Investment Performance Review Period Ending September 30, 2019

# Port of Houston Authority 457(b) and 401(a) Plans Executive Summary

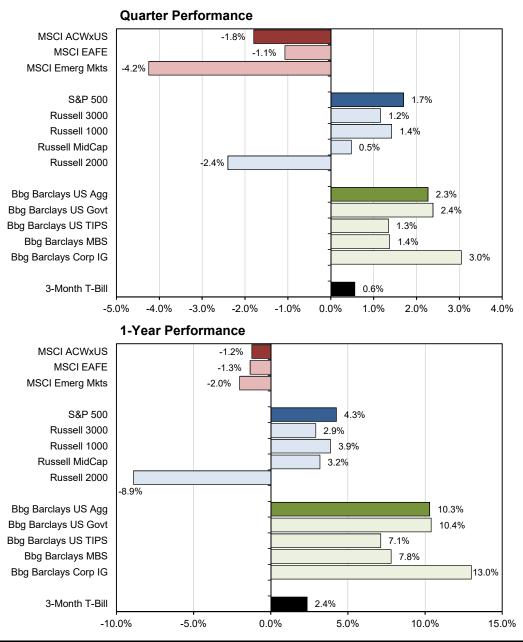


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**3rd Quarter 2019 Market Environment** 



- Broad asset class returns were mixed during the 3rd guarter of 2019 with both US large cap equity and fixed income indices extending their year-to-date gains while US small cap and international indices declined. Volatility was high during the period as investors weighed the effects of ongoing trade disruption and slowing global economic data against the announcement of several new central bank stimulus measures. US stocks continued their year-to-date outperformance relative to international stocks during the period. US markets faced headwinds from continued escalation in the ongoing trade dispute with China, slowing economic data, particularly with regards to manufacturing, and political uncertainty following a late quarter impeachment inquiry against President Donald Trump. However, markets were supported by easing monetary policy from the Federal Reserve (Fed) which cut interest rates twice during the period. In general, lower risk assets performed better through the period as investors weighed the increased risk of a recession. Within domestic equity markets, large cap stocks outperformed small cap equities during the quarter with the S&P 500 Index returning 1.7% versus a -2.4% return on the small cap Russell 2000 Index. US equity returns over the 1-year period were positive for large and mid-cap stocks, returning 4.3% and 3.2% respectively, but small cap stocks posted a loss, falling -8.9%.
- International markets posted negative returns for the 3rd quarter. Similar to US markets, international returns were impacted by continued weakness in economic data, heightened geopolitical uncertainly around global trade and Brexit and newly announced stimulus measures from global central banks including the European Central Bank (ECB) and Peoples Bank of China (PBoC). International returns also faced headwinds from a strengthening US dollar (USD) which appreciated against most major currencies during the period. Developed markets continued their outperformance relative to emerging markets during the period with the MSCI EAFE Index falling -1.1% versus a -4.2% decline for the MSCI Emerging Markets Index. Both developing and emerging markets posted slight losses over the 1-year period, returning -1.3% and -2.0% respectively.
- Fixed income returns outperformed equities during the 3rd quarter as investors looked for relative safety amid the equity market volatility. The broad market Bloomberg Barclays Aggregate Index gained 2.3% as interest rates fell following central bank stimulus from the Fed and other global central banks. The US Treasury Yield Curve also inverted in August, contributing to growing concern around the potential for an upcoming recession. Investment grade corporate issues were the best performing securities for the third quarter in a row, returning 3.0%, outperforming Treasury and securitized issues. Corporate issues benefitted from their relatively high duration and yield. The bond market has meaningfully outperformed the equity market over the trailing 1-year period with the Bloomberg Barclays Aggregate posting a solid 10.3% return.





- US equity returns were modestly positive during the 3rd quarter, but results varied considerably across the style and capitalization spectrum. Data released during the guarter showed signs that the US economy could be slowing down. Weakening metrics around manufacturing and sentiment were particularly concerning and employment, typically a bright spot for the US economy, missed expectations for the pace of new jobs and hours worked. A likely contributor to the softening economic data is the ongoing trade war between the US and China. Despite last guarter's agreement to cease escalations following a meeting between President Trump and President Jinping at the G20 summit, the 3rd quarter saw the announcement and implementation of a series of new tariffs from both the US and China. Additionally, in response to new tariffs, the PBoC allowed the yuan to depreciate to its lowest level since 2008 leading US Treasury officials to accuse China of currency manipulation. Even with the apparent breakdown in relations between the two sides, both China and the US agreed to continue negotiations set to take place in October. Markets also reacted to the late guarter announcement of a formal impeachment inquiry against President Trump following a whistle blower report alleging that President Trump pressured the government of Ukraine to investigate the son of political opponent Joe Biden. Despite these substantial headwinds, the US equity market found support from Fed easing of monetary policy in the form of two separate interest rate cuts and ended the period with a gain. The Russell 3000 Index returned 1.2% and 2.9% for the guarter and 1-year period respectively.
- During the quarter, higher market cap stocks outperformed lower market cap stocks across the style spectrum. The large cap Russell 1000 Index gained 1.4% during the period versus a -2.4% return for the small cap Russell 2000 Index. Investors may have been attracted to large cap names as a result of the guarter's volatility as large cap stocks are typically viewed as less risky than their small cap counterparts. When viewed over the most recent 1-year period, large cap stocks significantly outperformed small cap stocks with the Russell 1000 posting a 3.9% gain while the while the Russell 2000 had considerable losses, declining -8.9%.
- In general, value stocks outperformed growth stocks during the 3rd guarter as investors gravitated toward the relative safety these securities typically provide. However, large cap growth stocks slightly outperformed large cap value stocks due to favorable holdings in the technology and industrials sectors as well as a large underweight to the underperforming energy sector. The Russell 1000 Growth Index was the best performing style index for the period, returning 1.5%, with the small cap growth index posting the lowest relative return, a loss of -4.2%. Results over the 1-year period are mixed with value stocks outperforming in large and small cap and growth stocks outperforming in midcap.

Source: Investment Metrics



-10.0%

-8.0%

-6.0%

-4.0%

-2.0%

0.0%

2.0%

4.0%

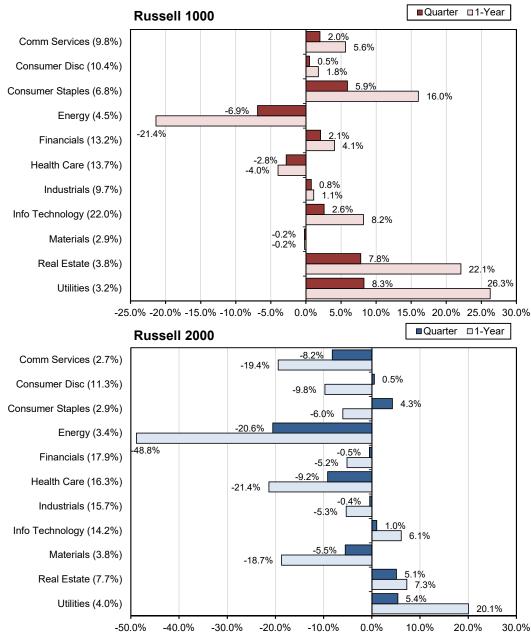
-12.0%

**Quarter Performance - Russell Style Series** 



6.0%

- Sector performance was mixed across large cap sectors for the 3rd guarter. . There were gains for eight out of eleven sectors within the Russell 1000 Index during the period with six sectors outpacing the return of the index. Defensive sectors such as utilities, real estate and consumer staples were the best performers through the quarter returning 8.3%, 7.8% and 5.9% respectively as investors looked toward these sectors for their higher yields and lower historical volatility. Energy, health care and materials stocks were Consumer Staples (6.8%) the worst performers during the period. Energy stocks fell -6.9% as crude oil prices fell during the period despite a sharp upward spike in September following a terrorist attack in Saudi Arabia that temporarily reduced the country's oil production, causing a large disruption in supply. Health care stocks also lagged, declining -2.8%, as discussions in Washington around the potential for increased regulation on drug pricing acted as a headwind. Health care reform has also been a major topic of discussion among candidates for the 2020 US Presidential election, creating additional uncertainty within the sector. Materials returned -0.2% as demand concerns weighed on the economically sensitive sector. Returns over the 1-year period were also generally positive with eight out of eleven sectors posting gains. Similar to the quarter's results, defensive sectors outperformed by a considerable margin. Utilities, real estate and consumer staples performed well returning 26.3%, 22.1% and 16.0% respectively. Technology returns were also strong gaining 8.2%. Energy, health care and materials were the only sectors to post negative results over the 1-year period with energy falling -21.4%, health care dropping -4.0% and materials returning -0.2%.
- Quarterly results for small cap sectors were worse than their large capitalization counterparts with all eleven sectors trailing their corresponding large cap equivalents. Five of eleven economic sectors produced gains during the period with seven of eleven sectors outpacing the Russell 2000 Index return for the quarter. Similar to large caps, defensive sectors performed well as investors gravitated toward their relative safety and higher yields. Utilities were the best performers, returning 5.4% followed closely by REITs and consumer staples which returned 5.1% and 4.3% respectively. The cyclically oriented energy sector was the largest detractor for the period, posting a loss of -20.6%. Health care and communication services stocks also experienced notable declines, falling -9.2% and -8.2% respectively. Over the trailing 1-year period, returns were broadly negative. Utilities, real estate and technology were the only sectors to post gains returning 20.1% 7.3% and 6.1%. The energy sector was an outlier in terms of negative returns dropping -48.8% during the period. There were also notable losses in health care, communication services and materials which declined -21.4%, -19.4% and -18.7% respectively.



The Market Environment Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000

As of September 30, 2019

Top 10 Weighted Stocks					
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector	
Microsoft Corp	3.82%	4.1%	22.9%	Information Technology	
Apple Inc	3.68%	13.6%	0.8%	Information Technology	
Amazon.com Inc	2.61%	-8.3%	-13.3%	Consumer Discretionary	
Facebook Inc A	1.55%	-7.7%	8.3%	Communication Services	
Berkshire Hathaway Inc B	1.48%	-2.4%	-2.8%	Financials	
JPMorgan Chase & Co	1.36%	6.0%	7.4%	Financials	
Alphabet Inc Class C	1.35%	12.8%	2.1%	Communication Services	
Alphabet Inc A	1.33%	12.8%	1.2%	Communication Services	
Johnson & Johnson	1.25%	-6.4%	-3.8%	Health Care	
Procter & Gamble Co	1.12%	14.2%	54.0%	Consumer Staples	

Top 10 Performing Stocks (by Quarter)					
Russell 1000	Weight	Weight 1-Qtr 1-Year Return Return		Sector	
Insulet Corp	0.04%	38.2%	55.7%	Health Care	
CyrusOne Inc	0.03%	37.9%	28.8%	Real Estate	
KLA Corp	0.09%	35.7%	61.1%	Information Technology	
New York Community Bancorp Inc	0.02%	27.6%	28.7%	Financials	
Entegris Inc	0.02%	26.3%	63.9%	Information Technology	
Pilgrims Pride Corp	0.01%	26.2%	77.1%	Consumer Staples	
Western Digital Corp	0.06%	25.4%	5.6%	Information Technology	
DocuSign Inc	0.03%	24.6%	17.8%	Information Technology	
Target Corp	0.19%	24.4%	24.3%	Consumer Discretionary	
XPO Logistics Inc	0.02%	23.8%	-37.3%	Industrials	

XPO Logistics Inc	0.02%	23.8%	-37.3%	Industrials	Ardelyx Inc
E	Bottom 10 Perform	ning Stocks	(by Quarter)	ı.	
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector	Russell 2000
2U Inc	0.00%	-56.7%	-78.3%	Information Technology	Tocagen Inc
PG&E Corp	0.02%	-56.4%	-78.3%	Utilities	Waitr Holdings Inc Clas
Covetrus Inc	0.00%	-51.4%	N/A	Health Care	McDermott Internationa
Sarepta Therapeutics Inc	0.02%	-50.4%	-53.4%	Health Care	Sonim Technologies Inc
Nektar Therapeutics Inc	0.01%	-48.8%	-70.1%	Health Care	Synlogic Inc
DXC Technology Co	0.03%	-46.2%	-67.9%	Information Technology	Mallinckrodt PLC
Antero Resources Corp	0.00%	-45.4%	-82.9%	Energy	Clovis Oncology Inc
Range Resources Corp	0.00%	-45.0%	-77.3%	Energy	Bloom Energy Corp Cla
Pluralsight Inc Class A	0.00%	-44.6%	-47.5%	Information Technology	Chaparral Energy Inc C
Fluor Corp	0.01%	-42.5%	-66.1%	Industrials	Pacific Drilling SA

Top 10 Weighted Stocks						
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector		
NovoCure Ltd	0.34%	18.3%	42.7%	Health Care		
Haemonetics Corp	0.33%	4.8%	10.1%	Health Care		
Trex Co Inc	0.28%	26.8%	18.1%	Industrials		
Science Applications International	0.27%	1.3%	10.4%	Information Technology		
Portland General Electric Co	0.26%	4.8%	27.2%	Utilities		
ONE Gas Inc	0.26%	7.0%	19.5%	Utilities		
First Industrial Realty Trust Inc	0.26%	8.3%	29.3%	Real Estate		
Southwest Gas Holdings Inc	0.26%	2.2%	18.2%	Utilities		
Maximus Inc	0.25%	6.9%	20.4%	Information Technology		
Teladoc Health Inc	0.25%	2.0%	-21.6%	Health Care		

Top 10 Performing Stocks (by Quarter)						
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector		
NextCure Inc	0.00%	105.9%	N/A	Health Care		
Dova Pharmaceuticals Inc	0.01%	98.2%	33.3%	Health Care		
WW International Inc	0.09%	98.0%	-47.5%	Consumer Discretionary		
R.R.Donnelley & Sons Co	0.01%	94.7%	-27.6%	Industrials		
Infinera Corp	0.05%	87.3%	-25.3%	Information Technology		
Lannett Co Inc	0.02%	84.8%	135.8%	Health Care		
Owens & Minor Inc	0.02%	81.6%	-64.4%	Health Care		
Allakos Inc	0.08%	81.5%	74.8%	Health Care		
Solid Biosciences Inc	0.01%	79.8%	-78.1%	Health Care		
Ardelyx Inc	0.01%	74.7%	8.0%	Health Care		

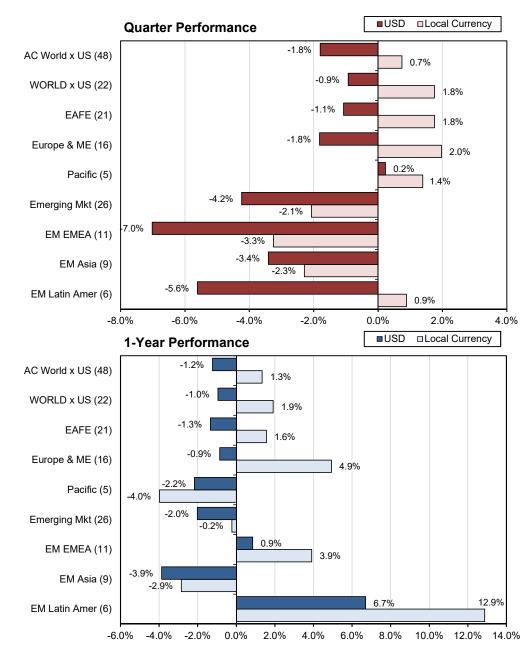
Bottom 10 Performing Stocks (by Quarter)					
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector	
Tocagen Inc	0.00%	-90.1%	-95.8%	Health Care	
Waitr Holdings Inc Class A	0.00%	-79.6%	-88.1%	Consumer Discretionary	
McDermott International Inc	0.02%	-79.1%	-89.0%	Energy	
Sonim Technologies Inc	0.00%	-77.0%	N/A	Information Technology	
Synlogic Inc	0.00%	-74.8%	-83.9%	Health Care	
Mallinckrodt PLC	0.01%	-73.7%	-91.8%	Health Care	
Clovis Oncology Inc	0.01%	-73.6%	-86.6%	Health Care	
Bloom Energy Corp Class A	0.01%	-73.5%	-90.5%	Industrials	
Chaparral Energy Inc Class A	0.00%	-71.5%	-92.4%	Energy	
Pacific Drilling SA	0.01%	-69.3%	-99.7%	Energy	



- Broad international equity returns were negative in USD terms for the 3rd quarter as US investors in international markets faced a meaningful headwind from a USD that strengthened against most major currencies. In local currency terms, developed markets were generally positive while emerging markets posted losses. The MSCI ACWI ex US Index gained 0.7% in local currency terms, but a USD investor experienced a loss of -1.8% due to the currency effect. Similar to US markets, international equity markets balanced headwinds from slowing economic data and concerns around global trade with tailwinds from central bank shifts toward more accommodative policies. Among others, the ECB and PBoC announced new stimulus measures during the quarter. The ECB cut its policy rate and committed to a new quantitative easing program and the PBoC announced new stimulus measures designed to encourage bank lending and reduce borrowing costs as it tries to counteract a cooling economy and the effects of its ongoing trade war with the US. The recent USD strength can also be seen over the 1-year period with USD returns trailing most local currency returns. Returns for the MSCI ACWI ex US Index were 1.3% in local currency terms and -1.2% in USD terms for the trailing year.
- Results for developed market international indices were generally positive in local currency terms, but negative in USD terms for the 3rd quarter, with the MSCI EAFE Index returning 1.8% and -0.9% respectively. Outside of central bank policy and trade, there were notable developments within the political sphere. In Europe, Christine Lagarde was nominated to succeed Mario Draghi as the head of the ECB. Japanese stocks rose as election results appeared to support continuity for Prime Minister Abe's ongoing policy efforts. In the UK, pro-Brexit Boris Johnson was appointed to prime minister, replacing Theresa May. The UK continues to face uncertainty around Brexit as its late October deadline to agree to a withdrawal agreement with the European Union (EU) quickly approaches. Stocks in Hong Kong fell as the government dealt with major pro-democracy protests throughout the quarter. The MSCI EAFE Index returned 1.6% and -1.3% for the last twelve months in local currency and USD terms respectively.
- Emerging markets continued their trend of 2019 underperformance relative to developed markets during the 3rd quarter, posting negative returns in both local currency and USD terms. The MSCI Emerging Markets Index fell -2.1% and -4.2% respectively. As expected, geopolitical tensions around trade continued to put pressure on emerging market stocks. Countries with greater sensitivities to commodity prices or a strong USD tended to underperform during the period. Argentina's stock market fell -46.8% as primary elections in the country saw the defeat of the country's current market friendly president. One year returns for the MSCI Emerging Market Index were -0.2% in local currency terms and -2.0% in USD terms.

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#### The Market Environment International and Regional Market Index Performance (Country Count) As September 30, 2019





	The Market Environment
<b>US Dollar International Index Attr</b>	ribution & Country Detail
	As of September 30, 2019

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.4%	-0.9%	-0.7%
Consumer Discretionary	11.5%	0.3%	-2.0%
Consumer Staples	12.0%	1.9%	6.9%
Energy	5.1%	-6.5%	-14.5%
Financials	18.6%	-2.6%	-6.3%
Health Care	11.6%	2.4%	4.3%
Industrials	14.7%	-2.0%	-2.1%
Information Technology	6.7%	-0.5%	1.8%
Materials	7.0%	-5.4%	-5.7%
Real Estate	3.6%	-1.3%	4.3%
Utilities	3.8%	2.4%	13.2%
Total	100.0%	-1.1%	-1.3%
MSCI - ACWIxUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	6.8%	-2.9%	-1.0%
Consumer Discretionary	11.4%	-0.7%	-1.6%
Consumer Staples	10.2%	1.5%	6.8%
Energy	6.7%	-4.6%	-9.8%
Financials	21.6%	-3.6%	-3.2%
Health Care	8.5%	1.1%	0.9%

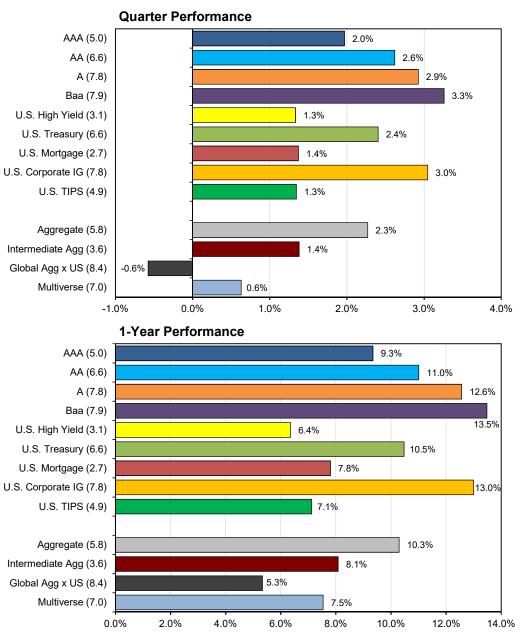
Consumer Discretionary	11.4%	-0.7%	-1.6%
Consumer Staples	10.2%	1.5%	6.8%
Energy	6.7%	-4.6%	-9.8%
Financials	21.6%	-3.6%	-3.2%
Health Care	8.5%	1.1%	0.9%
Industrials	11.9%	-2.5%	-2.4%
Information Technology	8.9%	2.2%	4.1%
Materials	7.3%	-6.5%	-7.2%
Real Estate	3.2%	-3.1%	5.0%
Utilities	3.5%	1.3%	12.6%
Total	100.0%	-1.8%	-1.2%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	11.6%	-5.2%	-2.5%
Consumer Discretionary	13.1%	-3.1%	0.1%
Consumer Staples	6.9%	-0.8%	3.0%
Energy	7.7%	-4.0%	-2.3%
Financials	24.7%	-8.0%	1.6%
Health Care	2.6%	-6.6%	-24.2%
Industrials	5.4%	-5.2%	-4.4%
Information Technology	15.1%	5.6%	3.9%
Materials	7.3%	-10.7%	-15.9%
Real Estate	2.9%	-8.8%	6.8%
Utilities	2.8%	-3.6%	7.2%
Total	100.0%	-4.2%	-2.0%

	MSCI-EAFE	MSCI-ACWIXUS	Quarter	1- Year
Country	Weight	Weight	Return	Return
Japan	24.6%	16.5%	3.1%	-4.7%
United Kingdom	16.4%	11.0%	-2.5%	-2.9%
France	11.4%	7.6%	-1.7%	-1.6%
Switzerland	9.4%	6.3%	0.3%	12.0%
Germany	8.5%	5.7%	-4.0%	-7.1%
Australia	7.0%	4.7%	-1.4%	6.1%
Netherlands	4.0%	2.7%	2.4%	9.5%
Hong Kong	3.5%	2.4%	-11.9%	-1.8%
Spain	2.9%	2.0%	-3.8%	-3.5%
Sweden	2.6%	1.7%	-4.8%	-8.0%
Italy	2.3%	1.6%	-0.1%	3.9%
Denmark	1.8%	1.2%	-1.0%	2.3%
Singapore	1.3%	0.9%	-5.8%	-0.2%
Belgium	1.0%	0.7%	3.4%	-0.8%
Finland	1.0%	0.7%	-1.8%	-0.8%
Norway	0.7%	0.4%	-3.4%	-13.4%
Israel	0.6%	0.4%	-3.4%	-13.4%
Ireland	0.5%	0.4%	-0.6%	-12.5%
New Zealand	0.3%	0.2%	-2.9%	10.0%
Austria	0.2%		-2.9%	-16.0%
		0.2%		
Portugal	0.2%	0.1%	1.6%	-2.5%
Total EAFE Countries	100.0%	67.0%	-1.1%	-1.3%
Canada		7.0%	0.5%	3.0%
Total Developed Countries		74.0%	-0.9%	-1.0%
China		8.3%	-4.7%	-3.9%
Korea		3.2%	-4.5%	-13.8%
Taiwan		3.0%	5.2%	-0.2%
India		2.3%	-5.2%	4.7%
Brazil		2.0%	-4.6%	25.4%
South Africa		1.2%	-12.6%	-6.4%
Russia		1.0%	-1.4%	18.0%
Thailand		0.8%	-6.0%	-0.9%
Saudi Arabia		0.7%	-9.5%	4.0%
Mexico		0.7%	-1.7%	-14.8%
Indonesia		0.5%	-5.2%	11.9%
Malaysia		0.5%	-6.3%	-10.4%
Philippines		0.3%	-4.6%	13.1%
Poland		0.3%	-12.1%	-12.2%
Qatar		0.3%	-0.2%	5.0%
Chile		0.3%	-7.3%	-16.8%
United Arab Emirates		0.2%	-0.2%	-0.3%
Turkey		0.2%	11.7%	16.5%
Colombia		0.1%	-6.1%	-7.3%
Peru		0.1%	-9.3%	-4.0%
Greece		0.1%	-3.1%	6.8%
Hungary		0.1%	-3.9%	3.4%
Argentina		0.1%	-46.8%	-32.3%
Czech Republic		0.0%	-10.1%	-12.6%
Egypt		0.0%	7.4%	21.5%
Pakistan		0.0%	1.1%	-32.7%
Total Emerging Countries		26.0%	-4.2%	-2.0%
Total ACWIxUS Countries		100.0%	-1.8%	-1.2%

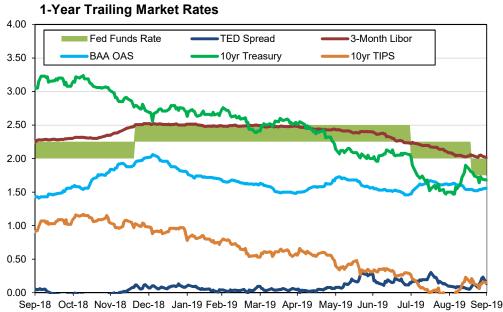
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD) As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Page 7 Services sector.

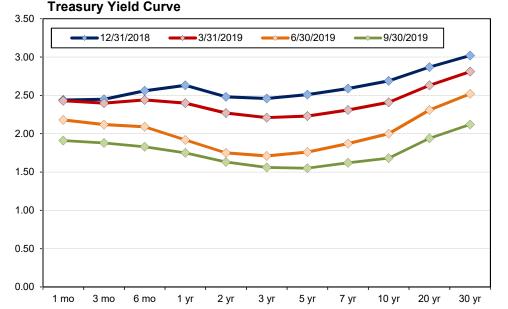
- Broad fixed income benchmarks continued their trend of 2019 gains during the . 3rd guarter. Interest rates fell across the US Treasury Yield Curve through the quarter as the Fed continued to shift toward an easing of monetary policy in an attempt to combat slowing economic data. The Fed cut short-term interest rates twice during the period following their July and September meetings. In addition, it ended its balance sheet reduction plan in September which represents a further easing of monetary policy. After its September meeting, the Fed issued a statement commenting that future changes to monetary policy are not on a preset course and will be evaluated as the Fed receives new information on the state of the economy, but that Fed officials "will continue to monitor the implications of incoming information for the economic outlook and will act as appropriate to sustain the expansion." The Fed response provided market support in a quarter where we saw the formal inversion of the yield curve. Treasury yields on 2-year issues briefly surpassed the yield on 10-year issues in August. This inversion of the yield curve has historically preceded a recession within the next 6-24 months. However, the magnitude of the inversion was mild and short in duration with rates on the 10year Treasury rising above the yield of the 2-year by early September. The bellwether Bloomberg Barclays US Aggregate Index posted positive returns for both the 3rd quarter and the 1-year period, returning 2.3% and 10.3% respectively.
- Within investment grade credit, lower quality issues outperformed higher quality issues during the quarter. Lower quality issues benefitted from their higher durations as interest rates fell during the quarter. On an absolute basis, without negating the duration differences in the sub-indices, Baa rated credit was the best performing investment grade credit quality segment returning 3.3% for the quarter, while AAA was the worst performing, returning 2.0%. High yield issues returned 1.3% for the quarter as these issues did not commensurately benefit from the drop in interest rates due to their relatively low durations. Returns over the 1-year period show lower quality securities outperforming higher quality issues with Baa rated issues returning 13.5% versus a 9.3% return for AAA securities.
- Investment grade corporates outperformed the more defensive Treasury and mortgage backed sectors of the Bloomberg Barclays US Aggregate Index's three broad sectors during the 3rd quarter. Investment grade corporate credit returned 3.0%, as they benefitted from their higher sensitivity to interest rates, low credit spreads and high investor demand for yield. When viewed over the 1-year period, corporate credit outperformed both Treasuries and mortgage backed securities. Corporate issues returned 13.0% versus a 7.8% return for mortgages and 10.5% gain on Treasury securities.





- Global fixed income returns underperformed their domestic counterparts during the 3rd quarter. These indices have lower, or in some cases (Germany, Japan), negative yields, but have higher durations. Given their higher durations, these issues would be expected to perform relatively well during periods of falling rates, however, the returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. As mentioned, the USD appreciated against most other developed currencies during the quarter, acting as a headwind to global bond indices. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was -0.6%. Global bonds also trailed over the 1-year period with the Global Aggregate ex US Index returning 5.3% versus a 10.3% return on the domestically focused Bloomberg Barclays Aggregate Index. As global growth has shown signs of stalling, several international central banks have started to step back from more restrictive postures. The ECB and the PBoC have moved toward an easing of monetary policy and implemented various stimulus programs designed to support their respective economies. The Bank of England and the Bank of Japan made no major policy changes during the quarter as they continue to review macroeconomic data within their respective countries.
- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis by reviewing the line graphs to the right. The '1-Year Trailing Market Rates' chart illustrates that over the last year, the 10-year Treasury yield (green line) fell from high's greater than 3.0%, to yields below 1.5% before ending the guarter at 1.68%. The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional yield premium that investors require to purchase and hold non-Treasury issues. This line illustrates an abrupt increase in credit spreads during the 4th guarter of 2018 as investors moved to higher guality assets during the guarter's risk-off environment. Subsequently, spreads declined steadily, remaining somewhat range bound with increases in May and August. There was little change through the quarter with spreads tightening by about 1 basis point. Spread tightening is equivalent to an interest rate decrease on corporate bonds, which produces an additional tailwind for corporate bond index returns. The green band across the graph illustrates the decrease in the Federal Funds Rate due to the recent easing in US monetary policy. The rate cuts in July and September have pushed the Fed Funds Rate to 1-year lows.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four calendar quarters. The downward shift in interest rates as well as a general flattening of the yield curve are clearly visible over the last quarter. As mentioned, the yield curve continues to invert as yields on shorterand middle-term maturities fell less than interest rates at the long-end of the curve.

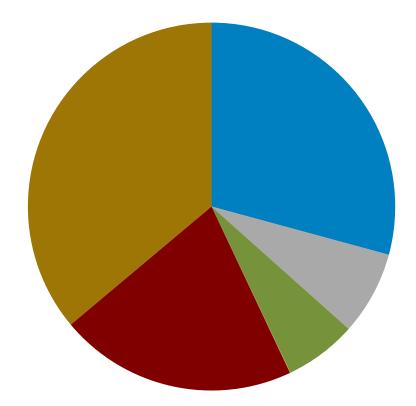


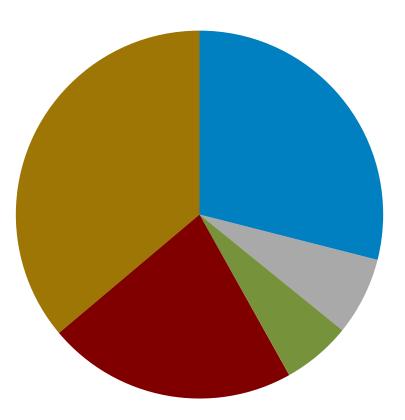


#### Sep-18 Oct-18 NOV-18 Dec-

September 30, 2019 : \$52,910,343

June 30, 2019 : \$52,374,055



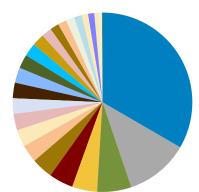


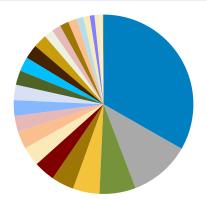
Asset Allocation by Segment	Asset Allocation by Segment				
Segments	Market Value	Allocation	Segments	Market Value	Allocation
Domestic Equity	15,169,075	29.0	Domestic Equity	15,459,934	29.2
International Equity	3,597,551	6.9	International Equity	3,897,341	7.4
Domestic Fixed Income	3,160,826	6.0	Domestic Fixed Income	3,362,068	6.4
Cash Equivalent	7,691	0.0	Cash Equivalent	17,318	0.0
Target Date Funds	11,512,644	22.0	Target Date Funds	11,073,326	20.9
Fixed Account	18,926,268	36.1	Fixed Account	19,100,357	36.1



### September 30, 2019 : \$52,910,343

#### June 30, 2019 : \$52,374,055





#### Allocation

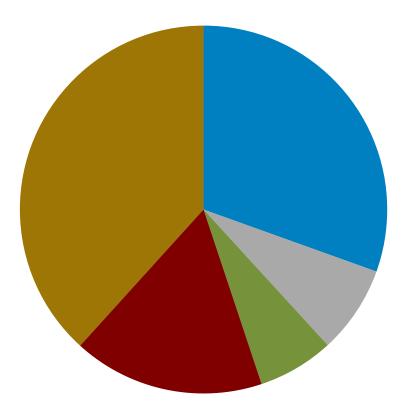
	Market Value	Allocation		Market Value	Allocation
Nationwide Fixed Account	17,484,812	33.4	Nationwide Fixed Account	17,594,416	33.3
MFS Growth R4 (MFEJX)	5,982,523	11.4	MFS Growth R4 (MFEJX)	5,795,078	11.0
Vanguard 500 Index (VFIAX)	3,226,779	6.2	Vanguard 500 Index (VFIAX)	3,446,395	6.5
American Funds Europacific Growth R4 (REREX)	2,361,629	4.5	American Funds Europacific Growth R4 (REREX)	2,531,297	4.8
American Funds 2030 Target Date (RDETX)	2,286,487	4.4	DFA US Large Cap Value (DFLVX)	2,148,660	4.1
DFA US Large Cap Value (DFLVX)	2,013,484	3.8	American Funds 2030 Target Date (RDETX)	2,010,443	3.8
American Funds 2025 Target Date (RDDTX)	1,670,643	3.2	Western Asset Core Plus Bond Fund (WACPX)	1,849,151	3.5
Western Asset Core Plus Bond Fund (WACPX)	1,609,003	3.1	American Funds 2025 Target Date (RDDTX)	1,677,333	3.2
Vanguard Total Bond Index (VBTLX)	1,551,823	3.0	Vanguard Total Bond Index (VBTLX)	1,512,916	2.9
American Funds 2040 Target Date (RDGTX)	1,470,893	2.8	Total Fixed Assets	1,505,941	2.8
American Funds 2035 Target Date (RDFTX)	1,466,021	2.8	American Funds 2040 Target Date (RDGTX)	1,463,986	2.8
Total Fixed Assets	1,441,457	2.8	Vanguard Mid Cap Index (VIMAX)	1,379,311	2.6
Vanguard Mid Cap Index (VIMAX)	1,309,406	2.5	Vanguard Total Intl Stock Index (VTIAX)	1,366,044	2.6
Vanguard Total Intl Stock Index (VTIAX)	1,235,922	2.4	American Funds 2035 Target Date (RDFTX)	1,359,717	2.6
American Funds 2045 Target Date (RDHTX)	1,168,054	2.2	American Funds 2045 Target Date (RDHTX)	1,287,931	2.4
American Funds 2050 Target Date (RDITX)	957,217	1.8	Touchstone Mid Cap Growth Y (TEGYX)	870,766	1.6
American Funds 2010 Target Date (RDATX)	835,019	1.6	American Funds 2050 Target Date (RDITX)	859,832	1.6
Vanguard Small Cap Index (VSMAX)	817,549	1.6	American Funds 2010 Target Date (RDATX)	842,390	1.6
Touchstone Mid Cap Growth Y (TEGYX)	796,383	1.5	Vanguard Small Cap Index (VSMAX)	824,953	1.6
Goldman Sachs Small Cap Growth Insights Instl (GSIOX)	727,944	1.4	Goldman Sachs Small Cap Growth Insights Instl (GSIOX)	656,547	1.2
American Funds 2015 Target Date (RDBTX)	596,689	1.1	American Funds 2015 Target Date (RDBTX)	608,881	1.2
American Funds 2020 Target Date (RDCTX)	585,853	1.1	American Funds 2020 Target Date (RDCTX)	454,958	0.9
American Funds 2055 Target Date (RDJTX)	420,693	0.8	American Funds 2055 Target Date (RDJTX)	444,120	0.8
American Beacon Small Cap Value Y (ABSYX)	295,008	0.6	American Beacon Small Cap Value Y (ABSYX)	338,224	0.6
American Funds 2060 Target Date (RDKTX)	55,076	0.1	American Funds 2060 Target Date (RDKTX)	63,737	0.1
Nationwide Government Money Fund (GMIXX)	6,588	0.0	Nationwide Government Money Fund (GMIXX)	15,299	0.0
Total Vanguard Treasury Money Market Fund (VUSXX)	1,103	0.0	Total Vanguard Treasury Money Market Fund (VUSXX)	2,019	0.0

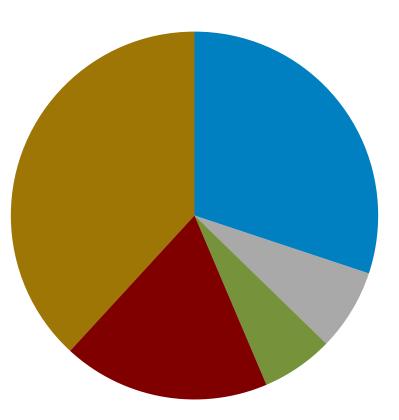
Allocation



September 30, 2019 : \$49,912,562

June 30, 2019 : \$49,594,115

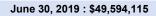


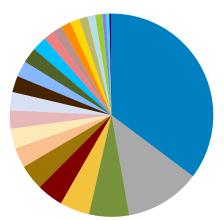


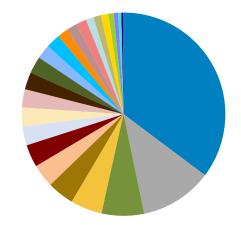
Asset Allocation by Segment					
Segments	Market Value	Allocation	Segments	Market Value	Allocation
Domestic Equity	14,925,083	30.1	Domestic Equity	15,209,401	30.5
International Equity	3,557,732	7.2	International Equity	3,853,756	7.7
Domestic Fixed Income	3,140,348	6.3	Domestic Fixed Income	3,339,157	6.7
Target Date Funds	9,044,683	18.2	Target Date Funds	8,409,891	16.8
Fixed Account	18,926,268	38.2	Fixed Account	19,100,357	38.3



#### September 30, 2019 : \$49,912,562





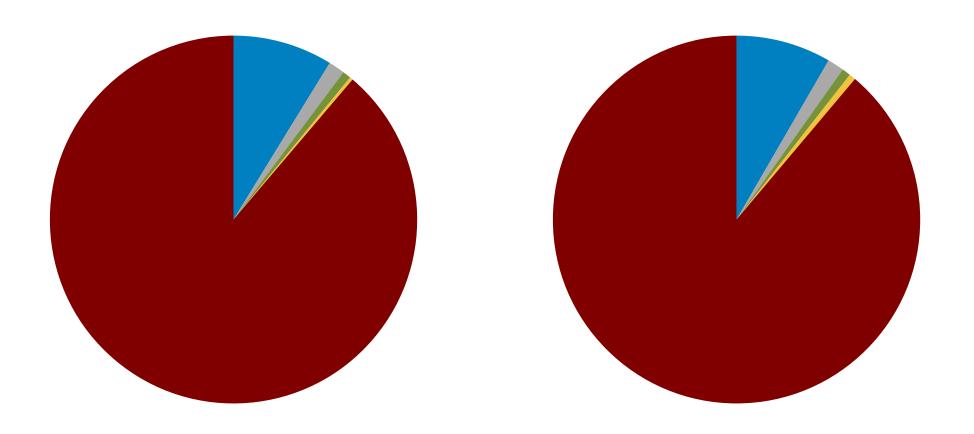


Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
457(b) Nationwide Fixed Account	17,484,812	35.3	457(b) Nationwide Fixed Account	17,594,416	35.3
457(b) MFS Growth R4 (MFEJX)	5,930,015	12.0	457(b) MFS Growth R4 (MFEJX)	5,738,876	11.5
457(b) Vanguard 500 Index (VFIAX)	3,149,582	6.4	457(b) Vanguard 500 Index (VFIAX)	3,363,542	6.7
457(b) American Funds Europacific Growth R4 (REREX)	2,335,411	4.7	457(b) American Funds Europacific Growth R4 (REREX)	2,502,357	5.0
457(b) American Funds 2030 Target Date (RDETX)	2,080,925	4.2	457(b) DFA US Large Cap Value (DFLVX)	2,131,233	4.3
457(b) DFA US Large Cap Value (DFLVX)	1,997,839	4.0	457(b) Western Asset Core Plus Bond Fund (WACPX)	1,839,647	3.7
457(b) Western Asset Core Plus Bond Fund (WACPX)	1,600,845	3.2	457(b) American Funds 2030 Target Date (RDETX)	1,787,330	3.6
457(b) Vanguard Total Bond Index (VBTLX)	1,539,503	3.1	457(b) Fixed Assets	1,505,941	3.0
457(b) American Funds 2025 Target Date (RDDTX)	1,452,286	2.9	457(b) Vanguard Total Bond Index (VBTLX)	1,499,510	3.0
457(b) Fixed Assets	1,441,457	2.9	457(b) American Funds 2025 Target Date (RDDTX)	1,445,191	2.9
457(b) Vanguard Mid Cap Index (VIMAX)	1,292,480	2.6	457(b) Vanguard Mid Cap Index (VIMAX)	1,370,944	2.7
457(b) American Funds 2035 Target Date (RDFTX)	1,258,608	2.5	457(b) Vanguard Total Intl Stock Index (VTIAX)	1,351,399	2.7
457(b) Vanguard Total Intl Stock Index (VTIAX)	1,222,322	2.5	457(b) American Funds 2035 Target Date (RDFTX)	1,131,372	2.3
457(b) American Funds 2040 Target Date (RDGTX)	1,161,210	2.3	457(b) American Funds 2040 Target Date (RDGTX)	1,124,613	2.3
457(b) Vanguard Small Cap Index (VSMAX)	810,567	1.6	457(b) American Funds 2045 Target Date (RDHTX)	852,029	1.7
457(b) Touchstone Mid Cap Growth Y (TEGYX)	775,129	1.6	457(b) Touchstone Mid Cap Growth Y (TEGYX)	848,382	1.7
457(b) American Funds 2045 Target Date (RDHTX)	768,105	1.5	457(b) Vanguard Small Cap Index (VSMAX)	816,877	1.6
457(b) American Funds 2050 Target Date (RDITX)	729,734	1.5	457(b) American Funds 2015 Target Date (RDBTX)	608,881	1.2
457(b) Goldman Sachs Small Cap Growth Insights Instl (GSIOX)	675,484	1.4	457(b) Goldman Sachs Small Cap Growth Insights Instl (GSIOX)	602,419	1.2
457(b) American Funds 2015 Target Date (RDBTX)	596,689	1.2	457(b) American Funds 2050 Target Date (RDITX)	594,832	1.2
457(b) American Funds 2020 Target Date (RDCTX)	565,095	1.1	457(b) American Funds 2020 Target Date (RDCTX)	430,132	0.9
457(b) American Beacon Small Cap Value Y (ABSYX)	293,987	0.6	457(b) American Beacon Small Cap Value Y (ABSYX)	337,128	0.7
457(b) American Funds 2055 Target Date (RDJTX)	259,378	0.5	457(b) American Funds 2055 Target Date (RDJTX)	259,692	0.5
457(b) American Funds 2010 Target Date (RDATX)	125,603	0.3	457(b) American Funds 2010 Target Date (RDATX)	125,570	0.3
457(b) American Funds 2060 Target Date (RDKTX)	47,051	0.1	457(b) American Funds 2060 Target Date (RDKTX)	50,250	0.1



September 30, 2019 : \$2,997,780

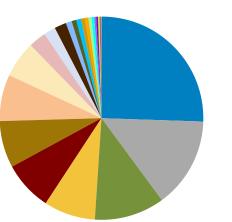
June 30, 2019 : \$2,779,940



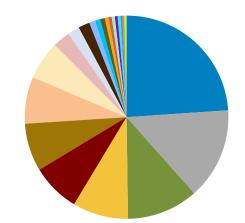
Asset Allocation by Segment			Asset Allocation by Segment		
Segments	Market Value	Allocation	Segments	Market Value	Allocation
Domestic Equity	243,991	8.8	Domestic Equity	250,532	8.4
International Equity	39,818	1.4	International Equity	43,584	1.5
Domestic Fixed Income	20,478	0.7	Domestic Fixed Income	22,910	0.8
Cash Equivalent	7,691	0.3	Cash Equivalent	17,318	0.6
Target Date Funds	2,467,961	88.8	Target Date Funds	2,663,435	88.8



#### September 30, 2019 : \$2,997,780



June 30, 2019 : \$2,779,940



Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
401(a) American Funds 2010 Target Date (RDATX)	709,416	25.5	401(a) American Funds 2010 Target Date (RDATX)	716,820	23.9
401(a) American Funds 2045 Target Date (RDHTX)	399,949	14.4	401(a) American Funds 2045 Target Date (RDHTX)	435,902	14.5
401(a) American Funds 2040 Target Date (RDGTX)	309,683	11.1	401(a) American Funds 2040 Target Date (RDGTX)	339,373	11.3
401(a) American Funds 2050 Target Date (RDITX)	227,483	8.2	401(a) American Funds 2050 Target Date (RDITX)	265,000	8.8
401(a) American Funds 2025 Target Date (RDDTX)	218,357	7.9	401(a) American Funds 2025 Target Date (RDDTX)	232,142	7.7
401(a) American Funds 2035 Target Date (RDFTX)	207,413	7.5	401(a) American Funds 2035 Target Date (RDFTX)	228,345	7.6
401(a) American Funds 2030 Target Date (RDETX)	205,562	7.4	401(a) American Funds 2030 Target Date (RDETX)	223,112	7.4
401(a) American Funds 2055 Target Date (RDJTX)	161,316	5.8	401(a) American Funds 2055 Target Date (RDJTX)	184,428	6.2
401(a) Vanguard 500 Index (VFIAX)	77,197	2.8	401(a) Vanguard 500 Index (VFIAX)	82,853	2.8
401(a) MFS Growth R4 (MFEJX)	52,508	1.9	401(a) MFS Growth R4 (MFEJX)	56,202	1.9
401(a) Goldman Sachs Small Cap Growth Insights Instl (GSIOX)	52,460	1.9	401(a) Goldman Sachs Small Cap Growth Insights Instl (GSIOX)	54,128	1.8
401(a) American Funds Europacific Growth R4 (REREX)	26,218	0.9	401(a) American Funds Europacific Growth R4 (REREX)	28,940	1.0
401(a) Touchstone Mid Cap Growth Y (TEGYX)	21,253	0.8	401(a) American Funds 2020 Target Date (RDCTX)	24,826	0.8
401(a) American Funds 2020 Target Date (RDCTX)	20,758	0.7	401(a) Touchstone Mid Cap Growth Y (TEGYX)	22,383	0.7
401(a) Vanguard Mid Cap Index (VIMAX)	16,926	0.6	401(a) DFA US Large Cap Value (DFLVX)	17,427	0.6
401(a) DFA US Large Cap Value (DFLVX)	15,645	0.6	401(a) Nationwide Government Money Fund (GMIXX)	15,299	0.5
401(a) Vanguard Total Intl Stock Index (VTIAX)	13,600	0.5	401(a) Vanguard Total Intl Stock Index (VTIAX)	14,645	0.5
401(a) Vanguard Total Bond Index (VBTLX)	12,320	0.4	401(a) American Funds 2060 Target Date (RDKTX)	13,486	0.4
401(a) Western Asset Core Plus Bond Fund (WACPX)	8,158	0.3	401(a) Vanguard Total Bond Index (VBTLX)	13,406	0.4
401(a) American Funds 2060 Target Date (RDKTX)	8,024	0.3	401(a) Western Asset Core Plus Bond Fund (WACPX)	9,504	0.3
401(a) Vanguard Small Cap Index (VSMAX)	6,982	0.3	401(a) Vanguard Mid Cap Index (VIMAX)	8,368	0.3
401(a) Nationwide Government Money Fund (GMIXX)	6,588	0.2	401(a) Vanguard Small Cap Index (VSMAX)	8,076	0.3
401(a) Vanguard Treasury Money Market Fund (VUSXX)	1,103	0.0	401(a) Vanguard Treasury Money Market Fund (VUSXX)	2,019	0.1
401(a) American Beacon Small Cap Value Y (ABSYX)	1,021	0.0	401(a) American Beacon Small Cap Value Y (ABSYX)	1,095	0.0
401(a) American Funds 2015 Target Date (RDBTX)	-	0.0	401(a) American Funds 2015 Target Date (RDBTX)	-	0.0



#### Port of Houston Investment Option Performance Review As of September 30, 2019

Fund	Manager Tenure	Style	Asset Level (millions)	Expense Ratio	Category Median Exp Ratio	*Consecutive Qtr Return & Rank		5 & 10 Year Return > Index		Rank		5 & 10 Year Sharpe Ratio < 50th %-tile		Ratio Positive	
DFA US Large Cap Value (DFLVX)	7.7	US Equity Large Cap Value	25,523.7	27 bps	88 bps	YES	YES	NO (4)	Yes	45	7	62 (2)	45	-1.30 (5)	-0.96 (3)
MFS Growth R4 (MFEJX)	17.5	US Equity Large Cap Growth	23,168.5	67 bps	88 bps	YES	YES	Yes	Yes	6	11	6	5	1.45	0.18
Touchstone Mid Cap Growth Y (TEGYX)	20.5	US Equity Mid Cap	1,208.4	102 bps	101 bps	YES	YES	Yes	NO (3)	22	48	23	49	0.94	-1.27 (3)
American Beacon Small Cap Value Y (ABSYX)	20.8	US Equity Small Cap	6,207.1	88 bps	110 bps	YES	YES	NO (5)	Yes	29	20	26	22	-1.32 (4)	0.10
Goldman Sachs Small Cap Growth Insights Instl (GSIOX)	8.1	US Equity Small Cap	1,128.6	84 bps	110 bps	YES	YES	Yes	Yes	35	22	34	26	0.97	1.18
American Funds Europacific Growth R4 (REREX)	18.3	Global Equity Large Cap	161,753.8	84 bps	97 bps	YES	YES	Yes	Yes	33	38	32	38	1.91	1.43
Western Asset Core Plus Bond Fund (WACPX)	12.8	US Fixed Income	29,690.6	45 bps	64 bps	YES	YES	Yes	Yes	3	7	11	9	1.25	2.28

Index Funds	Manager Tenure	Style		Manager Asset Level Expense Median			5 & 10 Trackin <50th	g Error
Vanguard 500 Index (VFIAX)	3.5	US Equity Large Cap Blend	493,907.4	4 bps	88 bps	1	1	
Vanguard Mid Cap Index (VIMAX)	21.4	US Equity Mid Cap	105,404.4	5 bps	101 bps	1	1	
Vanguard Small Cap Index (VSMAX)	3.5	US Equity Small Cap	90,226.7	5 bps	110 bps	1	1	
Vanguard Total Intl Stock Index (VTIAX)	11.2	Global Equity Large Cap	384,492.7	11 bps	97 bps	1	N/A	
Vanguard Total Bond Index (VBTLX)	6.7	US Fixed Income	241,308.6	5 bps	64 bps	1	N/A	

Target Date Funds	Manager Tenure	Style	Asset Level (millions)	Expense Ratio	Category Median Exp Ratio	*Consecutive Qtr Return & Rank		5 & 10 Year Rank < 50th %-tile		Sharp	0 Year e Ratio w-tile
American Funds 2010 Target Date (RDATX)	12.7	Target Date	3,530.1	69 bps	53 bps	YES	YES	36	24	35	4
American Funds 2015 Target Date (RDBTX)	12.7	Target Date	5,251.7	68 bps	58 bps	YES	YES	44	33	23	7
American Funds 2020 Target Date (RDCTX)	12.7	Target Date	16,206.2	69 bps	68 bps	YES	YES	28	13	19	8
American Funds 2025 Target Date (RDDTX)	12.7	Target Date	22,683.6	71 bps	67 bps	YES	YES	24	8	19	8
American Funds 2030 Target Date (RDETX)	12.7	Target Date	24,666.6	73 bps	69 bps	YES	YES	12	7	10	6
American Funds 2035 Target Date (RDFTX)	12.7	Target Date	19,712.5	74 bps	68 bps	YES	YES	8	8	7	8
American Funds 2040 Target Date (RDGTX)	12.7	Target Date	17,184.2	75 bps	73 bps	YES	YES	7	9	6	5
American Funds 2045 Target Date (RDHTX)	12.7	Target Date	12,704.3	75 bps	70 bps	YES	YES	8	9	5	5
American Funds 2050 Target Date (RDITX)	12.7	Target Date	10,631.4	77 bps	73 bps	YES	YES	5	8	5	4
American Funds 2055 Target Date (RDJTX)	9.7	Target Date	5,772.1	77 bps	71 bps	YES	YES	8	N/A (5)	6	N/A (5)
American Funds 2060 Target Date (RDKTX)	4.6	Target Date	1,975.5	79 bps	71 bps	YES	YES	N/A (5)	N/A (5)	N/A (5)	N/A (5)

Fund meets criteria
Fund does not currently meet criteria

Fund has not met criteria for more than 4 quarters

\*Less than 4 consecutive quarterly returns below the index and peer rankings below the 75th percentile

"More than 4 quarters" evaluation criteria excludes Index Funds

#### Asset Allocation & Performance Trailing Periods As of September 30, 2019

Asset Allocation & Performance							Perform	ance(%)						
	Q	TR	Y	TD	1`	/R		YR	5	YR	7	YR	10	YR
Domestic Equity	0.71	(74)	15.03	(74)	4.04	(00)	0.54	(54)	7.00	(45)	10.00	(7)	40.40	(7)
DFA US Large Cap Value (DFLVX) Russell 1000 Value Index	1.36	(74) (53)	15.03	(74) (34)	-1.91 4.00	(86) (30)	9.51 <u>9.43</u>	(54) (56)	7.33 7.79	(45) (32)	12.06 11.30	(7) (22)	12.19 11.46	(7) (19)
IM U.S. Large Cap Value Equity (MF) Median	1.30	(55)	16.67	(34)	4.00	(30)	9.43 9.67	(30)	7.17	(32)	10.63	(22)	10.52	(19)
Vanguard 500 Index (VFIAX)	1.69	(40)	20.54	(36)	4.22	(39)	13.36	(25)	10.80	(16)	13.22	(15)	13.21	(12)
S&P 500 Index	1.70	(39)	20.55	(35)	4.25	(39)	13.39	(24)	10.84	(16)	13.26	(14)	13.24	(11)
IM U.S. Large Cap Core Equity (MF) Median	1.46		19.49		3.21		12.26		9.41		12.00		11.90	
MFS Growth R4 (MFEJX)	1.12	(23)	26.86	(7)	7.45	(11)	18.72	(7)	14.49	(6)	15.74	(9)	15.01	(11)
Russell 1000 Growth Index	1.49	(16)	23.30	(25)	3.71	(33)	16.89	(27)	13.39	(22)	15.02	(19)	14.94	(13)
IM U.S. Large Cap Growth Equity (MF) Median	-0.01		21.44		2.32		15.72		12.20		13.77		13.61	
Vanguard Mid Cap Index (VIMAX)	0.61	(41)	22.60	(39)	3.65	(31)	10.67	(46)	9.20	(41)	12.65	(26)	13.05	(25)
CRSP U.S. Mid Cap TR Index	0.62	(40)	22.66	(39)	3.70	(30)	10.70	(45)	9.24	(41)	12.71	(25)	13.14	(23)
IM U.S. Mid Cap Equity (MF) Median	0.03		21.31		1.37		10.31		8.36		11.31		11.64	
Touchstone Mid Cap Growth Y (TEGYX)	-0.03	(23)	27.92	(23)	7.82	(18)	15.44	(30)	11.94	(22)	14.21	(25)	12.90	(48)
Russell Midcap Growth Index	-0.67	(33)	25.23	(42)	5.20	(33)	14.50	(39)	11.12	(36)	13.80	(29)	14.08	(20)
IM U.S. Mid Cap Growth Equity (MF) Median	-1.37		24.19		3.02		13.95		10.45		12.44		12.85	
American Beacon Small Cap Value Y (ABSYX)	-1.11	(79)	12.90	(30)	-10.66	(58)	5.56	(42)	5.99	(29)	9.56	(16)	10.38	(20)
Russell 2000 Value Index	-0.57	(67)	12.82	(30)	-8.24	(20)	6.54	(25)	7.17	(12)	9.35	(20)	10.06	(26)
IM U.S. Small Cap Value Equity (MF) Median	0.31		11.36		-9.87		5.09		4.99		8.10		9.14	
Vanguard Small Cap Index (VSMAX)	-1.45	(63)	17.78	(7)	-3.81	(5)	9.62	(9)	8.62	(22)	11.59	(11)	12.38	(14)
CRSP U.S. Small Cap TR Index	-1.47	(63)	17.79	(6)	-3.80	(5)	9.61	(9)	8.60	(22)	11.73	(9)	12.71	(8)
IM U.S. Small Cap Equity (MF) Median	-0.71		11.72		-10.12		6.17		6.27		8.96		10.04	
Goldman Sachs Small Cap Growth Insights Instl (GSIOX)	-3.44	(22)	15.21	(22)	-9.40	(24)	10.22	(31)	9.71	(35)	11.59	(31)	13.24	(22)
Russell 2000 Growth Index	-4.17	(31)	15.34	(22)	-9.63	(25)	9.79	(42)	9.08	(38)	11.43	(32)	12.25	(32)
IM U.S. Small Cap Growth Equity (MF) Median	-5.12		7.15		-15.03		9.13		7.76		8.57		11.30	
International Equity														
Vanguard Total Intl Stock Index (VTIAX)	-1.60	(54)	11.46	(79)	-1.56	(54)	6.06	(51)	3.16	(49)	5.30	(52)	N/A	
FTSE Global ex USA All Cap Index (Net)	-1.65	(57)	11.48	(79)	-1.66	(55)	6.19	(48)	3.19	(48)	5.32	(51)	4.84	(48)
IM International Large Cap Equity (MF) Median	-1.51		14.97		-0.98		6.08		3.05		5.39		4.72	
American Funds Europacific Growth R4 (REREX)	-1.68	(62)	15.43	(67)	0.80	(51)	7.00	(44)	4.65	(33)	6.73	(24)	5.70	(38)
MSCI AC World ex USA (Net)	-1.80	(72)	11.56	(98)	-1.23	(68)	6.33	(61)	2.90	(74)	5.01	(74)	4.46	(73)
IM International Large Cap Growth Equity (MF) Median	-1.46		16.42		0.81		6.73		3.78		5.82		5.38	





### Asset Allocation & Performance Trailing Periods

As of September 30, 2019

							Perform	ance(%)						
	Q	TR	Y	TD	1`	YR	3	YR	5	YR	7	YR	10	YR
Target Date Funds														
American Funds 2010 Target Date (RDATX)	0.72	(84)	9.31	(87)	5.19	(68)	5.28	(64)	4.68	(36)	5.89	(19)	6.72	(24)
Morningstar Category Target-Date 2000-2010	1.03	(40)	10.26	(60)	5.52	(48)	5.33	(57)	4.38	(60)	4.92	(77)	5.69	(80)
IM Mixed-Asset Target 2010 (MF) Median	0.95		10.47		5.50		5.41		4.60		5.32		6.31	
American Funds 2015 Target Date (RDBTX)	0.77	(75)	10.04	(91)	5.33	(40)	5.71	(61)	4.97	(44)	6.54	(16)	7.14	(33)
Morningstar Category Target-Date 2011-2015	1.06	(38)	11.24	(50)	5.23	(44)	5.81	(49)	4.71	(59)	5.40	(79)	6.18	(82)
IM Mixed-Asset Target 2015 (MF) Median	0.92		11.23		5.10		5.80		4.82		5.99		6.84	
American Funds 2020 Target Date (RDCTX)	0.62	(78)	10.37	(82)	4.87	(49)	6.32	(44)	5.42	(28)	7.31	(7)	7.78	(13)
Morningstar Category Target-Date 2016-2020	1.03	(48)	11.83	(53)	4.96	(46)	6.05	(57)	4.88	(57)	5.80	(59)	6.56	(65)
IM Mixed-Asset Target 2020 (MF) Median	1.00		11.87		4.81		6.20		5.01		6.15		6.99	
American Funds 2025 Target Date (RDDTX)	0.36	(86)	11.29	(82)	4.22	(61)	7.15	(39)	5.97	(24)	8.40	(3)	8.70	(8)
Morningstar Category Target-Date 2021-2025	0.93	(49)	12.93	(51)	4.47	(52)	6.98	(49)	5.48	(51)	6.80	(51)	7.41	(69)
IM Mixed-Asset Target 2025 (MF) Median	0.92		12.94		4.50		6.96		5.50		6.80		7.85	
American Funds 2030 Target Date (RDETX)	0.14	(91)	12.40	(77)	3.43	(63)	8.27	(25)	6.77	(12)	9.27	(3)	9.36	(7)
Morningstar Category Target-Date 2026-2030	0.76	(49)	13.86	(51)	3.81	(54)	7.59	(51)	5.87	(53)	7.25	(61)	7.68	(67)
IM Mixed-Asset Target 2030 (MF) Median	0.72		13.91		3.86		7.60		5.91		7.55		8.11	
American Funds 2035 Target Date (RDFTX)	-0.13	(87)	13.87	(75)	2.66	(59)	9.23	(12)	7.38	(8)	9.77	(3)	9.67	(8)
Morningstar Category Target-Date 2031-2035	0.56	(47)	14.69	(50)	3.07	(41)	8.35	(46)	6.23	(57)	7.99	(52)	8.33	(63)
IM Mixed-Asset Target 2035 (MF) Median	0.53		14.65		2.89		8.27		6.33		8.05		8.60	
American Funds 2040 Target Date (RDGTX)	-0.26	(85)	14.26	(72)	2.25	(53)	9.53	(12)	7.57	(7)	9.97	(3)	9.83	(9)
Morningstar Category Target-Date 2036-2040	0.37	(48)	15.14	(49)	2.47	(45)	8.52	(54)	6.43	(56)	8.11	(66)	8.35	(70)
IM Mixed-Asset Target 2040 (MF) Median	0.35		15.04		2.29		8.64		6.52		8.42		8.71	
American Funds 2045 Target Date (RDHTX)	-0.25	(85)	14.48	(80)	2.21	(43)	9.73	(12)	7.71	(8)	10.08	(3)	9.90	(9)
Morningstar Category Target-Date 2041-2045	0.26	(49)	15.65	(48)	2.10	(48)	8.95	(41)	6.69	(50)	8.60	(51)	8.79	(62)
IM Mixed-Asset Target 2045 (MF) Median	0.26		15.59		1.99		8.81		6.69		8.64		8.99	
American Funds 2050 Target Date (RDITX)	-0.32	(86)	14.57	(78)	2.02	(47)	9.81	(12)	7.76	(5)	10.12	(3)	9.93	(8)
Morningstar Category Target-Date 2046-2050	0.22	(50)	15.71	(47)	1.92	(53)	8.81	(54)	6.65	(54)	8.42	(68)	8.60	(70)
IM Mixed-Asset Target 2050 (MF) Median	0.22		15.61		1.95		8.87		6.75		8.74		9.04	
American Funds 2055 Target Date (RDJTX)	-0.31	(86)	14.56	(81)	2.07	(43)	9.80	(14)	7.75	(8)	10.11	(4)	N/A	
Morningstar Category Target-Date 2055	0.20	(44)	15.86	(44)	1.81	(52)	9.09	(44)	6.84	(48)	N/A		N/A	
IM Mixed-Asset Target 2055 (MF) Median	0.16		15.73		1.88		8.95		6.81		8.87		8.94	
American Funds 2060 Target Date (RDKTX)	-0.31	(87)	14.50	(88)	2.00	(47)	9.76	(23)	N/A		N/A		N/A	
Morningstar Category Target Date 2060+	0.17	(53)	15.99	(46)	1.75	(56)	9.20	(47)	N/A		N/A		N/A	
IM Mixed-Asset Target 2060+ (MF) Median	0.19		15.88		1.92		9.15		7.21		N/A		N/A	



#### Asset Allocation & Performance Trailing Periods As of September 30, 2019

												A5 01	Septembe	30, 20		
							Perform	ance(%)								
	Q	QTR		QTR		YTD		1 YR		3 YR		YR	7 YR		10 YR	
Fixed Income																
Vanguard Total Bond Index (VBTLX)	2.43	(1)	8.68	(1)	10.43	(1)	2.90	(4)	3.35	(1)	2.67	(3)	3.69	(10)		
Blmbg. Barc. U.S. Aggregate Float Adjusted	2.33	(1)	8.72	(1)	10.44	(1)	2.96	(4)	3.40	(1)	2.74	(2)	3.79	(10)		
IM U.S. Intermediate Duration Fixed Income (MF) Median	0.93		4.82		5.99		1.89		1.98		1.58		2.44			
Western Asset Core Plus Bond Fund (WACPX)	2.38	(23)	10.79	(6)	11.75	(7)	4.48	(4)	4.69	(3)	4.17	(4)	5.89	(7)		
Blmbg. Barc. U.S. Aggregate Index	2.27	(35)	8.52	(66)	10.30	(27)	2.92	(70)	3.38	(52)	2.72	(67)	3.75	(87)		
IM U.S. Broad Market Core+ Fixed Income (MF) Median	2.08		8.91		9.71		3.29		3.40		3.00		4.44			
Nationwide Government Money Fund (GMIXX)	0.46	(59)	1.46	(61)	1.92	(61)	1.11	(62)	0.67	(61)	0.48	(61)	0.33	(65)		
90 Day U.S. Treasury Bill	0.56	(4)	1.81	(5)	2.38	(6)	1.54	(11)	0.96	(12)	0.70	(11)	0.52	(11)		
IM U.S. Taxable Money Market (MF) Median	0.47	~ /	1.53	× /	2.02		1.22	× /	0.73	× /	0.52	× /	0.37	× /		



### Asset Allocation & Performance Calendar Years

As of September 30, 2019

Asset Allocation & Performance						Deaf	(0/ )					
	YTD		Performance(%) 2018 2017					016 2015			2014	
			20	10	20		20	10	20	15	20	/14
Domestic Equity												
DFA US Large Cap Value (DFLVX)	15.03	(74)	-11.65	(90)	18.97	(19)	18.89	(13)	-3.49	(50)	10.07	(69
Russell 1000 Value Index	17.81	(34)	-8.27	(36)	13.66	(77)	17.34	(19)	-3.83	(57)	13.45	(9)
IM U.S. Large Cap Value Equity (MF) Median	16.67		-9.08		16.25		13.82		-3.54		10.81	
Vanguard 500 Index (VFIAX)	20.54	(36)	-4.43	(31)	21.79	(39)	11.93	(27)	1.36	(33)	13.64	(17
S&P 500 Index	20.55	(35)	-4.38	(30)	21.83	(38)	11.96	(26)	1.38	(33)	13.69	(16
IM U.S. Large Cap Core Equity (MF) Median	19.49		-5.61		21.17		10.07		0.25		11.41	
MFS Growth R4 (MFEJX)	26.86	(7)	2.59	(15)	30.88	(36)	2.45	(47)	7.38	(31)	8.78	(72
Russell 1000 Growth Index	23.30	(25)	-1.51	(58)	30.21	(41)	7.08	(8)	5.67	(54)	13.05	(22
IM U.S. Large Cap Growth Equity (MF) Median	21.44		-0.86		29.47		2.18		6.00		10.46	
Vanguard Mid Cap Index (VIMAX)	22.60	(39)	-9.23	(45)	19.25	(46)	11.22	(54)	-1.34	(39)	13.76	(8)
CRSP U.S. Mid Cap TR Index	22.66	(39)	-9.22	(45)	19.30	(45)	11.25	(54)	-1.28	(39)	13.83	(7)
IM U.S. Mid Cap Equity (MF) Median	21.31		-10.41		18.28		11.68		-2.46		8.13	
Touchstone Mid Cap Growth Y (TEGYX)	27.92	(23)	-3.52	(36)	24.47	(55)	4.88	(50)	1.13	(43)	13.23	(4)
Russell Midcap Growth Index	25.23	(42)	-4.75	(46)	25.27	(45)	7.33	(27)	-0.20	(55)	11.90	(10
IM U.S. Mid Cap Growth Equity (MF) Median	24.19		-5.12		24.79		4.80		0.44		7.20	
American Beacon Small Cap Value Y (ABSYX)	12.90	(30)	-15.70	(47)	8.65	(55)	26.61	(69)	-5.10	(6)	4.61	(26
Russell 2000 Value Index	12.82	(30)	-12.86	(25)	7.84	(66)	31.74	(31)	-7.47	(44)	4.22	(31
IM U.S. Small Cap Value Equity (MF) Median	11.36		-16.87		8.91		29.88		-8.52		2.78	
Vanguard Small Cap Index (VSMAX)	17.78	(7)	-9.31	(25)	16.24	(18)	18.30	(74)	-3.64	(27)	7.50	(7)
CRSP U.S. Small Cap TR Index	17.79	(6)	-9.33	(25)	16.24	(18)	18.26	(74)	-3.68	(28)	7.54	(7)
IM U.S. Small Cap Equity (MF) Median	11.72		-13.06		10.58		23.01		-6.26		3.13	
Goldman Sachs Small Cap Growth Insights Instl (GSIOX)	15.21	(22)	-7.15	(58)	18.41	(38)	13.89	(37)	0.62	(26)	6.72	(5)
Russell 2000 Growth Index	15.34	(22)	-9.31	(75)	22.17	(28)	11.32	(55)	-1.38	(36)	5.60	(8)
IM U.S. Small Cap Growth Equity (MF) Median	7.15		-6.85		16.99		12.19		-3.30		0.65	
International Equity												
Vanguard Total Intl Stock Index (VTIAX)	11.46	(79)	-14.43	(40)	27.55	(46)	4.67	(7)	-4.26	(84)	-4.17	(30
FTSE Global ex USA All Cap Index (Net)	11.48	(79)	-14.61	(41)	27.41	(46)	4.72	(7)	-4.29	(84)	-3.39	(26
IM International Large Cap Equity (MF) Median	14.97		-15.18		26.76		0.06		-0.98	. /	-5.55	
American Funds Europacific Growth R4 (REREX)	15.43	(67)	-15.22	(58)	30.70	(33)	0.69	(32)	-0.82	(65)	-2.66	(24
MSCI AC World ex USA (Net)	11.56	(98)	-14.20	(43)	27.19	(65)	4.50	(10)	-5.66	(90)	-3.87	(33
IM International Large Cap Growth Equity (MF) Median	16.42		-14.98		29.50		-0.87		-0.02		-4.98	



#### Asset Allocation & Performance Calendar Years

As of September 30, 2019

						Perform	ance(%)						
	Y	TD	20	18	2017 2010			)16	16 2015			2014	
Target Date Funds													
American Funds 2010 Target Date (RDATX)	9.31	(87)	-2.80	(17)	9.98	(63)	7.13	(14)	-1.15	(46)	6.37	(2)	
Morningstar Category Target-Date 2000-2010	10.26	(60)	-3.26	(33)	10.21	(53)	5.80	(59)	-1.31	(59)	4.09	(52)	
IM Mixed-Asset Target 2010 (MF) Median	10.47		-3.58		10.24		6.06		-1.20		4.11		
American Funds 2015 Target Date (RDBTX)	10.04	(91)	-3.04	(18)	10.77	(68)	7.23	(19)	-1.04	(38)	6.34	(8)	
Morningstar Category Target-Date 2011-2015	11.24	(50)	-3.94	(53)	11.30	(52)	6.13	(66)	-1.40	(56)	4.45	(52)	
IM Mixed-Asset Target 2015 (MF) Median	11.23		-3.90		11.40		6.40		-1.29		4.47		
American Funds 2020 Target Date (RDCTX)	10.37	(82)	-3.08	(10)	12.50	(54)	6.66	(39)	-0.20	(7)	6.35	(8)	
Morningstar Category Target-Date 2016-2020	11.83	(53)	-4.59	(53)	12.19	(59)	6.25	(55)	-1.59	(57)	4.73	(50)	
IM Mixed-Asset Target 2020 (MF) Median	11.87		-4.52		12.69		6.36		-1.44		4.72		
American Funds 2025 Target Date (RDDTX)	11.29	(82)	-3.77	(12)	14.90	(52)	6.91	(49)	-0.16	(6)	6.38	(20)	
Morningstar Category Target-Date 2021-2025	12.93	(51)	-5.39	(52)	14.59	(54)	6.75	(56)	-1.60	(61)	5.07	(53)	
IM Mixed-Asset Target 2025 (MF) Median	12.94		-5.26		14.95		6.87		-1.37		5.19		
American Funds 2030 Target Date (RDETX)	12.40	(77)	-4.53	(11)	17.97	(22)	7.34	(48)	0.18	(3)	6.69	(12)	
Morningstar Category Target-Date 2026-2030	13.86	(51)	-6.33	(51)	16.38	(58)	7.36	(47)	-1.81	(63)	5.08	(55)	
IM Mixed-Asset Target 2030 (MF) Median	13.91		-6.32		16.92		7.30		-1.47		5.18		
American Funds 2035 Target Date (RDFTX)	13.87	(75)	-5.52	(10)	20.63	(9)	7.65	(54)	0.23	(3)	6.66	(19)	
Morningstar Category Target-Date 2031-2035	14.69	(50)	-7.06	(48)	18.45	(56)	7.15	(68)	-1.75	(59)	5.20	(59)	
IM Mixed-Asset Target 2035 (MF) Median	14.65		-7.26		18.72		7.75		-1.53		5.40		
American Funds 2040 Target Date (RDGTX)	14.26	(72)	-5.85	(7)	21.59	(10)	7.82	(52)	0.21	(3)	6.60	(22)	
Morningstar Category Target-Date 2036-2040	15.14	(49)	-7.76	(46)	19.30	(58)	7.96	(50)	-2.00	(63)	5.29	(54)	
IM Mixed-Asset Target 2040 (MF) Median	15.04		-7.98		19.74		7.95		-1.66		5.38		
American Funds 2045 Target Date (RDHTX)	14.48	(80)	-5.90	(5)	21.98	(13)	7.93	(57)	0.20	(4)	6.72	(22)	
Morningstar Category Target-Date 2041-2045	15.65	(48)	-8.13	(49)	20.42	(56)	7.96	(56)	-1.81	(56)	5.34	(56)	
IM Mixed-Asset Target 2045 (MF) Median	15.59		-8.19		20.65		8.15		-1.65		5.55		
American Funds 2050 Target Date (RDITX)	14.57	(78)	-5.92	(5)	22.15	(12)	7.98	(55)	0.28	(3)	6.64	(25)	
Morningstar Category Target-Date 2046-2050	15.71	(47)	-8.44	(48)	20.41	(61)	8.23	(48)	-1.96	(59)	5.42	(55)	
IM Mixed-Asset Target 2050 (MF) Median	15.61		-8.54		20.80		8.10		-1.63		5.61		
American Funds 2055 Target Date (RDJTX)	14.56	(81)	-5.92	(5)	22.15	(15)	7.93	(59)	0.25	(3)	6.70	(28)	
Morningstar Category Target-Date 2055	15.86	(44)	-8.43	(49)	20.99	(54)	8.01	(56)	-1.62	(49)	5.51	(48)	
IM Mixed-Asset Target 2055 (MF) Median	15.73		-8.48		21.12		8.25		-1.67		5.43		
American Funds 2060 Target Date (RDKTX)	14.50	(88)	-5.95	(6)	22.09	(21)	8.00	(44)	N/A		N/A		
Morningstar Category Target Date 2060+	15.99	(46)	-8.51	(48)	21.22	(55)	8.02	(44)	N/A		N/A		
IM Mixed-Asset Target 2060+ (MF) Median	15.88		-8.66		21.30		7.86		-1.01		N/A		

\*The interest rate for the Guaranteed Income Fund is announced in advance. The current annualized rate of return is 3.5% from now until end of 2019.



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#### Asset Allocation & Performance Calendar Years

As of September 30, 2019

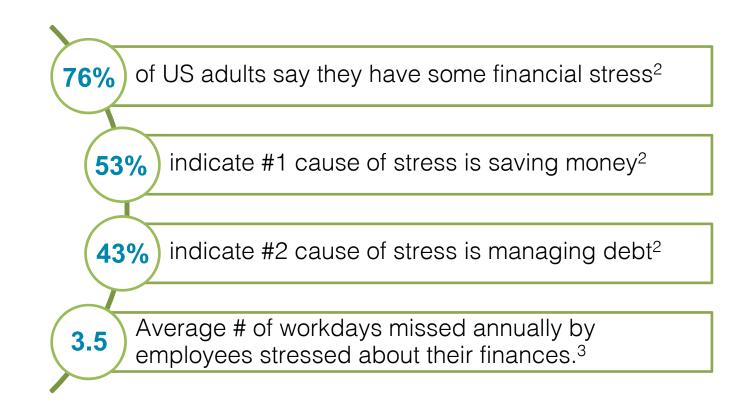
						Perform	ance(%)					
	YTD		2018		2017		2016		2015		20	)14
Fixed Income												
Vanguard Total Bond Index (VBTLX)	8.68	(1)	-0.03	(82)	3.56	(4)	2.60	(23)	0.40	(54)	5.89	(1)
Blmbg. Barc. U.S. Aggregate Float Adjusted	8.72	(1)	-0.08	(85)	3.63	(3)	2.75	(19)	0.44	(53)	5.85	(1)
IM U.S. Intermediate Duration Fixed Income (MF) Median	4.82		0.64		1.68		1.69		0.48		2.07	
Western Asset Core Plus Bond Fund (WACPX)	10.79	(6)	-1.49	(70)	6.96	(2)	4.79	(33)	1.29	(2)	7.68	(6)
Blmbg. Barc. U.S. Aggregate Index	8.52	(66)	0.01	(20)	3.54	(77)	2.65	(83)	0.55	(13)	5.97	(32)
IM U.S. Broad Market Core+ Fixed Income (MF) Median	8.91		-0.94		4.49		4.19		-0.26		5.23	
Nationwide Government Money Fund (GMIXX)	1.46	(61)	1.40	(65)	0.46	(59)	0.04	(54)	0.00	(89)	0.00	(91)
90 Day U.S. Treasury Bill	1.81	(5)	1.87	(10)	0.86	(12)	0.25	(16)	0.03	(20)	0.04	(9)
IM U.S. Taxable Money Market (MF) Median	1.53		1.54	. ,	0.55		0.06	. ,	0.01		0.01	. /

## **2019 Fiduciary Documentation**

Quarterly	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr
Review of plan investments	$\checkmark$	$\checkmark$	$\checkmark$	
Follow required procedures, including documentation of all meetings and decisions	$\checkmark$	$\checkmark$	$\checkmark$	
Review performance of providers	$\checkmark$	$\checkmark$	$\checkmark$	
Regularly				
Review QDIA selection			$\checkmark$	
Allocation fund (Target Date or Risk-based) analysis			$\checkmark$	
Investment Policy Statement Draft			$\checkmark$	
Employee education review				
Fee analysis	$\checkmark$	$\checkmark$	$\checkmark$	
Plan recordkeeping & administration services review				
Other Projects				
Fiduciary Module	$\checkmark$	$\checkmark$	$\checkmark$	



Financial wellness refers to programs that assess and support an individual's "complete financial picture" and "overall financial health." Financial wellness programs are meant to look comprehensively at how the pieces of an individual's financial life fit together with their physical health.<sup>1</sup>

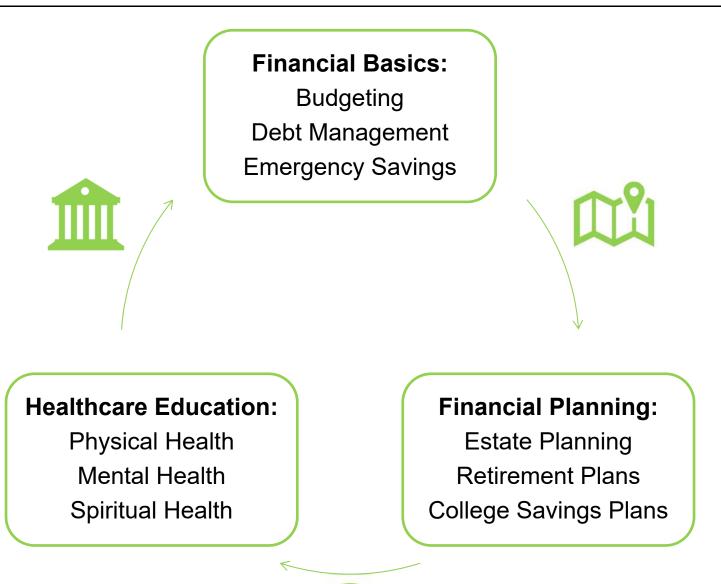


<sup>1</sup>Consumer Financial Protection Bureau (CFPB) - <u>https://files.consumerfinance.gov/f/201408\_cfpb\_report\_financial-wellness-at-work.pdf</u>

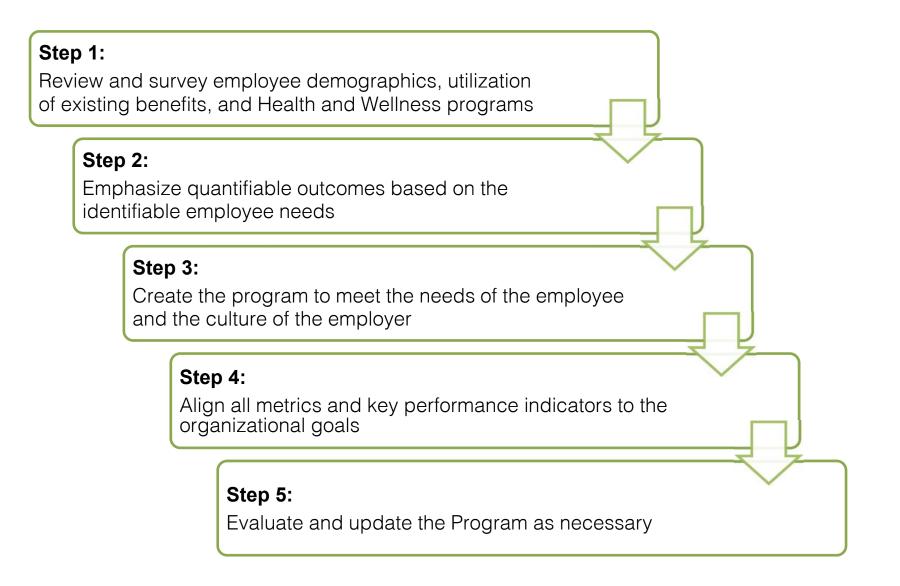
<sup>2</sup>National Endowment for Financial Education - <u>New Year Resolutions 2018 Survey</u>

<sup>3</sup>Center for Retirement Research at Boston College - <u>Work Absenteeism Tied to Money Stress</u>









Next Quarter's Module Topic: Fiduciary Update



Active Return	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
Alpha	- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.
Beta	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
Consistency	- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.
Distributed to Paid In (DPI)	- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.
Down Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
Downside Risk	- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.
Excess Return	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
Excess Risk	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
Information Ratio	- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.
Public Market Equivalent (PME)	- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.
R-Squared	- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.
Return	- Compounded rate of return for the period.
Sharpe Ratio	- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.
Standard Deviation	- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.
Total Value to Paid In (TVPI)	- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life
Tracking Error	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
Treynor Ratio	- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.
Up Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.



AndCo compiled this report for the sole use of the client for which it was prepared. AndCo is responsible for evaluating the performance results of the Total Fund along with the investment advisors by comparing their performance with indices and other related peer universe data that is deemed appropriate. AndCo uses the results from this evaluation to make observations and recommendations to the client.

AndCo uses time-weighted calculations which are founded on standards recommended by the CFA Institute. The calculations and values shown are based on information that is received from custodians. AndCo analyzes transactions as indicated on the custodian statements and reviews the custodial market values of the portfolio. As a result, this provides AndCo with a reasonable basis that the investment information presented is free from material misstatement. This methodology of evaluating and measuring performance provides AndCo with a practical foundation for our observations and recommendations. Nothing came to our attention that would cause AndCo to believe that the information presented is significantly misstated.

This performance report is based on data obtained by the client's custodian(s), investment fund administrator, or other sources believed to be reliable. While these sources are believed to be reliable, the data providers are responsible for the accuracy and completeness of their statements. Clients are encouraged to compare the records of their custodian(s) to ensure this report fairly and accurately reflects their various asset positions.

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