Plymouth County Retirement Association

April 29, 2020

Fund Evaluation Report

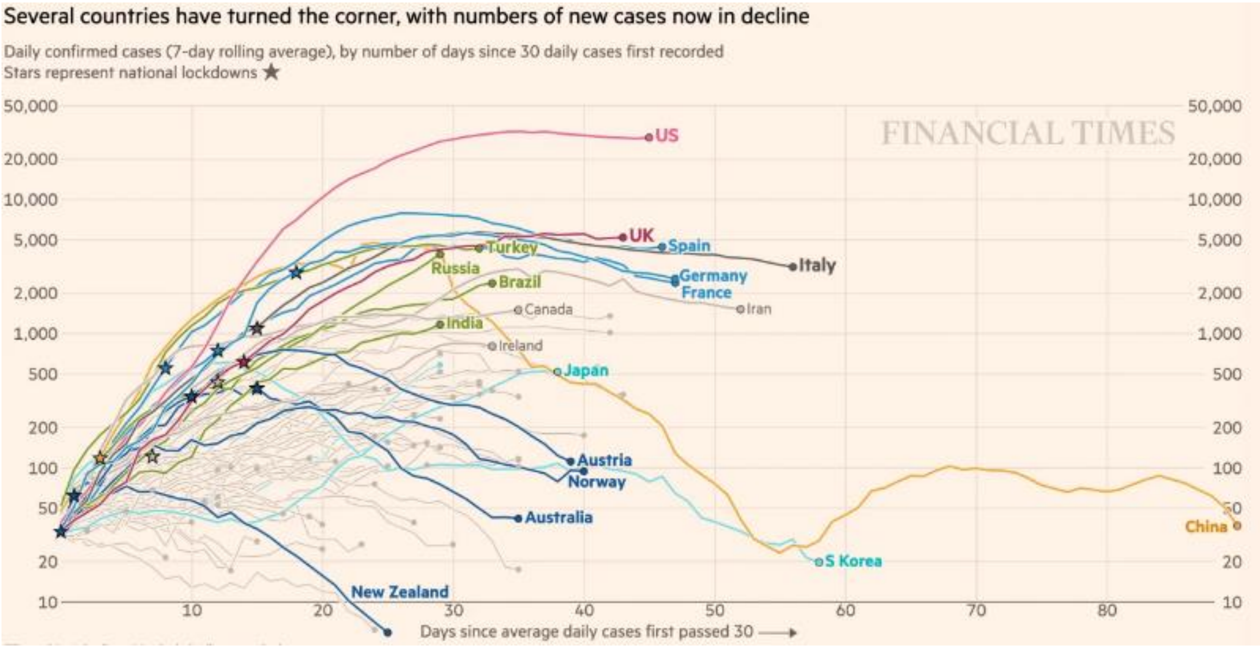
Agenda

1. Economic and Market Update-Data as of April 17, 2020
2. Estimated Retirement Association Performance as of March 31, 2020
3. Interim Update as of February 29, 2020
4. Current Issues
    - EMD RFP Respondent Review
    - Asset Allocation Update
5. Disclaimer, Glossary, and Notes

Economy and Market Update

Data as of April 17, 2020

Case Count by Select Country: Flattening the Curve[1]



- There are now over 2.5 million cases globally across 185 countries, with the death toll over 170,000.
- Originally China-focused, this became a global issue with the fastest spread of the virus in the US and Europe.
- New cases of the virus have declined and plateaued in China, although there are questions around the data. New cases are starting to level-off in the US and some countries in Europe are seeing declines.

[1] Source: Financial Times. Virus data is as of April 19 2020. Most data throughout the rest of the document is through April 17, 2020.

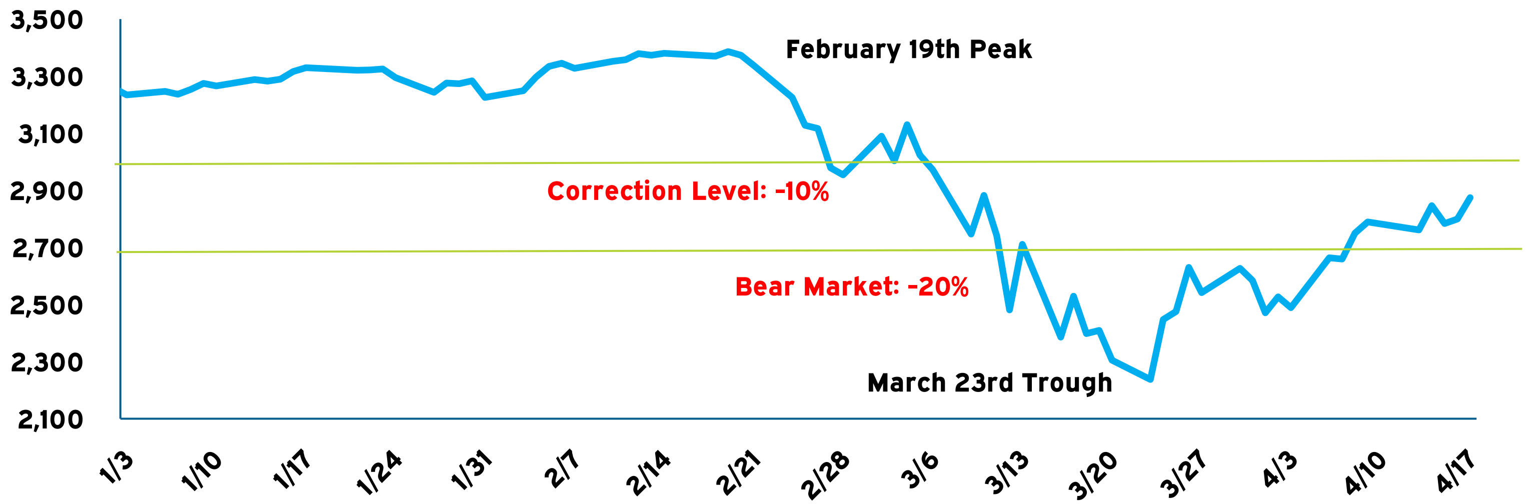
Market Returns[1]

Indices	YTD	3 Year	5 Year	10 Year	20 Year
S&P 500	-10.5%	9.1%	8.9%	11.5%	5.7%
MSCI EAFE	-19.7%	-0.5%	-0.4%	2.9%	2.2%
MSCI Emerging Markets	-18.8%	0.2%	-0.5%	1.1%	-
MSCI China	-5.6%	8.4%	1.5%	4.7%	-
Bloomberg Barclays Aggregate	4.7%	5.1%	3.6%	4.0%	5.1%
Bloomberg Barclays TIPS	3.6%	3.9%	2.7%	3.6%	5.4%
Bloomberg Barclays High Yield	-7.6%	2.6%	3.7%	6.1%	-
10-year US Treasury	12.4%	7.1%	4.1%	5.3%	5.6%
30-year US Treasury	28.1%	15.4%	7.9%	10.0%	8.2%

- Given uncertainty related to the ultimate impact of the virus on economic growth, company profitability, and societal norms, many investors have sought perceived safe haven assets like US Treasuries.
- Stocks experienced large declines globally, but fiscal and monetary authorities across the globe are deploying emergency measures to moderate huge economic losses; the S&P 500 has recovered by over 20% percent versus March lows.
- The recent declines in US stocks (S&P 500) brought long-term returns to levels just slightly above US bonds (Bloomberg Barclays Aggregate).
- By contrast, at the end of 2019, the S&P 500's five-year annual return was 11.7%, far above the bond market's 3.1% return, indicating how dramatically long-term returns can shift.

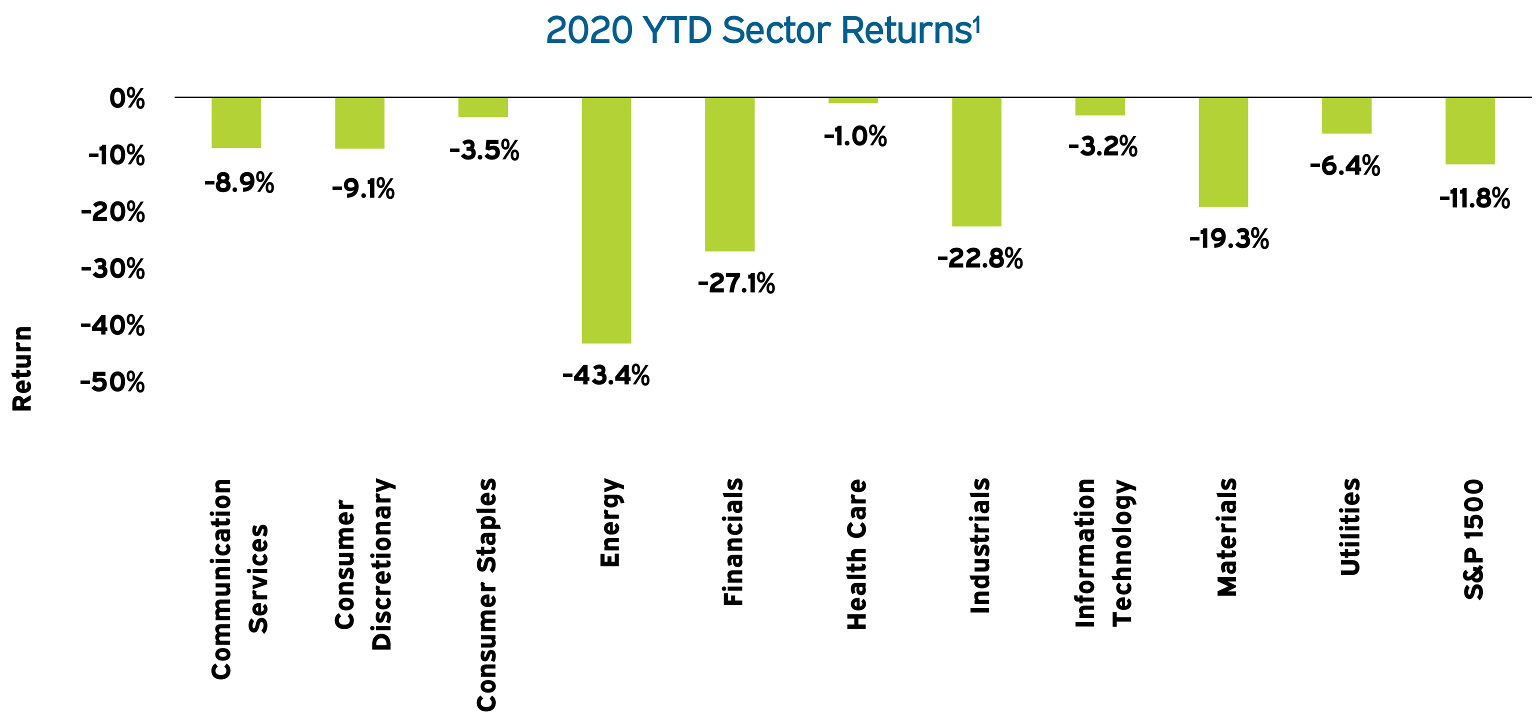
[1] Source: InvestorForce and Bloomberg. Data is as of April 17, 2020.

S&P 500 Reaches Bear Market Levels[1]



- Given all the uncertainty, US stocks declined from their recent peak into bear market (-20%) territory at the fastest pace in history.
- From the February 19 peak, the S&P 500 declined 34% in a matter of 24 trading days.
- The index recovered recently from its lows, likely due to the unprecedented monetary and fiscal stimulus announced in the US and some improvements in virus data.
- It is unclear whether the US equity market has reached a bottom, or if the recent recovery is temporary, with more declines to come as the impact of COVID-19 on the economy becomes more apparent.

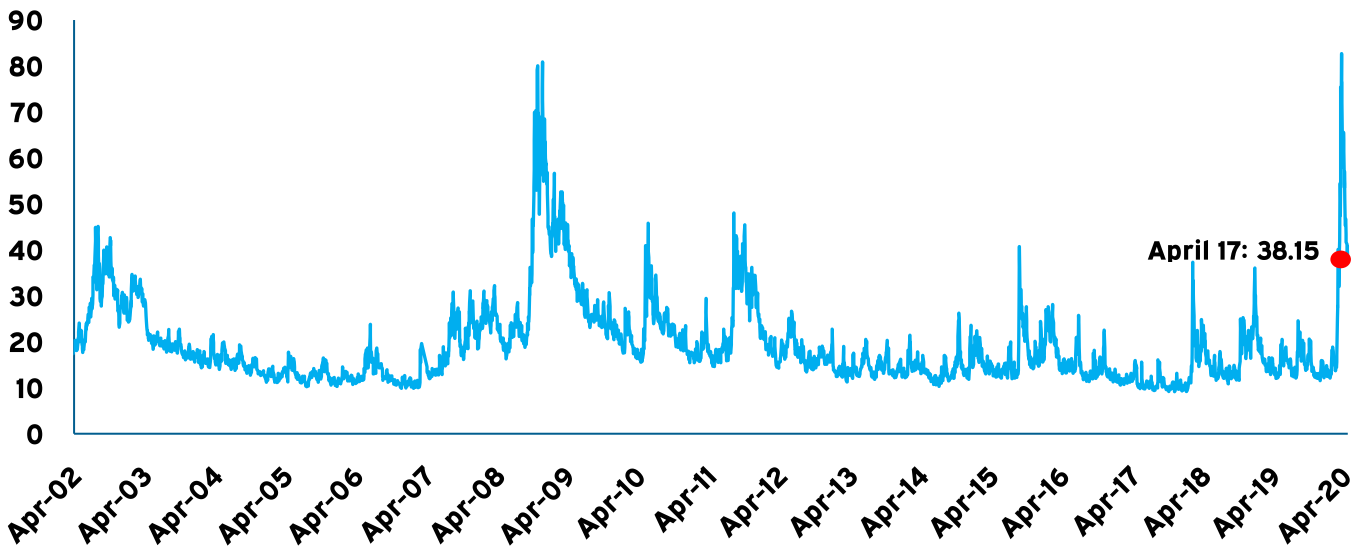
[1] Source: Bloomberg. Data is as of April 17, 2020.



- The energy sector saw some improvements immediately after an agreement by Saudi Arabia and Russia to cut supply, but it remains the sector with the largest declines given the fall in oil prices.
- Financials (-27.1%), industrials (-22.8%) and materials (-19.3%), experienced the next largest declines, while defensive sectors like utilities, health care, and consumer staples experienced smaller declines.
- The information technology sector (-3.2%) also had relatively lower declines as consumers move to online purchases and entertainment given the stay at home restrictions.

[1] Source: Bloomberg. Data is as of April 17, 2020.

VIX Index[1]



- Given the recent fiscal and monetary support and corresponding improvement in investor risk sentiment, expectations of short-term volatility, as measured by the VIX index, declined from record levels but remain elevated.
- At the recent height, the VIX index reached 82.7, surpassing the pinnacle of volatility during the GFC, showing the magnitude of investor fear.
- As investors continue to process the impacts of COVID-19 and the effectiveness of the policy response, it is likely that volatility will remain high.

[1] Source: Chicago Board of Exchange. Data is as of April 17, 2020.

Global Financial Crisis Comparison

	2007-2009 Global Financial Crisis	COVID-19 Crisis
Primary Causes	Excess Risk Taking Due to: • Deregulation, un-constrained securitization, shadow banking system, fraud	Pandemic/Natural Disaster: • Large scale global restrictions on businesses and individuals leading to immediate and significant deterioration in economic fundamentals

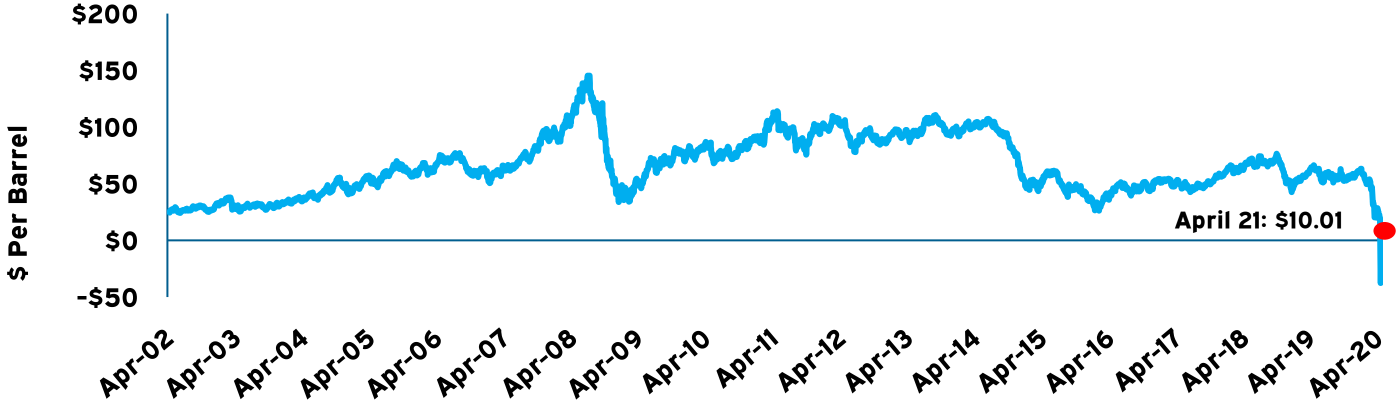
	2007-2009 Global Financial Crisis	COVID-19 Crisis
Fiscal Measures	• American Recovery Reinvestment Act of 2009: $787 billion • Economic Stimulus Act of 2008: $152 billion	• CARES Act of 2020: $2.3 trillion • Families First Coronavirus Response Act: $150 billion • Coronavirus Preparedness & Response Supplemental Appropriations Act 2020: $8.3 billion • National Emergency: $50 billion

	2007-2009 Global Financial Crisis	COVID-19 Crisis
Monetary Measures		
Lowering Fed Funds Rate	X	X
Quantitative Easing	X	X
Primary Dealer Repos	X	X
Central Bank Swap Lines	X	X
Commercial Paper Funding Facility	X	X
Primary Dealers Credit Facility	X	X
Money Market Lending Facility	X	X
Term Auction Facility	X	
TALF	X	X
TSLF	X	
FIMA Repo Facility		X
Primary & Secondary Corp. Debt		X
PPP Term Facility		X
Municipal Liquidity Facility		X
Main Street Loan Facility		X

Global Financial Crisis Comparison (continued)

- The US **fiscal** COVID-19 Crisis response has been materially larger in dollar terms than the 2007-2009 Global Financial Crisis (GFC), and stimulus is more acutely focused on areas of the economy showing the greatest need.
- On the **monetary** side, markets targeted during both crises represent those most in need, but for the COVID-19 Crisis the policy response was dramatically faster; measured in weeks, not years, as in the GFC.
- Of the monetary stimulus measures for the recent crisis, corporate debt (Primary & Secondary Corporate Debt) programs, and Main Street Loan Facility, are new and garnered much attention from market participants due to being considered outside of expectations.

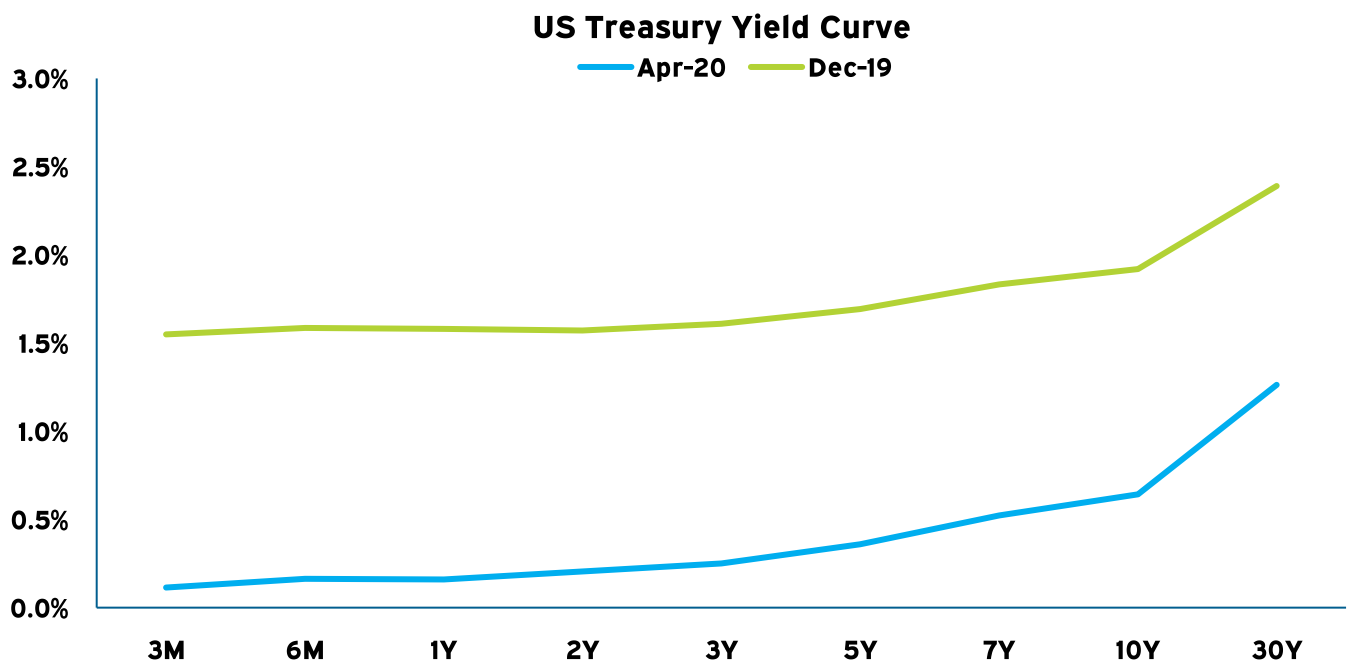
Oil Prices (WTI)[1]



- Recently, in an unprecedented turn of events, oil prices reached negative levels on concerns over storage capacity in the US. This led to producers having to pay to offload their oil for May delivery.
- Negative prices were driven by the futures market that requires physical delivery of oil at contract expirations. As the May expiration date approached traders sold the contracts given extremely low demand and storage constraints.
- Prior to this, oil markets were already under pressure as the virus started to lower global growth expectations, and prices deteriorated further when Saudi Arabia initiated a price war due to Russia's decision to not participate in the proposed OPEC+ supply cuts. Russia ultimately agreed to participate, but the material decline in global demand overwhelmed the agreed supply cuts.

[1] Source: Bloomberg. Represents WTI first available futures contract. Given recent events data is as of April 21, 2020.

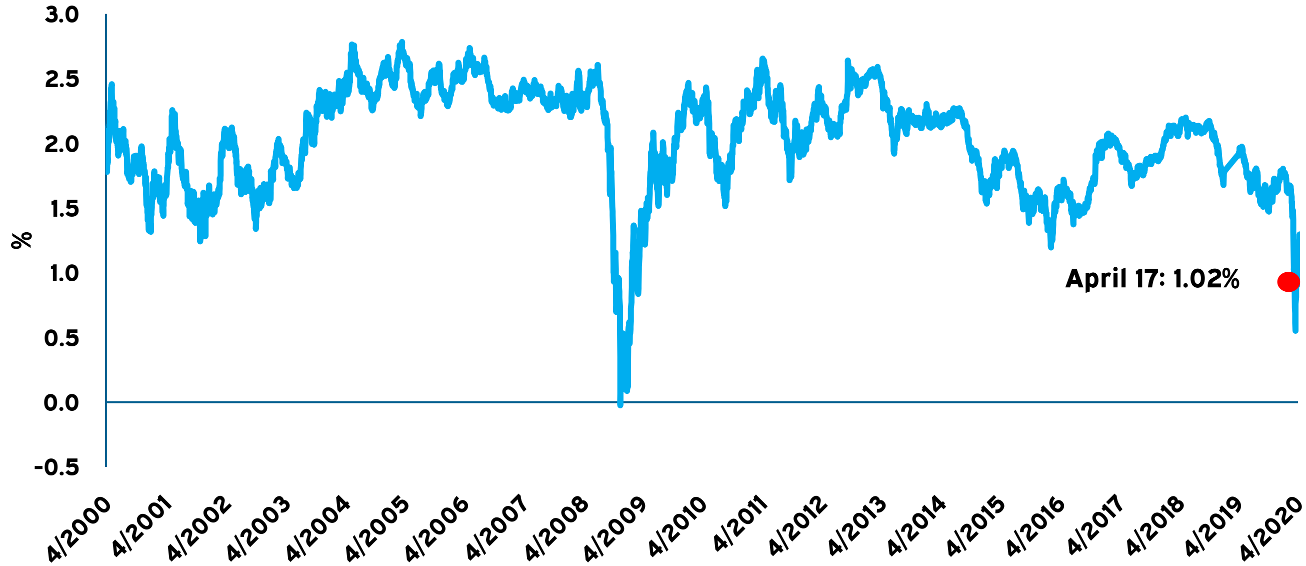
US Yield Curve Declines[1]



- The US Treasury yield curve has declined materially since last year.
- Notable cuts in monetary policy rates lowered yields in shorter-dated maturities, while flight-to-quality flows, low inflation, and lower growth expectations, particularly given recent data that showed economic growth could slow by record amounts, have driven the changes in longer-dated maturities.

[1] Source: Bloomberg. Data is as of April 17, 2020.

10-Year Breakeven Inflation[1]

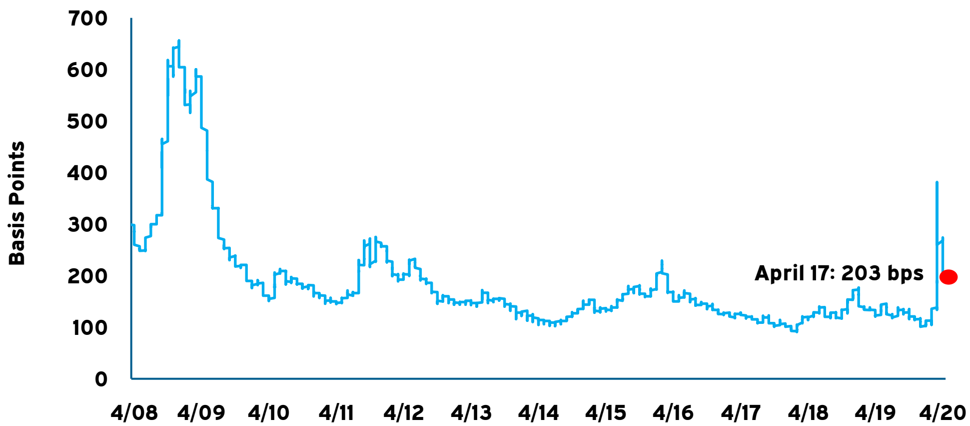


- Inflation breakeven rates declined sharply over the last two months, due to a combination of declines in inflation expectations and liquidity dynamics in TIPS during the height of rate volatility.
- Breakeven rates have not traded near these levels since the GFC, and when they did, the Federal Reserve responded with large-scale asset purchases; this is consistent with recent policy actions.
- Inflation expectation levels have come off of their recent lows as liquidity improved and given the potential longer term inflationary effects of the unprecedented US fiscal and monetary responses.

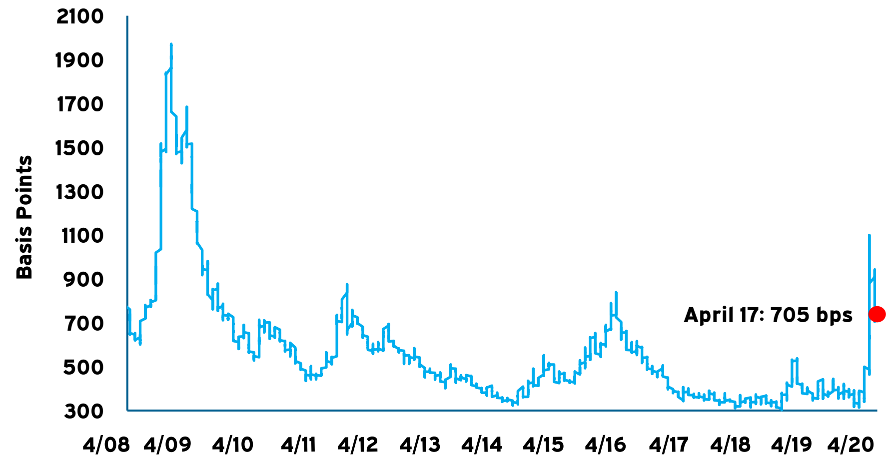
[1] Source: Bloomberg. Data is as of April 17, 2020.

Credit Spreads (High Yield & Investment Grade)[1]

Investment Grade OAS



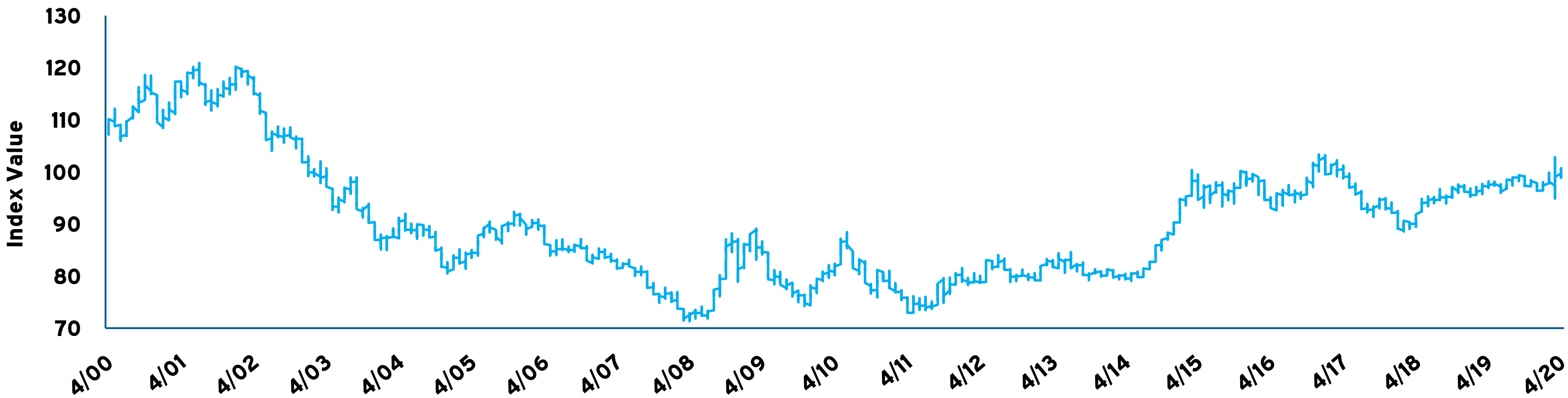
High Yield OAS



- Credit spreads (the spread between a comparable Treasury bond) for investment grade and high yield corporate debt expanded sharply as investors preferred perceived safe-haven bonds.
- Investment grade bonds held up much better than high yield bonds, which have a far greater risk of default in this environment. The Federal Reserve's recently announced corporate debt purchase program for investment grade, and certain high yield securities that were recently downgraded from investment grade, has been well received by investors.
- Corporate debt issuance has more than doubled since 2008, which magnifies the impact of deterioration in the corporate debt market. This is particularly true for the energy sector, which represents a large portion of the high yield bond market.

[1] Source: Federal Reserve Bank of St. Louis Economic Research. Data is as of April 17, 2020.

US Dollar versus Broad Currencies[1]

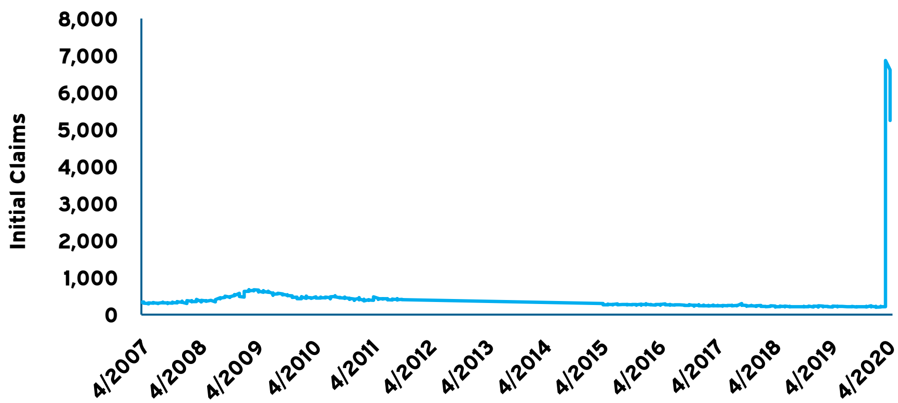


- When financial markets began aggressively reacting to COVID-19 developments, the US dollar came under selling pressure as investors sought safe-haven exposure in currencies like the Japanese yen.
- As the crisis grew into a pandemic, investors' preferences shifted to holding US dollars and highly liquid, short-term securities like US Treasury bills. This global demand for US dollars led to appreciation versus most major currencies.
- A relatively strong US dollar makes US goods more expensive for overseas consumers and causes commodity prices outside the US to rise, negatively impacting foreign countries, and particularly emerging markets.
- To help ease global demand for US dollars, the Federal Reserve, working with a number of global central banks, re-established the US dollar swap program, providing some relief to other currencies.

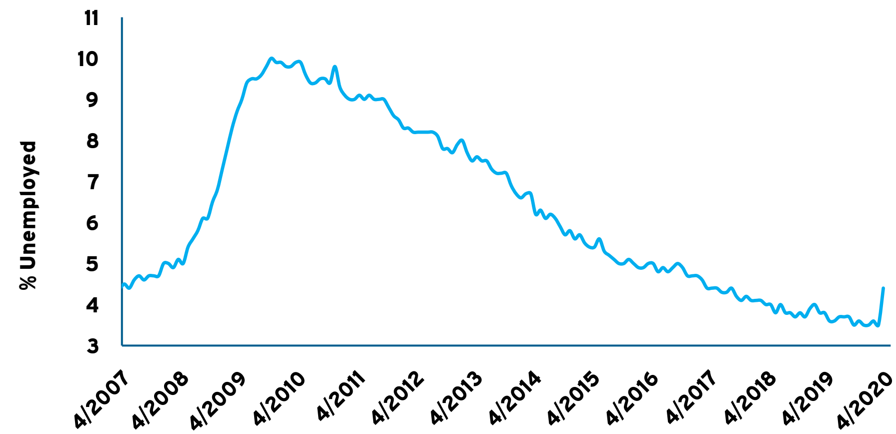
[1] Source: Bloomberg. Represents the DXY Index. Data is as of April 17, 2020.

US Jobs Data

US Initial Jobless Claims[1]



US Unemployment Rate[2]



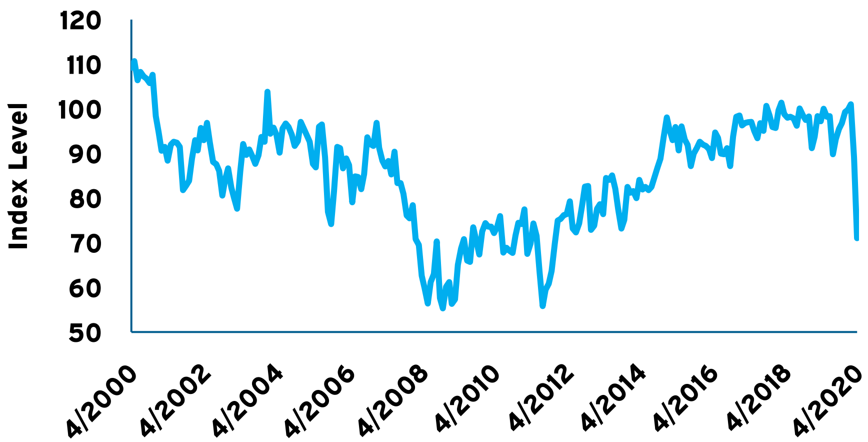
- Layoffs expanded dramatically, as businesses have been forced to close in an effort to stop the spread of the disease.
- Over the last three weeks, roughly 22 million people filed claims for initial unemployment benefits, showing just how immediate and unprecedented the impact of the virus is.
- The last reading of unemployment ticked up from 3.5% to 4.4% with expectations to increase to double-digit levels.

1 Source: Bloomberg. First reading of seasonally adjusted initial jobless claims. Data is as of April 17, 2020.

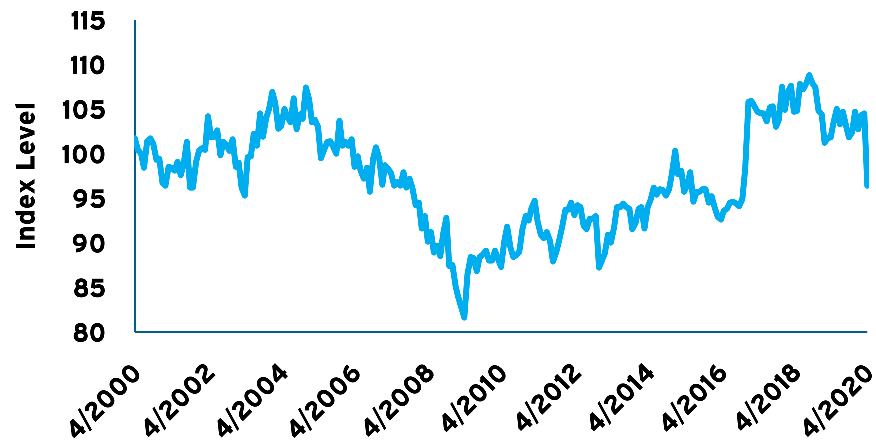
2 Source: Bloomberg. U-3 US Employment Rate, total in labor force, seasonally adjusted. Data is as of March 31, 2020.

Sentiment Indicators

University of Michigan Consumer Sentiment[1]



Small Business Confidence[2]



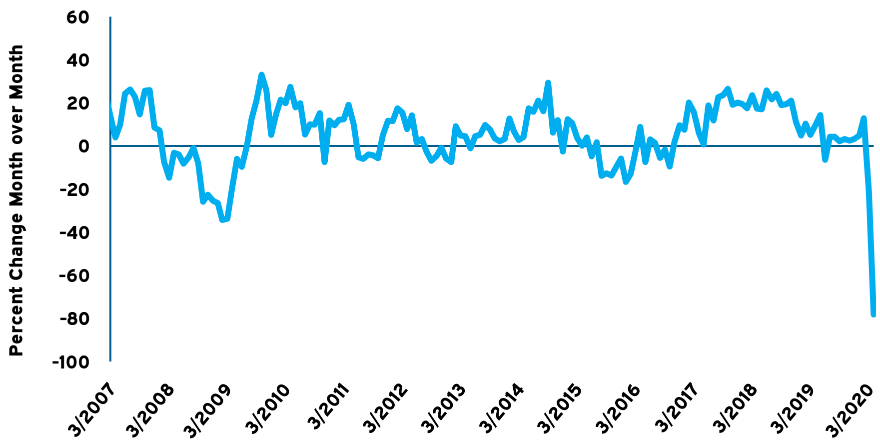
- A strong indicator of future economic activity are the attitudes of businesses and consumers today.
- Consumer spending comprises close to 70% of US GDP, making the attitudes of consumers an important driver of future economic growth. Additionally, small businesses comprise a majority of the economy making sentiment in that segment important too.
- As restrictions caused many businesses to close and employees to be laid off, sentiment indicators have seen corresponding declines with potentially more to come as the impact of the virus evolves.

[1] Source: Bloomberg. University of Michigan Consumer Sentiment Index. Data is as of April 17, 2020.

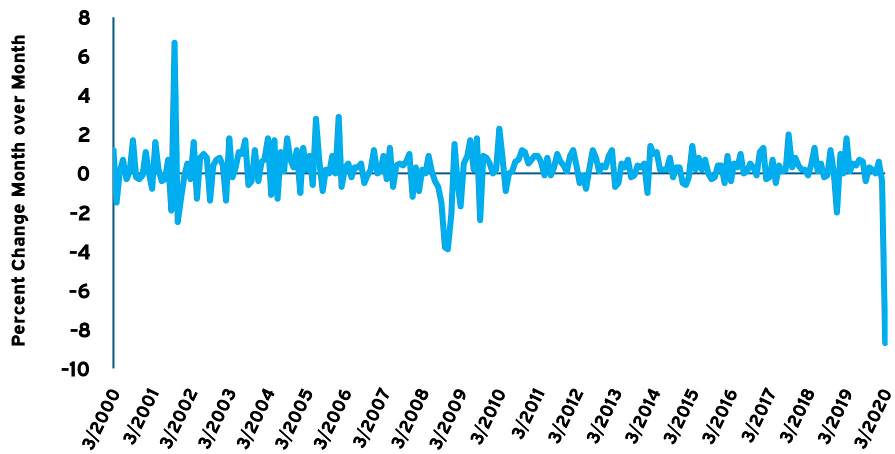
[2] Source: Bloomberg. NFIB Small Business Optimism Index. Data is as of March 31, 2020.

Cracks Starting to Show in Q2 US Data

US Empire State Manufacturing Survey[1]



US Retail Sales[2]



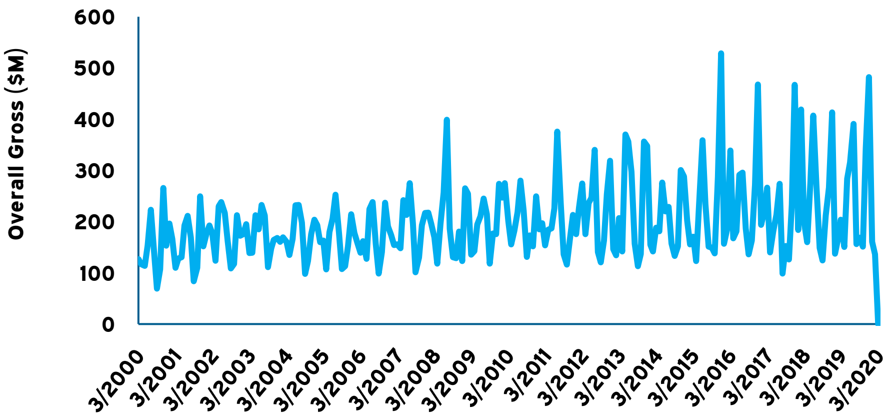
- Manufacturing in New York during March declined at the fastest pace on record, dropping 78.2%, the lowest on record dating back to 2001, with readings below zero indicating economic contraction.
- March US retail sales also fell by a record amount (-8.7%), more than double the prior record of -3.8% set during November 2008. The declines were led by clothing and accessories store sales which fell more than 50% from the previous month.

[1] Source: Bloomberg. Data is as of March 31, 2020 and represents the US Empire State Manufacturing Survey General Business Conditions SA.

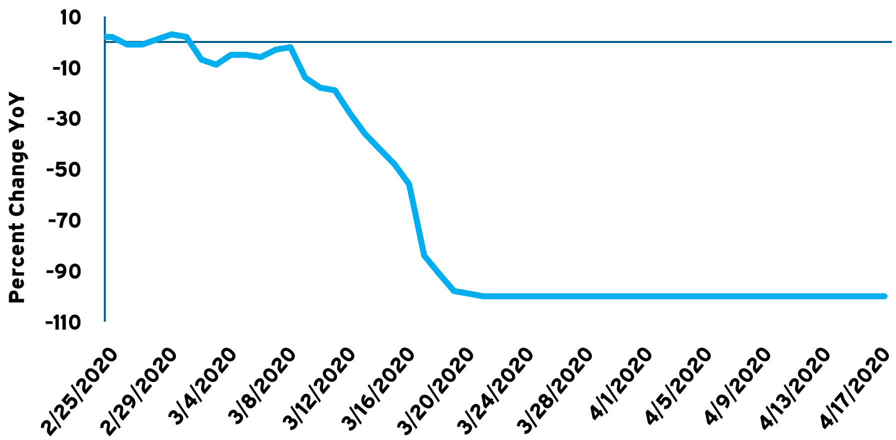
[2] Source: Bloomberg. Data is as of March 31, 2020 and represents the adjusted Retail Sales SA Monthly % Change.

US High Frequency Data

Box Office Sales[1]



Restaurant Traffic[2]



- Due to stay-at-home orders and forced business closures, many industries have seen revenues plummet, and in some cases, virtually vanish.
- As people are forced to stay at home, entertainment industries like restaurants and movies have been impacted dramatically.
- Going forward, improvements in these indicators could offer early signs of the virus' economic impacts declining.

[1] Source: Bloomberg. Represents overall domestic weekly overall box office gross. Data is as of March 31, 2020.

[2] Source: Bloomberg. This data shows year-over-year seated diners at restaurants on the OpenTable network across all channels: online reservations, phone reservations, and walk-ins. Only states or cities with 50+ restaurants in the sample are included. All such restaurants on the OpenTable network in either period are included. Data is as of April 17, 2020. Index start date 2/19/20.

Historic $2T US Fiscal Stimulus

Destination	Amount ($ Billion)
Individuals	$560
Large Corporations	$500
Small Business	$377
State & Local Governments	$340
Public Health	$154
Student Loans	$44
Safety Net	$26

- Recently, a historic $2 trillion fiscal package was approved in the US, representing close to 10% of GDP and including support across the economy.
- Individuals are actively receiving cash payments of up to $1,200 per adult and $500 per child, and extended and higher weekly unemployment benefits (+$600/week).
- The package also includes a $500 billion lending program for distressed industries, like airlines, and $377 billion in loans to small businesses.
- Other parts of the package include allocations to state and local governments, support for public health, student loan relief, and a safety net.
- As of this writing, the next round of fiscal stimulus is already under discussion in the US including replenishing the depleted fund to help small businesses.

Policy Responses

	Fiscal	Monetary
United States	$50 billion to states for virus related support, interest waived on student loans, flexibility on tax payments and filings, expanded COVID-19 testing, paid sick leave for hourly workers, $2 trillion package for individuals, businesses, and state/local governments.	Cut policy rates to zero, unlimited QE4, offering trillions in repo market funding, restarted CPFF, PDCF, MMMF programs to support lending and financing market, expanded US dollar swap lines with foreign central banks, announced IG corporate debt buying program with subsequent amendment for certain HY securities, Main Street Lending program, Muni liquidity facility, repo facility with foreign central banks, and easing of some financial regulations for lenders.
Euro Area	Germany: Launched 750 billion euro stimulus package. France: 45 billion euro for workers, guaranteed up to 300 billion euro in corporate borrowing. Italy: 25 billion euro emergency decree, suspending mortgage payments for impacted workers. Spain: 200 billion euro and 700 million euro loan and aid package, respectively.	Targeted longer-term refinancing operations aimed at small and medium sized businesses, under more favorable pricing, and announced the 750 billion euro Pandemic Emergency Purchase Program.
Japan	$20 billion in small business loans, direct funding program to stop virus spread among nursing homes and those affected by school closures, discussion of additional relief in the coming months.	Increase in QE purchases (ETFs, corporate bonds, and CP), and 0% interest loans to businesses hurt by virus.
China	Tax cuts, low-interest business loans, extra payments to gov't benefit recipients.	Expanded repo facility, policy rate cuts, lowered reserve requirements.
Canada	$7.1 billion in loans to businesses to help with virus damage.	Cut policy rates, expanded bond-buying and repos, lowered bank reserve requirements.
UK (BOE)	Tax cut for retailers, small business cash grants, benefits for those infected with virus, expanded access to gov't benefits for self and un-employed.	Lowered policy rates and capital requirements for UK banks, restarts QE program.
Australia	$11.4 billion, subsidies for impacted industries like tourism, one-time payment to gov't benefit recipients.	Policy rate cut, started QE.

Government Re-Opening Recommendation[1]

Phase One	Phase Two	Phase Three
• Vulnerable individuals continue to stay at home. • Avoid groups of more than 10 people if social distancing is not possible. • Minimize non-essential travel. • Work remotely if possible with restrictions in the office for those businesses that open. • Schools remain closed, but some larger venues can open with strict protocols. • Outpatient elective surgeries can resume.	• Vulnerable individuals continue to stay at home. • Avoid groups of more than 50 people if social distancing is not possible. • Non-essential travel resumes. • Continue to work remotely if possible with restrictions in the office for those businesses that open. • Schools can reopen. • Inpatient elective surgeries can resume	• Vulnerable individuals can return to public life with social distancing. • Workplaces can reopen without restrictions. • Larger venues can operate under reduced social distancing protocols.

- The Trump administration recently announced guidelines for re-opening the US economy.
- Guidelines recommend states document a "downward trajectory" in new cases for two weeks before beginning a three-phase process to scale back distancing measures and reopen local economies.
- States should also document an additional two-week period decline in instances between each of the three phases, and be prepared to reinstate social distancing measures should cases rebound.

[1] Source: https://www.whitehouse.gov/openingamerica/

Likely Economic Impact

Supply Chain Disruptions:

- Factories closing, increased cost of stagnant inventory, and disrupted supply agreements.
- Reduced travel, tourism, and separation policies including closed borders: Significant impact on service-based economies.

Labor Force Impacts:

- Huge layoffs across service and manufacturing economies.
- Increased strains as workforce productivity declines from increased societal responsibilities (e.g., home schooling of children) and decreased functionality working from home.
- Illnesses from the disease will also reduce the labor force temporarily.

Declines in Business and Consumer Sentiment:

- Sentiment drives investment and consumption, which leads to increased recessionary pressures as sentiment slips.

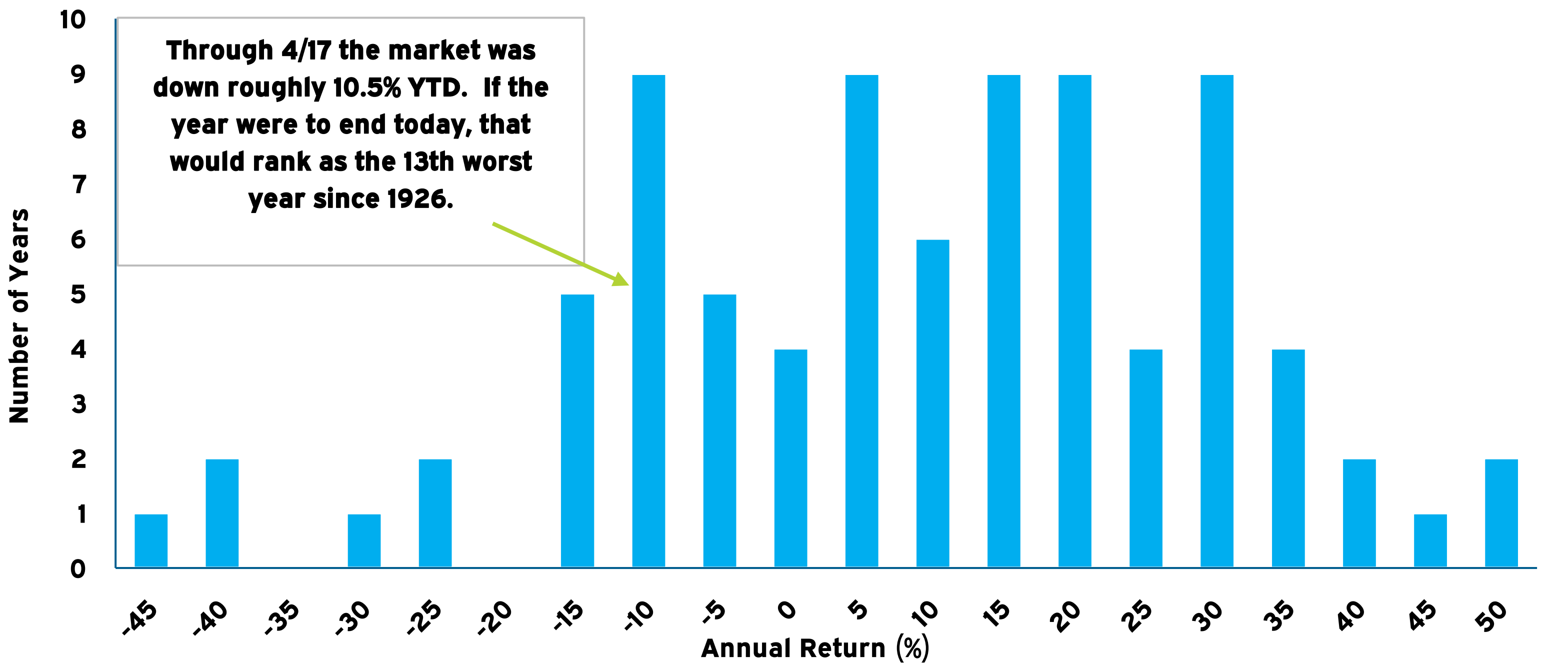
Wealth Effect:

- As financial markets decline and wealth deteriorates, consumer spending will be impacted.

Looking Forward…

- There will be significant economic impact and a global recession.
  - How deep it will be and how long it will last depend on factors (below) that are unknowable at this time.
- The length of the virus and country responses will be key considerations.
  - As of now, it is not clear the end is in sight; however, impacted countries are attempting to lay the groundwork to support a recovery.
- Central banks and governments are pledging support, but will it be enough?
  - Based on initial market reactions to announced policies, the answer is no, until the virus gets better contained.
- Expect heightened market volatility given the virus and previous high valuations.
  - This has been a consistent theme over the last weeks; volatility is likely to remain elevated for some time.
- It is important to retain a long-term focus.
  - History supports the argument that maintaining a long-term focus will ultimately prove beneficial for diversified portfolios.

Distribution of Annual S&P 500 Returns[1]
(1926-2020)



- The 10.5% year-to-date decline (through 4/17) in the S&P 500 would be the thirteenth largest in modern history if it ended the year at this level.
- With over eight months remaining in 2020, and trillions of dollars in fiscal and monetary stimulus deployed, we expect asset prices to experience notable volatility over the near term.

[1] Source: Bloomberg. Data is as of April 17, 2020.

Prior Drawdowns and Recoveries from 1926-2020[1]

Period	Peak-to-Trough Decline of the S&P 500	Approximate Time to Recovery
Sept 1929 to June 1932	-85%	266 months
February 1937 to April 1942	-57%	48 months
May 1946 to February 1948	-25%	27 months
August 1956 to October 1957	-22%	11 months
December 1961 to June 1962	-28%	14 months
February 1966 to October 1966	-22%	7 months
November 1968 to May 1970	-36%	21 months
January 1973 to October 1974	-48%	69 months
September 1976 to March 1978	-19%	17 months
November 1980 to August 1982	-27%	3 months
August 1987 to December 1987	-32%	19 months
July 1990 to October 1990	-20%	4 months
July 1998 to August 1998	-19%	3 months
March 2000 to October 2002	-49%	56 months
October 2007 to March 2009	-57%	49 months
February 2020 to April 2020	-34%	TBD
Average	**-36%**	**41 months**
Average ex. Great Depression	**-33%**	**25 months**

- Markets are continuing to reprice amid the uncertain impact of the virus on markets and the global economy, which means this drawdown is still being defined in the context of history.
- That said, financial markets have experienced material declines with some frequency, and while certain declines took a meaningful time to recover, in all cases they eventually did.
- The current decline is severe, and it is still too early to tell how long a full recovery might take.

[1] Source: Goldman Sachs. Recent peak to trough declines are through April 17, 2020.

Implications for Clients

- Be prepared to rebalance and take advantage of the age-old wisdom "buy low, sell high".
  - Before rebalancing, consider changes in liquidity needs given the potential for inflows to decline in some cases.
  - Also, consider the cost of rebalancing as investment liquidity declines.
- Diversification works. The latest decline was an example of a flight to quality leading to gains in very high quality bonds.

Performance YTD
(through April 17, 2020)

S&P 500	ACWI (ex. US)	Aggregate Bond Index	Balanced Portfolio[1]
-10.5%	-19.6%	4.7%	-8.5%

- Meketa will continue to monitor the situation and communicate frequently.
  - The situation is fluid and the economic impact is uncertain at this stage.
- Please feel free to reach out with any questions.
  - We would be glad to assist with performance estimates, memorandums, or phone calls.

[1] Source: InvestorForce. Balanced Portfolio represents 60% MSCI ACWI and 40% Bloomberg Barclays Global Aggregate.

Estimated Retirement Association Performance
As of March 31, 2020

Estimated Aggregate Performance[1]

	March[2] (%)	QTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Total Retirement Association	-8.6	-13.2	-5.8	1.9	2.9	6.0
60% MSCI ACWI/40% Barclays Global Aggregate	*-9.0*	*-13.0*	*-5.1*	*2.3*	*2.8*	*4.5*
Policy Benchmark	*-8.6*	*-12.9*	*-5.3*	*3.0*	*3.5*	*6.5*

Benchmark Returns

	March (%)	QTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Russell 3000	-13.8	-20.9	-9.1	4.0	5.8	10.2
MSCI EAFE	-13.4	-22.8	-14.4	-1.8	-0.6	2.7
MSCI Emerging Markets	-15.4	-23.6	-17.7	-1.6	-0.4	0.7
Barclays Aggregate	-0.6	3.2	8.9	4.8	3.5	3.9
Barclays TIPS	-1.8	1.7	6.9	3.5	2.7	3.5
Barclays High Yield	-11.5	-12.7	-6.9	0.8	2.8	5.6
JPM GBI-EM Global Diversified (Local Currency)	-11.1	-15.2	-6.5	-0.8	0.3	0.5
S&P Global Natural Resources	-18.1	-32.9	-30.0	-6.4	-2.7	-2.2

Estimated Total Assets

	Estimate
Total Retirement Association	$920,352,112

[1] The March performance estimates are calculated using index returns as of March 31, 2020 for each asset class. No performance estimate was included for private equity, real estate, infrastructure, and private natural resources asset classes.

[2] As of March 31, 2020

Interim Update
As of February 29, 2020

Asset Class Net Performance Summary

	Market Value ($)	% of Portfolio	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Retirement Association	**1,022,519,855**	**100.0**	**-4.1**	**-4.9**	**4.2**	**5.3**	**4.8**	**7.4**	**7.6**	**Nov-89**
60% MSCI ACWI / 40% Barclays Global Aggregate			*-4.6*	*-4.7*	*5.8*	*6.1*	*4.7*	*6.1*	*6.5*	*Nov-89*
Custom Benchmark - Policy Benchmark (Net)			*-4.2*	*-4.7*	*4.6*	*6.3*	*5.5*	*7.9*	*--*	*Nov-89*
Domestic Equity Assets	**245,147,595**	**24.0**	**-7.7**	**-8.1**	**3.8**	**8.3**	**--**	**--**	**10.9**	**Jan-16**
Russell 3000			*-8.2*	*-8.3*	*6.9*	*9.3*	*8.7*	*12.5*	*11.2*	*Jan-16*
International Developed Market Equity Assets	**72,747,330**	**7.1**	**-10.1**	**-13.0**	**-4.5**	**2.0**	**--**	**--**	**2.8**	**Jan-16**
MSCI EAFE			*-9.0*	*-10.9*	*-0.6*	*3.9*	*2.0*	*4.8*	*4.1*	*Jan-16*
International Emerging Market Equity Assets	**110,731,445**	**10.8**	**-5.0**	**-9.3**	**-1.1**	**3.7**	**--**	**--**	**6.6**	**Jan-16**
MSCI Emerging Markets			*-5.3*	*-9.7*	*-1.9*	*4.9*	*2.7*	*3.2*	*8.3*	*Jan-16*
Global Equity Assets	**99,850,268**	**9.8**	**-7.2**	**-9.1**	**1.5**	**--**	**--**	**--**	**-0.7**	**Feb-18**
MSCI ACWI			*-8.1*	*-9.1*	*3.9*	*7.0*	*5.5*	*8.1*	*-0.6*	*Feb-18*
Core Fixed Income	**93,240,537**	**9.1**	**1.1**	**2.5**	**9.8**	**4.4**	**--**	**--**	**4.3**	**Jan-16**
75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year			*1.6*	*3.4*	*10.7*	*4.6*	*3.3*	*3.6*	*4.2*	*Jan-16*
Value Added Fixed Income	**106,110,988**	**10.4**	**-1.2**	**-0.7**	**4.8**	**4.5**	**--**	**--**	**6.7**	**Jan-16**
Custom Benchmark (1)			*-0.8*	*0.0*	*6.7*	*4.9*	*--*	*--*	*7.1*	*Jan-16*
Hedge Funds (2)	**64,936,398**	**6.4**	**-0.8**	**-0.9**	**12.7**	**5.4**	**3.7**	**4.7**	**4.7**	**Feb-10**
HFRI Fund of Funds Composite Index			*-1.6*	*-1.2*	*3.3*	*2.8*	*1.7*	*2.7*	*2.7*	*Feb-10*
Real Estate (3)	**103,260,182**	**10.1**	**0.1**	**0.2**	**9.6**	**6.4**	**--**	**--**	**5.8**	**Jan-16**
80% NCREIF ODCE / 20% Wilshire REIT			*-1.6*	*-1.4*	*4.4*	*5.9*	*--*	*--*	*6.2*	*Jan-16*
Private Equity (4)	**65,688,850**	**6.4**	**0.0**	**0.0**	**7.0**	**7.6**	**--**	**--**	**4.5**	**Jan-16**
Cambridge Associates FoF Composite 1Q Lag			*0.0*	*0.0*	*7.8*	*12.9*	*11.0*	*12.2*	*10.4*	*Jan-16*
Real Assets (5)	**53,837,513**	**5.3**	**-0.2**	**-0.3**	**5.9**	**2.4**	**--**	**--**	**-0.5**	**Jan-16**
CPI + 3%			*0.3*	*0.7*	*5.3*	*5.0*	*5.0*	*4.8*	*5.1*	*Jan-16*
Cash and Cash Equivalent	**6,968,750**	**0.7**								

(1) The custom benchmark is comprised of 25% BBgBarc US High Yield/ 25% Credit Suisse Leveraged Loans/ 25% JP Morgan EMBI Global diversified/ 25% BBgBarc Multiverse TR

(2) The data for EntrustPermal Special Opportunities Evergreen Fund and Entrust Special Opportunities Fund III are based on December 31, 2019 market value, adjusted for subsequent cash flows.

(3) The market value and performance is one quarter lagged.

(4) The market value and performance is one quarter lagged.

(5) The market value and performance is one quarter lagged.

Trailing Net Performance

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Retirement Association	**1,022,519,855**	**100.0**	**--**	**-4.1**	**-4.9**	**4.2**	**5.3**	**4.8**	**7.4**	**7.6**	**Nov-89**
60% MSCI ACWI / 40% Barclays Global Aggregate				*-4.6*	*-4.7*	*5.8*	*6.1*	*4.7*	*6.1*	*6.5*	*Nov-89*
Custom Benchmark - Policy Benchmark (Net)				*-4.2*	*-4.7*	*4.6*	*6.3*	*5.5*	*7.9*	*--*	*Nov-89*
Domestic Equity Assets	**245,147,595**	**24.0**	**24.0**	**-7.7**	**-8.1**	**3.8**	**8.3**	**--**	**--**	**10.9**	**Jan-16**
Russell 3000				*-8.2*	*-8.3*	*6.9*	*9.3*	*8.7*	*12.5*	*11.2*	*Jan-16*
Rhumbline Russell 1000 Value	40,716,682	4.0	16.6	-9.7	-11.6	0.5	3.7	5.4	--	8.3	Apr-13
Russell 1000 Value				*-9.7*	*-11.6*	*0.5*	*3.8*	*5.5*	*10.4*	*8.4*	*Apr-13*
Rhumbline Russell 1000 Growth	44,230,929	4.3	18.0	-6.8	-4.7	15.1	15.6	12.3	14.7	15.2	Jul-09
Russell 1000 Growth				*-6.8*	*-4.7*	*15.1*	*15.7*	*12.4*	*14.8*	*15.3*	*Jul-09*
Fisher Midcap Value	43,673,299	4.3	17.8	-7.9	-8.6	3.8	6.7	7.3	11.4	7.2	Apr-07
Russell MidCap Value				*-9.9*	*-11.7*	*-1.4*	*2.2*	*4.4*	*10.8*	*6.1*	*Apr-07*
Boston Company Small Cap Growth	53,640,415	5.2	21.9	-4.6	-0.3	12.0	17.2	12.9	14.7	14.9	Aug-09
Russell 2000 Growth				*-7.2*	*-8.2*	*-0.7*	*7.9*	*6.5*	*12.1*	*12.5*	*Aug-09*
LMCG Small Cap Value	62,886,269	6.2	25.7	-9.8	-14.1	-6.8	-1.1	4.1	--	6.4	Mar-11
Russell 2000 Value				*-9.7*	*-14.6*	*-9.3*	*-0.8*	*3.6*	*8.7*	*6.5*	*Mar-11*

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
International Developed Market Equity Assets	**72,747,330**	**7.1**	**7.1**	**-10.1**	**-13.0**	**-4.5**	**2.0**	**--**	**--**	**2.8**	**Jan-16**
MSCI EAFE				*-9.0*	*-10.9*	*-0.6*	*3.9*	*2.0*	*4.8*	*4.1*	*Jan-16*
KBI Master Account	19,660,248	1.9	27.0	-8.9	-11.4	-4.4	0.6	-0.7	3.3	2.9	Jul-05
MSCI EAFE				*-9.0*	*-10.9*	*-0.6*	*3.9*	*2.0*	*4.8*	*4.0*	*Jul-05*
HGK TS International Equity	21,544,845	2.1	29.6	-7.8	-10.6	1.4	6.9	4.4	--	5.6	Feb-11
MSCI EAFE				*-9.0*	*-10.9*	*-0.6*	*3.9*	*2.0*	*4.8*	*3.3*	*Feb-11*
Copper Rock International Small Cap	31,542,237	3.1	43.4	-12.4	-15.5	-7.1	--	--	--	-9.1	Nov-17
MSCI EAFE Small Cap				*-9.8*	*-12.4*	*-0.9*	*4.1*	*4.6*	*7.6*	*-3.5*	*Nov-17*
International Emerging Market Equity Assets	**110,731,445**	**10.8**	**10.8**	**-5.0**	**-9.3**	**-1.1**	**3.7**	**--**	**--**	**6.6**	**Jan-16**
MSCI Emerging Markets				*-5.3*	*-9.7*	*-1.9*	*4.9*	*2.7*	*3.2*	*8.3*	*Jan-16*
LMCG Emerging Markets	46,495,084	4.5	42.0	-5.5	-11.3	-5.8	1.7	-0.3	--	0.2	Sep-13
MSCI Emerging Markets				*-5.3*	*-9.7*	*-1.9*	*4.9*	*2.7*	*3.2*	*2.6*	*Sep-13*
ABS Emerging Markets	27,496,357	2.7	24.8	-4.3	-7.0	1.8	--	--	--	9.0	Dec-18
MSCI Emerging Markets				*-5.3*	*-9.7*	*-1.9*	*4.9*	*2.7*	*3.2*	*3.3*	*Dec-18*
Copper Rock Emerging Markets Small Cap	10,230,650	1.0	9.2	-7.4	-9.8	-1.6	--	--	--	2.2	Dec-18
MSCI Emerging Markets Small Cap				*-7.1*	*-10.8*	*-6.8*	*-0.5*	*-0.1*	*2.1*	*-1.7*	*Dec-18*
Driehaus Emerging Markets Growth	26,509,354	2.6	23.9	-4.0	-7.7	5.5	--	--	--	5.5	Mar-19
MSCI Emerging Markets				*-5.3*	*-9.7*	*-1.9*	*4.9*	*2.7*	*3.2*	*-1.9*	*Mar-19*
Global Equity Assets	**99,850,268**	**9.8**	**9.8**	**-7.2**	**-9.1**	**1.5**	**--**	**--**	**--**	**-0.7**	**Feb-18**
MSCI ACWI				*-8.1*	*-9.1*	*3.9*	*7.0*	*5.5*	*8.1*	*-0.6*	*Feb-18*
First Eagle Global Value Fund	19,285,230	1.9	19.3	-6.6	-9.0	0.0	--	--	--	-1.7	Feb-18
MSCI ACWI				*-8.1*	*-9.1*	*3.9*	*7.0*	*5.5*	*8.1*	*-0.6*	*Feb-18*

MEKETA

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Kopernik Global All Cap Fund	17,184,775	1.7	17.2	-5.3	-9.7	-7.3	--	--	--	-7.0	Feb-18
MSCI ACWI				*-8.1*	*-9.1*	*3.9*	*7.0*	*5.5*	*8.1*	*-0.6*	*Feb-18*
Lee Munder Global Multi-Cap Strategy	28,212,792	2.8	28.3	-8.0	-10.6	-0.1	--	--	--	-0.7	Mar-18
MSCI ACWI				*-8.1*	*-9.1*	*3.9*	*7.0*	*5.5*	*8.1*	*1.5*	*Mar-18*
Wellington Durable Enterprises, L.P.	35,167,470	3.4	35.2	-7.8	-7.7	9.0	--	--	--	8.3	Mar-18
MSCI ACWI				*-8.1*	*-9.1*	*3.9*	*7.0*	*5.5*	*8.1*	*1.5*	*Mar-18*
Core Fixed Income	**93,240,537**	**9.1**	**9.1**	**1.1**	**2.5**	**9.8**	**4.4**	**--**	**--**	**4.3**	**Jan-16**
75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year				*1.6*	*3.4*	*10.7*	*4.6*	*3.3*	*3.6*	*4.2*	*Jan-16*
IR&M Core Bonds	57,299,720	5.6	61.5	1.5	3.4	10.9	4.6	3.4	4.0	4.4	Nov-04
75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year				*1.6*	*3.4*	*10.7*	*4.6*	*3.3*	*3.6*	*4.2*	*Nov-04*
Lord Abbett Short Duration Credit Trust II	35,940,817	3.5	38.5	0.4	1.1	--	--	--	--	2.6	Aug-19
BBgBarc US Credit 1-3 Yr TR				*0.7*	*1.2*	*5.3*	*3.0*	*2.4*	*2.3*	*2.9*	*Aug-19*
Value Added Fixed Income	**106,110,988**	**10.4**	**10.4**	**-1.2**	**-0.7**	**4.8**	**4.5**	**--**	**--**	**6.7**	**Jan-16**
Custom Benchmark				*-0.8*	*0.0*	*6.7*	*4.9*	*--*	*--*	*7.1*	*Jan-16*
Eaton Vance High Yield	22,064,878	2.2	20.8	-1.5	-1.6	5.8	4.4	4.8	7.1	6.8	Apr-06
ICE BofAML US High Yield TR				*-1.6*	*-1.6*	*5.9*	*4.8*	*5.2*	*7.2*	*7.1*	*Apr-06*
THL Bank Loan Select Fund	21,842,426	2.1	20.6	-1.2	-0.7	2.8	3.5	4.3	--	5.2	Sep-10
Credit Suisse Leveraged Loans				*-1.4*	*-0.8*	*3.2*	*3.8*	*4.0*	*4.9*	*4.7*	*Sep-10*
Franklin Templeton Emerging Market Bonds	21,128,000	2.1	19.9	-1.1	-0.5	5.3	5.2	6.0	5.7	6.8	May-06
JP Morgan EMBI Global Diversified				*-1.0*	*0.5*	*9.7*	*5.7*	*6.0*	*6.8*	*7.2*	*May-06*

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Manulife Strategic Fixed Income	30,835,684	3.0	29.1	-1.0	0.0	--	--	--	--	2.7	Jul-19
BBgBarc Multiverse TR				*0.5*	*1.7*	*7.7*	*4.4*	*3.0*	*2.8*	*3.0*	*Jul-19*
Mesirow High Yield	10,240,000	1.0	9.7	-1.8	-0.9	--	--	--	--	2.4	Aug-19
BBgBarc US Corporate High Yield TR				*-1.4*	*-1.4*	*6.1*	*4.9*	*5.2*	*7.3*	*2.0*	*Aug-19*
Hedge Funds	**64,936,398**	**6.4**	**6.4**	**-0.8**	**-0.9**	**12.7**	**5.4**	**3.7**	**4.7**	**4.7**	**Feb-10**
HFRI Fund of Funds Composite Index				*-1.6*	*-1.2*	*3.3*	*2.8*	*1.7*	*2.7*	*2.7*	*Feb-10*
ABS Offshore SPC - Global Segregated Portfolio	22,522,414	2.2	34.7	-2.1	-2.1	7.1	5.0	3.0	--	5.2	Aug-10
HFRI Fund of Funds Composite Index				*-1.6*	*-1.2*	*3.3*	*2.8*	*1.7*	*2.7*	*2.9*	*Aug-10*
Entrust Special Opportunities Fund III, Ltd.	25,670,074	2.5	39.5	0.0	0.0	16.8	7.6	--	--	11.3	Oct-16
HFRI Fund of Funds Composite Index				*-1.6*	*-1.2*	*3.3*	*2.8*	*1.7*	*2.7*	*3.3*	*Oct-16*
Old Farm Partners Master Fund, L.P.	4,980,992	0.5	7.7	-0.6	-1.6	2.1	--	--	--	-0.3	Oct-18
HFRI Fund of Funds Composite Index				*-1.6*	*-1.2*	*3.3*	*2.8*	*1.7*	*2.7*	*1.3*	*Oct-18*
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	11,762,918	1.2	18.1	0.0	0.0	23.7	--	--	--	23.2	Jan-19
HFRI Fund of Funds Composite Index				*-1.6*	*-1.2*	*3.3*	*2.8*	*1.7*	*2.7*	*6.0*	*Jan-19*

Note: The data for EntrustPermal Special Opportunities Evergreen Fund and Entrust Special Opportunities Fund III are based on December 31, 2019 market value, adjusted for subsequent cash flows.

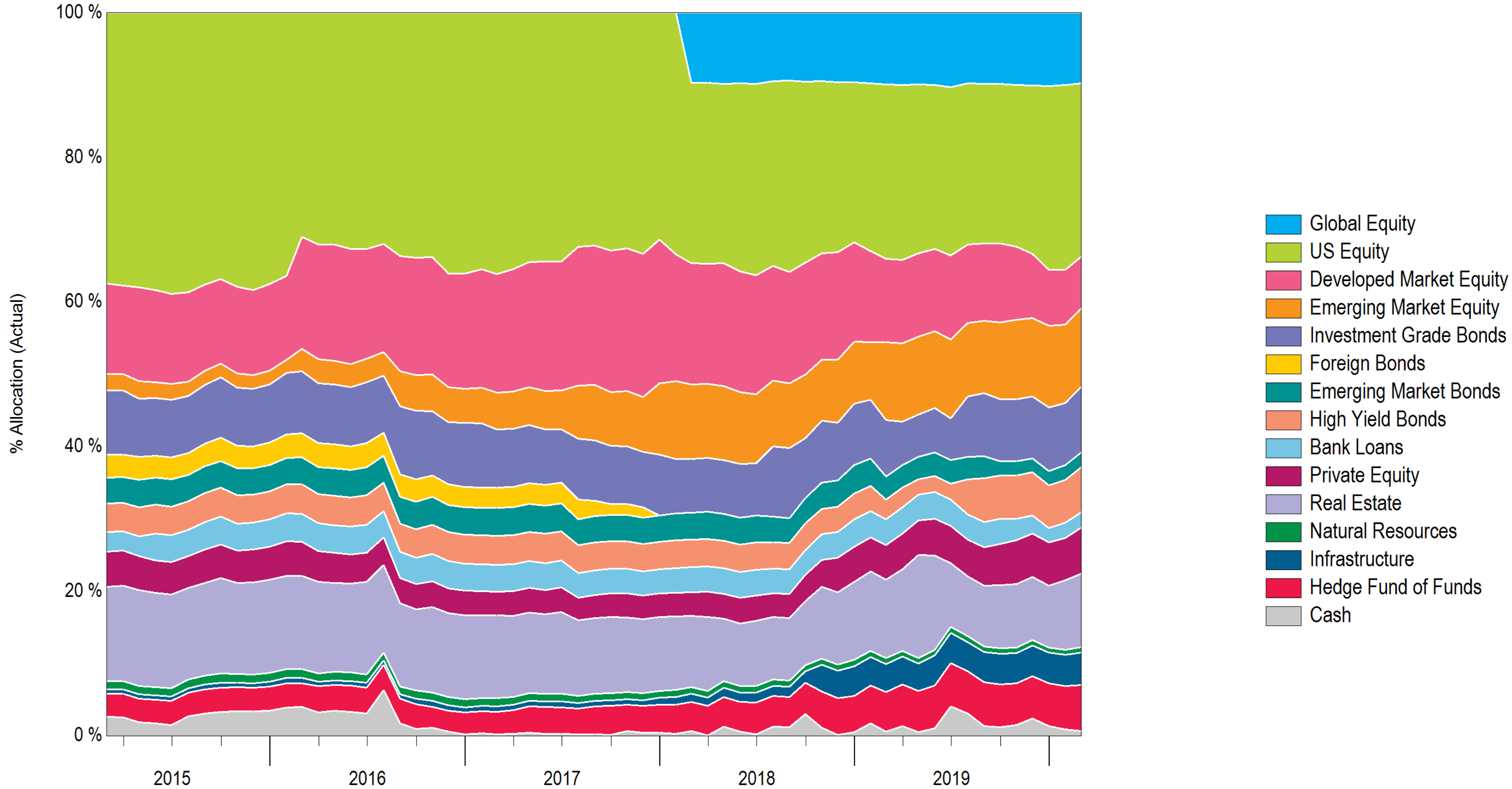
	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Real Estate	**103,260,182**	**10.1**	**10.1**	**0.1**	**0.2**	**9.6**	**6.4**	--	--	**5.8**	**Jan-16**
80% NCREIF ODCE / 20% Wilshire REIT				*-1.6*	*-1.4*	*4.4*	*5.9*	--	--	*6.2*	*Jan-16*
Core Real Estate	**66,856,521**	**6.5**	**64.7**	**0.2**	**0.3**	**7.8**	**6.9**	--	--	**7.2**	**Jan-16**
NCREIF-ODCE				*0.0*	*0.0*	*5.3*	*7.1*	*9.0*	*11.4*	*7.2*	*Jan-16*
TA Realty Core Property Fund, L.P.	38,706,398	3.8	57.9	0.0	0.0	9.8	--	--	--	10.4	Apr-18
NCREIF ODCE				*0.0*	*0.0*	*5.3*	*7.1*	*9.0*	*11.4*	*5.9*	*Apr-18*
JPMorgan Strategic Property	28,150,123	2.8	42.1	0.4	0.7	--	--	--	--	3.5	Apr-19
NCREIF-ODCE				*0.0*	*0.0*	*5.3*	*7.1*	*9.0*	*11.4*	*3.9*	*Apr-19*
Non-Core Real Estate	**36,403,661**	**3.6**	**35.3**	**0.0**	**0.0**	**13.3**	**3.9**	--	--	**0.8**	**Jan-16**
Private Equity	**65,688,850**	**6.4**	**6.4**	**0.0**	**0.0**	**7.0**	**7.6**	--	--	**4.5**	**Jan-16**
Cambridge Associates FoF Composite 1Q Lag				*0.0*	*0.0*	*7.8*	*12.9*	*11.0*	*12.2*	*10.4*	*Jan-16*
Private Equity	**58,210,701**	**5.7**	**88.6**	**0.0**	**0.0**	**7.9**	**6.2**	--	--	**3.1**	**Jan-16**
Venture Capital	**7,478,149**	**0.7**	**11.4**	**0.0**	**0.0**	**2.6**	**11.8**	--	--	**8.8**	**Jan-16**
Real Assets	**53,837,513**	**5.3**	**5.3**	**-0.2**	**-0.3**	**5.9**	**2.4**	--	--	**-0.5**	**Jan-16**
CPI + 3%				*0.3*	*0.7*	*5.3*	*5.0*	*5.0*	*4.8*	*5.1*	*Jan-16*
IFM Global Infrastructure	23,087,705	2.3	42.9	-0.6	-0.7	14.1	--	--	--	11.8	Oct-18
CPI+5% (1q Lagged)				*0.4*	*1.0*	*7.1*	--	--	--	*6.5*	*Oct-18*
Cash and Cash Equivalent	**6,968,750**	**0.7**	**0.7**								
Cash	6,968,750	0.7	100.0								

Allocation vs. Target

	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
Domestic Equity	$245,147,595	24%	26%	21% - 36%	Yes
International Developed Market Equity	$72,747,330	7%	6%	1% - 16%	Yes
International Emerging Market Equity	$110,731,445	11%	10%	5% - 20%	Yes
Global Equity	$99,850,268	10%	10%	5% - 20%	Yes
Core Bonds	$93,240,537	9%	9%	4% - 14%	Yes
Value-Added Fixed Income	$106,110,988	10%	6%	2% - 12%	Yes
Private Equity	$65,688,850	6%	13%	4% - 18%	Yes
Real Estate	$103,260,182	10%	10%	5% - 15%	Yes
Real Assets	$53,837,513	5%	6%	2% - 10%	Yes
Hedge Fund of Funds	$64,936,398	6%	4%	2% - 8%	Yes
Cash	$6,968,750	1%	0%	0% - 3%	Yes
Total	**$1,022,519,855**	**100%**	**100%**		

	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
Total Equity	$659,101,885	64%	69%	60% - 80%	Yes
Total Fixed Income	$199,351,525	19%	15%	5% - 25%	Yes
Total Real Assets and Real Estate	$157,097,695	15%	16%	13% - 19%	Yes
Cash	$6,968,750	1%	0%	0% - 3%	Yes

Asset Allocation History
5 Years Ending February 29, 2020



Annual Investment Expense Analysis
As Of February 29, 2020

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Domestic Equity Assets		**$245,147,595**		
Rhumbline Russell 1000 Value	0.05% of First 25.0 Mil, 0.04% of Next 25.0 Mil, 0.03% Thereafter	$40,716,682	$18,787	0.05%
Rhumbline Russell 1000 Growth	0.05% of First 25.0 Mil, 0.04% of Next 25.0 Mil, 0.03% Thereafter	$44,230,929	$20,192	0.05%
Fisher Midcap Value	0.80% of First 25.0 Mil, 0.75% of Next 25.0 Mil, 0.67% Thereafter	$43,673,299	$340,050	0.78%
Boston Company Small Cap Growth	0.45% of Assets	$53,640,415	$241,382	0.45%
LMCG Small Cap Value	0.90% of Assets	$62,886,269	$565,976	0.90%
International Developed Market Equity Assets		**$72,747,330**		
KBI Master Account	0.65% of Assets	$19,660,248	$127,792	0.65%
HGK TS International Equity	1.00% of Assets	$21,544,845	$215,448	1.00%
Copper Rock International Small Cap	0.85% of Assets	$31,542,237	$268,109	0.85%
International Emerging Market Equity Assets		**$110,731,445**		
LMCG Emerging Markets	0.64% of Assets	$46,495,084	$297,569	0.64%
ABS Emerging Markets	0.35% Management Fee and 10% Performance/Incentive Fee.	$27,496,357		
Copper Rock Emerging Markets Small Cap	0.85% of Assets	$10,230,650	$86,961	0.85%
Driehaus Emerging Markets Growth	0.55% of Assets	$26,509,354	$145,801	0.55%

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Global Equity Assets		**$99,850,268**		
First Eagle Global Value Fund	0.75% of Assets	$19,285,230	$144,639	0.75%
Kopernik Global All Cap Fund	0.80% of First 50.0 Mil, 0.75% of Next 150.0 Mil, 0.70% of Next 250.0 Mil, 0.65% of Next 350.0 Mil	$17,184,775	$137,478	0.80%
Lee Munder Global Multi-Cap Strategy	0.45% of Assets	$28,212,792	$126,958	0.45%
Wellington Durable Enterprises, L.P.	0.60% of Assets	$35,167,470	$211,005	0.60%
Core Fixed Income		**$93,240,537**		
IR&M Core Bonds	0.25% of First 50.0 Mil, 0.20% of Next 50.0 Mil, 0.15% Thereafter	$57,299,720	$139,599	0.24%
Lord Abbett Short Duration Credit Trust II	0.19% of Assets	$35,940,817	$68,288	0.19%
Value Added Fixed Income		**$106,110,988**		
Eaton Vance High Yield	0.42% of Assets	$22,064,878	$92,672	0.42%
THL Bank Loan Select Fund	0.40% of Assets	$21,842,426	$87,370	0.40%
Franklin Templeton Emerging Market Bonds	0.99% of Assets	$21,128,000	$209,167	0.99%
Manulife Strategic Fixed Income	0.40% of Assets	$30,835,684	$123,343	0.40%
Mesirow High Yield	0.40% of Assets	$10,240,000	$40,960	0.40%

Note: The value is based on September 30, 2019 FMV.

Private Equity	Commitment	Total Contributions	Total Distributions	Adjusted Value
Ascend Ventures II, L.P.	2,500,000	2,324,355	925,962	56,191
Ascent Venture Partners IV, L.P.	2,500,000	2,502,219	388,970	39,655
Ascent Venture Partners V, L.P.	5,000,000	5,104,731	3,432,862	4,396,415
Audax Mezzanine Fund IV, L.P.	10,000,000	4,616,422	1,908,017	3,145,436
Charles River Partnership XI, L.P.	1,839,000	1,820,323	1,996,788	145,168
Charlesbank Technology Opportunities Fund, L.P.	12,000,000	0	0	0
DN Partners II, L.P.	5,000,000	2,375,841	0	1,616,217
Euro Choice V, L.P.	5,031,619	5,688,459	2,345,992	4,575,786
FS Equity Partners VIII, L.P.	12,000,000	0	0	988,332
Globespan Capital Partners V, L.P.	5,000,000	4,852,500	8,008,564	2,935,888
HarbourVest Partners Co-Investment Fund V, L.P.	12,000,000	1,200,000	0	1,010,563
Ironsides Direct Investment Fund V, L.P.	12,000,000	12,094,751	824,306	12,321,911
Landmark Equity Partners XIV, L.P.	6,000,000	6,288,437	6,669,658	1,001,281
Leeds Equity Partners IV, L.P.	5,185,562	5,089,327	6,224,435	10,391
Leeds Equity Partners V, L.P.	2,500,000	3,570,815	3,981,623	2,471,347
Lexington Capital Partners VII, L.P.	10,000,000	10,556,021	13,122,582	2,465,158
LLR Equity Partners V, L.P.	12,000,000	6,240,000	433,003	6,155,025
Mesirow Financial Capital Partners IX, L.P.	4,000,000	3,840,731	1,897,056	223,973
Ridgemont Equity Partners III, L.P.	12,000,000	0	0	0
Rimco Production Company, Inc	2,000,000	2,000,000	7,632,984	1
Searchlight Capital III, L.P.	12,000,000	0	0	0
Siguler Guff Distressed Opportunities Fund III, L.P.	6,000,000	5,820,000	8,210,296	998,772
Summit Partners Growth Equity Fund IX, L.P.	10,000,000	8,416,000	2,232,746	9,075,534
TRG Growth Partnership II, L.P.	7,500,000	7,450,399	7,463,445	1,141,155
Trilantic Capital Partners VI (North America), L.P.	12,000,000	2,907,130	0	2,761,509
Wellspring Capital Partners VI, L.P.	12,000,000	3,402,317	0	3,047,559
Total Plymouth County - PE	**198,056,180**	**108,160,779**	**77,699,289**	**60,583,266**

Note: The value is based on September 30, 2019 FMV.

Real Assets	Commitment	Total Contributions	Total Distributions	Adjusted Value
Basalt Infrastructure Partners II	10,000,000	6,500,879	49,561	6,861,968
BTG Pactual Global Timberland Resources Fund, LLC	4,328,717	5,043,536	229,998	2,923,821
Global Infrastructure Partners III, L.P.	10,000,000	8,325,631	908,856	8,498,551
Global Infrastructure Partners IV, L.P.	10,000,000	43,750	0	-2,723
IFM Global Infrastructure (U.S.), L.P.	35,000,000	20,000,000	119,615	23,087,705
JPMorgan Global Maritime Investment	10,000,000	9,186,014	938,504	6,191,285
Domain Timbervest Partners III, L.P.	5,000,000	5,000,000	1,426,771	4,964,163
Total Plymouth County - RA	**84,328,717**	**54,099,809**	**3,673,306**	**52,524,770**

Real Estate	Commitment	Total Contributions	Total Distributions	Adjusted Value
1921 Realty, Inc.	5,000,000	5,378,194	0	756,654
AEW Partners Real Estate Fund VIII, L.P.	25,000,000	14,575,503	3,410,486	12,692,931
Berkshire Value Fund V, L.P.	9,000,000	0	0	0
Carlyle Realty Partners VIII, L.P.	18,000,000	2,757,163	2,657	3,112,184
DSF Capital Partners IV, L.P.	5,000,000	5,000,000	5,997,885	7,413
DSF Multi-Family Real Estate Fund III, L.P.	15,000,000	15,499,746	1,229,341	16,367,900
JPMorgan Strategic Property	27,000,000	27,000,000	0	28,150,123
New Boston Institutional Fund VII, L.P.	5,000,000	3,012,998	3,961,438	184,301
Real Estate International Partnership Fund I, L.P.	15,000,000	12,674,617	10,772,161	2,178,911
Rockpoint Real Estate Fund VI, L.P.	9,000,000	0	0	0
TA Realty Core Property Fund, L.P.	25,000,000	25,000,000	322,844	28,706,398
Total Plymouth County - RE	**158,000,000**	**110,898,222**	**25,696,812**	**92,156,815**

Note: The value for IFM Global Infrastructure and JPMorgan Strategic Property is as of February 29, 2020.

Cash Flow Summary

Month Ending February 29, 2020

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
1921 Realty, Inc	$756,654	$0	$0	$0	$756,654
ABS Emerging Markets	$28,728,668	$0	$0	$0	$27,496,357
ABS Offshore SPC - Global Segregated Portfolio	$22,997,651	$0	$0	$0	$22,522,414
AEW Partners Real Estate VIII	$13,098,256	$0	$0	$0	$13,098,256
Ascend Ventures II	$56,191	$0	$0	$0	$56,191
Ascent Ventures IV	$39,655	$0	$0	$0	$39,655
Ascent Ventures V	$4,446,415	$0	$0	$0	$4,446,415
Audax Mezzanine Debt IV	$3,363,647	$0	$0	$0	$3,363,647
Basalt Infrastructure Partners II	$8,243,140	$0	$0	$0	$8,243,140
Boston Company Small Cap Growth	$56,217,755	$0	$0	$0	$53,640,415
BTG Pactual Global Timberland Resources	$2,923,821	$0	$0	$0	$2,923,821
Carlyle Realty Partners VIII	$4,638,518	$0	$0	$0	$4,638,518
Cash	$9,776,838	$0	-$2,808,088	-$2,808,088	$6,968,750
Copper Rock Emerging Markets Small Cap	$11,064,161	$0	$0	$0	$10,230,650
Copper Rock International Small Cap	$36,047,921	$0	$0	$0	$31,542,237
DN Partners II, LP	$1,616,217	$0	$0	$0	$1,616,217
Driehaus Emerging Markets Growth	$27,593,537	$0	$0	$0	$26,509,354
DSF Capital Partners IV	$98	$0	$0	$0	$98
DSF Multi-Family Real Estate Fund III	$15,941,764	$0	$0	$0	$15,941,764
Eaton Vance High Yield	$22,395,150	$0	$0	$0	$22,064,878
Entrust Special Opportunities Fund III, Ltd.	$24,755,440	$914,634	$0	$914,634	$25,670,074
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	$10,951,154	$811,764	$0	$811,764	$11,762,918

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Euro Choice V Programme	$4,181,593	$0	-$68,955	-$68,955	$4,112,637
First Eagle Global Value Fund	$20,649,861	$0	$0	$0	$19,285,230
Fisher Midcap Value	$47,398,075	$0	$0	$0	$43,673,299
Franklin Templeton Emerging Market Bonds	$21,361,244	$0	$0	$0	$21,128,000
FS Equity Partners VIII, L.P.	$1,704,169	$0	$0	$0	$1,704,169
Global Infrastructure Partners III	$8,417,143	$0	$0	$0	$8,417,143
Global Infrastructure Partners IV, L.P.	$135,256	$0	$0	$0	$135,256
Globespan Capital V	$2,935,888	$0	$0	$0	$2,935,888
HarbourVest Partners Co-Investment V	$1,610,563	$1,200,000	$0	$1,200,000	$2,810,563
HGK TS International Equity	$23,342,115	$0	$0	$0	$21,544,845
IFM Global Infrastructure	$23,219,643	$0	$0	$0	$23,087,705
IR&M Core Bonds	$56,419,765	$0	$0	$0	$57,299,720
Ironsides Direct Investment Fund V, L.P.	$11,338,668	$0	$0	$0	$11,338,668
JP Morgan Global Maritime Investment	$6,191,285	$0	$0	$0	$6,191,285
JPMorgan Strategic Property	$28,025,697	$0	$0	$0	$28,150,123
KBI Master Account	$21,583,144	$0	$0	$0	$19,660,248
Kopernik Global All Cap Fund	$18,153,036	$0	$0	$0	$17,184,775
Landmark Equity Partners XIV	$959,740	$0	$0	$0	$959,740
Lee Munder Global Multi-Cap Strategy	$30,651,145	$0	$0	$0	$28,212,792
Leeds Equity Partners IV	$10,391	$0	$0	$0	$10,391
Leeds Equity Partners V	$2,471,347	$0	$0	$0	$2,471,347
Lexington Capital Partners VII	$2,258,806	$0	-$37,931	-$37,931	$2,220,875
LLR Equity Partners V, LP.	$6,703,450	$0	$0	$0	$6,703,450
LMCG Emerging Markets	$49,200,617	$0	$0	$0	$46,495,084
LMCG Small Cap Value	$69,689,292	$0	$0	$0	$62,886,269

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Lord Abbett Short Duration Credit Trust II	$35,803,113	$0	$0	$0	$35,940,817
Manulife Strategic Fixed Income	$31,135,350	$0	$0	$0	$30,835,684
Mesirow Financial Capital Partners IX, LP	$223,973	$0	$0	$0	$223,973
Mesirow Financial International Real Estate Fund I	$1,835,684	$0	$0	$0	$1,835,684
Mesirow High Yield	$10,430,000	$0	$0	$0	$10,240,000
New Boston Institutional Fund, LP VII	$50,066	$0	$0	$0	$50,066
Old Farm Partners Master Fund, L.P.	$5,011,882	$0	$0	$0	$4,980,992
Rhumbline Russell 1000 Growth	$51,200,204	$0	-$4,000,618	-$4,000,618	$44,230,929
Rhumbline Russell 1000 Value	$48,942,950	$0	-$4,001,914	-$4,001,914	$40,716,682
Ridgemont Equity Partners III, L.P.	$1,400,121	$1,066,699	$0	$1,066,699	$2,466,820
RIMCO Royalty Partners, LP	$1	$0	$0	$0	$1
Rockpoint Real Estate Fund VI, L.P.	$82,621	$0	$0	$0	$82,621
Siguler Guff Distressed Opportunities Fund III, LP	$948,763	$0	$0	$0	$948,763
Summit Partners Growth Equity Fund IX	$9,166,279	$586,000	$0	$586,000	$9,752,279
TA Realty Core Property Fund, L.P.	$38,706,398	$0	$0	$0	$38,706,398
THL Bank Loan Select Fund	$22,114,359	$0	$0	$0	$21,842,426
Timbervest Partners III, LP	$4,839,163	$0	$0	$0	$4,839,163
TRG Growth Partnership II	$1,085,771	$0	$0	$0	$1,085,771
Trilantic Capital Partners VI, L.P.	$2,669,904	$0	$0	$0	$2,669,904
Wellington Durable Enterprises, L.P.	$38,160,264	$0	$0	$0	$35,167,470
Wellspring Capital Partners VI	$3,751,486	$0	$0	$0	$3,751,486
Total	**$1,071,822,936**	**$4,579,097**	**-$10,917,507**	**-$6,338,410**	**$1,022,519,855**

Cash Flow Summary

From September 30, 2019 through February 29, 2020

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
1921 Realty, Inc	$765,556	$0	$0	$0	$756,654
ABS Emerging Markets	$21,350,946	$5,000,000	$0	$5,000,000	$27,496,357
ABS Offshore SPC - Global Segregated Portfolio	$21,638,916	$0	$0	$0	$22,522,414
AEW Partners Real Estate VIII	$11,052,620	$2,642,920	-$1,424,389	$1,218,531	$13,098,256
Ascend Ventures II	$61,532	$0	$0	$0	$56,191
Ascent Ventures IV	$40,167	$0	$0	$0	$39,655
Ascent Ventures V	$4,255,389	$50,000	$0	$50,000	$4,446,415
Audax Mezzanine Debt IV	$3,465,317	$730,969	-$1,013,423	-$282,454	$3,363,647
Basalt Infrastructure Partners II	$6,360,148	$1,381,172	$0	$1,381,172	$8,243,140
Boston Company Small Cap Growth	$50,466,136	$0	$0	$0	$53,640,415
BTG Pactual Global Timberland Resources	$3,043,232	$0	$0	$0	$2,923,821
Carlyle Realty Partners VIII	$2,309,686	$1,809,754	-$283,420	$1,526,334	$4,638,518
Cash	$14,111,233	$3,215,338	-$10,357,821	-$7,142,483	$6,968,750
Charles River Partnership XI	$145,052	$0	-$536,096	-$536,096	--
Copper Rock Emerging Markets Small Cap	$10,197,621	$0	$0	$0	$10,230,650
Copper Rock International Small Cap	$34,072,827	$0	$0	$0	$31,542,237
DN Partners II, LP	$1,641,786	$0	$0	$0	$1,616,217
Driehaus Emerging Markets Growth	$25,552,721	$0	$0	$0	$26,509,354
DSF Capital Partners IV	$16,359	$0	-$7,315	-$7,315	$98
DSF Multi-Family Real Estate Fund III	$15,344,826	$0	-$426,136	-$426,136	$15,941,764
Eaton Vance High Yield	$21,807,580	$0	$0	$0	$22,064,878
Entrust Special Opportunities Fund III, Ltd.	$27,352,278	$914,634	-$3,178,036	-$2,263,402	$25,670,074
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	$8,821,364	$1,964,706	$0	$1,964,706	$11,762,918

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Euro Choice V Programme	$5,000,943	$0	-$463,149	-$463,149	$4,112,637
First Eagle Global Value Fund	$19,854,767	$0	$0	$0	$19,285,230
Fisher Midcap Value	$42,798,398	$0	$0	$0	$43,673,299
Franklin Templeton Emerging Market Bonds	$31,791,000	$0	-$11,500,000	-$11,500,000	$21,128,000
FS Equity Partners VIII, L.P.	$0	$1,681,191	$0	$1,681,191	$1,704,169
Global Infrastructure Partners III	$8,407,375	$284,053	-$365,461	-$81,408	$8,417,143
Global Infrastructure Partners IV, L.P.	$0	$135,256	$0	$135,256	$135,256
Globespan Capital V	$2,593,945	$0	$0	$0	$2,935,888
HarbourVest Partners Co-Investment V	$1,200,000	$1,800,000	$0	$1,800,000	$2,810,563
HGK TS International Equity	$28,797,233	$0	-$9,060,399	-$9,060,399	$21,544,845
IFM Global Infrastructure	$21,685,341	$0	-$180,908	-$180,908	$23,087,705
Invesco Equity Real Estate Securities Trust	$816,097	$0	-$797,320	-$797,320	--
IR&M Core Bonds	$59,456,127	$0	-$4,000,000	-$4,000,000	$57,299,720
Ironsides Direct Investment Fund V, L.P.	$8,726,286	$3,393,190	-$1,630,205	$1,762,985	$11,338,668
JP Morgan Global Maritime Investment	$6,344,048	$0	$0	$0	$6,191,285
JPMorgan Strategic Property	$27,398,999	$0	-$133,638	-$133,638	$28,150,123
KBI Master Account	$47,688,431	$0	-$30,000,000	-$30,000,000	$19,660,248
Kopernik Global All Cap Fund	$18,338,549	$0	$0	$0	$17,184,775
Landmark Equity Partners XIV	$1,028,077	$12,105	-$110,491	-$98,386	$959,740
Lee Munder Global Multi-Cap Strategy	$27,897,142	$0	$0	$0	$28,212,792
Leeds Equity Partners IV	$10,302	$0	$0	$0	$10,391
Leeds Equity Partners V	$2,135,786	$0	$0	$0	$2,471,347
Lexington Capital Partners VII	$2,449,859	$0	-$298,798	-$298,798	$2,220,875
LLR Equity Partners V, LP.	$5,983,057	$1,200,000	-$651,575	$548,425	$6,703,450
LMCG Emerging Markets	$46,344,777	$0	$0	$0	$46,495,084
LMCG Small Cap Value	$64,788,763	$0	$0	$0	$62,886,269

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Lord Abbett Short Duration Credit Trust II	$30,266,272	$5,000,000	$0	$5,000,000	$35,940,817
Manulife Strategic Fixed Income	$30,404,283	$0	-$48,816	-$48,816	$30,835,684
Mesirow Financial Capital Partners IX, LP	$223,454	$0	$0	$0	$223,973
Mesirow Financial International Real Estate Fund I	$2,189,009	$0	-$374,142	-$374,142	$1,835,684
Mesirow High Yield	$10,070,000	$0	$0	$0	$10,240,000
New Boston Institutional Fund, LP VII	$56,763	$0	-$23,657	-$23,657	$50,066
Old Farm Partners Master Fund, L.P.	$4,948,033	$0	$0	$0	$4,980,992
Rhumbline Russell 1000 Growth	$35,084,579	$10,999,118	-$4,000,618	$6,998,500	$44,230,929
Rhumbline Russell 1000 Value	$34,891,173	$10,996,747	-$4,001,914	$6,994,833	$40,716,682
Ridgemont Equity Partners III, L.P.	--	$2,466,820	$0	$2,466,820	$2,466,820
RIMCO Royalty Partners, LP	$1	$0	$0	$0	$1
Rockpoint Real Estate Fund VI, L.P.	--	$82,621	$0	$82,621	$82,621
Siguler Guff Distressed Opportunities Fund III, LP	$909,309	$0	-$51,967	-$51,967	$948,763
Summit Partners Growth Equity Fund IX	$7,331,852	$1,207,000	-$530,055	$676,945	$9,752,279
TA Realty Core Property Fund, L.P.	$27,153,280	$10,337,300	-$337,300	$10,000,000	$38,706,398
THL Bank Loan Select Fund	$36,385,726	$0	-$15,005,673	-$15,005,673	$21,842,426
Timbervest Partners III, LP	$5,147,941	$0	-$377,229	-$377,229	$4,839,163
TRG Growth Partnership II	$1,181,037	$0	$0	$0	$1,085,771
Trilantic Capital Partners VI, L.P.	$2,765,494	$435	-$92,040	-$91,605	$2,669,904
Wellington Durable Enterprises, L.P.	$36,021,760	$0	$0	$0	$35,167,470
Wellspring Capital Partners VI	$3,169,101	$703,927	$0	$703,927	$3,751,486
Total	**$1,033,607,662**	**$68,009,255**	**-$101,261,991**	**-$33,252,736**	**$1,022,519,855**

Current Issues

Emerging Markets Debt
RFP Respondent Review

Background

- In February 2020, Meketa Investment Group issued an emerging market debt RFP on behalf of the Plymouth Country Retirement Association.
- Meketa Investment Group received 24 responses from emerging market debt managers.
- The results of our review of responses are listed on the following pages.
- All statistics in this review are as of December 31, 2019, unless otherwise noted.

Introduction

Selecting strong and appropriate investment managers is a key determinant of the overall success of the Fund. Investment managers are expected to operate within a client's investment guidelines and are given a large degree of latitude to achieve the investment objectives.

Manager selection is a nuanced process and requires extensive due diligence. When selecting prospective active managers, Meketa Investment Group evaluates the following areas:

- Organization
- Investment team
- Investment philosophy
- Investment process
- Investment performance
- Management fees

In addition, all managers are evaluated within the context of the Fund's overall investment policy.

RFP Respondents

Manager	Headquarters	Strategy	Overall Rating
Aberdeen Standard Investments Inc.	Philadelphia, Pennsylvania	Emerging Markets Debt Plus	Highly Advantageous
Wellington Management	Boston, Massachusetts	Blended Opportunistic EMD	Highly Advantageous
Eaton Vance Management	Boston, Massachusetts	Emerging Markets Debt Opportunities	Highly Advantageous
MetLife Investment Management	Whippany, New Jersey	Emerging Markets Debt Blend	Highly Advantageous
Ashmore Investment Advisors Limited	London, United Kingdom	EM Total Return	Advantageous
Neuberger Berman	New York, New York	Emerging Market Debt Blend	Advantageous
Finisterre Capital	Des Moines, Iowa	Unconstrained Emerging Markets Bond	Advantageous
Ninety One (Investec)	London, United Kingdom	Emerging Market Blended Debt	Advantageous
TCW Investment Management Company	Los Angeles, California	Emerging Markets Fixed Income Tot. Ret.	Advantageous
Marathon Asset Management	New York, New York	Emerging Markets Bond	Advantageous
Pacific Investment Management Co. (PIMCO)	Newport Beach, California	Emerging Markets Full Spectrum Bond	Advantageous
GAM International Management	New York, New York	Emerging Markets Opportunities Bond	Advantageous
GoldenTree Asset Management	New York, New York	Emerging Markets	Advantageous
Manulife Investment Management	Toronto, Ontario, Canada	Emerging Markets Debt	Advantageous
Nuveen	New York, New York	TIAA-CREF Emerging Markets Debt	Advantageous
Lazard Asset Management	New York, New York	Emerging Markets Debt Blend	Advantageous
Northwest Passage	Milwaukee, Wisconsin	Blended Emerging Markets Debt	Advantageous
Stone Harbor Investment Partners LP	New York, New York	EMD Global Allocation 50/50 Core strategy	Advantageous
Mellon Investments	Boston, Massachusetts	Emerging Markets Debt – Opportunistic	Advantageous
Invesco Advisers	Atlanta, Georgia	Invesco Oppenheimer EM Local Debt	Advantageous
State Street Global Advisors	Boston, Massachusetts	EM Hard Currency Bond Sovereign/Corporate Blend	Advantageous
Franklin Templeton	San Mateo, California	Emerging Market Debt Opportunities	Advantageous
Grantham, Mayo, Van Otterloo & Co. (GMO)	Boston, Massachusetts	Emerging Country Debt	Advantageous
Bosera Asset Management	China Mainland	*strategy proposed not applicable	Not Advantageous

Aberdeen Standard Investments Inc.

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	• Aberdeen Standard Investments Inc., located in Philadelphia, Pennsylvania, is an asset management subsidiary of Aberdeen PLC. Aberdeen PLC is a wholly owned subsidiary of SLA, a publicly traded company. • The firm manages $669 billion in assets under management across a mix of strategies as of December 2019. The emerging markets debt plus strategy was incepted in 1999 and has approximately $3.9 billion in assets.
Team	Highly Advantageous	• The strategy is managed by the Emerging Markets Debt team, and is led by Brett Diment. • The team is organized by specialization, either sovereign or corporate, and they are primarily based in London and Singapore. Most team members have a dual role of portfolio manager and research analysts.
Investment Philosophy	Highly Advantageous	• Aberdeen's Emerging Markets Debt Plus strategy is centered on a bottom up approach. Fundamental research is a core aspect of the investment philosophy and they are benchmark aware. • The team has a bias towards being overweight frontier countries. They believe that frontier countries have the potential to provide attractive opportunities given that they are less well researched.
Investment Process	Highly Advantageous	• The team begins their investment process by conducting fundamental research on their investment universe, which consist of more than 80 countries. At this time the team puts together a country note, which contains country specific macroeconomic information as well as forward looking credit profile. They also make use of a proprietary local currency scorecard and ESGP framework. The goal of this first stage in the investment process is to understand all associated risks related to a specific country. • The second step in the process is relative value analysis where the team produces return forecasts for each asset type within their respective countries of coverage. Then the team compares across countries for the best relative value opportunities. Portfolio construction then takes place with a view to duration, correlation between assets, beta exposures, volatility and tracking error. All team members are involved in the decision making process but Brett Diment has ultimate decision making authority.
Performance	Advantageous	• Aberdeen outperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one-, five-, and ten-year trailing periods, with excess returns of 0.7%, 1.1% and 1.9% respectively. However, they underperformed the three-year trailing period by -0.6%.
Fees	Advantageous	• Commingled Fund: stated fee of 0.45%, • Separate account stated fee of 0.45% • Mutual Fund (Ticker: AKFIX) effective fee of 0.66%

Wellington Management

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Highly Advantageous	• Wellington Trust Company was established in 1928 and headquarters are located in Boston, Massachusetts. Wellington Management Group LLP, is owned by 165 partners, all active in the business of the firm. • Total firm asset are $1.2 trillion, of which $5.3 billion are in the Blended Opportunistic Emerging Markets Debt strategy, incepted in 2009. • Wellington has a long track record of investing in emerging markets debt (EMD) since 1990 within multiple strategies and began managing dedicated EMD portfolios on an advisory basis in 1998.
Team	Highly Advantageous	• Lead portfolio manager Jim Valone has been managing the strategy since inception. Kevin Murphy and Evan Ouellette act as backup portfolio managers. Mr. Murphy focuses on macroeconomic and country/sector decisions, while Mr. Ouellette focuses on portfolio construction and security selection. • The team has 5 additional portfolio managers who support actively in broad strategy discussions and are supported by a team of 27 dedicated Emerging Markets professionals.
Investment Philosophy	Highly Advantageous	• The team believes that emerging markets must be approached from a global perspective, recognizing that global market conditions will impact the attractiveness of emerging markets. They take both a quantitative and fundamental approach to assessing rates and currencies in a large universe of emerging markets countries.
Investment Process	Highly Advantageous	• The investment process begins with an assessment of global economic, liquidity, and market conditions. The portfolio managers have final responsibility for setting the total portfolio risk level. . Country research assesses both the ability and willingness of emerging countries to service their external debt, and summarizes this in a country score to quantify the team's sovereign credit outlook and rank countries according to credit strength from high to low. • Portfolios are constructed with the goal of generating attractive total returns while minimizing systemic risk. Mr. Valone has final decision making power and all decisions are made under his guidance and approval.
Performance	Advantageous	• Wellington outperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one-, three-, five-, and ten-year trailing periods, with excess returns of 2.1%, 0.6%, 0.6% and 0.8% respectively.
Fees	Advantageous	• Commingled Fund: Effective fee of 0.55% with other operating expenses capped at 0.20% (currently ~0.045%) • Separate Account effective fee of 0.75%

Eaton Vance Management

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	• Eaton Vance Management is based in Boston, Massachusetts and is a wholly owned subsidiary of Eaton Vance, a publicly traded company. Voting shares are held in a trust and voting trustees are officers of Eaton Vance or its affiliates. Non-voting shares are publicly traded on the New York Stock Exchange (NYSE:EV) • The firm traces its beginning to 1924 and has $213.4 billion in assets under management. The Emerging Markets Debt Opportunities was launched in 2013 and has $288 million in assets.
Team	Highly Advantageous	• Portfolio managers Michael Cirami, Eric Stein and John Baur have been managing the strategy since inception. • Analysts are country specialists, and there are more than one team member covering each country.
Investment Philosophy	Advantageous	• The team relies on, short term factors, intermediate-term fundamentals and long-term structural trends to form views about specific countries. They see themselves as "country pickers" and believe that countries that have improving economic freedom are some of the best places to invest. • Benchmark agnostic, benchmark weights do not play a role in determining position sizing or portfolio construction. It is usually more concentrated than the benchmark and comprises only the best ideas.
Investment Process	Highly Advantageous	• Country analysis and access to markets are the first steps in the investment process. Eaton Vance has worked over the years to build traditional and non-traditional liquidity sources to properly access markets. When conducting country analysis the team's primary goal is to determine a country's direction of change over the intermediate to long term (1-5 years). Once the team has conducted the fundamental work on each country, they evaluate securities through a risk and return framework. Then the team submits investment positions for potential inclusion in the portfolio. • When constructing the portfolio the team uses a tier system that allows countries with strong or improving country fundamentals, high return potential and ample liquidity to have a higher weight within the portfolio. Michael Cirami is the coordinating portfolio for the strategy and has final decision making authority.
Performance	Highly Advantageous	• Eaton Vance outperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one-, three-, and five-year trailing periods, with excess returns of 4.3%, 1.9% and 2.1% respectively.
Fees	Highly Advantageous	• Commingled Fund: Stated fee of 0.30% with other operating expenses capped at 0.15%

MetLife Investment Management

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	• MetLife Investment Management is a wholly owned affiliate of MetLife, Inc., a publicly traded company listed in the New York Stock Exchange. On July 1, 2019 Logan Circle Partners, L.P. merged with and into its affiliate MetLife Investment Advisors, LLC and was renamed MetLife Investment Management, LLC. • MetLife Investment Management was established as an investment advisor in 2006 and has over $600.0 billion in assets under management, of which $3.1 billion is managed in the Emerging Market Debt strategy that incepted in 2006.
Team	Highly Advantageous	• Scott Moses and Todd Howard have been managing the strategy since inception. • The Emerging Markets Debt Team is comprised of six investment professionals, including two portfolio managers, three traders and one sovereign research analyst. The team also leverages regional based sovereign analysts, not dedicated to the firm, for fundamental sovereign research. The additional resources include two sovereign analysts in Santiago, three in London and one in Japan.
Investment Philosophy	Highly Advantageous	• MetLife believes that fixed income markets regularly misprice securities that are exposed to credit, country, and currency risk. In seeking to exploit inefficiencies and provide clients with consistent returns, the team uses proprietary, in depth fundamental research, and focuses on relative value across the credit spectrum. • The objective of emerging markets debt team is to produce predictable and consistent excess returns. The strategy is opportunistic and can invest in both U.S. dollar and local currency sovereign debt, as well as global credits across the ratings spectrum.
Investment Process	Highly Advantageous	• MetLife's investment process blends bottom-up credit selection with top-down macroeconomic research. The team's analysts assess credits with a focus on asset quality, management, and capital structure. This fundamental work is paired with top-down research, which focuses on country and currency relative value. The team also monitors currency valuation with in-house regression models and tracks currency volatility as a leading indicator of risk. • Portfolio construction is driven by the team's blended top-down/bottom-up global relative value process, with a focus on maintaining geographic diversity. Todd focuses on the non-dollar side of the portfolio and on macro-based idea generation and workflow. While Scott focuses his time on the higher risk hard currency exposures and overall risk positioning. Scott Moses has final say on portfolio construction.
Performance	Advantageous	• MetLife outperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the five-, and ten-year trailing periods, with excess returns of 1.2% and 2.6% respectively. However, they underperformed the one- and three-year trailing period by -0.1% and -0.4% respectively.
Fees	Advantageous	• Collective Investment Trust effective fee of 0.55% • Limited Partnership stated fee of 0.60% and other operating expense of 0.05% • Separate Account effective fee of 0.50%

Ashmore Investment Advisors Limited

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Ashmore Investment Advisors Limited is a London-based firm owned by Ashmore Group plc, a public company listed in the London Stock exchange. • Ashmore was founded in 1992 and now manages roughly $98.4 billion in assets across all strategies. There is approximately $14 billion in the Ashmore Emerging Markets Blended Debt strategy, whose track record dates back to 2003.
Team	Highly Advantageous	• Ashmore has a team driven approach when managing emerging markets debt portfolios. Investment decisions need to go through the Investment Committee, which includes Mark Coombs, Ricardo Xavier, Jan Dehn, Herbert Saller, Robin Forrest and Fernando Assad. • Portfolio managers are responsible for conducting research, portfolio monitoring and trade execution. Most of their time is spent on research, as they have primary and secondary product and geographical responsibilities.
Investment Philosophy	Advantageous	• Ashmore thinks about emerging markets through a macroeconomic top-down lens. They place strong emphasis on a value driven approach to find diverging market prices and credit risk. Liquidity management also plays a central role as it is embedded into the security selection and portfolio construction methodologies.
Investment Process	Advantageous	• The Investment process begins with the weekly Investment Committee meeting, where members discuss the macroeconomic environment and review individual countries. These meetings determine the theme allocations across all emerging markets fixed income funds in addition to the broader macroeconomic positioning. Then the Investment Committee breaks down into sub-Investment Committees where investment professionals discuss/act on trade ideas for their respective areas of expertise. • The investment Committee is the ultimate decision making body, however the Heads of External, Corporate and Local Currency teams are given a limited amount of autonomy to make trading decisions, which need to be ratified at the following Investment Committee meeting.
Performance	Not Advantageous	• Ashmore underperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one-, and three-year trailing periods, with excess returns of -3.6 and -0.9% respectively. However, they outperformed over the five- and ten-year trailing period by 1.3% and 0.4% respectively.
Fees	Advantageous	• Collective Investment Trust: stated fee of 0.70% with an estimated 0.15% other operating costs • Mutual fund effective fee of 1.02% • UCITS SIVAC stated fee of 0.55% with an estimated 0.12% other operating costs • Limited Partnership stated fee of 0.55% with an estimated 0.08% other operating costs • Separate Account stated fee of 0.55% with an estimated 0.10% other operating costs

Neuberger Berman

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Neuberger Berman was founded in 1939 and is a large, New York-based investment management firm. The firm went through several organizational changes, including an IPO, a merger, and multiple acquisitions, before becoming 100% employee-owned in 2018. Neuberger Berman has a total of $355.8 billion under management as of December 31, 2019. The team manages $7.6 billion in the Emerging Markets Debt strategy.
Team	Advantageous	• Neuberger Berman's emerging market debt platform is headed by Rob Drijkoningen in The Hague and Gorky Urquieta in the firm's Atlanta, GA office. Messrs. Drijkoningen and Urquieta have 30 and 25 years of experience, respectively. • The co-heads are supported by thirteen portfolio managers, ten research analysts, four strategists, two portfolio specialists, and three traders. Sector specialist portfolio managers manage the three segments of the Blend strategy: EM hard currency, local currency, and corporate debt.
Investment Philosophy	Advantageous	• The EMD team believes EM debt is a generally improving asset class that is less efficient than developed debt markets. As such, they believe active management is the best way for investors to access the full potential of the asset class, as fundamental managers can generate alpha by exploiting mispricing. The team believes in investing with a medium-term investment horizon and relatively low turnover.
Investment Process	Advantageous	• The team's investment process combines a bottom-up focus on fundamental value in relatively concentrated exposures in the country, FX, rates, and corporates, with a top-down driven tactical asset allocation among the various risk categories, as well as cash. • The first step of the process is a top-down review of the EMD investment universe to create top-down scores for each of the blended strategy's sub-strategies. The second step of the process involves bottom-up country and corporate issuer, currency, rates or local duration, and instrument level selection.
Performance	Not Advantageous	• Neuberger underperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one-, three- and five-year trailing periods, with excess returns of -0.6%, -0.4% and -0.6% respectively.
Fees	Advantageous	• Collective Investment Trust (Class I) effective fee of 0.69% • Mutual Fund (Institutional Class) effective fee of 0.79% • Separate Account effective fee of 0.65% • UCITS stated fee of 0.70% with other operating expenses capped at 0.20% • Private Fund effective fee of 0.65%

Finisterre Capital

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Finisterre Capital was founded in London in 2002 as a specialist Emerging Markets Debt investment manager. Effective Oct 2019, Principal Global, the investment arm of the publicly traded Principal Financing Group acquired the remaining ownership interest in Finisterre after being the majority owner since 2011. Post-acquisition, Finisterre and Principal's investment teams merged to create a single Emerging Markets Fixed Income platform. • As of December 2019, Principal manages a total of $157.8 billion in assets of which $2.8 billion is managed by Finisterre Capital. The Total Return strategy, launched in 2013, has $1.1 billion assets under management.
Team	Advantageous	• The strategy is led by Damien Buchet and Christopher Watson. Damien focuses on portfolio strategy, construction and risk budgeting with a bias towards the local currency and sovereign debt strategies. Christopher has a bottom-up credit and special situations analysis background and focuses on the Emerging Markets corporate and frontier sovereign strategies. The two are the key decision makers on the Total Return strategy. • The team is fully embedded in the Finisterre Emerging Markets Portfolio Management platform consisting of 5 portfolio managers and 7 research analysts.
Investment Philosophy	Advantageous	• The firm's investment philosophy combines top-down analysis of global macro trends and conditions with rigorous single name work on individual countries and companies. For Finisterre, the management of risk is critical, with diligent country research, corporate credit analysis, and consistent risk monitoring playing a central role in their investment process.
Investment Process	Advantageous	• The team follows a holistic, benchmark-agnostic, top-down approach for the Total Return Strategy. Being totally unconstrained in their focus and priorities, both investment teams and research teams are free to focus on certain names, sectors which have been identified as worth focusing on, either from a flow angle, following specific market/sovereign/sectoral events, or as a result of a valuation screening by PMs or analysts. • The Macro process involves weekly meetings examining the most relevant issues for EMD such as outlook for the US, EU, China, Oil and commodities, as well as global risk appetite and liquidity conditions. Subsequently the analysis drills down to the country level with decisions to focus on certain countries made through consensus by portfolio managers and economists. The meetings are supplemented with daily interactions between the Macro Research team a portfolio managers. • The EM Total Return team has developed its own monitoring tools such as the "EM Country Map" that sources data from the IMS and World Bank macro databases.
Performance	Highly Advantageous	• Finisterre outperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one-, three-, and five-year trailing periods by 0.9%, 1.5%, and 2.3% respectively.
Fees	Not Advantageous	• Mutual Fund Effective fee of 0.85%

Ninety One (Investec)

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Ninety one, formerly Investec Asset Management (IAM), started in South Africa in 1991. IAM was a subsidiary of publicly-traded Investec Group prior to the de-merger and rebranding in March 2020. The firm is currently 55% publicly owned, 25% by Investec and 20% by Forty-Two Point Two. • Ninety One has more than 25 years of experience in emerging markets. Total firm AUM at IAM (excluding the parent) is $148.9 billion, with 28% ($41 billion) of that being emerging markets debt and $2.9 billion in this strategy.
Team	Advantageous	• The Emerging Markets Blended Debt strategy is managed by the Global Emerging Markets Debt (Global EMD) team, which is part of the Fixed Income investment capability as overseen by Peter Eerdmans. • Within Global EMD, there are two sub-teams, EM Sovereign & FX and EM Corporate Debt. The Sovereign & FX team is organized by region, typically working in pairs to cover the regions across three asset classes: sovereign local debt, hard currency debt, and currencies. The Corporate Debt team is organized by industry.
Investment Philosophy	Advantageous	• The team believes the best approach to building a blended EMD portfolio is to use 'best ideas' to achieve a combination of top-down allocation and bottom-up, high conviction assets. Once asset allocation targets have been set – for overall portfolio risk and then for the allocation of that risk between local currency sovereign, hard currency sovereign and, hard currency corporate credit – the team achieve those targets by implementing their highest conviction individual ideas.
Investment Process	Advantageous	• Management of the portfolio is holistic by selecting the assets from each country with the highest expected return vs. risk while carefully ensuring that they do not end up with excessive exposure to a single country, currency or economic outcome • The team accesses country exposure through what they believe are the most attractive entry points across FX, sovereign debt, and corporate debt markets. • The team utilizes a structured analytical approach, with the team's insight supplemented by advanced proprietary econometric modeling and valuation tools.
Performance	Advantageous	• Ninety One outperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one- and three-year trailing periods by 0.4% and 0.2% respectively. However, they underperformed the five-year trailing period by -0.2%.
Fees	Advantageous	• Commingled Fund: Effective fee of 0.45% with other operating expenses of 0.14%

TCW Investment Management Company

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• TCW Investment Management Company, located in Los Angeles, California, is a subsidiary of TCW Group, Inc. ("TCW"). TCW is 44% employee owned, 31% owned by Carlyle Global Partners via a private equity fund, and 24.75% owned by Nippon Life, a large Japanese insurance company. • The firm was founded in 1971 and manages $217.5 billion in assets across strategies. The TCW Emerging Markets Fixed Income Total Return strategy was incepted in 2011 and has $9.7 billion in assets under management.
Team	Advantageous	• Penny Foley, David Robbins and Alex Stanojevic are the portfolio managers for the strategy. Investment decisions are made collectively by all three portfolio managers, with input from the entire team. • Sovereign analysts are organized by region and corporate analysts are organized by sector.
Investment Philosophy	Advantageous	• The strategy employs a value driven approach, integrating both top-down and bottom up factors to find the best reward-risk opportunities in the space. • The strategy is benchmark aware but it is not tied to the benchmark, as the team will make significant overweight or underweight decisions based on evaluation of risk and reward.
Investment Process	Advantageous	• In the first phase of the investment process the team evaluates all sovereign and corporate credits with the intention to analyze credit strengths, weaknesses, momentum and to develop a standardized way of looking across the universe. The team also conducts scenario analysis before making investment decisions. Currency and local rates forecasting is also a crucial step in the investment process. • The Emerging Markets Fixed Income Team does not imply an investment committee for decision making purposes. Instead, final decision making on specific investments is made by portfolio managers in conjunction with sovereign analysts, corporate credit analysts, strategists and traders.
Performance	Highly Advantageous	• TCW outperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one-, three-, five-, and ten-year trailing periods, with excess returns of 1.9%, <0.1%, 2.0% and 2.4% respectively.
Fees	Advantageous	• Collective Investment Trust effective fee of 0.57% • Mutual Fund effective fee of 0.85% • Separate Account effective fee of 0.40%

Marathon Asset Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Marathon Asset Management a New York-based asset management firm and is privately owned by 8 partners as well as a passive minority interest by Blackstone Alternative Asset Management. • Marathon was founded in 1998 and now has roughly $18.4 billion assets under management. The Marathon Emerging Markets Bond Fund was launched in January 2015, and it has $328 million in assets.
Team	Advantageous	• Marathon follows a team-based approach. There is a team of 8 dedicated EM investment professionals led by Gabriel Szpigiel, Head of Emerging Markets. Andrew Szmulewicz is portfolio manager on the strategy along with 6 investment analysts. • The research process utilizes professionals from Marathon's broader global credit research platform
Investment Philosophy	Advantageous	• Marathon's investment strategy is founded on rigorous value-based fundamental analysis and a keen understanding of underlying securities, allowing the team to select high conviction long positions, coupled with Index-based exposures that intend to result in a value-added portfolio vis-à-vis the Index.
Investment Process	Advantageous	• Marathon's "Optimal Beta" strategy is built around the concept of benchmark replication which is supported by their knowledge in index architecture led by Andrew Szmulewicz who came over from JPMorgan where he developed key market benchmarks such as the CEMBI and NEXGEM indices and determined rules and instrument level composition for the widely followed EMBI, GBI-EM and ELMI+ index series. • The process involves neutralizing key portfolio variables vs the index and relying on credit selection to drive portfolio returns. If there is uncertainty, the team defaults to mirror index exposures. • Analysts are industry specific as opposed to country specific. The team spends significant time meeting with issuers, resulting in being anchor investors in many new issuances that supports alpha driven from primary deals
Performance	Highly Advantageous	• Marathon outperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one-, three-, and five-year trailing period, with excess returns of 1.2%, 0.6%, and 2.6% respectively.
Fees	Not Advantageous	• Commingled Fund effective fee of 0.75%

Pacific Investment Management Company (PIMCO)

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• PIMCO is located in Newport Beach and is a majority owned subsidiary of AAM, a subsidiary of Allianz SE, a financial services company based in Germany. • The firm was founded in 1971 and now totals $1.9 trillion in assets under management across strategies. The PIMCO Emerging Markets Full Spectrum Bond Fund was incepted on 2013 and has close to $277.4 million in assets.
Team	Advantageous	• The strategy is managed in a team based approach by the Emerging Markets Portfolio Committee (EMPC). Pramol Dhawan, Head of the Emerging Markets, is the chair of the EMPC and has final decision making authority.
Investment Philosophy	Advantageous	• PIMCO seeks to generate strong risk adjusted returns independently of the market cycle. Their approach is based on three principles to bring discipline and consistency into their process. The first principle involves analyzing from every angle as they believe that no single approach holds the key to unlocking alpha. Secondly, they strive to avoid concentrations in order protect against low probability/ high impact events. Lastly the emerging markets team looks for ways to be different than the crowd.
Investment Process	Advantageous	• The investment process centers on the Emerging Markets Portfolio Committee (EMPC), comprised of nine senior members with Pramol Dhawan as chair. The EMPC meets several times per week and are in charge of building a model portfolio for all emerging markets strategies. PIMCO employs internal ratings that take into account country fundamentals, political landscape, reserve levels, debt profile and contingency measures. The EMPC then blends PIMCO's top-down views, which are developed through various forums, into the emerging markets process. • The investment process is a collaborative effort of the entire team, decisions tend to be made on a consensus basis. However, if no consensus can be reached Pramol Dhawan has final decision making authority.
Performance	Highly Advantageous	• PIMCO outperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one- and three-year trailing period, with excess returns of 0.9% and 0.1% respectively. However, they underperformed the five-year trailing period by -0.5%.
Fees	Not Advantageous	• Mutual Fund (PFSIX): Effective fee of 0.98%,

GAM International Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• GAM was founded in 1983 by Gilbert de Botton. GAM is a wholly-owned subsidiary of publicly traded GAM Holding AG. • The firm manages $137 billion in assets under management. The Emerging Market Debt group manages $8.3 billion, of which $73 million is within the Emerging Markets Opportunities Bond strategy, launched in 2014.
Team	Advantageous	• Paul McNamara is the lead manager for the strategy, he is supported by Bogdan Manescu and Alessandro Ghidini who act as co-managers. Allessandro and Bogdan are located in Zurich and the rest of the team is in London. • Enzo Puntillo, previously leading the Fixed Income Team in Zurich, left the company when Paul McNamera assumed responsibility for the group. The two Emerging Markets Debt teams were combined in 2019, in an effort to reduce complexity within their business.
Investment Philosophy	Advantageous	• The Emerging Markets Opportunities Bond focuses on a country by country approach, as they believe this facilitates the best capture of opportunities. • The strategy is unconstrained and benchmark agnostic, with the ability to invest in both hard and local currency. Their investment universe includes sovereigns, corporates, nominal and inflation-linked bonds as well as currencies.
Investment Process	Advantageous	• The team utilizes a three step investment process that includes country selection, market cycle analysis and portfolio construction. During the country selection phase the team analyses the macroeconomic environment and political landscapes to identify countries going into or coming out of crisis. Once the team determines what is priced-in, they are able to set country and debt sector exposures. The market cycle analysis is conducted to calibrate credit and interest rate exposures and to come up with a final credit and interest rate profile. • Portfolio construction and management is the last phase in the process, where the team builds a diversified portfolio of their best ideas. Decisions are made through consensus at weekly and monthly meetings. However when consensus is not found Paul McNamara makes the final decisions
Performance	Not Advantageous	• GAM underperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one-, three-, and five-year trailing periods by -3.0%, -1.4%, and -0.6% respectively.
Fees	Advantageous	• Commingled Fund: Effective fee of 0.45% • Separate Account: Effective Fee of 0.45%

GoldenTree Asset Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Highly Advantageous	• GoldenTree Asset Management was founded in 2000 and is 100% employee owned, with ownership distributed among 27 partners. As of December 31 2019, the firm had $32.3 billion assets under management and the emerging markets debt strategy that launched in March 2017 has $1.0 billion in assets.
Team	Advantageous	• The emerging markets debt team is led by Vladimir Liberzon and Matias Silvani. • Vladimir and Matias, located in New York, are supported by five dedicated emerging markets professionals including three analysts located in London; S. Rishad Ahmed, Robert Tancsa and Jacqueline Madu. The team also has two dedicated traders, Morgan Cain is in New York and Ryan Jennings is located in London.
Investment Philosophy	Advantageous	• GoldenTree's investment philosophy is based on fundamental value with a focus on margin of safety and a total return approach. The strategy is opportunistic and tends to take more concentrated positions than the benchmark as well as taking significant exposure in out of benchmark securities.
Investment Process	Advantageous	• The first step in the investment process is to rank sovereigns based on their internally generated credit score using a proprietary tool called Fundamental Sovereign Index (FSI) that aggregates solvency, liquidity and structural factors. The FSI uses some forward-looking numbers, including inflation and GDP growth which the team is responsible for forecasting. Focus lies on the on the rate of change of each country over time, and the directional aspect of the change. • The FSI is then used in a fair value spread analysis to quantify a spread differential and capture value. The fair value spread is determined by aggregating four factors including the FSI, Country credit rating, beta to market and volatility. Once the team has the fair value spread they conduct a qualitative assessment and further revise what their proprietary models are telling them to come up with an adjusted fair value spread. Then the adjusted fair value spread is compared to the market spread, which can tell if a country is cheap, rich or fairly-valued.
Performance	Highly Advantageous	• GoldenTree outperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one-year trailing period by 2.9%
Fees	Advantageous	• Commingled Fund: Stated fee of 0.70%

Manulife Investment Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Manulife Investment Management, located in Boston, is the global asset management arm of Manulife, a publicly-held corporation trading under the symbol 'MFC' on the NYSE, TSX and PSE, and under '945' on the SEHK. • Manulife IM was founded in 2002 and merged with John Hancock 2014. Manulife now has $409.2 billion in assets under management. The Emerging Market Debt strategy, incepted in 2007, currently has $1.1 billion in assets.
Team	Advantageous	• Lead portfolio managers Roberto Sanchez-Dahl, CFA and Paolo H. Valle, responsible for the Emerging Markets Debt Strategy were solely responsible for the strategy at another firm since 2007 and joined Manulife in 2013. • The team is supported by 16 credit research analysts, 4 traders, 3 macroeconomic advisers and an Asia Team in 10 markets.
Investment Philosophy	Advantageous	• The team invests in Emerging Market economies with a long-term horizon and seek countries with improving sovereign credit stories and great companies • The team believes a successful investment strategy should incorporate a flexible approach with strategic allocation to hard currency sovereign and corporate debt, and tactical allocation to local currency debt.
Investment Process	Advantageous	• The investment process begins with a top-down macro-economic assessment in which the investment team analyzes fiscal and monetary policy, global liquidity, market risk appetite and volatility, geopolitical and regulatory environment, interest rate, yield curve and currency trends. This macroeconomic analysis drives global and local investment themes on a secular (long-term) and cyclical (short-term) basis which focus the entire investment process, from country and security selection to currency and duration • The top-down analysis drives the process and the credit research provides the opportunity set to gain that exposure in the specific countries. If the team does not view the country positively, they will not invest there. • As a general rule, the portfolio maintains a duration +/-20% of benchmark and does not employ aggressive interest rate timing in managing the strategy.
Performance	Advantageous	• Manulife outperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one-, three-, five-, and ten-year trailing period, with excess returns of 0.9%, 0.3%, 1.6%, and 2.2% respectively.
Fees	Advantageous	• Commingled Fund effective fee of 0.49% • Mutual Fund effective fee of 0.88% • Separate Account: Effective fee of 0.60%

Nuveen

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Nuveen is headquartered in New York and is a wholly owned subsidiary of stock life insurance company TIAA, Teachers Insurance and Annuity Association of America. • The firm was founded in 1898, acquired by TIAA in 2014 and now totals $1.0 trillion in assets under management across strategies. The Emerging markets Blend composite was launched in 2004 and has close to $623.5 million in assets under management.
Team	Advantageous	• The emerging markets debt team was formed in 1997 to manage over $1 billion in assets for the TIAA General Account. Katherine Renfrew joined the emerging markets debt team in 1998 and was named the lead portfolio manager of the blend strategy at inception in 2004. Anupam Damani joined the team in 2005 and was named portfolio manager for the blend strategy in 2014. • Katherine is ultimately accountable for asset allocation across sovereign, corporate, and local currency as well as risk budgeting, regional allocations, country exposure and duration/yield curve positioning. • The portfolio managers are supported by research analysts segmented by region and across sovereign and corporate debt
Investment Philosophy	Advantageous	• Nuveen's philosophy centers around protecting on downside risk. The team seeks to generate consistent, incremental alpha over long-term returns without taking concentrated bets in any one region, country, issuer or issue. They believe EM provides greater opportunity given less market coverage and protect the portfolios from lower recovery rates by creating barbells with higher-quality corporates with lower-quality sovereigns.
Investment Process	Advantageous	• The team's investment process begins with an assessment of global markets and this macro assessment at each individual sovereign level drives duration and rate biases of the portfolio. • Duration is typically maintained within +/-30% of the benchmark. Duration is monitored at portfolio level and is determined by the lead portfolio manager. Alpha sourced from duration is primarily at individual country or company level. The majority of alpha is sourced from country and security selection. • The lead portfolio manager is tasked with allocating across sovereigns, corporates and local currency.
Performance	Highly Advantageous	• Nuveen outperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one-, three-, five-, and ten-year trailing period, with excess returns of 3.3%, 1.1%, 2.4% and 2.7% respectively.
Fees	Advantageous	• Mutual Fund effective fee of 0.63% • Separate Account effective fee of 0.54%

Lazard Asset Management

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Lazard Asset Management is located in New York, New York and is a wholly-owned subsidiary of Lazard Freres & Co. LLC, a limited liability company with one member, Lazard Group LLC. Interest of Lazard Group LLC are held by Lazard Ltd, a publicly traded company on the New York Stock Exchange. • Lazard traces its history back to the 1840's as a dry goods merchant. Asset management capabilities began in 1953 out of London and now totals $222.9 billion in assets under management across strategies. The Lazard EMD Blend strategy was incepted in 2011 and has close to $4.6 billion in assets.
Team	Advantageous	• The Emerging Markets Debt team is led by Denise Simon and Arif Joshi. They are supported by three sector-specific portfolio managers/analysts including Sergio Valderrama for Sovereign Credit , Felipe Pianetti for local currency debt and Adam Borneleit for corporate debt. • Additionally the team is supported by a team of research analysts, who cover countries from an asset class perspective
Investment Philosophy	Advantageous	• The investment philosophy is based on the belief that there are broad structural inefficiencies in emerging markets that create attractive opportunities. Lazard focuses on fundamental global trends follows a flexible management approach, fostering the ability to adapt to changing market environments. • The strategy is benchmark aware but it is able to invest in out of benchmark securities.
Investment Process	Advantageous	• The Emerging Markets Debt Investment Process begins by developing global macroeconomic themes. Asset allocation is then determined based on expected returns for each asset class and forward volatility expectations. Then the team conducts issuer analysis taking into consideration country-specific economic data, political trends, country visits and ESG factors among many others. Once the team has determined issuer weightings they move into instrument selection and portfolio construction. • Denise Simon and Arif Joshi decide on asset class allocation, overall risk framework and macroeconomic themes. In addition, Mr. Simon makes final security selection decisions for local currency debt, while Mr. Joshi makes final security selection decisions for sovereign hard currency debt. Mr. Borneleit makes final security selection decisions on corporate securities.
Performance	Not Advantageous	• Lazard underperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the three- and five-year trailing periods by -0.9% and -1.1% respectively. However, they outperformed the one-year trailing period by 0.7%.
Fees	Advantageous	• Commingled Fund: Stated fee of 0.55% with other operating expenses capped at 0.23% (currently running at 0.10%) • Mutual Fund (R6): Effective fee of 0.90% • Separate Account: Effective fee of 0.80%

Northwest Passage

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Northwest Passage (NWP) is an exclusively emerging markets debt focused, Milwaukee-based, investment advisor and is a privately owned limited liability company with four partners. • The firm was founded in 2013 and has $1.2 billion in assets under management. The proposed Emerging Markets Debt strategy was launched in 2014 and has $749.2 million in assets under management.
Team	Advantageous	• The team is comprised of CIO, Jefferson DeAngelis, portfolio manager, William Slaughter, and supported by 4 research analysts. The CIO and Portfolio manager developed the strategy and have been together since inception.
Investment Philosophy	Advantageous	• NWP has a systematic, data driven investment philosophy. The team has a model that attempts to capture a mispricing between their assessments of sovereign fundamentals versus the ratings agency assessment.
Investment Process	Advantageous	• The process begins with an input of macroeconomic fundamental data into the firm's systematic relative value model, resulting in outputs of internal credit ratings and modeled spread curves for issuers in the universe. • The team constructs the portfolio by finding relative value along the curve for each country whereby portfolio duration is an outcome of where they find attractive spread product. • The team either invests directly in the sovereign or through quasi-sovereign entities. Within sovereigns, the focus is on ability and willingness to pay, being aware of political willingness as well. Regarding quasi-sovereigns, the team applies a more conventional credit research approach. • Adding holdings to the portfolio takes into consideration the overall targets for portfolio characteristics and risk. The resulting characteristics reflect their outlooks on duration, yield curves, and foreign exchange rates.
Performance	Not Advantageous	• NWP underperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one- and three-year trailing period, with excess returns of -0.7%, -0.6% respectively. However, they outperformed the five-year trailing period by 0.5%.
Fees	Highly Advantageous	• Separate account effective fee of 0.42%

Stone Harbor Investment Partners LP

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Stone Harbor is located in New York, New York and is 100% employee owned, with ownership broadly dispersed among firm's employees. • The firm was founded in 2005 and has $20.4 billion assets under management. The team's track records trace back to the early 1990s when they were established at Salomon Brothers, almost all of the original investment team continues to work at Stone Harbor. The Emerging Markets Debt (EMD) Global Allocation strategy, launched in 2007, has $3.9 billion assets under management.
Team	Advantageous	• James Craige, Co-Chief Investment Officer and Head of Emerging Markets is the lead portfolio manager for the strategy. He joined the industry in 1988 and has been with Stone Harbor since it was first founded. A senior portfolio manager covering local currency bonds, Pablo Cisilino, was replaced in 2019. • .All members of the Emerging Markets team are located in the New York and London offices and most have a long tenure at the firm.
Investment Philosophy	Advantageous	• Stone Harbor's philosophy rests on three pillars, investing on improving emerging market debt instruments will result in favorable performance, combining fundamental and political analysis provides the foundation for portfolio construction and the team's long-term experience is a competitive advantage. The team believes that the key to generating excess returns is through a disciplined process of rigorous credit analysis combined with investment people and technology
Investment Process	Advantageous	• The investment process begins with idea generation derived from internal research, almost all ideas are generated this way but the firm also takes into consideration external research from Teneo Intelligence and Global Source Partners. Then the team conducts deeper analysis on the best ideas including sector and security analysis. Country visits are also part of the due diligence process, and they serve as a way to confirm or disprove the team's assumptions on local investors positioning and sentiment. • The team collaborates together to make investment decisions.
Performance	Not Advantageous	• Stone Harbor underperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one- and three-year trailing periods by -0.1% and -1.1% respectively.
Fees	Advantageous	• Collective Investment Trust stated fee of 0.55% with other expenses of 0.10% • Mutual Fund (SHADX): Effective fee of 0.85%

Mellon Investments

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Mellon is a Boston-based asset management firm that is 80-100% owned by MBC Investment Corp, with up to 20% ownership (currently 2.56%) by certain Mellon employees. MBC Investment Corp is 100% owned by BNY Mellon. • Mellon was initially established in 1933, however the current structure resulting from the merger of The Boston Company, Standish, and Mellon Capital was established in January 2018. The firm manages $545.3 billion in assets of which $325.5 million are in the Emerging Markets Debt – Opportunistic strategy, established in May 2011.
Team	Advantageous	• The Emerging Markets Debt strategies are led by Federico Garcia Zamora on the local currency side and by Josephine Shea on the hard currency side. They follows a team based approach to managing the strategies. • Mellon has a dedicated 28 person Emerging Markets Debt Team with professionals located in the US, Europe and Asia. The team also has access to the full resources of Mellon (an additional 229 investment professionals and 505 staff in total)
Investment Philosophy	Advantageous	• Mellon takes both a quantitative and fundamental approach to identify value in both macro and idiosyncratic positions. They have a focus on long-term structural trends and tend to limit investments to what they follow on a daily basis.
Investment Process	Advantageous	• Mellon undertakes in-depth fundamental country research supported by a top down commodities view, US treasury and ECB view, as well as US$ view. • The EM Opportunistic strategy combines the existing local currency and hard currency strategies. The cornerstone of the opportunistic strategy is their dynamic approach to currency allocation, asset allocation and security selection across different sectors of the benchmark. • From a top-down perspective, the team focuses on fundamental country views that reconcile various sources of national macro data, ensuring their methodological consistency on a cross-country basis. • Following the country analysis, the analysts reach a recommendation on local and hard currency bonds by adding to their fundamental view, the country's technical view, and relative value.
Performance	Not Advantageous	• Mellon underperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one-, three-, and five-year trailing period, with excess returns of -0.8%, -0.9%, and -1.1% respectively.
Fees	Highly Advantageous	• Commingled Fund effective fee of 0.35%

Invesco Advisers

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• The firm was established in 1985 and is located in Atlanta, Georgia. Invesco is a public firm (NYSE: IVZ) and it is also included in the S&P 500, with 92% owned by the public and 8% owned by employees. As of December 31, 2019, Invesco managed approximately $1.2 trillion in assets across all strategies, of which $7.6 billion is managed across Emerging Markets Debt strategies.
Team	Advantageous	• Hemant Baijal and Wim Vandenhoeck are the co-portfolio managers for the Invesco Oppenheimer Emerging Markets Local Bond strategy. They have served as portfolio managers since March 2015 and September 2016, respectively. • The Global Debt team was created with the launch of the International Bond strategy in 1995. The current team was built by Hemant Baijal who joined the firm in July 2011. The team consists of 12 investment professionals. This team started running the Emerging Market Local debt strategies with a similar approach on January 1 2014.
Investment Philosophy	Advantageous	• The Global Debt team believes macroeconomic base case changes slowly. However, the microeconomic features, such as pricing, change more rapidly, which provides opportunities to take advantage of shifting risk premia. • The team also believes in a robust process based on a risk allocation framework. Given their 9-18 month investment horizon they look through short term noise while still adding value through allocation and selection
Investment Process	Advantageous	• The team employs macroeconomic analysis that results in expressions of risk that the team seeks to take in the global FX and interest rates markets. Through relative value analysis, the team expresses these risk factors through diversified currency and country exposures. This is a local only strategy. • The team seeks to opportunistically manage country, sector, and security exposures, which allows them to potentially enhance yield and total return as well as effectively manage risk.
Performance	Not Advantageous	• Invesco underperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one- and five-year trailing periods by -0.1% and -0.2% respectively. However, they outperformed the three-year trailing period by 0.4%.
Fees	Advantageous	• Commingled Fund: Stated fee of 0.45% and 0.05% max other operating expenses • Separate Account: Effective fee of 0.45% • Mutual fund (R6 class) effective fee of 0.85%

State Street Global Advisors Trust Company (SSGA)

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• State Street Global Advisors Trust Company (SSGA), located in Boston, MA, is a wholly owned subsidiary of State Street Bank and Trust Company which is in turn a wholly-owned subsidiary of State Street Corporation. State Street Corporation is a publicly traded bank holding company traded on the NYSE. • The firm was founded in 1978 as the Asset Management Division of State Street Bank and Trust Company and has $3.1 trillion assets under management. The firm manages $27.5 billion in emerging markets debt assets of which $47.8 million are in the proposed Fund.
Team	Advantageous	• Abhishek Kumar is the lead portfolio manager for EMD and has been managing EMD at SSGA for over 9 years. Abhishek has been the key driver in the development of the Value-Added Indexing Investment Approach and has ultimate responsibility for all EMD portfolios. • Abhishek is supported by four additional portfolio managers in London each of who specializes in a specific segment of the EMD universe. The team in London also collaborates with three portfolio managers in Singapore who focus on Asia Rates and Credit. The specialized EMD Portfolio Management team reports to Stephen Yeats, APAC and EMEA Head of Fixed Income Beta Solutions.
Investment Philosophy	Advantageous	• The Indexed Fixed Income team's over-reaching objective is to generate as closely as possible, through the use of advanced portfolio management techniques and system capabilities, the total return of the benchmark throughout the market cycle.
Investment Process	Advantageous	• SSGA relies on their Value Added Indexing Investment Approach to indexing which constantly aims to strike the right balance between minimizing tracking error and minimizing transaction cost in a risk controlled process. • The team uses stratified sampling, a method dividing an index into manageable risk elements, in indexing which aims to match the benchmark's defining characteristics. • The team relies on efficiency of their investment process to generate alpha through minimizing turnover, pragmatic index rebalancing, harvesting primary market premium, security selection and trade execution.
Performance	Not Advantageous	• SSGA underperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one- and three-year trailing periods by -0.4% and -0.5% respectively.
Fees	Highly Advantageous	• Commingled Trust Fund effective fee of 0.14% for this passive strategy.

Franklin Templeton

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Franklin Templeton, headquartered in San Mateo, CA, is one of the largest public investment managers in the world (NYSE:BEN). Directors and officers of the firm own approximately 24.6% of outstanding shares. In February 2020, Franklin Templeton acquired Legg Mason and its affiliates. • The firm traces its history back to 1947 and currently has $698.3 billion assets under management. The Franklin Emerging Market Debt Opportunities Strategy has been managed since 1996 now has $10.2 billion assets under management. The proposed investment fund's inception date is May 2006.
Team	Advantageous	• The Strategy is managed collaboratively by portfolio managers Nicholas Hardingham, CFA, Stephanie Ouwendijk, CFA, and Robert Nelson, CFA. The team is supported by EMD Portfolio Analyst, Fatma Charlwood and trader, Philip Spires. The team is based in London, UK. • William Ledward, who passed away unexpectedly in April 2020, previously led the strategy since June 1997. • Research is primarily conducted by the Emerging Market Debt Opportunities Team. However, the team also uses the macroeconomic views of the broader Fixed Income team consisting of 37 corporate credit, 27 regional fixed income, and 89 emerging markets equity investment professionals.
Investment Philosophy	Advantageous	• The team's predominantly bottom-up, fundamental research-driven process aims to identify and exploit the inefficiencies and misvaluations inherent in the emerging market debt markets. • The research and total return approach seeks to identify and incorporate the investment opportunities beyond the constraints of traditional benchmarks. Top-down risk controls also help ensure diversification.
Investment Process	Advantageous	• The portfolio managers are all actively involved in the decision-making process and are responsible for all strategy implementation decisions, including security selection and risk management. All investment ideas are discussed among the portfolio management team, and investment decisions are made collectively. • The team uses a total return approach, with the objective of capturing high yields while minimizing the risk of default. Rather than constructing portfolios relative to a benchmark, the strategy invests only in countries, currencies, and securities that are attractive, using an investment process that combines bottom-up fundamental research and top-down risk controls.
Performance	Not Advantageous	• FGT underperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one- and three-year trailing periods, with excess returns of -4.4% and -0.3% respectively. However, they outperformed the five- and ten-year trailing period by 1.3% and 1.2% respectively.
Fees	Not Advantageous	• Separate Account stated fee of 0.70% • Mutual Fund: Effective fee of 1.02%

Grantham, Mayo, Van Otterloo & Co. (GMO)

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• GMO is a Boston-based, privately owned firm, founded in 1977. Firm assets under management are \$64.2 billion across multi-asset, equities, absolute return and fixed income. • GMO was an early entrant into EMD in 1994 and now has \$7.1 billion in AUM including credit exposures. This consists of \$5.7bn hard currency benchmarked to the JPM EMBIG and \$1.4 billion in local benchmarked to the GBI-EM. There is no blended strategy.
Team	Advantageous	• Tina Vandersteel is sole head of the Emerging Country Debt team following the retirement of Tom Cooper, co-founder of GMO Global Fixed Income, in 2016. Tina is a partner of the firm. She has 30 years of experience analyzing and investing in emerging debt, 16 of which have been with GMO. Her focus is security selection and portfolio construction • GMO's Emerging Country Debt team, all based in Boston, consists of six core members: two portfolio managers and four people in research.
Investment Philosophy	Advantageous	• The team follows an active bottom up value-driven philosophy believing bonds can be undervalued due to relative liquidity, form of issuance, or currency. Given high transaction costs and illiquidity, they believe a long-term buy and hold strategy is most appropriate. Alpha is driven by 2/3 security selection and 1/3 country selection.
Investment Process	Not Advantageous	• The team tends not to take a view on global macro issues, however, they do incorporate global macro considerations into their quantitative model assumptions. The team has a bottom-up orientation to their investment process that focuses on issue selection as opposed to country selection. • Security selection is conducted from the bottom up looking for relatively cheap securities and trying to understand the risks and any needs for hedging. Sovereign risk is assessed according to three quantitative factors (economic structure, fiscal sustainability, external liquidity) and qualitative factors like willingness to pay, quality of policy makers, political regime shifts. These factors contribute to a proprietary risk score. • There is no blended strategy. The proposed strategy rarely takes corporate exposure but does take quasi-sovereign exposure. The strategy is managed with less than 10% exposure to non-USD currencies.
Performance	Advantageous	• GMO outperformed the 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified index over the one-, five-, and ten-year trailing periods, with excess returns of <0.1%, 2.0% and 4.6% respectively. However, they underperformed the three-year trailing period by -0.4%.
Fees	Not Advantageous	• Mutual Fund (Class III): Effective fee of 0.54% with a 2.00% purchase and redemption fee • Mutual Fund (Class IV): Effective fee of 0.49% with a 2.00% purchase and redemption fee

Manager Trailing Performance (Net of Fees)
As of December 31, 2019

Manager	Inception Date	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
Aberdeen Standard Investments Inc.	Aug-99	15.0	6.3	5.6	6.7
Wellington Trust Company	Feb-09	16.4	7.5	5.2	5.7
Eaton Vance Management	Feb-13	18.6	8.8	6.7	-
MetLife Investment Management	Nov-06	14.2	6.5	5.8	7.4
Ashmore Investment Advisors Limited	Jun-03	10.7	6.0	5.9	5.3
Neuberger Berman	Sep-13	13.6	6.5	4.0	-
Finisterre Capital	Jul-16	15.2	8.4	6.8	-
Ninety One (Investec)	Dec-10	14.7	7.1	4.3	-
TCW Investment Management Company	Jan-11	16.2	7.0	6.6	7.3
Marathon Asset Management	Jan-15	15.5	7.5	7.2	-
Pacific Investment Management Company (PIMCO)	Feb-13	15.2	7.0	4.1	-
GAM International Management	Feb-14	11.3	5.6	3.9	-
GoldenTree Asset Management	Mar-17	17.1	-	-	-
Manulife Investment Management	Mar-07	15.1	7.3	6.2	7.0
Nuveen	Sep-14	17.5	8.1	6.9	7.5
Lazard Asset Management	Oct-11	14.9	6.0	3.5	-
Northwest Passage	Feb-14	13.6	6.3	5.1	-
Stone Harbor Investment Partners	May-07	14.2	5.8	-	-
Mellon Investments	May-11	13.5	6.0	3.5	-
Invesco Advisers	Jun-10	14.2	7.3	4.4	-
State Street Global Advisors Trust Company	Dec-15	13.9	6.5	-	-
Franklin Templeton	Mar-06	9.9	6.6	5.9	6.1
Grantham, Mayo, Van Otterloo & Co. (GMO)	Apr-94	14.3	6.5	6.6	9.5
50% JPM GBI-EM G.D. (Local) / 50% JPM EMBI G. D. (Hard)		14.3	6.9	4.5	4.8

Proposed Fees

Manager	Proposed Vehicle	Stated Fee (%)[1]	Other Expenses	Minimum Investment
Aberdeen Standard Investments Inc.	Commingled Fund	0.45	-	$5 million
	Mutual Fund (AKFIX)	0.66	-	$1 million
Wellington Trust Company	Commingled Fund	0.55	0.045% capped at 0.20%	$1 million
Eaton Vance Management	Commingled Fund	0.30	capped at 0.15%	$5 million
MetLife Investment Management	CIT	0.55	-	NA
	Limited Partnership	0.60	0.05%	$1 million
Ashmore Investment Advisors Limited[2]	CIT (Class A)	0.70	0.15%	$10 million
	Mutual Fund	1.02	-	$1 million
	UCITS SICAV	0.55	0.12%	$1 million
	Limited Partnership	0.55	0.08%	$10 million
Neuberger Berman	CIT (Class I)	0.69	-	$10 million
	Mutual Fund (Inst Class)	0.79	-	$1 million
	UCITS	0.70	0.20%	$2.5 million
	Private Fund	0.65	-	$10 million
Finisterre Capital	Mutual Fund (PFUMX)	0.85	-	$1 million
Ninety One (Investec)	Commingled Fund	0.45	0.14	$10 million

[1] Assumes a mandate size of $20 million. In certain cases operating expenses for commingled fund/collective investment trust vehicles were included in the stated fee. Otherwise the other operating expenses are listed separately and not included in the "Stated Fee"

[2] Stated minimum investment for Ashmore's Collective Investment Trust and Limited Partnership are the standard amounts that they are proposing to waive.

Proposed Fees (continued)

Manager	Proposed Vehicle	Stated Fee (%)[1]	Other Expenses	Minimum Investment
TCW Investment Management Company	CIT Mutual Fund (TGEIX)	0.57 0.85	- -	$5 million $2 thousand
Marathon Asset Management	Commingled Fun	0.75	-	$5 million
Pacific Investment Management Company (PIMCO)	Mutual Fund (PFSIX)	0.98	-	$1 million
GAM International Management	Commingled Fund	0.45	-	$3 million
GoldenTree Asset Management	Commingled Fund	0.70	-	$1 million
Manulife Investment Management	Commingled Fund Mutual fund (JMKIX)	0.49 0.88	- -	$20 million $0.25 million
Nuveen[2]	Mutual Fund	0.63	-	$2 million
Lazard Asset Management	Commingled Fund Mutual Fund (R6)	0.55 0.90	0.10% capped at 0.23% -	$1 million $1 million
Northwest Passage	Separate Account	0.42	-	$20 million

[1] Assumes a mandate size of $20 million. In certain cases operating expenses for commingled fund/collective investment trust vehicles were included in the stated fee. Otherwise the other operating expenses are listed separately and not included in the "Stated Fee"

[2] Nuveen is in the process of launching a CIT for which they are seeing investors who are eligible for founders pricing and are willing to discuss in more detail through the search process

Proposed Fees (continued)

Manager	Proposed Vehicle	Stated Fee (%)[1]	Other Expenses	Minimum Investment
Stone Harbor Investment Partners[2]	Mutual Fund (SHADX)	0.85	-	$1 million
	CIT	0.55	0.10%	$25 million
Mellon Investments[3]	Separate Account	0.35		$50 million
Invesco Advisers	Commingled Fund	0.45	0.05%	$5 million
	Mutual Fund (R6)	0.85	-	$1 million
State Street Global Advisors Trust Company	Commingled Trust Fund	0.14	-	$5 million
Franklin Templeton	Mutual Fund (Class Z)	1.02	-	$1 million
Grantham, Mayo, Van Otterloo & Co. (GMO)	Trust Fund Class III	0.54	2.0% Purchase & Redemption Fee	$5 million
	Trust Fund Class IV	0.49		$250 million

[1] Assumes a mandate size of $20 million. In certain cases operating expenses for commingled fund/collective investment trust vehicles were included in the stated fee. Otherwise the other operating expenses are listed separately and not included in the "Stated Fee"

[2] Separate account minimum listed for Stone Harbor is the standard amount that they are offering to be lowered to $20 million for the PCRA account.

[3] Separate account minimum listed for Mellon Investments is the standard amount that they are offering to be waived for the PCRA account.

Summary

- A total of 24 managers submitted responses to this search.
- Based upon our review and evaluation of each respondent, Meketa Investment Group has rated four as "Highly Advantageous, 19 were ranked as "Advantageous," and one was ranked as "Not Advantageous."

Asset Allocation Review and Risk Analysis (From August 2019)

Asset Allocation Comparison[1]

	PCRA Policy (%)	PCRA 08/2019 (%)	PRIT (%)	Public DB[2] (%)
Equities	**65**	**61**	**52**	**60**
US Equity	26	23	13	28
Developed Market Equity (non-US)	6	12	13	7
Emerging Market Equity	10	11	5	5
Global Equity	10	10	0	12
Long-Short	0	0	8	0
Private Equity	13	5	13	8
Credit	**6**	**9**	**8**	**3**
High Yield Bonds / Bank Loans	4	6	5	0
Distressed Debt	0	0	2	0
Emerging Market Bonds	2	3	2	3
Rate Sensitive	**9**	**10**	**15**	**20**
Short-term Investment Grade Bonds / Cash	2	4	2	0
Investment Grade Bonds	5	4	6	20
Long-term Strips	0	0	3	0
TIPS	2	2	4	0
Real Assets	**16**	**14**	**14**	**12**
Real Estate	10	9	10	9
Natural Resources / Timber	2	2	4	3
Core Infrastructure	4	3	0	0
Hedge Funds	**4**	**6**	**11**	**5**
Expected Return (20 years)	*8.58*	*8.20*	*7.65*	*7.88*
Standard Deviation	*14.4*	*13.5*	*11.6*	*12.6*
Probability of Achieving 7.88% over 20 Years	*58.3*	*53.8*	*46.1*	*49.6*

[1] Expected return and standard deviation are based upon Meketa Investment Group's 2019 Annual Asset Study. Throughout this document, returns for periods longer than one year are annualized.

[2] Public Defined Benefit Peer group represents the InvMetrics Public DB Net Universe as of June 30, 2019. Includes 241 observations

Stress Testing: Impact of Market Movements
(Expected Return under Stressed Conditions)[1]

Scenario	PCRA Policy (%)	PCRA 08/2019 (%)	PRIT (%)	Public DB (%)
10-year Treasury Bond rates rise 100 bps	6.2	6.0	4.4	5.2
10-year Treasury Bond rates rise 200 bps	3.7	4.0	1.3	2.1
10-year Treasury Bond rates rise 300 bps	1.9	2.3	-1.8	0.1
Baa Spreads widen by 50 bps, High Yield by 200 bps	-0.7	-1.2	0.4	-0.5
Baa Spreads widen by 300 bps, High Yield by 1000 bps	-23.9	-24.2	-18.1	-21.6
Trade Weighted Dollar gains 10%	-2.1	-2.6	-0.7	-1.2
Trade Weighted Dollar gains 20%	-2.5	-3.4	-1.0	-1.9
US Equities decline 10%	-6.7	-6.6	-4.9	-6.0
US Equities decline 25%	-18.3	-18.1	-13.6	-16.7
US Equities decline 40%	-30.4	-30.7	-22.4	-28.0

- Each portfolio has a different sensitivity to four major risk factors: interest rates, credit spreads, currency fluctuations, and equity values.
- The Association's primary risk factors would continue to be an equity market decline and a widening of credit spreads, no matter the policy.

[1] Assumes that assets not directly exposed to the factor are affected nonetheless.

Stress Testing: Impact of Positive Market Movements
(Expected Return under Stressed Conditions)[1]

Scenario	PCRA Policy (%)	PCRA 08/2019 (%)	PRIT (%)	Public DB (%)
10-year Treasury Bond rates drop 100 bps	5.4	4.8	6.2	5.9
10-year Treasury Bond rates drop 200 bps	15.2	15.0	14.6	16.1
Baa Spreads narrow by 30bps, High Yield by 100 bps	9.0	8.7	7.4	8.4
Baa Spreads narrow by 100bps, High Yield by 300 bps	16.4	16.9	13.0	15.0
Trade Weighted Dollar drops 10%	7.8	8.2	6.8	7.3
Trade Weighted Dollar drops 20%	20.5	20.9	17.6	19.8
US Equities rise 10%	7.9	7.5	6.8	7.4
US Equities rise 30%	19.6	19.0	15.1	19.0

- The portfolio with the least downside risk is likewise the portfolio that participates least in upside scenarios.

[1] Assumes that assets not directly exposed to the factor are affected nonetheless.

MVO-Based Risk Analysis

Scenario	PCRA Policy (%)	PCRA 08/2019 (%)	PRIT (%)	Public DB[1] (%)
Worst Case Returns (1)				
One Year	-20.0	-18.9	-16.1	-17.6
Three Years (annualized)	-9.0	-8.4	-6.8	-7.7
Five Years (annualized)	-5.3	-4.9	-3.7	-4.4
Ten Years (annualized)	-1.4	-1.2	-0.5	-1.0
Twenty Years (annualized)	1.4	1.4	1.8	1.5
Probability of Experiencing Negative Returns				
One Year	26.6	26.3	24.6	25.7
Three Years	13.9	13.6	11.7	12.9
Five Years	8.1	7.8	6.2	7.2
Ten Years	2.4	2.2	1.5	2.0
Twenty Years	0.3	0.2	0.1	0.2
Probability of Achieving at least an 7.88% Return				
One Year	51.9	50.9	49.1	49.9
Three Years	53.2	51.5	48.5	49.8
Five Years	54.2	51.9	48.0	49.8
Ten Years	55.9	52.7	47.2	49.7
Twenty Years	58.3	53.8	46.1	49.6

- PRIT is structured to be the most defensive portfolio. However, it is the least likely to reach the Association's target return over the long term.

[1] Public Defined Benefit Peer group represents the InvMetrics Public DB Net Universe as of June 30, 2019. Includes 241 observations

Value at Risk[1]

Scenario	PCRA Policy	PCRA 08/2019	PRIT	Public DB
VaR (%):				
1 month	-8.9	-8.4	-7.1	-7.8
3 months	-14.5	-13.6	-11.5	-12.6
6 months	-19.1	-17.9	-15.1	-16.6

Conditional Value at Risk[1]

Scenario	PCRA Policy	PCRA 08/2019	PRIT	Public DB
CVaR (%):				
1 month	-10.3	-9.7	-8.2	-9.0
3 months	-16.8	-15.8	-13.4	-14.7
6 months	-22.4	-21.0	-17.8	-19.5

- According to the VaR model, the Association could lose up to 8.9% in a single month, based on the current policy targets.

[1] Calculated with a 99% confidence level and based upon Meketa Investment Group's Annual Asset Study. cVaR represents the average loss past the 99th percentile.

Historical Negative Scenario Analysis[1]
(*Cumulative* Return)

Scenario	PCRA Policy	PCRA 08/2019	PRIT	Public DB
Taper Tantrum (May - Aug 2013)	-0.1	-0.9	-0.5	-0.5
Global Financial Crisis (Oct 2007 - Mar 2009)	-33.1	-34.0	-22.8	-29.6
2008 Calendar Year	-29.5	-30.1	-21.3	-25.7
Popping of the TMT Bubble (Apr 2000 - Sep 2002)	-16.8	-17.9	-8.3	-17.1
LTCM (Jul - Aug 1998)	-10.5	-11.2	-6.9	-10.1
Asian Financial Crisis (Aug 1997 - Jan 1998)	1.0	-1.2	3.8	1.5
Rate spike (1994 Calendar Year)	2.2	1.7	3.0	1.6
Crash of 1987 (Sep - Nov 1987)	-13.9	-14.4	-7.9	-13.9
Strong dollar (Jan 1981 - Sep 1982)	0.2	-0.5	4.2	3.1
Stagflation (Jan - Mar 1980)	-3.7	-3.7	-3.9	-4.7
Stagflation (Jan 1973 - Sep 1974)	-25.7	-25.6	-18.8	-23.1
Taper Tantrum (May - Aug 2013)	-0.1	-0.9	-0.5	-0.5

- The PRIT portfolio would have performed the best in environments of declining equity markets, due to its more conservative positioning.
- The public DB Median portfolio would have fared the worst during periods of rising rates; however, the losses in these environments are dwarfed by the losses during an equity downturn.

[1] See the Appendix for our scenario inputs. In periods where the ideal benchmark was not yet available we used the next closest benchmark(s) as a proxy.

Historical Positive Scenario Analysis[1]
(Cumulative Return)

Scenario	PCRA Policy (%)	PCRA 08/2019 (%)	PRIT (%)	Public DB (%)
Global Financial Crisis Recovery (Mar 2009 - Nov 2009)	39.6	42.1	27.3	37.9
Best of Great Moderation (Apr 2003 - Feb 2004)	33.5	34.9	26.0	30.7
Peak of the TMT Bubble (Oct 1998 - Mar 2000)	49.9	46.5	56.9	42.5
Pre-Recession (Jun - Oct 1990)	-6.8	-7.2	-2.2	-5.8
Plummeting Dollar (Jan 1986 - Aug 1987)	59.1	66.0	47.9	58.7
Volcker Recovery (Aug 1982 - Apr 1983)	34.4	34.0	25.7	36.5
Bretton Wood Recovery (Oct 1974 - Jun 1975)	32.5	32.4	23.3	32.2

- PCRA's current portfolio would have captured most of the upside in strongly positive markets.

[1] See the Appendix for our scenario inputs. In periods where the ideal benchmark was not yet available we used the next closest benchmark(s) as a proxy.

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PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. Portfolio Return- [Risk Free Rate+Beta*(market return-Risk Free Rate)].

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about is future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk-free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

SI: Since Inception

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Tracking Error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark, as defined by the difference in standard deviation.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a "basis book." For example, a 5% bond pays $5 a year interest on each $100 par value. To figure its current yield, divide $5 by $95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay $100 for the bond that can be bought now for $95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\%\text{ (discount)}}{5\text{ (yrs. to maturity)}} = \begin{array}{l}1\%\text{ pro rata, plus}\\ 5.26\%\text{ (current yield)}\end{array} = 6.26\%\text{ (yield to maturity)}$$

Yield to Worst: The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call, or sinking fund, are used by the issuer.

NCREIF Property Index (NPI): Measures unleveraged investment performance of a very large pool of individual commercial real estate properties acquired in the private market by tax-exempt institutional investors for investment purposes only. The NPI index is capitalization-weighted for a quarterly time series composite total rate of return.

NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE): Measures the investment performance of 28 open-end commingled funds pursuing a core investment strategy that reflects funds' leverage and cash positions. The NFI-ODCE index is equal-weighted and is reported gross and net of fees for a quarterly time series composite total rate of return.

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999.
The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991

Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.