most notably in the intermediate and long portions of the yield curve.
- As Democrats won both seats in the Georgia run-off, greater fiscal stimulus is likely. This may lead to further steepening of the yield curve and increased inflation expectations.
- A rising rate environment opens opportunities for floatingrate securities like leveraged loans, and makes securities with shorter durations such as securitized credit more attractive.

# **Global Fixed Income**

# Global fixed income rose amid monetary backdrop

- Low rates and asset purchase programs continued to prop up the global bond market.
- Broad-based U.S. dollar weakness resulting from continued confidence in risk assets dampened hedged returns as the USD lost 4.27% versus the euro, 5.43% versus the British pound, and 2.02% versus the yen.

# Emerging market debt ended the year positive

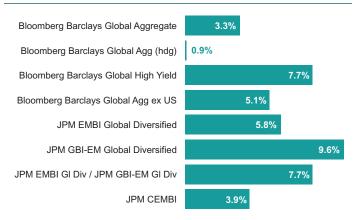
- Emerging market debt indices gained in 4Q20, finishing the year in positive territory amid a global search for yield and renewed growth expectations.
- U.S. dollar-denominated index (EMBI Global Diversified) underperformed local currency emerging market debt as U.S. rates rose; returns were mixed across the 70+ constituents.
- Local currency index (GBI-EM Global Diversified) was up significantly, with broad-based gains across constituents.

## Change in 10-Year Global Government Bond Yields



Source: Bloomberg Barclays

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



Sources: Bloomberg Barclays and JPMorgan Chase

## Global Fixed Income: One-Year Returns



Sources: Bloomberg Barclays and JPMorgan Chase

# Hotels, Retail Face Pandemic Headwinds; REITs Gain but Lag Equities

### REAL ESTATE/REAL ASSETS | Munir Iman

## Pandemic continues to challenge Hotels and Retail

- Hotels and Retail are the most challenged sectors while Office faces uncertainty; Industrial remains the best performer.
- Income remains positive except in the Hotel sector.
- Appraisers have more certainty on the pandemic's impact on valuations.
- Return dispersion by manager within the ODCE Index is due to the composition of underlying portfolios.

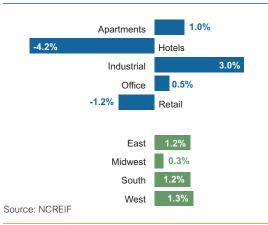
## More than \$200b of dry power

- U.S. core open end funds have investment queues of roughly
   \$5 billion and exit queues of \$20 billion.
- >\$200 billion of capital waiting to be deployed in North America
- Majority of dry powder capital in opportunistic, value-add, and debt funds

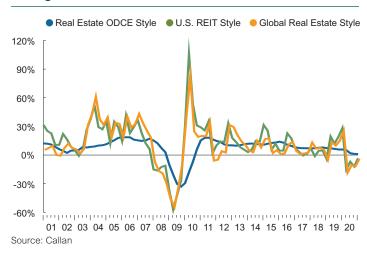
#### Fundamentals will continue to be affected

- Vacancy rates for all property types have been or will be affected.
- Net operating income has declined as Retail continues to suffer.
- 4Q20 rent collections showed relatively stable income throughout the quarter in the Industrial, Apartment, and Office sectors. The Retail sector remains challenged, with regional malls affected most heavily.
- Class A/B urban apartments relatively strong, followed by certain types of Industrial and Office
- Supply was in check before the pandemic.

# Sector Quarterly Returns by Property Type and Region



## **Rolling One-Year Returns**



- Construction is limited to finishing up existing projects but has been hampered by shelter-in-place orders and material shortages.
- New construction of preleased industrial and multifamily is occurring.
- Transaction volume dropped off during the quarter, except for multifamily and industrial assets with strong-credit tenants, which are trading at pre-COVID-19 levels.
- Cap rates remained steady during the quarter. The spread between cap rates and 10-year Treasuries is relatively high, leading some market participants to speculate that cap rates 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 increased but slightly lagged equities

- Global REITs underperformed slightly in 4Q20, gaining 13.3% compared to 14.0% for global equities (MSCI World).
- U.S. REITs rose 11.6% in 4Q20, lagging the S&P 500 Index, which jumped 12.1%.
- Globally, REITs are trading at a discount to NAV with the exception of those in the U.S., Singapore, and Australia.

### REAL ESTATE/REAL ASSETS (Continued)

- Sectors are mixed, between trading at a discount or premium.
- Ongoing volatility in REIT share prices offers opportunities to purchase mispriced securities, individual assets from REIT owners, and discounted debt, as well as lend to companies and/or execute take-privates of public companies.

#### Investment opportunities: real estate

- Primary opportunity: purchase of mispriced publicly traded real estate, both equity and debt
- Emerging opportunity: purchase of mezzanine loans from forced sellers
- The pandemic continues to impact real estate assets across Europe, with the Retail and Office sectors the first to undergo write-downs. Transaction activity has not yet meaningfully bounced back, as price discovery is still underway.

# Investment opportunities: infrastructure

- Strong performance from communications assets has drawn increased interest from infrastructure investors, and in some cases real estate investors for data centers.
- Most infrastructure investment continues to be focused in OECD countries in North America and Europe. Some managers are sponsoring Asia-focused funds.

# Investment opportunities: timberland and farmland

- Investment in farmland may increase if it proves to be a true diversifier in the pandemic.
- Institutional investment in timber has been waning for several years. The pandemic is unlikely to turn that tide.

# **NCREIF Capitalization Rates by Property Type**



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

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



Source: NCREIF

Note: Transaction capitalization rate is equal weighted.

# Callan Database Median and Index Returns\* for Periods Ended 12/31/20

Private Real Assets	Quarter	Year to Date	Year	3 Years	5 Years	10 Years	15 Years
Real Estate ODCE Style	1.3	1.0	1.0	4.6	5.9	9.1	5.5
NFI-ODCE (value wt net)	1.1	0.3	0.3	4.0	5.3	8.9	5.5
NCREIF Property	1.2	1.6	1.6	4.9	5.9	9.0	7.1
NCREIF Farmland	0.6	1.7	1.7	3.9	5.0	10.1	11.2
NCREIF Timberland	0.6	0.8	0.8	1.8	2.3	4.6	5.4
Public Real Estate							
Global Real Estate Style	11.4	-3.9	-3.9	4.6	5.8	7.5	5.7
FTSE EPRA Nareit Developed	13.3	-9.0	-9.0	1.5	3.7	5.4	
Global ex-U.S. Real Estate Style	12.7	-0.9	-0.9	5.4	6.3	7.2	5.9
FTSE EPRA Nareit Dev ex US	13.9	-7.1	-7.1	1.7	5.0	4.5	
U.S. REIT Style	9.8	-3.2	-3.2	5.8	6.4	9.5	7.4
EPRA Nareit Equity REITs	11.6	-8.0	-8.0	3.4	4.8	8.3	6.5

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

# Roller-Coaster Ride Ends on a High Note

## PRIVATE EQUITY | Gary Robertson

Given travel restrictions and the move to video due diligence "onsites," global private equity fundraising held up amazingly well in 2020. The same can be said for the volumes of underlying portfolio company investments and exits. Private equity market liquidity showed a quickening pace in the final quarter, which is expected to carry to 2021.

In 2020, private equity partnerships holding final closes raised \$645 billion globally across 1,163 partnerships (unless otherwise noted, PitchBook provided all data cited). The dollar amount declined only 12% from 2019's near record total, and the number of funds raised fell 34%. 4Q20 finished strong with final closes totaling \$197 billion, up 74% from 3Q. The number of funds totaled 295, up 22%.

#### Funds Closed 1/1/20 to 12/31/20

Strategy	No. of Funds	Amt (\$mm)	Share
Venture Capital	592	110,362	17%
Growth Equity	99	49,493	8%
Buyouts	273	285,346	44%
Mezzanine Debt	18	21,362	3%
Distressed	34	40,149	6%
Energy	4	6,216	1%
Secondary and Other	79	103,814	16%
Fund-of-Funds	64	27,814	4%
Totals	1,163	644,556	100%

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

New buyout investments for 2020 totaled 7,575, down 20% from 2019. Dollar volume fell 36% to \$441 billion. The fourth quarter saw 2,223 new investments, a 23% increase, and dollar volume jumped 20% to \$116 billion.

The year produced 32,198 rounds of new investment in venture capital (VC) companies, down 19% from 2019. Announced volume of \$326 billion was up 18%. 4Q saw 7,227 new rounds, a 4% decline, and dollar volume rose 9% to \$96 billion.

Last year also saw 1,791 buyout-backed private M&A exits, down 31% from 2019, with proceeds of \$373 billion, down 42%. 4Q had 497 private exits, up 29%, with proceeds of \$117 billion, up 144%. IPOs were strong for both venture capital and buyouts. The year's 144 buyout-backed IPOs increased 16% from 2019, with proceeds of \$58 billion, up 71%. 4Q buyout-backed IPOs numbered 62, a jump of 32% from 3Q, with \$24 billion of proceeds, up 60%.

Venture-backed M&A exits for the year totaled 1,788, down 18% from 2019. Announced dollar volume of \$108 billion was down 19%. The final quarter had 473 exits, up 9%, and announced value of \$46 billion vaulted 171%. The year's 391 venture-backed IPOs jumped 46% from 2019, with proceeds of \$76 billion, up 65%. There were 115 VC-backed offerings in 4Q, a 17% drop, and the \$26 billion of proceeds dropped 21% from 3Q.

### Private Equity Performance (%) (Pooled Horizon IRRs through 9/30/20\*)

Strategy	3 Months	Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
All Venture	11.1	27.9	20.8	14.6	16.6	12.3	6.0	26.6
Growth Equity	12.4	25.8	19.2	16.4	14.7	13.5	11.3	15.1
All Buyouts	10.8	15.6	13.4	14.3	14.0	12.4	11.9	13.2
Mezzanine	5.5	7.5	9.0	10.0	11.5	10.5	8.4	9.8
Credit Opportunities	3.5	-1.8	2.7	5.6	8.2	8.5	9.4	9.5
Control Distressed	7.8	5.9	5.8	8.5	10.3	9.6	10.3	10.7
All Private Equity	10.5	18.1	14.7	13.9	13.9	12.1	10.0	14.1
S&P 500	8.9	15.2	12.3	14.2	13.7	9.2	6.4	9.3
Russell 3000	14.7	20.9	14.5	15.4	13.8	10.0	7.8	9.7

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

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

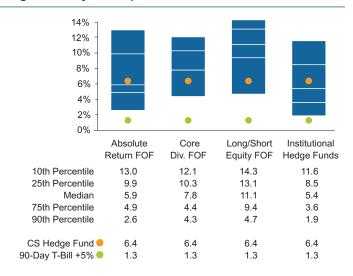
# **Hedge Funds Vaccinated Against Risk**

### HEDGE FUNDS/MACs | Jim McKee

The vigorous but volatile market conditions fed by continuing central bank liquidity enabled healthy hedge fund profits from both alpha and beta. As a proxy of asset-weighted hedge fund performance, the Credit Suisse Hedge Fund Index (CS HFI) surged 6.4% in 4Q20, its strongest quarterly gain since 2009. Representing actual hedge fund portfolios net of all fees and expenses, the median manager in the Callan Hedge Fund-of-Funds (FOF) Peer Group advanced 8.5%.

All strategies within the CS HFI were positive. Frenzied corporate issuance, whether equity, credit, or blank checks in the form of SPACs, particularly enriched Risk Arbitrage (+11.3%) and Event-Driven Multi-Strategy (+10.7%). Revived hopes for downtrodden credits benefited Distressed (+9.2%), marking the strategy's best quarterly gain since its 1994 inception. Riding the equity wave higher with an average 0.5 beta exposure, Long-Short Equity added 7.6%.

# **Hedge Fund Style Group Returns**



Sources: Callan, Credit Suisse, Federal Reserve

# Callan Peer Group Median and Index Returns\* for Periods Ended 12/31/20

Hedge Fund Universe	Quarter	Year	3 Years	5 Years	10 Years	15Years
Callan Institutional Hedge Fund Peer Group	5.4	6.8	5.1	5.9	5.7	6.9
Callan Fund-of-Funds Peer Group	8.5	13.1	6.5	5.7	5.0	4.8
Callan Absolute Return FOF Style	5.9	4.4	3.8	4.1	4.3	4.2
Callan Core Diversified FOF Style	7.8	12.4	5.7	5.2	4.7	4.6
Callan Long/Short Equity FOF Style	11.1	17.9	8.1	7.3	6.2	5.5
BB GS Cross Asset Risk Premia 6% Vol Idx	1.2	-4.3	2.3	3.2	5.1	5.9
Credit Suisse Hedge Fund	6.4	6.4	4.0	4.1	3.8	4.7
CS Convertible Arbitrage	4.2	10.3	5.2	5.5	4.1	4.8
CS Distressed	9.2	3.8	1.2	3.4	3.6	4.4
CS Emerging Markets	5.6	12.2	4.6	6.9	4.7	5.7
CS Equity Market Neutral	0.7	1.7	-0.6	0.3	1.6	-0.9
CS Event-Driven Multi	10.7	6.9	4.1	3.9	2.5	4.7
CS Fixed Income Arb	3.3	3.6	3.6	4.3	4.6	4.0
CS Global Macro	6.0	6.5	5.5	4.4	4.1	6.0
CS Long/Short Equity	7.6	7.9	4.9	4.8	5.0	5.5
CS Managed Futures	5.9	1.9	1.2	-0.1	0.6	2.8
CS Multi-Strategy	5.1	5.6	3.9	4.6	5.7	5.6
CS Risk Arbitrage	11.3	16.0	6.8	6.4	3.9	4.5
HFRI Asset Wtd Composite	7.6	2.8	3.2	3.8	3.7	
90-Day T-Bill + 5%	1.3	5.7	6.6	6.2	5.6	6.2

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

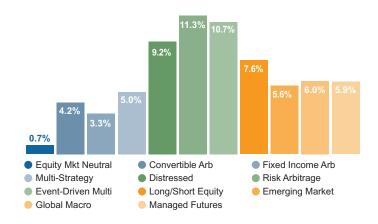
Within Callan's Hedge FOF Peer Group, market exposures differentiated performance in the quarter. Fed by the equity rally as well as stock dispersion within it, the median Callan Long/ Short Equity FOF (+11.1%) easily beat the Callan Absolute Return FOF (+5.9%), which benefited from tightening spreads in equity, credit, and event arbitrage. With diversifying exposures to both non-directional and directional styles, the Core Diversified FOF gained 7.8%.

Tracking 50 of the largest, broadly diversified hedge funds with low-beta exposure to equity markets, the median manager in the Callan Institutional Hedge Fund (CIHF) Peer Group gained 5.4% in 4Q. For the year, the median manager was up 6.8%. Those funds focused on hedged credit led, on average, others focused more on equities, rates, and cross-asset strategies in the quarter, but lagged those others for the full year.

Measuring the performance of these alternative risk premia in the quarter, the Bloomberg GSAM Risk Premia Index gained 1.2% based upon a 6% volatility target. Within the underlying styles of the Index's alternative risk premia, Currency Carry (+3.7%), U.S. Equity Value (+3.6%), and Currency Trend (+3.6%) were the big beneficiaries of the quarter's cyclical risk-on rotation.

Within Callan's database of liquid alternative solutions, the median managers of Callan Multi-Asset Class (MAC) style groups generated positive returns, gross of fees, consistent with their underlying risk exposures. For example, the Callan Risk Parity MAC, which typically targets equal risk-weighted allocations across asset classes with leverage, gained 7.9%, slightly trailing the more equity risk-oriented benchmark of 60% MSCI ACWI and 40% Bloomberg Barclays US Aggregate Bond Index (+9.1%). Given its usually long equity bias within a dynamic asset allocation framework, the Callan Long-Biased MAC (+8.4%) also marginally underperformed the 60%/40% index. The median Callan Risk Premia MAC fell 1.0%, reflecting its levered exposures to uncorrelated alternative risk premia (such as those in the Bloomberg GSAM Risk Premia Index). As the most conservative MAC style focused on non-directional strategies of long and short asset class exposures, the Callan Absolute Return MAC earned 3.5%.

#### Credit Suisse Hedge Fund Strategy Returns



#### Source: Credit Suisse

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



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

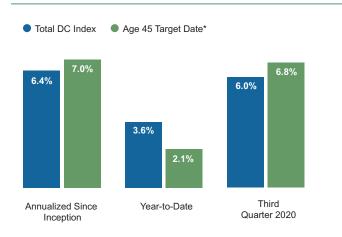
# **Index Posts Second Straight Quarterly Gain**

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

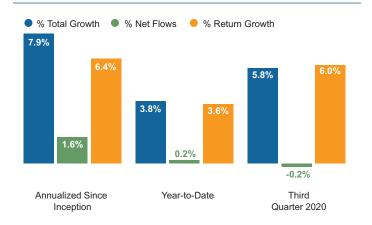
- The Callan DC Index™ rose 6.0% in 3Q20, the second straight quarter of gains after a 15.0% 1Q20 plunge. The increase propelled the Index to a gain year to date (3.6%). The Age 45 Target Date Fund (analogous to the 2040 vintage) posted a larger quarterly gain (6.8%), attributable to its higher allocation to equity.
- Balances within the DC Index rose by 5.8%. Investment returns (6.0%) were the sole driver of the growth, while net flows (-0.2%) had a small, negative effect.
- Target date funds typically get the largest net inflows, but they received only 12.5% of guarterly inflows as investors gravitated to relatively safer asset classes such as U.S. fixed income (36.9%) and stable value (30.7%).
- U.S. large cap (-45.1%) and U.S. small/mid cap (-38.9%) had the largest net outflows.
- Turnover (i.e., net transfer activity levels within DC plans) increased in 3Q, rising to 0.75% from the previous quarter's 0.37%.
- The Index's overall allocation to equity increased slightly to 68.8% from the previous quarter's 68.4%. U.S. large cap saw the largest percentage increase in allocation, rising by 60 basis points to 26.0%. U.S. small/mid cap had the largest percentage decrease, to 7.4% from 7.7% in 2Q.
- The prevalence of a money market offering (49.1%) increased by 1.4 percentage points from 2Q20. The percentage of plans offering a balanced fund (47.4%) dipped by more than 3 percentage points.
- For plans with more than \$1 billion in assets, the average asset-weighted fee decreased by 2 basis points to 0.27%. Plans with less than \$500 million in assets saw a slightly larger fee decrease of 4 bps to 0.33%, 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 (3Q20)

(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
U.S. Fixed Income	36.91%
Stable Value	30.67%
U.S. Smid Cap	-38.89%
U.S. Large Cap	-45.14%
Total Turnover**	0.75%

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

Source: Callan DC Index

Note: DC Index inception date is January 2006.

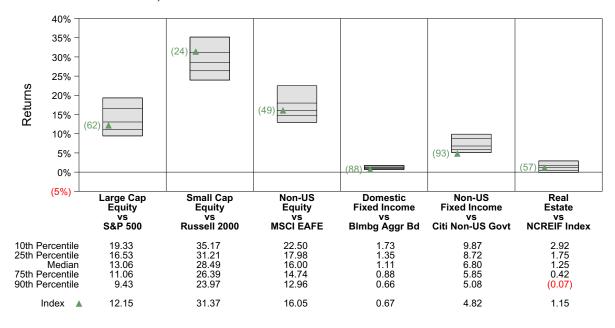
- The Age 45 Fund transitioned from the average 2035 TDF to the 2040 TDF in June 2018.
- \*\* Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

# Market Overview Active Management vs Index Returns

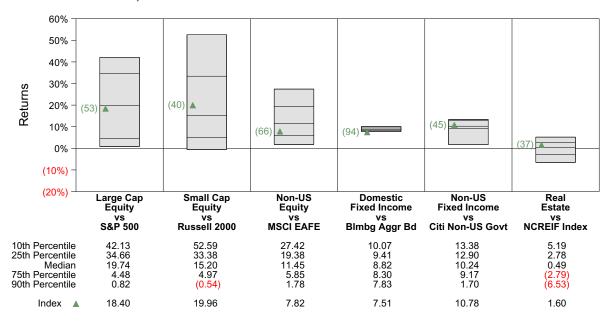
#### **Market Overview**

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

# Range of Separate Account Manager Returns by Asset Class One Quarter Ended December 31, 2020



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





# **ASSET ALLOCATION AND PERFORMANCE**

# **Asset Allocation and Performance**

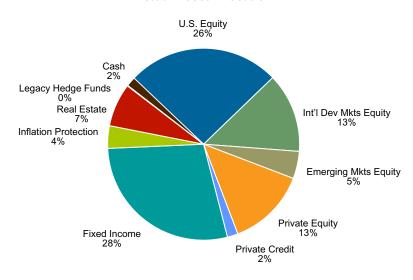
This section begins with an overview of the fund's asset allocation at the broad asset class level. This is followed by a top down performance attribution analysis which analyzes the fund's performance relative to the performance of the fund's policy target asset allocation. The fund's historical performance 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.



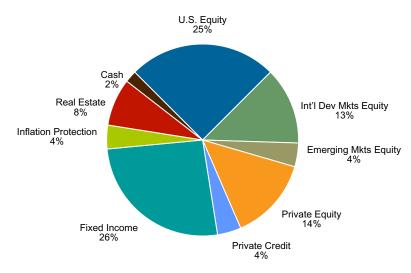
# Actual vs Target Asset Allocation As of December 31, 2020

The first chart below shows the Fund's current asset allocation. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement. Transition account market values are not included in any asset class and are excluded from these charts.

#### **Actual Asset Allocation**



# **Target Asset Allocation**



	\$000s	Weight		Percent	\$000s
Asset Class	Actual	Actual	Target	Difference	Difference
U.S. Equity	8,895,654	25.8%	25.0%	0.8%	281,197
Int'l Dev Mkts Equity	4,614,137	13.4%	13.0%	0.4%	134,619
Emerging Mkts Equity	1,595,533	4.6%	4.0%	0.6%	217,220
Private Equity	4,601,147	13.4%	14.0%	(0.6%)	(222,949)
Private Credit	608,200	1.8%	4.0%	(2.2%)	(770,113)
Fixed Income	9,754,906	28.3%	26.0%	2.3%	795,871
Inflation Protection	1,292,353	3.8%	4.0%	(0.2%)	(85,960)
Real Estate	2,530,688	7.3%	8.0%	(0.7%)	(225,938)
Legacy Hedge Funds	25,191	0.1%	0.0%	0.1%	25,191
Cash	540,020	1.6%	2.0%	(0.4%)	(149,136)
Total	34,457,828	100.0%	100.0%		

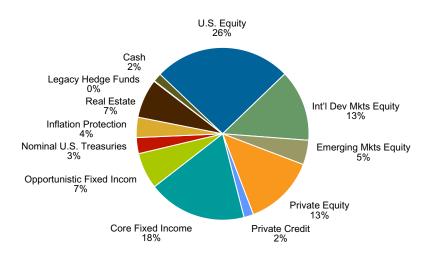
<sup>\*</sup>Transition account market values are not included in any asset class and are excluded from these charts.



# Actual Asset Allocation As of December 31, 2020

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

#### **Actual Asset Allocation**

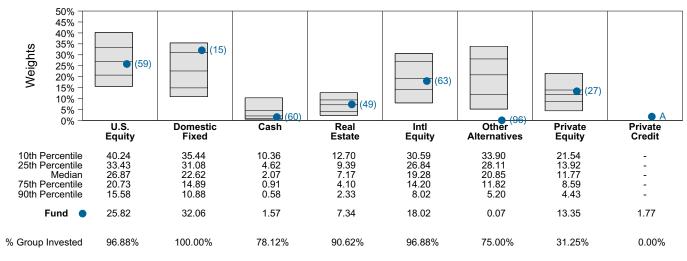


φυυυδ	vveigni
Actual	Actual
8,895,654	25.8%
4,614,137	13.4%
1,595,533	4.6%
4,601,147	13.4%
608,200	1.8%
6,365,694	18.5%
2,345,083	6.8%
1,044,129	3.0%
1,292,353	3.8%
2,530,688	7.3%
25,191	0.1%
540,020	1.6%
34,457,828	100.0%
	Actual  8,895,654  4,614,137  1,595,533  4,601,147  608,200  6,365,694  2,345,083  1,044,129  1,292,353  2,530,688  25,191  540,020

\$000

Weight

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



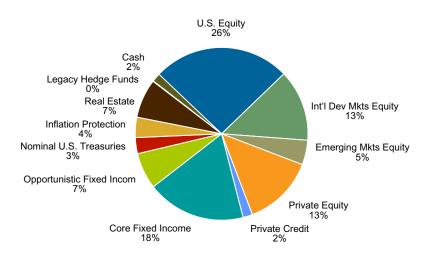
<sup>\*</sup>Transition account market values are not included in any asset class and are excluded from these charts.



# Actual Asset Allocation As of December 31, 2020

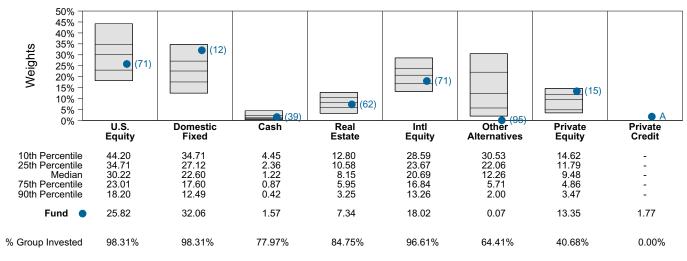
The first chart below shows the Fund's asset allocation as of December 31, 2020. The second chart ranks the fund's asset allocation versus the Callan Public Fund Spons - Large (>1B).

#### **Actual Asset Allocation**



	\$000s	Weight
Asset Class	Actual	Actual
U.S. Equity	8,895,654	25.8%
Int'l Dev Mkts Equity	4,614,137	13.4%
Emerging Mkts Équity	1,595,533	4.6%
Private Equity	4,601,147	13.4%
Private Credit	608,200	1.8%
Core Fixed Income	6,365,694	18.5%
Opportunistic Fixed Incom	2,345,083	6.8%
Nominal U.S. Treasuries	1,044,129	3.0%
Inflation Protection	1,292,353	3.8%
Real Estate	2,530,688	7.3%
Legacy Hedge Funds	25,191	0.1%
Cash	540,020	1.6%
Total	34,457,828	100.0%

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



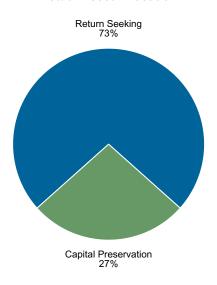
<sup>\*</sup>Transition account market values are not included in any asset class and are excluded from these charts.



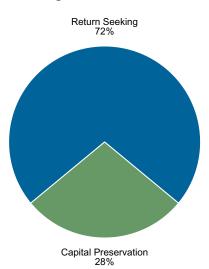
# **Actual vs Target Asset Allocation** As of December 31, 2020

The first chart below shows the Fund's asset allocation as of December 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	\$Millions Actual	Weight Actual	Target	Percent Difference	\$Millions Difference
Return Seeking	25,216	73.2%	72.0%	1.2%	406
Capital Preservation	9,242	26.8%	28.0%	(1.2%)	(406)
Total	34 458	100.0%	100.0%	•	

<sup>\*</sup>Transition account market values are not included in any asset class and are excluded from these charts.



<sup>\*</sup>Return Seeking Assets contains: Domestic Equity, Int'l Developed Markets Equity, Emerging Markets Equity, Opportunistic Fixed Income, Private Equity, Private Credit, Real Estate, and Legacy Hedge Funds.

<sup>\*</sup>Capital Preservation Assets contains: Core Fixed Income, Nominal Treasuries, Inflation Protection (TIPS), and Cash.

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

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.



#### **Actual and Target Returns Absolute Return Contributions** U.S. Equity Int'l Dev. Mkts Equity **Emerging Mkts Equity** Private Equity Private Credit Fixed Income Inflation Protection Real Estate Multi-Strategy Legacy Hedge Funds Cash Total 0% 5% 10% 15% 20% 25% 0% 2% 4% 6% 8% 10% 12% 14% Actual Target Actual Target

# Absolute Attribution Effects for Quarter ended December 31, 2020

	Effective Actual Weight	Actual Return	Absolute Return Contribution	Effective Target Weight	Target Return	Target Return Contribution	Return Contribution Difference
U.S. Equity	26%	16.86%	4.32%	25%	14.68%	3.67%	0.65%
Int'l Dev. Mkts Equity	13%	16.32%	2.15%	13%	16.10%	2.09%	0.06%
Emerging Mkts Equity	4%	20.35%	0.89%	4%	19.95%	0.80%	0.09%
Private Equity	13%	15.53%	2.05%	14%	15.53%	2.17%	(0.13%)
Private Credit	2%	7.21%	0.12%	4%	4.36%	0.17%	(0.05%)
Fixed Income	29%	2.30%	0.67%	26%	0.67%	0.17%	0.49%
Inflation Protection	4%	1.79%	0.07%	4%	1.62%	0.06%	0.01%
Real Estate	7%	3.93%	0.29%	8%	1.64%	0.13%	0.16%
Multi-Strategy	0%	0.00%	0.00%	0%	3.81%	0.00%	0.00%
Legacy Hedge Funds	0%	5.04%	0.00%	0%	7.94%	0.00%	0.00%
Cash	2%	0.04%	0.00%	2%	0.03%	0.00%	0.00%

Total Fund Return 10.44% Target Return 9.23% 1.21%

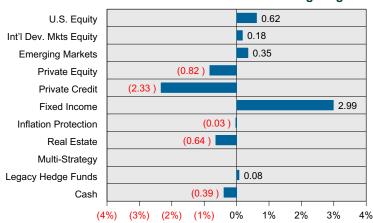
<sup>\*</sup> Current Quarter Target = 26.0% Blmbg U.S. Agg Bond Index, 25.0% Russell 3000 Index, 14.0% Private Equity, 13.0% MSCI ex US IMI, 7.2% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 4.0% S&P Levered Loan Index +1% (Qtr lag), 4.0% MSCI EM IMI, 4.0% U.S. TIPS Index, 2.0% 3-month Treasury Bill, 0.8% FTSE EP/NA US Index, 0.0% S&P:LSTA Lev Loan and 0.0% HFRI FOF.



# **Quarterly Total Fund Relative Attribution - December 31, 2020**

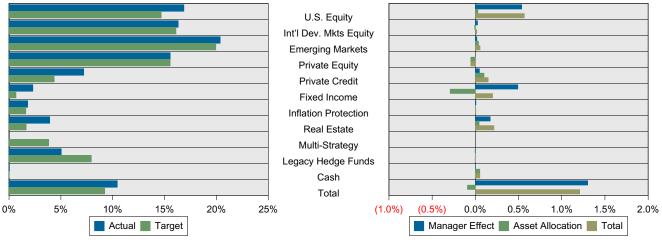
The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation 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 December 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%	16.86%	14.68%	0.54%	0.03%	0.57%
Int'l Dev. Mkts Equity	13%	13%	16.32%	16.10%	0.03%	(0.01%)	0.02%
Emerging Markets	4%	4%	20.35%	19.95%	0.02%	0.04%	0.05%
Private Equity	13%	14%	15.53%	15.53%	0.00%	(0.05%)	(0.05%)
Private Credit	2%	4%	7.21%	4.36%	0.05%	0.10%	0.15%
Fixed Income	29%	26%	2.30%	0.67%	0.49%	(0.29%)	0.20%
Inflation Protection	4%	4%	1.79%	1.62%	0.01%	(0.00%)	0.01%
Real Estate	7%	8%	3.93%	1.64%	0.17%	0.04%	0.22%
Multi-Strategy	0%	0%	0.00%	3.81%	0.00%	0.00%	0.00%
Legacy Hedge Funds	0%	0%	5.04%	7.94%	(0.00%)	(0.00%)	(0.00%)
Cash	2%	2%	0.04%	0.03%	0.00%	0.05%	0.05%′
Total			10.44% =	9.23%	+ 1.30% +	(0.09%)	1.21%

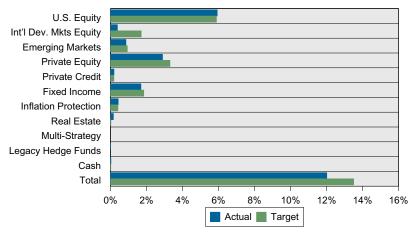
<sup>\*</sup> Current Quarter Target = 26.0% Blmbg U.S. Agg Bond Index, 25.0% Russell 3000 Index, 14.0% Private Equity, 13.0% MSCI ex US IMI, 7.2% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 4.0% S&P Levered Loan Index +1% (Qtr lag), 4.0% MSCI EM IMI, 4.0% U.S. TIPS Index, 2.0% 3-month Treasury Bill, 0.8% FTSE EP/NA US Index, 0.0% S&P:LSTA Lev Loan and 0.0% HFRI FOF.



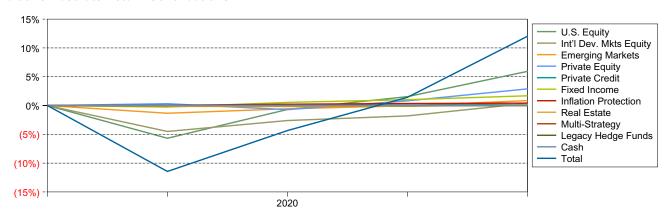
# **Cumulative Total Fund Absolute Attribution - December 31, 2020**

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of absolute total fund Performance and target performance. These cumulative results quantify the longer-term contribution of each asset class to absolute total fund return as well as the target return.

#### **One Year Absolute Return Contributions**



#### **Cumulative Absolute Return Contributions**



#### **One Year Absolute Attribution Effects**

	Effective Actual Weight	Actual Return	Absolute Return Contribution	Effective Target Weight	Target Return	Target Return Contribution	Return Contribution Difference
U.S. Equity	26%	21.35%	5.92%	25%	20.89%	5.88%	0.04%
Int'l Dev. Mkts Equity	15%	9.84%	0.38%	13%	8.32%	1.70%	(1.32%)
Emerging Markets	5%	25.10%	0.85%	4%	18.39%	0.93%	(0.08%)
Private Equity	13%	22.49%	2.89%	14%	22.49%	3.30%	(0.41%)
Private Credit	1%	13.28%	0.19%	4%	2.12%	0.19%	0.00%
Fixed Income	26%	6.05%	1.69%	26%	7.51%	1.85%	(0.16%)
Inflation Protection	4%	11.20%	0.42%	4%	10.99%	0.41%	0.01%
Real Estate	7%	1.83%	0.16%	8%	0.25%	0.02%	0.14%
Multi-Strategy	0%	-	0.00%	0%	-	0.00%	0.00%
Legacy Hedge Funds	0%	3.59%	0.00%	0%	10.75%	0.00%	0.00%
Cash	2%	0.64%	0.02%	2%	0.67%	0.01%	0.01%

Total Fund Return 12.01% Target Return 13.50% (1.49%)

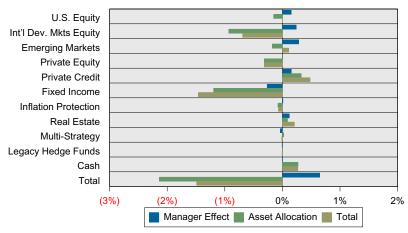
<sup>\*</sup> Current Quarter Target = 26.0% Blmbg U.S. Agg Bond Index, 25.0% Russell 3000 Index, 14.0% Private Equity, 13.0% MSCI ex US IMI, 7.2% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 4.0% S&P Levered Loan Index +1% (Qtr lag), 4.0% MSCI EM IMI, 4.0% U.S. TIPS Index, 2.0% 3-month Treasury Bill, 0.8% FTSE EP/NA US Index, 0.0% S&P:LSTA Lev Loan and 0.0% HFRI FOF.



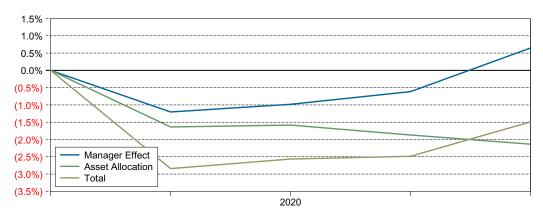
# **Cumulative Total Fund Relative Attribution - December 31, 2020**

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

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



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



### One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
U.S. Equity	26%	25%	21.35%	20.89%	0.15%	(0.15%)	(0.00%)
Int'l Dev. Mkts Equity	15%	13%	9.84%	8.32%	0.24%	(0.93%)	(0.69%)
Emerging Markets	5%	4%	25.10%	18.39%	0.28%	(0.18%)	`0.11%´
Private Equity	13%	14%	22.49%	22.49%	0.00%	(0.31%)	(0.31%)
Private Credit	1%	4%	13.28%	2.12%	0.15%	0.33%	0.48%
Fixed Income	26%	26%	6.05%	7.51%	(0.26%)	(1.19%)	(1.46%)
Inflation Protection	4%	4%	11.20%	10.99%	0.01%	(0.08%)	(0.07%)
Real Estate	7%	8%	1.83%	0.25%	0.12%	`0.09%	0.21%
Multi-Strategy	0%	0%	-	-	(0.04%)	0.02%	(0.01%)
Legacy Hedge Funds	0%	0%	3.59%	10.75%	(0.00%)	(0.00%)	(0.01%)
Cash	2%	2%	0.64%	0.67%	(0.00%)	0.27%	0.27%
Total			12.01% =	13.50% +	0.65% +	(2.14%)	(1.49%)

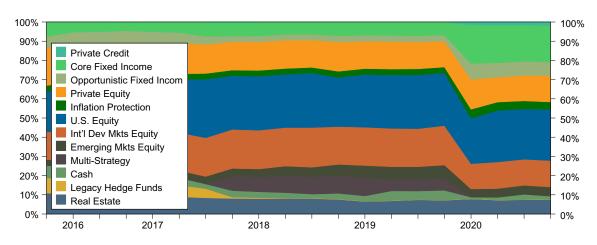
<sup>\*</sup> Current Quarter Target = 26.0% Blmbg U.S. Agg Bond Index, 25.0% Russell 3000 Index, 14.0% Private Equity, 13.0% MSCI ex US IMI, 7.2% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 4.0% S&P Levered Loan Index +1% (Qtr lag), 4.0% MSCI EM IMI, 4.0% U.S. TIPS Index, 2.0% 3-month Treasury Bill, 0.8% FTSE EP/NA US Index, 0.0% S&P:LSTA Lev Loan and 0.0% HFRI FOF.



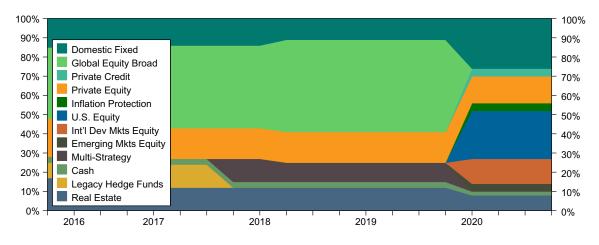
# **Actual vs Target Historical Asset Allocation**

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).

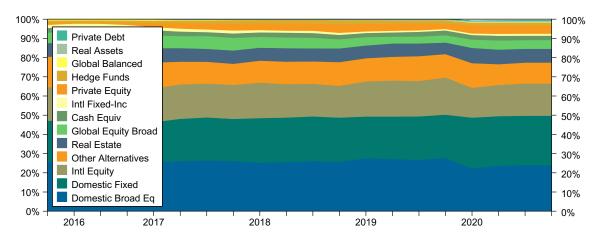
#### **Actual Historical Asset Allocation**



## **Target Historical Asset Allocation**



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



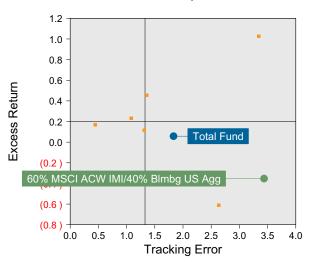


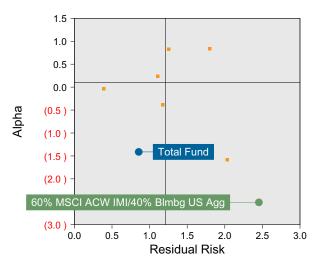
# Total Fund Total Fund vs Target Risk Analysis

#### **Risk Analysis**

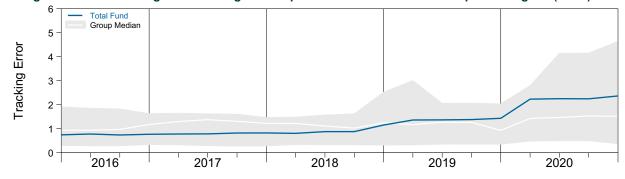
The graphs below analyze the performance and risk of the fund relative to the appropriate target mix. This relative performance is compared to a peer group of funds wherein each member fund is measured against its own target mix. The first scatter chart illustrates the relationship, called Excess Return 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 December 31, 2020

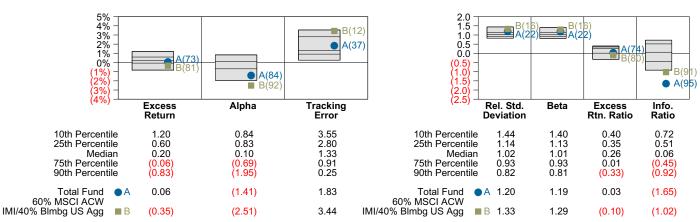




Rolling 12 Quarter Tracking Error vs Targets Compared to Callan Public Fund Spons- V Lg DB (>10B)



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

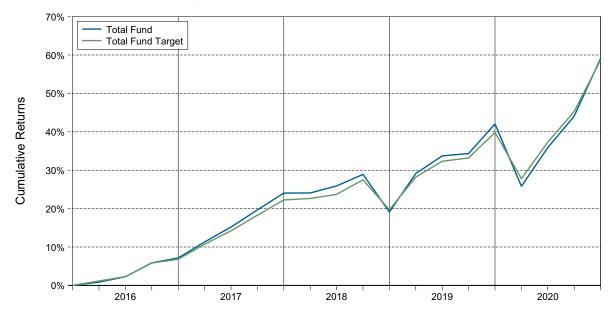




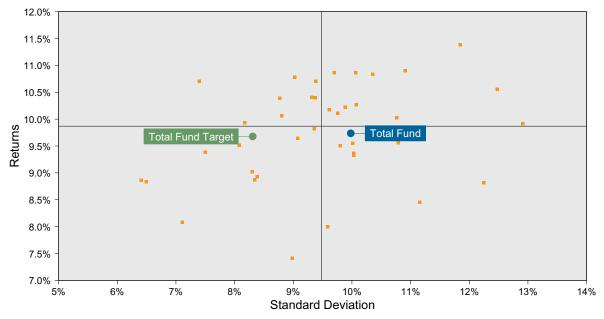
# **Cumulative Performance Relative to Target**

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

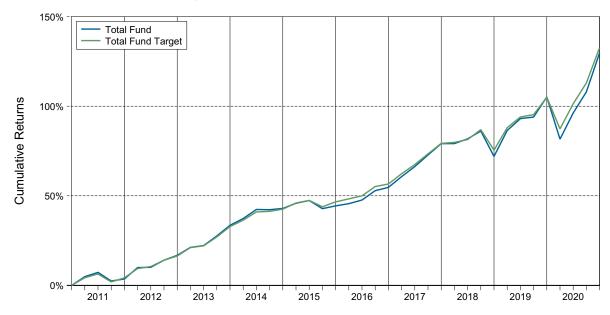


Squares represent membership of the Callan Public Fund Spons- V Lg DB (>10B)

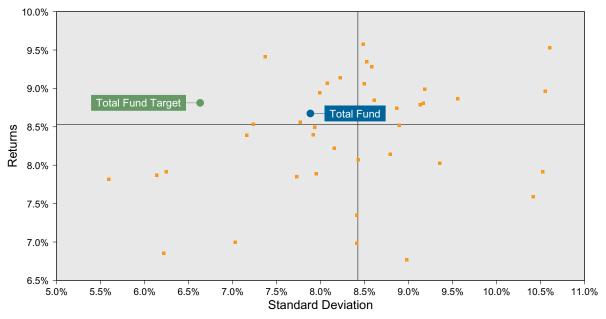
# **Cumulative Performance Relative to Target**

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**



### Ten Year Annualized Risk vs Return

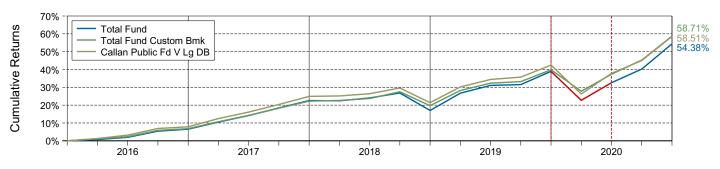


Squares represent membership of the Callan Public Fund Spons- V Lg DB (>10B)

# Total Fund Drawdown Analysis for Five Years Ended December 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**



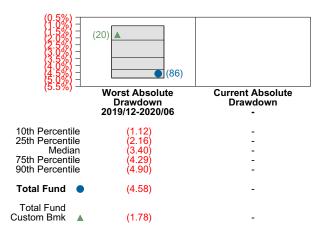
		Detum Vers Desired Index Desire					Ouricit Absolute Blawdown				
	Return	Years	Period	Index	Peers	Return	Years	Period	Index	Peers	
Total Fund	(4.58)%	0.50	2019/12-2020/06	(1.78)%	(3.27)%	-	-	-	-	-	
Recovery from Trough	5.78%	0.25	2020/06-2020/09	5.79%	5.22%	-	-	-	-	-	
Total Fund Custom Bmk	(6.11)%	0.25	2018/09-2018/12			-	-	-			
Callan Public Fd V Lg DB	(6.32)%	0.25	2018/09-2018/12			-	-	-			

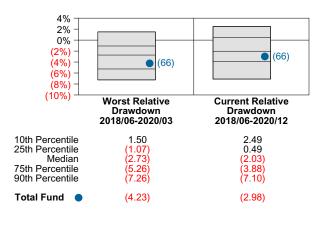
Worst Absolute Drawdown

#### Relative Cumulative Drawdown Analysis vs. Total Fund Custom Bmk **Cumulative Relative Returns** Peak Catch-up Rel Rtn: 3.08% Total Fund 2% Callan Public Fd V Lg DB 1% 0% (0.12%)(1%)(2.73%)(3%)(4%)(5%)2016 2020 2017 2018 2019

	v	vorst Rei	ative Drawdown		Cu	irrent Kei	ative Drawdown	
	Rel Rtn	Years	Period	Peers	Rel Rtn	Years	Period	Peers
Total Fund	(4.23)%	1.75	2018/06-2020/03	(3.29)%	(2.98)%	2.50	2018/06-2020/12	(2.24)%
Recovery from Trough	1.31%	0.75+	2020/03-2020/12	1.08%	1.31%	0.75+	2020/03-2020/12	1.08%
Callan Public Fd V Lg DB	(3.30)%	2.25	2017/12-2020/03		(2.25)%	3.00	2017/12-2020/12	

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





Current Absolute Drawdown

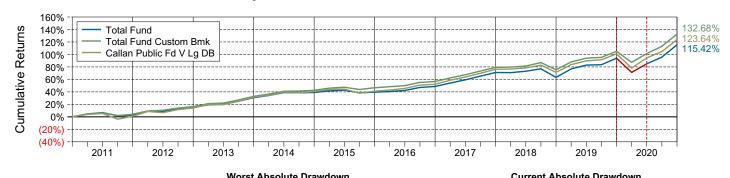


## Total Fund

## Drawdown Analysis for Ten Years Ended December 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**

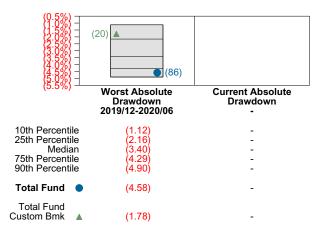


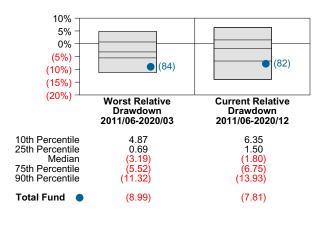
		4.58)%     0.50     2019/12-2020/06     (1.78)%     (3.27       5.78%     0.25     2020/06-2020/09     5.79%     5.22				Ourient Absolute Diawdown					
	Return	Years	Period	Index	Peers	Return	Years	Period	Index	Peers	
Total Fund	(4.58)%	0.50	2019/12-2020/06	(1.78)%	(3.27)%	-	-	_	-	-	
Recovery from Trough	5.78%	0.25	2020/06-2020/09	5.79%	5.22%	-	-	-	-	-	
Total Fund Custom Bmk	(6.11)%	0.25	2018/09-2018/12			-	-	-			
Callan Public Fd V Lg DB	(6.32)%	0.25	2018/09-2018/12			-	-	-			

#### Relative Cumulative Drawdown Analysis vs. Total Fund Custom Bmk Cumulative Relative Returns Peak Catch-up Rel Rtn: 8.47% Total Fund Callan Public Fd V Lg DB (3.89%)(6%)(7.42%)(8%)2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

	V	Vorst Rei	ative Drawdown		Cu	irrent Rei	ative Drawdown	
	Rel Rtn	Years	Period	Peers	Rel Rtn	Years	Period	Peers
Total Fund	(8.99)%	8.75	2011/06-2020/03	(4.02)%	(7.81)%	9.50	2011/06-2020/12	(2.98)%
Recovery from Trough	1.31%	0.75+	2020/03-2020/12	1.08%	1.31%	0.75+	2020/03-2020/12	1.08%
Callan Public Fd V Lg DB	(5.63)%	0.75	2010/12-2011/09		(3.44)%	9.75	2011/03-2020/12	

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



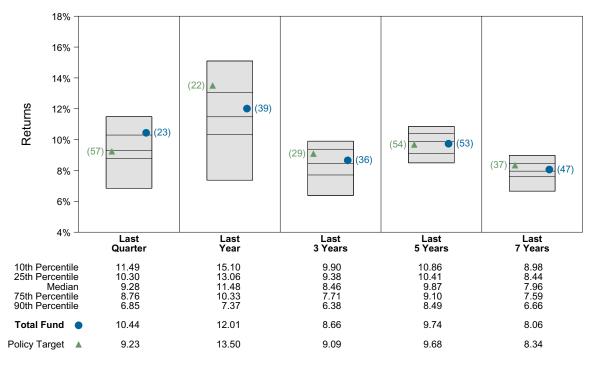




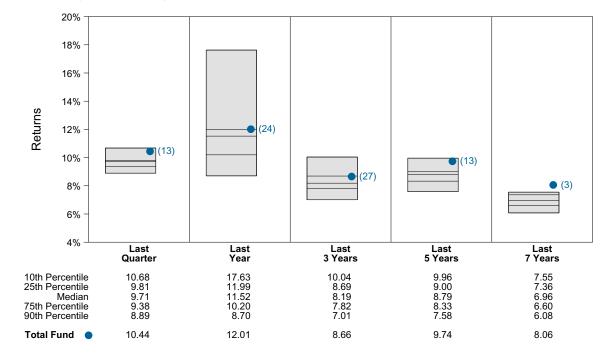
#### **Total Fund Ranking**

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 December 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% S&P:LSTA Lev Loan lagged 3 months+1.0%, 4.0% MSCI EM IMI, 4.0% Blmbg:TIPS, 2.0% 3-month Treasury Bill, 0.8% FTSE EP/NA US Index, 0.0% S&P:LSTA Lev Loan and 0.0% HFRI Fund of Funds Compos.

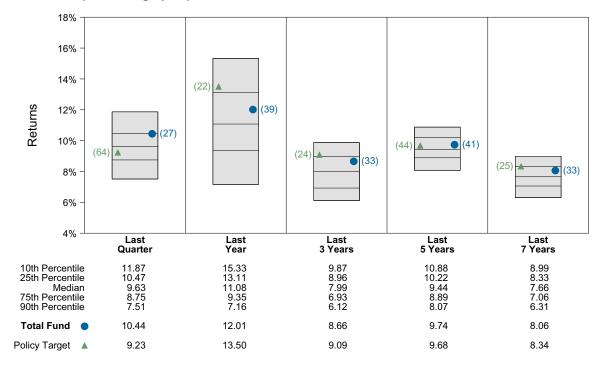
<sup>\*</sup>The gross history shown is estimated by BNY Mellon using a gross-up methodology through 12/31/19. Gross performance is calculated for the Total Fund starting 01/01/2020.



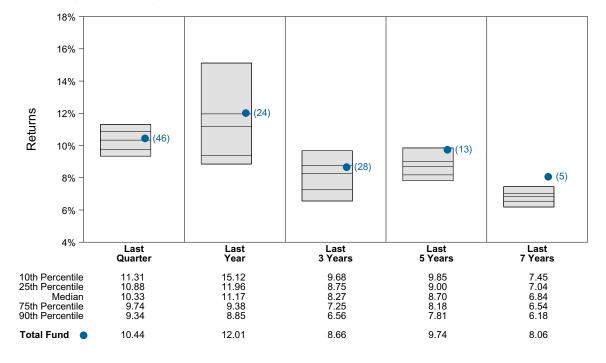
#### **Total Fund Ranking**

The first two charts show the ranking of the Total Fund's performance relative to that of the Callan Public Fund Spons - Large (>1B) for periods ended December 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% S&P:LSTA Lev Loan lagged 3 months+1.0%, 4.0% MSCI EM IMI, 4.0% Blmbg:TIPS, 2.0% 3-month Treasury Bill, 0.8% FTSE EP/NA US Index, 0.0% S&P:LSTA Lev Loan and 0.0% HFRI Fund of Funds Compos.

<sup>\*</sup>The gross history shown is estimated by BNY Mellon using a gross-up methodology through 12/31/19. Gross performance is calculated for the Total Fund starting 01/01/2020.



## Total Fund Period Ended December 31, 2020

#### **Gross Performance History**

The gross history shown is estimated by BNY Mellon using a gross-up methodology through 12/31/19. Gross performance is calculated for the Total Fund starting 01/01/2020.

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

- Total Fund's portfolio posted a 10.44% return for the quarter placing it in the 23 percentile of the Callan Public Fund Spons- V Lg DB (>10B) group for the quarter and in the 39 percentile for the last year.
- Total Fund's portfolio outperformed the Total Fund Custom Benchmark by 1.21% for the quarter and underperformed the Total Fund Custom Benchmark for the year by 1.49%.

#### **Quarterly Asset Growth**

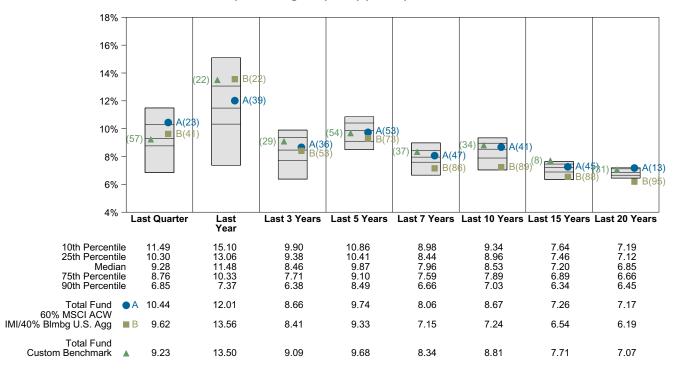
 Beginning Market Value
 \$31,465,376,282

 Net New Investment
 \$-282,746,478

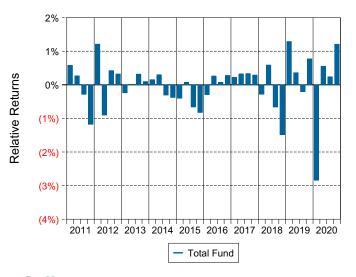
 Investment Gains/(Losses)
 \$3,276,914,279

Ending Market Value \$34,459,544,083

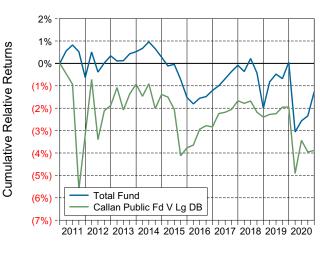
#### Performance vs Callan Public Fund Spons- V Lg DB (>10B) (Gross)



# Relative Returns vs Total Fund Custom Benchmark



#### Cumulative Returns vs Total Fund Custom Benchmark





## Total Fund Period Ended December 31, 2020

#### **Gross Performance History**

The gross history shown is estimated by BNY Mellon using a gross-up methodology through 12/31/19. Gross performance is calculated for the Total Fund starting 01/01/2020.

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

- Total Fund's portfolio posted a 10.44% return for the quarter placing it in the 27 percentile of the Callan Public Fund Spons - Large (>1B) group for the quarter and in the 39 percentile for the last year.
- Total Fund's portfolio outperformed the Total Fund Custom Benchmark by 1.21% for the quarter and underperformed the Total Fund Custom Benchmark for the year by 1.49%.

#### **Quarterly Asset Growth**

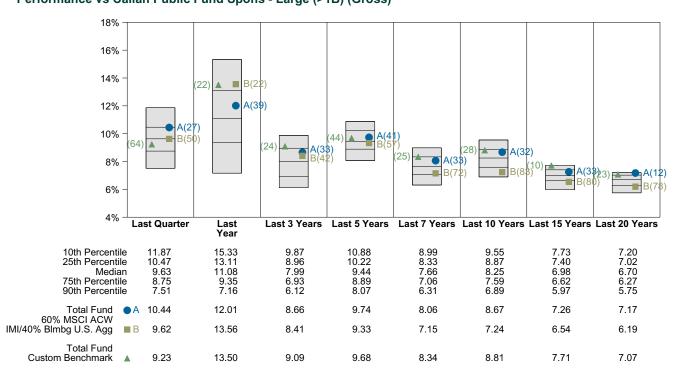
 Beginning Market Value
 \$31,465,376,282

 Net New Investment
 \$-282,746,478

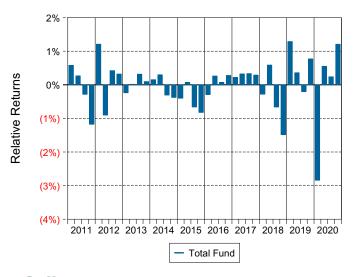
 Investment Gains/(Losses)
 \$3,276,914,279

 Ending Market Value
 \$34,459,544,083

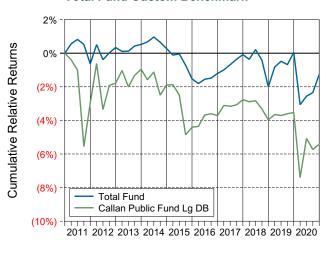
## Performance vs Callan Public Fund Spons - Large (>1B) (Gross)



# Relative Returns vs Total Fund Custom Benchmark



# Cumulative Returns vs Total Fund Custom Benchmark

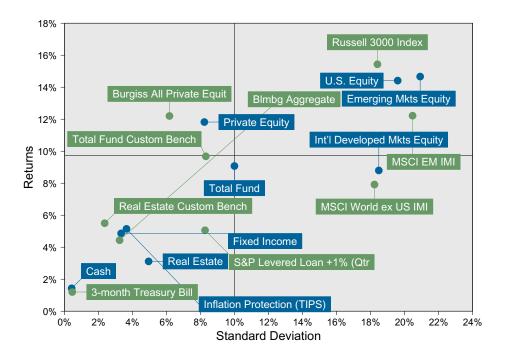




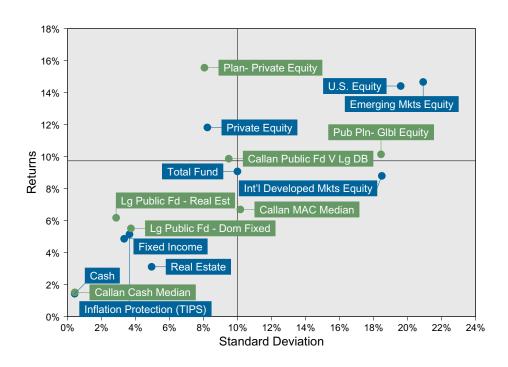
#### **Asset Class Risk and Return**

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 December 31, 2020, with the distribution as of September 30, 2020.

## **Asset Distribution Across Investment Managers**

		Dec	ember 31,	2020		Se	ptember 30, 20	20
	Market Value	% of Total	(min)	Target	(max)	Market Value	% of Total	Target
	\$(000)	Weight	Weight	\$(000)	Weight	Weight		
U.S. Equity	\$8,895,654	25.81%	20.00%	25.00%	30.00%	\$8,133,340	25.85%	25.00%
Int'l Developed Markets Equity	\$4,614,137	13.39%	8.00%	13.00%	18.00%	\$4,220,404	13.41%	13.00%
Emerging Mkts Equity	\$1,595,533	4.63%	0.00%	4.00%	8.00%	\$1,457,295	4.63%	4.00%
Private Equity (1)	\$4,601,147	13.35%	N/A	14.00%	N/A	\$4,170,316	13.25%	14.00%
Buyouts	2,477,745	7.19%				2,200,599	6.99%	
Special Situations	452,634	1.31%				431,225	1.37%	
Growth Equity	1,093,563	3.17%				959,003	3.05%	
Keystone Legacy (2)	577,206	1.68%				579,489	1.84%	
Private Credit (1)	\$608,200	1.76%	N/A	4.00%	N/A	\$498,557	1.58%	4.00%
Fixed Income	\$9,754,906	28.31%	21.00%	26.00%	31.00%	\$8,478,450	26.95%	26.00%
Core Fixed Income	6,365,694	18.47%				5,862,934	18.63%	
Opportunistic Fixed Income	2,345,083	6.81%				2,241,690	7.12%	
Nominal U.S. Treasuries	1,044,129	3.03%				373,825	1.19%	
Inflation Protection (TIPS)	\$1,292,353	3.75%	1.00%	4.00%	7.00%	\$1,320,319	4.20%	4.00%
Real Estate (1)	\$2,530,688	7.34%	N/A	8.00%	N/A	\$2,311,123	7.34%	8.00%
Core/Core Plus Real Estate Funds	1,007,067	2.92%				885,090	2.81%	
Value Add/Opportunistic SMA	716,569	2.08%				688,778	2.19%	
Value Add/Opportunistic Funds	529,874	1.54%				488,703	1.55%	
REITS	271,923	0.79%				243,135	0.77%	
Legacy Real Assets	5,255	0.02%				5,417	0.02%	
Legacy Hedge Funds	\$25,191	0.07%	-	-	-	\$24,094	0.08%	-
Cash	\$540,020	1.57%	0.00%	2.00%	7.00%	\$849,821	2.70%	2.00%
Total Fund	\$34,459,544	100.0%		100.0%		\$31,465,376	100.0%	100.0%

<sup>(1)</sup> Private Equity, Real Estate, and Private Credit Market Values have a 1 Qtr lag
(2) As of 9/30/2020, Keystone Legacy SPV consists of 131 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 December 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	Year to Date	Last 3 Years	Last 5 Years
Net Performance	· · · /	•	·			
Total Fund Total Fund Custom Benchmark(1) Public Market Equiv Benchmark(2) 60/40 Index(3)	\$34,460 - - - -	100.00% - - -	<b>10.09%</b> 9.23% 8.36% 9.62%	<b>11.11%</b> 13.50% 13.24% 13.56%	<b>7.99%</b> 9.09% 9.23% 8.41%	<b>9.07%</b> 9.68% 10.41% 9.33%
U.S. Equity Russell 3000 Index	\$8,896 -	25.81% -	<b>16.85%</b> 14.68%	<b>21.28%</b> 20.89%	<b>13.52%</b> 14.49%	<b>14.41%</b> 15.43%
Int'l Developed Mkts Equity MSCI World ex US IMI	\$4,614 -	13.39% -	<b>16.29%</b> 16.10%	<b>9.62%</b> 8.32%	<b>4.98%</b> 4.34%	<b>8.80%</b> 7.92%
Emerging Mkts Equity MSCI EM IMI	\$1,596 -	4.63% -	<b>20.19%</b> 19.95%	<b>24.45%</b> 18.39%	<b>8.32%</b> 5.78%	<b>14.66%</b> 12.22%
Private Equity  Burgiss Private Equity Index (Qtr lag)  Global Equity + 3% (Qtr lag)(4)	\$4,601 - -	13.35% - -	<b>13.46%</b> 8.08% 8.81%	<b>18.37%</b> 13.13% 15.55%	<b>13.21%</b> 12.25% 14.15%	<b>11.82%</b> 12.20% 16.45%
Private Credit S&P Levered Loan Index + 1% (Qtr lag)	\$608 -	1.76% -	<b>5.58%</b> 4.36%	<b>9.08%</b> 2.27%	<b>9.71%</b> 4.18%	- 5.06%
Fixed Income Blmbg U.S. Agg Bond Index	\$9,755 -	28.31% -	<b>2.24%</b> 0.67%	<b>5.78%</b> 7.51%	<b>4.68%</b> 5.34%	<b>4.86%</b> 4.44%
Inflation Protection (TIPS) Blmbg U.S. TIPS Index	\$1,292 -	3.75% -	<b>1.76%</b> 1.62%	<b>11.04%</b> 10.99%	<b>5.74%</b> 5.92%	<b>5.15%</b> 5.08%
Real Estate Real Estate Custom Bench (Qtr lag)(5) CPI + 3% (Qtr lag)	\$2,531 - -	7.34% - -	<b>3.49%</b> 1.64% 1.68%	<b>2.11%</b> 0.25% 4.37%	<b>3.44%</b> 4.04% 4.79%	<b>3.11%</b> 5.50% 4.81%
Cash 3-month Treasury Bill	\$540 -	1.57% -	<b>0.04%</b> 0.03%	<b>0.64%</b> 0.67%	<b>1.68%</b> 1.60%	<b>1.43%</b> 1.20%

<sup>(5)</sup> As of 03/31/2019 benchmark consists of 90% NCREIF ODCE Index (Qtr lag) and 10% FTSE NAREIT Index (unlagged). 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. Starting 01/01/2020,

benchmark consists of: 26% Bloomberg U.S. 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% Bloomberg U.S. Agg Bond Index, 25% Russell 3000,13% 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 IMI Index and 40% Bloomberg U.S. Agg Bond Index.

<sup>(4)</sup> As of 01/01/2020 benchmark consists of 25% MSCI World ex US +3% (Qtr lag) and 75% Russell 3000 + 3% (Qtr 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 December 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	7.98%	6.47%	6.39%	7.92%	9.59%	(4/04)
Total Fund Custom Benchmark(1)	8.81%	7.71%	7.07%	8.32%	9.59 /0	(1/81)
Public Market Equiv Benchmark(2)	9.12%	7.92%	7.22%	8.45%	_	
60/40 Index(3)	7.24%	6.54%	6.19%	6.73%	-	
U.S. Equity	13.30%	8.83%	7.49%	9.25%	10.98%	(1/81)
Russell 3000 Index	13.79%	9.98%	7.82%	9.67%		(1/81)
Int'l Developed Mkts Equity	6.47%	4.70%	_		6.57%	(1/02)
MSCI World ex US IMI	5.43%	4.71%	5.02%	5.36%	6.66%	(1/02)
Emerging Mkts Equity	4.00%	4.94%	-	-	8.36%	(1/02)
MSCI EM IMI	3.47%	6.63%	9.59%	5.51%	10.24%	(1/02)
Private Equity	11.52%	11.01%	8.07%	13.19%	11.11%	(1/86)
Burgiss Private Equity Index (Qtr lag)	12.72%	11.97%	9.16%	14.45%	16.73%	(1/86)
Global Equity + 3% (Qtr lag)(4)	16.50%	12.44%	9.94%	12.69%	14.54%	(1/86)
Private Credit	-	_	-	-	8.89%	(12/17)
S&P Levered Loan Index + 1% (Qtr lag)	5.27%	5.49%	5.65%	-	4.22%	(12/17)
Fixed Income	4.21%	5.06%	5.66%	5.86%	8.33%	(1/81)
Blmbg U.S. Agg Bond Index	3.84%	4.49%	4.83%	5.16%	7.63%	(1/81)
Inflation Protection (TIPS)	3.12%	3.90%	-	-	3.68%	(2/03)
Blmbg U.S. TIPS Index	3.81%	4.31%	5.40%	-	4.66%	(2/03)
Real Estate	6.97%	4.08%	6.26%	7.63%	8.21%	(3/84)
Real Estate Custom Bench (Qtr lag)(5)	9.01%	5.83%	7.01%	-	-	
CPI + 3% (Qtr lag)	4.77%	4.81%	5.04%	5.14%	5.60%	(3/84)
Cash	0.91%	1.54%	1.95%	2.62%		(1/87)
3-month Treasury Bill	0.64%	1.23%	1.51%	2.27%	3.19%	(1/87)

<sup>(5)</sup> As of 03/31/2019 benchmark consists of 90% NCREIF ODCE Index (Qtr lag) and 10% FTSE NAREIT Index (unlagged) 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. Starting 01/01/2020,

benchmark consists of: 26% Bloomberg U.S. 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% Bloomberg U.S. Agg Bond Index, 25% Russell 3000,13% 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 IMI Index and 40% Bloomberg U.S. Agg Bond Index

<sup>(4)</sup> As of 01/01/2020 benchmark consists of 25% MSCI World ex US +3% (Qtr lag) and 75% Russell 3000 + 3% (Qtr 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 December 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	Year to Date	Last 3 Years	Last 5 Years
Net Performance- Domestic Equity						
U.S. Equity	\$8,896	100.00%	<b>16.85%</b>	<b>21.28%</b> 20.89%	<b>13.52%</b>	<b>14.41%</b>
Russell 3000 Index (1)	-	-	14.68%		14.49%	15.43%
MCM Russell 1000 Index	7,060	79.37%	13.72%	20.85%	14.83%	15.61%
Russell 1000 Index	-	-	13.69%	20.96%	14.82%	15.60%
MCM Russell 2000 Core Index	181	2.04%	30.54%	19.04%	9.95%	-
Russell 2000 Index	-		31.37%	19.96%	10.25%	13.26%
MCM Russell 2000 Val Index	651	7.31%	33.35%	4.66%	3.70%	-
Russell 2000 Value Index	-	-	33.36%	4.63%	3.72%	9.65%
Emerald Asset Management	1,004	11.28%	25.77%	36.46%	16.43%	-
Russell 2000 Growth Index		-	29.61%	34.63%	16.20%	16.36%

<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 December 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	Last Last 10 15		Last 25	Since	
	Years	Years	20 Years	Years	Inception	
Net Performance- Domestic Equity						
U.S. Equity	13.30%	8.83%	7.49%	9.25%	<b>10.98%</b> (1/81)	
Russell 3000 Index (1)	13.79%	9.98%	7.82%	9.61%	11.28% (1/81)	
MCM Russell 1000 Index	-	-	-	-	15.45% (1/12)	
Russell 1000 Index	14.01%	10.07%	7.75%	9.75%	15.49% (1/12)	
MCM Russell 2000 Core Index	-	-	-	-	11.61% (12/16)	
Russell 2000 Index	11.20%	8.91%	8.74%	9.05%	11.84% (12/16)	
MCM Russell 2000 Val Index	-	-	-	-	5.65% (12/16)	
Russell 2000 Value Index	8.66%	6.92%	8.54%	9.34%	5.68% (12/16)	
Emerald Asset Management	-	-	-	-	18.76% (12/16)	
Russell 2000 Growth Index	13.48%	10.69%	8.52%	8.25%	17.66% (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 December 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	Year to	Last 3	Last 5
	\$(mm)	Weight	Quarter	Date	Years	Years
Net Performance- International Equity		-				
int'l Developed Mkts Equity MSCI World ex US IMI	\$4,614 -	74.31% -	<b>16.29%</b> 16.10%	<b>9.62%</b> 8.32%	<b>4.98%</b> 4.34%	<b>8.80%</b> 7.92%
Walter Scott & Partners(1)	690	11.11%	14.71%	21.14%	16.42%	16.35%
MSCI World	-	-	13.96%	15.90%	10.54%	12.19%
BlackRock MSCI World Ex US Index	3,489	56.19%	15.98%	8.01%	4.64%	-
MSCI World ex US	-	-	15.85%	7.59%	4.22%	7.64%
Xponance Non-U.S. Small Cap	234	3.77%	16.35%	9.38%	-	_
MSCI ACWI ex US Small Cap	-	-	18.56%	14.24%	4.59%	9.37%
Harris Assoc Int'l SCV	193	3.11%	24.53%	7.32%	2.90%	8.31%
MSCI World ex US Sm Cap	-	-	17.55%	12.78%	5.04%	9.63%
MSCI World ex US Sm Value	-	-	20.30%	2.58%	0.94%	7.25%
Emerging Mkts Equity	\$1,596	25.69%	20.19%	24.45%	8.32%	14.66%
MSCI EM IMI	-	-	19.95%	18.39%	5.78%	12.22%
Macquarie Emg Mkts Equity	563	9.07%	16.86%	20.54%	8.04%	14.68%
MSCI EM	-	-	19.70%	18.31%	6.18%	12.81%
Martin Currie Emg Mkts Equity	625	10.07%	22.96%	27.85%	10.15%	17.69%
MSCI EM	-	-	19.70%	18.31%	6.18%	12.81%
BlackRock Emg Mkts Index	14	0.23%	19.53%	17.85%	5.87%	-
MSCI EM	-	-	19.70%	18.31%	6.18%	12.81%
Leading Edge Emg Mkts Fund	280	4.50%	20.28%	18.30%	-	-
MSCI EM	-	-	19.70%	18.31%	6.18%	12.81%
GlobeFlex Emerging Small Cap	113	1.82%	21.41%	16.55%	3.15%	9.77%
MSCI EM Small Cap	-	-	22.22%	19.29%	2.69%	8.19%

<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) 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 December 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					•
Int'l Developed Mkts Equity MSCI World ex US IMI	<b>6.47%</b> 5.43%	<b>4.70%</b> 4.71%	- 5.02%	<b>-</b> 5.36%	<b>6.57%</b> (1/02) 6.66% (1/02)
Walter Scott & Partners(1) MSCI World	12.30%	-	-	-	10.31% (10/06)
	9.87%	7.33%	6.02%	7.21%	6.96% (10/06)
BlackRock MSCI World Ex US Index	-	-	-	-	6.82% (6/17)
MSCI World ex US	5.19%	4.47%	4.58%	5.17%	6.37% (6/17)
Xponance Non-U.S. Small Cap	-	-	-	-	7.19% (10/18)
MSCI ACWI ex US Small Cap	5.95%	6.41%	8.52%	6.49%	8.31% (10/18)
Harris Assoc Int'l SCV	6.36%	7.14%	-	-	10.79% (7/03)
MSCI World ex US Sm Cap	6.98%	5.90%	8.51%	-	9.75% (7/03)
MSCI World ex US Sm Value	5.54%	5.45%	8.74%	7.12%	9.23% (7/03)
Emerging Mkts Equity  MSCI EM IMI	<b>4.00%</b> 3.47%	<b>4.94%</b> 6.63%	- 9.59%	<b>-</b> 5.51%	<b>8.36%</b> (1/02) 10.24% (1/02)
Macquarie Emg Mkts Equity MSCI EM	-	-	-	-	7.06% (5/13)
	3.63%	6.59%	9.59%	-	5.38% (5/13)
Martin Currie Emg Mkts Equity MSCI EM	3.63%	- 6.59%	- 9.59%	- -	8.98% (1/14) 6.17% (1/14)
BlackRock Emg Mkts Index	-	-	-	-	9.52% (7/17)
MSCI EM	3.63%	6.59%	9.59%	-	9.81% (7/17)
Leading Edge Emg Mkts Fund	-	-	-	-	17.65% (11/18)
MSCI EM	3.63%	6.59%	9.59%	-	17.58% (11/18)
GlobeFlex Emerging Small Cap	-	-	-	-	5.90% (8/13)
MSCI EM Small Cap	2.29%	6.82%	10.18%	5.18%	5.17% (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. (1) 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 December 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	Year to Date	Last 3 Years	Last 5 Years
Net Performance - Private Equity	, ,					
Private Equity	\$4,601	88.32%	13.46%	18.37%	13.21%	11.82%
Burgiss Private Equity Index (Qtr lag)	-	-	8.08%	13.13%	12.25%	12.20%
Global Equity + 3% (Qtr lag)(1)	-	-	8.81%	15.55%	14.15%	16.45%
Buyouts	2,478	47.56%	12.46%	20.77%	14.06%	13.66%
Burgiss Buyout Index (Qtr lag)	-	-	8.47%	10.43%	10.52%	12.28%
Special Situations	453	8.69%	8.42%	9.32%	11.30%	10.38%
Burgiss Special Situations ldx (Qtr lag)	-	-	3.56%	2.33%	4.30%	5.95%
Growth Equity	1,094	20.99%	21.67%	37.49%	27.64%	17.05%
Burgiss Venture Capital Index (Qtr lag)	-	-	10.24%	25.35%	21.36%	15.20%
Keystone Legacy (2)	577	11.08%	7.81%	(6.30%)	-	-
rivate Credit	\$608	11.68%	5.58%	9.08%	9.71%	-
S&P Levered Loan Index +1% (Qtr lag)	-	-	4.36%	2.27%	4.18%	5.06%

<sup>(2)</sup> As of 9/30/2020, Keystone Legacy SPV consists of 131 non-core funds, prior performance in previous sub-asset classes



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<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 December 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 - Private Equity					
Private Equity	11.52%	11.01%	8.07%	13.19%	<b>11.11%</b> (1/86)
Burgiss Private Equity Index (Qtr lag)	12.72%	11.97%	9.16%	14.45%	16.73% (1/86)
Global Equity + 3% (Qtr lag)(1)	16.50%	12.44%	9.94%	12.69%	14.54% (1/86)
Buyouts	13.70%	13.06%	10.90%	15.94%	13.33% (4/86)
Burgiss Buyout Index (Qtr lag)	12.43%	12.28%	11.48%	13.49%	19.23% (4/86)
Special Situations	10.00%	11.40%	11.73%	12.24%	12.28% (1/95)
Burgiss Special Situations Idx (Qtr lag)	7.94%	7.63%	8.87%	10.02%	10.19% (6/95)
Growth Equity	13.06%	9.19%	1.59%	8.34%	7.87% (1/86)
Burgiss Venture Capital Index (Qtr lag)	16.51%	12.49%	3.75%	15.51%	13.95% (1/86)
Keystone Legacy (2)	-	-	-	-	(4.71%) (7/18)
Private Credit	_	-	-	-	<b>8.89%</b> (12/17)
S&P Levered Loan Index +1% (Qtr lag)	5.27%	5.49%	5.65%	-	4.22% (12/17)

<sup>(2)</sup> As of 9/30/2020, Keystone Legacy SPV consists of 131 non-core funds, prior performance in previous sub-asset classes



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	Market Value \$(mm)	Ending Weight	Last Quarter	Year to Date	Last 3 Years	Last 5 Years	
Net Performance - Fixed Income							
Fixed Income	\$9,755	56.83%	<b>2.24%</b>	<b>5.78%</b>	<b>4.68%</b> 5.34%	<b>4.86%</b>	
Blmbg U.S. Agg Bond Index	-	-	0.67%	7.51%		4.44%	
Core Fixed Income	\$6,366	37.09%	<b>0.82%</b>	<b>6.86%</b>	<b>5.21%</b> 5.34%	<b>4.70%</b>	
Blmbg U.S. Agg Bond Index	-	-	0.67%	7.51%		4.44%	
PIMCO Core Bond Fund	724	4.22%	1.08%	7.65%	5.45%	4.96%	
Blmbg Agg ex Treasury	-	-	1.56%	6.85%	5.33%	4.77%	
Mellon Bond-Index	5,415	31.55%	0.67%	7.42%	5.29%	4.38%	
Blmbg U.S. Agg Bond Index (1)	-	-	0.67%	7.51%	5.34%	4.44%	
BMO (TCH) Corp FI	227	1.32%	3.61%	10.58%	7.03%	7.28%	
BImbg Credit	-	-	2.79%	9.35%	6.80%	6.44%	
Nominal U.S. Treasuries	\$1,044	6.08%	<b>(1.70%)</b>	<b>11.12%</b>	<b>6.73%</b> 6.40%	<b>4.59%</b>	
Blmbg US Treas Bell 10Y	-	-	(1.91%)	10.61%		4.20%	
PIMCO US Treasuries	693	4.04%	(1.86%)	10.95%	6.68%	4.79%	
Blmbg US Treas Bell 10Y	-		(1.91%)	10.61%	6.40%	4.20%	

<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 December 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 - Fixed Income					7
Fixed Income	4.21%	5.06%	5.66%	5.86%	<b>8.33%</b> (1/81)
Blmbg U.S. Agg Bond Index	3.84%	4.49%	4.83%	5.16%	7.63% (1/81)
Core Fixed Income	4.21%	4.82%	-	_	<b>4.97%</b> (1/02)
Blmbg U.S. Agg Bond Index	3.84%	4.49%	4.83%	5.16%	4.65% (1/02)
PIMCO Core Bond Fund	-	_	-	-	3.47% (1/13)
Blmbg Agg ex Treasury	4.11%	4.75%	-	-	3.60% (1/13)
Mellon Bond-Index	3.73%	4.37%	4.74%	5.14%	7.13% (4/84)
Blmbg U.S. Agg Bond Index (1)	3.84%	4.49%	4.85%	5.23%	-
BMO (TCH) Corp FI	5.62%	5.78%	6.14%	-	6.17% (12/00)
Blmbg Credit	5.40%	5.60%	5.97%	5.94%	6.05% (12/00)
Nominal U.S. Treasuries	-	-	-	-	<b>3.47%</b> (9/11)
Blmbg US Treas Bell 10Y	4.44%	4.76%	4.89%	5.04%	3.44% (9/11)
PIMCO US Treasuries	-	_	-	-	3.64% (9/11)
Blmbg US Treas Bell 10Y	4.44%	4.76%	4.89%	5.04%	3.44% (9/11)

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	Market Value \$(mm)	Ending Weight	Last Quarter	Year to Date	Last 3 Years	Last 5 Years
Net Performance - Fixed Income						
Opportunistic Fixed Income	\$2,345	100.00%	7.51%	2.86%	3.74%	5.73%
BAAM Keystone(1)	994	42.40%	7.63%	2.54%	4.35%	4.77%
HFRI FOF Comp Index		-	8.05%	10.82%	4.86%	4.54%
Brandywine Global Opp FI	225	9.59%	9.50%	9.86%	4.39%	6.23%
FTSE Wrld Gov't Bond Index	-	-	2.77%	10.11%	4.96%	4.78%
Eaton Vance GMARA(2)	225	9.60%	3.15%	5.56%	-	-
3 Month LIBOR Index + 6%	-	-	1.52%	6.64%	7.78%	7.47%
Fidelity HY CMBS	323	13.76%	3.83%	(5.48%)	1.87%	2.87%
Blmbg US CMBS Ex AAA Index	-	-	4.42%	4.13%	5.46%	5.40%
SEI Str. Credit: HY Bank Loans(3)(4)	179	7.64%	17.43%	4.57%	3.91%	8.39%
FTSE HY Corp (1 month lag)	-	-	3.28%	6.41%	5.31%	7.37%
Stone Harbor Glbl HY	218	9.31%	7.03%	8.48%	6.37%	7.65%
FTSE HY Market Index	-	-	6.45%	6.29%	5.87%	8.40%
Stone Harbor EMD	181	7.71%	7.48%	6.73%	3.96%	7.49%
JPM Emg Mkts Bond Global Index	-	-	5.49%	5.88%	4.94%	6.84%

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



<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> 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.

The table below details the rates of return for the Fund's investment managers over various time periods ended December 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
Net Performance - Fixed Income	Tears	Tears	Tears	Tears	Inception
Opportunistic Fixed Income	-	-	-	-	4.36% (10/12)
BAAM Keystone(1)	-	-	-	-	6.99% (7/12)
HFRI FOF Comp Index	3.32%	3.02%	3.73%	5.08%	4.52% (7/12)
Brandywine Global Opp FI	-	-	-	-	4.60% (2/11)
FTSE Wrld Gov't Bond Index	2.32%	3.88%	4.63%	4.33%	2.34% (2/11)
Eaton Vance GMARA(2)	-	-	-	-	4.68% (6/18)
3 Month LIBOR Index + 6%	6.89%	7.60%	7.81%	-	7.73% (6/18)
Fidelity HY CMBS	7.16%	5.63%	7.23%	_	7.93% (4/97)
Blmbg US CMBS Ex AAA Index	5.47%	1.02%	-	-	-
SEI Str. Credit: HY Bank Loans(3)(4)	8.38%	-	_	_	11.17% (5/08)
FTSE HY Corp (1 month lag)	6.49%	7.05%	7.58%	6.96%	7.48% (5/08)
Stone Harbor Glbl HY	6.05%	6.71%	7.74%	_	7.60% (7/00)
FTSE HY Market Index	6.49%	7.13%	7.58%	6.97%	7.15% (7/00)
Stone Harbor EMD	5.48%	6.95%	-	-	7.44% (4/05)
JPM Emg Mkts Bond Global Index	5.97%	6.76%	8.11%	9.21%	7.21% (4/05)

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	Market Value		Last	Year to	Last 3	Last 5
	\$(mm)	Weight	Quarter	Date	Years	Years
Net Performance - Inflation Protection						
Inflation Protection (TIPS)	\$1,292	100.00%	1.76%	11.04%	5.74%	5.15%
Blmbg U.S. TIPS Index	-	-	1.62%	10.99%	5.92%	5.08%
NISA Inv Adv TIPS	578	44.74%	1.53%	10.89%	5.84%	5.06%
Blmbg U.S. TIPS Index (1)	-	-	1.62%	10.99%	5.92%	5.08%
Brown Brothers TIPS	577	44.61%	1.30%	10.64%	5.77%	5.02%
Blmbg U.S. TIPS Index	-	-	1.62%	10.99%	5.92%	5.08%
New Century Global TIPS	138	10.65%	4.75%	14.43%	5.86%	6.12%
Blmbg Wrld Inflation Linked Unhdg	-	-	4.53%	12.54%	5.32%	5.69%

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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)	3.12%	3.90%	_	-	<b>3.68%</b> (2/03)
Blmbg U.S. TIPS Index	3.81%	4.31%	5.40%	-	4.66% (2/03)
NISA Inv Adv TIPS	2.90%	-	-	-	3.69% (4/07)
Blmbg U.S. TIPS Index(1)	2.90%	3.59%	4.86%	-	3.70% (4/07)
Brown Brothers TIPS	=	-	-	-	2.65% (2/12)
Blmbg U.S. TIPS Index	3.81%	4.31%	5.40%	-	2.54% (2/12)
New Century Global TIPS	-	-	-	-	3.48% (2/12)
Blmbg Wrld Inflation Linked Unhdg	3.95%	4.46%	5.82%	-	2.97% (2/12)

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	Market Value \$(mm)	Ending Weight	Last Quarter	Year to Date	Last 3 Years	Last 5 Years
Net Performance - Real Estate	, ,					
Real Estate	\$2,531	100.00%	3.49%	2.11%	3.44%	3.11%
Real Estate Custom Bench (Qtr lag)(1)	-	-	1.64%	0.25%	4.04%	5.50%
CPI +3% (Qtr lag)	-	-	1.68%	4.37%	4.79%	4.81%
Core/Core Plus Real Estate Funds	1,007	39.79%	2.35%	2.11%	4.93%	6.10%
NCREIF ODCE Index (Qtr lag)	-	-	0.37%	0.89%	4.64%	6.09%
Value Add/Opportunistic SMA	717	28.32%	3.84%	8.22%	3.22%	1.75%
NCREIF ODCE Index (Qtr lag)	-	-	0.37%	0.89%	4.64%	6.09%
Value Add/Opportunistic Funds	530	20.94%	0.87%	(1.54%)	4.25%	5.35%
NCREIF ODCE Index (Qtr lag)	-	-	0.37%	0.89%	4.64%	6.09%
Legacy Real Assets	5	0.21%	(2.99%)	(9.28%)	(2.52%)	(2.84%)
CPI +3% (Qtr lag)	-	-	1.68%	4.37%	4.79%	4.81%
REITS	272	10.75%	11.95%	(4.20%)	5.43%	4.93%
FTSE NAREIT US Index	-	-	13.02%	(9.59%)	2.96%	5.21%

<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) As of 03/31/2019 benchmark consists of 90% NCREIF ODCE Index (1 Qtr lag) and 10% FTSE NAREIT Index (unlagged) Prior to 03/31/2019, benchmark history was provided by RVK.



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	Last 10	Last 15	Last 20	Last 25	Since
	Years	Years	Years	Years	Inception
Net Performance - Real Estate					
Real Estate	6.97%	4.08%	6.26%	7.63%	<b>8.21%</b> (3/84
Real Estate Custom Bench (Qtr lag) (1)	9.01%	5.83%	7.01%	-	-
CPI +3% (Qtr lag)	4.77%	4.81%	5.04%	5.14%	5.60% (3/84
Core/Core Plus Real Estate Funds	9.53%	6.53%	7.25%	8.49%	6.95% (9/86
NCREIF ODCE Index (Qtr lag)	9.42%	5.69%	6.53%	7.50%	5.85% (9/86
Value Add/Opportunistic SMA	5.98%	2.45%	4.82%	6.34%	5.27% (6/88
NCREIF ODCE Index (Qtr lag)	9.42%	5.69%	6.53%	7.50%	5.89% (6/88
Value Add/Opportunistic Funds	9.45%	4.55%	6.96%	8.51%	7.58% (3/84
NCREIF ODCE Index (Qtr lag)	9.42%	5.69%	6.53%	7.50%	6.12% (3/84
Legacy Real Assets	(0.52%)	1.30%	1.81%	3.58%	3.91% (3/93
CPI +3% (Qtr lag)	4.77%	4.81%	5.04%	5.14%	5.20% (3/93
REITS	7.13%	6.37%	9.09%	-	9.38% (4/96
FTSE NAREIT US Index	8.51%	6.16%	9.21%	9.89%	9.77% (4/96

<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) As of 03/31/2019 benchmark consists of 90% NCREIF ODCE Index (1 Qtr lag) and 10% FTSE NAREIT Index (unlagged) Prior to 03/31/2019, benchmark history was provided by RVK.



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	Market Value \$(mm)	Ending Weight	Last Quarter	Year to Date	Last 3 Years	Last 5 Years
Gross Performance	,, ,	<b>.</b>				
Total Fund (1)  Total Fund Estimated Gross History (1)  Total Fund Custom Benchmark  Public Market Equiv Benchmark  60/40 Index	<b>\$34,460</b> 34,460	<b>100.00%</b> 100.00% - - -	10.44% 10.44% 9.23% 8.36% 9.62%	<b>12.01%</b> 12.01% 13.50% 13.24% 13.56%	8.66% 9.09% 9.23% 8.41%	9.74% 9.68% 10.41% 9.33%
U.S. Equity Russell 3000 Index	\$8,896 -	25.81% -	<b>16.86%</b> 14.68%	<b>21.35%</b> 20.89%	<b>13.60%</b> 14.49%	<b>14.54%</b> 15.43%
Int'l Developed Mkts Equity MSCI World ex US IMI	\$4,614 -	13.39% -	<b>16.32%</b> 16.10%	<b>9.84%</b> 8.32%	<b>5.11%</b> 4.34%	<b>8.98%</b> 7.92%
Emerging Mkts Equity MSCI EM IMI	\$1,596 -	4.63% -	<b>20.35%</b> 19.95%	<b>25.10%</b> 18.39%	<b>8.82%</b> 5.78%	<b>15.25%</b> 12.22%
Private Equity (1)  Burgiss Private Equity Index (Qtr lag)  Global Equity +3% (Qtr lag)	\$4,601 - -	13.35% - -	<b>15.53%</b> 8.08% 8.81%	<b>23.63%</b> 13.13% 15.55%	- 12.25% 14.15%	- 12.20% 16.45%
Private Credit (1) S&P Levered Loan Index +1% (Qtr Lag)	\$608 -	1.76% -	<b>7.21%</b> 4.36%	<b>13.28%</b> 2.27%	- 4.18%	-
Fixed Income Blmbg U.S. Agg Bond Index	\$9,755 -	28.31% -	<b>2.30%</b> 0.67%	<b>6.05%</b> 7.51%	<b>4.90%</b> 5.34%	<b>5.12%</b> 4.44%
Inflation Protection (TIPS) Blmbg U.S. TIPS Index	\$1,292 -	3.75% -	<b>1.79%</b> 1.62%	<b>11.20%</b> 10.99%	<b>5.88%</b> 5.92%	<b>5.28%</b> 5.08%
Real Estate (1) Real Estate Custom Benchmark (Qtr lag) CPI +3% (Qtr lag)	\$2,531 - -	7.34% - -	<b>3.93%</b> 1.64% 1.68%	<b>3.03%</b> 0.25% 4.37%	- 4.04% 4.79%	- 5.50% 4.81%
Cash 3-month Treasury Bill	\$540 -	1.57% -	<b>0.04%</b> 0.03%	<b>0.64%</b> 0.67%	<b>1.68%</b> 1.60%	<b>1.43%</b> 1.20%

<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) The Total Fund Estimated Gross History is calculated by BNY Mellon using a gross-up methodology through 12/31/19. Starting 01/01/2020 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.



The table below details the rates of return for the Fund's investment managers over various time periods ended December 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						
Total Fund (1)	_	_	_	_	<b>12.01%</b> (1)	/20)
Total Fund Estimated Gross History (1)	8.67%	7.26%	7.17%	8.64%	•	/96)
Total Fund Custom Benchmark	8.81%	7.71%	7.07%	8.32%		/96)
Public Market Equiv Benchmark	9.12%	7.92%	7.22%	8.45%	•	/96)
60/40 Index	7.24%	6.54%	6.19%	6.73%		/96)
U.S. Equity	13.43%	8.99%	7.63%	9.37%	<b>11.06%</b> (1)	/81)
Russell 3000 Index	13.79%	9.98%	7.82%	9.67%		/81)
Int'l Developed Mkts Equity	6.72%	4.99%	_	_	<b>6.88%</b> (1)	/02)
MSCI World ex US IMI	5.43%	4.71%	5.02%	5.36%	•	/02)
Emerging Mkts Equity	4.45%	5.38%	_	_	<b>8.74%</b> (1)	/02)
MSCI EM IMI	3.47%	6.63%	9.59%	5.51%	•	/02)
Private Equity (1)	_	_	_	_	<b>23.63%</b> (1)	/20)
Burgiss Private Equity Index (Qtr lag)	12.72%	11.97%	9.16%	14.45%	*	/20)
Global Equity +3% (Qtr lag)	16.50%	12.44%	9.94%	12.69%		/20)
Private Credit (1)	_	_	_	_	<b>13.28%</b> (1)	/20)
S&P Levered Loan Index +1% (Qtr Lag)	5.27%	5.49%	5.65%	-		/20)
Fixed Income	4.48%	5.31%	5.91%	6.09%	<b>7.64%</b> (1)	/85)
Blmbg U.S. Agg Bond Index	3.84%	4.49%	4.83%	5.16%	•	/85)
Inflation Protection (TIPS)	3.25%	4.03%	-		<b>3.81%</b> (2)	2/03)
Blmbg U.S. TIPS Index	3.81%	4.31%	5.40%	-	•	2/03)
Real Estate (1)	-	_	-	-	<b>3.03%</b> (1)	/20)
Real Estate Custom Benchmark (Qtr lag)	9.01%	5.83%	7.01%	-		/20)
CPI +3% (Qtr lag)	4.77%	4.81%	5.04%	5.14%	4.37% (1/	/20)
Cash	0.91%	1.57%	1.85%	2.59%	,	/87)
3-month Treasury Bill	0.64%	1.23%	1.51%	2.27%	3.19% (1/	/87)

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The table below details the rates of return for the Fund's investment managers over various time periods ended December 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	Year to	Last 3	Last 5
	\$(mm)	Weight	Quarter	Date	Years	Years
Gross Performance- Domestic Equity	, ,					
U.S. Equity	\$8,896	100.00%	<b>16.86%</b>	<b>21.35%</b> 20.89%	<b>13.60%</b>	<b>14.54%</b>
Russell 3000 Index(1)	-	-	14.68%		14.49%	15.43%
MCM Russell 1000 Index	7,060	79.37%	13.72%	20.86%	14.84%	15.62%
Russell 1000 Index	-	-	13.69%	20.96%	14.82%	15.60%
MCM Russell 2000 Core Index	181	2.04%	30.55%	19.07%	9.97%	-
Russell 2000 Index	-		31.37%	19.96%	10.25%	13.26%
MCM Russell 2000 Val Index	651	7.31%	33.35%	4.68%	3.73%	-
Russell 2000 Value Index	-	-	33.36%	4.63%	3.72%	9.65%
Emerald Asset Management	1,004	11.28%	25.88%	37.18%	16.99%	-
Russell 2000 Growth Index	-	-	29.61%	34.63%	16.20%	16.36%

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The table below details the rates of return for the Fund's investment managers over various time periods ended December 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- Domestic Equity					
U.S. Equity	13.43%	8.99%	7.63%	9.37%	<b>11.06%</b> (1/81)
Russell 3000 Index(1)	13.79%	9.98%	7.82%	9.61%	11.28% (1/81)
MCM Russell 1000 Index	-	-	-	-	15.46% (1/12)
Russell 1000 Index	14.01%	10.07%	7.75%	9.75%	15.49% (1/12)
MCM Russell 2000 Core Index	-	-	-	-	11.64% (12/16)
Russell 2000 Index	11.20%	8.91%	8.74%	9.05%	11.84% (12/16)
MCM Russell 2000 Val Index	-	-	-	-	5.67% (12/16)
Russell 2000 Value Index	8.66%	6.92%	8.54%	9.34%	5.68% (12/16)
Emerald Asset Management	-	-	-	-	19.29% (12/16)
Russell 2000 Growth Index	13.48%	10.69%	8.52%	8.25%	17.66% (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.



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	Market Value \$(mm)	Ending Weight	Last Quarter	Year to Date	Last 3 Years	Last 5 Years
Gross Performance - International Equity			<u> </u>			
Int'l Developed Mkts Equity	\$4,614	74.31%	<b>16.32%</b>	<b>9.84%</b>	<b>5.11%</b> 4.34%	<b>8.98%</b>
MSCI World ex US IMI	-	-	16.10%	8.32%		7.92%
Walter Scott & Partners (1)	690	11.11%	14.82%	21.89%	16.96%	16.85%
MSCI World	-	-	13.96%	15.90%	10.54%	12.19%
BlackRock MSCI World Ex US Index	3,489	56.19%	15.97%	8.02%	4.65%	-
MSCI World ex US	-	-	15.85%	7.59%	4.22%	7.64%
Xponance Non-U.S. Small Cap MSCI ACWI ex US Small Cap	234	3.77%	16.55% 18.56%	10.19% 14.24%	- 4.59%	- 9.37%
Harris Assoc Int'l SCV	193	3.11%	24.96%	8.70%	3.81%	9.16%
MSCI World ex US Sm Cap	-	-	17.55%	12.78%	5.04%	9.63%
MSCI World ex US Sm Value	-	-	20.30%	2.58%	0.94%	7.25%
Emerging Mkts Equity MSCI EM IMI	\$1,596 -	<b>25.69%</b> -	<b>20.35%</b> 19.95%	<b>25.10%</b> 18.39%	<b>8.82%</b> 5.78%	<b>15.25%</b> 12.22%
Macquarie Emg Mkts Equity	563	9.07%	17.02%	21.20%	8.54%	15.36%
MSCI EM	-	-	19.70%	18.31%	6.18%	12.81%
Martin Currie Emg Mkts Equity	625	10.07%	23.11%	28.49%	10.99%	18.42%
MSCI EM	-	-	19.70%	18.31%	6.18%	12.81%
BlackRock Emg Mkts Index	14	0.23%	19.51%	18.02%	5.98%	-
MSCI EM	-		19.70%	18.31%	6.18%	12.81%
Leading Edge Emg Mkts Fund	280	4.50%	20.52%	19.25%	-	-
MSCI EM		-	19.70%	18.31%	6.18%	12.81%
GlobeFlex Emerging Small Cap	113	1.82%	21.56%	17.45%	3.87%	10.54%
MSCI EM Small Cap	-	-	22.22%	19.29%	2.69%	8.19%

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	Last 10 Years	Last 15 Years	Last 20 Years	Last 25 Years	Since Inception
Gross Performance - International Equity					
Int'l Developed Mkts Equity MSCI World ex US IMI	<b>6.72%</b> 5.43%	<b>4.99%</b> 4.71%	- 5.02%	<b>-</b> 5.36%	<b>6.88%</b> (1/02) 6.66% (1/02)
Walter Scott & Partners (1)	12.78%	-	-	-	10.77% (10/06)
MSCI World	9.87%	7.33%	6.02%	7.21%	6.96% (10/06)
BlackRock MSCI World Ex US Index	-	-	-	-	6.83% (6/17)
MSCI World ex US	5.19%	4.47%	4.58%	5.17%	6.37% (6/17)
Xponance Non-U.S. Small Cap	-	-	-	-	7.67% (10/18)
MSCI ACWI ex US Small Cap	5.95%	6.41%	8.52%	6.49%	8.31% (10/18)
Harris Assoc Int'l SCV	7.15%	7.93%	-	-	11.60% (7/03)
MSCI World ex US Sm Cap	6.98%	5.90%	8.51%	-	9.75% (7/03)
MSCI World ex US Sm Value	5.54%	5.45%	8.74%	7.12%	9.23% (7/03)
Emerging Mkts Equity  MSCI EM IMI	<b>4.45%</b> 3.47%	<b>5.38%</b> 6.63%	- 9.59%	<b>-</b> 5.51%	<b>8.74%</b> (1/02) 10.24% (1/02)
Macquarie Emg Mkts Equity	-	-	-	-	7.76% (5/13)
MSCI EM	3.63%	6.59%	9.59%	-	5.38% (5/13)
Martin Currie Emg Mkts Equity	-	-	-	-	9.56% (1/14)
MSCI EM	3.63%	6.59%	9.59%	-	6.17% (1/14)
BlackRock Emg Mkts Index	-	-	-	-	9.62% (7/17)
MSCI EM	3.63%	6.59%	9.59%	-	9.81% (7/17)
Leading Edge Emg Mkts Fund	-	-	-	-	18.26% (11/18)
MSCI EM	3.63%	6.59%	9.59%	-	17.58% (11/18)
GlobeFlex Emerging Small Cap	-	-	-	-	6.54% (8/13)
MSCI EM Small Cap	2.29%	6.82%	10.18%	5.18%	5.17% (8/13)

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The table below details the rates of return for the Fund's investment managers over various time periods ended December 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	Year to Date	Last 3 Years	Since Inception
Gross Performance - Private Equity	, ,					<u> </u>
Private Equity (1)	\$4,601	88.32%	15.53%	23.63%		<b>23.63%</b> (1/20)
Burgiss All Private Equity (Qtr Lag)	-	-	8.08%	13.13%	12.25%	13.13% (1/20)
Global Equity +3% (Qtr lag) (2)	-	-	8.81%	15.55%	14.15%	15.55% (1/20)
Buyouts	2,478	47.56%	15.20%	27.31%	-	27.31% (1/20)
Burgiss Buyout Index (Qtr Lag)	-	-	8.47%	10.43%	10.52%	10.43% (1/20)
Special Situations	453	8.69%	10.05%	10.97%	-	10.97% (1/20)
Burgiss Special Sits Index (Qtr Lag)	-	-	3.56%	2.33%	4.30%	2.33% (1/20)
Growth Equity	1,094	20.99%	23.18%	44.36%	_	44.36% (1/20)
Burgiss Venture Capital Idx (Qtr Lag)	-	-	10.24%	25.35%	21.36%	25.35% (1/20)
Keystone Legacy (3)	577	11.08%	8.50%	(4.23%)	-	(4.23%) (1/20)
Private Credit (1) S&P Levered Loan Index + 1% (Qtr Lag)	\$608	11.68%	<b>7.21%</b> 4.36%	<b>13.28%</b> 2.27%	<b>-</b> 4.18%	<b>13.28%</b> (1/20) 2.27% (1/20)

<sup>(3)</sup> As of 9/30/2020, Keystone Legacy SPV consists of 131 non-core funds, prior performance in previous sub-asset classes



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The market values and performance of such accounts are included within their relevant composites.

<sup>(1)</sup> Starting 01/01/2020 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. (2) As of 01/01/2020 benchmark is 25% MSCI World ex US Index and 75% Russell 3000 + 3% with a 1 Qtr lag.

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	Market Value \$(mm)	Ending Weight	Last Quarter	Year to Date	Last 3 Years	Last 5 Years
Gross Performance - Fixed Income						
Fixed Income	\$9,755	56.83%	<b>2.30%</b>	<b>6.05%</b>	<b>4.90%</b>	<b>5.12%</b>
Blmbg U.S. Agg Bond Index	-	-	0.67%	7.51%	5.34%	4.44%
Core Fixed Income	\$6,366	37.09%	<b>0.85%</b>	<b>6.95%</b>	<b>5.31%</b> 5.34%	<b>4.81%</b>
Blmbg U.S. Agg Bond Index	-	-	0.67%	7.51%		4.44%
PIMCO Core Bond Fund	724	4.22%	1.31%	8.06%	5.72%	5.20%
Blmbg Agg ex Treasury	-	-	1.56%	6.85%	5.33%	4.77%
Mellon Bond Index	5,415	31.55%	0.67%	7.44%	5.31%	4.41%
Blmbg U.S. Agg Bond Index(1)	-	-	0.67%	7.51%	5.34%	4.44%
BMO (TCH) Corp FI	227	1.32%	3.66%	10.88%	7.29%	7.56%
Blmbg Credit	-	-	2.79%	9.35%	6.80%	6.44%
Nominal U.S. Treasuries	\$1,044	6.08%	<b>(1.70%)</b>	<b>11.23%</b>	<b>6.83%</b> 6.40%	<b>4.69%</b>
Blmbg US Treas Bell 10Y	-	-	(1.91%)	10.61%		4.20%
PIMCO US Treasuries	693	4.04%	(1.86%)	11.05%	6.78%	4.89%
Blmbg US Treas Bell 10Y	-	-	(1.91%)	10.61%	6.40%	4.20%

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	Last 10	Last 15	Last 20	Last 25	Since
	Years	Years	Years	Years	Inception
Gross Performance - Fixed Income					
Fixed Income	4.48%	5.31%	5.91%	6.09%	<b>7.64%</b> (1/85)
Blmbg U.S. Agg Bond Index	3.84%	4.49%	4.83%	5.16%	6.82% (1/85)
Core Fixed Income	4.35%	4.99%	-		<b>5.13%</b> (1/02)
Blmbg U.S. Agg Bond Index	3.84%	4.49%	4.83%	5.16%	4.65% (1/02)
PIMCO Core Bond Fund	-	-	-	-	3.67% (1/13)
Blmbg Agg ex Treasury	4.11%	4.75%	-	-	3.60% (1/13)
Mellon Bond Index	3.77%	4.41%	4.78%	5.18%	5.33% (10/93)
Blmbg U.S. Agg Bond Index(1)	3.84%	4.49%	4.86%	5.24%	5.39% (10/93)
BMO (TCH) Corp FI	5.89%	6.04%	6.41%	-	6.43% (12/00)
Blmbg Credit	5.40%	5.60%	5.97%	5.94%	6.05% (12/00)
Nominal U.S. Treasuries	-	-	-		<b>3.57%</b> (9/11)
Blmbg US Treas Bell 10Y	4.44%	4.76%	4.89%	5.04%	3.44% (9/11)
PIMCO US Treasuries	-	-	-	-	3.74% (9/11)
Blmbg US Treas Bell 10Y	4.44%	4.76%	4.89%	5.04%	3.44% (9/11)

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	Market Value \$(mm)	Ending Weight	Last Quarter	Year to Date	Last 3 Years	Last 5 Years
Gross Performance - Fixed Income						
Opportunistic Fixed Income	\$2,345	100.00%	7.65%	3.51%	4.31%	6.37%
BAAM Keystone(1)	994	42.40%	7.79%	3.16%	4.71%	4.99%
HFRI FOF Comp Index	-	-	8.05%	10.82%	4.86%	4.54%
Brandywine Global Opp FI	225	9.59%	9.60%	10.37%	4.92%	6.65%
FTSE Wrld Gov't Bond Index	-	-	2.77%	10.11%	4.96%	4.78%
Eaton Vance GMARA(2)	225	9.60%	3.24%	5.93%	-	-
3 Month LIBOR Index + 6%	-	-	1.52%	6.64%	7.78%	7.47%
Fidelity HY CMBS	323	13.76%	3.98%	(4.73%)	2.56%	3.59%
BImbg US CMBS Ex AAA Index	-	-	4.42%	4.13%	5.46%	5.40%
SEI St. Credit: HY Bank Loans(3)(4)	179	7.64%	17.76%	5.84%	4.93%	9.41%
FTSE HY Corp (1 month lag)	-	-	3.28%	6.41%	5.31%	7.37%
Stone Harbor Glbl HY	218	9.31%	7.13%	8.99%	6.82%	8.10%
FTSE High Yield Market Index	-	-	6.45%	6.29%	5.87%	8.40%
Stone Harbor EMD	181	7.71%	7.58%	7.28%	4.42%	7.95%
JPM Emg Mkts Bond Global Index	-	-	5.49%	5.88%	4.94%	6.84%

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



<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> 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.

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	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	\$2,345	100.00%	-	-	-	-	<b>5.02%</b> (10/
BAAM Keystone(1) HFRI FOF Comp Index	994	42.40% -	- 3.32%	3.02%	3.73%	- 5.08%	7.12% (7/1: 4.52% (7/1:
Brandywine Global Opp Fl	225	9.59%	-	-	-	-	5.00% (2/1:
FTSE Wrld Gov't Bond Index		-	2.32%	3.88%	4.63%	4.33%	2.34% (2/1:
Eaton Vance GMARA(2)	225	9.60%	-	-	-	<del>-</del>	4.98% (6/18
3 Month LIBOR Index + 6%		-	6.89%	7.60%	7.81%	-	7.73% (6/18
Fidelity HY CMBS Blmbg US CMBS Ex AAA Index	323	13.76% -	7.87% 5.47%	6.33% 1.02%	7.95% -	<del>-</del> -	8.62% (4/9
SEI St. Credit: HY Bank Loans(3)(4) FTSE HY Corp (1 month lag)	179	7.64%	9.38%	-	-	-	12.22% (5/08
	-	-	6.49%	7.05%	7.58%	6.96%	7.48% (5/08
Stone Harbor Glbl HY	218	9.31%	6.52%	7.17%	7.95%	-	7.80% (7/00
FTSE HY Market Index		-	6.49%	7.13%	7.58%	6.97%	7.15% (7/00
Stone Harbor EMD	181	7.71%	5.94%	7.41%	-	-	7.89% (4/09
JPM Emg Mkts Bond Global Index	-	-	5.97%	6.76%	8.11%	9.21%	7.21% (4/09



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(1) 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.

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

(3) 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.

(4) 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 December 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	Year to	Last 3	Last 5
	\$(mm)	Weight	Quarter	Date	Years	Years
<b>Gross Performance - Inflation Protection</b>						
Inflation Protection (TIPS)	\$1,292	100.00%	1.79%	11.20%	5.88%	5.28%
Blmbg U.S. TIPS	-	-	1.62%	10.99%	5.92%	5.08%
NISA Inv Adv TIPS	578	44.74%	1.56%	11.02%	5.95%	5.17%
Blmbg U.S. TIPS (1)	-	-	1.62%	10.99%	5.92%	5.08%
Brown Brothers TIPS	577	44.61%	1.32%	10.76%	5.89%	5.15%
Blmbg U.S. TIPS	-	-	1.62%	10.99%	5.92%	5.08%
New Century Global TIPS	138	10.65%	4.81%	14.75%	6.15%	6.38%
Blmbg Wrld Inflation Linked Unhdg	-	-	4.53%	12.54%	5.32%	5.69%

<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.



### **Investment Manager Returns**

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

### Returns for Periods Ended December 31, 2020

	Last 10	Last 15	Last 20	Last 25	Since
	Years	Years	Years	Years	Inception
Gross Performance - Inflation Protection					
Inflation Protection (TIPS)	3.25%	4.03%	_	_	<b>3.81%</b> (2/03)
Blmbg U.S. TIPS Index	3.81%	4.31%	5.40%	-	4.66% (2/03)
NISA Inv Adv TIPS	3.01%	-	-	-	3.79% (4/07)
Blmbg U.S. TIPS Index (1)	3.81%	4.31%	5.40%	-	4.49% (4/07)
Brown Brothers TIPS	-	-	-	-	2.78% (2/12)
Blmbg U.S. TIPS Index	3.81%	4.31%	5.40%	-	2.54% (2/12)
New Century Global TIPS	-	-	-	-	3.73% (2/12)
Blmbg Wrld Inflation Linked Unhdg	3.95%	4.46%	5.82%	-	2.97% (2/12)

<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.



### **Investment Manager Returns**

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

#### Returns for Periods Ended December 31, 2020

	Market Value \$(mm)	Ending Weight	Last Quarter	Year to Date	Last 3 Years	Since Inception
Gross Performance - Real Estate						<u>.</u>
Real Estate (1)	\$2,531	100.00%	3.93%	3.03%	-	<b>3.03%</b> (1/20)
Real Estate Custom Bench (Qtr lag) (2)	-	-	1.64%	0.25%	4.04%	0.25% (1/20)
CPI + 3% (Qtr lag)	-	-	1.68%	4.37%	4.79%	4.37% (1/20)
Core/Core Plus Real Estate Funds	1,007	39.79%	2.53%	2.29%	-	2.29% (1/20)
NCREIF ODCE Index (Qtr lag)	-	-	0.37%	0.89%	4.64%	0.89% (1/20)
Value Add/Opportunistic SMA	717	28.32%	4.47%	9.71%	-	9.71% (1/20)
NCREIF ODCE Index (Qtr lag)	-	-	0.37%	0.89%	4.64%	0.89% (1/20)
Value Add/Opportunistic Funds	530	20.94%	1.67%	0.33%	-	0.33% (1/20)
NCREIF ODCE Index (Qtr lag)	-	-	0.37%	0.89%	4.64%	0.89% (1/20)
Legacy Real Assets	5	0.21%	(2.99%)	(9.14%)	-	(9.14%) (1/20)
CPI + 3% (Qtr lag)	-	-	1.68%	4.37%	4.79%	4.37% (1/20)
REITS	272	10.75%	12.04%	(3.76%)	-	(3.76%) (1/20)
FTSE NAREIT US Index	-	-	13.02%	(9.59%)	2.96%	(9.59%) (1/20)

<sup>(2)</sup> As of 03/31/2019 benchmark consists of 90% NCREIF ODCE Index (Qtr lag) and 10% FTSE NAREIT Index (unlagged). Prior to 03/31/2019, benchmark history was provided by RVK.



<sup>\*</sup>Market values may not sum as a result of accounts funded within the quarter or accounts in the process of liquidation.

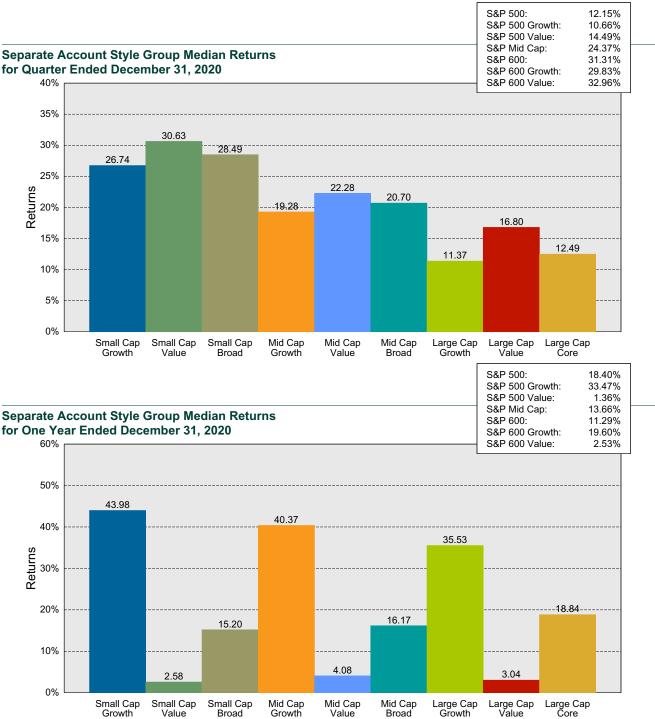
The market values and performance of such accounts are included within their relevant composites.

(1) Starting 01/01/2020 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.

# Domestic Equity Active Management Overview

U.S. stocks continued their upward trajectory in the fourth quarter, and the S&P 500 Index hit a record high going into year-end. The Index was up 12.1% for the quarter, bringing its 2020 gain to 18.4%. Since the market low in March, the benchmark is up over 70%, with all sectors posting increases greater than 40%. The quarter's winner, Energy (+28%), however, remains down 34% for the year. Technology (+12% in 4Q) was the best-performing 2020 sector with a 44% gain. Laggards for the quarter and the year were Utilities (+7%; +1%) and Real Estate (+5%; -2%). Megacaps continue to account for a disproportionate amount of the index and returns; the five largest stocks (Apple, Microsoft, Amazon, Facebook, Alphabet) made up 22% of the S&P 500 Index as of 12/31, and for 2020, this group accounted for 12.1% of the 18.4% Index return. In 4Q, value outperformed growth across the capitalization spectrum but trails by a significant margin for the full year. Small cap value (R2000 Value: +33.4%) was the best-performing style group for the quarter but its 2020 gain is a mere 4.6%. Small cap outperformed large for the quarter (R2000: +31.4%; R1000: +13.7%) but 2020 performance was roughly even (+20.0%; +21.0%).



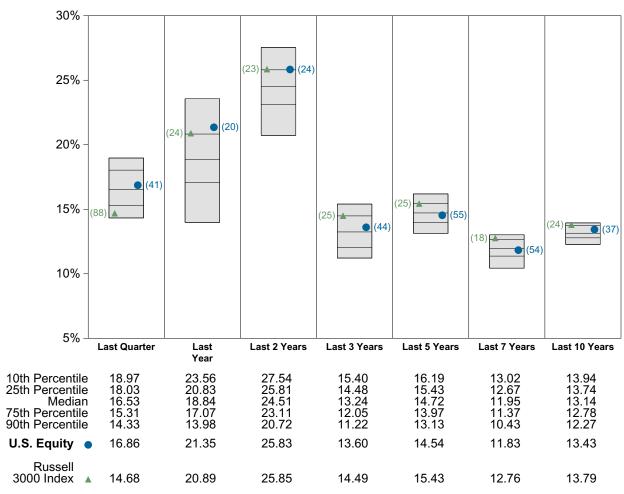


## U.S. Equity Period Ended December 31, 2020

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

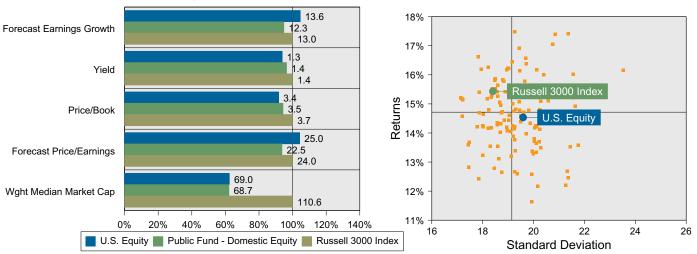
- U.S. Equity's portfolio posted a 16.86% return for the quarter placing it in the 41 percentile of the Public Fund -Domestic Equity group for the quarter and in the 20 percentile for the last year.
- U.S. Equity's portfolio outperformed the Russell 3000 Index by 2.18% for the quarter and outperformed the Russell 3000 Index for the year by 0.47%.

### 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



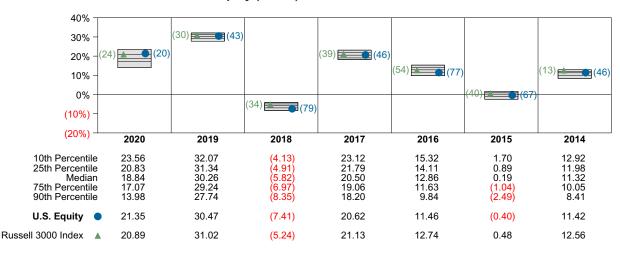


## U.S. Equity Return Analysis Summary

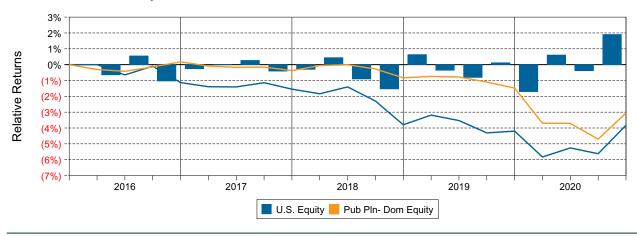
#### **Return Analysis**

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.

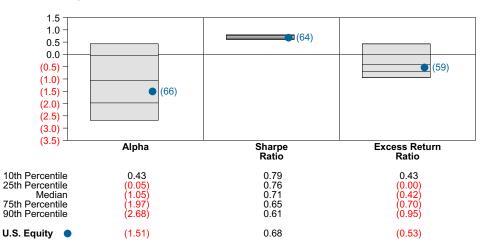
#### Performance vs Public Fund - Domestic Equity (Gross)



#### **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 December 31, 2020



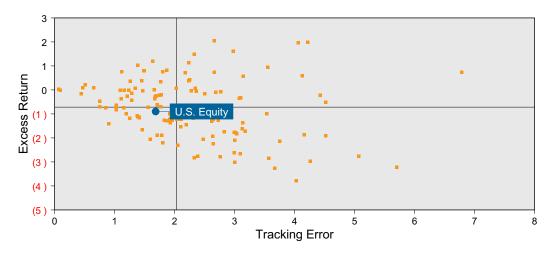


## U.S. Equity Risk Analysis Summary

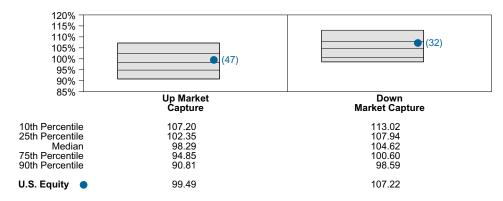
#### **Risk Analysis**

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.

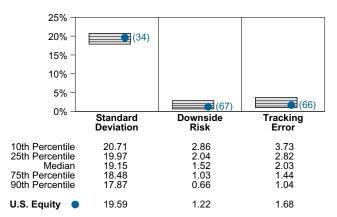
# Risk Analysis vs Public Fund - Domestic Equity (Gross) Five Years Ended December 31, 2020

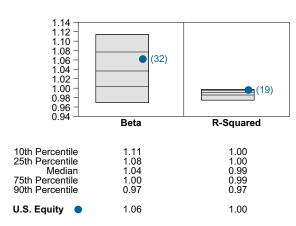


Market Capture vs Russell 3000 Index Rankings Against Public Fund - Domestic Equity (Gross) Five Years Ended December 31, 2020



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



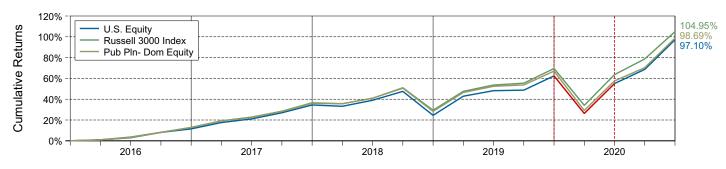




# U.S. Equity Drawdown Analysis for Five Years Ended December 31, 2020

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**

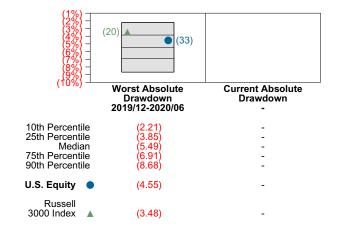


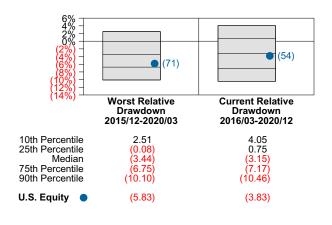
	Worst Absolute Drawdown				Current Absolute Drawdown					
	Return	Years	Period	Index	Peers	Return	Years	Period	Index	Peers
U.S. Equity	(4.55)%	0.50	2019/12-2020/06	(3.48)%	(5.66)%	-	-	_	-	-
Recovery from Trough	8.79%	0.25	2020/06-2020/09	9.21%	8.08%	-	-	-	-	-
Russell 3000 Index	(3.48)%	0.50	2019/12-2020/06			-	-	-		
Pub Pln- Dom Equity	(5.66)%	0.50	2019/12-2020/06			-	-	-		

#### Relative Cumulative Drawdown Analysis vs. Russell 3000 Index Cumulative Relative Returns Peak Catch-up Rel Rtn: 3.98% 0% U.S. Equity Pub Pln- Dom Equity (1%)(2%) (3.05%)(3%)(3.83%)(5%)2016 2017 2018 2019 2020

	Worst Relative Drawdown			Cu	rrent Rel	ative Drawdown		
	Rel Rtn	Years	Period	Peers	Rel Rtn	Years	Period	Peers
U.S. Equity	(5.83)%	4.25	2015/12-2020/03	(3.70)%	(3.83)%	4.75	2016/03-2020/12	(2.75)%
Recovery from Trough	0.61%	0.25	2020/03-2020/06	(0.00)%	2.13%	0.75+	2020/03-2020/12	0.67%
Pub Pln- Dom Equity	(4.87)%	3.75	2016/12-2020/09		(3.22)%	4.00	2016/12-2020/12	

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



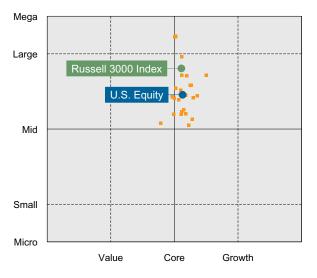




# Current Holdings Based Style Analysis U.S. Equity As of December 31, 2020

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.

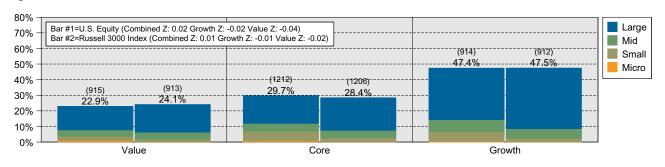
# Style Map vs Pub Pln- Dom Equity Holdings as of December 31, 2020



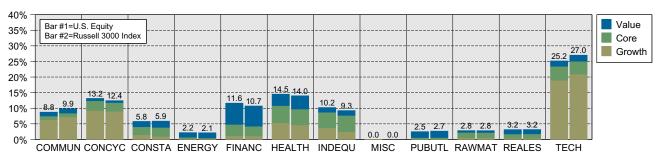
# Style Exposure Matrix Holdings as of December 31, 2020

	Value	Core	Growth	Total
	24.1% (913)	28.4% (1206)	47.5% (912)	100.0% (3031)
Total	, ,		, ,	
	22.9% (915)	29.7% (1212)	47.4% (914)	100.0% (3041)
	0.3% (391)	0.3% (390)	0.1% (129)	0.6% (910)
Micro				
	0.9% (393)	0.6% (390)	0.4% (131)	1.9% (914)
	1.4% (275)	2.4% (509)	2.2% (428)	6.0% (1212)
Small				
	2.8% (275)	6.2% (513)	6.2% (428)	15.2% (1216)
	4.6% (158)	4.8% (204)	6.2% (244)	15.6% (606)
Mid				
	4.0% (158)	5.0% (206)	7.8% (244)	16.9% (608)
	17.8% (89)	21.0% (103)	38.9% (111)	77.7% (303)
Large				
	15.2% (89)	17.8% (103)	33.0% (111)	66.0% (303)

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



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

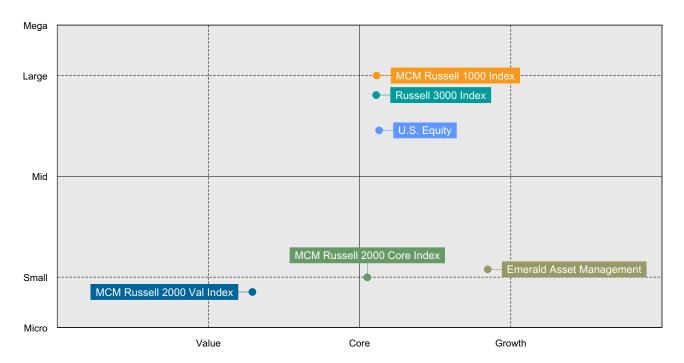




## **Holdings Based Style Analysis** For One Quarter Ended December 31, 2020

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 December 31, 2020



	Weight	Wtd Median	Combined	Growth	Value	Number of	Security
	%	Mkt Cap	Z-Score	Z-Score	Z-Score	Securities [	Diversification
MCM Russell 2000 Val Index	7.31%	2.07	(0.62)	(0.20)	0.43	1474	213.59
MCM Russell 2000 Core Index	2.04%	2.72	(0.04)	(0.11)	(0.07)	2044	315.81
Emerald Asset Management	11.28%	3.67	0.57	0.08	(0.49)	124	35.32
MCM Russell 1000 Index	79.37%	133.67	0.01	(0.01)	(0.02)	1018	54.61
U.S. Equity	100.00%	69.01	0.02	(0.02)	(0.04)	3070	101.80
Russell 3000 Index	-	110.64	0.01	(0.01)	(0.02)	3059	65.27

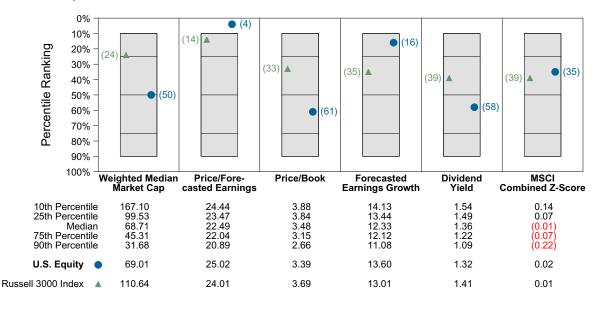


# U.S. Equity Equity Characteristics Analysis Summary

#### **Portfolio Characteristics**

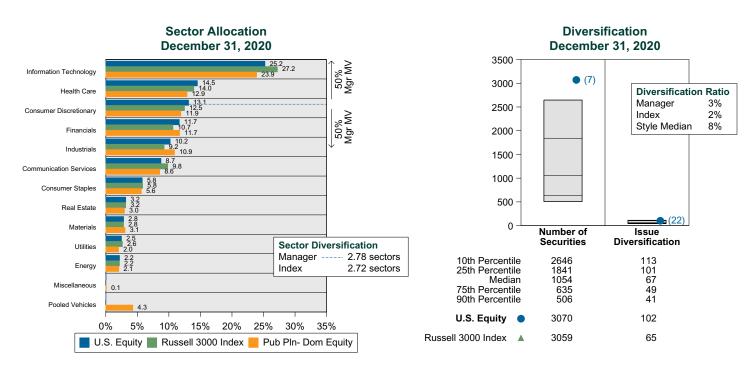
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

### Portfolio Characteristics Percentile Rankings Rankings Against Public Fund - Domestic Equity as of December 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.





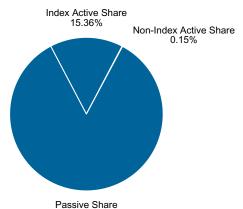
#### **U.S. Equity**

# Active Share Analysis as of December 31, 2020

#### vs. Russell 3000 Index

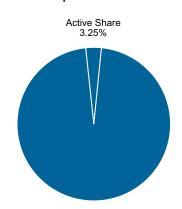
Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes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



84.49%

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



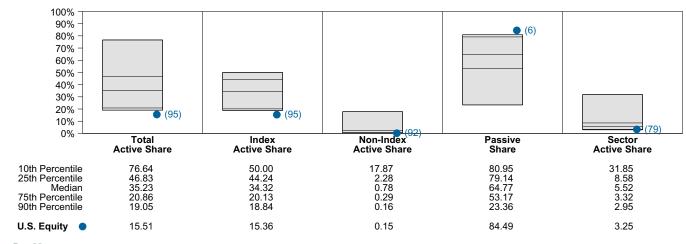
Passive Share 96.75%

Total Active Share: 15.51%

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
4.57%	0.00%	4.57%	9.82%	8.75%	0.93%
19.45%	0.00%	19.45%	12.48%	13.13%	2.23%
13.89%	0.00%	13.89%	5.85%	5.78%	0.84%
12.64%	2.77%	15.41%	2.17%	2.18%	0.32%
20.20%	0.00%	20.20%	10.65%	11.66%	1.97%
20.36%	0.39%	20.75%	13.96%	14.52%	2.76%
22.78%	0.08%	22.85%	9.25%	10.21%	1.92%
9.57%	0.00%	9.57%	27.20%	25.23%	3.33%
15.07%	0.00%	15.08%	2.83%	2.83%	0.42%
0.00%	100.00%	100.00%	-	0.04%	0.02%
0.00%	100.00%	100.00%	-	0.00%	0.00%
14.34%	0.00%	14.34%	3.16%	3.16%	0.46%
9.19%	0.00%	9.19%	2.64%	2.50%	0.30%
15.36%	0.15%	15.51%	100.00%	100.00%	15.51%

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





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

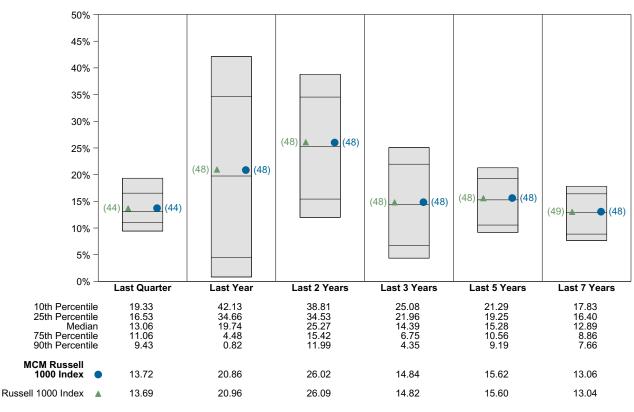
#### **Investment Philosophy**

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

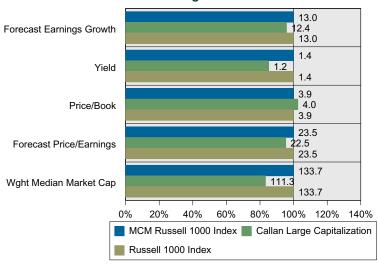
#### **Quarterly Summary and Highlights**

- MCM Russell 1000 Index's portfolio posted a 13.72% return for the quarter placing it in the 44 percentile of the Callan Large Capitalization group for the quarter and in the 48 percentile for the last year.
- MCM Russell 1000 Index's portfolio outperformed the Russell 1000 Index by 0.03% for the quarter and underperformed the Russell 1000 Index for the year by 0.10%.

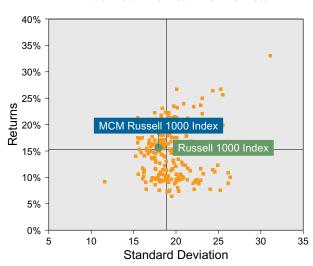
### Performance vs Callan Large Capitalization (Gross)



# Portfolio Characteristics as a Percentage of the Russell 1000 Index



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



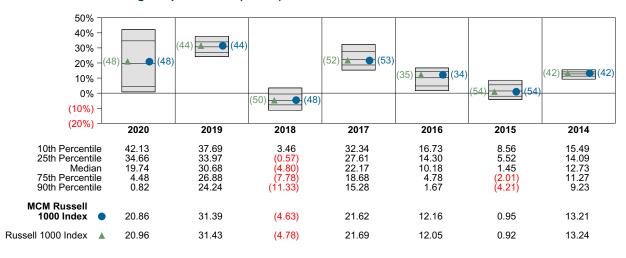


# MCM Russell 1000 Index Return Analysis Summary

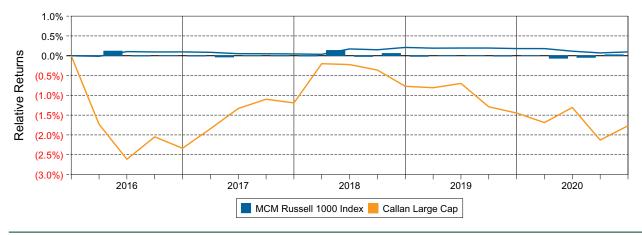
#### **Return Analysis**

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.

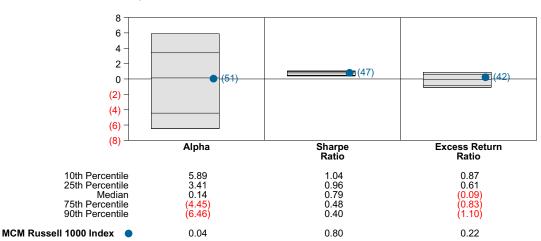
#### Performance vs Callan Large Capitalization (Gross)



### **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 December 31, 2020



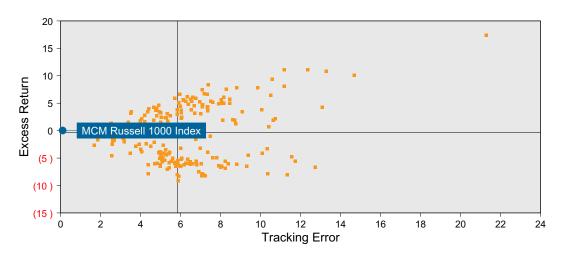


# MCM Russell 1000 Index Risk Analysis Summary

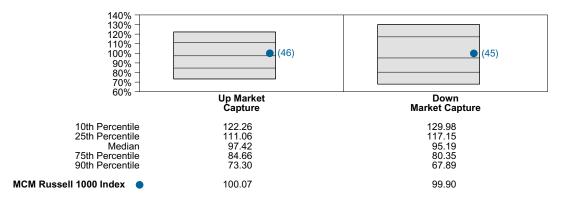
#### **Risk Analysis**

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.

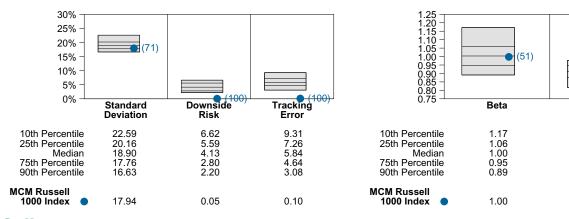
# Risk Analysis vs Callan Large Capitalization (Gross) Five Years Ended December 31, 2020



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



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





**(**1)

R-Squared

0.98

0.95 0.91

0.88

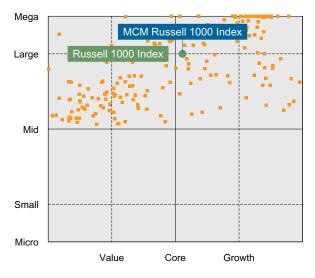
0.82

1.00

# Current Holdings Based Style Analysis MCM Russell 1000 Index As of December 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.

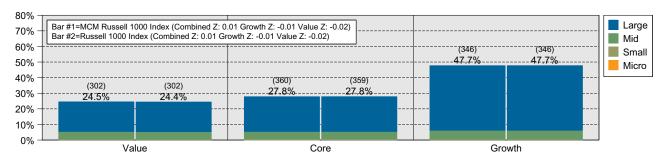
### Style Map vs Callan Large Cap Holdings as of December 31, 2020



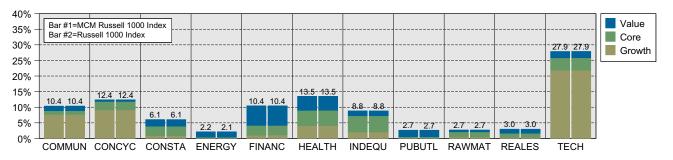
# Style Exposure Matrix Holdings as of December 31, 2020

24.4% (302)	27.8% (359)	47.7% (346)	100.0% (1007)
24.5% (302)	27.8% (360)	47.7% (346)	100.0% (1008)
0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
0.5% (57)	0.6% (73)	0.4% (41)	1.5% (171)
0.5% (57)	0.6% (74)	0.4% (41)	1.5% (1/2)
` '	, ,	` ,	1.5% (172)
4.9% (156)	4.8% (183)	5.8% (194)	15.5% (533)
4.9% (156)	4.8% (183)	5.8% (194)	15.5% (533)
19.1% (89)	22.4% (103)	41.5% (111)	83.0% (303)
19.1% (89)	22.4% (103)	41.5% (111)	82.9% (303)
	19.1% (89) 4.9% (156) 4.9% (57) 0.5% (57) 0.0% (0)	19.1% (89) 22.4% (103) 4.9% (156) 4.8% (183) 4.9% (156) 4.8% (183) 0.5% (57) 0.6% (74) 0.5% (57) 0.6% (73) 0.0% (0) 0.0% (0)	19.1% (89)     22.4% (103)     41.5% (111)       4.9% (156)     4.8% (183)     5.8% (194)       4.9% (156)     4.8% (183)     5.8% (194)       0.5% (57)     0.6% (74)     0.4% (41)       0.5% (57)     0.6% (73)     0.4% (41)       0.0% (0)     0.0% (0)     0.0% (0)

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



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



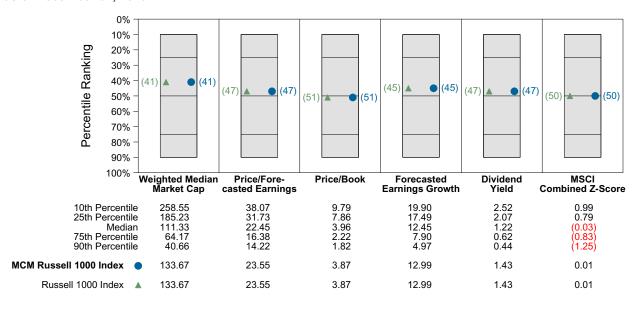


# MCM Russell 1000 Index Equity Characteristics Analysis Summary

#### **Portfolio Characteristics**

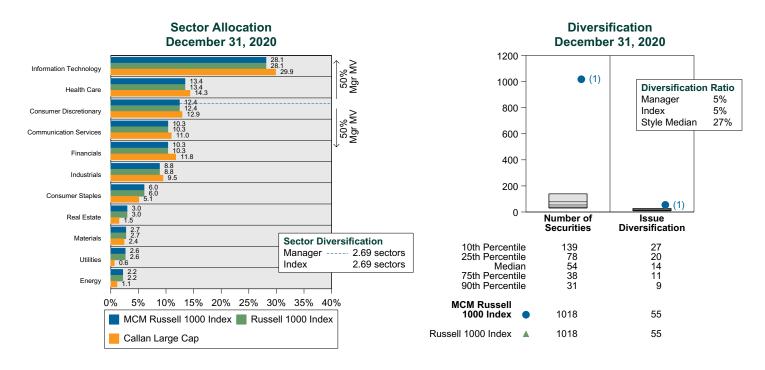
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

### Portfolio Characteristics Percentile Rankings Rankings Against Callan Large Capitalization as of December 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.



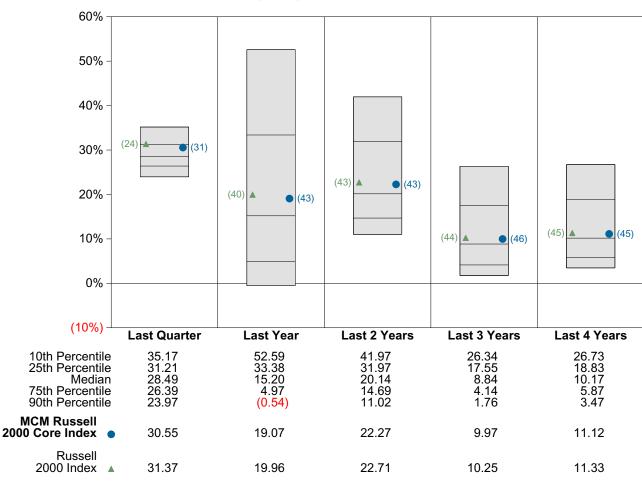


### MCM Russell 2000 Core Index Period Ended December 31, 2020

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

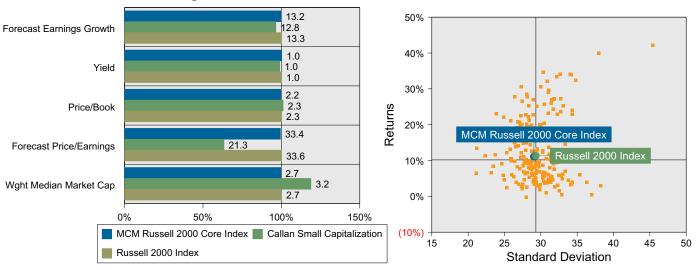
- MCM Russell 2000 Core Index's portfolio posted a 30.55% return for the quarter placing it in the 31 percentile of the Callan Small Capitalization group for the quarter and in the 43 percentile for the last year.
- MCM Russell 2000 Core Index's portfolio underperformed the Russell 2000 Index by 0.82% for the quarter and underperformed the Russell 2000 Index for the year by 0.89%.

### Performance vs Callan Small Capitalization (Gross)



# Portfolio Characteristics as a Percentage of the Russell 2000 Index

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



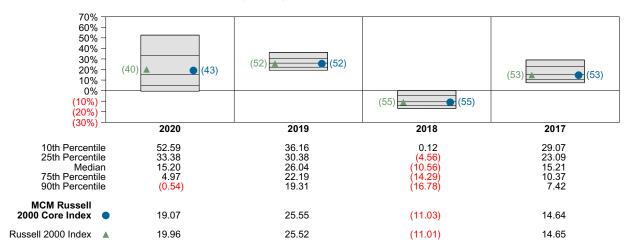


# MCM Russell 2000 Core Index Return Analysis Summary

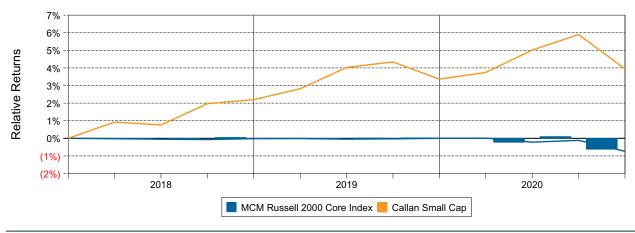
#### **Return Analysis**

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.

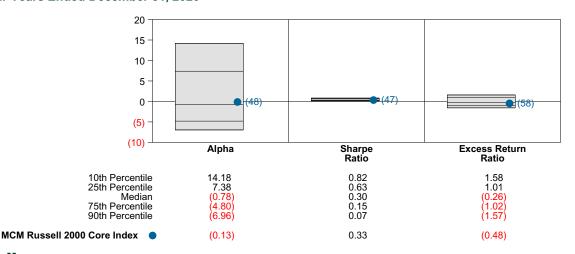
### Performance vs Callan Small Capitalization (Gross)



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



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



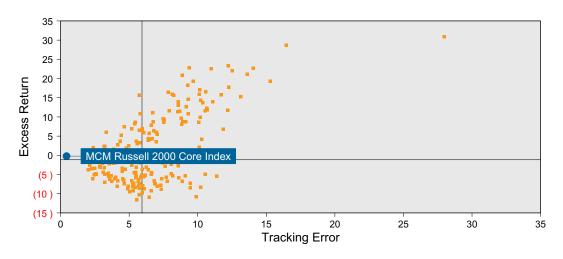


# MCM Russell 2000 Core Index Risk Analysis Summary

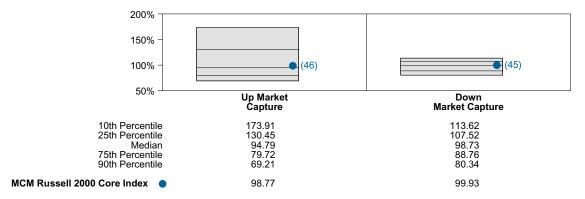
#### **Risk Analysis**

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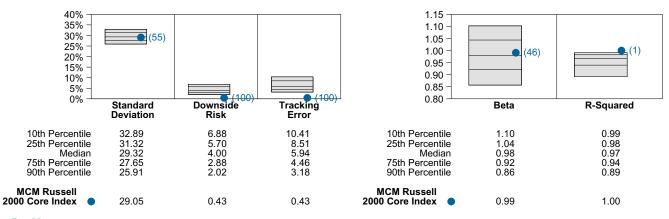
# Risk Analysis vs Callan Small Capitalization (Gross) Four Years Ended December 31, 2020



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



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

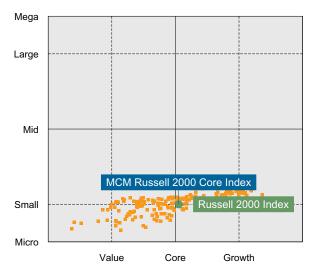




# Current Holdings Based Style Analysis MCM Russell 2000 Core Index As of December 31, 2020

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.

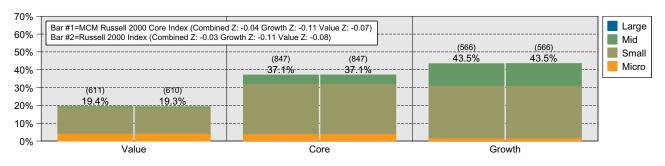
### Style Map vs Callan Small Cap Holdings as of December 31, 2020



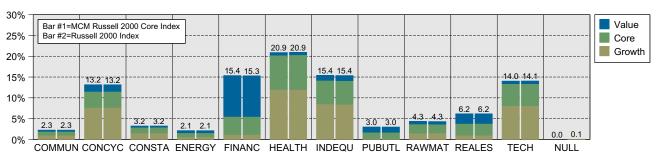
# Style Exposure Matrix Holdings as of December 31, 2020

	Value	Core	Growth	Total
Total	19.3% (610)	37.1% (847)	43.5% (566)	100.0% (2023)
Tatal	19.4% (611)	37.1% (847)	43.5% (566)	100.0% (2024)
WIICIO	4.2% (390)	4.0% (390)	1.7% (129)	9.9% (909)
Micro	4.2% (391)	4.0% (390)	1.6% (129)	9.9% (910)
	14.8% (218)	28.1% (436)	29.3% (387)	72.3% (1041)
Small	14.9% (218)	28.1% (436)	29.3% (387)	72.3% (1041)
	0.3% (2)	5.0% (21)	12.5% (50)	17.8% (73)
Mid	0.070 (2)	0.070 (21)	12.070 (30)	11.170 (13)
	0.3% (2)	5.0% (21)	12.5% (50)	17.7% (73)
Large	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
_	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)

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



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



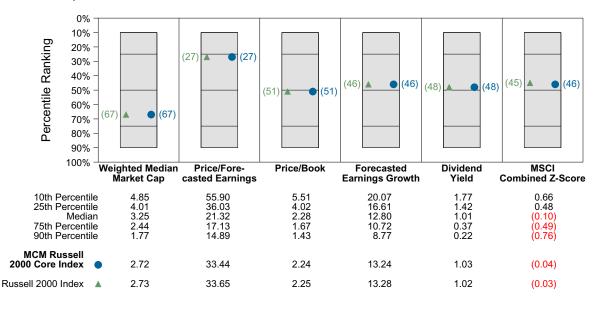


# MCM Russell 2000 Core Index Equity Characteristics Analysis Summary

#### **Portfolio Characteristics**

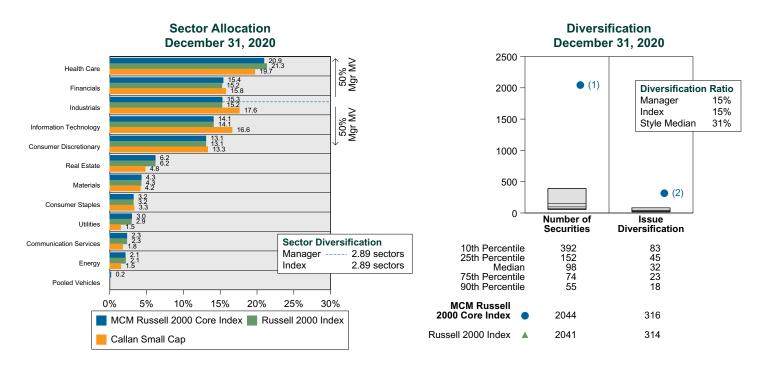
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

### Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Capitalization as of December 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.



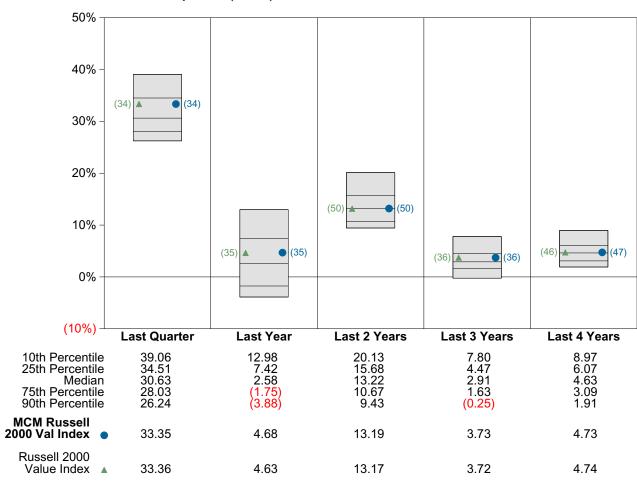


### MCM Russell 2000 Val Index Period Ended December 31, 2020

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

- MCM Russell 2000 Val Index's portfolio posted a 33.35% return for the quarter placing it in the 34 percentile of the Callan Small Cap Value group for the quarter and in the 35 percentile for the last year.
- MCM Russell 2000 Val Index's portfolio underperformed the Russell 2000 Value Index by 0.01% for the quarter and outperformed the Russell 2000 Value Index for the year by 0.05%.

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



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

10.0

10.1

10.0

1.7

1.7

1.4

1.4

20.3

20.3

2.1

2.1

100%

15.9

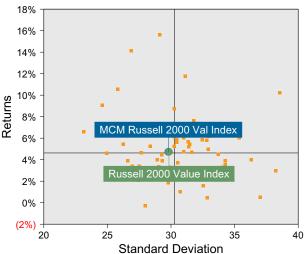
50%

Russell 2000 Value Index

16

Returns 2.5 150% MCM Russell 2000 Val Index 🔲 Callan Small Cap Value

### Callan Small Cap Value (Gross) Annualized Four Year Risk vs Return





Forecast Earnings Growth

Forecast Price/Earnings

Wght Median Market Cap

Yield

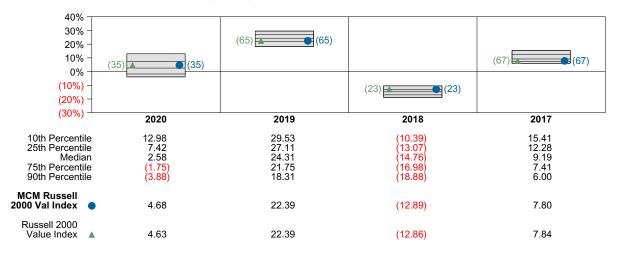
Price/Book

# MCM Russell 2000 Val Index Return Analysis Summary

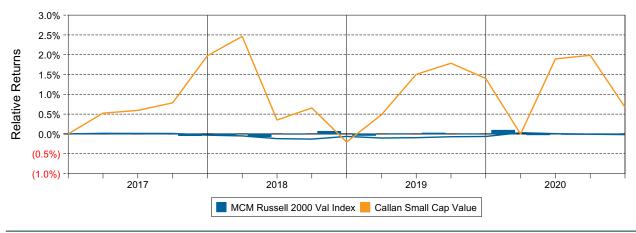
#### **Return Analysis**

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.

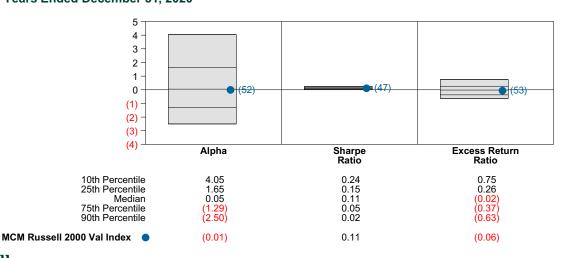
### Performance vs Callan Small Cap Value (Gross)



### 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) Four Years Ended December 31, 2020



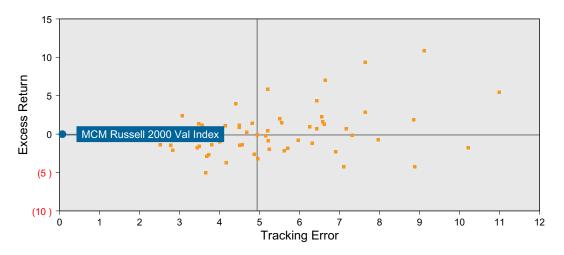


# MCM Russell 2000 Val Index Risk Analysis Summary

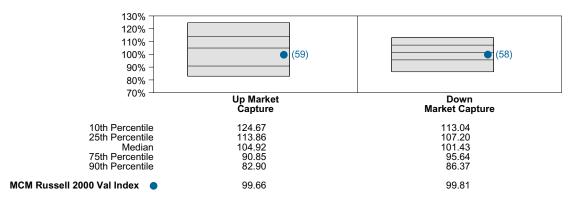
#### **Risk Analysis**

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.

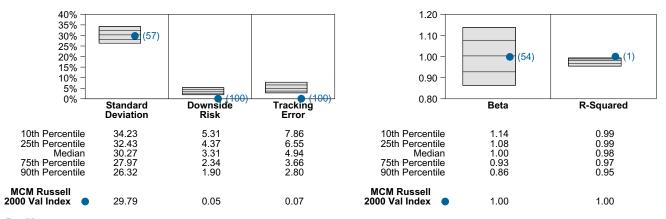
# Risk Analysis vs Callan Small Cap Value (Gross) Four Years Ended December 31, 2020



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



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

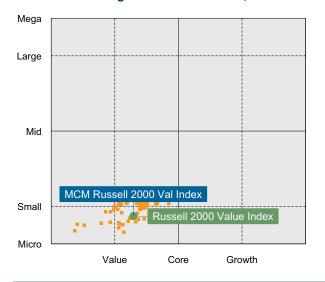




# Current Holdings Based Style Analysis MCM Russell 2000 Val Index As of December 31, 2020

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.

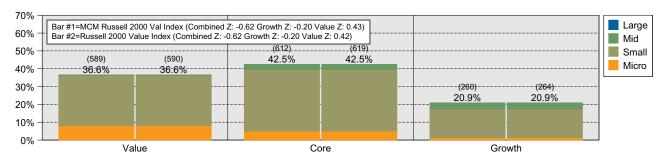
# Style Map vs Callan Small Cap Value Holdings as of December 31, 2020



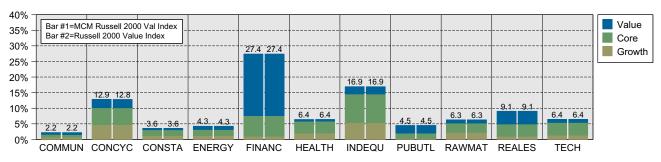
# Style Exposure Matrix Holdings as of December 31, 2020

	Value	Core	Growth	Total
	36.6% (590)	42.5% (619)	20.9% (264)	100.0% (1473)
Total	, ,		, ,	, ,
	36.6% (589)	42.5% (612)	20.9% (260)	100.0% (1461)
	8.1% (378)	5.0% (273)	1.4% (71)	14.5% (722)
Micro				
	8.1% (377)	5.0% (266)	1.3% (67)	14.5% (710)
	28.1% (211)	34.5% (336)	16.0% (183)	78.5% (730)
Small				
	28.1% (211)	34.5% (336)	16.0% (183)	78.6% (730)
	0.4% (1)	3.0% (10)	3.5% (10)	7.0% (21)
Mid				
	0.4% (1)	3.0% (10)	3.5% (10)	7.0% (21)
	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 December 31, 2020



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



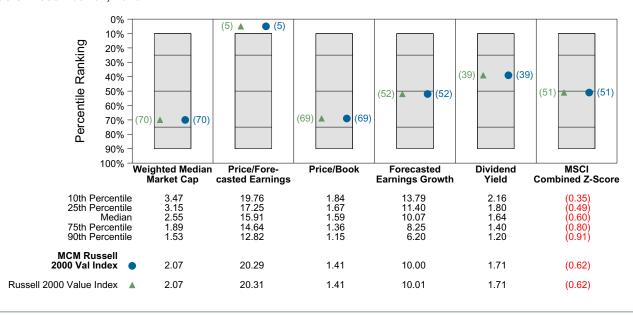


# MCM Russell 2000 Val Index Equity Characteristics Analysis Summary

#### **Portfolio Characteristics**

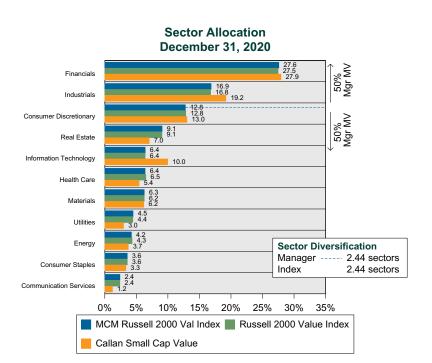
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

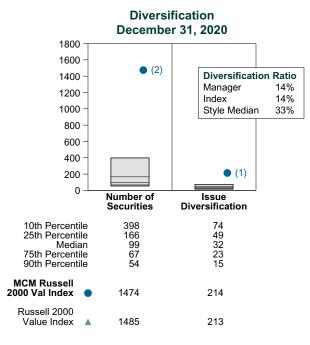
### Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Cap Value as of December 31, 2020



#### **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 December 31, 2020

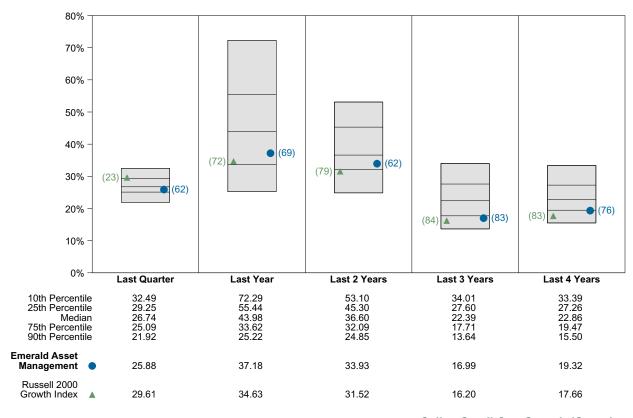
#### **Investment Philosophy**

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 25.88% return for the quarter placing it in the 62 percentile of the Callan Small Cap Growth group for the quarter and in the 69 percentile for the last year.
- Emerald Asset Management's portfolio underperformed the Russell 2000 Growth Index by 3.73% for the quarter and outperformed the Russell 2000 Growth Index for the year by 2.55%.

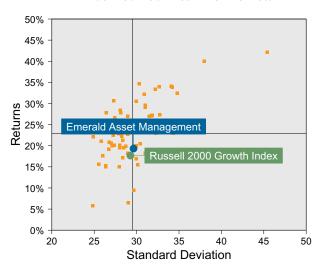
### Performance vs Callan Small Cap Growth (Gross)



### Relative Return vs Russell 2000 Growth Index

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

# Callan Small Cap Growth (Gross) Annualized Four Year Risk vs Return



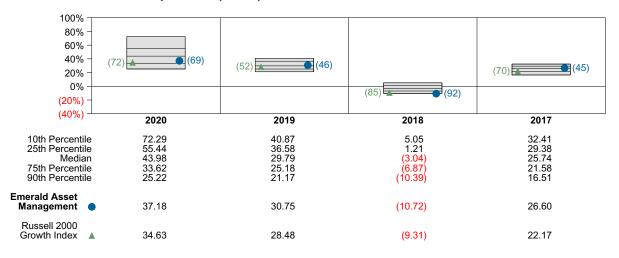


# **Emerald Asset Management Return Analysis Summary**

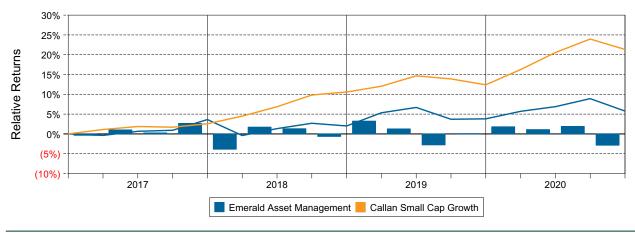
#### **Return Analysis**

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.

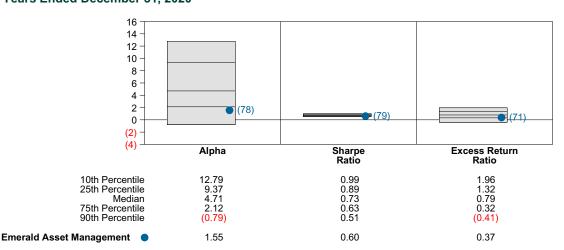
### Performance vs Callan Small Cap Growth (Gross)



### **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) Four Years Ended December 31, 2020



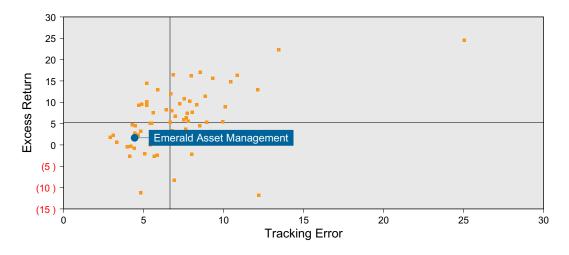


## **Emerald Asset Management Risk Analysis Summary**

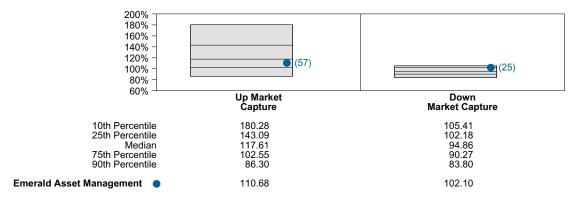
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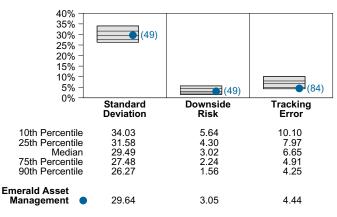
# Risk Analysis vs Callan Small Cap Growth (Gross) Four Years Ended December 31, 2020

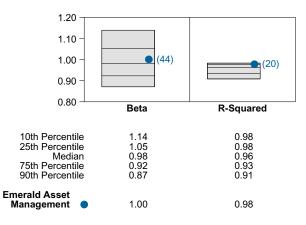


Market Capture vs Russell 2000 Growth Index Rankings Against Callan Small Cap Growth (Gross) Four Years Ended December 31, 2020



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



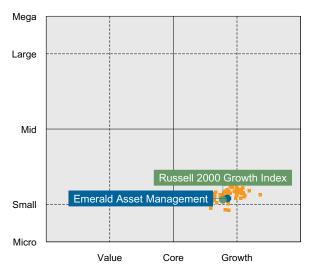




## Current Holdings Based Style Analysis Emerald Asset Management As of December 31, 2020

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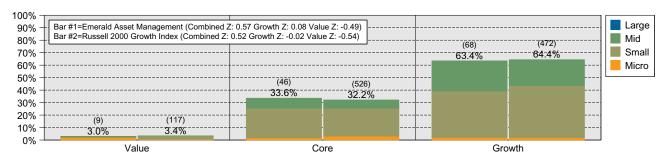
# Style Map vs Callan Small Cap Growth Holdings as of December 31, 2020



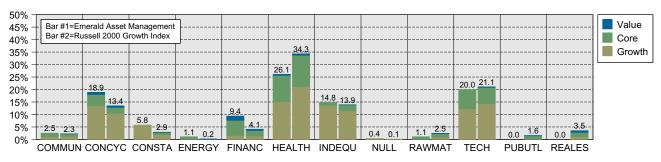
# Style Exposure Matrix Holdings as of December 31, 2020

	Value	Core	Growth	Total
	3.4% (117)	32.2% (526)	64.4% (472)	100.0% (1115)
Total	(5)	(15)	(00)	(123)
	3.0% (9)	33.6% (46)	63.4% (68)	100.0% (123)
	0.6% (74)	3.1% (235)	1.9% (98)	5.7% (407)
Micro				
	2.1% (7)	1.7% (5)	2.0% (4)	5.7% (16)
	2.6% (42)	22.3% (272)	41.6% (326)	66.6% (640)
Small				
	0.3% (1)	23.9% (32)	37.3% (46)	61.5% (79)
	0.1% (1)	6.8% (19)	20.8% (48)	27.8% (68)
Mid				
	0.6% (1)	8.0% (9)	24.2% (18)	32.8% (28)
	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 December 31, 2020



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



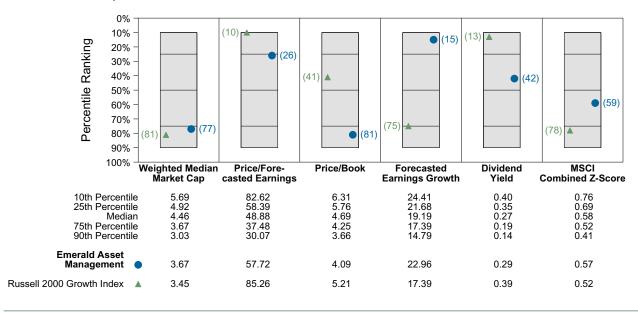


## **Emerald Asset Management Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

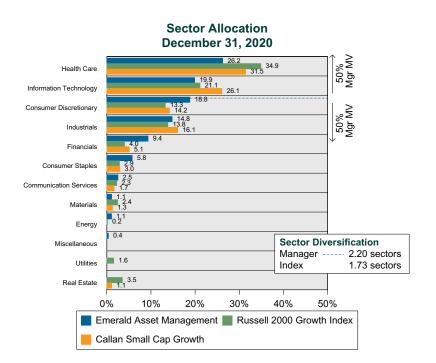
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

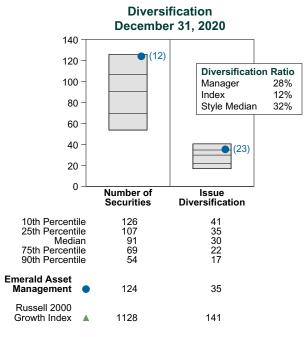
### **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Small Cap Growth as of December 31, 2020



#### **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.



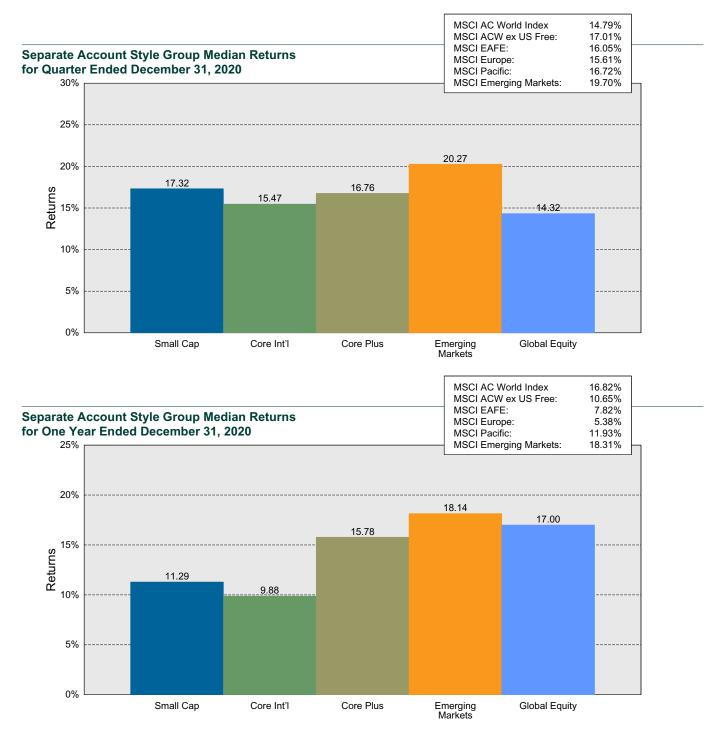




## **International Equity Active Management Overview**

Developed ex-U.S. and emerging market indices (MSCI ACWI ex-USA: +17.0%; MSCI Emerging Markets: +19.7%) posted robust returns for the quarter. Double-digit returns were broad-based across developed market countries during the quarter, but returns for the full year were mixed (Japan: +15%, +15%; UK: +17%, -11%; Pacific ex-Japan: +20%, +7%; Europe ex-UK: +15%, +11%). From a sector perspective, Technology was a top performing sector in both developed and emerging markets for the quarter and the year. Quarterly returns were bolstered by a weaker U.S. dollar across developed and emerging market currencies. Relative to a basket of developed market currencies, the greenback lost over 4% for the quarter and more than 7% for the year.

In emerging markets, Latin America posted the strongest gain (+35%) but is down 14% for the year. Emerging Asia (+19%) trailed but is up 28% for the year. China (+11%) was the laggard among the BRICs (Brazil: +37%; Russia: +22%; India +21%) for the quarter but remains up the most for the full year (China: +30%; India: +16%; Brazil -19%; Russia: -13%).



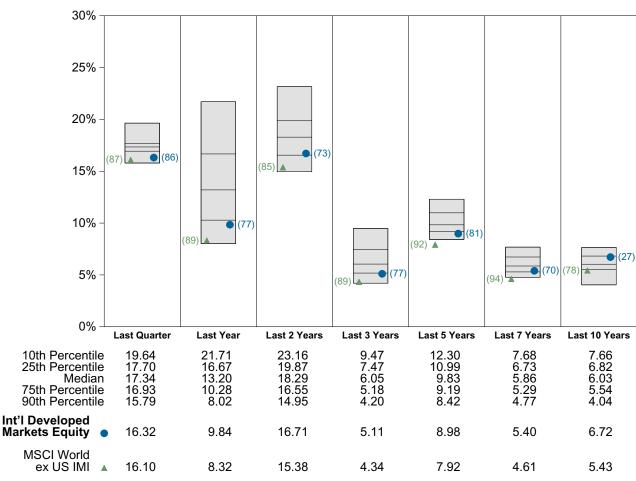


# Int'l Developed Markets Equity Period Ended December 31, 2020

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

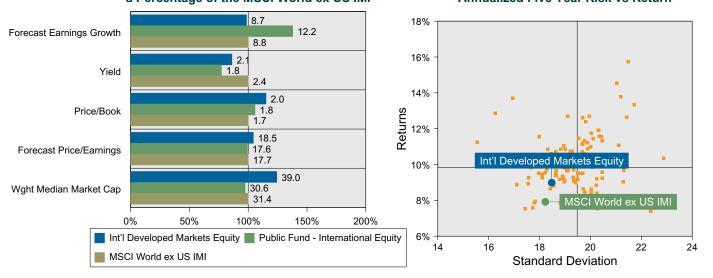
- Int'l Developed Markets Equity's portfolio posted a 16.32% return for the quarter placing it in the 86 percentile of the Public Fund - International Equity group for the quarter and in the 77 percentile for the last year.
- Int'l Developed Markets Equity's portfolio outperformed the MSCI World ex US IMI by 0.22% for the quarter and outperformed the MSCI World ex US IMI for the year by 1.52%.

# 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



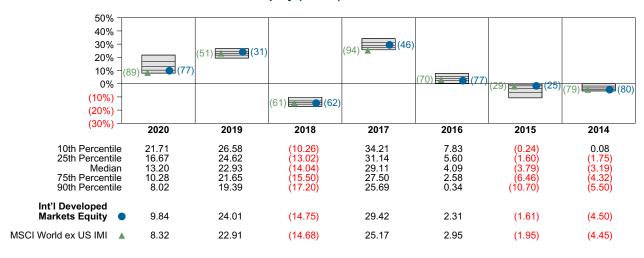


# Int'l Developed Markets Equity **Return Analysis Summary**

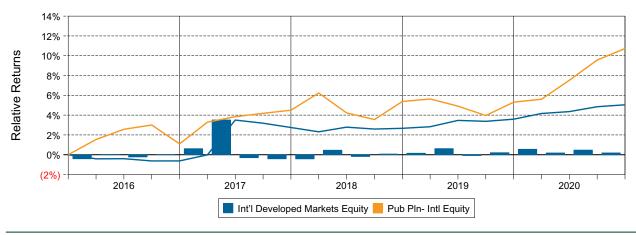
#### **Return Analysis**

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.

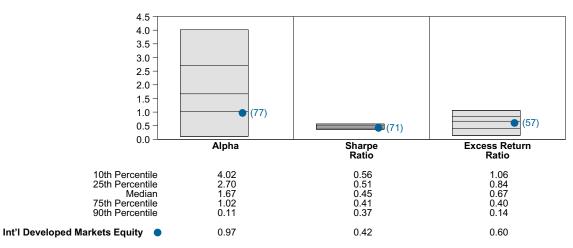
# Performance vs Public Fund - International Equity (Gross)



# 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 December 31, 2020



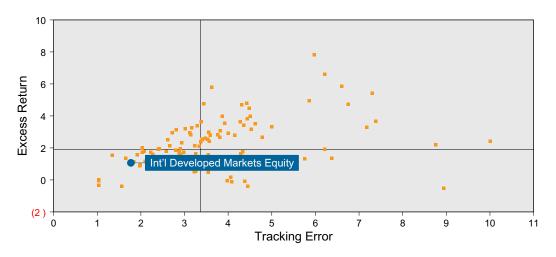


# Int'l Developed Markets Equity **Risk Analysis Summary**

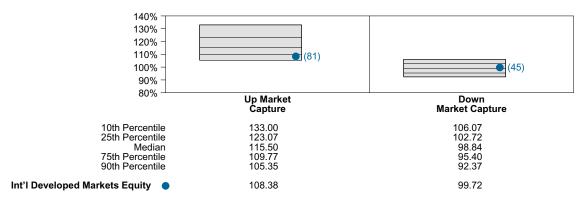
#### Risk Analysis

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.

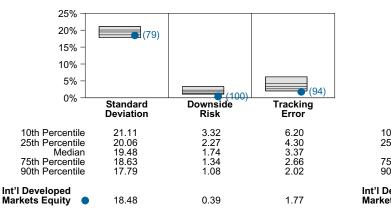
# Risk Analysis vs Public Fund - International Equity (Gross) Five Years Ended December 31, 2020



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



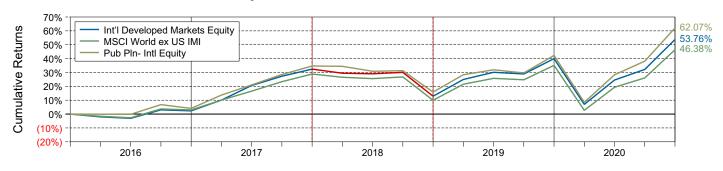




# Int'l Developed Markets Equity Drawdown Analysis for Five Years Ended December 31, 2020

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**

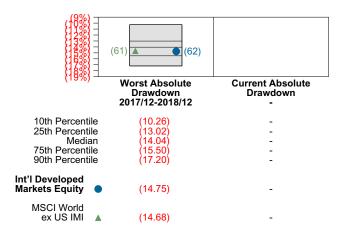


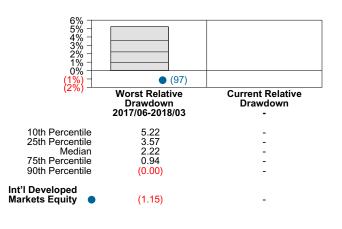
	Worst Absolute Drawdown				Current Absolute Drawdown					
	Return	Years	Period	Index	Peers	Return	Years	Period	_Index_	Peers
Int'l Developed Markets Equi	ty (14.75)%	1.00	2017/12-2018/12	(14.68)%	(13.97)%	-	-	-	-	-
Recovery from Trough	24.01%	1.00	2018/12-2019/12	22.91%	22.83%	-	-	-	-	-
MSCI World ex US IMI	(14.68)%	1.00	2017/12-2018/12			-	-	-		
Pub Pln- Intl Equity	(13.97)%	1.00	2017/12-2018/12			-	-	-		

#### Relative Cumulative Drawdown Analysis vs. MSCI World ex US IMI Cumulative Relative Returns Int'l Developed Markets Equity 12% Pub Pln- Intl Equity 10.72% 10% 8% 5.04% 2% 0% 2016 2020 2017 2018 2019

	Worst Relative Drawdown				Current Relative Drawdown			
	Rel Rtn	Years	Period	Peers	Rel Rtn	Years	Period	Peers
Int'l Developed Markets Equit	y (1.15)%	0.75	2017/06-2018/03	2.31%	-	-	-	-
Recovery from Trough	1.25%	1.75	2018/03-2019/12	(0.87)%	-	-	-	-
Pub Pln- Intl Equity	(2.53)%	0.50	2018/03-2018/09		-	-	-	

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



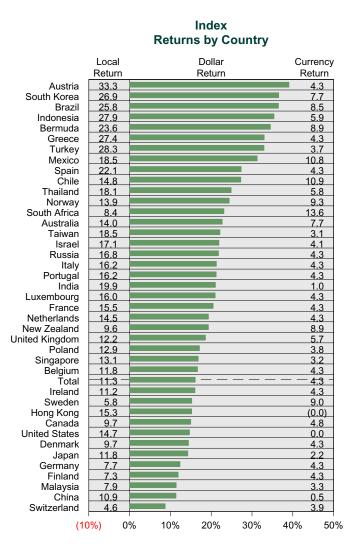




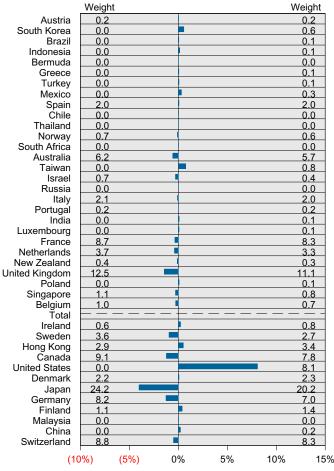
# Int'l Developed Markets Equity vs MSCI World ex US IMI Attribution for Quarter Ended December 31, 2020

# **International Attribution**

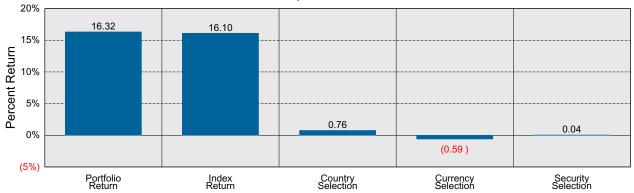
The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. 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.



#### **Beginning Relative Weights** (Portfolio - Index) Index Portfolio Weight Austria 0.2 Brazil 0.0 0.0 0.0 Greece 0.0









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

Europe

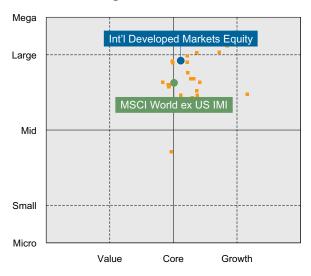
Mid Eas

N. Americ

Pacif

Emergin

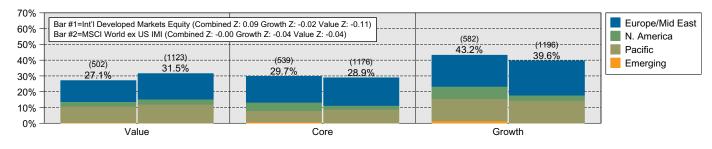
# Style Map vs Pub Pln- Intl Equity Holdings as of December 31, 2020



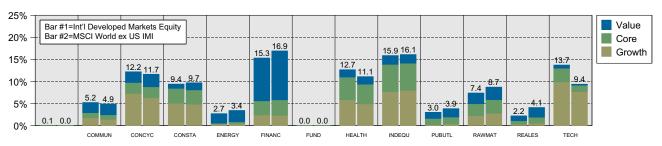
### **Style Exposure Matrix** Holdings as of December 31, 2020

	Value	Core	Growth	Total
	31.5% (1123)	28.9% (1176)	39.6% (1196)	100.0% (3495)
Total				,
	27.1% (502)	29.7% (539)	43.2% (582)	100.0% (1623)
	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
erging				
	0.3% (34)	0.7% (63)	1.4% (78)	2.4% (175)
	12.0% (587)	8.8% (559)	14.4% (582)	35.2% (1728)
Pacific	( )			(****)
	10.3% (237)	7.2% (219)	14.2% (207)	31.7% (663)
	3.3% (91)	2.4% (100)	3.4% (92)	9.1% (283)
merica	(==)	(55)		(****)
	3.2% (29)	5.3% (35)	7.7% (47)	16.2% (111)
urope/ d East	16.2% (445)	17.6% (517)	21.9% (522)	55.7% (1484)
	13.3% (202)	16.5% (222)	19.9% (250)	49.7% (674)

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



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

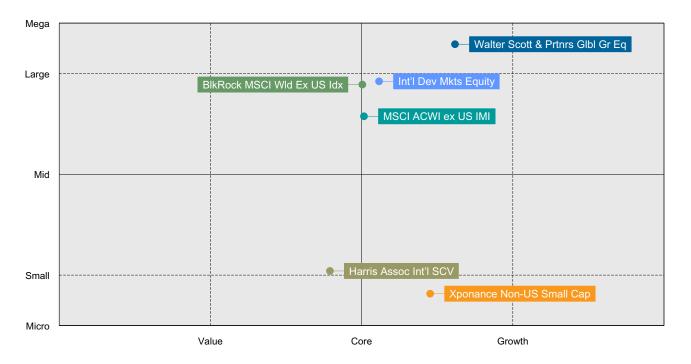




# **International Holdings Based Style Analysis** For One Quarter Ended December 31, 2020

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 December 31, 2020



	Weight	Wtd Median	Combined	Growth	Value	Number of	Security
	%	Mkt Cap	Z-Score	Z-Score	Z-Score	Securities I	Diversification
Walter Scott & Prtnrs Glbl Gr	E <b>q</b> 4.95%	117.12	0.52	0.04	(0.48)	50	16.77
BlkRock MSCI Wld Ex US Idx	75.62%	38.05	(0.01)	(0.05)	(0.04)	966	122.43
Harris Assoc Int'l SCV	4.18%	3.12	(0.19)	(0.06)	0.13	59	17.12
Xponance Non-US Small Cap	5.08%	2.11	0.38	0.21	(0.17)	705	112.41
Int'l Dev Mkts Equity	100.00%	38.86	0.09	(0.02)	(0.11)	1706	135.01
MSCI ACWI ex US IMI	-	30.10	0.00	(0.03)	(0.03)	6605	249.87

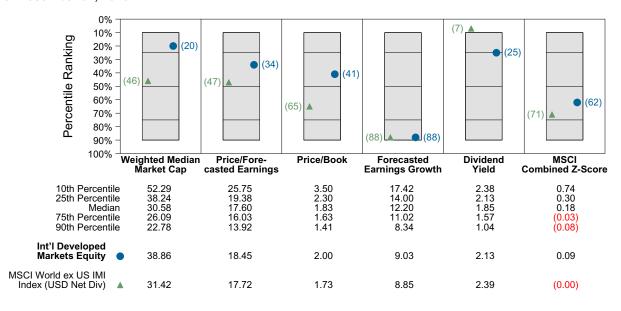


# Int'l Developed Markets Equity **Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

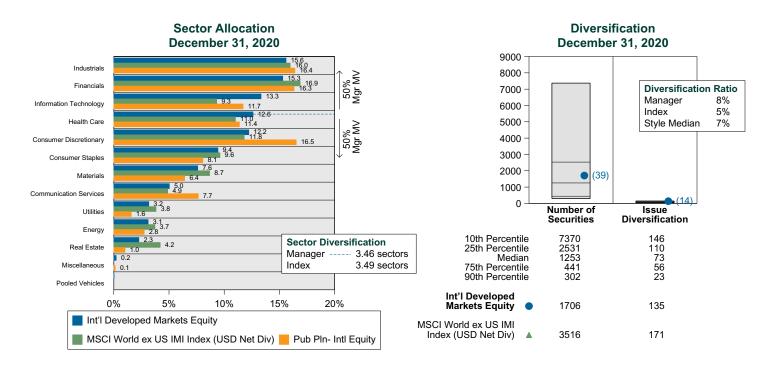
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

# **Portfolio Characteristics Percentile Rankings** Rankings Against Public Fund - International Equity as of December 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.

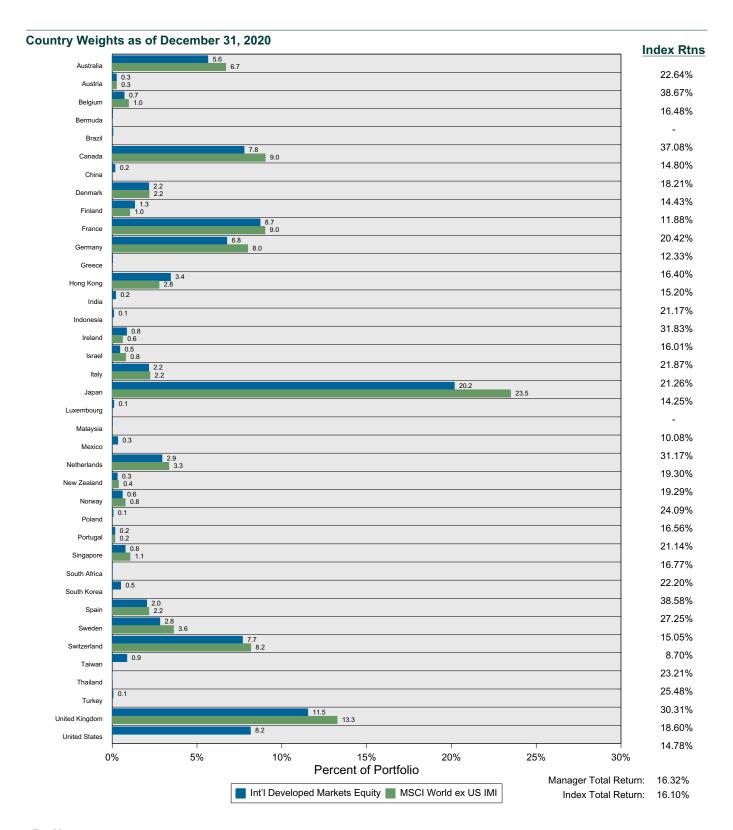




# **Country Allocation** Int'l Developed Markets Equity VS MSCI World ex US IMI Index (USD Net Div)

#### **Country Allocation**

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





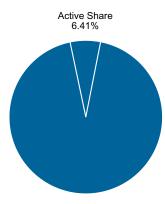
# Int'l Developed Markets Equity Active Share Analysis as of December 31, 2020 vs. MSCI World ex US IMI Index (USD Net Div)

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 16.22% Non-Index Active Share 7.78% Passive Share 76.00%

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



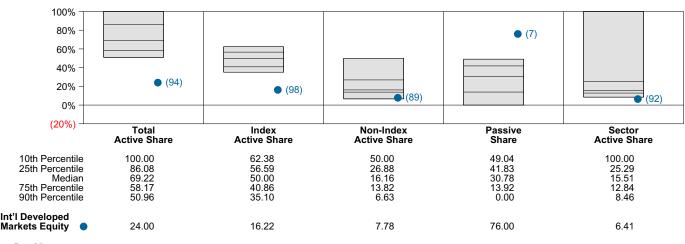
Passive Share 93.59%

Total Active Share: 24.00%

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
13.43%	9.22%	22.64%	4.89%	5.04%	1.06%
18.19%	9.14%	27.32%	11.82%	12.23%	3.08%
12.78%	4.49%	17.27%	9.62%	9.44%	1.69%
10.83%	3.70%	14.54%	3.73%	3.11%	0.56%
9.07%	2.65%	11.72%	16.88%	15.31%	2.48%
14.93%	10.65%	25.58%	11.02%	12.62%	2.75%
20.63%	4.05%	24.68%	15.98%	15.61%	3.99%
24.08%	17.95%	42.03%	9.33%	13.34%	4.02%
16.36%	6.62%	22.98%	8.68%	7.61%	2.11%
50.00%	50.00%	100.00%	-	0.22%	0.08%
50.00%	50.00%	100.00%	-	0.03%	0.02%
40.89%	4.86%	45.75%	4.21%	2.28%	1.21%
16.08%	4.56%	20.64%	3.83%	3.17%	0.76%
16.22%	7.78%	24.00%	100.00%	100.00%	23.82%

# Active Share vs. Pub Pln- Intl Equity





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

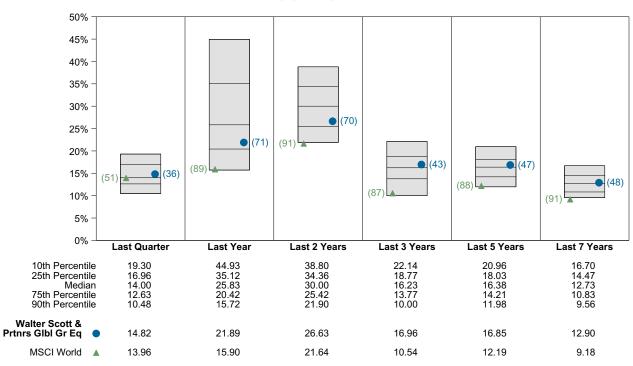
#### **Investment Philosophy**

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**

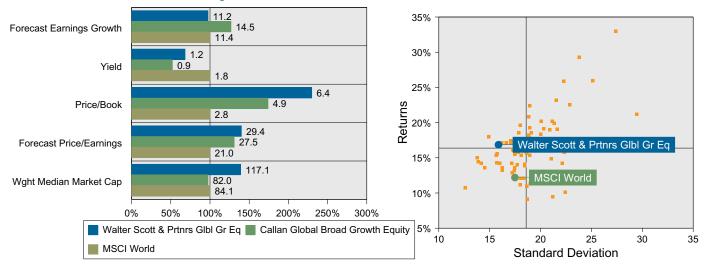
- Walter Scott & Prtnrs Glbl Gr Eg's portfolio posted a 14.82% return for the guarter placing it in the 36 percentile of the Callan Global Broad Growth Equity group for the quarter and in the 71 percentile for the last year.
- Walter Scott & Prtnrs Glbl Gr Eq's portfolio outperformed the MSCI World by 0.85% for the quarter and outperformed the MSCI World for the year by 5.99%.

#### 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



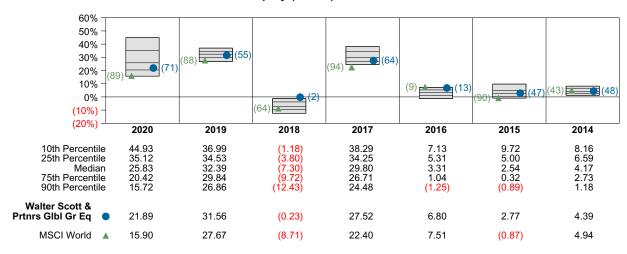


# Walter Scott & Prtnrs Glbl Gr Eq **Return Analysis Summary**

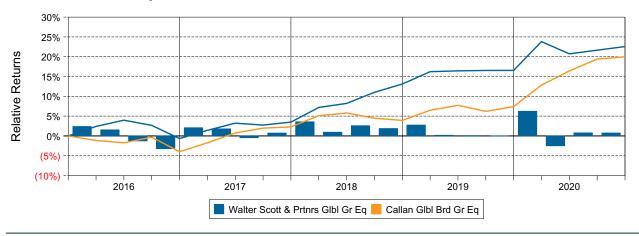
#### **Return Analysis**

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 December 31, 2020



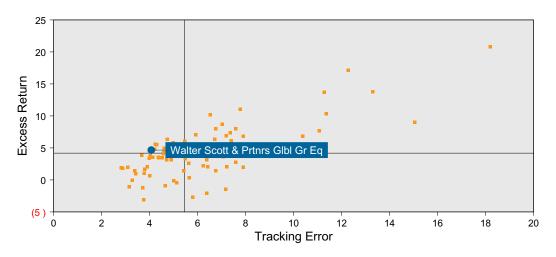


# Walter Scott & Prtnrs Glbl Gr Eq **Risk Analysis Summary**

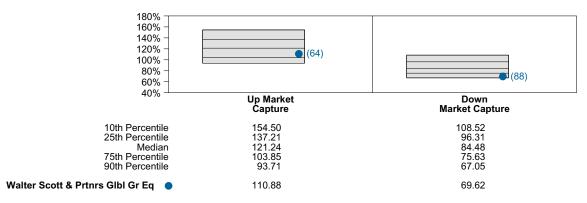
#### Risk Analysis

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.

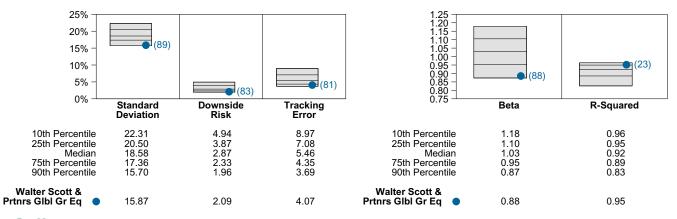
# Risk Analysis vs Callan Global Broad Growth Equity (Gross) Five Years Ended December 31, 2020



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



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

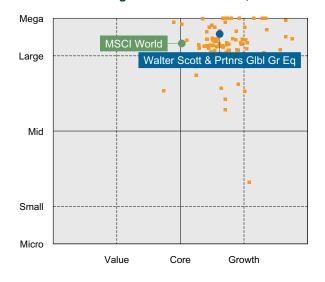




# **Current Holdings Based Style Analysis** Walter Scott & Prtnrs Glbl Gr Eq As of December 31, 2020

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.

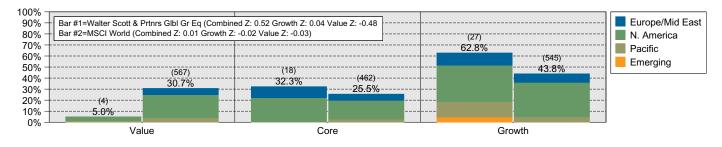
## Style Map vs Callan Glbl Brd Gr Eq Holdings as of December 31, 2020



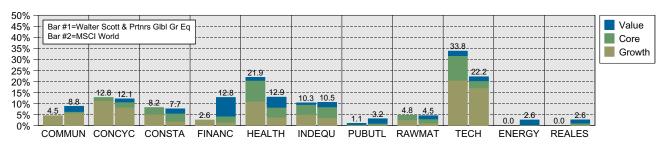
## **Style Exposure Matrix** Holdings as of December 31, 2020

	Value	Core	Growth	Total
	30.7% (567)	25.5% (462)	43.8% (545)	100.0% (1574)
Total				
	5.0% (4)	32.3% (18)	62.8% (27)	100.0% (49)
	0.0% (0)	0.0% (1)	0.0% (1)	0.0% (2)
Emerging				
	0.0% (0)	0.0% (0)	4.7% (1)	4.7% (1)
	4.0% (153)	2.8% (130)	4.9% (147)	11.7% (430)
Pacific				
	1.4% (2)	0.5% (1)	13.9% (6)	15.8% (9)
	20.9% (278)	17.0% (206)	31.2% (214)	69.0% (698)
N. America				
	3.6% (2)	21.7% (10)	33.1% (14)	58.4% (26)
Mid East	5.8% (136)	5.7% (125)	7.8% (183)	19.3% (444)
Europe/	0.0% (0)	10.1% (7)	11.1% (6)	21.2% (13)

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



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





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

#### **Portfolio Characteristics**

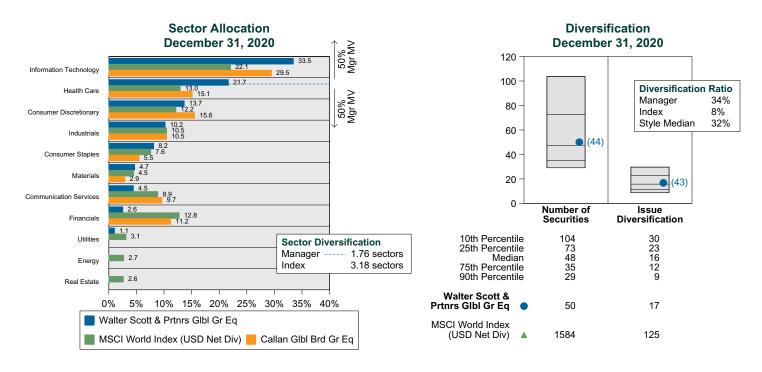
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Global Broad Growth Equity as of December 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 December 31, 2020

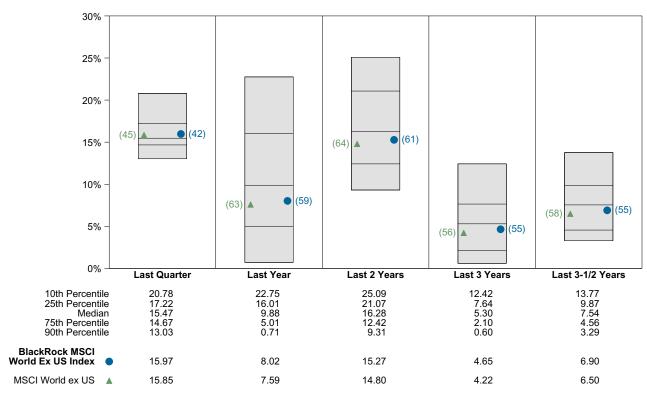
#### **Investment Philosophy**

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**

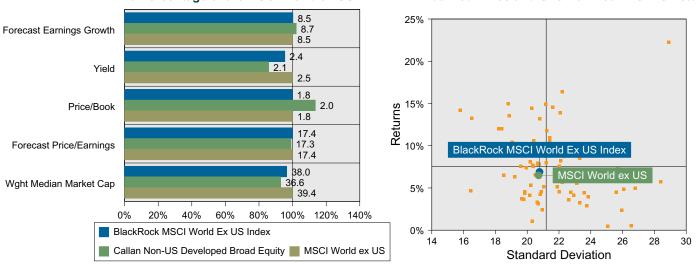
- BlackRock MSCI World Ex US Index's portfolio posted a 15.97% return for the quarter placing it in the 42 percentile of the Callan Non-US Developed Broad Equity group for the quarter and in the 59 percentile for the last year.
- BlackRock MSCI World Ex US Index's portfolio outperformed the MSCI World ex US by 0.12% for the quarter and outperformed the MSCI World ex US for the year by 0.44%.

# 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 Three and One-Half Year Risk vs Return



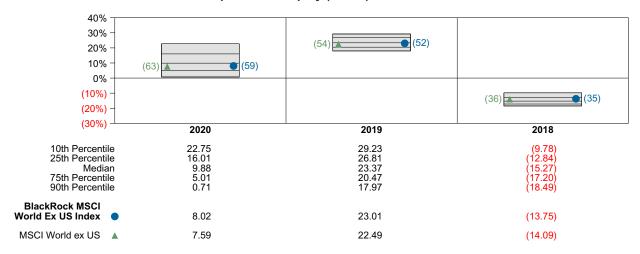


# BlackRock MSCI World Ex US Index **Return Analysis Summary**

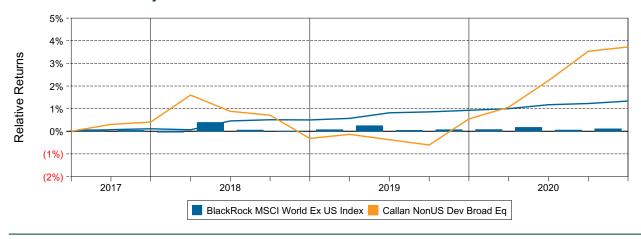
#### **Return Analysis**

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 Non-US Developed Broad Equity (Gross)



# Cumulative and Quarterly Relative Return vs MSCI World ex US



Risk Adjusted Return Measures vs MSCI World ex US Rankings Against Callan Non-US Developed Broad Equity (Gross) Three and One-Half Years Ended December 31, 2020



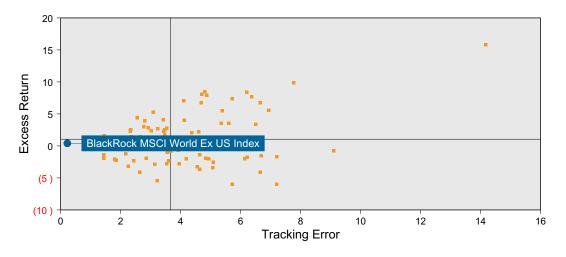


# BlackRock MSCI World Ex US Index **Risk Analysis Summary**

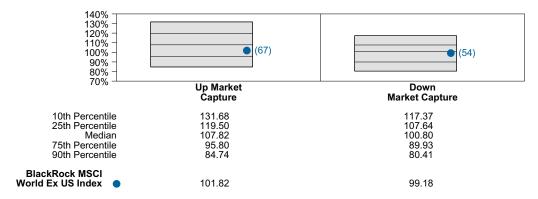
#### Risk Analysis

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.

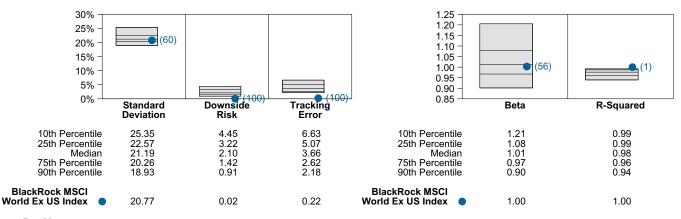
# Risk Analysis vs Callan Non-US Developed Broad Equity (Gross) Three and One-Half Years Ended December 31, 2020



Market Capture vs MSCI World ex US Index (USD Net Div) Rankings Against Callan Non-US Developed Broad Equity (Gross) Three and One-Half Years Ended December 31, 2020



Risk Statistics Rankings vs MSCI World ex US Index (USD Net Div) Rankings Against Callan Non-US Developed Broad Equity (Gross) Three and One-Half Years Ended December 31, 2020

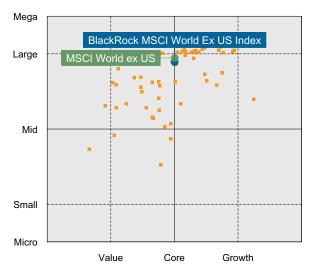




# **Current Holdings Based Style Analysis** BlackRock MSCI World Ex US Index As of December 31, 2020

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.

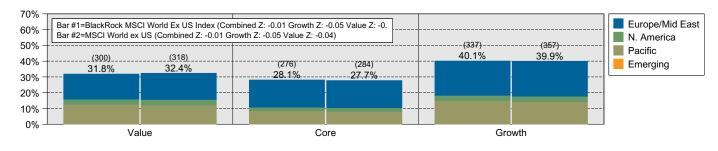
# Style Map vs Callan NonUS Dev Broad Eq Holdings as of December 31, 2020



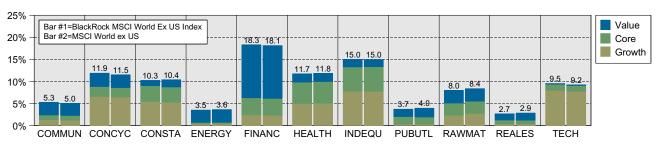
# **Style Exposure Matrix** Holdings as of December 31, 2020

- ,	15.9% (123)	17.3% (124)	21.8% (161)	55.0% (408)
Europe/				
Mid East	16.8% (135)	17.3% (129)	22.2% (177)	56.3% (441)
	3.4% (26)	2.3% (22)	3.3% (31)	9.0% (79)
N. America		, ,		, ,
	3.5% (29)	2.2% (23)	3.5% (36)	9.2% (88)
	12.6% (151)	8.5% (130)	15.0% (145)	36.0% (426)
Pacific	, ,	, ,	, ,	, ,
	12.1% (154)	8.1% (132)	14.2% (144)	34.5% (430)
	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)
	31.8% (300)	28.1% (276)	40.1% (337)	100.0% (913)
Total		, ,		, i
	32.4% (318)	27.7% (284)	39.9% (357)	100.0% (959)
	Value	Core	Growth	Total

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



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





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

#### **Portfolio Characteristics**

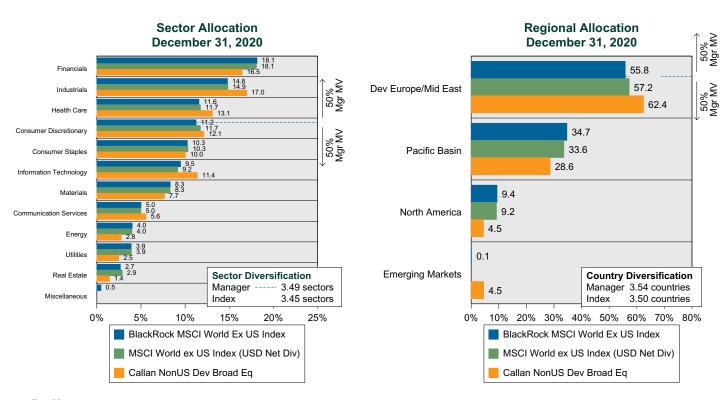
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

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

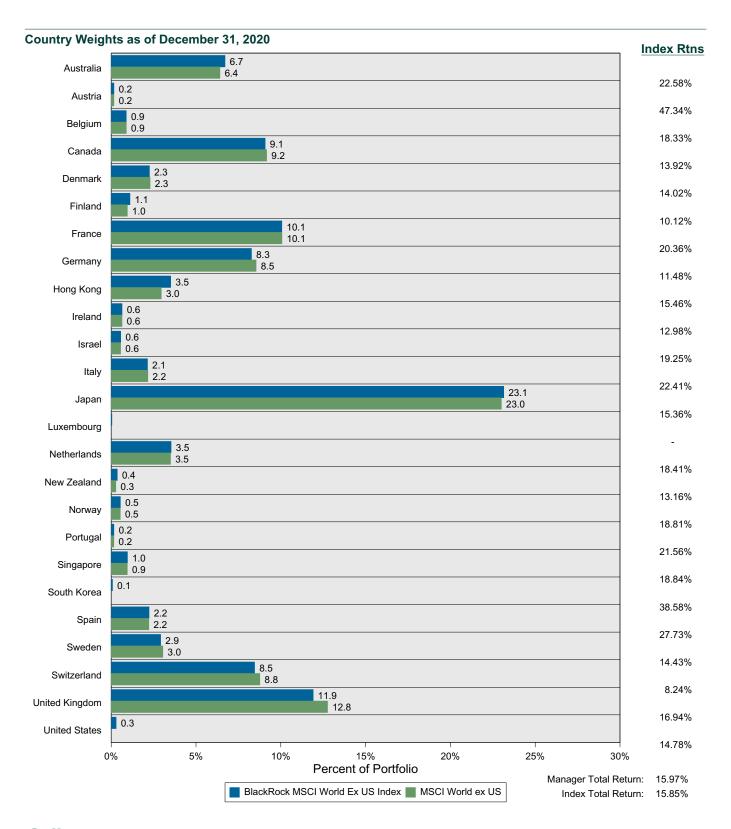




# **Country Allocation** BlackRock MSCI World Ex US Index VS MSCI World ex US Index (USD Net Div)

## **Country Allocation**

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





# **Xponance Non-U.S. Small Cap** Period Ended December 31, 2020

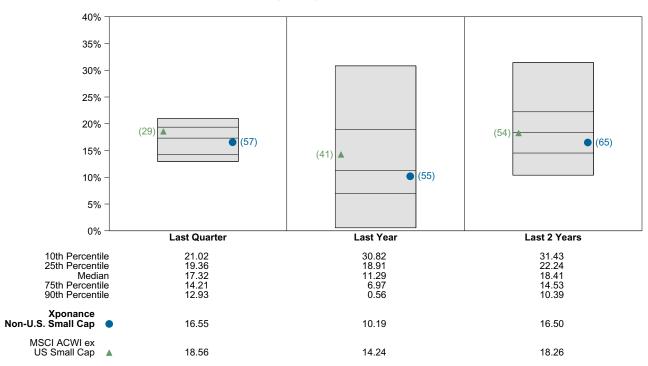
#### **Investment Philosophy**

Xponance utilizes an integrated investment process to actively generate investment alpha across its offerings. 25%-50% of outperformance is driven by top-down investment strategy implementation that informs risk management and portfolio construction and provides context to the market environment. Bottom up analysis through manager selection drives 50-75% of outperformance. Xponance uses a forward-looking proprietary factor scoring system in their manager due diligence process to help identify which managers are most likely to produce positive long-term outperformance.

## **Quarterly Summary and Highlights**

- Xponance Non-U.S. Small Cap's portfolio posted a 16.55% return for the quarter placing it in the 57 percentile of the Callan International Small Cap group for the quarter and in the 55 percentile for the last year.
- Xponance Non-U.S. Small Cap's portfolio underperformed the MSCI ACWI ex US Small Cap by 2.01% for the quarter and underperformed the MSCI ACWI ex US Small Cap for the year by 4.06%.

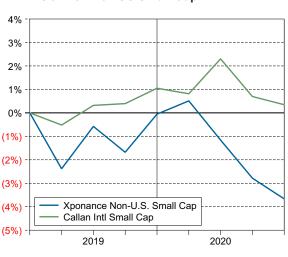
#### Performance vs Callan International Small Cap (Gross)



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

#### 12.3 Forecast Earnings Growth 11.4 **Cumulative Relative Returns** 1.4 1.8 Yield 2.0 2.1 Price/Book 1.4 17.7 Forecast Price/Earnings 18.3 2.7 Wght Median Market Cap 2.1 50% 100% 150% 200% Xponance Non-U.S. Small Cap Callan International Small Cap MSCI ACWI ex US Small Cap

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

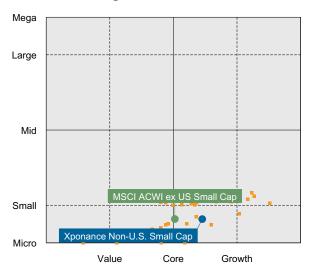




# **Current Holdings Based Style Analysis Xponance Non-U.S. Small Cap** As of December 31, 2020

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.

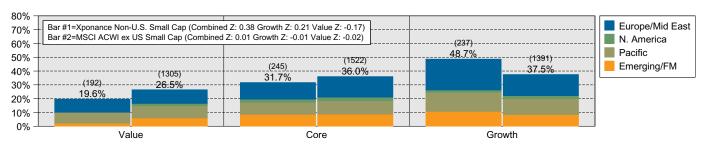
# Style Map vs Callan Intl Small Cap Holdings as of December 31, 2020



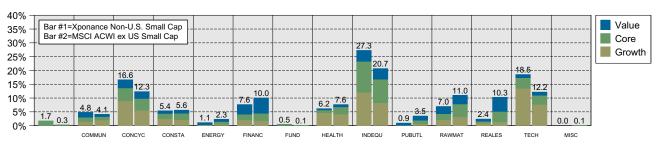
## **Style Exposure Matrix** Holdings as of December 31, 2020

	Value	Core	Growth	Total
	26.5% (1305)	36.0% (1522)	37.5% (1391)	100.0% (4218)
Total				
	19.6% (192)	31.7% (245)	48.7% (237)	100.0% (674)
Emerging/ FM	5.9% (499)	8.8% (622)	8.4% (551)	23.1% (1672)
	2.1% (32)	8.5% (60)	10.7% (75)	21.3% (167)
	8.8% (433)	9.6% (434)	11.6% (438)	30.1% (1305)
Pacific	(**)	(**)	(, )	, ,
	8.0% (86)	8.8% (90)	13.9% (67)	30.6% (243)
	1.6% (63)	2.7% (78)	2.1% (57)	6.4% (198)
N. America	, ,	, ,	, ,	
	0.0% (0)	2.4% (3)	1.6% (5)	3.9% (8)
Europe/ Mid East	10.1% (310)	14.9% (388)	15.4% (345)	40.4% (1043)
_ ,	9.6% (74)	12.1% (92)	22.5% (90)	44.1% (256)

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



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





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

#### **Portfolio Characteristics**

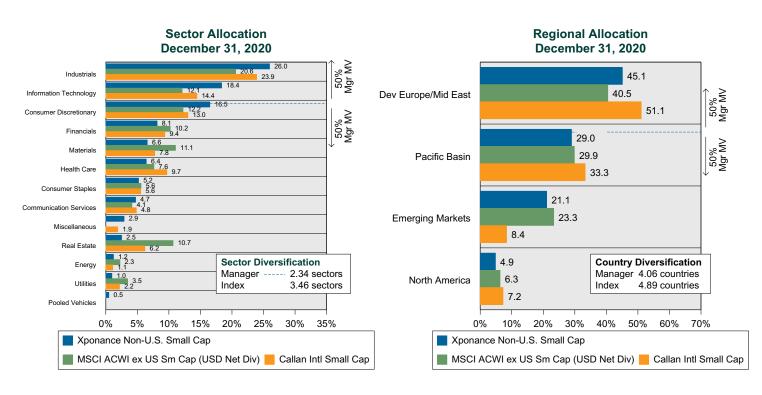
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

# **Portfolio Characteristics Percentile Rankings** Rankings Against Callan International Small Cap as of December 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.

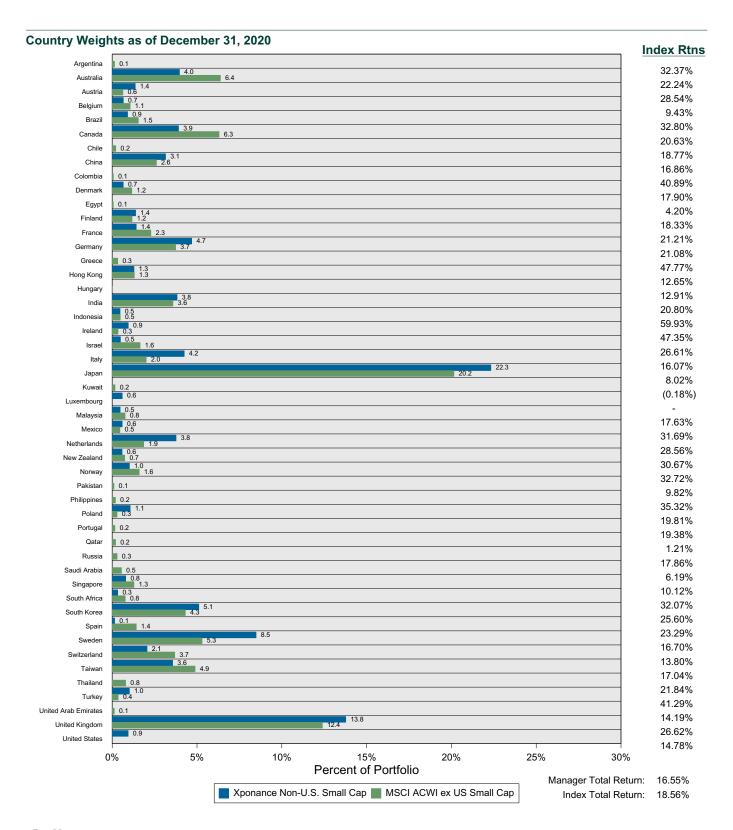




# **Country Allocation Xponance Non-U.S. Small Cap VS MSCI ACWI ex US Sm Cap (USD Net Div)**

#### **Country Allocation**

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

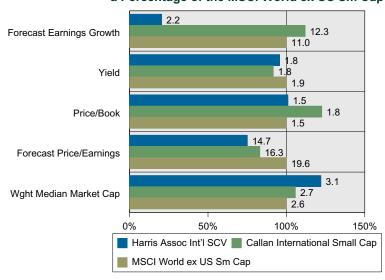
# **Quarterly Summary and Highlights**

- Harris Assoc Int'l SCV's portfolio posted a 24.96% return for the quarter placing it in the 3 percentile of the Callan International Small Cap group for the quarter and in the 65 percentile for the last year.
- Harris Assoc Int'l SCV's portfolio outperformed the MSCI World ex US Sm Cap by 7.41% for the quarter and underperformed the MSCI World ex US Sm Cap for the year by 4.08%.

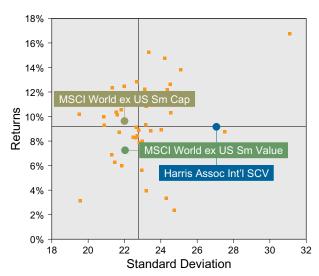
### Performance vs Callan International Small Cap (Gross)



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



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



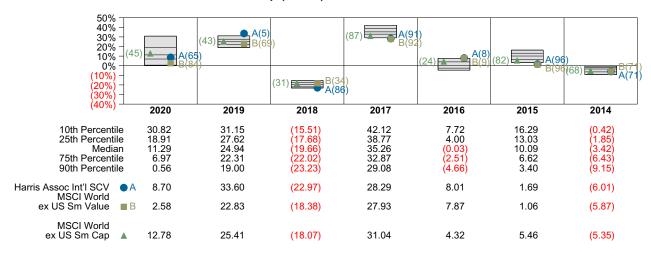


# Harris Assoc Int'l SCV **Return Analysis Summary**

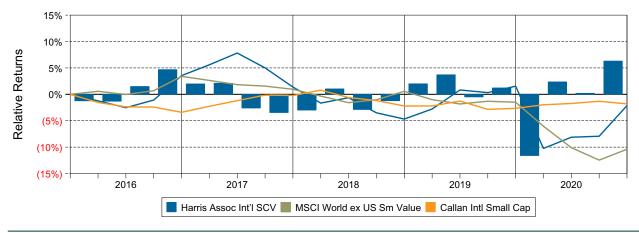
#### **Return Analysis**

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.

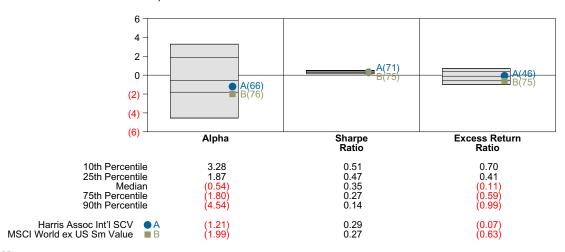
#### Performance vs Callan International Small Cap (Gross)



# 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 December 31, 2020



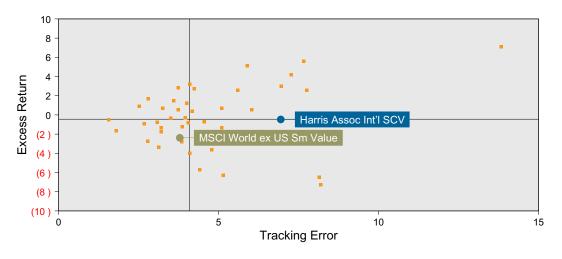


# Harris Assoc Int'l SCV **Risk Analysis Summary**

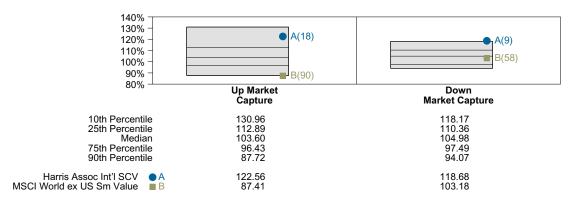
#### Risk Analysis

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.

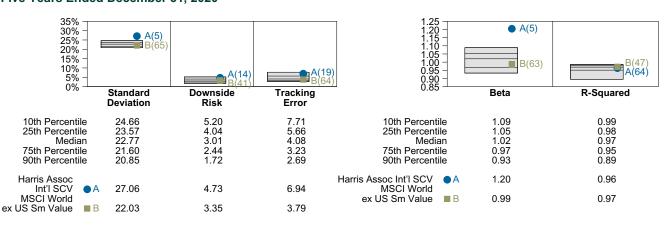
# Risk Analysis vs Callan International Small Cap (Gross) Five Years Ended December 31, 2020



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

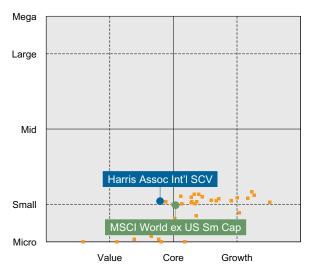




# **Current Holdings Based Style Analysis** Harris Assoc Int'l SCV As of December 31, 2020

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.

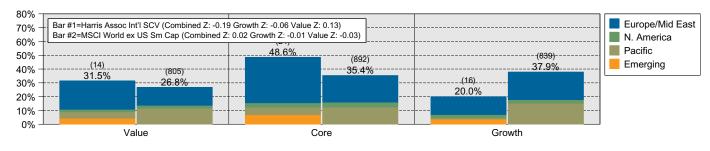
# Style Map vs Callan Intl Small Cap Holdings as of December 31, 2020



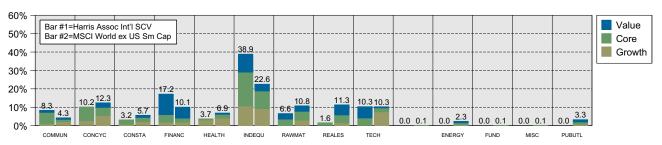
## **Style Exposure Matrix** Holdings as of December 31, 2020

	Value	Core	Growth	Total
	26.8% (805)	35.4% (892)	37.9% (839)	100.0% (2536)
Total				
	31.5% (14)	48.6% (24)	20.0% (16)	100.0% (54)
	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Emerging				
	4.5% (2)	6.9% (4)	3.6% (2)	15.0% (8)
	11.5% (433)	12.4% (427)	15.1% (438)	39.1% (1298)
Pacific				
	4.5% (2)	5.4% (5)	0.9% (2)	10.8% (9)
	2.1% (62)	3.5% (77)	2.7% (56)	8.4% (195)
N. America				
	1.8% (1)	3.2% (2)	2.4% (1)	7.4% (4)
Europe/ Mid East	13.1% (310)	19.4% (388)	20.1% (345)	52.6% (1043)
Furanc/	20.7% (9)	33.1% (13)	13.0% (11)	66.8% (33)

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



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



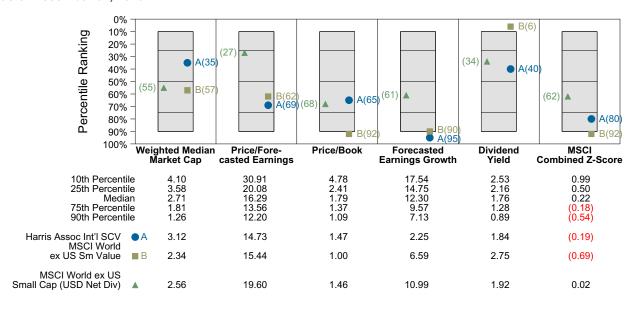


# Harris Assoc Int'l SCV **Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

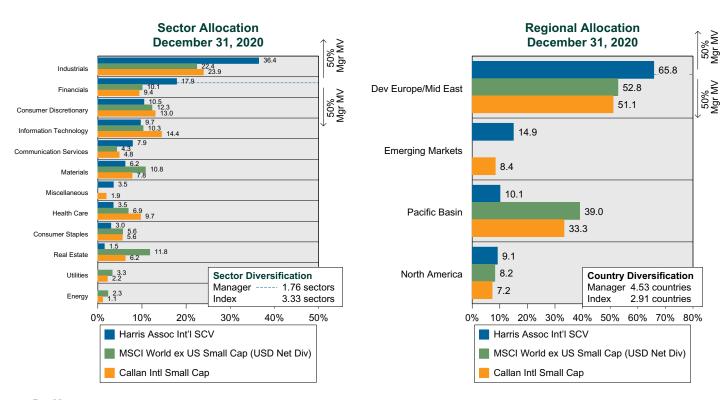
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## **Portfolio Characteristics Percentile Rankings** Rankings Against Callan International Small Cap as of December 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.

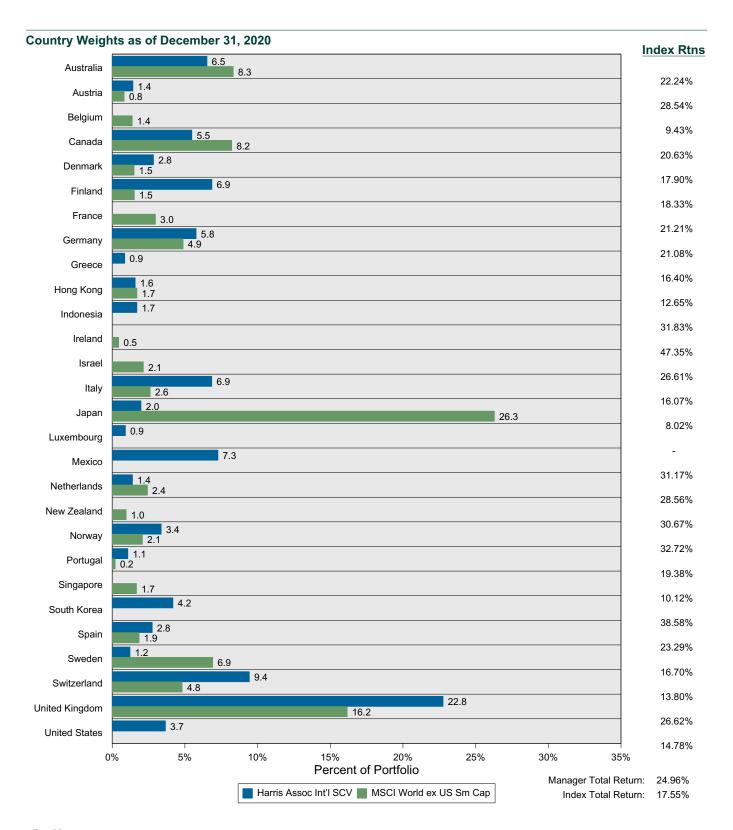




# **Country Allocation** Harris Assoc Int'l SCV VS MSCI World ex US Small Cap (USD Net Div)

# **Country Allocation**

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



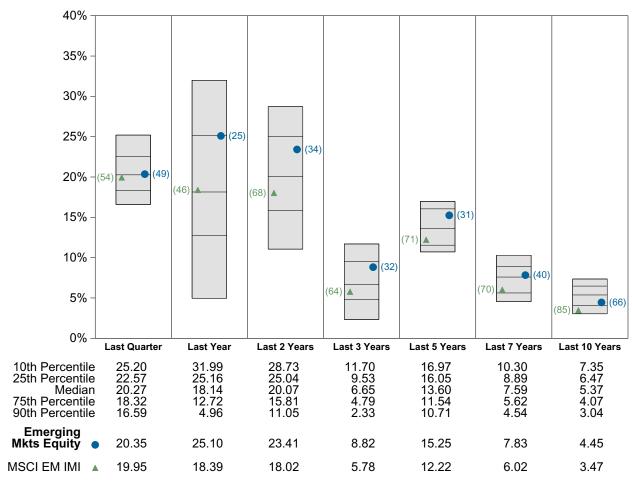


# **Emerging Mkts Equity** Period Ended December 31, 2020

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

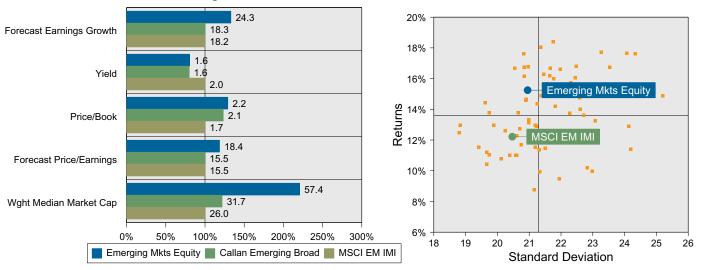
- Emerging Mkts Equity's portfolio posted a 20.35% return for the quarter placing it in the 49 percentile of the Callan Emerging Broad group for the quarter and in the 25 percentile for the last year.
- Emerging Mkts Equity's portfolio outperformed the MSCI EM IMI by 0.41% for the guarter and outperformed the MSCI EM IMI for the year by 6.70%.

## 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



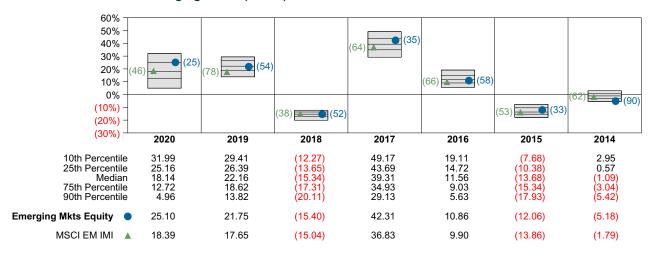


# **Emerging Mkts Equity Return Analysis Summary**

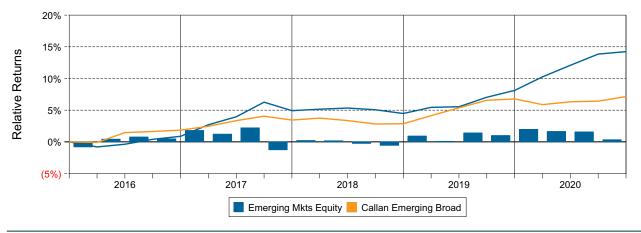
#### **Return Analysis**

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.

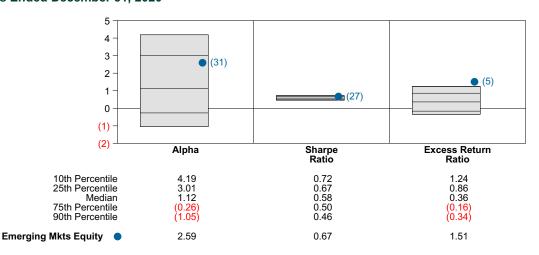
#### Performance vs Callan Emerging Broad (Gross)



#### **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 December 31, 2020



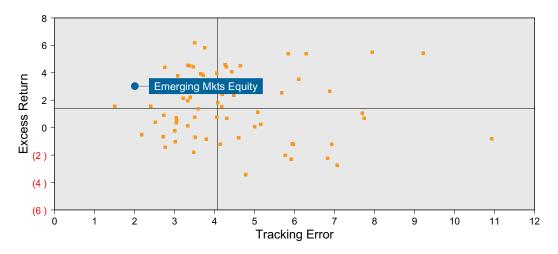


# **Emerging Mkts Equity Risk Analysis Summary**

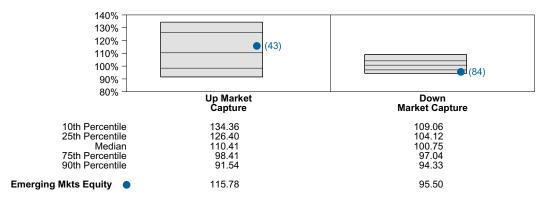
#### Risk Analysis

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.

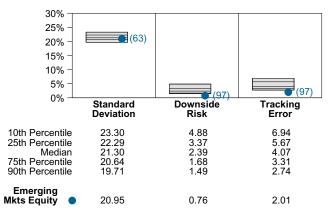
# Risk Analysis vs Callan Emerging Broad (Gross) Five Years Ended December 31, 2020



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



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



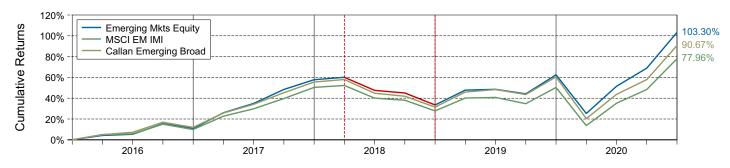




# Emerging Mkts Equity Drawdown Analysis for Five Years Ended December 31, 2020

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**

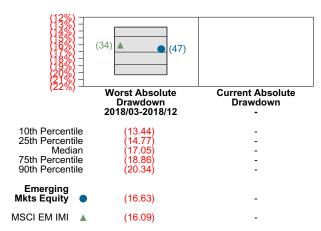


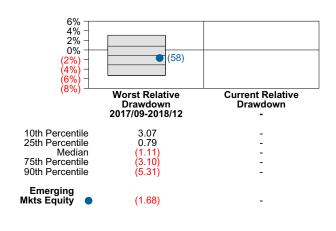
	Worst Absolute Drawdown			Current Absolute Drawdown						
	Return	Years	Period	Index	Peers	Return	Years_	Period	_Index_	Peers
Emerging Mkts Equity	(16.63)%	0.75	2018/03-2018/12	(16.09)%	(16.81)%	-	-	_	-	-
Recovery from Trough	21.75%	1.00	2018/12-2019/12	17.65%	22.14%	-	-	-	-	-
MSCI EM IMI	(25.37)%	2.00	2018/03-2020/03			-	-	-		
Callan Emerging Broad	(16.81)%	0.75	2018/03-2018/12			-	-	-		

# Relative Cumulative Drawdown Analysis vs. MSCI EM IMI 20% Emerging Mkts Equity 15% Callan Emerging Broad 7.14% 5% 0% 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	(1.15)%	-	-	-	-
Recovery from Trough	2.45%	0.75	2018/12-2019/09	3.60%	-	-	-	-
Callan Emerging Broad	(1.18)%	1.00	2017/09-2018/09		-	-	-	

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



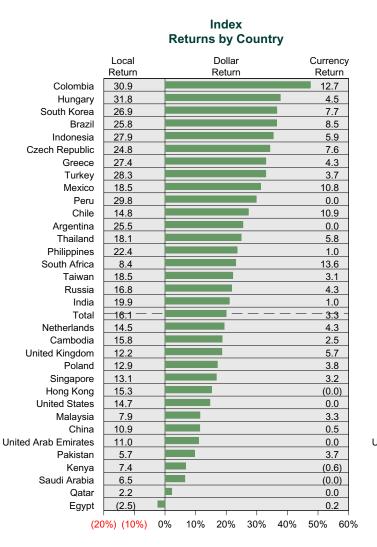




# **Emerging Mkts Equity vs MSCI EM IMI** Attribution for Quarter Ended December 31, 2020

#### 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.



#### **Beginning Relative Weights** (Portfolio - Index) Index Portfolio Weight Weight 0.0 Colombia 0.2 Hungary 0.2 8.0 South Korea 16.4 12.7 Brazil 4.8 5.2 Indonesia 1.6 Czech Republic 0.1 0.0 Greece 0.2 0.0 Turkey 0.4 0.9 Mexico 1.7 1.9 Peru 0.2 1.2 Chile 0.5 0.3 Argentina 0.4 0.2 Thailand 1.9 0.8 Philippines 0.7 0.5 South Africa 1.3 Taiwan 13.8 13.7 Russia 2.9 3.7 India 8.7 10.5 Total Netherlands 1.0 0.0 Cambodia 0.0 0.0 United Kingdom 0.4 0.0 Poland 0.7 0.5 Singapore 0.0 0.0 Hong Kong 0.0 1.7 **United States** 1.8 0.0 Malaysia 1.9 0.5 China 39.0 34.2 United Arab Emirates 0.6 0.1 Pakistan 0.0 0.1 0.0 0.0 Kenya Saudi Arabia 2.8 0.3 Qatar 0.8 0.1 0.1 0.0 Egypt (4%) 0% (8%)(6%) (2%)2% 4% 6%

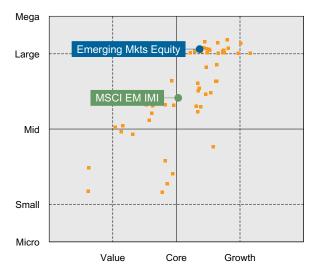




# **Current Holdings Based Style Analysis Emerging Mkts Equity** As of December 31, 2020

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.

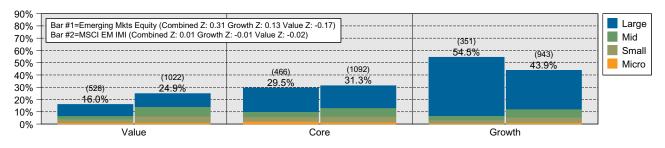
# Style Map vs Callan Emerging Broad Holdings as of December 31, 2020



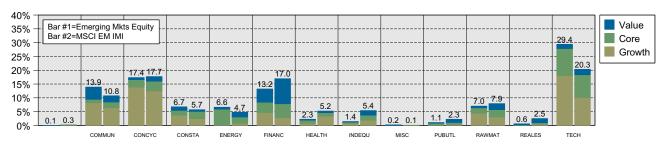
## **Style Exposure Matrix** Holdings as of December 31, 2020

	24.9% (1022)	31.3% (1092)	43.9% (943)	100.0% (3057)
Total	(020)		2 112 /2 (001)	(1010)
	16.0% (528)	29.5% (466)	54.5% (351)	100.0% (1345)
	1.2% (325)	1.4% (341)	1.1% (282)	3.7% (948)
Micro				
	1.1% (38)	2.1% (34)	0.8% (17)	4.0% (89)
	5.1% (389)	4.7% (427)	4.5% (364)	14.3% (1180)
Small				
	3.0% (215)	3.7% (149)	2.5% (106)	9.2% (470)
	7.8% (220)	7.1% (231)	6.6% (199)	21.4% (650)
Mid				
	2.6% (192)	4.3% (188)	3.5% (139)	10.4% (519)
	10.8% (88)	18.1% (93)	31.7% (98)	60.6% (279)
Large	, ,	, ,	, ,	
	9.4% (83)	19.4% (95)	47.7% (89)	76.5% (267)

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



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

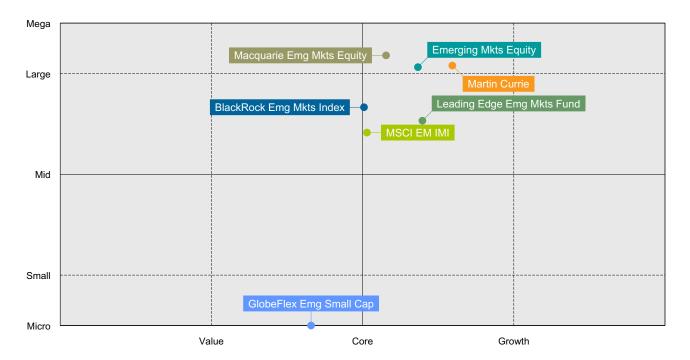




# **International Holdings Based Style Analysis** For One Quarter Ended December 31, 2020

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 December 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	0.91%	32.37	(0.00)	(0.01)	(0.01)	1387	61.96
Leading Edge Emg Mkts Fund	17.53%	28.99	0.33	0.13	(0.20)	220	30.04
Macquarie Emg Mkts Equity	35.31%	88.05	0.12	0.06	(0.07)	86	8.47
Martin Currie	39.18%	61.49	0.50	0.18	(0.33)	47	8.96
GlobeFlex Emg Small Cap	7.07%	0.65	(0.30)	0.12	0.42	136	20.85
Emerging Mkts Equity	100.00%	57.41	0.31	0.13	(0.17)	1644	19.84
MSCI EM IMI	-	26.02	0.01	(0.01)	(0.02)	3089	91.80

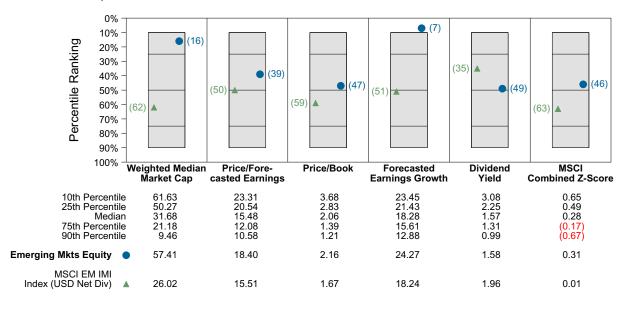


# **Emerging Mkts Equity Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

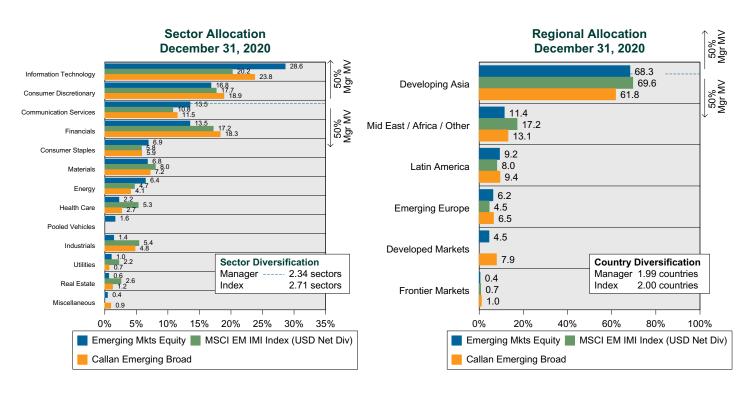
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Emerging Broad as of December 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.

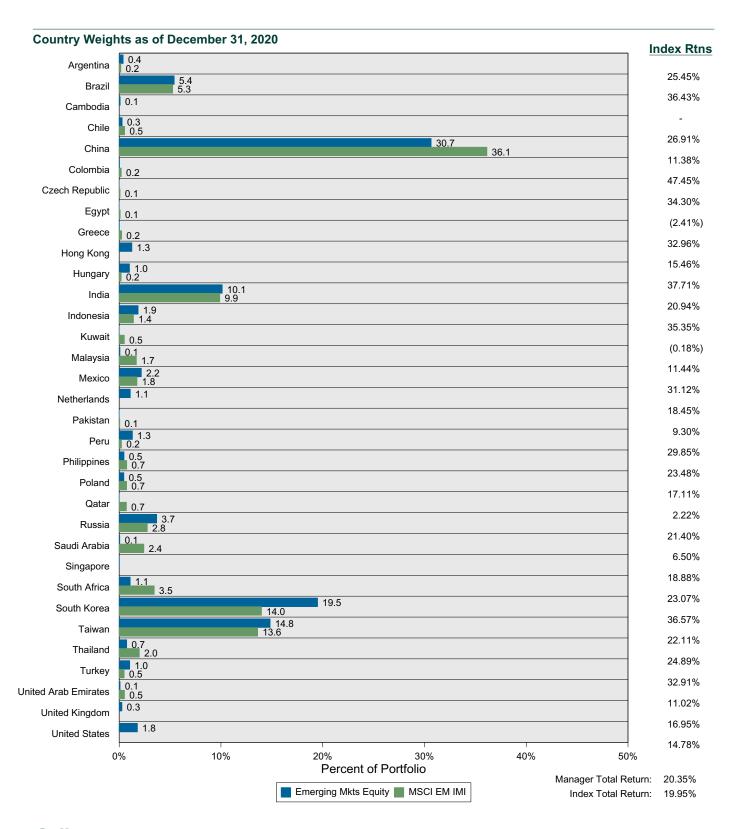




# **Country Allocation Emerging Mkts Equity VS MSCI EM IMI Index (USD Net Div)**

#### **Country Allocation**

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





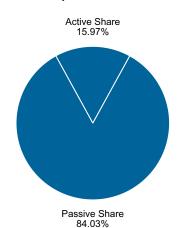
# **Emerging Mkts Equity** Active Share Analysis as of December 31, 2020 vs. MSCI EM IMI Index (USD Net Div)

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 51.62% Non-Index Active Share 6.88% Passive Share 41.51%

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

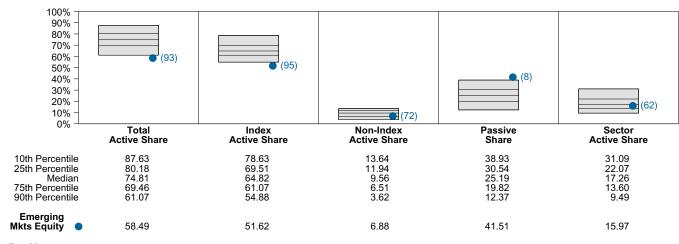


Total Active Share: 58.49%

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
49.63%	1.42%	51.05%	10.79%	13.52%	6.03%
39.95%	8.00%	47.95%	17.68%	16.84%	8.34%
67.95%	4.16%	72.11%	5.82%	6.90%	4.61%
39.92%	7.90%	47.82%	4.71%	6.44%	2.26%
59.82%	13.82%	73.64%	17.20%	13.50%	11.18%
76.60%	4.83%	81.43%	5.30%	2.25%	3.06%
77.18%	9.21%	86.39%	5.42%	1.43%	2.88%
38.74%	3.72%	42.46%	20.23%	28.60%	10.77%
68.44%	3.76%	72.20%	8.03%	6.78%	5.35%
49.96%	51.29%	101.25%	-	0.44%	0.22%
0.00%	100.00%	100.00%	-	1.63%	0.82%
77.41%	9.66%	87.07%	2.58%	0.63%	1.42%
86.05%	2.38%	88.43%	2.24%	1.05%	1.43%
51.62%	6.88%	58.49%	100.00%	100.00%	58.38%

#### Active Share vs. Callan Emerging Broad





# BlackRock Emg Mkts Index Period Ended December 31, 2020

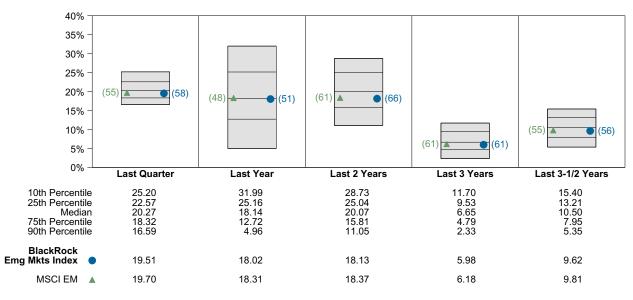
#### **Investment Philosophy**

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**

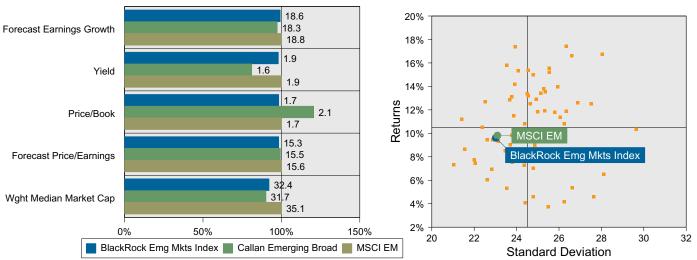
- BlackRock Emg Mkts Index's portfolio posted a 19.51% return for the quarter placing it in the 58 percentile of the Callan Emerging Broad group for the quarter and in the 51 percentile for the last year.
- BlackRock Emg Mkts Index's portfolio underperformed the MSCI EM by 0.18% for the quarter and underperformed the MSCI EM for the year by 0.28%.

#### Performance vs Callan Emerging Broad (Gross)



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

#### Callan Emerging Broad (Gross) Annualized Three and One-Half Year Risk vs Return



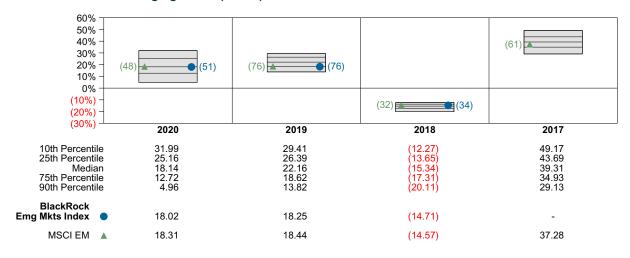


# BlackRock Emg Mkts Index **Return Analysis Summary**

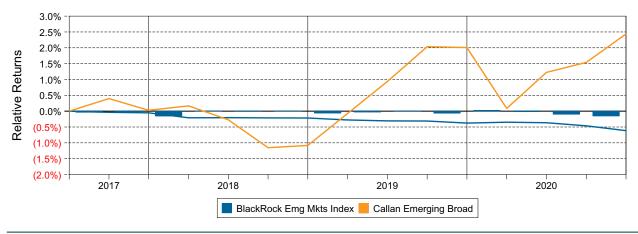
#### **Return Analysis**

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.

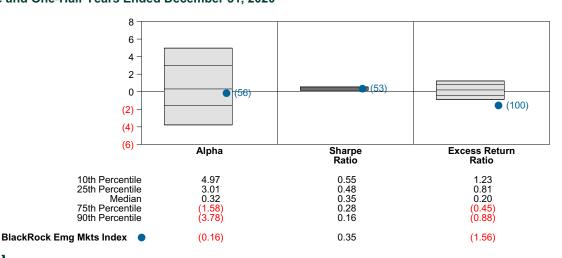
#### Performance vs Callan Emerging Broad (Gross)



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



Risk Adjusted Return Measures vs MSCI EM Rankings Against Callan Emerging Broad (Gross) Three and One-Half Years Ended December 31, 2020



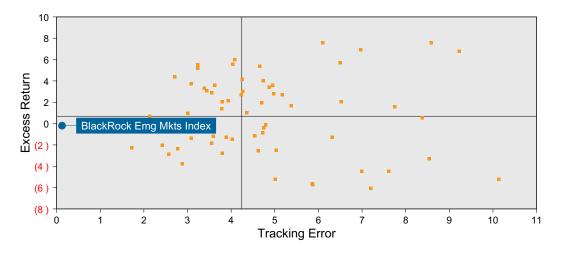


# BlackRock Emg Mkts Index **Risk Analysis Summary**

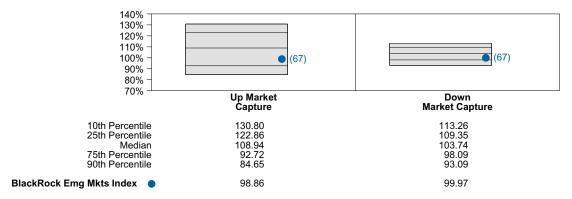
#### Risk Analysis

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.

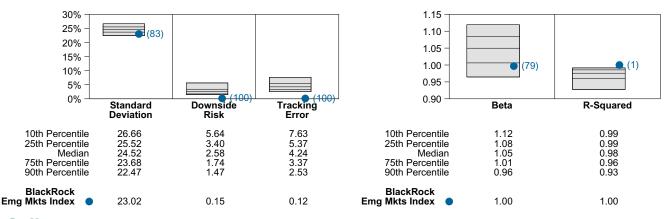
## Risk Analysis vs Callan Emerging Broad (Gross) Three and One-Half Years Ended December 31, 2020



Market Capture vs MSCI EM - Emerging Mkts (USD Net Div) Rankings Against Callan Emerging Broad (Gross) Three and One-Half Years Ended December 31, 2020



Risk Statistics Rankings vs MSCI EM - Emerging Mkts (USD Net Div) Rankings Against Callan Emerging Broad (Gross) Three and One-Half Years Ended December 31, 2020

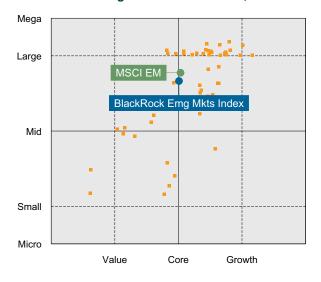




# **Current Holdings Based Style Analysis** BlackRock Emg Mkts Index As of December 31, 2020

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.

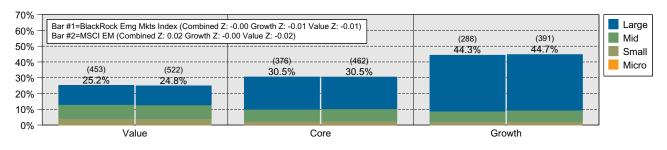
#### Style Map vs Callan Emerging Broad Holdings as of December 31, 2020



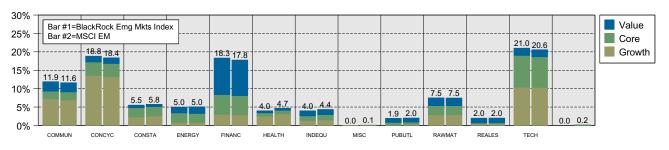
#### **Style Exposure Matrix** Holdings as of December 31, 2020

	Value	Core	Growth	Total
	24.8% (522)	30.5% (462)	44.7% (391)	100.0% (1375)
Total				
	25.2% (453)	30.5% (376)	44.3% (288)	100.0% (1117)
	0.1% (3)	0.2% (4)	0.0% (1)	0.3% (8)
Micro				
	0.1% (3)	0.2% (2)	0.0% (0)	0.3% (5)
	4.0% (211)	2.2% (136)	2.0% (94)	8.2% (441)
Small				
	4.0% (189)	2.1% (112)	1.9% (77)	8.1% (378)
	8.7% (220)	7.8% (229)	7.3% (198)	23.8% (647)
Mid				
	8.8% (183)	7.6% (185)	6.8% (135)	23.3% (503)
	12.1% (88)	20.2% (93)	35.4% (98)	67.7% (279)
Large	, ,	, ,	, ,	` '
	12.2% (78)	20.6% (77)	35.5% (76)	68.3% (231)

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



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



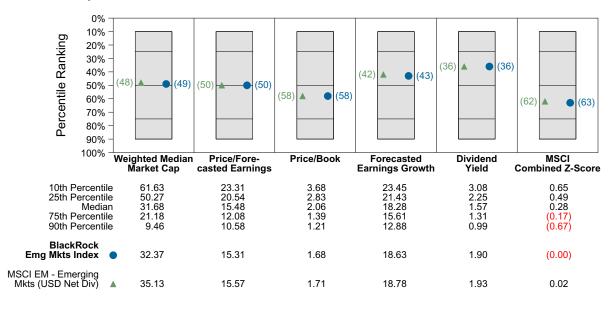


# BlackRock Emg Mkts Index **Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

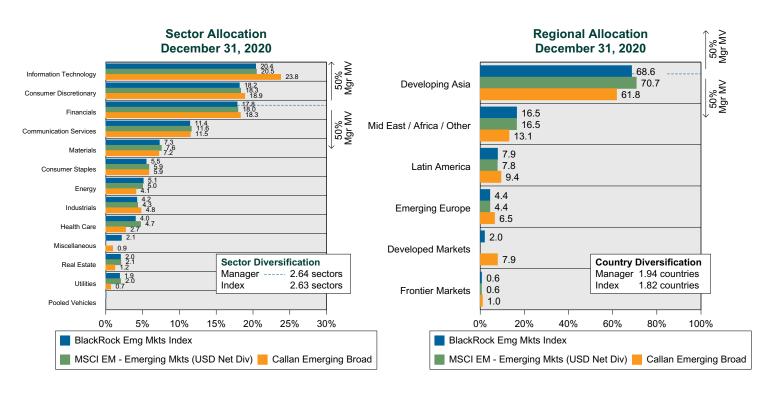
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Emerging Broad as of December 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.

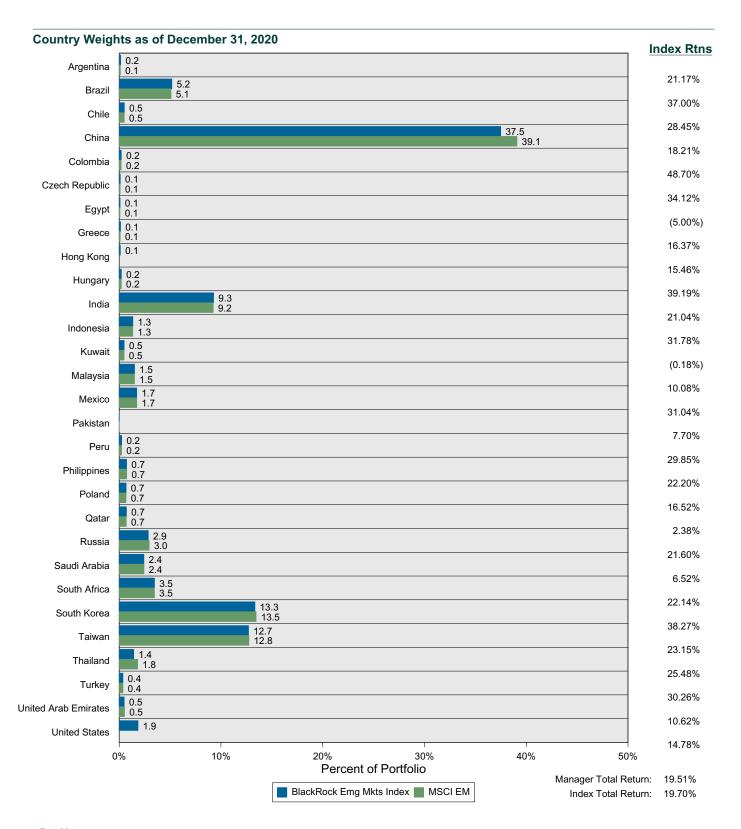




# **Country Allocation** BlackRock Emg Mkts Index VS MSCI EM - Emerging Mkts (USD Net Div)

#### **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of December 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 December 31, 2020

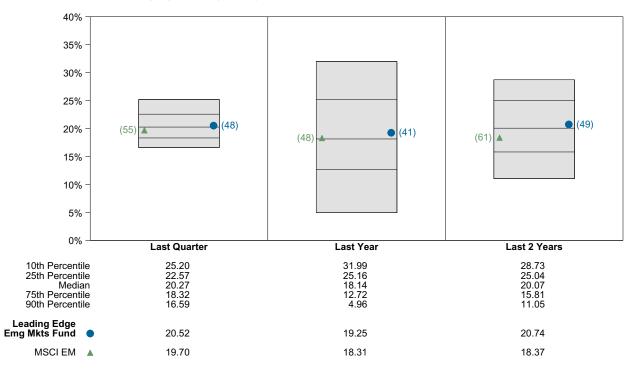
#### **Investment Philosophy**

Leading Edge Investment Advisors pursues innovation in research and investment technology to define how managers are discovered, evaluated and selected. They believe smaller, specialized managers are more innovative than their larger peers, thus producing better risk-adjusted performance. They utilize long-term, ongoing proprietary research to quantify and qualify characteristics that make managers competitive and structure these managers into an optimized, risk-managed Emerging Markets portfolio.

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

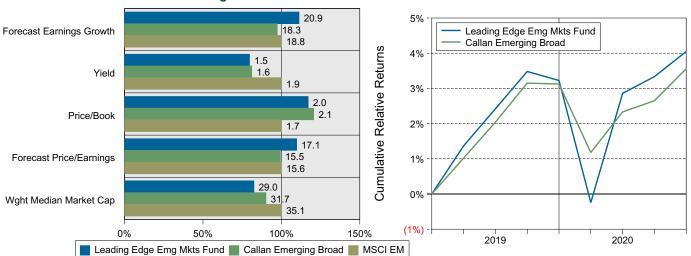
- Leading Edge Emg Mkts Fund's portfolio posted a 20.52% return for the quarter placing it in the 48 percentile of the Callan Emerging Broad group for the quarter and in the 41 percentile for the last year.
- Leading Edge Emg Mkts Fund's portfolio outperformed the MSCI EM by 0.83% for the quarter and outperformed the MSCI EM for the year by 0.94%.

#### Performance vs Callan Emerging Broad (Gross)



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

#### **Cumulative Returns vs MSCI EM**

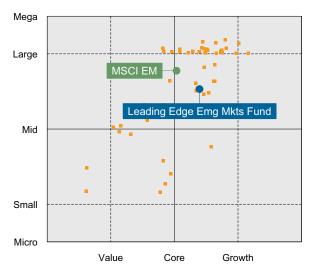




# **Current Holdings Based Style Analysis** Leading Edge Emg Mkts Fund As of December 31, 2020

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.

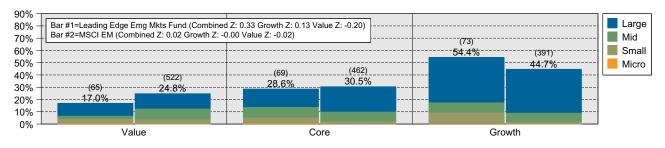
## Style Map vs Callan Emerging Broad Holdings as of December 31, 2020



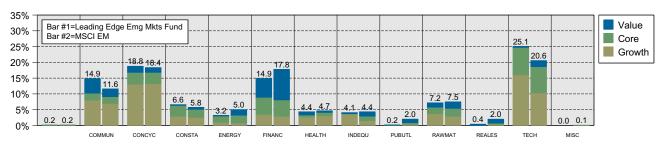
#### **Style Exposure Matrix** Holdings as of December 31, 2020

	Value	Core	Growth	Total
	24.8% (522)	30.5% (462)	44.7% (391)	100.0% (1375)
Total	, ,	, ,	` ,	` ,
	17.0% (65)	28.6% (69)	54.4% (73)	100.0% (207)
	0.1% (3)	0.2% (4)	0.0% (1)	0.3% (8)
Micro				
	0.5% (3)	0.7% (2)	0.3% (1)	1.5% (6)
	4.0% (211)	2.2% (136)	2.0% (94)	8.2% (441)
Small				
	3.9% (26)	4.9% (17)	9.3% (23)	18.1% (66)
	8.7% (220)	7.8% (229)	7.3% (198)	23.8% (647)
Mid				
	2.5% (20)	8.5% (25)	8.2% (19)	19.1% (64)
	12.1% (88)	20.2% (93)	35.4% (98)	67.7% (279)
Large				
	10.0% (16)	14.6% (25)	36.7% (30)	61.3% (71)

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



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



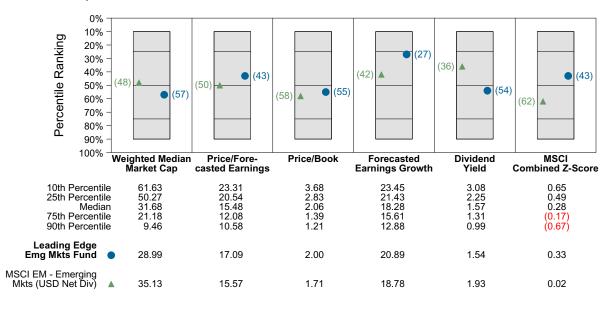


# Leading Edge Emg Mkts Fund **Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

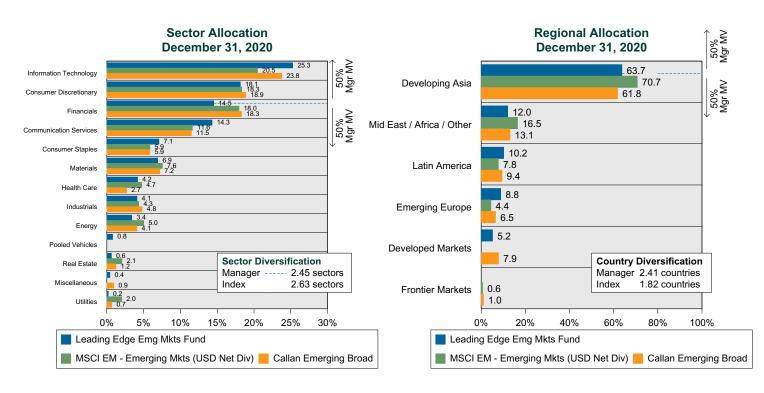
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Emerging Broad as of December 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.

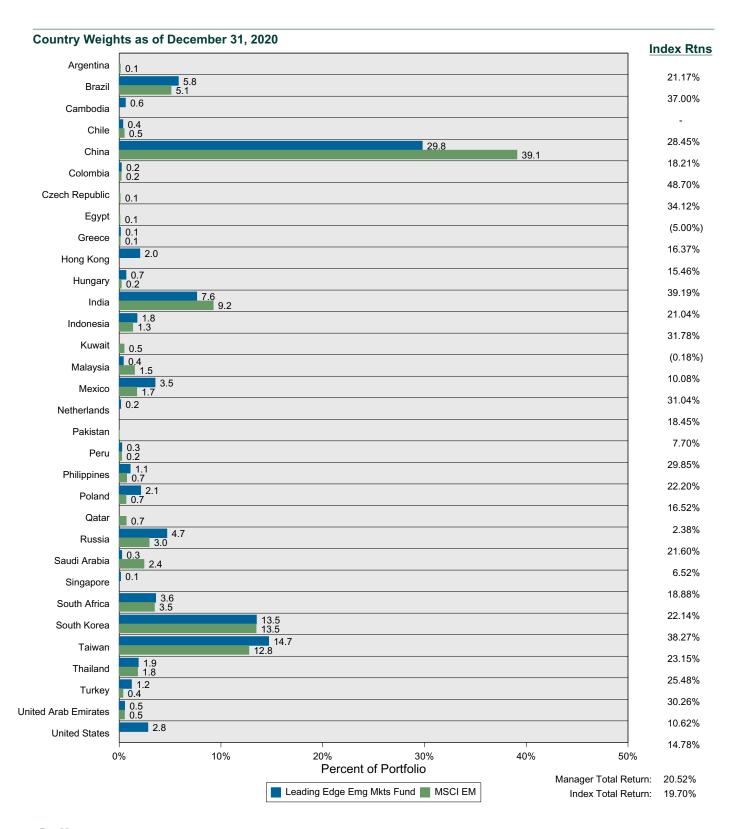




# **Country Allocation** Leading Edge Emg Mkts Fund VS MSCI EM - Emerging Mkts (USD Net Div)

#### **Country Allocation**

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





# **Macquarie Emerging Markets Equity** Period Ended December 31, 2020

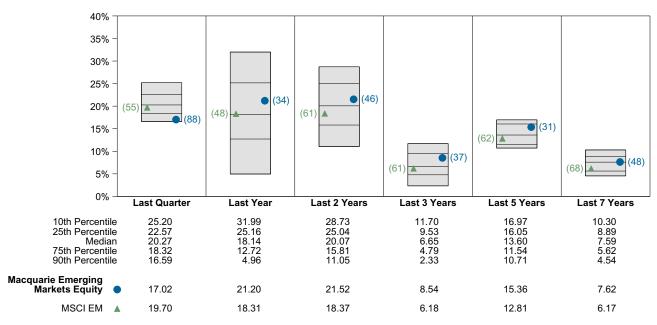
#### **Investment Philosophy**

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 17.02% return for the quarter placing it in the 88 percentile of the Callan Emerging Broad group for the quarter and in the 34 percentile for the last year.
- Macquarie Emerging Markets Equity's portfolio underperformed the MSCI EM by 2.67% for the guarter and outperformed the MSCI EM for the year by 2.90%.

#### Performance vs Callan Emerging Broad (Gross)

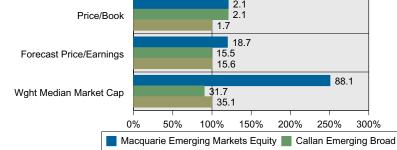


# **Portfolio Characteristics as** a Percentage of the MSCI EM

Annualized Five Year Risk vs Return 20% 18% Macquarie Emerging Markets Equity 16% 14% 12% 10% 8% 6% 20 21 22 23 24 25 26 18 19 Standard Deviation

Callan Emerging Broad (Gross)

#### 21.1 Forecast Earnings Growth 18.3 18.8 1.9 1.6 Yield 1.9



MSCI EM

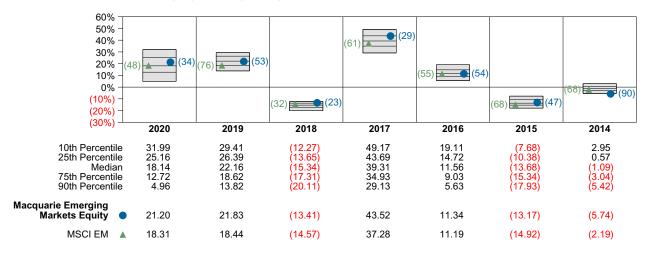


# **Macquarie Emerging Markets Equity Return Analysis Summary**

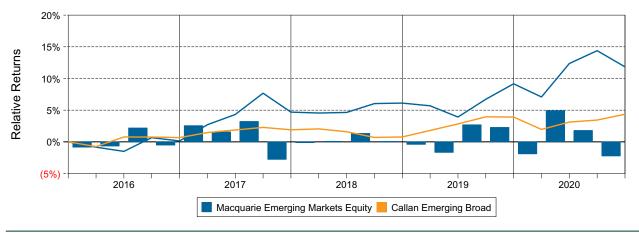
#### **Return Analysis**

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.

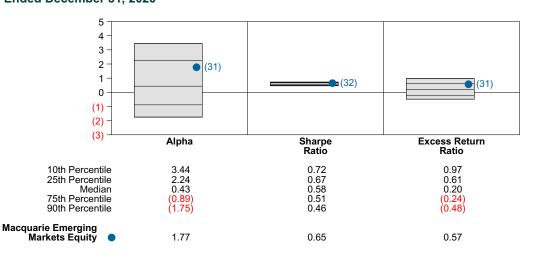
#### Performance vs Callan Emerging Broad (Gross)



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



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



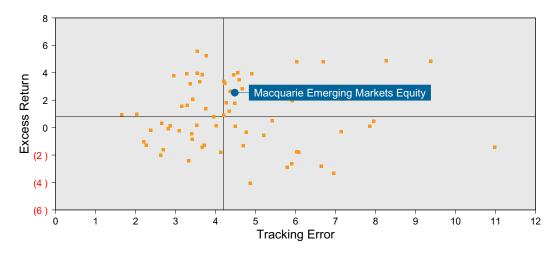


# **Macquarie Emerging Markets Equity Risk Analysis Summary**

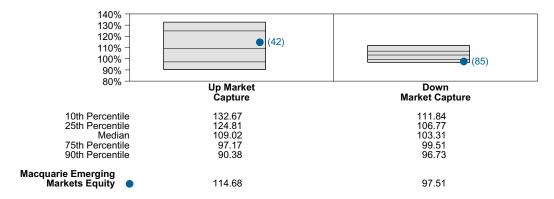
#### Risk Analysis

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.

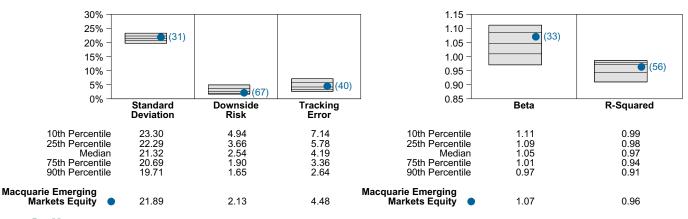
#### Risk Analysis vs Callan Emerging Broad (Gross) Five Years Ended December 31, 2020



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



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

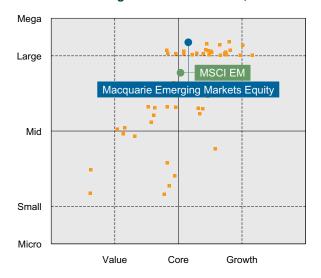




# **Current Holdings Based Style Analysis Macquarie Emerging Markets Equity** As of December 31, 2020

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.

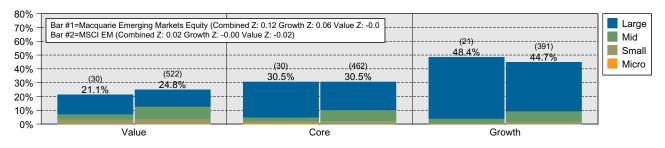
#### Style Map vs Callan Emerging Broad Holdings as of December 31, 2020



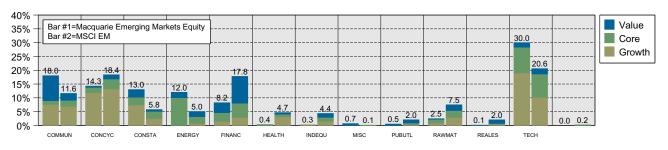
#### **Style Exposure Matrix** Holdings as of December 31, 2020

24.8% (522)	30.5% (462)	44.7% (391)	100.0% (1375)
21.1% (30)	30.5% (30)	48.4% (21)	100.0% (81)
0.1% (3)	0.2% (4)	0.0% (1)	0.3% (8)
(5)		(2)	(0)
0.2% (3)	0.4% (1)	0.3% (2)	0.9% (6)
4.0% (211)	2.2% (136)	2.0% (94)	8.2% (441)
3.3% (7)	1.8% (5)	0.4% (1)	5.5% (13)
8.7% (220)	7.8% (229)	7.3% (198)	23.8% (647)
3.7% (9)	2.8% (6)	3.4% (4)	9.9% (19)
12.1% (88)	20.2% (93)	35.4% (98)	67.7% (279)
13.9% (11)	25.4% (18)	44.3% (14)	83.7% (43)
	3.7% (9)  8.7% (220)  3.3% (7)  4.0% (211)  0.2% (3)  0.1% (3)  21.1% (30)	12.1% (88) 20.2% (93) 3.7% (9) 2.8% (6) 8.7% (220) 7.8% (229) 3.3% (7) 1.8% (5) 4.0% (211) 2.2% (136) 0.2% (3) 0.4% (1) 0.1% (3) 0.2% (4) 21.1% (30) 30.5% (30)	12.1% (88)     20.2% (93)     35.4% (98)       3.7% (9)     2.8% (6)     3.4% (4)       8.7% (220)     7.8% (229)     7.3% (198)       3.3% (7)     1.8% (5)     0.4% (1)       4.0% (211)     2.2% (136)     2.0% (94)       0.2% (3)     0.4% (1)     0.3% (2)       0.1% (3)     0.2% (4)     0.0% (1)       21.1% (30)     30.5% (30)     48.4% (21)

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



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



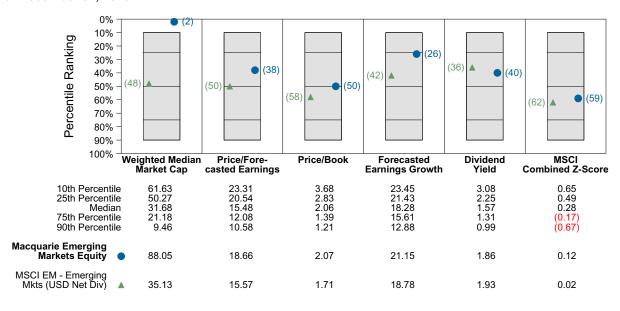


# **Macquarie Emerging Markets Equity Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

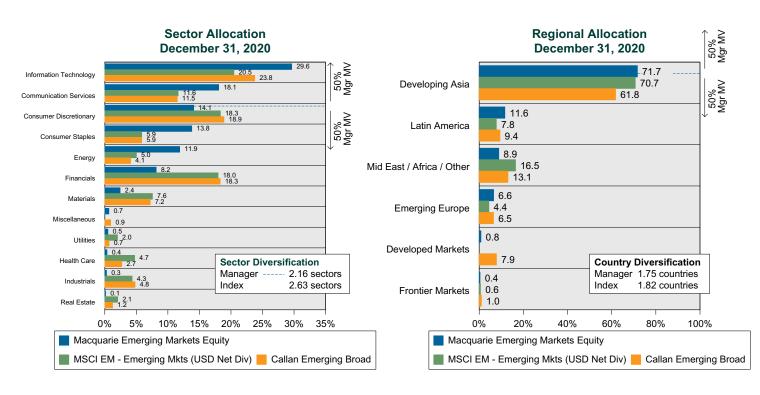
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Emerging Broad as of December 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.

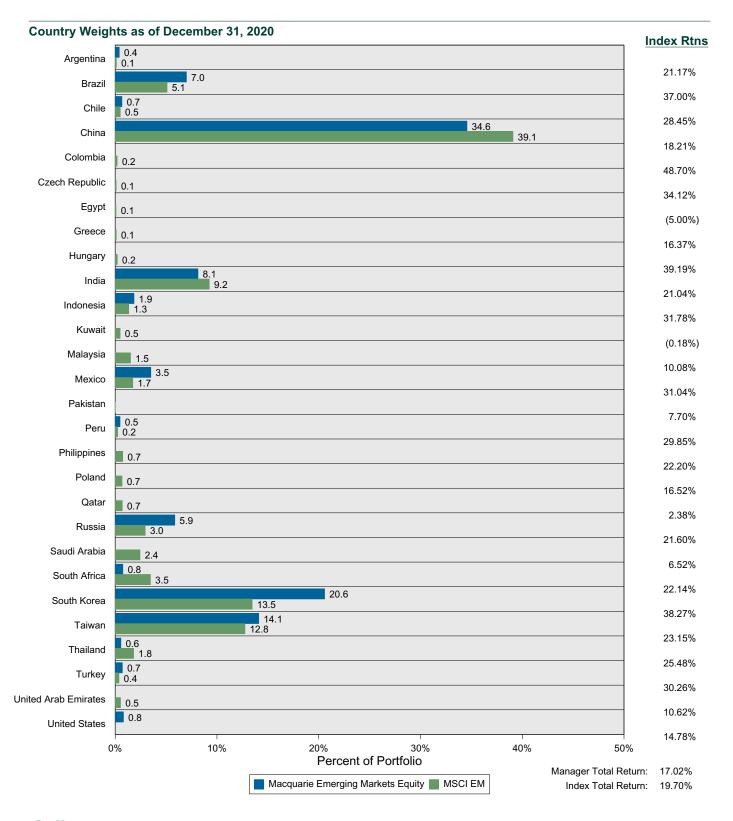




# **Country Allocation** Macquarie Emerging Markets Equity VS MSCI EM - Emerging Mkts (USD Net Div)

#### **Country Allocation**

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





# Martin Currie Period Ended December 31, 2020

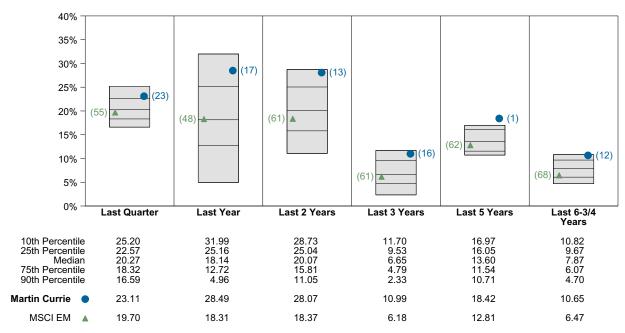
#### **Investment Philosophy**

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.

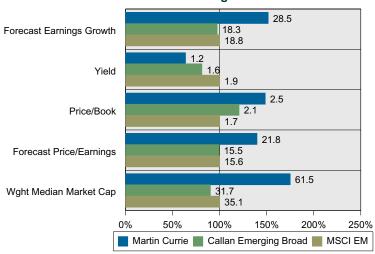
#### **Quarterly Summary and Highlights**

- Martin Currie's portfolio posted a 23.11% return for the quarter placing it in the 23 percentile of the Callan Emerging Broad group for the quarter and in the 17 percentile for the last year.
- Martin Currie's portfolio outperformed the MSCI EM by 3.41% for the quarter and outperformed the MSCI EM for the year by 10.18%.

#### 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



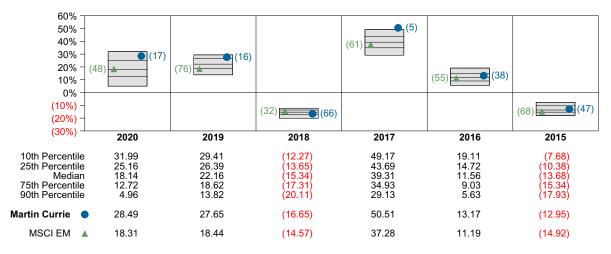


# **Martin Currie Return Analysis Summary**

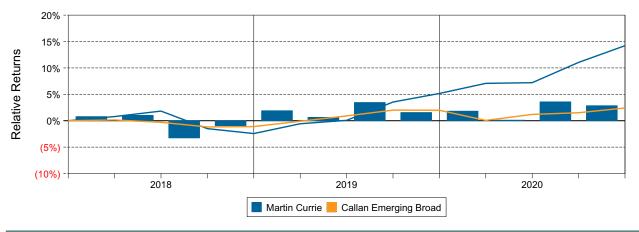
#### **Return Analysis**

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.

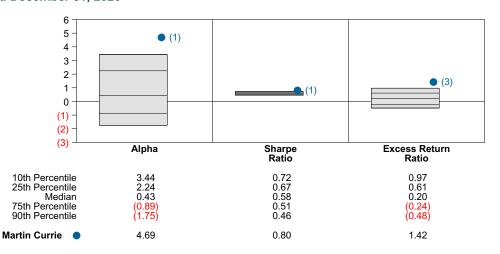
#### Performance vs Callan Emerging Broad (Gross)



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



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



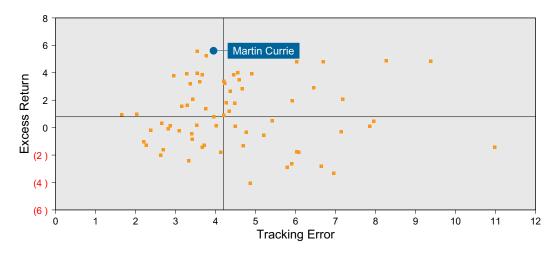


# **Martin Currie Risk Analysis Summary**

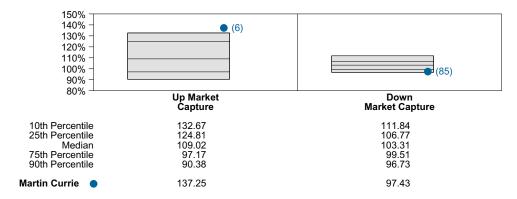
#### Risk Analysis

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.

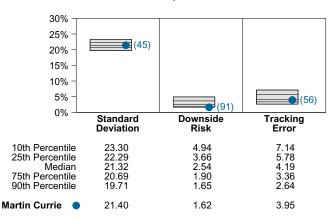
#### Risk Analysis vs Callan Emerging Broad (Gross) Five Years Ended December 31, 2020

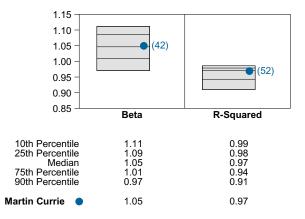


Market Capture vs MSCI EM - Emerging Mkts (USD Net Div) Rankings Against Callan Emerging Broad (Gross) Five Years Ended December 31, 2020



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







# **Current Holdings Based Style Analysis Martin Currie** As of December 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.

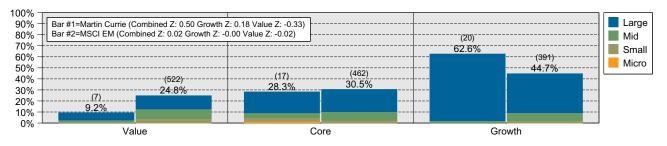
# Style Map vs Callan Emerging Broad Holdings as of December 31, 2020



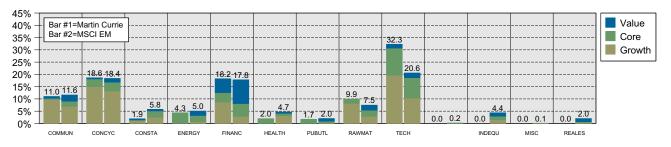
#### **Style Exposure Matrix** Holdings as of December 31, 2020

	Value	Core	Growth	Total
	24.8% (522)	30.5% (462)	44.7% (391)	100.0% (1375)
Total				
	9.2% (7)	28.3% (17)	62.6% (20)	100.0% (44)
	0.1% (3)	0.2% (4)	0.0% (1)	0.3% (8)
Micro				
	0.0% (0)	1.5% (1)	0.0% (0)	1.5% (1)
	4.0% (211)	2.2% (136)	2.0% (94)	8.2% (441)
Small				
	1.1% (2)	3.3% (3)	0.0% (0)	4.4% (5)
	8.7% (220)	7.8% (229)	7.3% (198)	23.8% (647)
Mid				
	1.6% (1)	4.4% (5)	2.1% (1)	8.2% (7)
	12.1% (88)	20.2% (93)	35.4% (98)	67.7% (279)
Large	( )	(3)	( ),	(, )
	6.5% (4)	19.0% (8)	60.5% (19)	85.9% (31)

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



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



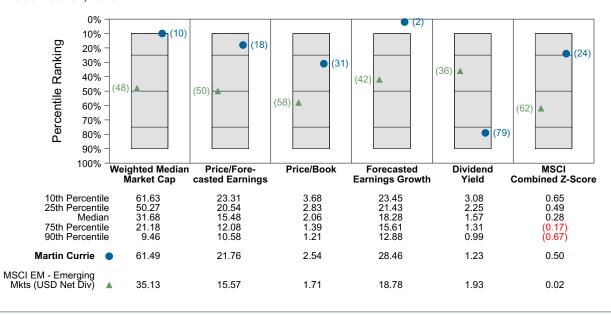


# **Martin Currie Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

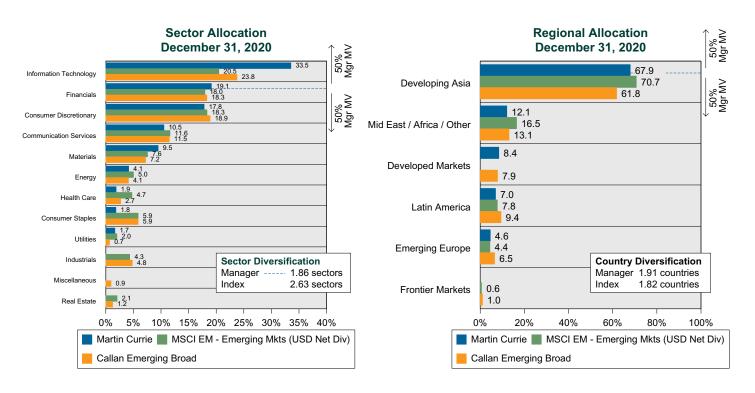
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Emerging Broad as of December 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.

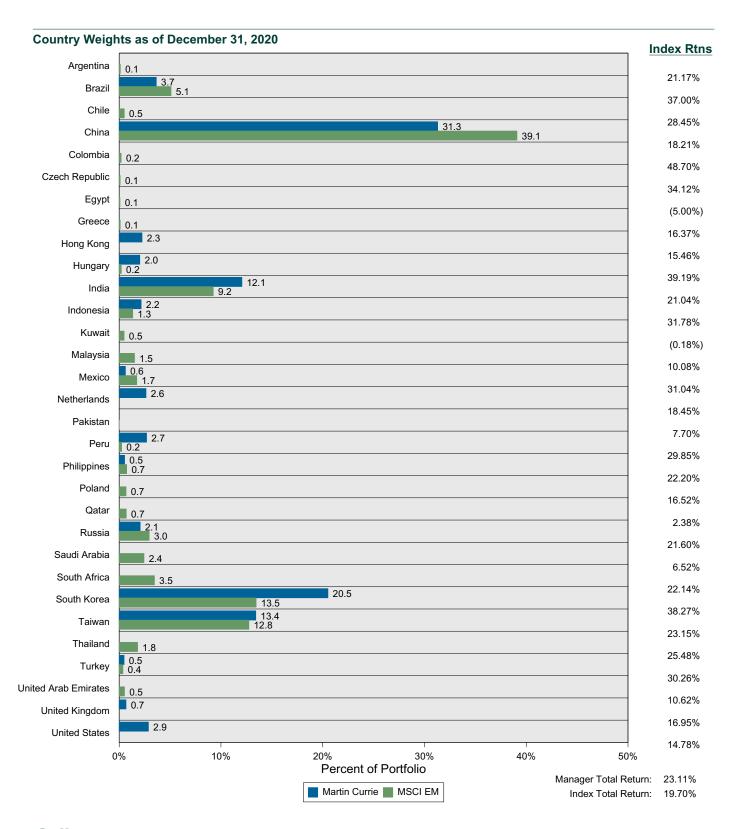




# **Country Allocation** Martin Currie VS MSCI EM - Emerging Mkts (USD Net Div)

#### **Country Allocation**

The chart below contrasts the portfolio's country allocation with that of the index as of December 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 December 31, 2020

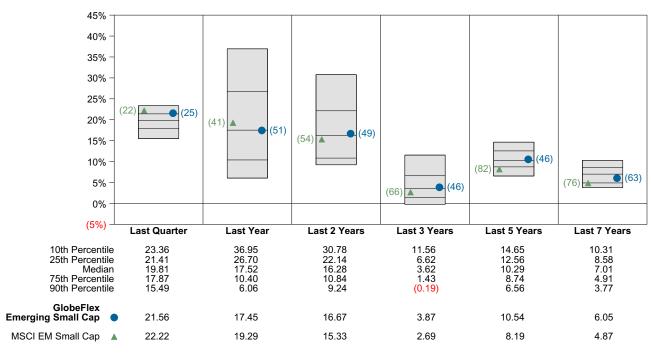
#### **Investment Philosophy**

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.

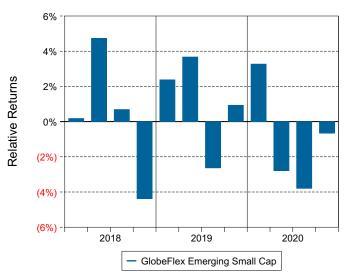
#### **Quarterly Summary and Highlights**

- GlobeFlex Emerging Small Cap's portfolio posted a 21.56% return for the quarter placing it in the 25 percentile of the Callan Emerging Small group for the quarter and in the 51 percentile for the last year.
- GlobeFlex Emerging Small Cap's portfolio underperformed the MSCI EM Small Cap by 0.66% for the quarter and underperformed the MSCI EM Small Cap for the year by 1.84%.

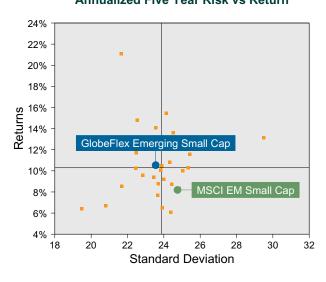
#### Performance vs Callan Emerging Small (Gross)



#### Relative Return vs MSCI EM Small Cap



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



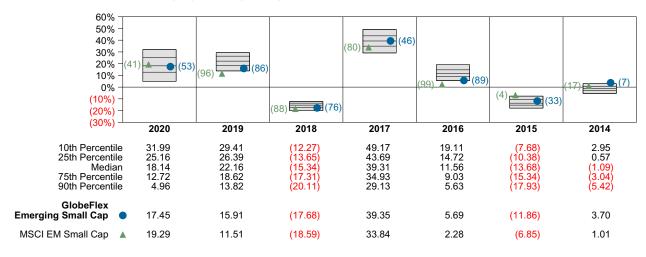


# **GlobeFlex Emerging Small Cap Return Analysis Summary**

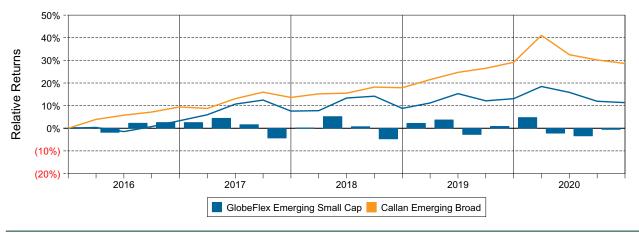
#### **Return Analysis**

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.

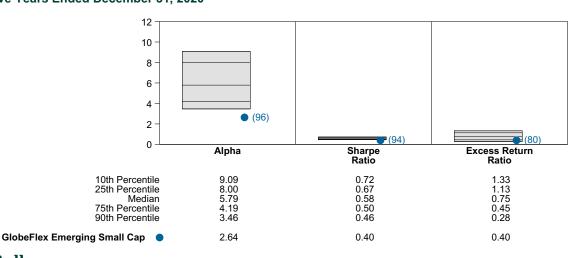
#### Performance vs Callan Emerging Broad (Gross)



#### 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 December 31, 2020



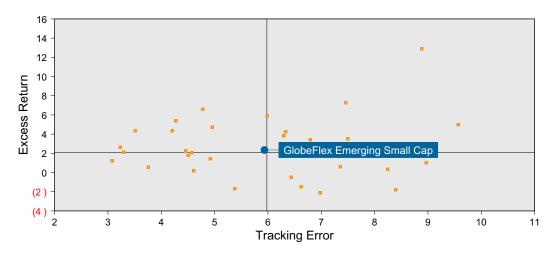


# **GlobeFlex Emerging Small Cap Risk Analysis Summary**

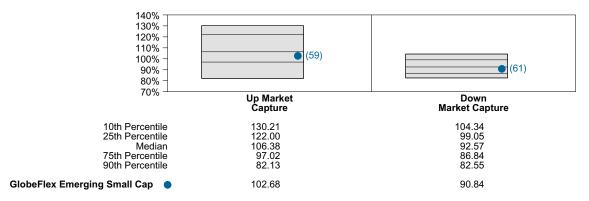
#### Risk Analysis

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.

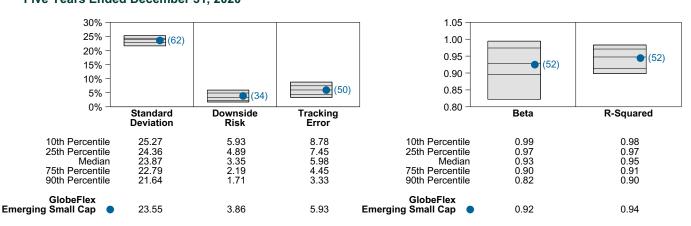
#### Risk Analysis vs Callan Emerging Small (Gross) Five Years Ended December 31, 2020



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



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

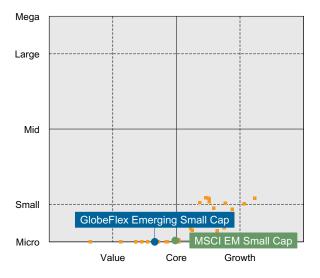




# **Current Holdings Based Style Analysis GlobeFlex Emerging Small Cap** As of December 31, 2020

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.

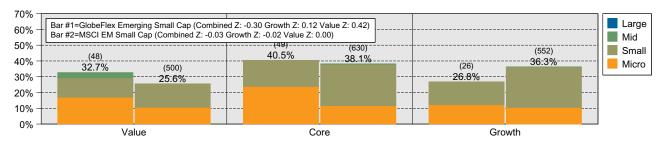
## Style Map vs Callan Emerging Small Holdings as of December 31, 2020



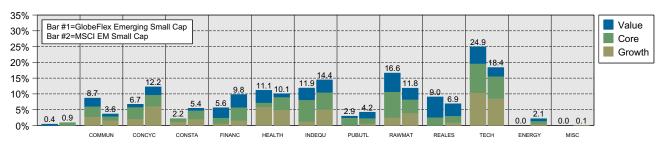
## **Style Exposure Matrix** Holdings as of December 31, 2020

	Value	Core	Growth	Total
	25.6% (500)	38.1% (630)	36.3% (552)	100.0% (1682)
Total	02.1 /0 (40)	40.070 (43)	20.070 (20)	100.070 (123)
	32.7% (48)	40.5% (49)	26.8% (26)	100.0% (123)
	10.5% (322)	11.6% (337)	10.5% (281)	32.7% (940)
Micro			` '	, ,
	17.0% (29)	23.8% (30)	12.2% (14)	<b>52.9</b> % (73)
	15.0% (178)	26.2% (291)	25.7% (270)	66.9% (739)
Small				
	12.3% (15)	16.7% (19)	14.6% (12)	43.6% (46)
	0.0% (0)	0.3% (2)	0.2% (1)	0.5% (3)
Mid				
	3.5% (4)	0.0% (0)	0.0% (0)	3.5% (4)
	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Large	(,,	(3)	(1)	(,,
	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)

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



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



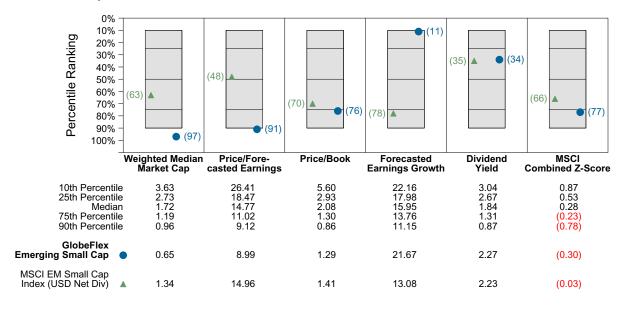


# GlobeFlex Emerging Small Cap **Equity Characteristics Analysis Summary**

#### **Portfolio Characteristics**

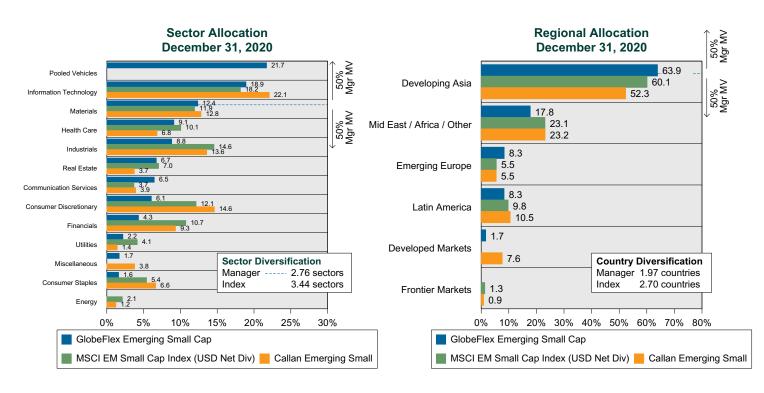
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Portfolio Characteristics Percentile Rankings** Rankings Against Callan Emerging Small as of December 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.

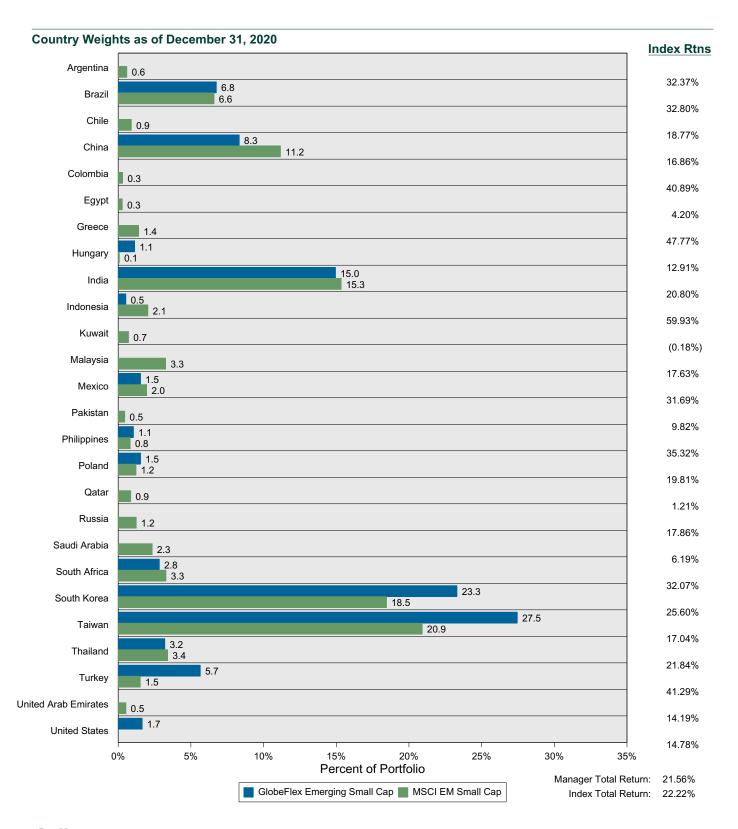




# **Country Allocation** GlobeFlex Emerging Small Cap VS MSCI EM Small Cap Index (USD Net Div)

#### **Country Allocation**

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

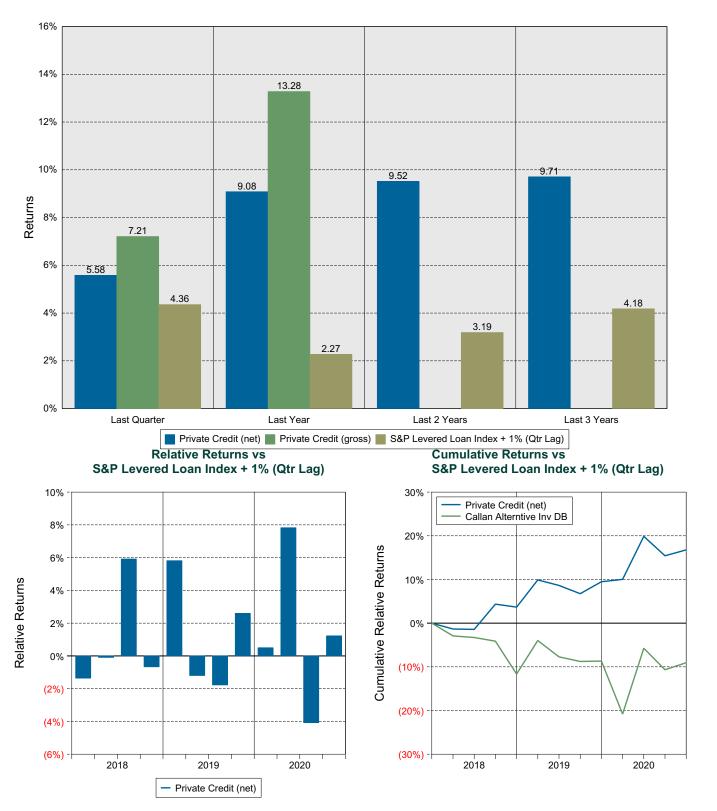




# **Private Credit** Period Ended December 31, 2020

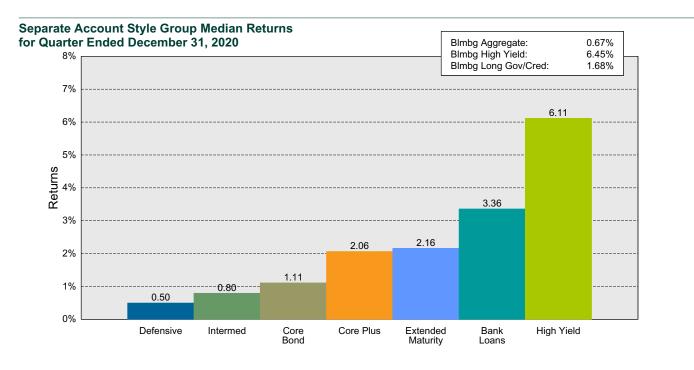
#### **Quarterly Summary and Highlights**

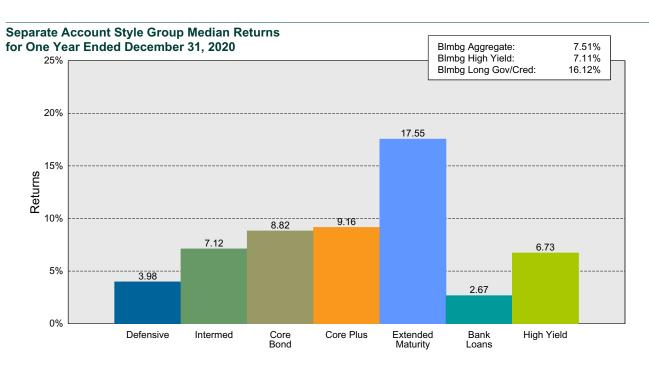
- Private Credit (net)'s portfolio posted a 5.58% return for the quarter placing it in the 95 percentile of the Callan Alternative Investments DB group for the quarter and in the 24 percentile for the last year.
- Private Credit (net)'s portfolio outperformed the S&P Levered Loan Index + 1% (Qtr Lag) by 1.23% for the quarter and outperformed the S&P Levered Loan Index + 1% (Qtr Lag) for the year by 6.81%.



### **Domestic Fixed Income Active Management Overview**

U.S. Treasury yields rose steadily over the course of 4Q; the 10-year U.S. Treasury yield closed the guarter at 0.93%, up 24 basis points from Sept. 30, but off sharply from the year-end level of 1.92%. TIPS (Bloomberg Barclays US TIPS: +1.6%) strongly outperformed nominal U.S. Treasuries for the quarter as 10-year breakeven spreads widened from 163 bps to 199 bps. The Bloomberg Barclays US Aggregate Bond Index gained 0.7%, bringing its 2020 gain to 7.5%. Investment grade corporates strongly outperformed U.S. Treasuries for the quarter and the year (Bloomberg Barclays US Treasury: -0.8%; +8.0%; Bloomberg Barclays US Corporate: +3.0%; +9.9%) in spite of record 2020 issuance. High yield corporates (Bloomberg Barclays High Yield: +6.5%; +7.1%) outperformed investment grade for the quarter but trailed for the year. High yield default rates (6.2% y-o-y as of December) continued to trend higher but are expected to peak far below levels reached in the Global Financial Crisis.



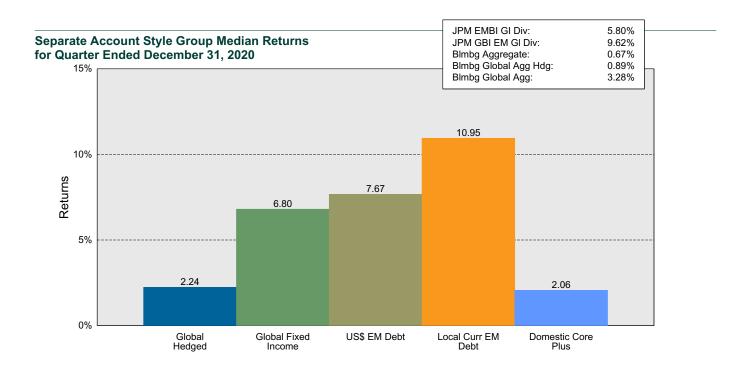


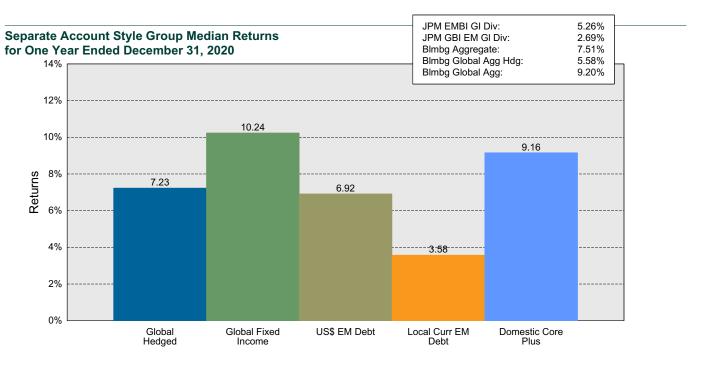


# **Global Fixed Income Active Management Overview**

Broad-based U.S. dollar weakness dampened hedged returns for the quarter. The Bloomberg Barclays Global Aggregate rose 3.3% (unhedged) and 0.9% (hedged). The rate picture was mixed, with rates relatively flat in most countries but falling in Italy in Spain and rising modestly in the U.S., Australia and Canada.

Emerging market debt indices posted solid results in the risk-on environment (EMBI Global Div: +5.8%; GBI-EM Gl Div: +9.6%) with emerging market currencies doing especially well. The S African rand and Brazilian peso surged more than 10%, with most other EM currencies up more modestly vs the greenback. From a country perspective, returns were mixed across the US dollar-denominated EMBI GI Diversified Index, which includes more than 70 countries. Owing primarily to EM currency strength, gains were more broad-based for the nineteen countries in the local currency GBI-EM GI Div Index, with a handful of those producing double-digit returns.





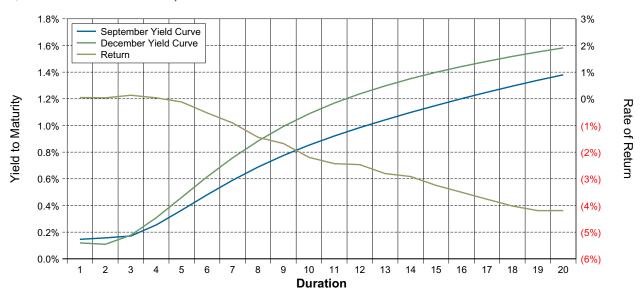


### **Bond Market Environment**

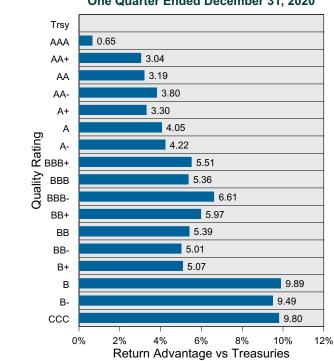
#### **Factors Influencing Bond Returns**

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.

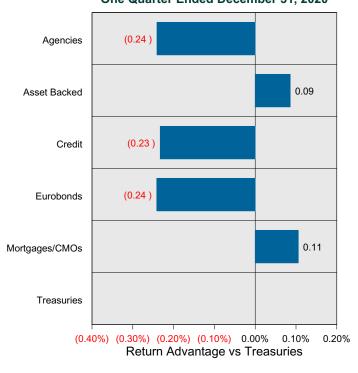
#### Yield Curve Change and Rate of Return One Quarter Ended December 31, 2020



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



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

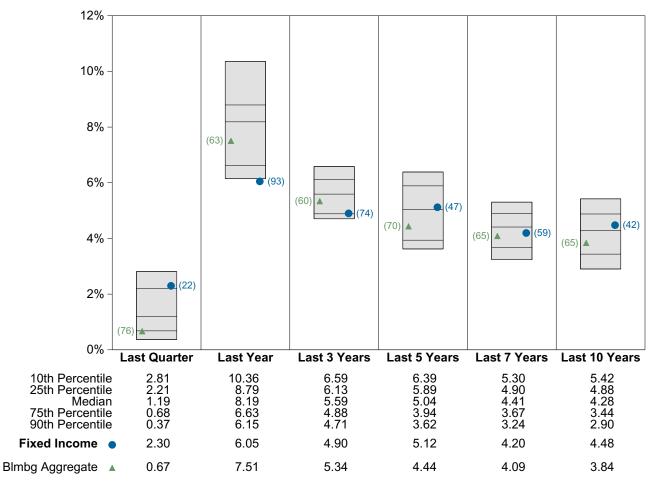


### **Fixed Income** Period Ended December 31, 2020

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

- Fixed Income's portfolio posted a 2.30% return for the guarter placing it in the 22 percentile of the Public Fund -Domestic Fixed group for the quarter and in the 93 percentile for the last year.
- Fixed Income's portfolio outperformed the Blmbg Aggregate by 1.63% for the quarter and underperformed the Blmbg Aggregate for the year by 1.46%.

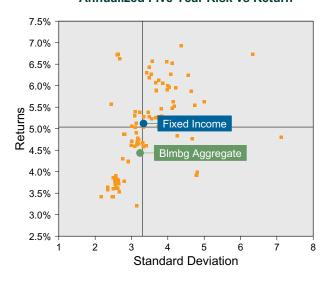
### Performance vs Public Fund - Domestic Fixed (Gross)



### Relative Return vs Blmbg Aggregate

# 3% 2% Relative Returns 0% (1%)(2%) (5%)(6%)2016 2017 2018 2019 2020 Fixed Income

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



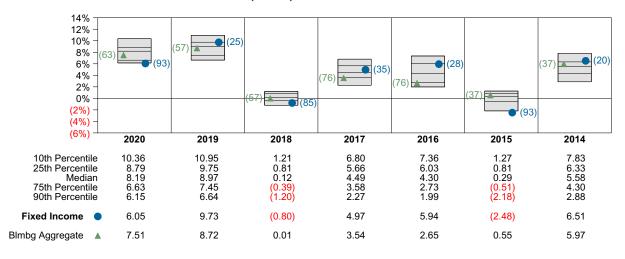


### **Fixed Income Return Analysis Summary**

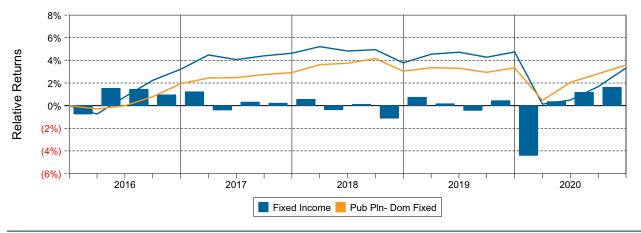
#### **Return Analysis**

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.

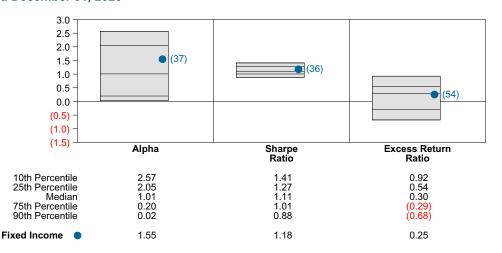
### Performance vs Public Fund - Domestic Fixed (Gross)



### 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 December 31, 2020

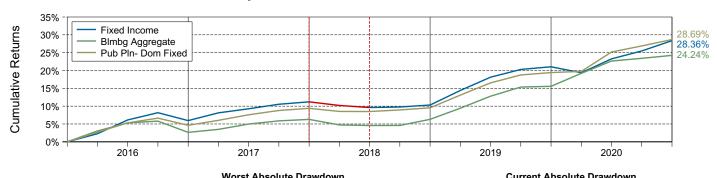




# **Fixed Income** Drawdown Analysis for Five Years Ended December 31, 2020

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**

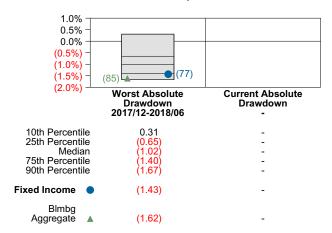


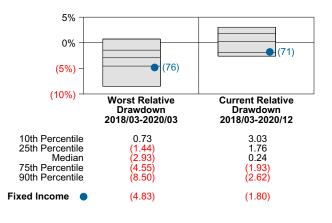
	Worst Absolute Diawdown					Current Absolute Diawdown				
	Return	Years	Period	Index	Peers	Return	Years	Period	_Index_	Peers
Fixed Income	(1.43)%	0.50	2017/12-2018/06	(1.62)%	(0.82)%	-	-	-	-	-
Recovery from Trough	4.37%	0.75	2018/06-2019/03	4.65%	4.24%	-	-	-	-	-
Blmbg Aggregate	(2.18)%	0.50	2016/09-2017/03			-	-	-		
Pub Pln- Dom Fixed	(0.82)%	0.50	2017/12-2018/06			-	-	-		

#### Relative Cumulative Drawdown Analysis vs. Blmbg Aggregate Cumulative Relative Returns Peak Catch-up Rel Rtn: 1.83% 5% Fixed Income Pub Pln- Dom Fixed 4% 3 58% 3.32% 3% 2% 1% 0% (1%)(2%)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	(3.05)%	(1.80)%	2.75	2018/03-2020/12	(0.04)%	
Recovery from Trough	3.18%	0.75+	2020/03-2020/12	3.11%	3.18%	0.75+	2020/03-2020/12	3.11%	
Pub Pln- Dom Fixed	(3.56)%	1.50	2018/09-2020/03		(0.55)%	2.25	2018/09-2020/12		

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





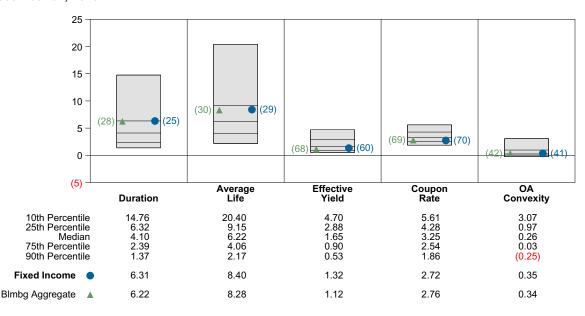


### **Fixed Income Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

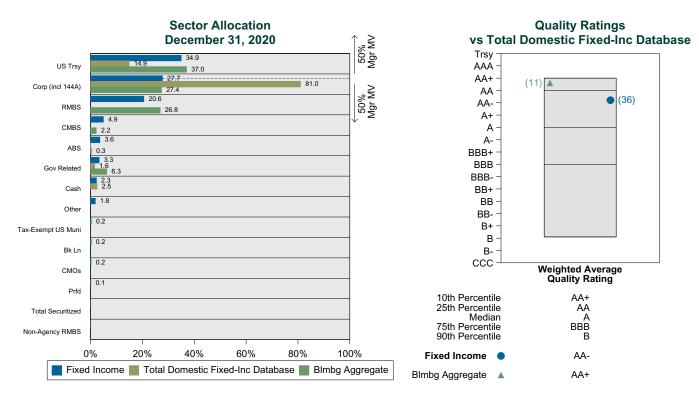
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

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

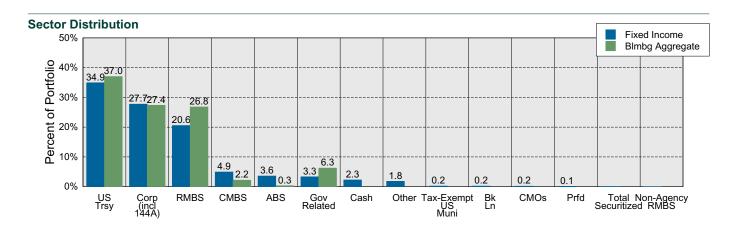


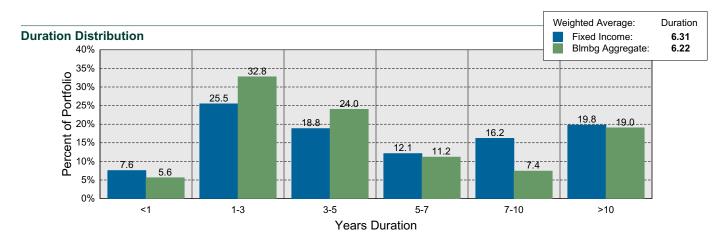


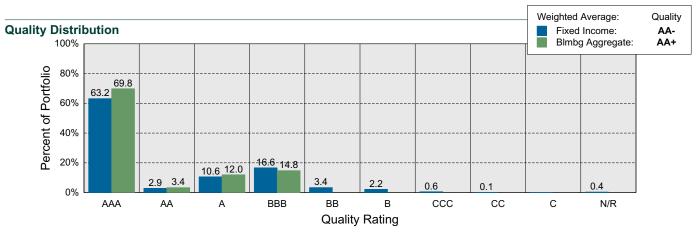
# **Fixed Income Portfolio Characteristics Summary** As of December 31, 2020

### **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.







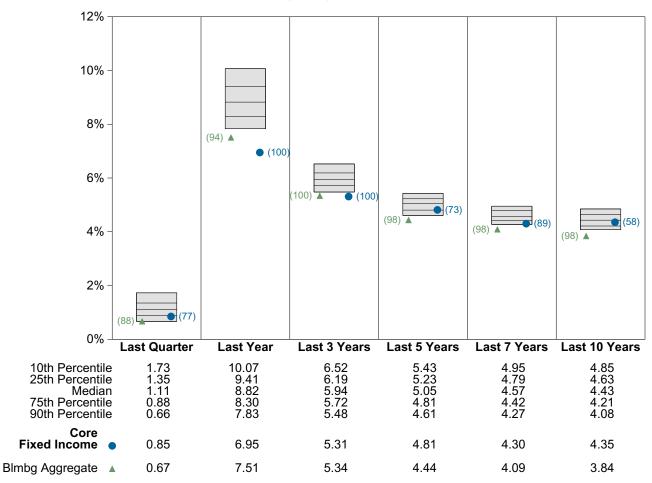


### **Core Fixed Income** Period Ended December 31, 2020

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

- Core Fixed Income's portfolio posted a 0.85% return for the quarter placing it in the 77 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 100 percentile for the last year.
- Core Fixed Income's portfolio outperformed the Blmbg Aggregate by 0.18% for the quarter and underperformed the Blmbg Aggregate for the year by 0.56%.

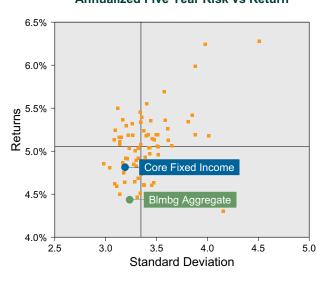
### Performance vs Callan Core Bond Fixed Income (Gross)



### Relative Return vs Blmbg Aggregate

# 1.0% 0.5% Relative Returns 0.0% (1.0%)(1.5%)(2.0%)2016 2017 2018 2019 2020 Core Fixed Income

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



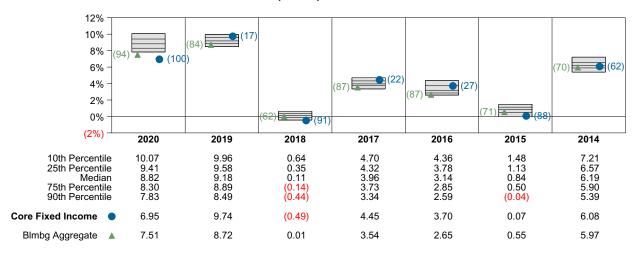


### **Core Fixed Income Return Analysis Summary**

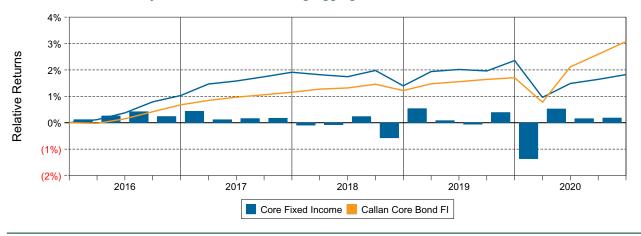
#### **Return Analysis**

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.

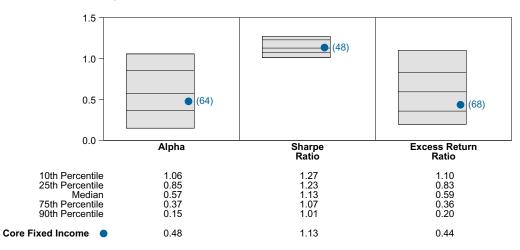
#### Performance vs Callan Core Bond Fixed Income (Gross)



### 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 December 31, 2020



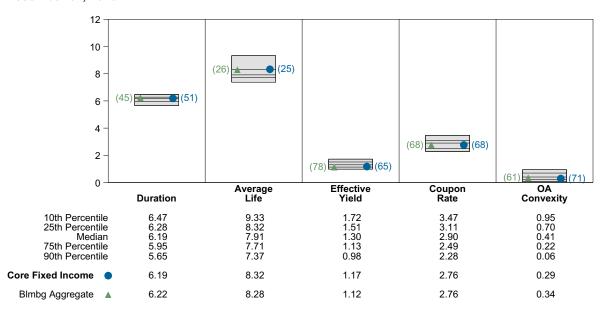


### **Core Fixed Income Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

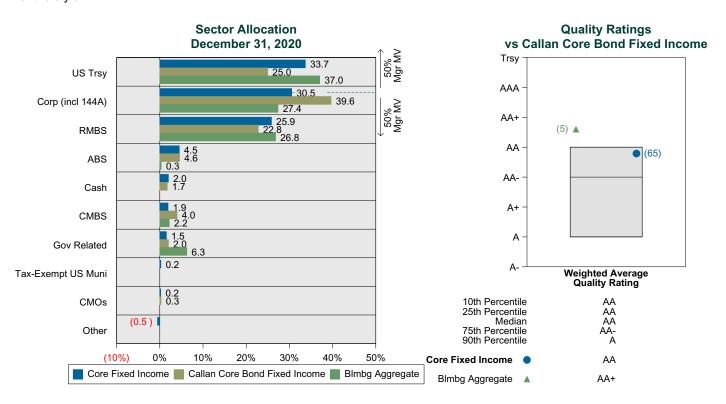
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Fixed Income Portfolio Characteristics** Rankings Against Callan Core Bond Fixed Income as of December 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.

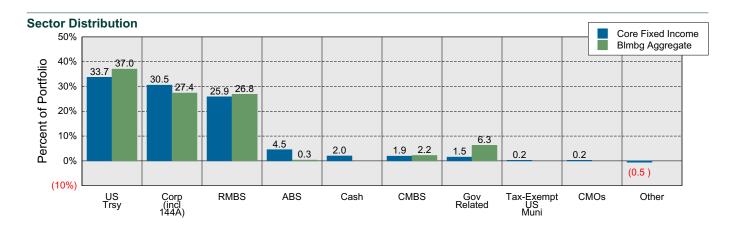


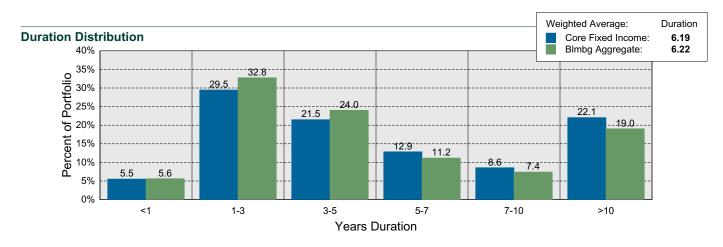


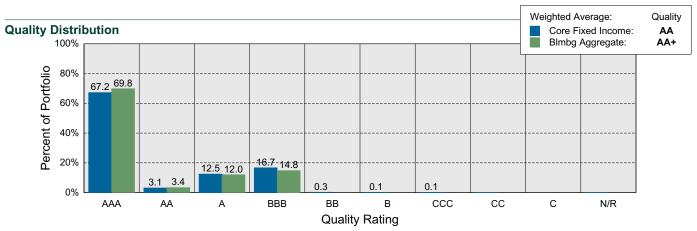
# **Core Fixed Income Portfolio Characteristics Summary** As of December 31, 2020

#### **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 December 31, 2020

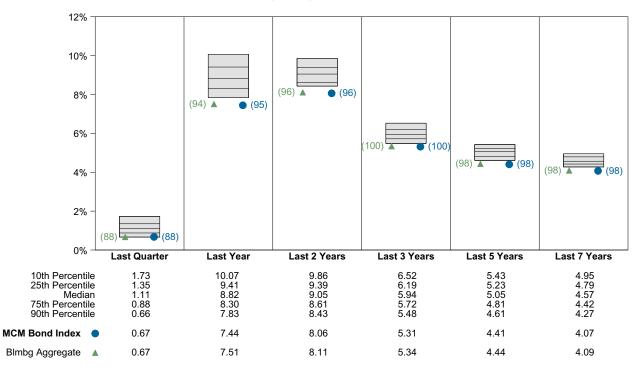
#### **Investment Philosophy**

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.

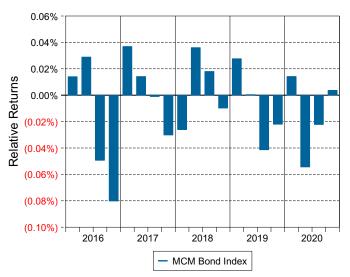
#### **Quarterly Summary and Highlights**

- MCM Bond Index's portfolio posted a 0.67% return for the quarter placing it in the 88 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 95 percentile for the last year.
- MCM Bond Index's portfolio outperformed the Blmbg Aggregate by 0.00% for the quarter and underperformed the Blmbg Aggregate for the year by 0.06%.

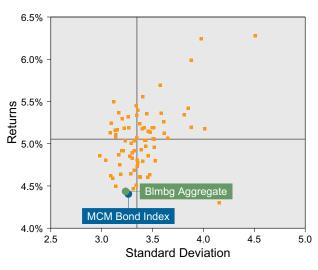
#### Performance vs Callan Core Bond Fixed Income (Gross)



#### Relative Return vs Blmbg Aggregate



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



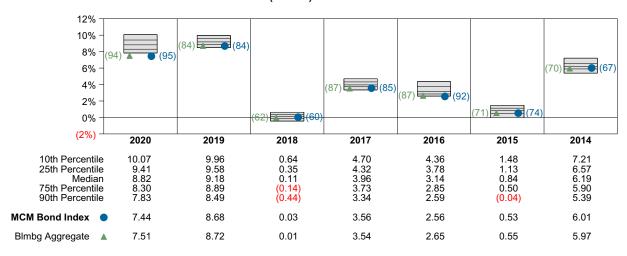


### **MCM Bond Index Return Analysis Summary**

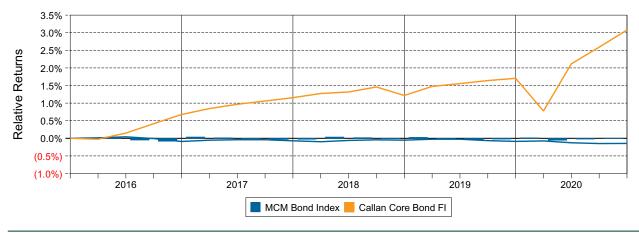
#### **Return Analysis**

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.

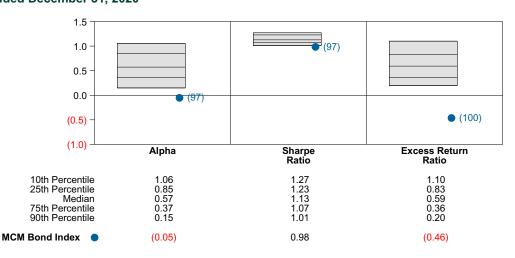
#### Performance vs Callan Core Bond Fixed Income (Gross)



### 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 December 31, 2020



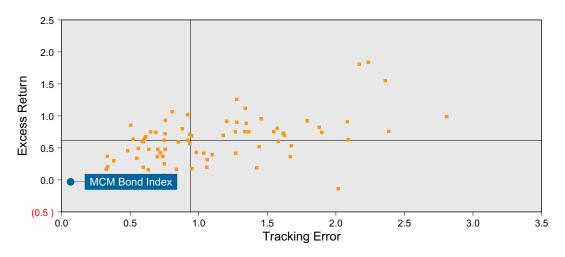


### **MCM Bond Index Risk Analysis Summary**

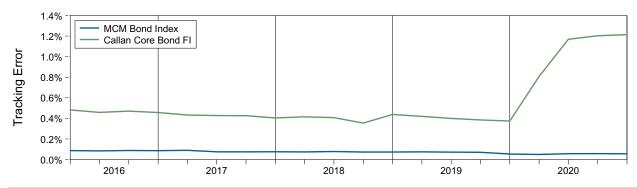
#### Risk Analysis

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.

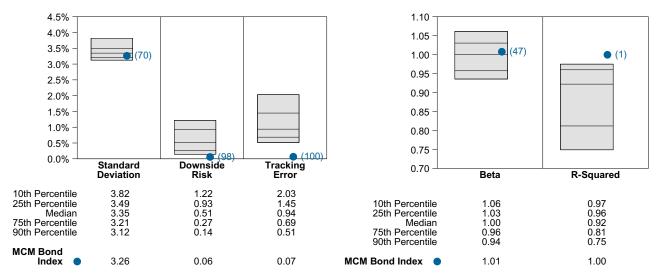
### Risk Analysis vs Callan Core Bond Fixed Income (Gross) Five Years Ended December 31, 2020



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 December 31, 2020

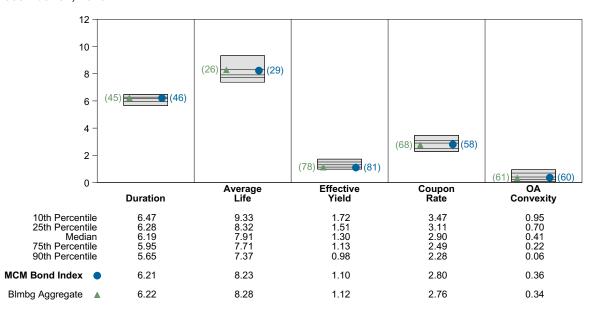


### **MCM Bond Index Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

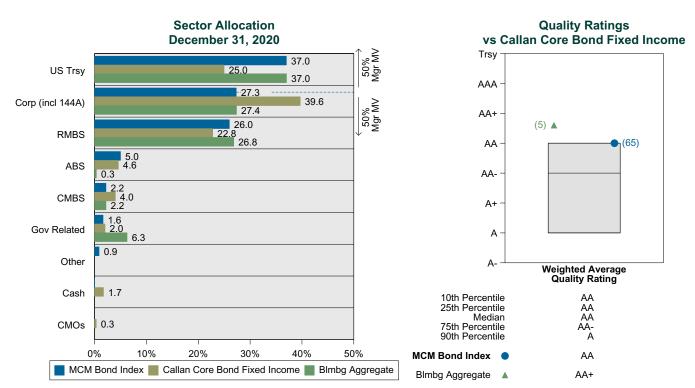
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Fixed Income Portfolio Characteristics** Rankings Against Callan Core Bond Fixed Income as of December 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.

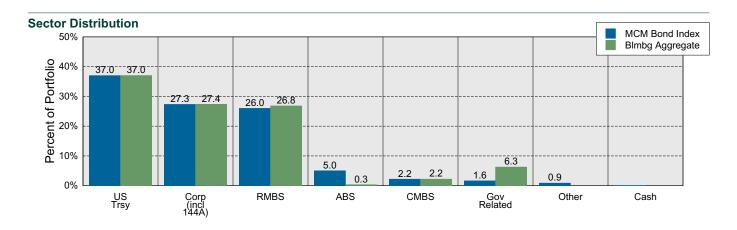


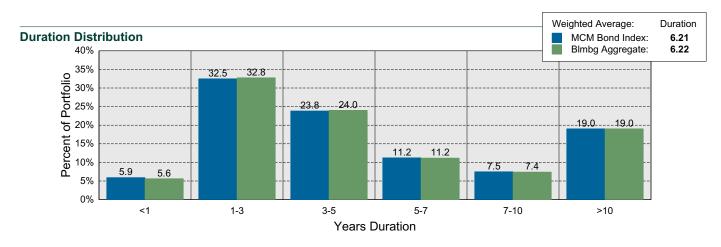


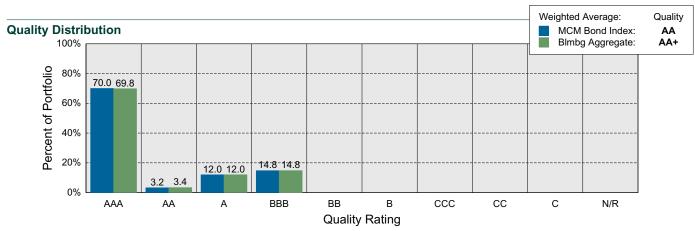
# **MCM Bond Index Portfolio Characteristics Summary** As of December 31, 2020

#### **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.







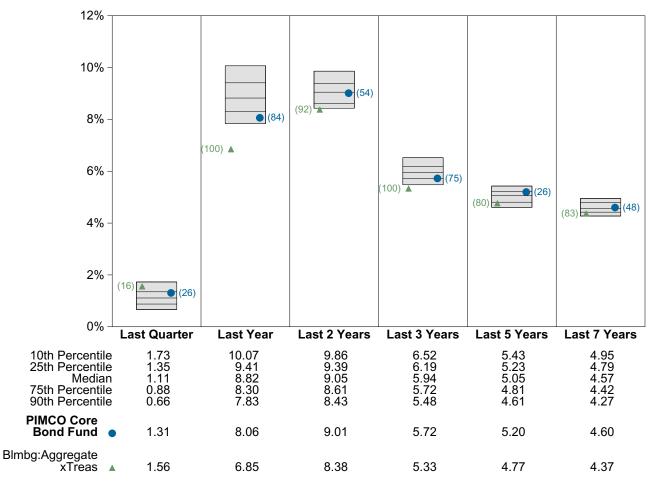


# **PIMCO Core Bond Fund** Period Ended December 31, 2020

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

- PIMCO Core Bond Fund's portfolio posted a 1.31% return for the quarter placing it in the 26 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 84 percentile for the last year.
- PIMCO Core Bond Fund's portfolio underperformed the Blmbg:Aggregate xTreas by 0.25% for the quarter and outperformed the Blmbg:Aggregate xTreas for the year by 1.21%.

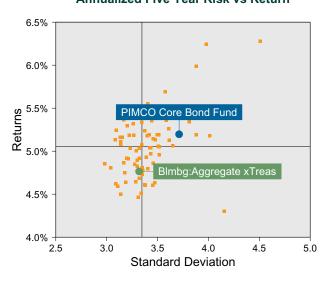
#### Performance vs Callan Core Bond Fixed Income (Gross)



#### Relative Return vs Blmbg:Aggregate xTreas

### 1.4% 1.2% 1.0% 0.8% Relative Returns 0.6% 0.4% 0.2% 0.0% (0.2%)(0.4%)(0.6%)2016 2017 2018 2019 2020 - PIMCO Core Bond Fund

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



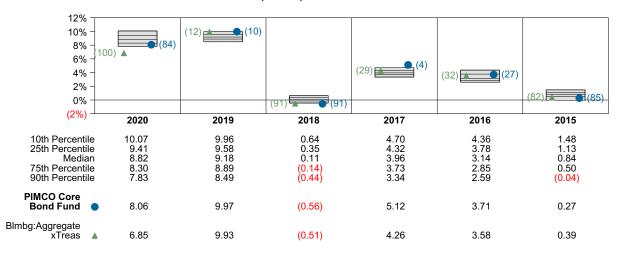


# **PIMCO Core Bond Fund Return Analysis Summary**

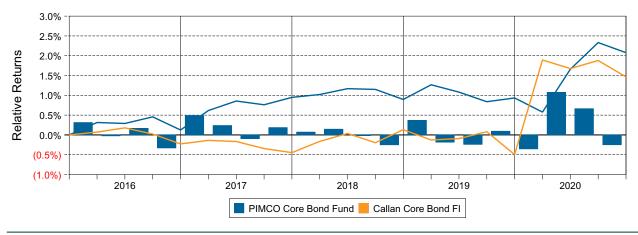
#### **Return Analysis**

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.

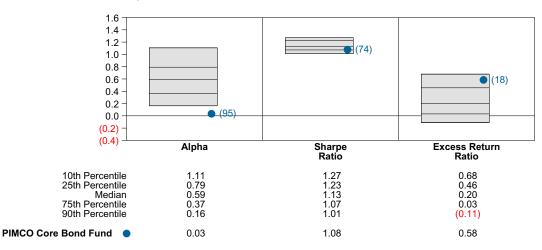
#### Performance vs Callan Core Bond Fixed Income (Gross)



### 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 December 31, 2020



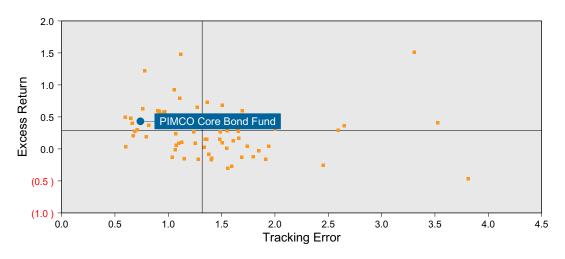


# **PIMCO Core Bond Fund Risk Analysis Summary**

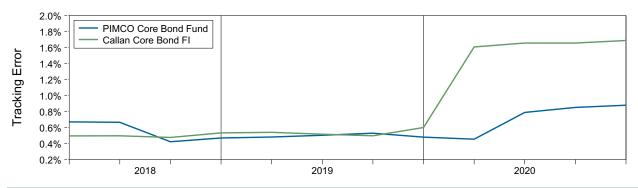
#### Risk Analysis

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.

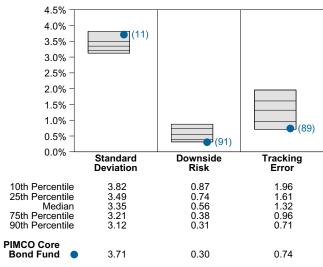
### Risk Analysis vs Callan Core Bond Fixed Income (Gross) Five Years Ended December 31, 2020

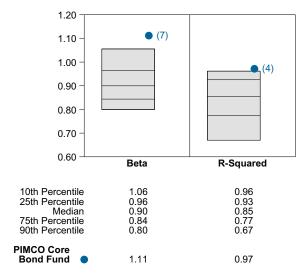


Rolling 12 Quarter Tracking Error vs Bloomberg Barclays Aggregate xTreasury



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





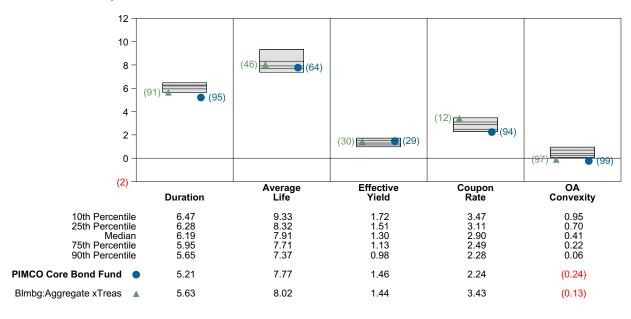


# **PIMCO Core Bond Fund Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

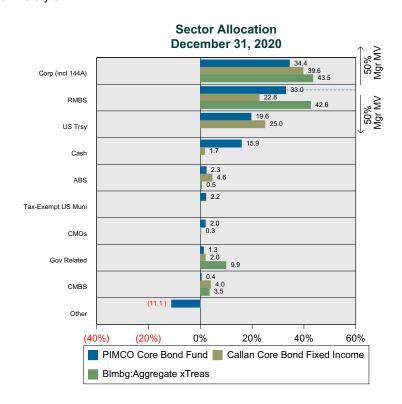
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

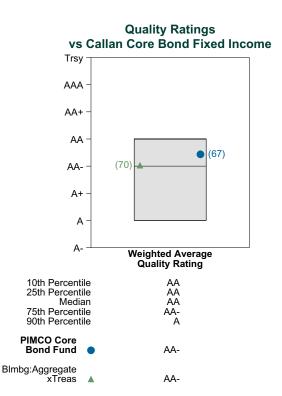
#### **Fixed Income Portfolio Characteristics** Rankings Against Callan Core Bond Fixed Income as of December 31, 2020



#### **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.



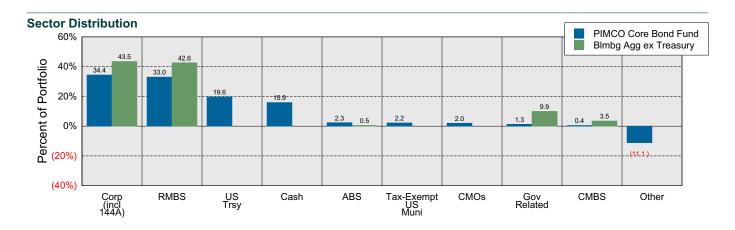


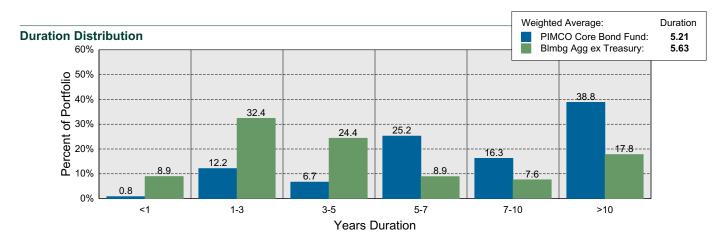


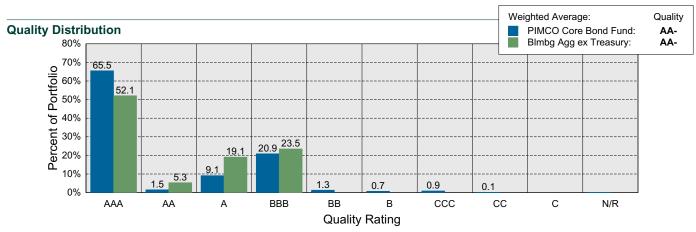
# **PIMCO Core Bond Fund Portfolio Characteristics Summary** As of December 31, 2020

#### **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.









### **BMO (TCH) Corp FI** Period Ended December 31, 2020

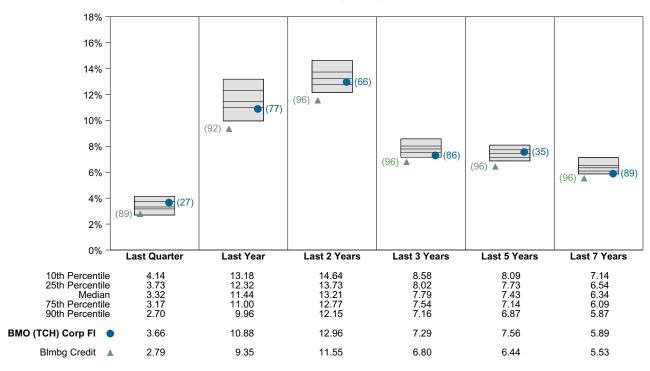
#### **Investment Philosophy**

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.

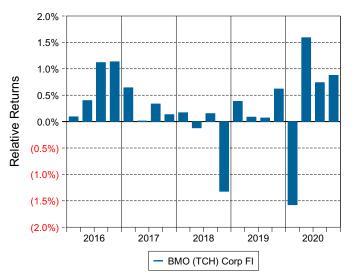
#### **Quarterly Summary and Highlights**

- BMO (TCH) Corp FI's portfolio posted a 3.66% return for the guarter placing it in the 27 percentile of the Callan Investment Grade Credit Fixed Inc group for the quarter and in the 77 percentile for the last year.
- BMO (TCH) Corp Fl's portfolio outperformed the Blmbg Credit by 0.87% for the guarter and outperformed the Blmbg Credit for the year by 1.53%.

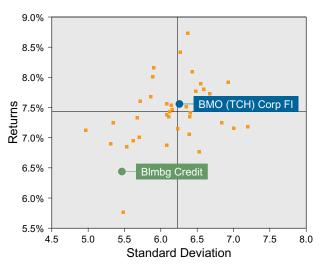
#### Performance vs Callan Investment Grade Credit Fixed Inc (Gross)



#### Relative Return vs Blmbg Credit



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



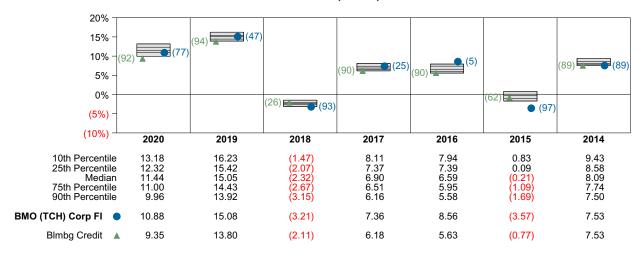


# **BMO (TCH) Corp FI Return Analysis Summary**

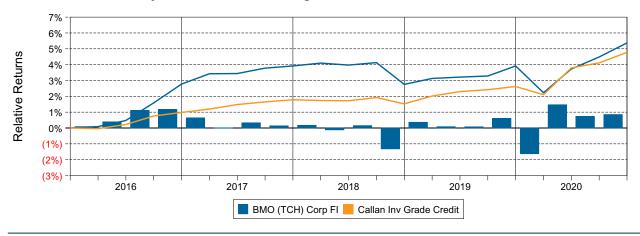
#### **Return Analysis**

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.

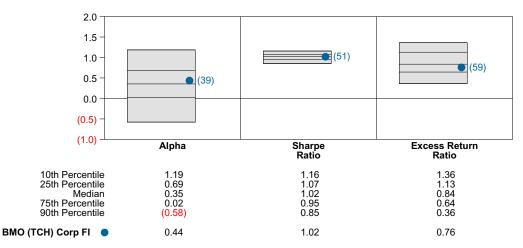
#### Performance vs Callan Investment Grade Credit Fixed Inc (Gross)



#### **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 December 31, 2020



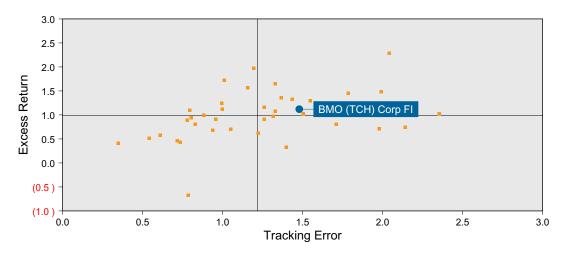


# **BMO (TCH) Corp FI Risk Analysis Summary**

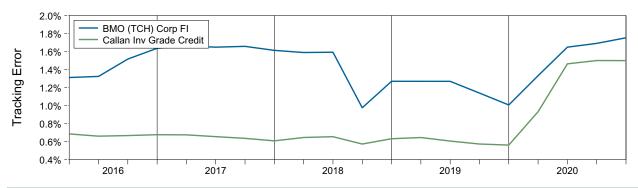
#### **Risk Analysis**

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.

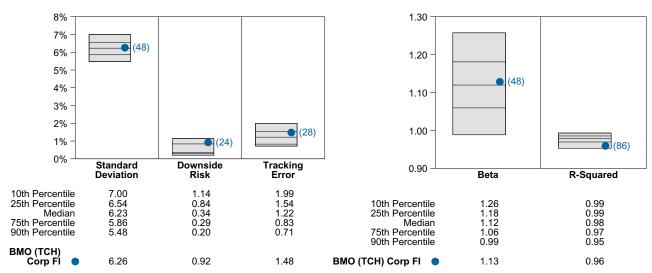
### Risk Analysis vs Callan Investment Grade Credit Fixed Inc (Gross) Five Years Ended December 31, 2020



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 December 31, 2020

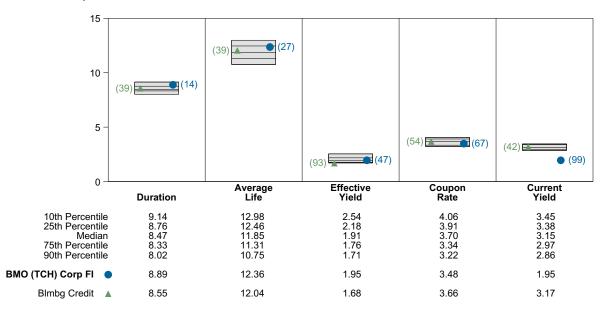


### **BMO (TCH) Corp FI Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

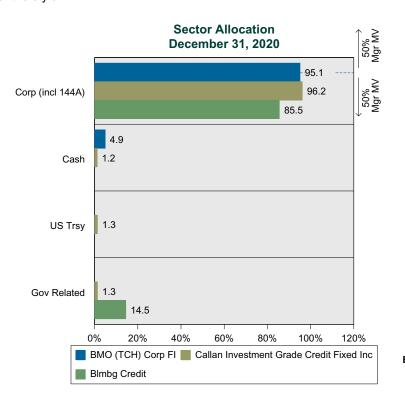
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

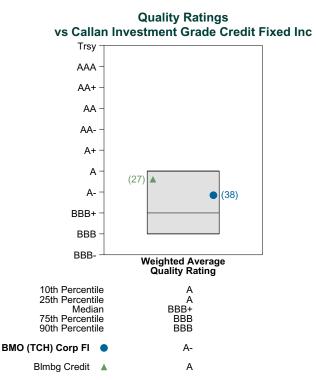
#### **Fixed Income Portfolio Characteristics** Rankings Against Callan Investment Grade Credit Fixed Inc as of December 31, 2020



#### 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.





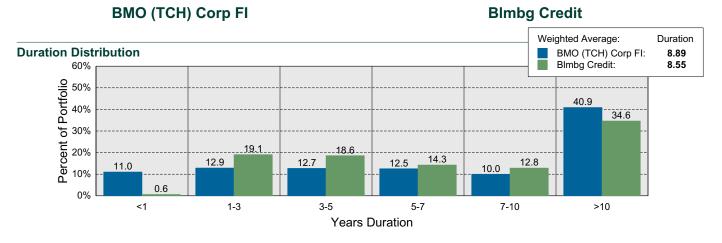


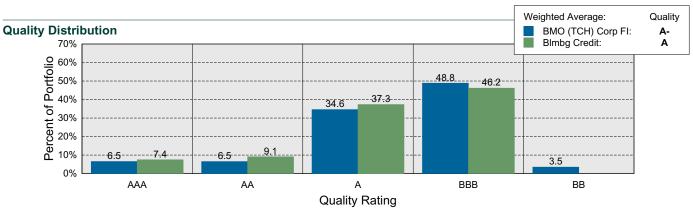
# **BMO (TCH) Corp FI Portfolio Characteristics Summary** As of December 31, 2020

#### **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.





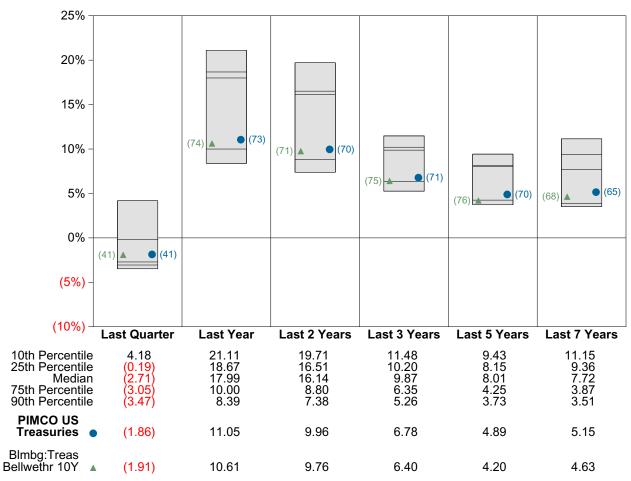


# **PIMCO US Treasuries** Period Ended December 31, 2020

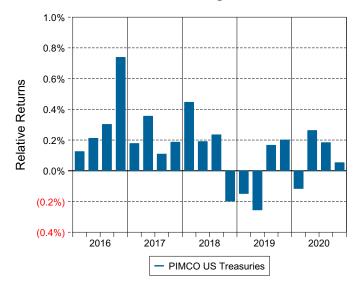
#### **Quarterly Summary and Highlights**

- PIMCO US Treasuries's portfolio posted a (1.86)% return for the quarter placing it in the 41 percentile of the Callan US Treas Bond Funds group for the guarter and in the 73 percentile for the last year.
- PIMCO US Treasuries's portfolio outperformed the Blmbg:Treas Bellwethr 10Y by 0.05% for the quarter and outperformed the Blmbg:Treas Bellwethr 10Y for the year by 0.44%.

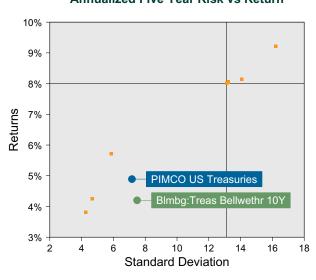
### Performance vs Callan US Treas Bond Funds (Gross)



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



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



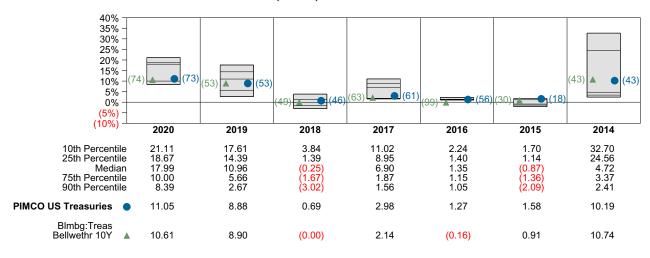


# **PIMCO US Treasuries Return Analysis Summary**

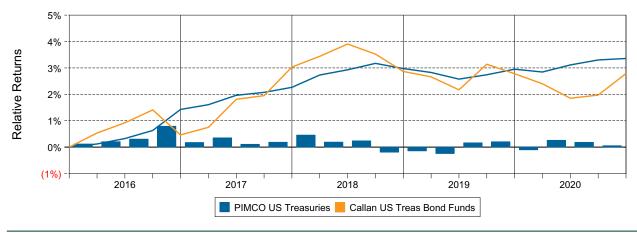
#### **Return Analysis**

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.

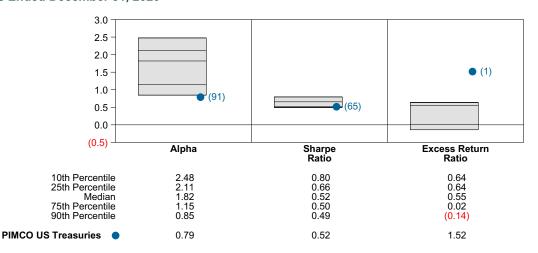
### Performance vs Callan US Treas Bond Funds (Gross)



### 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 December 31, 2020



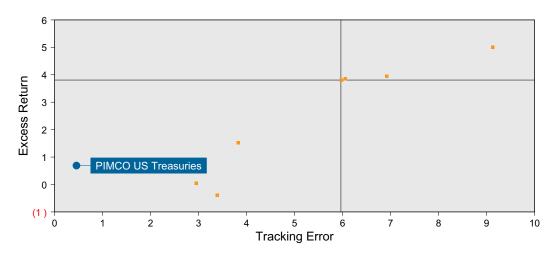


# **PIMCO US Treasuries Risk Analysis Summary**

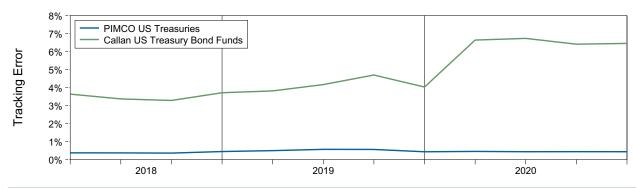
#### Risk Analysis

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.

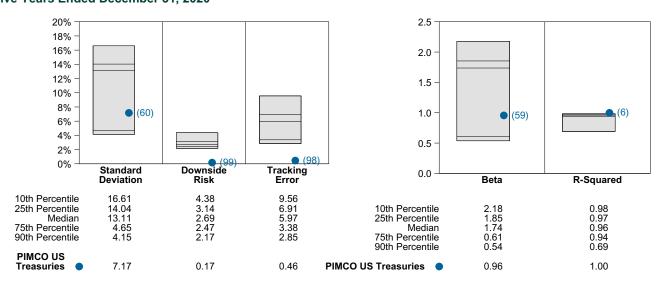
### Risk Analysis vs Callan US Treasury Bond Funds (Gross) Five Years Ended December 31, 2020



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



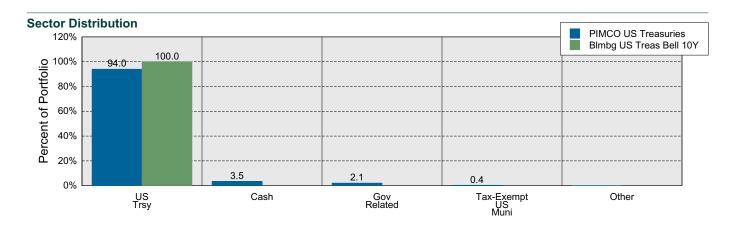
Risk Statistics Rankings vs Bloomberg Barclays Treas Bellwethr 10Y Rankings Against Callan US Treasury Bond Funds (Gross) Five Years Ended December 31, 2020

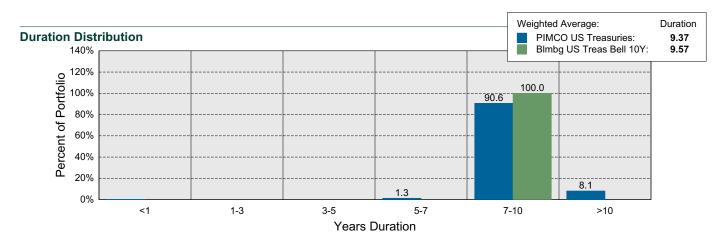


## **PIMCO US Treasuries Portfolio Characteristics Summary** As of December 31, 2020

### **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.







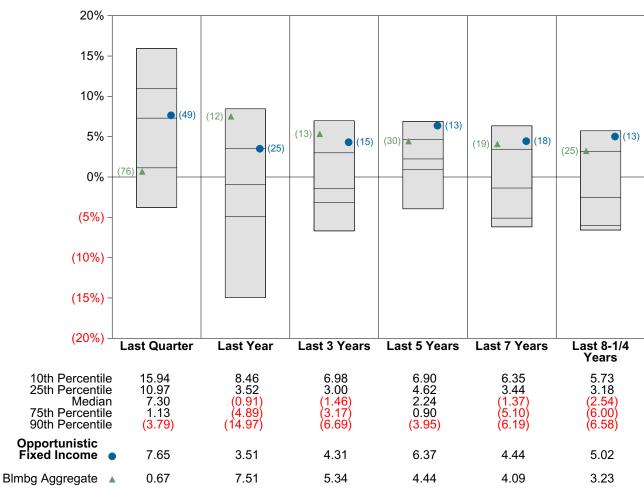


## **Opportunistic Fixed Income** Period Ended December 31, 2020

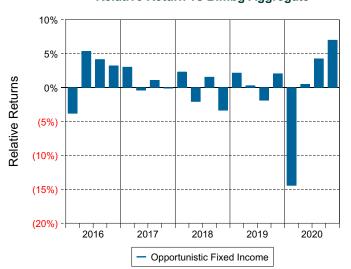
#### **Quarterly Summary and Highlights**

- Opportunistic Fixed Income's portfolio posted a 7.65% return for the quarter placing it in the 49 percentile of the Callan Alternative Investments DB group for the quarter and in the 25 percentile for the last year.
- Opportunistic Fixed Income's portfolio outperformed the Blmbg Aggregate by 6.98% for the quarter and underperformed the Blmbg Aggregate for the year by 4.00%.

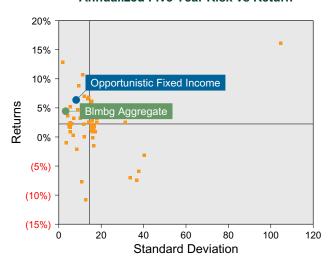
## Performance vs Callan Alternative Investments DB (Gross)



#### Relative Return vs Blmbg Aggregate



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



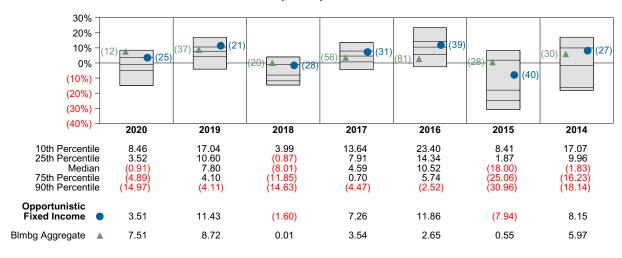


## **Opportunistic Fixed Income Return Analysis Summary**

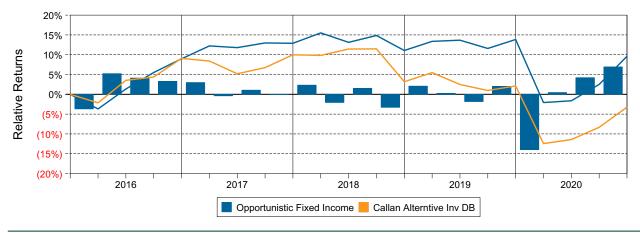
#### **Return Analysis**

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.

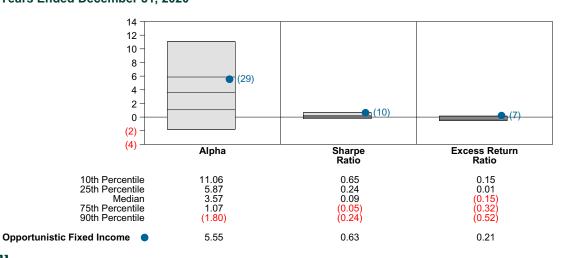
### Performance vs Callan Alternative Investments DB (Gross)



## 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 December 31, 2020



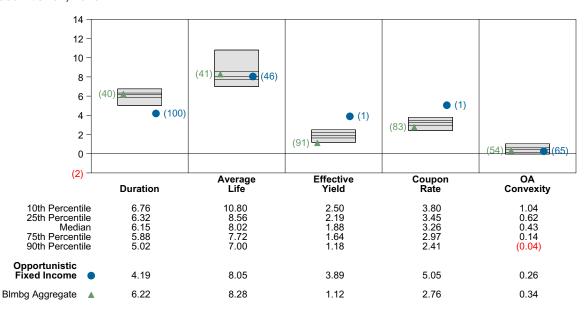


## **Opportunistic Fixed Income Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

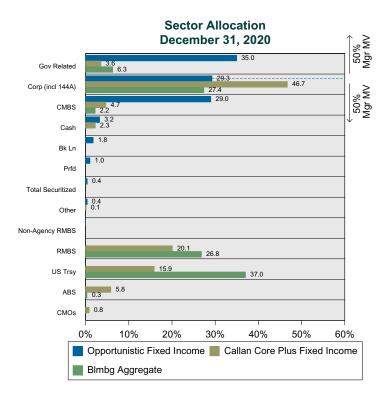
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

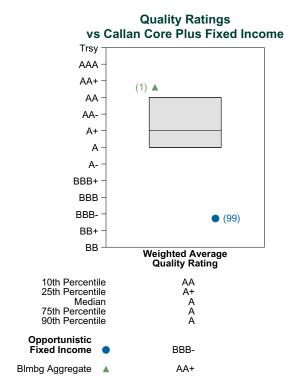
#### **Fixed Income Portfolio Characteristics** Rankings Against Callan Core Plus Fixed Income as of December 31, 2020



#### 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.



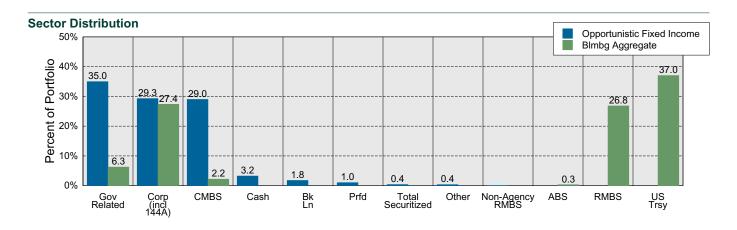


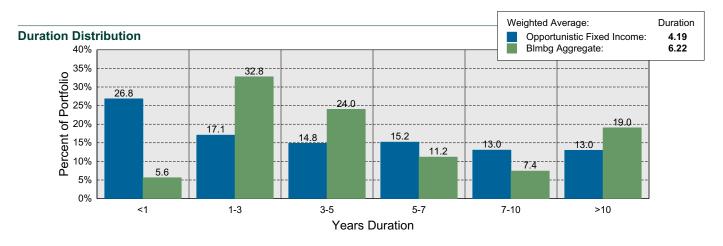


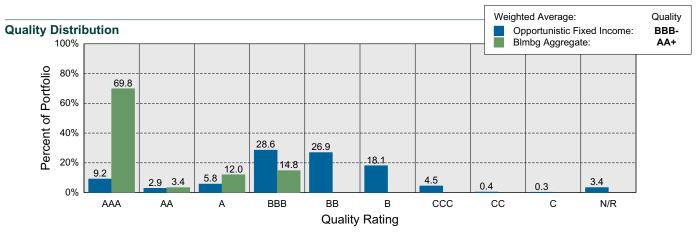
## **Opportunistic Fixed Income Portfolio Characteristics Summary** As of December 31, 2020

### **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.







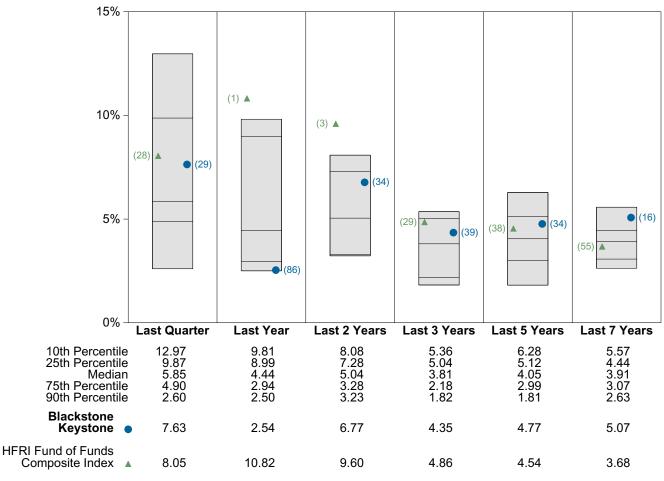


## **Blackstone Keystone** Period Ended December 31, 2020

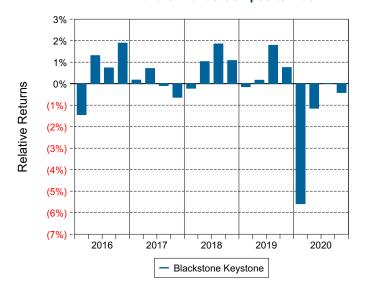
#### **Quarterly Summary and Highlights**

- Blackstone Keystone's portfolio posted a 7.63% return for the guarter placing it in the 29 percentile of the Callan Absolute Rtn Hedge Fund of Funds group for the quarter and in the 86 percentile for the last year.
- Blackstone Keystone's portfolio underperformed the HFRI Fund of Funds Composite Index by 0.42% for the quarter and underperformed the HFRI Fund of Funds Composite Index for the year by 8.28%.

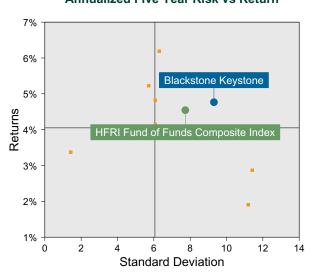
### Performance vs Callan Absolute Rtn Hedge Fund of Funds (Net)



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



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



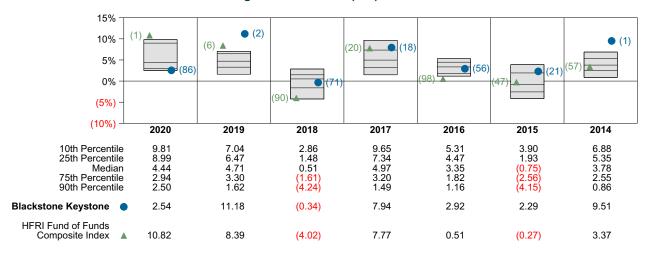


## **Blackstone Keystone Return Analysis Summary**

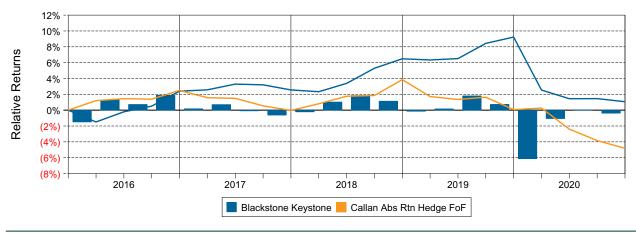
#### **Return Analysis**

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.

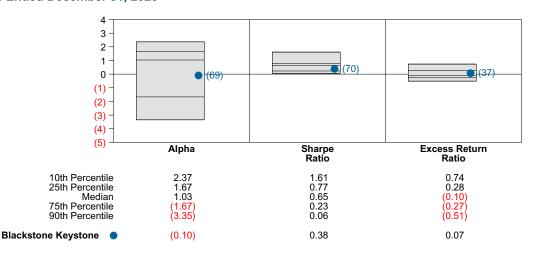
#### Performance vs Callan Absolute Rtn Hedge Fund of Funds (Net)



#### 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 December 31, 2020



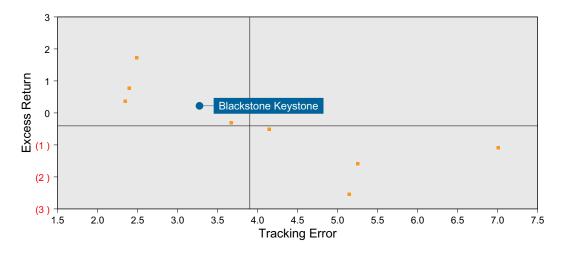


## **Blackstone Keystone Risk Analysis Summary**

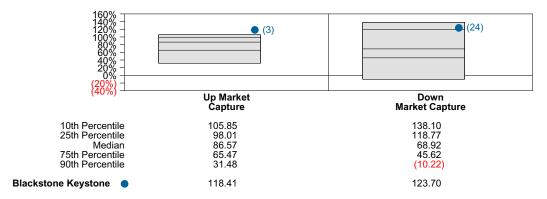
#### Risk Analysis

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.

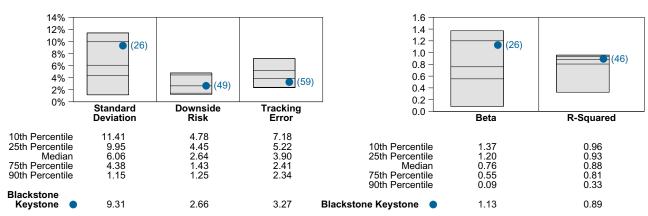
#### Risk Analysis vs Callan Absolute Rtn Hedge Fund of Funds (Net) Five Years Ended December 31, 2020



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





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

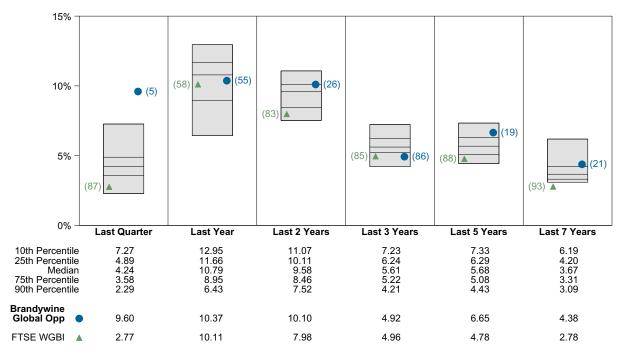
#### **Investment Philosophy**

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.

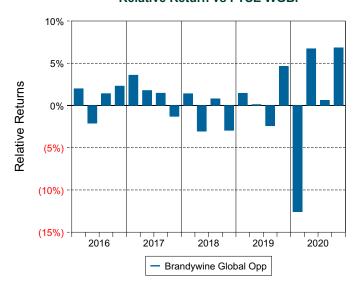
#### **Quarterly Summary and Highlights**

- Brandywine Global Opp's portfolio posted a 9.60% return for the quarter placing it in the 5 percentile of the Callan Global Fixed Income (Unhedged) group for the quarter and in the 55 percentile for the last year.
- Brandywine Global Opp's portfolio outperformed the FTSE WGBI by 6.83% for the quarter and outperformed the FTSE WGBI for the year by 0.26%.

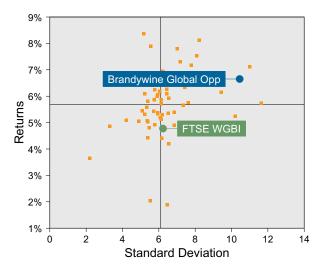
#### Performance vs Callan Global Fixed Income (Unhedged) (Gross)



### **Relative Return vs FTSE WGBI**



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

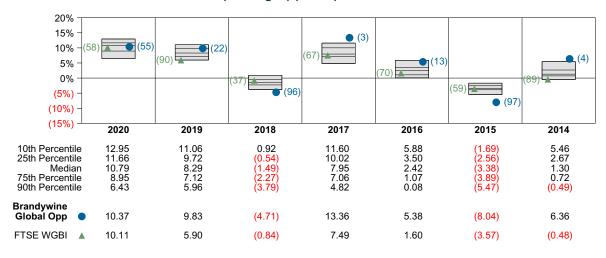


## **Brandywine Global Opp Return Analysis Summary**

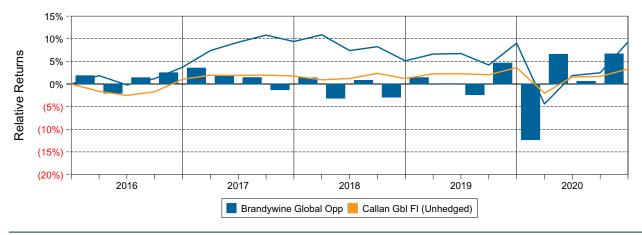
#### **Return Analysis**

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.

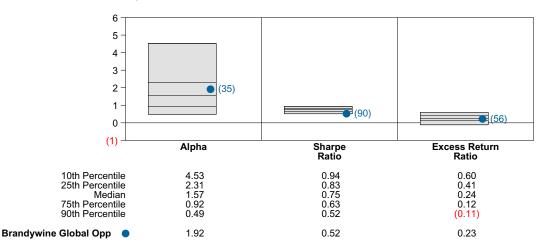
### Performance vs Callan Global Fixed Income (Unhedged) (Gross)



## **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 December 31, 2020



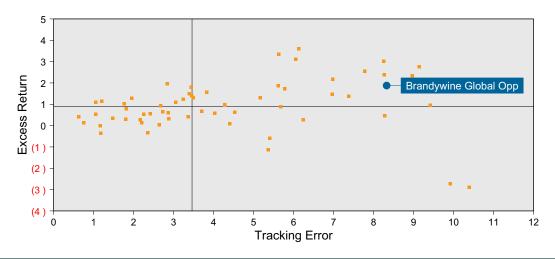


## **Brandywine Global Opp Risk Analysis Summary**

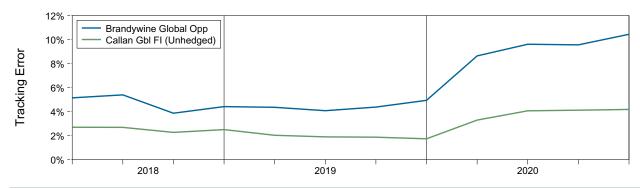
#### **Risk Analysis**

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.

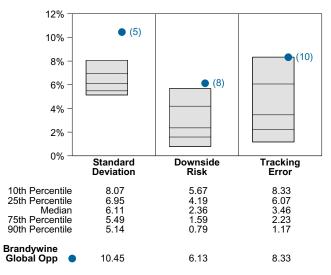
### Risk Analysis vs Callan Global Fixed Income (Unhedged) (Gross) Five Years Ended December 31, 2020

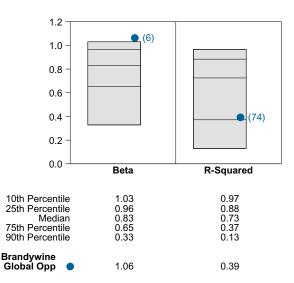


Rolling 12 Quarter Tracking Error vs FTSE World Gov Bond Index (WGBI)



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





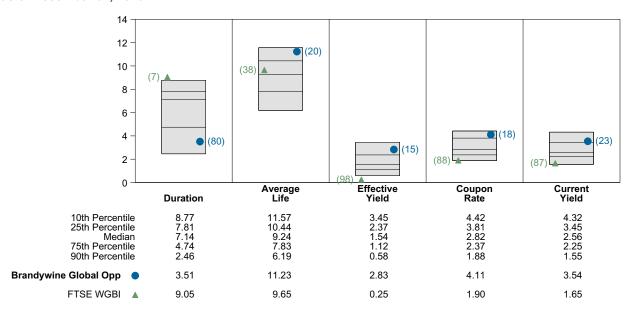


## **Brandywine Global Opp Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

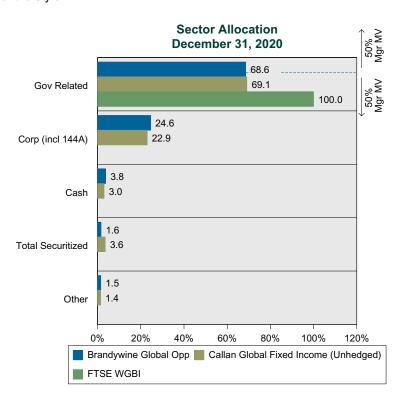
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

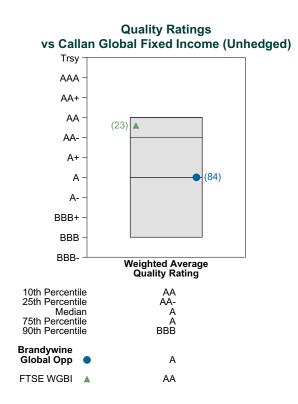
#### **Fixed Income Portfolio Characteristics** Rankings Against Callan Global Fixed Income (Unhedged) as of December 31, 2020



#### 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.



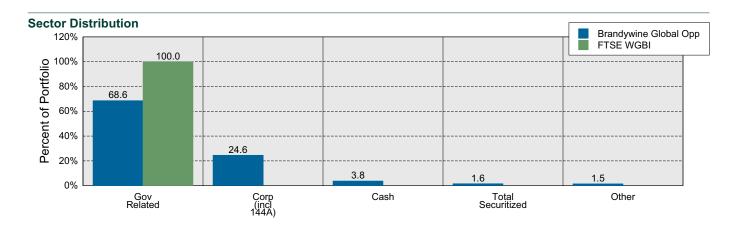


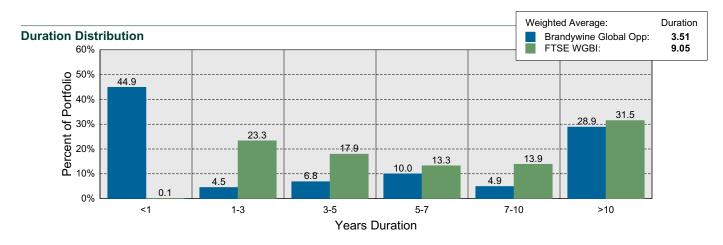


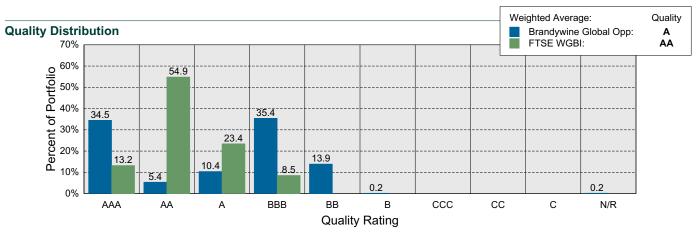
## **Brandywine Global Opp Portfolio Characteristics Summary** As of December 31, 2020

### **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.







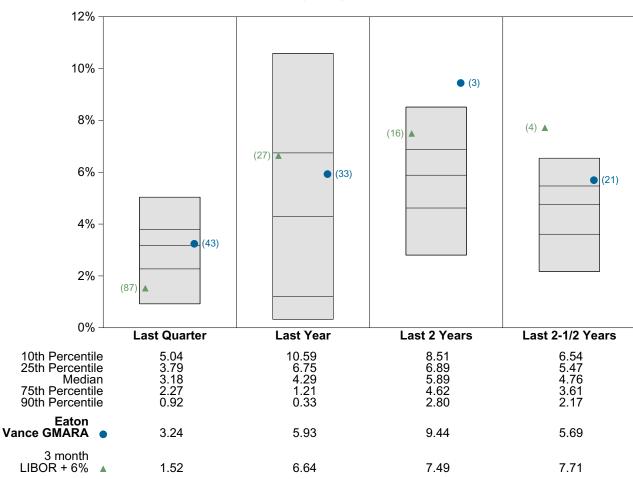


## **Eaton Vance GMARA** Period Ended December 31, 2020

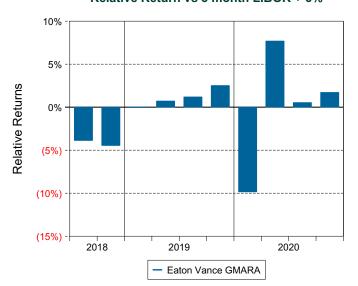
#### **Quarterly Summary and Highlights**

- Eaton Vance GMARA's portfolio posted a 3.24% return for the quarter placing it in the 43 percentile of the Callan Unconstrained Fixed Income group for the quarter and in the 33 percentile for the last year.
- Eaton Vance GMARA's portfolio outperformed the 3 month LIBOR + 6% by 1.72% for the quarter and underperformed the 3 month LIBOR + 6% for the year by 0.71%.

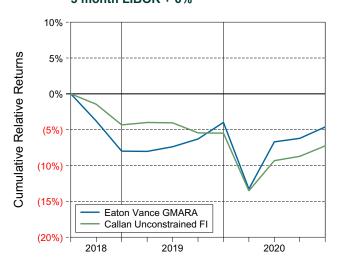
## Performance vs Callan Unconstrained Fixed Income (Gross)



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



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





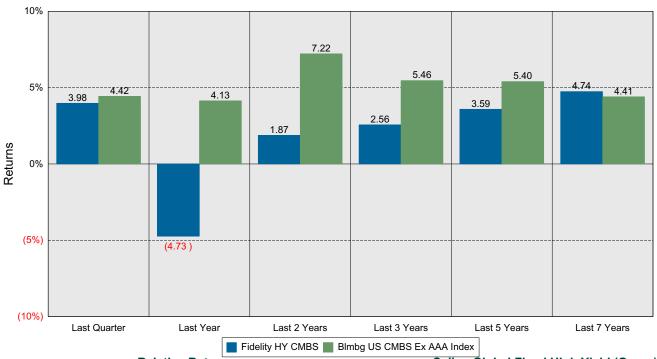
## Fidelity HY CMBS Period Ended December 31, 2020

#### **Investment Philosophy**

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

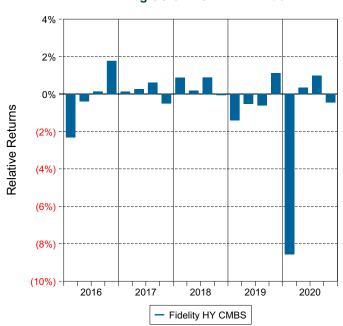
## **Quarterly Summary and Highlights**

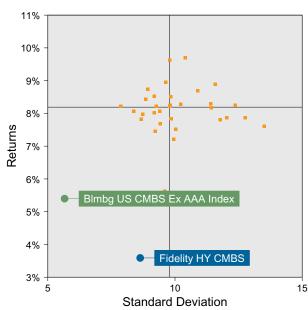
- Fidelity HY CMBS's portfolio posted a 3.98% return for the quarter placing it in the 100 percentile of the Callan Global Fixed High Yield group for the quarter and in the 99 percentile for the last year.
- Fidelity HY CMBS's portfolio underperformed the Blmbg US CMBS Ex AAA Index by 0.44% for the quarter and underperformed the Blmbg US CMBS Ex AAA Index for the year by 8.86%.



Relative Returns vs Blmbg US CMBS Ex AAA Index

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





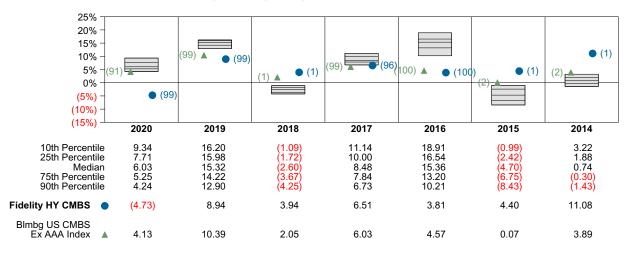


## Fidelity HY CMBS **Return Analysis Summary**

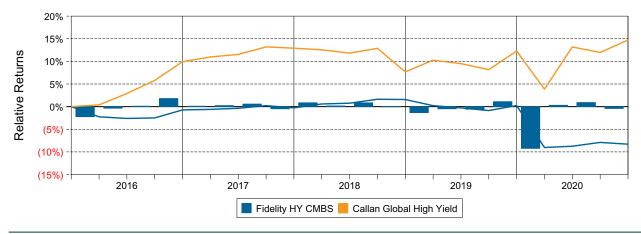
#### **Return Analysis**

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.

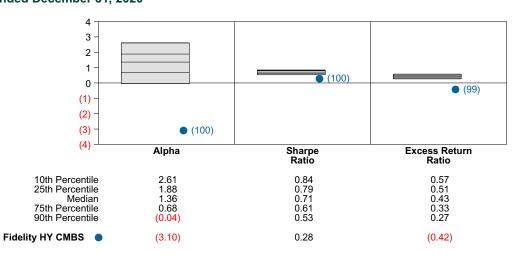
## Performance vs Callan Global Fixed High Yield (Gross)



## Cumulative and Quarterly Relative Return vs Blmbg US CMBS Ex AAA Index



Risk Adjusted Return Measures vs Blmbg US CMBS Ex AAA Index Rankings Against Callan Global Fixed High Yield (Gross) Five Years Ended December 31, 2020



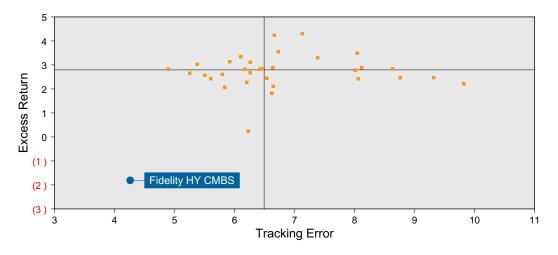


## Fidelity HY CMBS **Risk Analysis Summary**

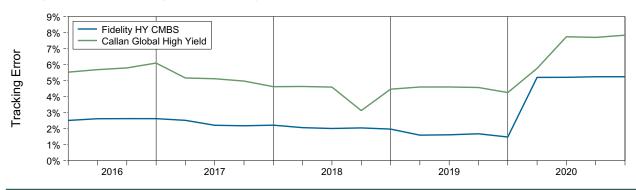
#### **Risk Analysis**

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.

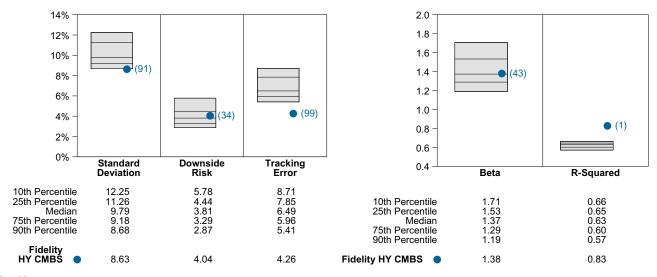
### Risk Analysis vs Callan Global Fixed High Yield (Gross) Five Years Ended December 31, 2020



Rolling 12 Quarter Tracking Error vs Blmbg US CMBS Ex AAA Index



Risk Statistics Rankings vs Blmbg US CMBS Ex AAA Index Rankings Against Callan Global Fixed High Yield (Gross) Five Years Ended December 31, 2020

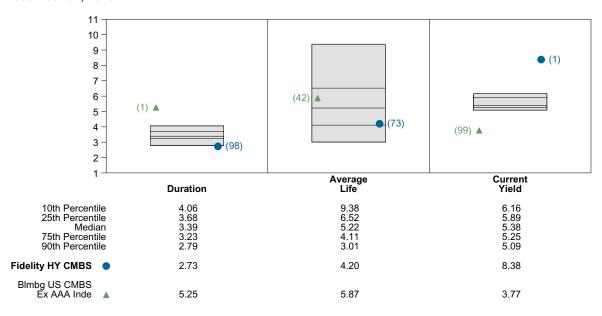


## **Fidelity HY CMBS Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

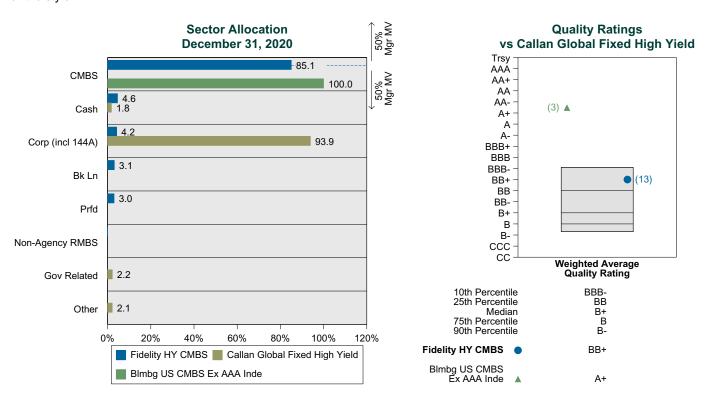
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Fixed Income Portfolio Characteristics** Rankings Against Callan Global Fixed High Yield as of December 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.

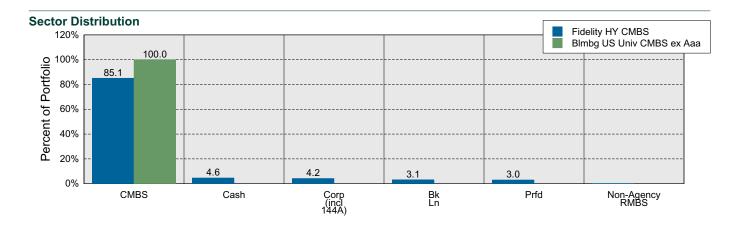


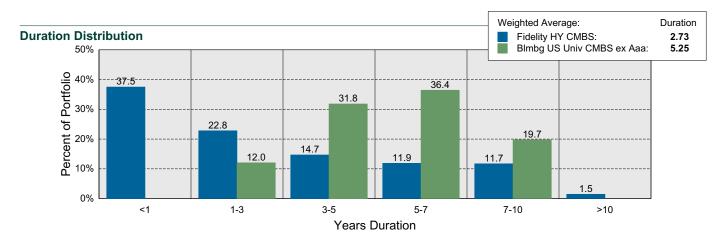


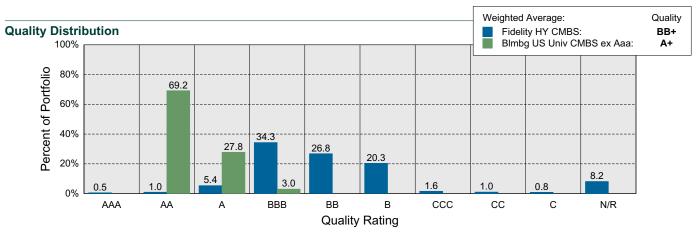
## **Fidelity HY CMBS Portfolio Characteristics Summary** As of December 31, 2020

### **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.





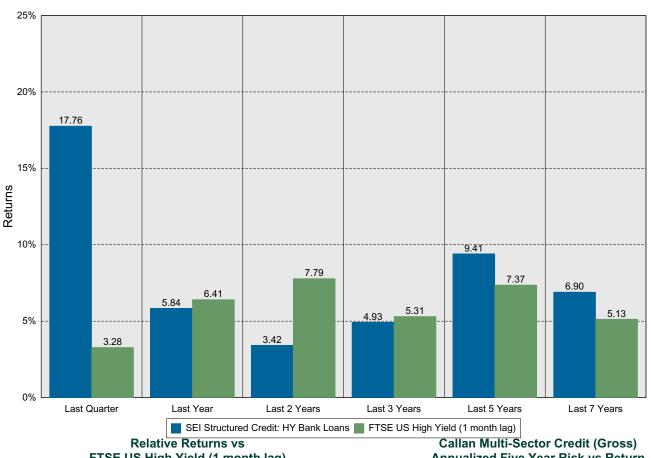




## **SEI Structured Credit: HY Bank Loans** Period Ended December 31, 2020

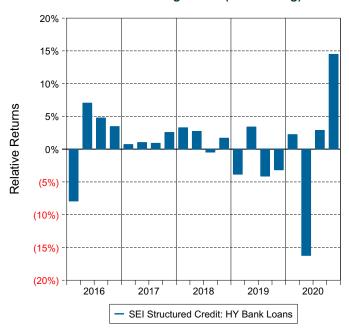
#### **Quarterly Summary and Highlights**

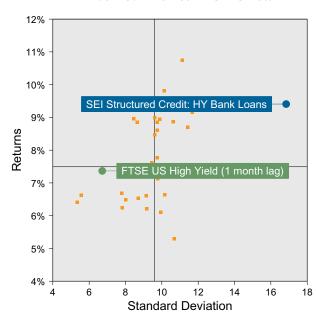
- SEI Structured Credit: HY Bank Loans's portfolio posted a 17.76% return for the quarter placing it in the 1 percentile of the Callan Multi-Sector Credit group for the quarter and in the 54 percentile for the last year.
- SEI Structured Credit: HY Bank Loans's portfolio outperformed the FTSE US High Yield (1 month lag) by 14.48% for the quarter and underperformed the FTSE US High Yield (1 month lag) for the year by 0.57%.



FTSE US High Yield (1 month lag)

**Annualized Five Year Risk vs Return** 





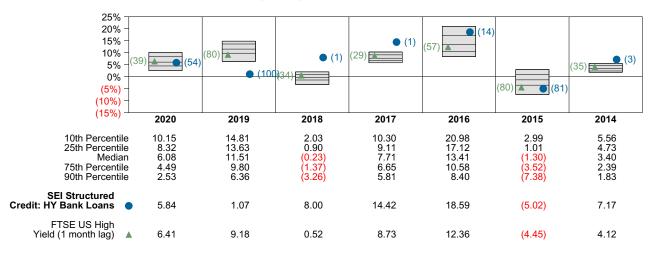


## **SEI Structured Credit: HY Bank Loans Return Analysis Summary**

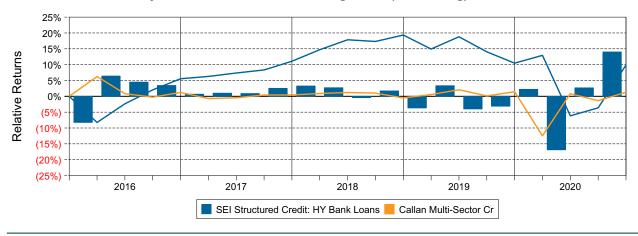
#### **Return Analysis**

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.

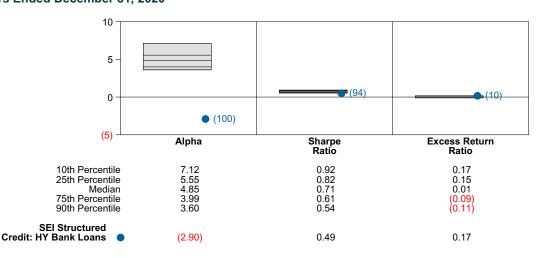
## Performance vs Callan Multi-Sector Credit (Gross)



### 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 December 31, 2020



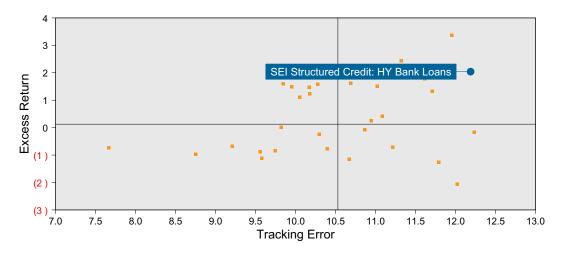


## **SEI Structured Credit: HY Bank Loans Risk Analysis Summary**

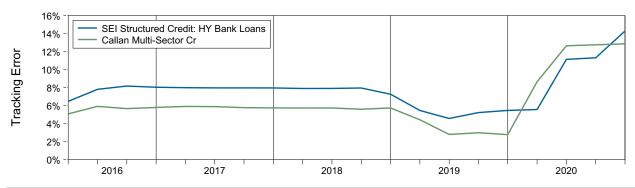
#### **Risk Analysis**

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.

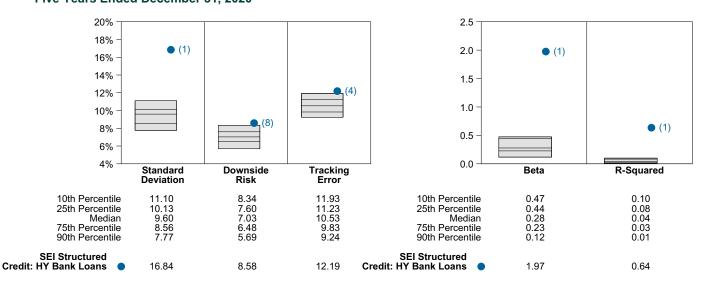
### Risk Analysis vs Callan Multi-Sector Credit (Gross) Five Years Ended December 31, 2020



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 December 31, 2020



## **Stone Harbor EMD** Period Ended December 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 7.58% return for the quarter placing it in the 55 percentile of the Callan Emerging Debt USD group for the quarter and in the 38 percentile for the last year.
- Stone Harbor EMD's portfolio outperformed the JPM EMBI Global by 2.10% for the guarter and outperformed the JPM EMBI Global for the year by 1.40%.

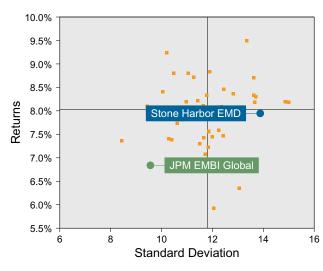
## Performance vs Callan Emerging Debt USD (Gross)



#### Relative Return vs JPM EMBI Global

# 8% 4% Relative Returns 2% 0% (4%)(8%)2016 2017 2018 2019 2020 Stone Harbor EMD

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



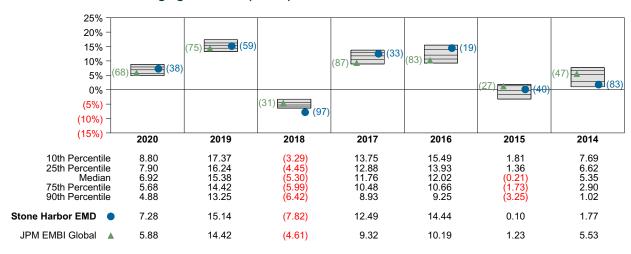


## **Stone Harbor EMD Return Analysis Summary**

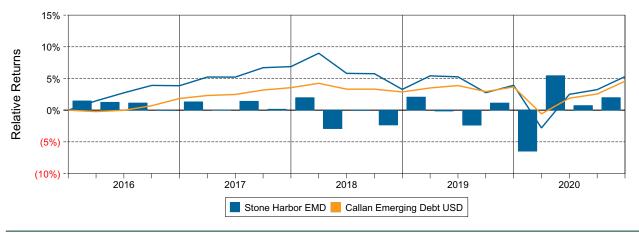
#### **Return Analysis**

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.

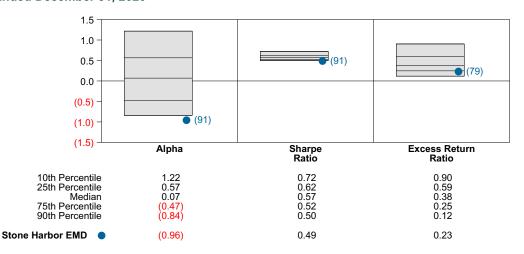
#### Performance vs Callan Emerging Debt USD (Gross)



### **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 December 31, 2020



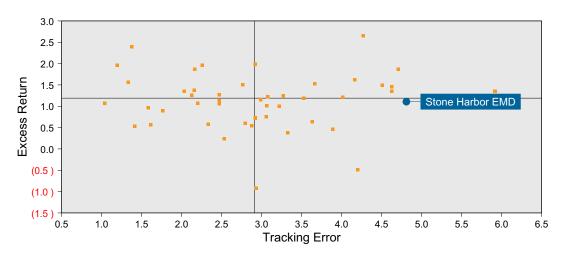


## **Stone Harbor EMD Risk Analysis Summary**

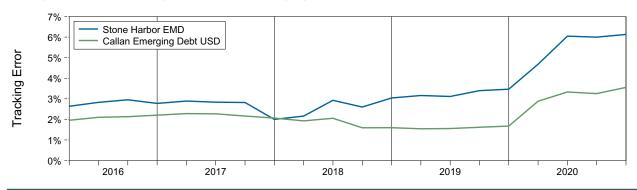
#### Risk Analysis

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.

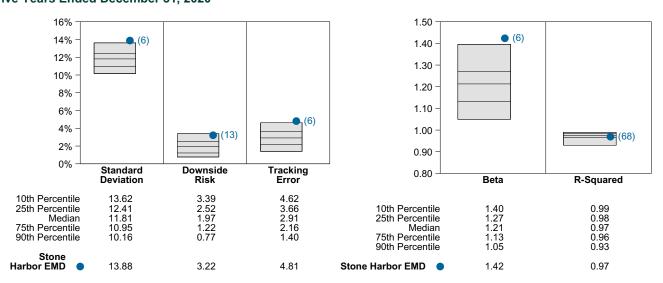
### Risk Analysis vs Callan Emerging Debt USD (Gross) Five Years Ended December 31, 2020



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 December 31, 2020

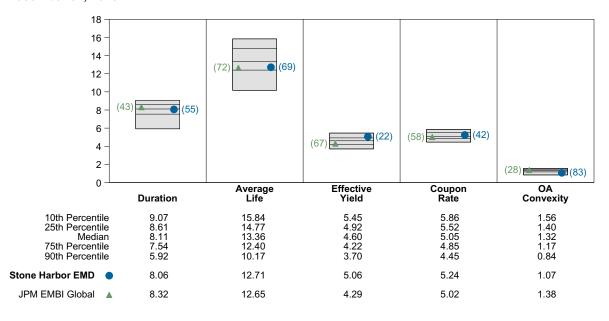


## **Stone Harbor EMD Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

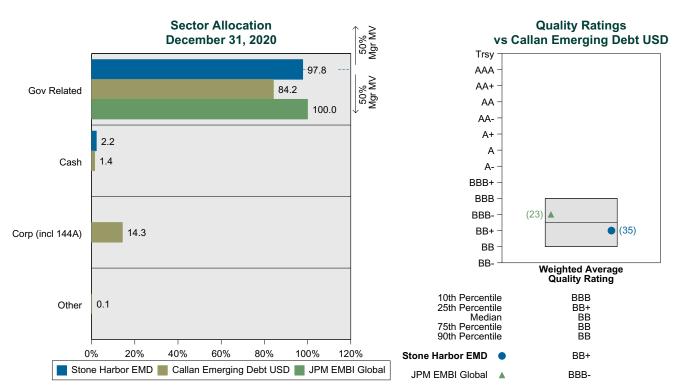
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Fixed Income Portfolio Characteristics** Rankings Against Callan Emerging Debt USD as of December 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.

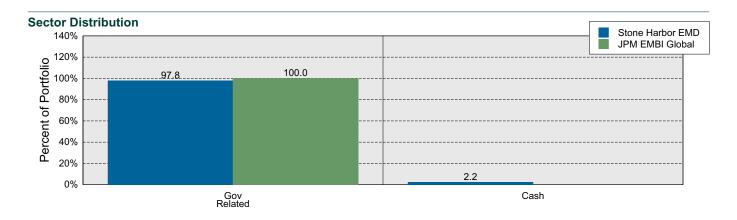


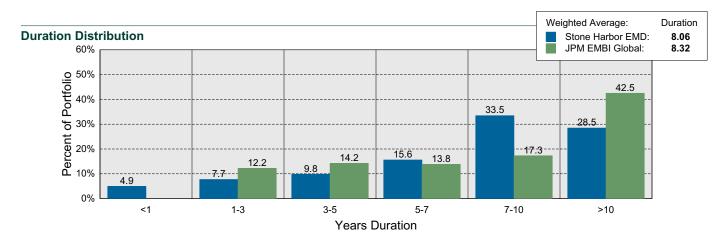


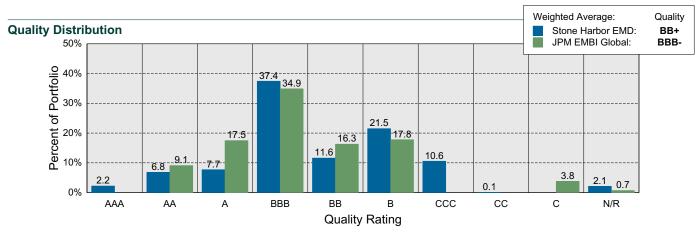
## **Stone Harbor EMD Portfolio Characteristics Summary** As of December 31, 2020

### **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.







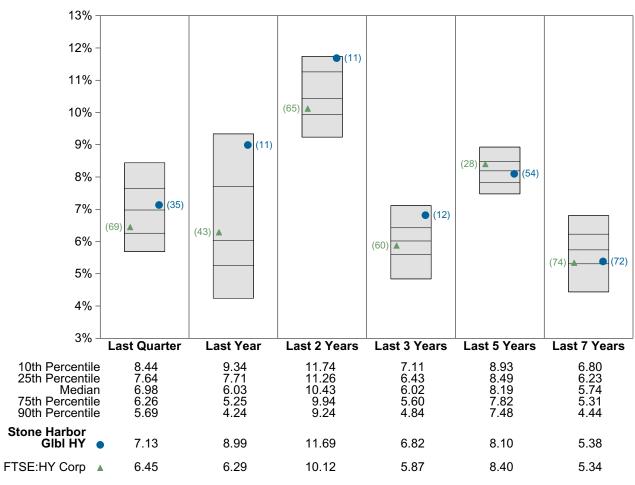


## Stone Harbor GlbI HY Period Ended December 31, 2020

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

- Stone Harbor GlbI HY's portfolio posted a 7.13% return for the quarter placing it in the 35 percentile of the Callan Global Fixed High Yield group for the quarter and in the 11 percentile for the last year.
- Stone Harbor Glbl HY's portfolio outperformed the FTSE:HY Corp by 0.69% for the quarter and outperformed the FTSE:HY Corp for the year by 2.70%.

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



## Relative Return vs FTSE:HY Corp

## 2.0% 1.5% 1.0% 0.5% Relative Returns 0.0% (1.0%)(1.5%)(2.0%)(2.5%)(3.0%)2016 2017 2018 2019 2020 Stone Harbor Glbl HY

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



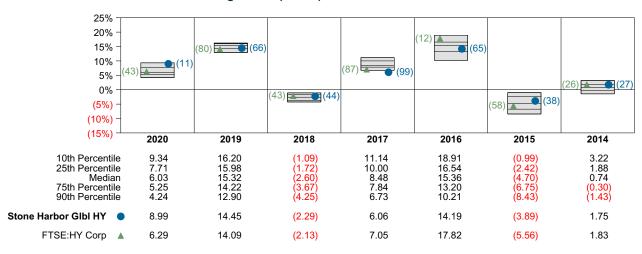


## **Stone Harbor GlbI HY Return Analysis Summary**

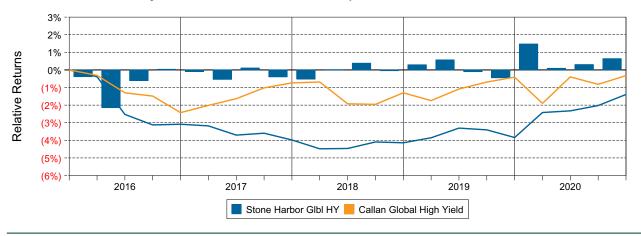
#### **Return Analysis**

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.

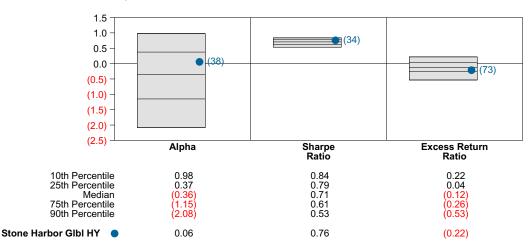
### Performance vs Callan Global Fixed High Yield (Gross)



#### 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 December 31, 2020



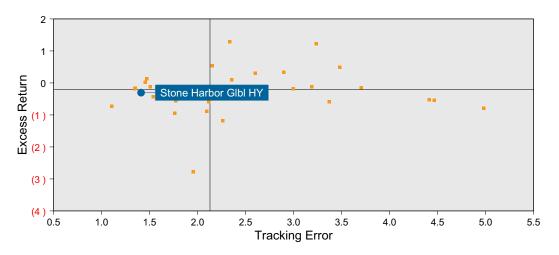


## Stone Harbor GlbI HY **Risk Analysis Summary**

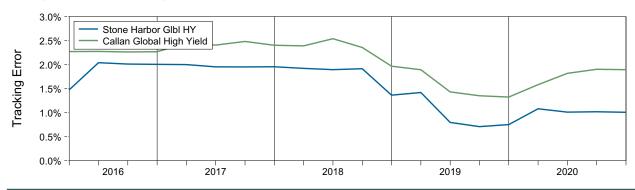
#### Risk Analysis

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.

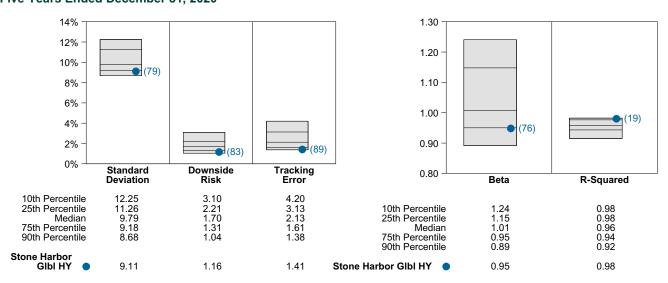
### Risk Analysis vs Callan Global Fixed High Yield (Gross) Five Years Ended December 31, 2020



### 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 December 31, 2020

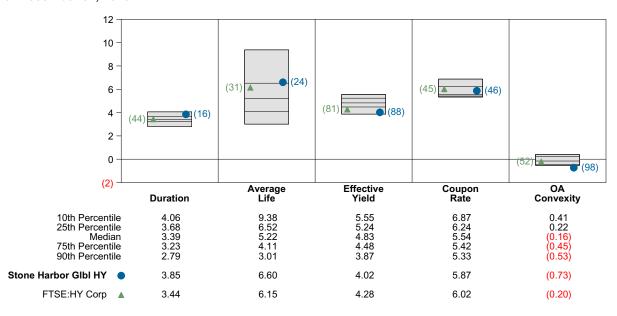


## **Stone Harbor GlbI HY Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

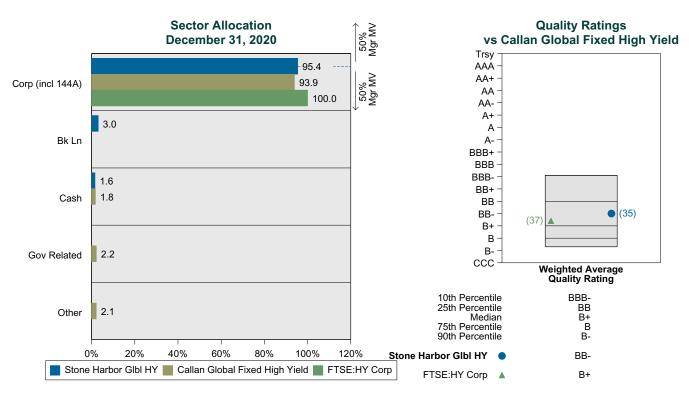
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Fixed Income Portfolio Characteristics** Rankings Against Callan Global Fixed High Yield as of December 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.

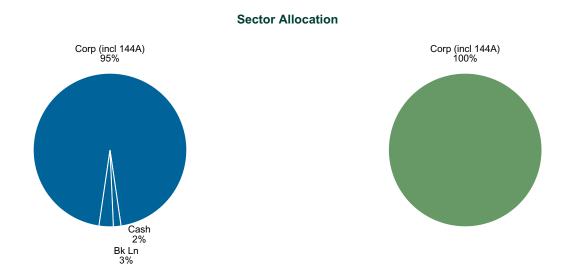




## **Stone Harbor GlbI HY Portfolio Characteristics Summary** As of December 31, 2020

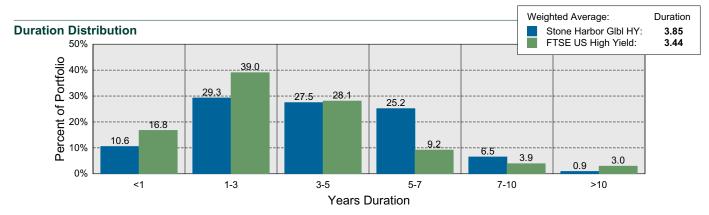
### **Portfolio Structure Comparison**

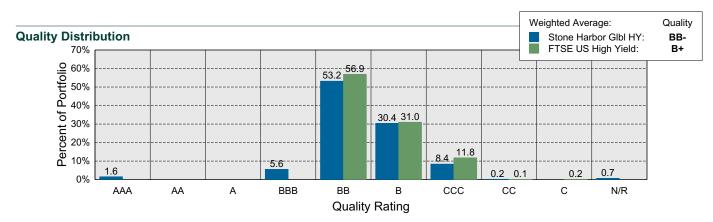
The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution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



## **Stone Harbor GlbI HY**

## FTSE US High Yield



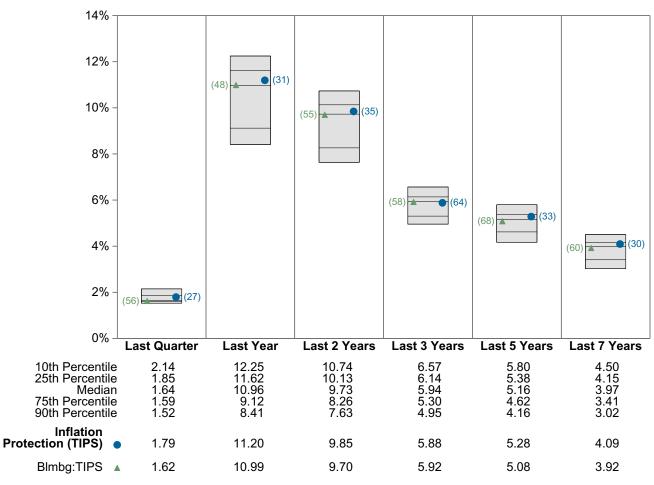


## Inflation Protection (TIPS) Period Ended December 31, 2020

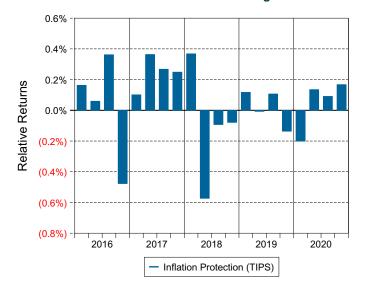
#### **Quarterly Summary and Highlights**

- Inflation Protection (TIPS)'s portfolio posted a 1.79% return for the guarter placing it in the 27 percentile of the Callan Inflation Linked Bonds group for the quarter and in the 31 percentile for the last year.
- Inflation Protection (TIPS)'s portfolio outperformed the BImbg:TIPS by 0.17% for the quarter and outperformed the Blmbg:TIPS for the year by 0.20%.

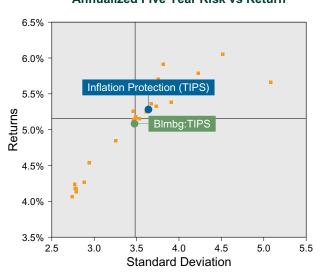
## Performance vs Callan Inflation Linked Bonds (Gross)



## Relative Return vs Blmbg:TIPS



## Callan Inflation Linked Bonds (Gross) **Annualized Five Year Risk vs Return**



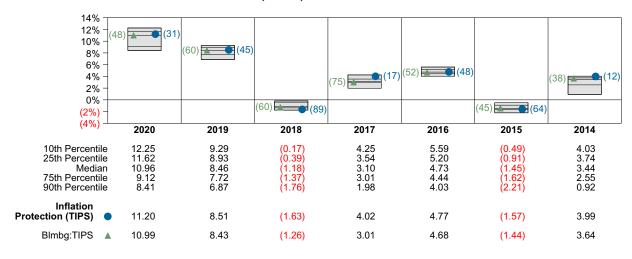


## Inflation Protection (TIPS) **Return Analysis Summary**

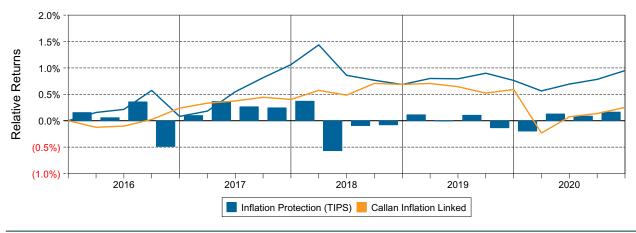
#### **Return Analysis**

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.

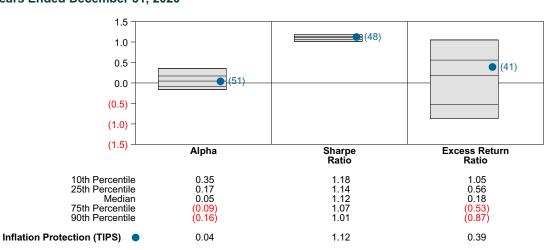
## Performance vs Callan Inflation Linked Bonds (Gross)



## 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 December 31, 2020



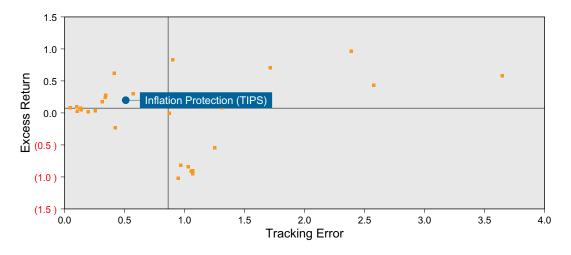


## Inflation Protection (TIPS) **Risk Analysis Summary**

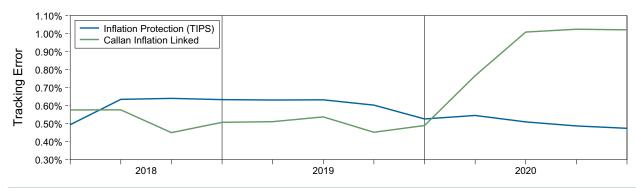
#### Risk Analysis

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.

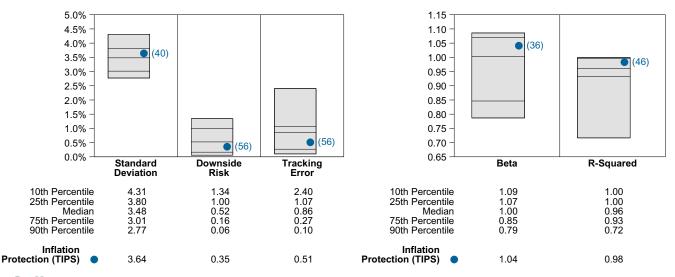
## Risk Analysis vs Callan Inflation Linked Bonds (Gross) Five Years Ended December 31, 2020



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 December 31, 2020

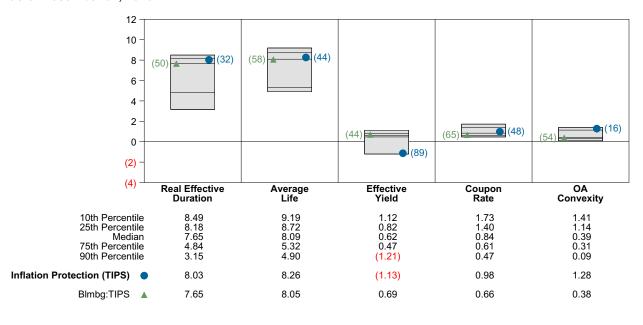


## Inflation Protection (TIPS) **Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

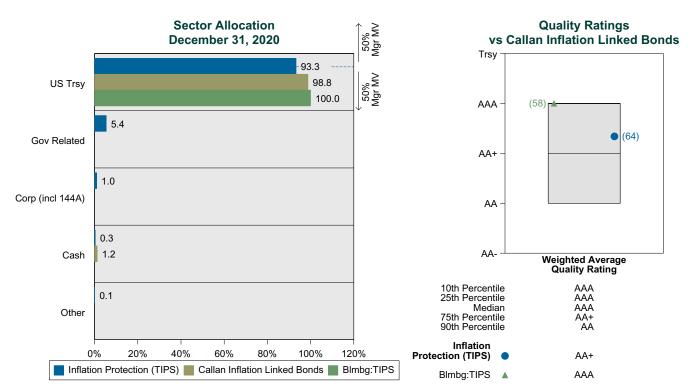
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Fixed Income Portfolio Characteristics Rankings Against Callan Inflation Linked Bonds** as of December 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.

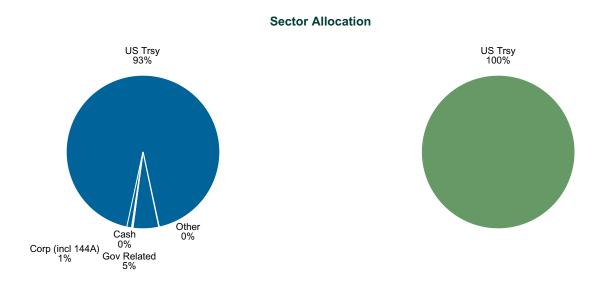


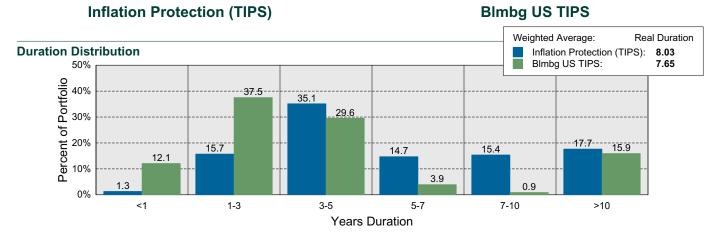


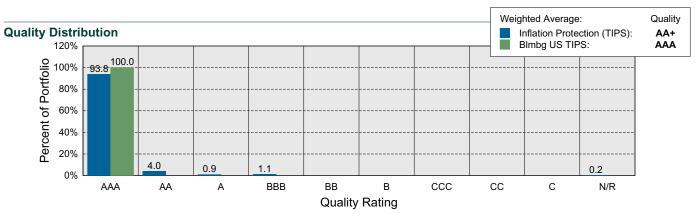
## Inflation Protection (TIPS) **Portfolio Characteristics Summary** As of December 31, 2020

## **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** Period Ended December 31, 2020

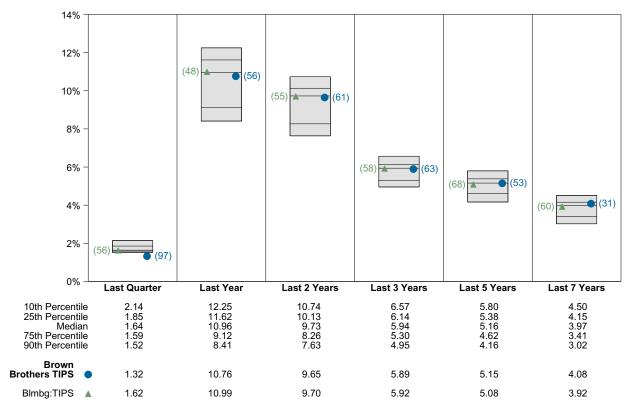
#### **Investment Philosophy**

The BBH U.S. TIPS strategy seeks to capture a range of fundamentally-based and technically-based opportunities in the inflation-indexed securities market.

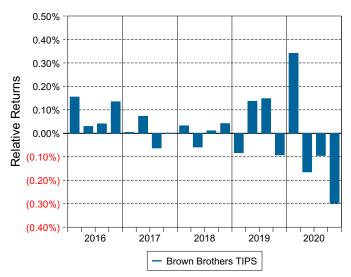
#### **Quarterly Summary and Highlights**

- Brown Brothers TIPS's portfolio posted a 1.32% return for the quarter placing it in the 97 percentile of the Callan Inflation Linked Bonds group for the quarter and in the 56 percentile for the last year.
- Brown Brothers TIPS's portfolio underperformed the Blmbg:TIPS by 0.30% for the quarter and underperformed the Blmbg:TIPS for the year by 0.23%.

## Performance vs Callan Inflation Linked Bonds (Gross)



#### Relative Return vs Blmbg:TIPS



#### Callan Inflation Linked Bonds (Gross) **Annualized Five Year Risk vs Return**



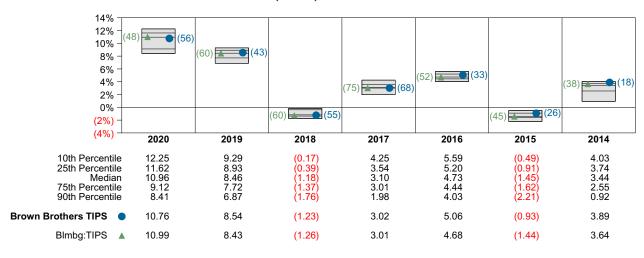


## **Brown Brothers TIPS Return Analysis Summary**

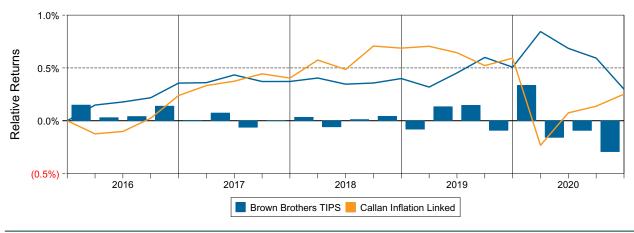
#### **Return Analysis**

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.

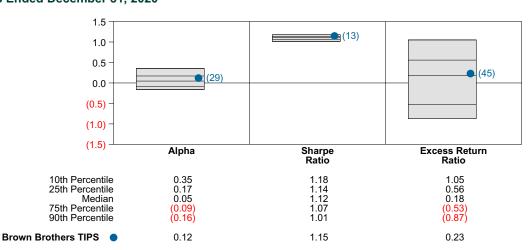
## Performance vs Callan Inflation Linked Bonds (Gross)



## 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 December 31, 2020



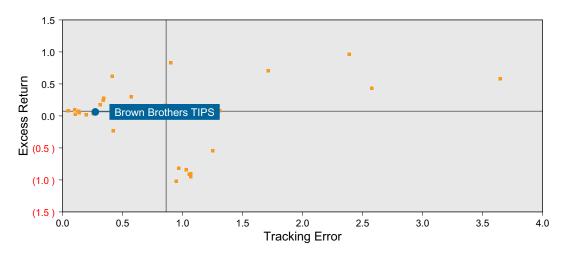


## **Brown Brothers TIPS Risk Analysis Summary**

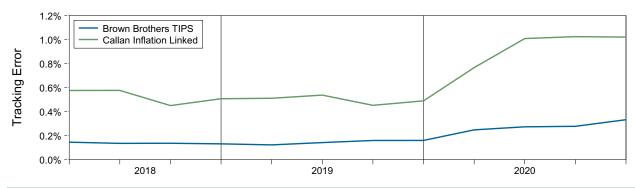
#### Risk Analysis

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.

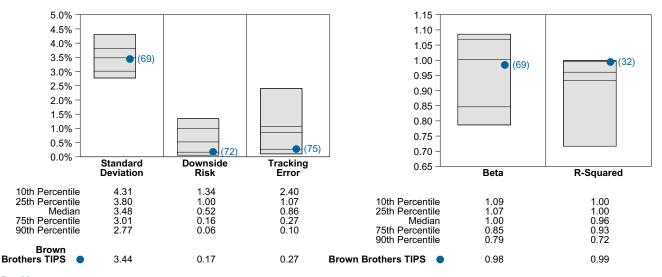
## Risk Analysis vs Callan Inflation Linked Bonds (Gross) Five Years Ended December 31, 2020



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 December 31, 2020

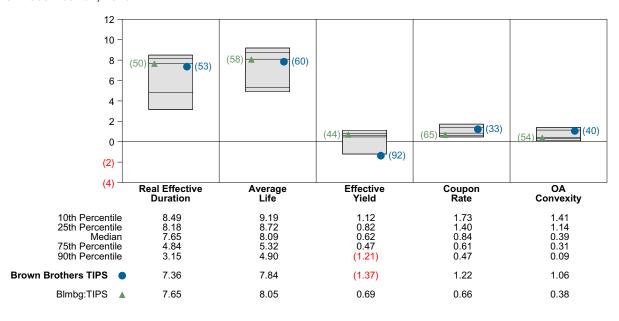


## **Brown Brothers TIPS Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

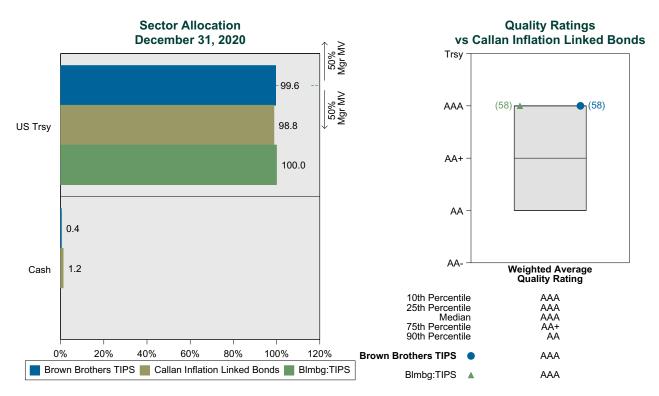
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Fixed Income Portfolio Characteristics Rankings Against Callan Inflation Linked Bonds** as of December 31, 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.





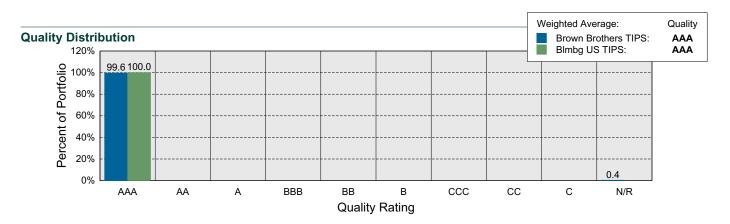
## **Brown Brothers TIPS Portfolio Characteristics Summary** As of December 31, 2020

## **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** Weighted Average: Real Duration **Duration Distribution** Brown Brothers TIPS: 7.36 60% Blmbg US TIPS: 7.65 Percent of Portfolio 50% 45.5 40% 29.6 30% 20% 13.8 13.5 13.6 12.1 13.2 10% 3.9 0.9 0.4 0% 3-5 >10 <1 1-3 5-7 7-10 Years Duration



## **NISA Inv Adv TIPS** Period Ended December 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 1.56% return for the guarter placing it in the 81 percentile of the Callan Inflation Linked Bonds group for the quarter and in the 42 percentile for the last year.
- NISA Inv Adv TIPS's portfolio underperformed the Blmbg:TIPS by 0.06% for the quarter and outperformed the Blmbg:TIPS for the year by 0.03%.

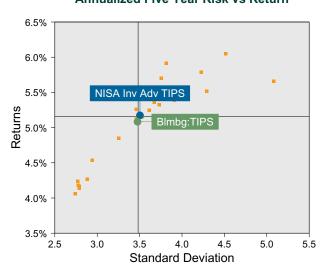
## Performance vs Callan Inflation Linked Bonds (Gross)



## Relative Return vs Blmbg:TIPS

## 0.15% 0.10% Relative Returns 0.05% 0.00% (0.05%)(0.10%)(0.15%)2016 2017 2018 2019 2020 NISA Inv Adv TIPS

## Callan Inflation Linked Bonds (Gross) **Annualized Five Year Risk vs Return**



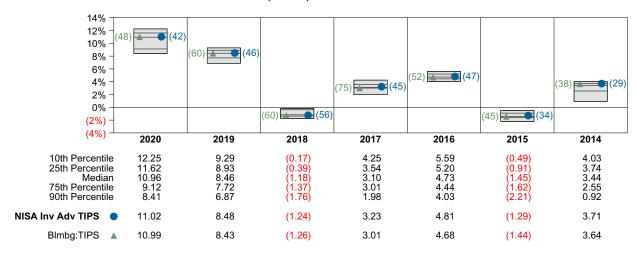


## **NISA Inv Adv TIPS Return Analysis Summary**

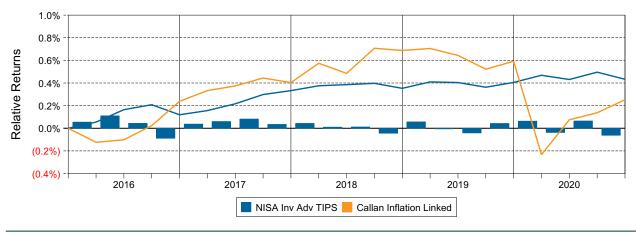
#### **Return Analysis**

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.

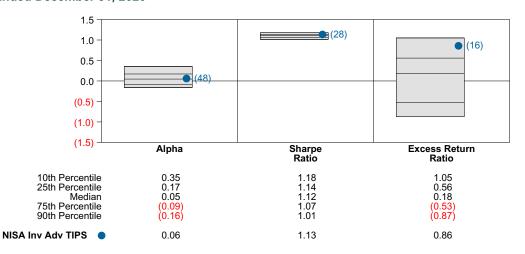
## Performance vs Callan Inflation Linked Bonds (Gross)



## 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 December 31, 2020



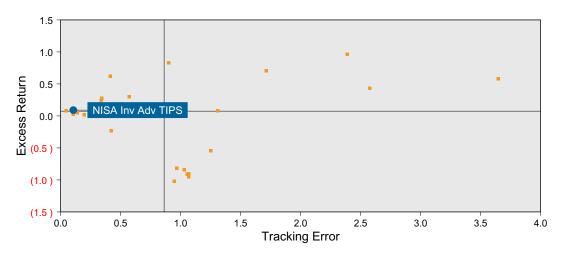


## **NISA Inv Adv TIPS Risk Analysis Summary**

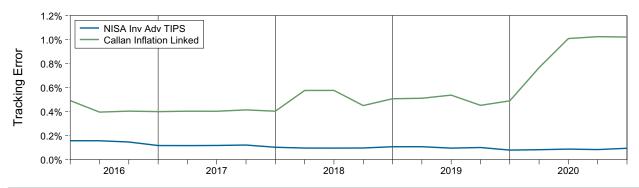
#### Risk Analysis

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.

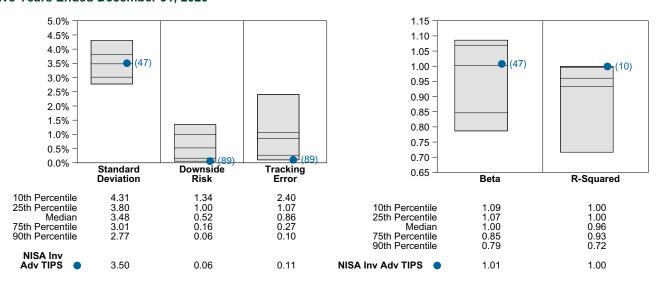
## Risk Analysis vs Callan Inflation Linked Bonds (Gross) Five Years Ended December 31, 2020



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 December 31, 2020

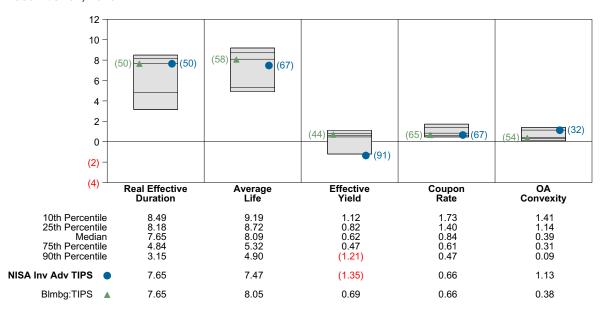


## **NISA Inv Adv TIPS Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

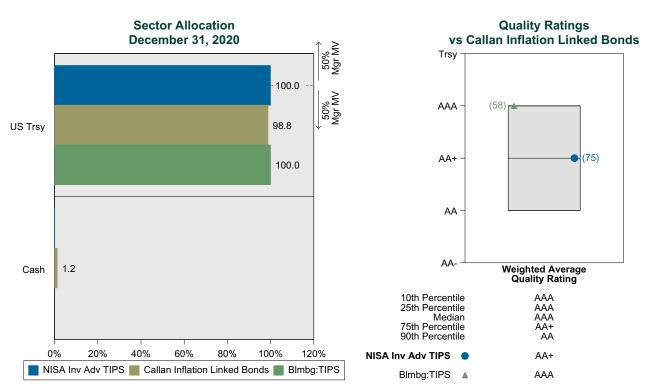
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

#### **Fixed Income Portfolio Characteristics Rankings Against Callan Inflation Linked Bonds** as of December 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.



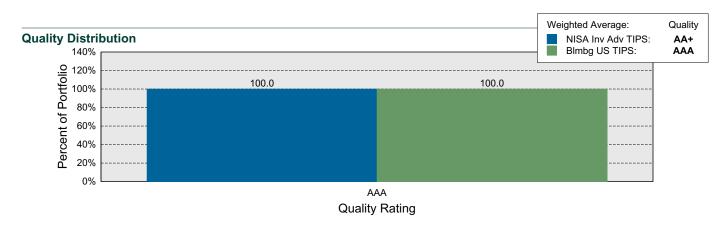
## **NISA Inv Adv TIPS Portfolio Characteristics Summary** As of December 31, 2020

## **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.



#### **NISA Inv Adv TIPS Blmbg US TIPS** Weighted Average: Real Duration **Duration Distribution** NISA Inv Adv TIPS: 7.65 50% Blmbg US TIPS: Dercent of Portfolio 29.7 29.6 20.2 16.4 15.9 12.1 3.9 0.9 0% 3-5 <1 1-3 5-7 7-10 >10 Years Duration



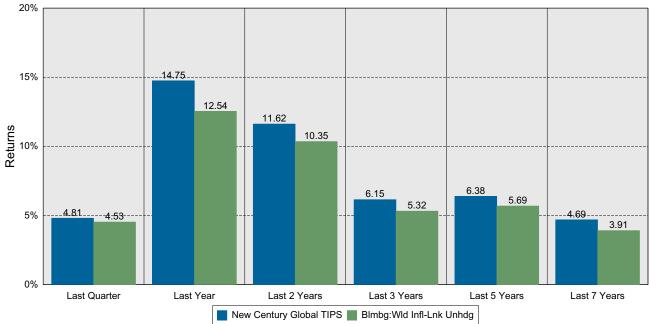
## **New Century Global TIPS** Period Ended December 31, 2020

#### **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.

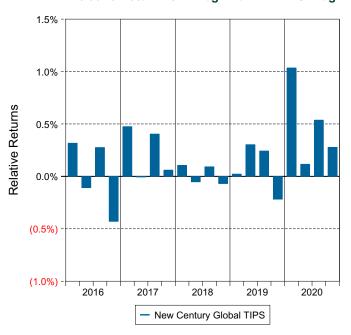
#### **Quarterly Summary and Highlights**

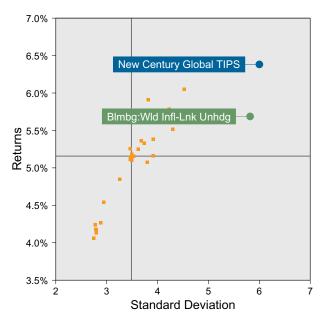
- New Century Global TIPS's portfolio posted a 4.81% return for the quarter placing it in the 1 percentile of the Callan Inflation Linked Bonds group for the quarter and in the 3 percentile for the last year.
- New Century Global TIPS's portfolio outperformed the Blmbg:Wld Infl-Lnk Unhdg by 0.28% for the quarter and outperformed the Blmbg:Wld Infl-Lnk Unhdg for the year by 2.21%.



#### Relative Return vs Blmbg:Wld Infl-Lnk Unhdg

Callan Inflation Linked Bonds (Gross) Annualized Five Year Risk vs Return





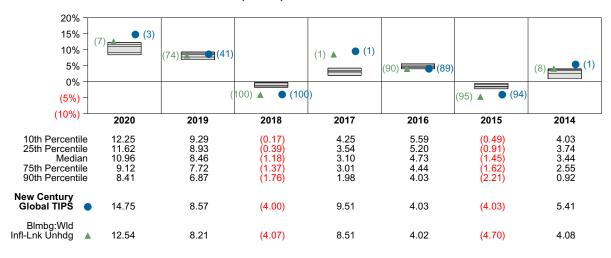


## **New Century Global TIPS Return Analysis Summary**

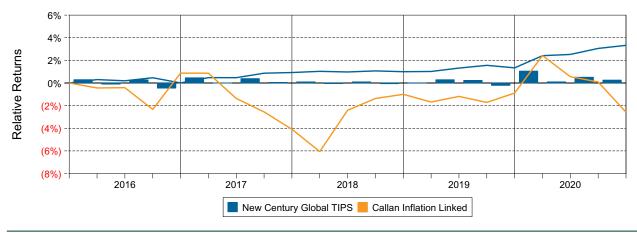
#### **Return Analysis**

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.

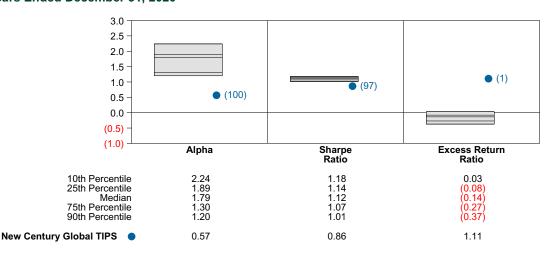
## Performance vs Callan Inflation Linked Bonds (Gross)



## 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 December 31, 2020



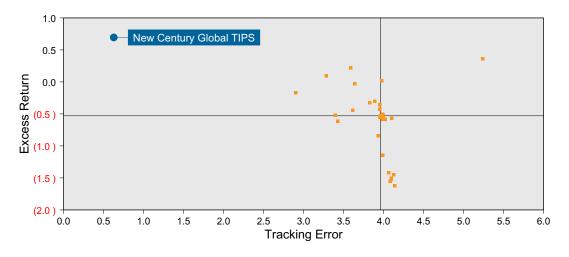


## **New Century Global TIPS Risk Analysis Summary**

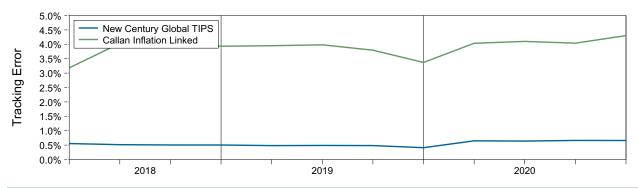
#### Risk Analysis

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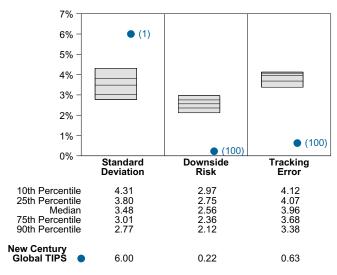
## Risk Analysis vs Callan Inflation Linked Bonds (Gross) Five Years Ended December 31, 2020

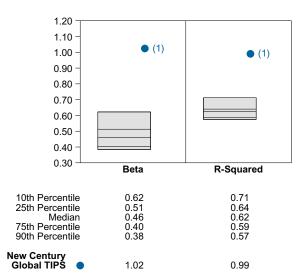


Rolling 12 Quarter Tracking Error vs Bloomberg Barclays World Infl-Lnk Unhdg



Risk Statistics Rankings vs Bloomberg Barclays World Infl-Lnk Unhdg Rankings Against Callan Inflation Linked Bonds (Gross) Five Years Ended December 31, 2020





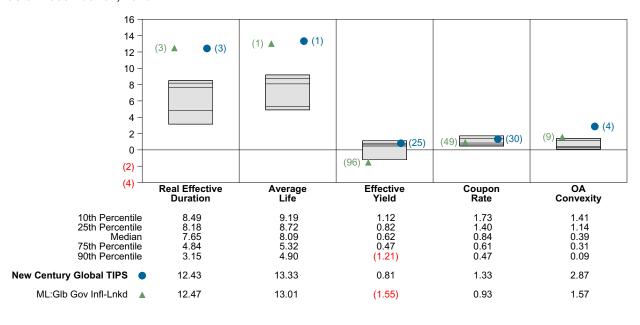


## **New Century Global TIPS Bond Characteristics Analysis Summary**

#### **Portfolio Characteristics**

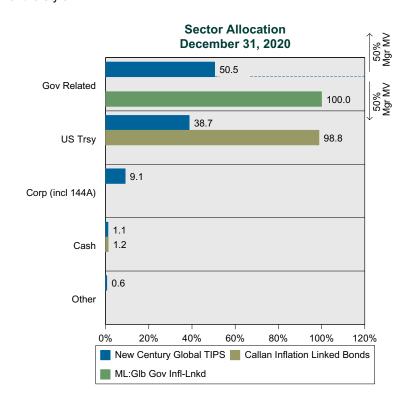
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

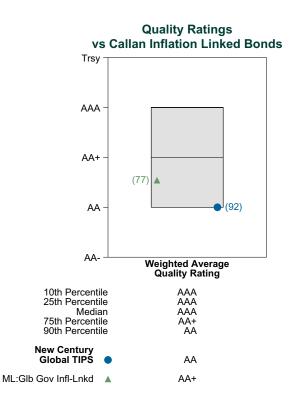
#### **Fixed Income Portfolio Characteristics Rankings Against Callan Inflation Linked Bonds** as of December 31, 2020



#### 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.



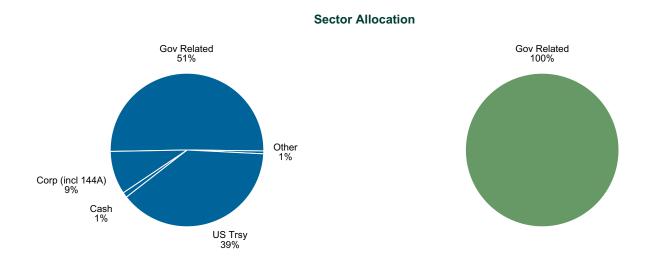




## **New Century Global TIPS Portfolio Characteristics Summary** As of December 31, 2020

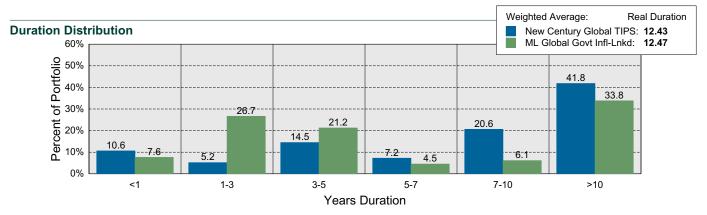
## **Portfolio Structure Comparison**

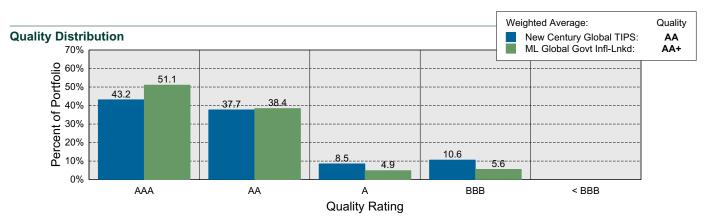
The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution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



## **New Century Global TIPS**

## ML Global Govt Infl-Lnkd







4th 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/research-library to see all of our publications, and www.callan.com/blog to view our blog. For more information contact Barb Gerraty at 415-274-3093 / institute@callan.com.

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

Under the Hood of Alternative Beta: Hedge Fund Monitor, 3rd Quarter 2020 | In this quarter's Hedge Fund Monitor, Jim McKee explains and analyzes the newly introduced set of alternative risk premia (ARP) indices from Bloomberg and Goldman Sachs Asset Management. This index suite can help institutional investors evaluate the performance of their strategies that use ARP solutions.

A Primer on Green Building Certifications | This essay by real assets consultant Aaron Quach examines "green building certifications," which seek to establish standards for sustainability and are used to assess the performance of a building or other commercial real estate project. Real estate investment managers can reduce their carbon footprint by acquiring buildings that are green-certified, obtaining certifications for existing properties, or developing new properties that will be green-certified.

Research Cafe: Private Equity | In this coffee break webinar session, private equity experts Pete Keliuotis and Ashley DeLuce used the results of our exclusive *Private Equity Fees and Terms Study* to provide actionable insights for institutional investors to help them negotiate with private equity managers.

## **Blog Highlights**

<u>Will Boring Still Be Beautiful?</u> | A simple, "boring" glidepath beat a diversified one over the last 10 years. Will that continue?

<u>The Kids Are Alright</u> | Private equity is doing quite well given the disruptions caused by the COVID-19 pandemic.

## DOL Issues Final Rule on Selecting Plan Investments

The Department of Labor (DOL) issued its final rule providing guidance to plan sponsors on the financial factors to consider when evaluating plan investments, a follow-up to its proposed environmental, social, and governance (ESG) rule released four months ago. In the final rule, the DOL modified the ESG rule, most notably removing references to ESG and instead focusing on pecuniary versus non-pecuniary factors.

The Private Equity Playbook: Playing Offense | Investors should maintain strong oversight of the in-place private equity program, particularly after periods of disruption.

Macroeconomic Alphabet Soup: V, W, L, U, or K? | While certain sectors of the economy have rebounded more quickly than expected, the trajectory of the recovery is still unclear.

#### **Quarterly Periodicals**

<u>Private Equity Trends, 3Q20</u> | A high-level summary of private equity activity in the quarter through all the investment stages

Active vs. Passive Charts, 3Q20 | A comparison of active managers alongside relevant benchmarks over the long term

Market Pulse Flipbook, 3Q20 | A quarterly market reference guide covering trends in the U.S. economy, developments for institutional investors, and the latest data on the capital markets

<u>Capital Markets Review, 3Q20</u> | Analysis and a broad overview of the economy and public and private market activity each quarter across a wide range of asset classes

Hedge Fund Quarterly, 3Q20 | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

Real Assets Reporter, 3Q20 | In this quarter's edition, Munir Iman provides analysis of the performance of real estate and other real assets in 3Q20.

#### **Events**

Miss out on a Callan conference or workshop? Event summaries and speakers' presentations are available on our website: callan.com/research-library

Please mark your calendar and look forward to upcoming invitations:

#### March Workshop—Virtual

A Fresh Look at Fixed Income—Generating Yield in a Zero Interest Rate Environment

March 25, 2021, at 9:00 am

## 2021 National Conference Summer 2021

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

## **Education: By the Numbers**

50+

Unique pieces of research the Institute generates each year

**525** 

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

3,700

Total attendees of the "Callan College" since 1994

#### **Education**

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

## Introduction to Investments—Virtual April 13-15, 2021

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

Additional information including registration can be found at: callan.com/events/april-intro-college-virtual/

# Introduction to Investments—In Person July 14-15, 2021, in San Francisco

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: <a href="mailto:callan.com/events/july-intro-college/">callan.com/events/july-intro-college/</a>



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

Greg Allen, CEO and Chief Research Officer







## Callan

Quarterly List as of December 31, 2020

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

Confidential - For Callan Client Use Only

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

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

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





Manager Name	Manager Name



Manager Name	Manager Name

