THE SUNSET CAPITAL OF FLORIDA

ST. PETE BEACH FIREFIGHTERS PENSION BOARD

QUARTERLY MEETING

CITY OF ST. PETE BEACH

155 Corey Avenue
St. Pete Beach, FL 33706

July 31st, 2018
8:30 am

Call to Order
Pledge of Allegiance
Roll Call

1. **Changes to the Agenda** – Agenda items to be added, moved or deleted will be addressed at this time. Items added will be assigned agenda item numbers and items that are moved will retain the same item numbers. A notation will be made that those items will be taken out of order.

2. **Audience Comments** – Comments shall be limited to three minutes per person to issues not on the agenda.

3. **Approval of Minutes**

   - **4-19-2018 Quarterly Meeting**

4. **Payment of Invoices**

   - **Anchor**
   - **&Co**

- **Brown**
- **Christiansen & Dehner**
- **Foster & Foster**
- **Insight**
- **Salem Trust**

5. Reports

- **&Co – Equity Manager Analysis**
- **Foster & Foster**
- **Salem Trust**
- **Christiansen & Dehner**

6. New Business

- **Adoption of Revised Summary Plan Description**
- **Secretary Keenan – Discussion of potential changes to beneficiaries**
- **Budget for FYE 9-30-19**

7. Adjournment

APPEAL

APPEAL: Florida Statutes 286.0105 Notices of meetings and hearings must advise that a record is required to appeal. Each board, commission, or agency of this state or of any political subdivision thereof shall include in the notice of any meeting or hearing, if notice of the meeting or hearing is required, of such board, commission, or agency, conspicuously on such notice, the advice that, if a person decides to appeal any decision made by the board, agency, or commission with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

AMERICANS WITH DISABILITIES ACT: Florida Statutes 286.26. Accessibility of public meetings to the physically handicapped. In accordance with the Americans with Disabilities Act and Florida Statutes, persons needing special accommodations to participate in a meeting should contact City Hall at (727) 367-2735 no later than forty-eight (48) hours prior to the meeting for assistance.

Electronic media must be submitted a minimum of 24 hours in advance to cityclerk@stpetebeach.org

The public is cordially invited to attend.

All agenda material is available for review at City Hall.

FIRE PENSION BOARD

MINUTES

APRIL 19, 2018

1:30 P.M.

CALL TO ORDER

PLEDGE OF ALLEGIANCE

ROLL CALL

PRESENT:

Ryan Holt, Chairman
Mark Keenan, Secretary
Keith Beattie, Member
Bruno Falkenstein, Member

ABSENT:

Michael Terry, Member

ALSO PRESENT:

Lee Dehner, Christansen & Dehner
Kerry Richardville, AndCo Consulting
Vince Tenaglia, Administrative Services Director
Mary Jo Murphy, Deputy City Clerk

1. Changes to the Agenda

There were no changes to the agenda.

2. Audience Comments

There were no audience comments.

3. Approval of Minutes

- January 18, 2018 Quarterly Meeting
- February 6, 2018 Special Meeting

Member Falkenstein made a motion to approve the minutes from the January 18, 2018 quarterly meeting and the February 6, 2018 special meeting. The motion was seconded by Member Beattie and unanimously approved by a voice vote.

4. Payment of Invoices

The board reviewed the following invoices included in the agenda packet:

• Anchor	$3,091.22
• Insight	$2,331.62
• Brown	$3,039.18
• Salem Trust	$3,335.00
• Christiansen and Dehner	$2,025.95

Secretary Keenan made a motion to accept the payment of invoices. The motion was seconded by Member Beattie and unanimously approved by a voice vote.

5. Reports

AndCo

Kerry Richardville, AndCo Consulting, gave a presentation to the Fire Pension Board and reviewed a document entitled "Investment Performance Review, Period Ending March 31, 2018, St. Pete Beach Firefighters' Retirement System."

Chairman Holt commented that Brown was underperforming, and Ms. Richardville replied that she would like to have a conversation about potential replacements for Brown during the next meeting. The board agreed to discuss the topic during the July meeting.

Ms. Richardville submitted an updated Investment Policy Statement to the board.

Foster & Foster

There was no report from Foster & Foster.

Salem Trust

There was no report from Salem Trust.

Christiansen & Dehner

Attorney Dehner discussed the following with the board:

- No information from Washington or Tallahassee
- File the Financial Disclosures by July 1, 2018

6. New Business

- Board Member Keenan to remain in seat by virtue of acclamation

Chairman Holt informed the board there were no other nominees aside from Secretary Keenan for the open seat. Attorney Dehner instructed the board that they needed to certify the result.

Chairman Holt asked for a motion to certify the result.

Member Falkenstein made a motion to certify the result of Mr. Keenan. The motion was seconded by Member Beattie and unanimously approved by a voice vote.

- Expense Report by Secretary Keenan

Attorney Dehner instructed the board that they needed to approve the report by motion and file it with the City.

Ms. Richardville added that the board needed to approve the new Investment Policy Statement with the rate of return.

Member Falkenstein made a motion to approve the new Investment Policy Statement with the rate of return. The motion was seconded by Member Beattie and unanimously approved by a voice vote.

Attorney Dehner informed the board that they needed to do the following tasks:

- Approve the expense report for the prior fiscal year
- Draft a budget for the next fiscal year and file it with the City prior to October 1, 2018

Chairman Holt asked for a motion to accept the expense report for fiscal year ending 9/30/17.

Member Beattie made a motion to accept the expense report ending 9/30/17. The motion was seconded by Secretary Keenan and unanimously approved by a voice vote.

7. ~~8.~~ Adjournment

Chairman Holt commented that Item No. 8, Adjournment, should be Item No. 7 on the agenda.

There being no further business to come before the Board, the meeting was adjourned at 1:49 p.m.

Attest:

_____ _____

Rebecca C. Haynes, City Clerk Ryan Holt, Chairman

Minutes approved on: _____

Investment Performance Review
Period Ending June 30, 2018

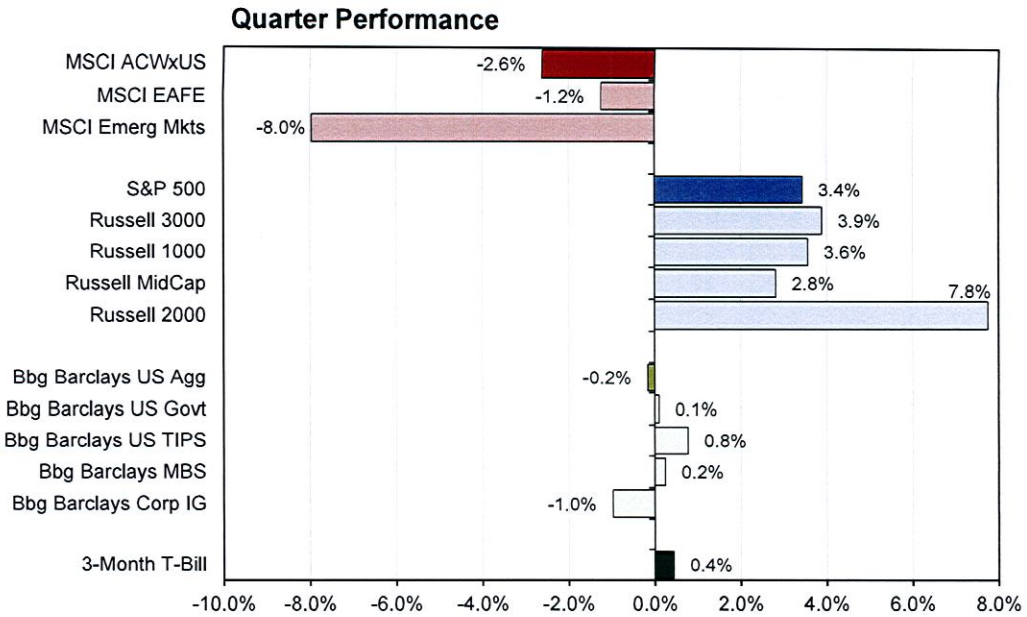
St. Pete Beach Firefighters' Retirement System
Preliminary

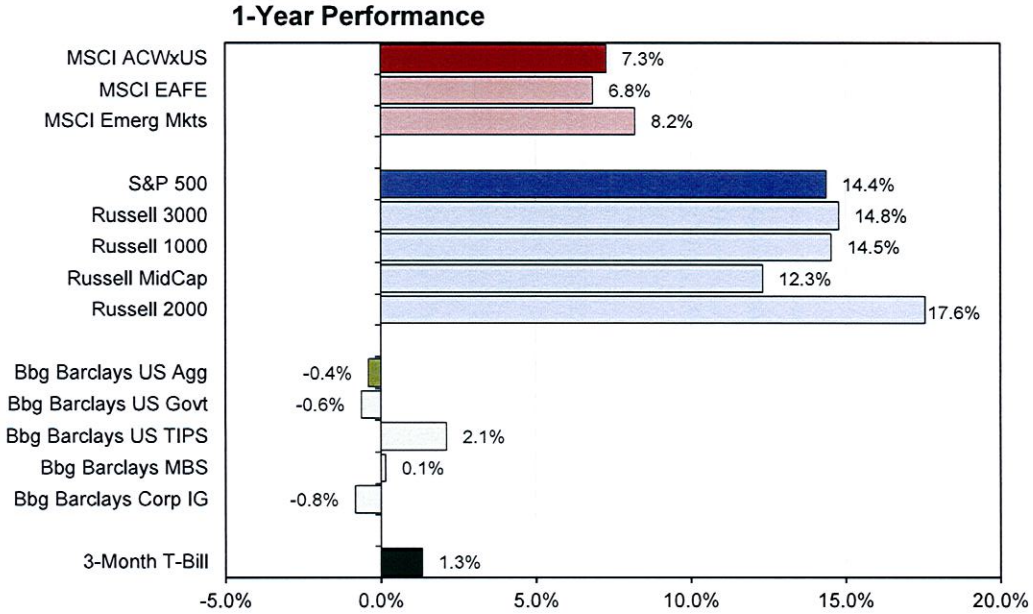
2nd Quarter 2018 Market Environment

- Market returns were mixed across major equity and fixed income indices for the 2nd quarter of 2018. Broad domestic equity indices had healthy gains as supportive economic and corporate earnings data, helped by a fiscal stimulus tailwind resulting from the Republican Party led tax reform passed in late 2017, continued to push domestic stocks higher. International indices did not fare as well during the period, posting negative returns in US dollar (USD) terms, as markets were hurt by relatively soft economic data, geopolitical concerns and a strengthening USD. Fixed income returns were somewhat flat for the quarter with the various sector segments producing minor gains or losses. Despite the Federal Reserve's (Fed) ongoing tightening of monetary policy and the potential for global trade disruptions resulting from Trump administration protectionist trade policies, economic momentum in the US continued to fuel investor demand for domestic equities. The US stock market represented by the Russell 3000 Index returned 3.9% and 14.8% for the quarter and 1-year period respectively.

- International equity posted negative returns for the quarter with emerging markets stocks falling the greatest degree. The developed market MSCI EAFE Index lost -1.2% as macroeconomic data abroad, while still signaling a continuation in global growth, appeared to slow throughout the quarter. International markets were also affected by investor concerns surrounding ongoing political developments in various countries and continued uncertainty around the outlook for global trade relations. International market returns also faced a currency effect headwind as the USD appreciated against most other currencies during the period. This combination of factors had the greatest influence on emerging market equities with the MSCI Emerging Markets Index posting a sharp decline of -8.0%. One-year returns remain broadly positive with the MSCI EAFE and MSCI Emerging Markets indices returning 6.8% and 8.2% respectively.

- Interest rates on the US Treasury Yield Curve rose across all maturities during the 2nd quarter. The increase in interest rates was most pronounced in short-term maturities resulting in further flattening of the yield curve. The relatively large increase at the short-end of the curve was partially due to the Feds decision to tighten monetary policy by increasing short-term interest rates for the second time this year during their June meeting. Also significant was the change in the Fed's forecasted schedule for interest rate increases, which now projects two potential additional rate increases in 2018, where it had previously forecast just one. The broad market Bloomberg Barclays US Aggregate Index was modestly negative for both the 2nd quarter and the 1-year time period, returning -0.2% and -0.4% respectively. Corporate issues were the worst performing investment grade sector during the quarter, returning -1.0% as credit spreads continued to widen through 2018.



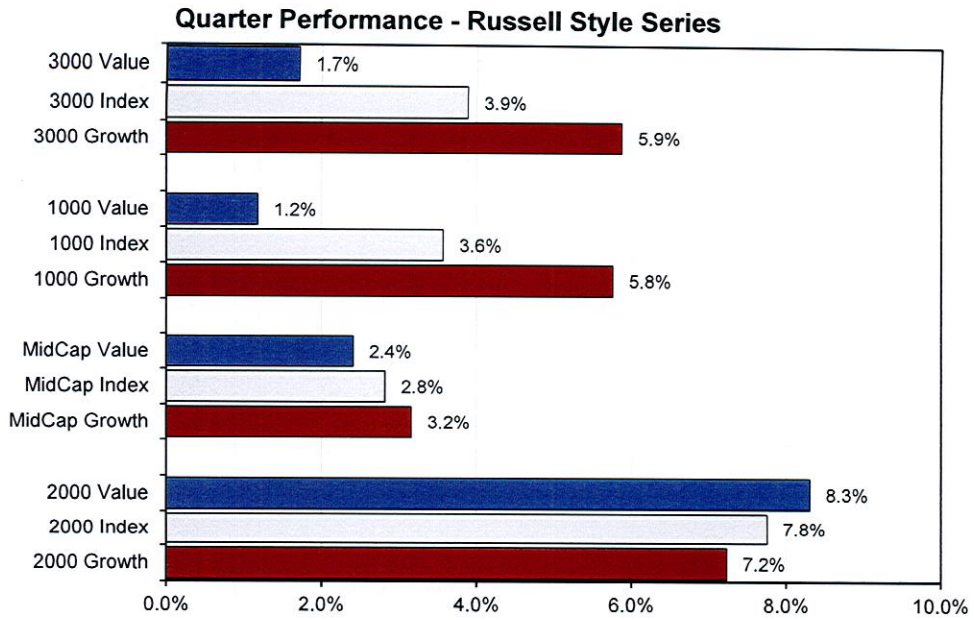


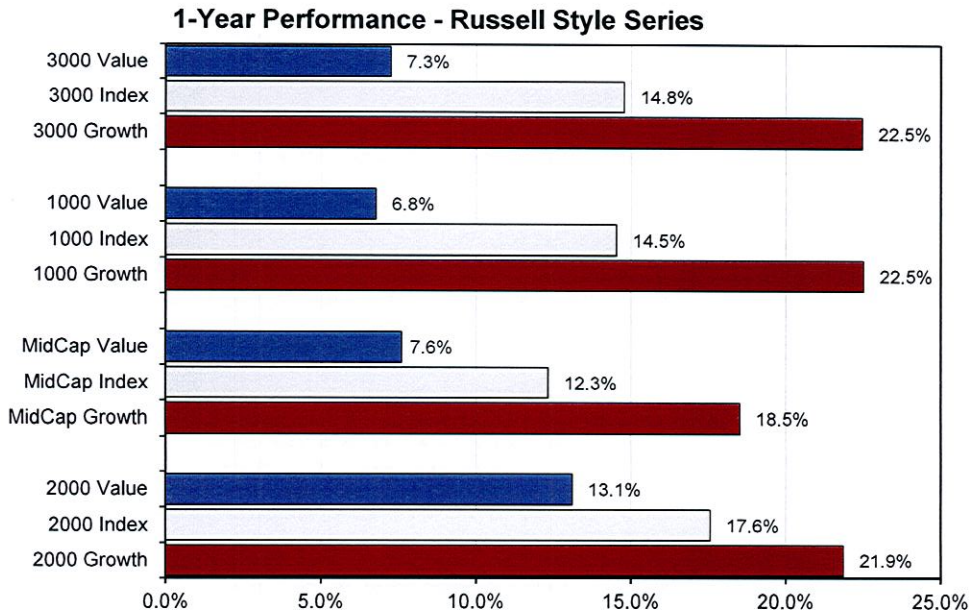
Source: Investment Metrics

- US equity index returns were positive across the style and capitalization spectrum during the 2nd quarter of 2018. Markets were encouraged by the ongoing strength in US economic data and corporate earnings. Positive data releases in unemployment, retail sales, consumer consumption, GDP and investor sentiment highlighted the continued health of the US economy. Additionally, Q1 2018 corporate earnings announced throughout the period grew at an impressive rate as corporate profits were beneficiaries of the late 2017 Republican Party tax reforms. Returns for the period were tempered by global trade uncertainty as tariffs on steel and aluminum imported from Canada, Mexico and the European Union took effect with the possibility of additional tariffs aimed at China and foreign auto producers being considered. The Trump administration also announced the US withdrawal from the Iran nuclear accord, proposing new sanctions, which could disrupt oil markets in the future, and made progress toward a denuclearization deal with North Korea.

- During the quarter, small cap stocks outperformed mid and large cap equities for style and core indices. This is partially due to the increased tax reform benefit small cap companies will receive relative to large caps. Small cap stocks have historically paid higher taxes relative to large cap companies since they typically generate more of their revenue in the US. More globally oriented large caps also faced a considerable headwind from the recent USD strength. Large cap companies generate more revenue outside of the US and an appreciating USD makes US exports more expensive to foreign consumers. The small cap Russell 2000 Index returned 7.8% during the period, while the large cap Russell 1000 Index returned 3.6%. Small caps also outperformed over the 1-year period with the Russell 2000 returning 17.6% over the trailing year while the Russell 1000 posted a return of 14.5%.

- Style index performance was mixed during the quarter with growth companies outperforming in large- and mid-cap, but value stocks outperforming in the small-cap space. The Russell 2000 Value Index was the best performing style index for the period returning a notable 8.3% for the quarter. Returns over the trailing year continue to show significant outperformance of growth indices relative to their value counterparts with the return of the Russell 1000 Growth Index more than tripling the return of the Russell 1000 Value Index. Growth benchmarks benefitted from larger exposures to more cyclical names within the information technology, consumer discretionary, health care and industrials sectors. They also benefitted from underweights to more defensive sectors such as REITs, utilities and telecom.



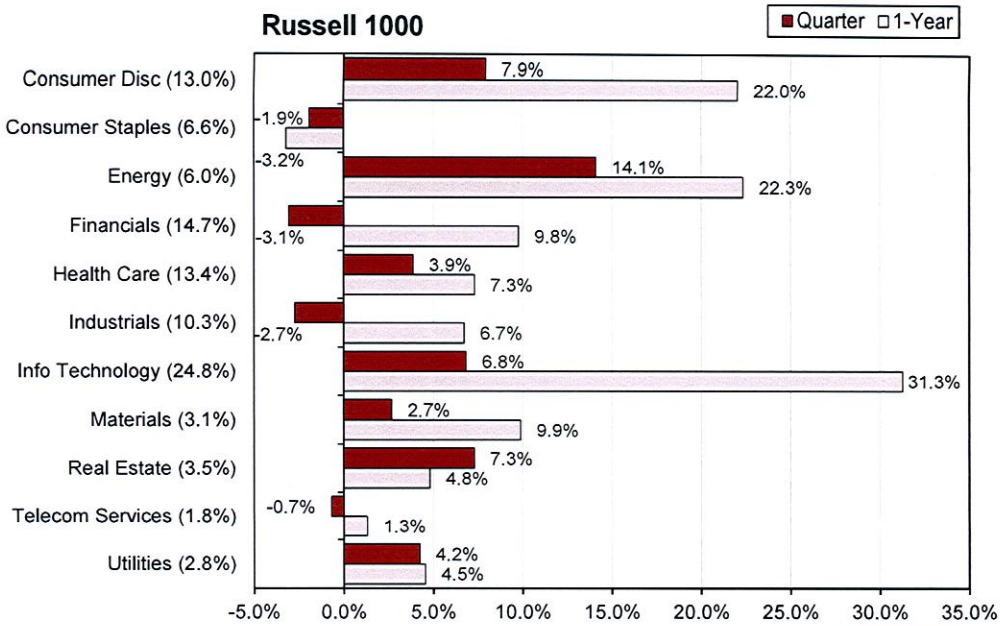


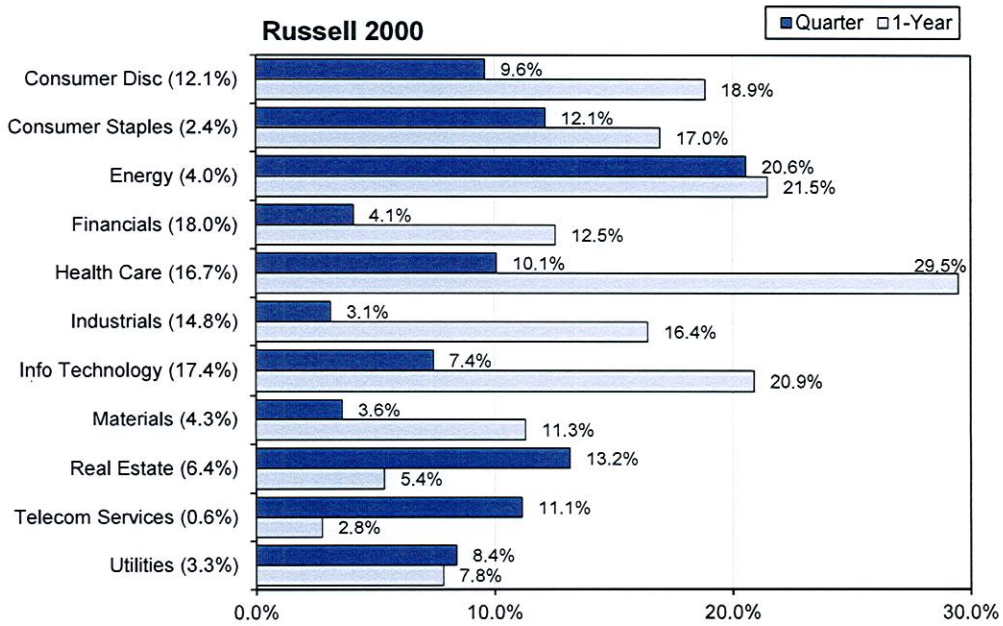
Source: Investment Metrics

- Sector performance was mixed across large cap sectors for the 2nd quarter of 2018. Seven of eleven sectors had positive returns for the quarter and six of eleven economic sectors outpaced the Russell 1000 Index return. Energy was the best performing sector during the quarter, returning 14.1%, as an OPEC announced increase in crude oil production was overshadowed by supply concerns in Iran, Venezuela and Libya, resulting in considerably higher oil prices. The consumer discretionary sector also performed well on the back of strong retail sales and increased consumer spending, gaining 7.9% for the period. Technology stocks continued their climb, returning 6.8% over the quarter. Technology names now account for nearly 25% of the market cap of the Russell 1000 Index. The largest detractors for the quarter were the financials, industrials and consumer staples sectors which returned -3.1%, -2.7% and -1.9% respectively. Over the trailing 1-year period, technology was the best performing sector by a relatively wide margin returning an impressive 31.3% and the consumer discretionary and energy sectors also posted returns greater than 20%. Ten of eleven large cap economic sectors posted positive returns for the 1-year period with consumer staples being the only sector to post negative performance, returning -3.2%.

- Quarterly results for small cap sectors were higher relative to their large capitalization counterparts. All sectors had positive returns during the period with seven of eleven economic sectors outpacing the Russell 2000 Index return for the quarter. Like the large cap index sector performance, industrials and financials were relative underperformers for the 2nd quarter. Financials were hurt by a flattening yield curve and concerns over global trade weighed on industrials. Quarterly performance on industrials and financials was 3.1% and 4.1% respectively. Energy was the best performing sector in the Russell 2000 as well, returning a notable 20.6%. However, there were several differences, particularly in consumer staples and telecom where there was significant outperformance relative to their large cap counterparts. Small cap sectors beat large cap sectors in those two categorizations by over 10.0% during the quarter. Over the trailing 1-year period, all eleven sectors posted gains. Health care stocks were the best performers within the Russell 2000 for the trailing year returning a solid 29.5%. Energy and technology also posted returns over 20% for the 1-year period.

- Using S&P 500 sector valuations as a proxy for the market, forward P/E ratios for six of the eleven GICS sectors were higher than their long-term averages at quarter-end. Using these historical P/E measures, the utilities, consumer discretionary and real estate sectors appear the most extended. In contrast the telecommunications, technology and health care sectors were trading at a discount to their long-term average P/E ratios.





Source: Morningstar Direct

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

As of June 30, 2018

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	3.53%	10.8%	30.5%	Information Technology
Microsoft Corp	2.89%	8.5%	45.8%	Information Technology
Amazon.com Inc	2.68%	17.4%	75.6%	Consumer Discretionary
Facebook Inc A	1.79%	21.6%	28.7%	Information Technology
Berkshire Hathaway Inc B	1.40%	-6.4%	10.2%	Financials
JPMorgan Chase & Co	1.37%	-4.8%	16.5%	Financials
Exxon Mobil Corp	1.36%	12.0%	6.6%	Energy
Alphabet Inc C	1.32%	8.1%	22.8%	Information Technology
Alphabet Inc A	1.31%	8.9%	21.5%	Information Technology
Johnson & Johnson	1.26%	-4.6%	-5.8%	Health Care

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Five Below Inc	0.24%	33.2%	97.9%	Consumer Discretionary
Etsy Inc	0.23%	50.4%	181.3%	Information Technology
Blackbaud Inc	0.22%	0.8%	20.1%	Information Technology
LivaNova PLC	0.22%	12.8%	63.1%	Health Care
Haemonetics Corp	0.22%	22.6%	127.1%	Health Care
Entegris Inc	0.22%	-2.4%	55.4%	Information Technology
FibroGen Inc	0.21%	35.5%	93.8%	Health Care
Idacorp Inc	0.21%	5.2%	10.9%	Utilities
Medidata Solutions Inc	0.21%	28.3%	3.0%	Health Care
Loxo Oncology Inc	0.21%	50.4%	116.3%	Health Care

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Sarepta Therapeutics Inc	0.03%	78.4%	292.1%	Health Care
Wayfair Inc Class A	0.03%	75.9%	54.5%	Consumer Discretionary
Chesapeake Energy Corp	0.02%	73.5%	5.4%	Energy
Whiting Petroleum Corp	0.02%	55.8%	139.2%	Energy
Twitter Inc	0.12%	50.5%	144.4%	Information Technology
Advanced Micro Devices Inc	0.05%	49.2%	20.1%	Information Technology
Exact Sciences Corp	0.03%	48.3%	69.0%	Health Care
Under Armour Inc C	0.02%	46.9%	4.6%	Consumer Discretionary
Twilio Inc A	0.02%	46.7%	92.4%	Information Technology
Weatherford International PLC	0.01%	43.7%	-15.0%	Energy

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Turtle Beach Corp	0.01%	746.8%	625.7%	Consumer Discretionary
Solid Biosciences Inc	0.01%	375.1%	N/A	Health Care
Tandem Diabetes Care Inc	0.04%	344.0%	175.2%	Health Care
Intelsat SA	0.03%	343.1%	444.4%	Telecommunication Services
Evolus Inc	0.01%	210.0%	N/A	Health Care
California Resources Corp	0.09%	165.0%	431.5%	Energy
TransEnterix Inc	0.03%	156.5%	514.1%	Health Care
Penn Virginia Corp	0.05%	142.3%	131.0%	Energy
Regenxbio Inc	0.09%	140.4%	263.3%	Health Care
Madrigal Pharmaceuticals Inc	0.07%	139.5%	1620.1%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Nektar Therapeutics Inc	0.03%	-54.0%	149.8%	Health Care
Alkermes PLC	0.02%	-29.0%	-29.0%	Health Care
CommScope Holding Co Inc	0.02%	-26.9%	-23.2%	Information Technology
American Airlines Group Inc	0.06%	-26.8%	-23.9%	Industrials
Arconic Inc	0.03%	-25.9%	-24.1%	Industrials
Copa Holdings SA Class A	0.01%	-25.9%	-17.0%	Industrials
First Solar Inc	0.02%	-25.8%	32.0%	Information Technology
ManpowerGroup Inc	0.02%	-24.4%	-21.5%	Industrials
Switch Inc Class A	0.00%	-23.3%	N/A	Information Technology
Skechers USA Inc	0.02%	-22.8%	1.7%	Consumer Discretionary

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Arsanis Inc	0.00%	-84.1%	N/A	Health Care
Menlo Therapeutics Inc	0.00%	-78.4%	N/A	Health Care
Jounce Therapeutics Inc	0.01%	-65.7%	-45.4%	Health Care
Prothena Corp PLC	0.03%	-60.3%	-73.1%	Health Care
Biglari Holdings Inc	0.01%	-55.1%	-54.1%	Consumer Discretionary
Catalyst Biosciences Inc	0.01%	-54.8%	151.0%	Health Care
Recro Pharma Inc	0.00%	-54.4%	-28.6%	Health Care
scPharmaceuticals Inc	0.00%	-54.4%	N/A	Health Care
Agenus Inc	0.01%	-51.8%	-41.9%	Health Care
Syndax Pharmaceuticals Inc	0.00%	-50.7%	-49.7%	Health Care

Source: Morningstar Direct

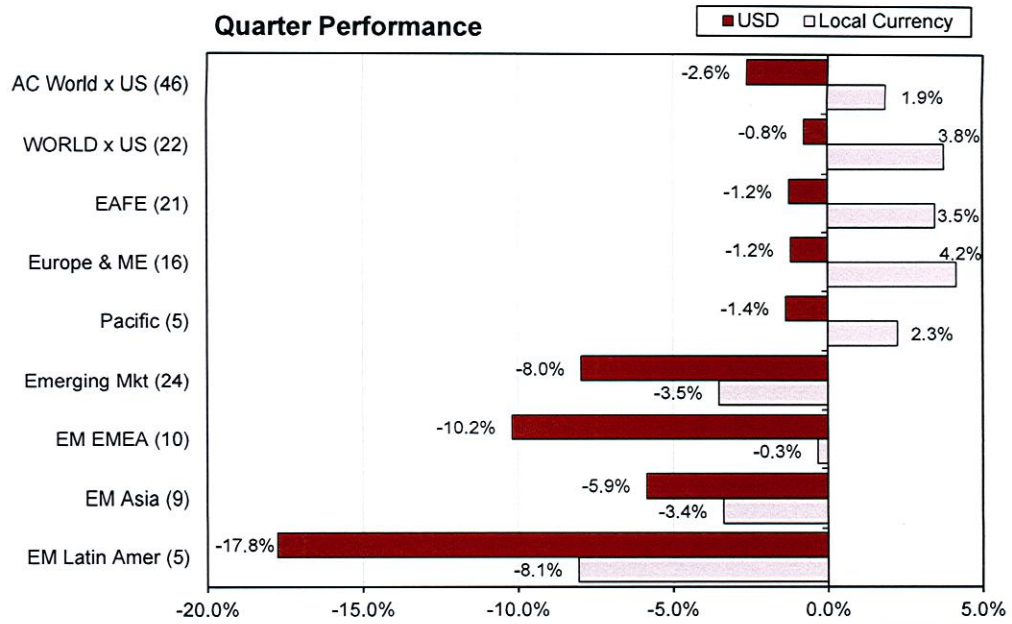
International and Regional Market Index Performance (Country Count)

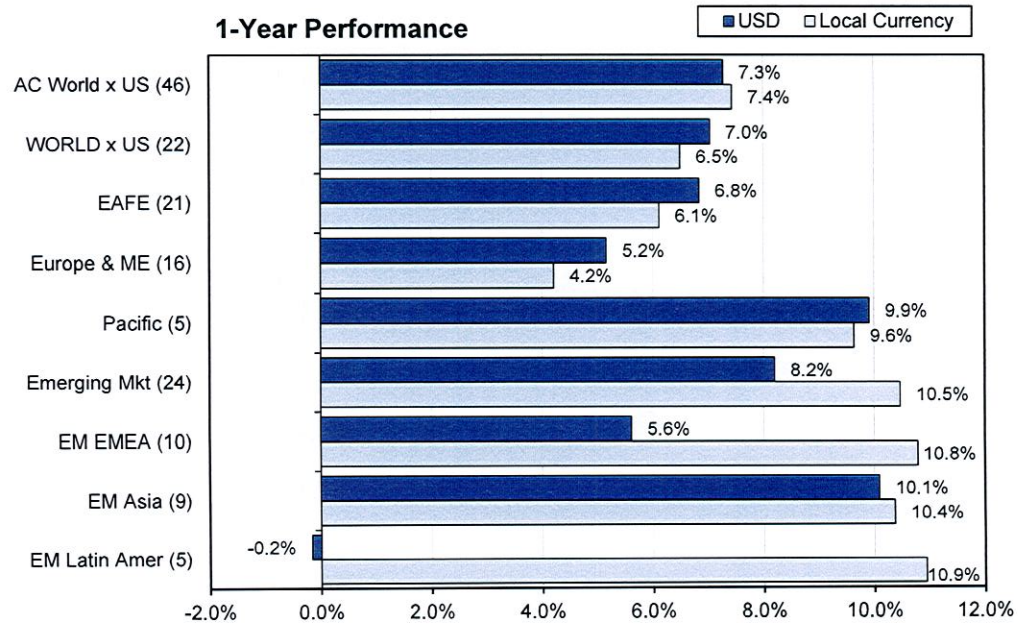
As June 30, 2018

- Broad international equity returns were mixed for the quarter. Many developed markets were positive in local currency terms, but negative in USD terms whereas emerging markets posted negative returns in both local currency and USD. Performance was largely driven by the same catalysts as the US equity markets with global macroeconomic data remaining generally positive, but returns being tempered by global trade tensions and ongoing political uncertainty. A strengthening USD caused by relatively strong US economic fundamentals and the continued divergence in global monetary policy hurt US investors in international markets. The MSCI ACWI ex US Index gained 1.9% in local currency terms, but lost -2.6% in USD terms during the second quarter. Returns over the 1-year period remain positive in both local currency and USD terms with the MSCI ACWI ex US returning 7.4% and 7.3% respectively.

- Second quarter results for developed market international indices were generally positive in local currency terms with the MSCI EAFE Index returning 3.5%. However, an appreciating USD pushed returns for US investors into negative territory, with the index returning -1.2% in USD terms. Developed markets were pushed higher by broadly positive, but slowing, global economic and earnings data despite several significant political events in Europe during the quarter. There was considerable volatility surrounding the formation of a coalition government in Italy which called into question Italy's future as part of the European Union. Spain also had a change in leadership after a political fundraising scandal led to a vote of no-confidence in Prime Minister Rajoy, forcing him to step down. World markets also reacted to the implementation of new tariffs on US imports of steel and aluminum and the possibility of new tariffs in the future, including tariffs on auto imports, which would negatively affect producers in Europe and Japan. The MSCI EAFE Index returned 6.1% and 6.8% for the last twelve months in local currency and USD terms respectively.

- Emerging markets trailed developed markets for the 2nd quarter, posting losses in local currency terms that were then intensified by the strengthening USD. The MSCI Emerging Markets Index returned -3.5% and -8.0% in local currency and USD terms respectively. The main factors affecting emerging markets were the threat of continued protectionist trade policies from the US creating uncertainty for export focused economies and rising US interest rates coupled with an appreciating USD. Many emerging market countries and companies issue debt denominated in USD and the combination of higher interest rates and a relatively weaker local currency can put stress on the balance sheets of these borrowers, especially those heavily dependent on external capital. One year returns for the MSCI Emerging Market Index were 10.5% in local currency terms and 8.2% in USD terms.





Source: MSCI Global Index Monitor (Returns are Net)

US Dollar International Index Attribution & Country Detail

As of June 30, 2018

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	12.4%	-2.6%	10.9%
Consumer Staples	11.3%	0.4%	3.1%
Energy	6.1%	11.2%	35.8%
Financials	19.8%	-6.2%	-0.5%
Health Care	10.7%	1.9%	1.7%
Industrials	14.3%	-2.2%	7.3%
Information Technology	6.8%	-0.2%	15.0%
Materials	8.2%	0.7%	16.7%
Real Estate	3.5%	-0.4%	7.8%
Telecommunication Services	3.6%	-4.8%	-6.3%
Utilities	3.3%	0.5%	5.2%
Total	**100.0%**	**-1.2%**	**6.8%**

MSCI - ACWIxUS	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	11.2%	-3.5%	8.4%
Consumer Staples	9.7%	-0.7%	2.9%
Energy	7.4%	7.3%	27.5%
Financials	21.9%	-7.3%	1.7%
Health Care	8.1%	1.4%	3.2%
Industrials	11.7%	-2.7%	5.9%
Information Technology	11.9%	-2.9%	15.5%
Materials	8.2%	-0.4%	16.1%
Real Estate	3.2%	-3.0%	6.9%
Telecommunication Services	3.7%	-6.0%	-6.3%
Utilities	3.0%	-1.5%	3.8%
Total	**100.0%**	**-2.6%**	**7.3%**

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	9.8%	-7.1%	-0.2%
Consumer Staples	6.7%	-6.2%	3.3%
Energy	7.2%	-4.7%	24.9%
Financials	22.8%	-12.7%	5.5%
Health Care	3.2%	-5.0%	22.4%
Industrials	5.2%	-11.2%	-5.9%
Information Technology	27.9%	-5.1%	15.2%
Materials	7.6%	-5.5%	14.0%
Real Estate	3.0%	-11.2%	5.6%
Telecommunication Services	4.3%	-9.7%	-7.5%
Utilities	2.4%	-8.1%	2.2%
Total	**100.0%**	**-8.0%**	**8.2%**

Country	MSCI-EAFE Weight	MSCI-ACWIxUS Weight	Quarter Return	1- Year Return
Japan	24.0%	16.4%	-2.8%	10.5%
United Kingdom	18.0%	12.3%	3.0%	10.0%
France	11.0%	7.5%	-0.5%	9.9%
Germany	9.5%	6.5%	-4.0%	2.6%
Switzerland	7.8%	5.3%	-2.7%	-3.4%
Australia	7.0%	4.8%	5.2%	8.7%
Hong Kong	3.6%	2.5%	-1.2%	9.2%
Netherlands	3.6%	2.5%	-1.8%	9.2%
Spain	3.1%	2.1%	-4.4%	-3.6%
Sweden	2.6%	1.8%	-3.7%	-4.6%
Italy	2.4%	1.7%	-7.3%	8.4%
Denmark	1.7%	1.1%	-7.0%	0.9%
Singapore	1.3%	0.9%	-7.5%	7.9%
Belgium	1.1%	0.7%	-6.0%	1.7%
Finland	1.0%	0.7%	1.3%	10.4%
Norway	0.7%	0.5%	2.3%	27.1%
Ireland	0.6%	0.4%	2.0%	5.3%
Israel	0.5%	0.4%	10.9%	-4.6%
Austria	0.2%	0.2%	-10.6%	8.9%
New Zealand	0.2%	0.2%	5.8%	1.7%
Portugal	0.2%	0.1%	1.2%	15.8%
Total EAFE Countries	**100.0%**	**68.4%**	**-1.2%**	**6.8%**
Canada		6.6%	4.7%	9.1%
Total Developed Countries		**75.0%**	**-0.8%**	**7.0%**
China		8.2%	-3.5%	21.2%
Korea		3.7%	-9.2%	3.4%
Taiwan		2.9%	-6.3%	3.9%
India		2.2%	-0.6%	6.5%
South Africa		1.6%	-11.9%	6.4%
Brazil		1.5%	-26.4%	-0.3%
Russia		0.9%	-6.0%	26.0%
Mexico		0.7%	-3.6%	-9.3%
Malaysia		0.6%	-11.4%	5.6%
Thailand		0.5%	-15.0%	12.0%
Indonesia		0.5%	-12.5%	-13.1%
Chile		0.3%	-11.5%	12.5%
Poland		0.3%	-11.6%	-6.2%
Philippines		0.2%	-11.2%	-13.9%
Qatar		0.2%	3.5%	3.5%
Turkey		0.2%	-25.9%	-26.3%
United Arab Emirates		0.2%	-4.4%	-6.0%
Colombia		0.1%	6.7%	20.1%
Peru		0.1%	-3.2%	30.7%
Greece		0.1%	-2.2%	-9.2%
Hungary		0.1%	-14.4%	-0.6%
Czech Republic		0.0%	-5.4%	19.4%
Egypt		0.0%	-8.1%	1.9%
Pakistan		0.0%	-20.8%	-30.3%
Total Emerging Countries		**25.0%**	**-8.0%**	**8.2%**
Total ACWIxUS Countries		**100.0%**	**-2.6%**	**7.3%**

Source: MSCI Global Index Monitor (Returns are Net in USD)

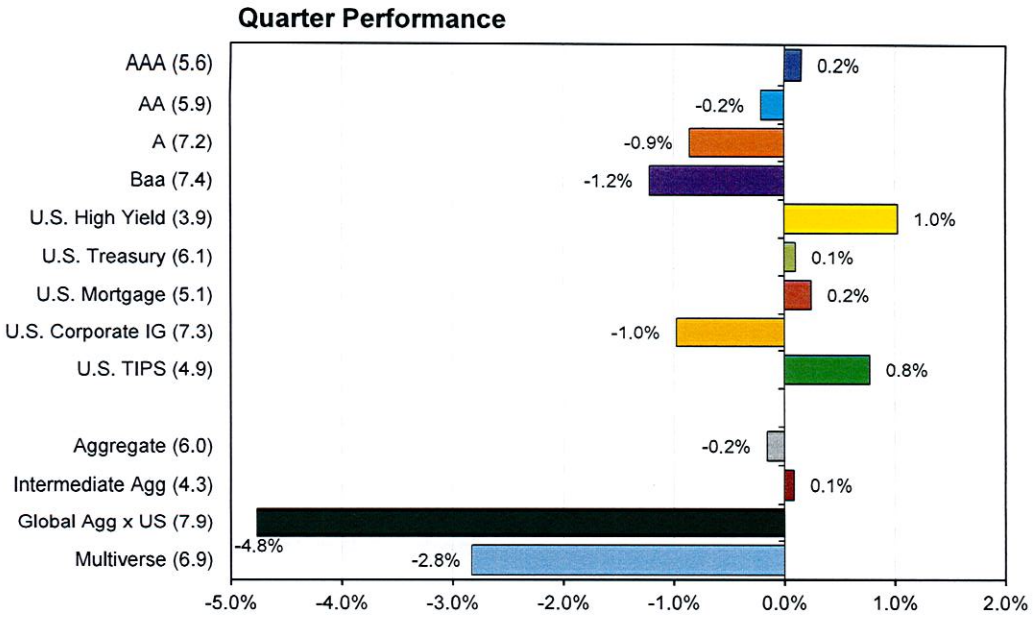
Domestic Bond Sector & Broad/Global Bond Market Performance (Duration)

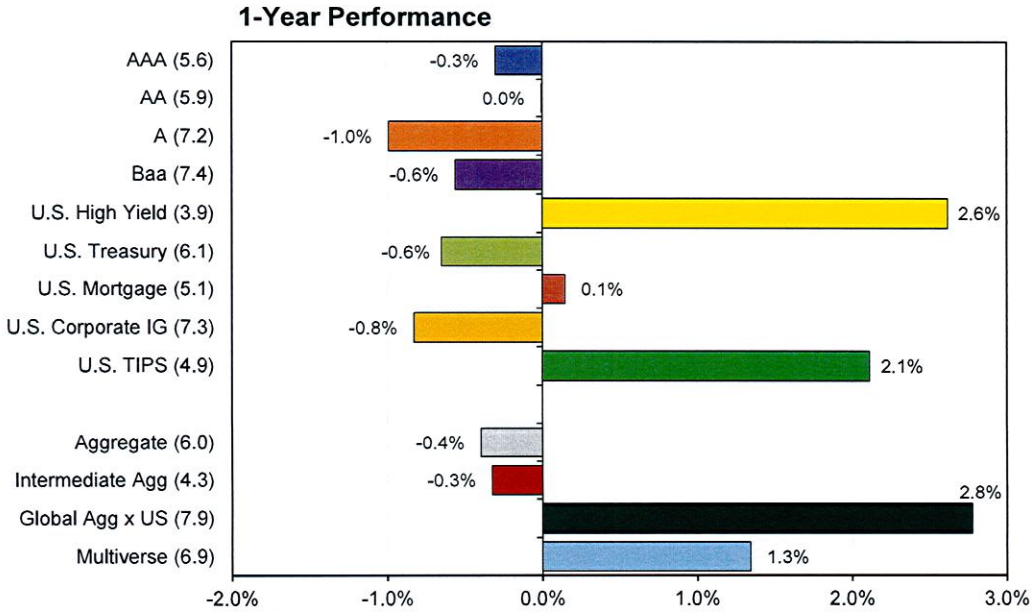
As of June 30, 2018

- Broad fixed income benchmarks had mixed results during the 2nd quarter. Interest rates rose across all maturities on the US Treasury Yield Curve. Early in the quarter, rates rose as positive economic data and signs of higher inflation increased investor expectations for another Fed interest rate hike. However, volatility caused by ongoing geopolitical developments later in the quarter led to an increase in risk aversion and demand for relatively safe assets, driving rates lower through the rest of the quarter. Interest rates on the 10-year Treasury reached a near-term high of 3.11% in mid-May before falling to end the quarter at 2.87%. As expected, the Federal Open Market Committee (FOMC), decided to increase short-term interest rates by 25 basis points at their June meeting. This is the second rate hike of 2018. The current Fed Funds Rate target range sits at 1.75%-2.00%. The FOMC also updated their forecast for future rate increases, now expecting two potential additional hikes in 2018 and three in 2019. The yield curve continued to flatten through the quarter as short-term yields rose at a greater rate than longer-term yields. The difference in yields between the 2-year and 10-year Treasury now sits at just 0.3%. The Fed is also continuing to reduce the size of its balance sheet by slowing its pace of reinvestment as the securities it holds mature. The Bloomberg Barclays US Aggregate Index was relatively flat during the quarter, falling -0.2%. It was also negative for the 1-year period returning -0.4%.

- Within investment grade credit, higher quality corporate issues outperformed lower quality issues for the quarter as credit spreads widened and investors looked for safety amid increased financial market volatility. On an absolute basis, without negating the duration differences in the sub-indices, AAA rated credit was the best performing investment grade credit quality segment returning 0.2% for the quarter. High yield debt outperformed relative to investment grade credit, returning 1.0%, as spreads widened to a lesser degree for these issues and the index benefitted from its lower duration. Part of the reason for the increased spread widening for investment grade issues relative to high yield issues was continued selling pressure from companies repatriating foreign cash reserves in response to the new tax code and lower demand from foreign investors due to increased hedging costs and a stronger USD.

- Of the Bloomberg Barclays US Aggregate Index's three broad sectors, US mortgage backed securities (MBS) were the best performing investment grade sector through the quarter, narrowly outperforming US Treasuries. Corporate credit underperformed as credit spreads widened and investors reacted to market volatility by moving into higher quality issues. Higher durations relative to other index sectors also acted as a headwind to these issues. The Bloomberg Barclays US Corporate IG Index returned -1.0%. While TIPS were also positive, it is important to note these Treasury issues are not part of the Bloomberg Barclays US Aggregate Index.





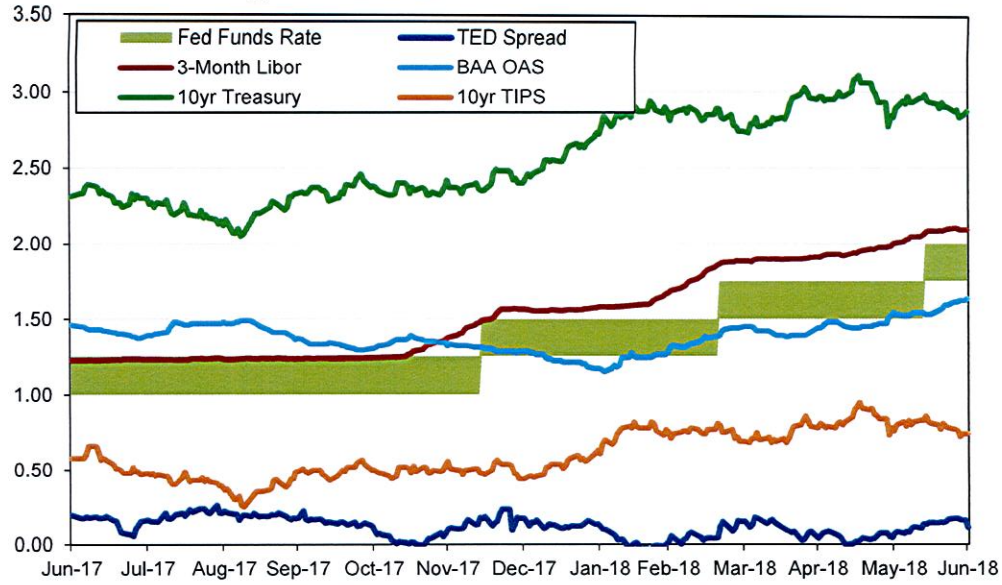
Source: Bloomberg

- Relative to their domestic counterparts, global fixed income indices underperformed during the quarter. The relatively high duration of these indices acted as a headwind to performance in the current quarter as interest rates increased. The returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. During the 2nd quarter the USD strengthened against most other currencies, negatively impacting the returns on global bond indices. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was -4.8% for the quarter. However, when viewed over the trailing year, global issues have outperformed domestic securities, returning 2.8%. As the global economy continues to recover, several international central banks have started to move toward less accommodative postures. Notably, the ECB, is planning to slow its monthly bond purchase program in September, reducing new purchases to 15 billion euro per month from 30 billion euro per month, as well as forecasting an end to the program by the end of the year assuming the eurozone recovery continues to flourish. However, they have indicated a continuation of reinvestment in maturing securities and would likely not raise interest rates from current levels until summer 2019. In contrast, the Bank of Japan will continue current stimulus programs and the Bank of England backed away from a telegraphed interest rate hike after disappointing economic data led them to lower their forecasts for future growth.

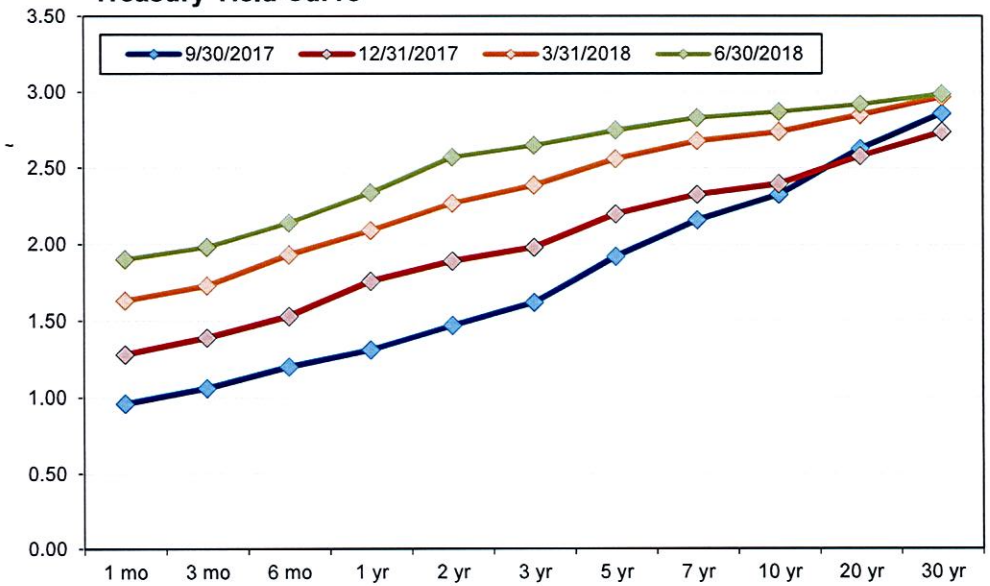
- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis by reviewing the line graphs to the right. The '1-Year Trailing Market Rates' chart illustrates that the 10-year Treasury yield (green line) rose significantly during the first half of the 2nd quarter, rising to a near-term high of 3.11% before falling to 2.87% to end the period. 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 a steady increase in credit spreads through the first two quarters of 2018. This increase is equivalent to an interest rate increase on corporate bonds, which produces an additional headwind for corporate bond index returns. These credit spreads have widened by about 17 basis points over the last 3-months. The green band across the graph illustrates the gradual increase in the Federal Funds Rate (three in the last twelve months) due to the continued unwinding of accommodative US monetary policy.

- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four calendar quarters. As mentioned, the yield curve continues to flatten as yields on shorter-term maturities have risen more than interest rates on the long end of the curve. The upward momentum of interest rates as well as a general flattening of the yield curve are clearly visible over both the 2nd quarter and the last twelve months.

1-Year Trailing Market Rates

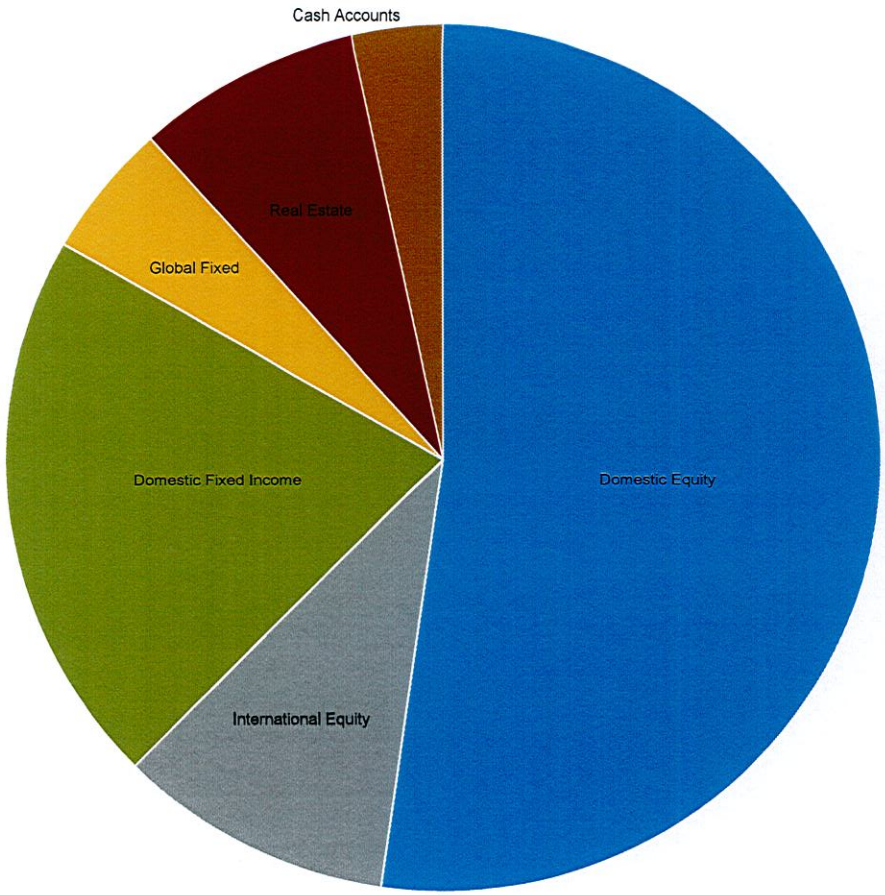


Treasury Yield Curve

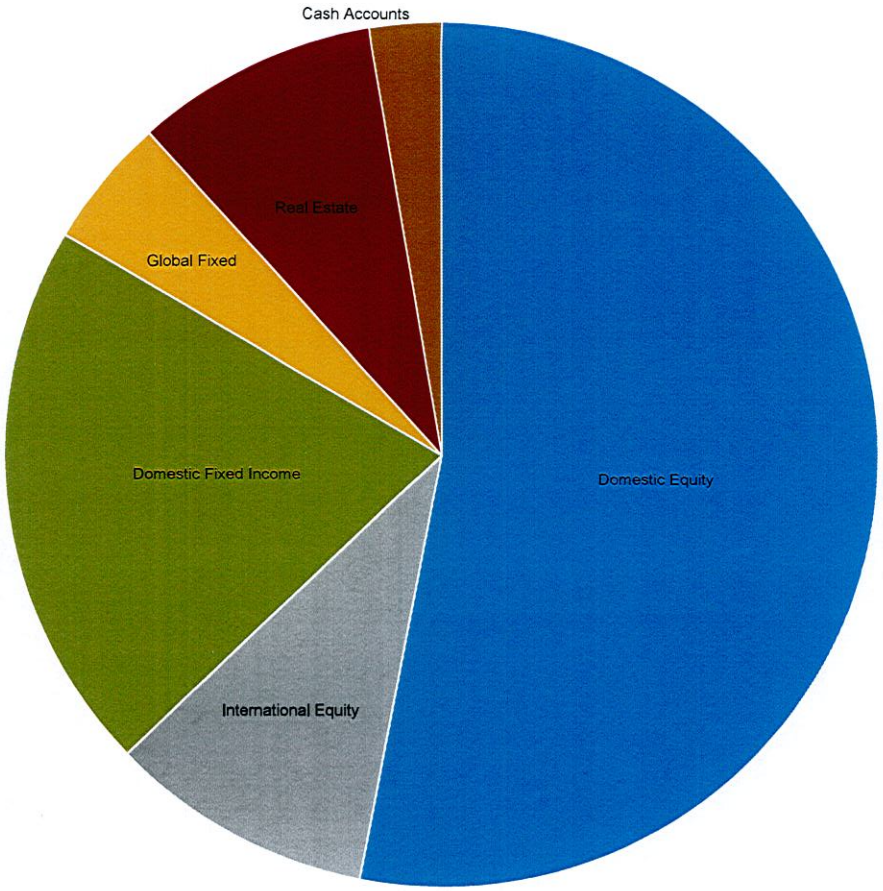


Source: US Department of Treasury, FRED (Federal Reserve of St. Louis)

March 31, 2018 : $13,034,405



June 30, 2018 : $13,276,668



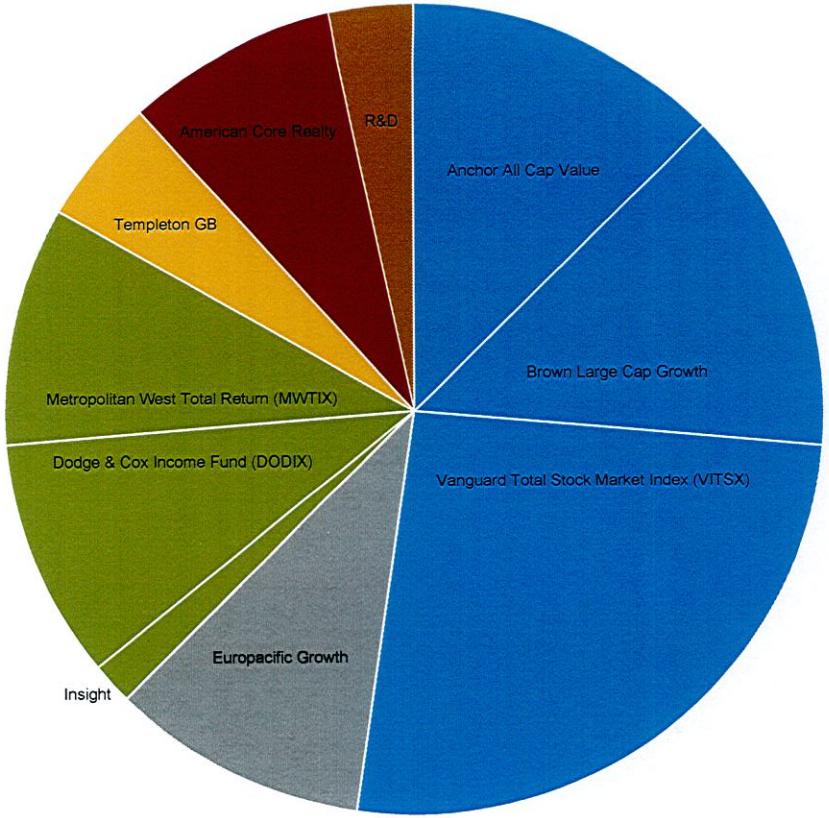
Allocation

	Market Value	Allocation
Domestic Equity	6,817,314	52.3
International Equity	1,323,269	10.2
Domestic Fixed Income	2,722,126	20.9
Global Fixed	656,866	5.0
Real Estate	1,078,551	8.3
Cash Accounts	436,279	3.3

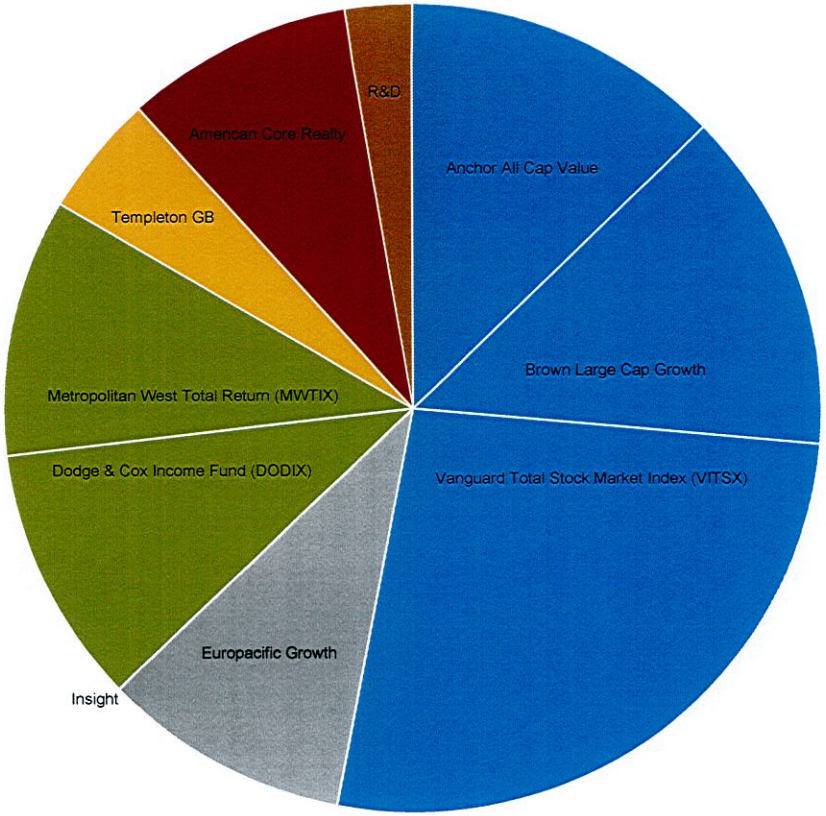
Allocation

	Market Value	Allocation
Domestic Equity	7,042,912	53.0
International Equity	1,297,548	9.8
Domestic Fixed Income	2,745,446	20.7
Global Fixed	645,852	4.9
Real Estate	1,191,051	9.0
Cash Accounts	353,859	2.7

March 31, 2018 : $13,034,405



June 30, 2018 : $13,276,668



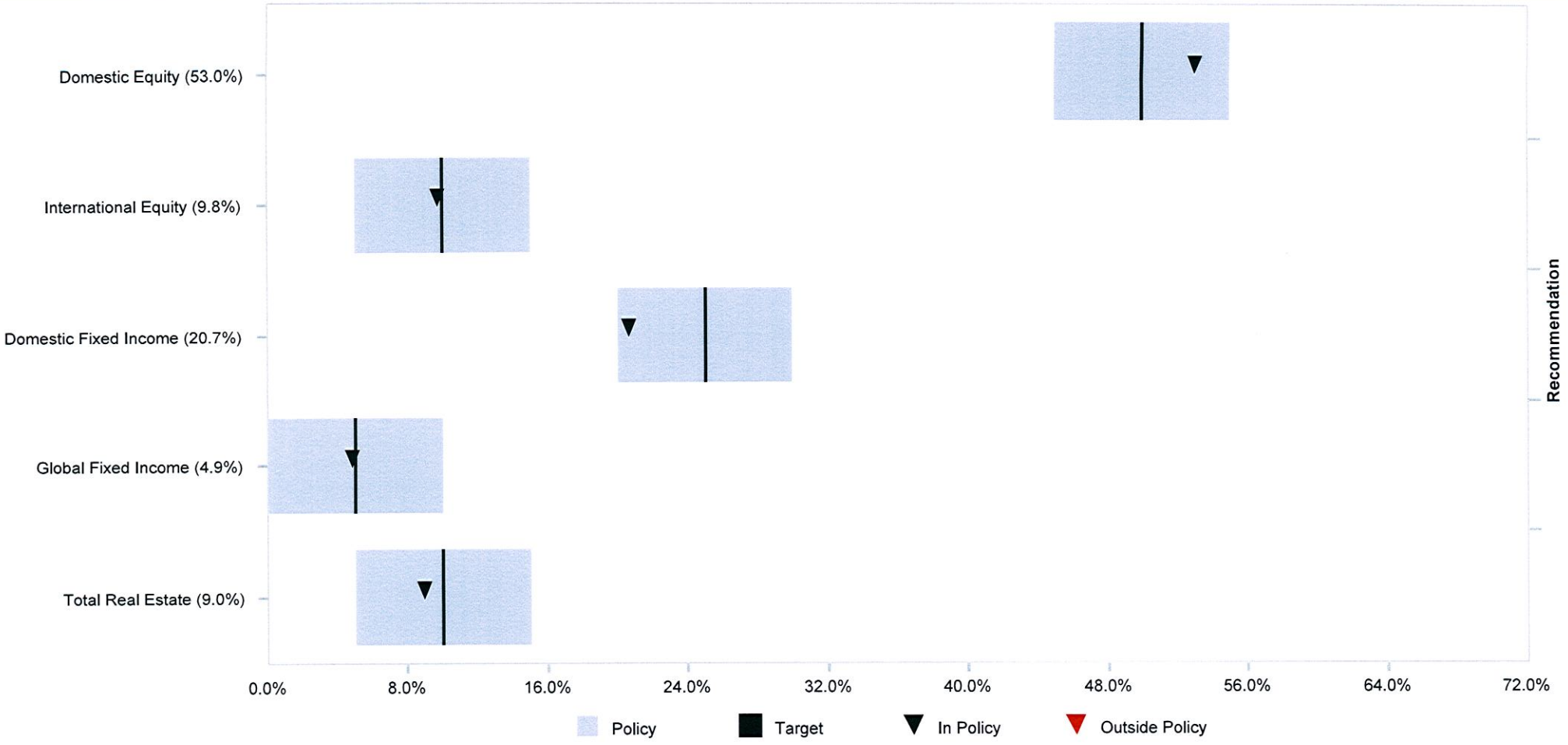
Allocation

	Market Value	Allocation
Anchor All Cap Value	1,634,688	12.5
Brown Large Cap Growth	1,806,604	13.9
Vanguard Total Stock Market Index (VITSX)	3,376,022	25.9
Europacific Growth	1,323,269	10.2
Insight	213,648	1.6
Dodge & Cox Income Fund (DODIX)	1,252,440	9.6
Metropolitan West Total Return (MWTIX)	1,256,038	9.6
Templeton GB	656,866	5.0
American Core Realty	1,078,551	8.3
R&D	436,279	3.3

Allocation

	Market Value	Allocation
Anchor All Cap Value	1,681,691	12.7
Brown Large Cap Growth	1,824,468	13.7
Vanguard Total Stock Market Index (VITSX)	3,536,753	26.6
Europacific Growth	1,297,548	9.8
Insight	29	0.0
Dodge & Cox Income Fund (DODIX)	1,369,225	10.3
Metropolitan West Total Return (MWTIX)	1,376,192	10.4
Templeton GB	645,852	4.9
American Core Realty	1,191,051	9.0
R&D	353,859	2.7

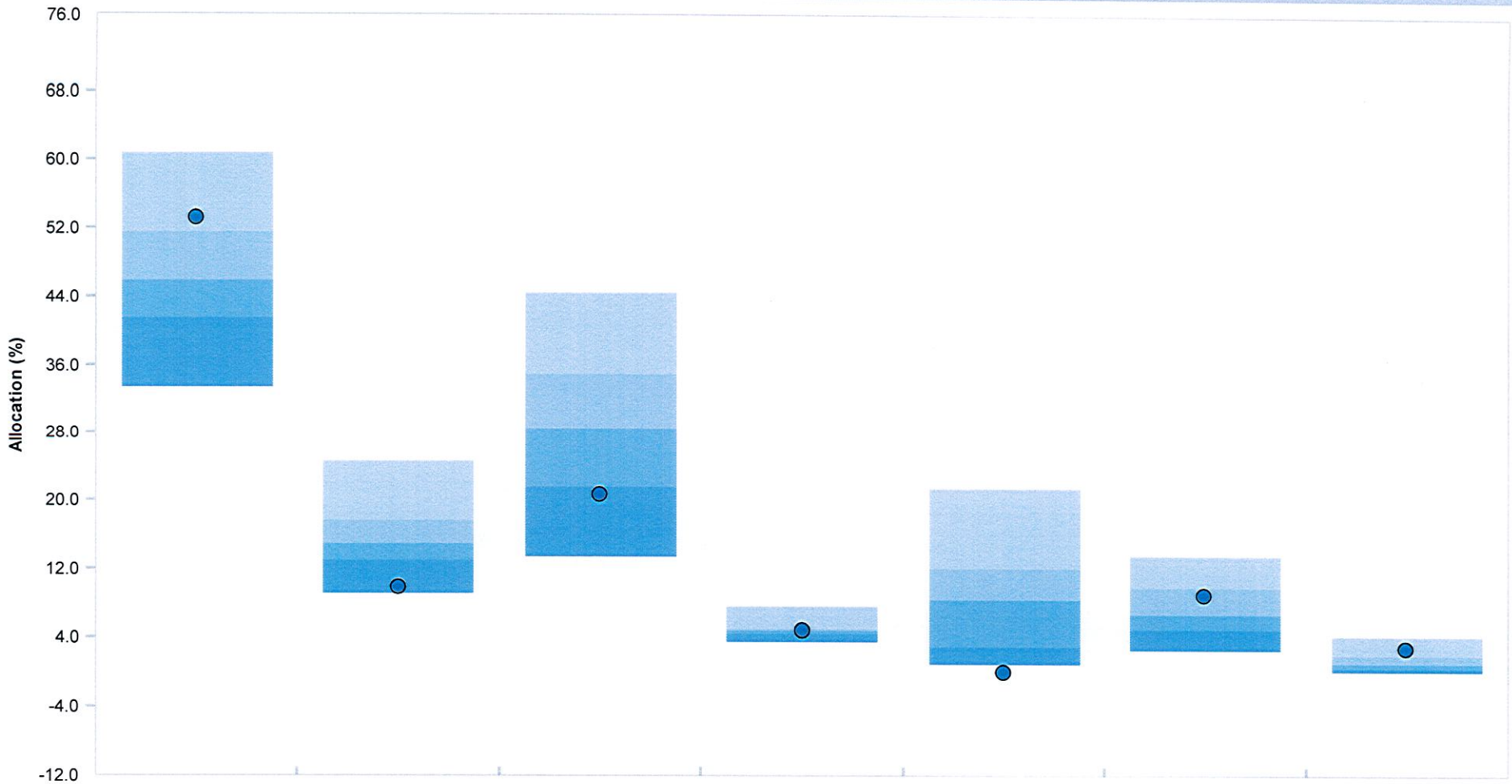
Executive Summary



Asset Allocation Compliance

	Minimum Allocation (%)	Maximum Allocation (%)	Current Allocation (%)	Target Allocation (%)
Global Fixed Income	0.0	10.0	4.9	5.0
International Equity	5.0	15.0	9.8	10.0
Total Real Estate	5.0	15.0	9.0	10.0
Domestic Fixed Income	20.0	30.0	20.7	25.0
Domestic Equity	45.0	55.0	53.0	50.0
Total Fund	N/A	N/A	100.0	100.0

Plan Sponsor TF Asset Allocation vs. All Public Plans-Total Fund

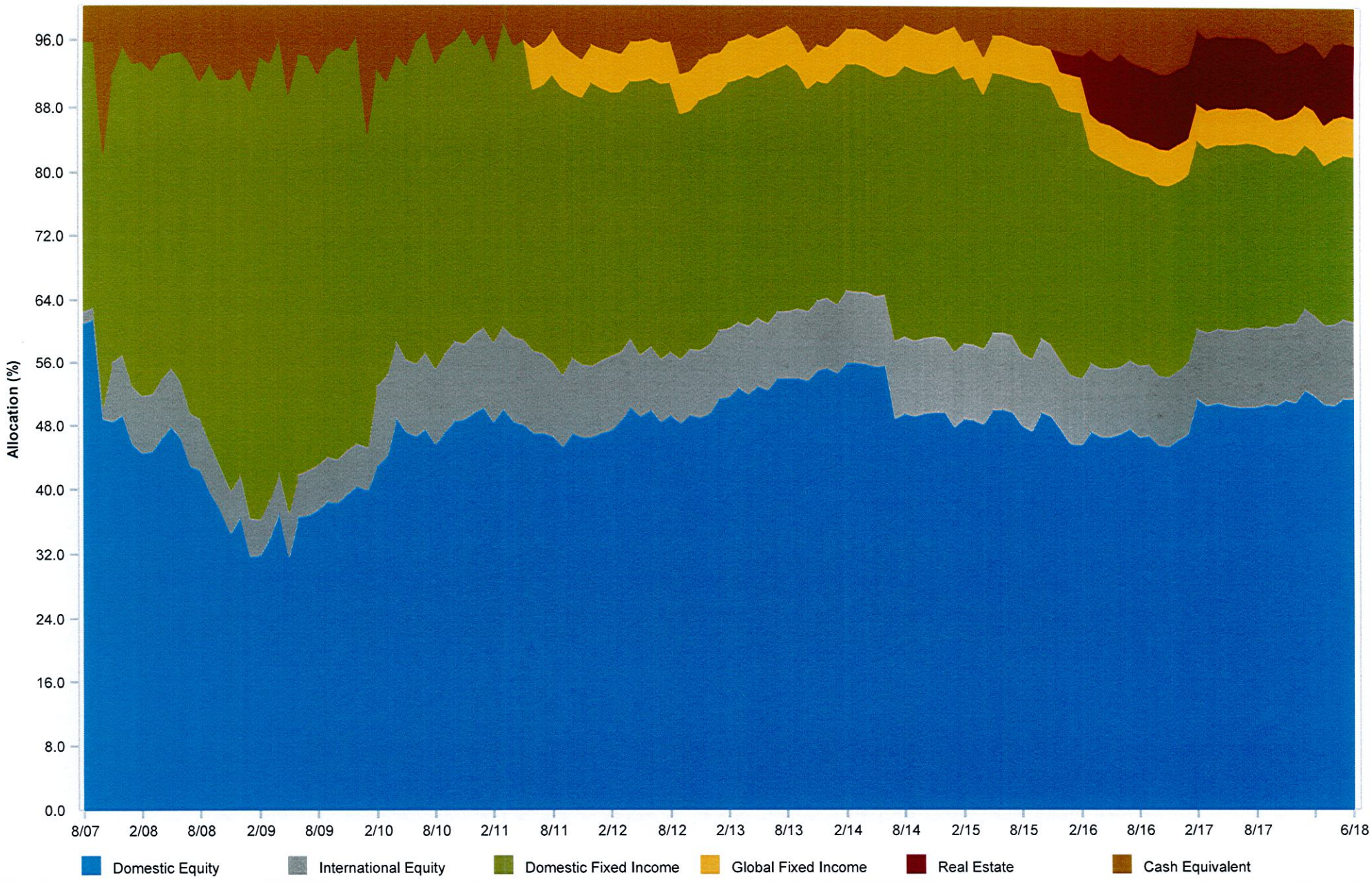


	US Equity	Intl. Equity	US Fixed Income	Intl. Fixed Income	Alternative Inv.	Real Estate	Cash
St. Pete Beach Fire	53.05 (18)	9.77 (89)	20.68 (78)	4.86 (44)	0.00	8.97 (35)	2.67 (14)
5th Percentile	60.77	24.57	44.23	7.56	21.29	13.56	4.26
1st Quartile	51.45	17.58	34.77	4.98	12.13	9.73	1.97
Median	45.82	14.85	28.43	4.81	8.27	6.60	0.97
3rd Quartile	41.41	12.98	21.48	4.32	2.84	5.02	0.40
95th Percentile	33.33	9.04	13.31	3.55	0.92	2.46	0.07
Population	136	128	137	58	25	84	127

Parentheses contain percentile rankings.

St. Pete Beach Firefighters' Retirement System
Asset Allocation History by Portfolio
As of June 30, 2018

	Jun-2018		Mar-2018		Dec-2017		Sep-2017		Jun-2017	
	($)	%	($)	%	($)	%	($)	%	($)	%
Total Equity	**8,340,460**	**62.82**	**8,140,582**	**62.45**	**8,142,777**	**62.94**	**7,680,985**	**62.31**	**7,457,852**	**62.14**
Domestic Equity	**7,042,912**	**53.05**	**6,817,314**	**52.30**	**6,833,039**	**52.81**	**6,453,183**	**52.35**	**6,288,589**	**52.40**
Anchor All Cap Value	1,681,691	12.67	1,634,688	12.54	1,648,405	12.74	1,602,747	13.00	1,574,463	13.12
Brown Large Cap Growth	1,824,468	13.74	1,806,604	13.86	1,788,211	13.82	1,656,439	13.44	1,607,316	13.39
Vanguard Total Stock Market Index (VITSX)	3,536,753	26.64	3,376,022	25.90	3,396,424	26.25	3,193,998	25.91	3,106,811	25.89
International Equity	**1,297,548**	**9.77**	**1,323,269**	**10.15**	**1,309,737**	**10.12**	**1,227,801**	**9.96**	**1,169,263**	**9.74**
American Funds EuroPacific Gr R6 (RERGX)	1,297,548	9.77	1,323,269	10.15	1,309,737	10.12	1,227,801	9.96	1,169,263	9.74
Total Fixed Income	**3,391,298**	**25.54**	**3,378,992**	**25.92**	**3,435,492**	**26.55**	**3,313,310**	**26.88**	**3,348,037**	**27.90**
Domestic Fixed Income	**2,745,446**	**20.68**	**2,722,126**	**20.88**	**2,787,612**	**21.55**	**2,775,919**	**22.52**	**2,806,649**	**23.39**
Insight Core Fixed Income	29	0.00	213,648	1.64	2,787,612	21.55	2,775,919	22.52	2,806,649	23.39
Dodge & Cox Income Fund (DODIX)	1,369,225	10.31	1,252,440	9.61	-	0.00	-	0.00	-	0.00
Metropolitan West Total Return (MWTIX)	1,376,192	10.37	1,256,038	9.64	-	0.00	-	0.00	-	0.00
Global Fixed Income	**645,852**	**4.86**	**656,866**	**5.04**	**647,879**	**5.01**	**537,391**	**4.36**	**541,388**	**4.51**
Templeton Global Bond R6 (FBNRX)	645,852	4.86	656,866	5.04	647,879	5.01	537,391	4.36	541,388	4.51
Total Real Estate	**1,191,051**	**8.97**	**1,078,551**	**8.27**	**1,070,717**	**8.28**	**1,068,284**	**8.67**	**1,064,210**	**8.87**
American Core Realty	1,191,051	8.97	1,078,551	8.27	1,070,717	8.28	1,068,284	8.67	1,064,210	8.87
Cash Accounts										
Receipt & Disbursement	353,859	2.67	436,279	3.35	289,149	2.23	265,170	2.15	131,144	1.09
Total Fund	**13,276,668**	**100.00**	**13,034,405**	**100.00**	**12,938,134**	**100.00**	**12,327,749**	**100.00**	**12,001,243**	**100.00**


Allocation (%)
96.0
88.0
80.0
72.0
64.0
56.0
48.0
40.0
32.0
24.0
16.0
8.0
0.0
8/07
2/08
8/08
2/09
8/09
2/10
8/10
2/11
8/11
2/12
8/12
2/13
8/13
2/14
8/14
2/15
8/15
2/16
8/16
2/17
8/17
6/18
Domestic Equity
International Equity
Domestic Fixed Income
Global Fixed Income
Real Estate
Cash Equivalent

	Market Value 04/01/2018	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Capital Gain/Loss	Market Value 06/30/2018
Total Equity	**8,140,582**	**-43,338**	**-**	**-**	**-6,678**	**-**	**28,075**	**221,818**	**8,340,460**
Domestic Equity	**6,817,314**	**-54,848**	**-**	**-**	**-6,678**	**-**	**26,857**	**260,267**	**7,042,912**
Anchor All Cap Value	1,634,688	14,413	-	-	-3,066	-	9,854	25,801	1,681,691
Brown Large Cap Growth	1,806,604	-98,087	-	-	-3,613	-	1,953	117,611	1,824,468
Vanguard Total Stock Market Index (VITSX)	3,376,022	28,826	-	-	-	-	15,051	116,855	3,536,753
International Equity	**1,323,269**	**11,510**	**-**	**-**	**-**	**-**	**1,218**	**-38,449**	**1,297,548**
American Funds EuroPacific Gr R6 (RERGX)	1,323,269	11,510	-	-	-	-	1,218	-38,449	1,297,548
Total Fixed Income	**3,378,992**	**35,963**	**-**	**-**	**-1,434**	**-**	**26,983**	**-49,206**	**3,391,298**
Domestic Fixed Income	**2,722,126**	**30,260**	**-**	**-**	**-1,434**	**-**	**18,704**	**-24,210**	**2,745,446**
Insight Core Fixed Income	213,648	-211,743	-	-	-1,434	-	-5	-436	29
Dodge & Cox Income Fund (DODIX)	1,252,440	121,002	-	-	-	-	9,559	-13,775	1,369,225
Metropolitan West Total Return (MWTIX)	1,256,038	121,002	-	-	-	-	9,151	-9,999	1,376,192
Global Fixed Income	**656,866**	**5,703**	**-**	**-**	**-**	**-**	**8,279**	**-24,996**	**645,852**
Templeton Global Bond R6 (FBNRX)	656,866	5,703	-	-	-	-	8,279	-24,996	645,852
Total Real Estate	**1,078,551**	**112,500**	**-**	**-**	**-**	**-**	**-**	**-**	**1,191,051**
American Core Realty	1,078,551	112,500	-	-	-	-	-	-	1,191,051
Cash Accounts									
Receipt & Disbursement	436,279	-105,125	232,784	-199,473	-	-11,559	953	-	353,859
Total Fund	**13,034,405**	**-**	**232,784**	**-199,473**	**-8,113**	**-11,559**	**56,011**	**172,613**	**13,276,668**

	Market Value 10/01/2017	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Capital Gain/Loss	Market Value 06/30/2018
Total Equity	**7,680,985**	**-125,838**	**-**	**-**	**-18,629**	**-**	**92,359**	**711,583**	**8,340,460**
Domestic Equity	**6,453,183**	**-167,348**	**-**	**-**	**-18,629**	**-**	**80,019**	**695,687**	**7,042,912**
Anchor All Cap Value	1,602,747	14,413	-	-	-9,162	-	28,528	45,165	1,681,691
Brown Large Cap Growth	1,656,439	-210,587	-	-	-9,467	-	5,809	382,274	1,824,468
Vanguard Total Stock Market Index (VITSX)	3,193,998	28,826	-	-	-	-	45,681	268,248	3,536,753
International Equity	**1,227,801**	**41,510**	**-**	**-**	**-**	**-**	**12,341**	**15,896**	**1,297,548**
American Funds EuroPacific Gr R6 (RERGX)	1,227,801	41,510	-	-	-	-	12,341	15,896	1,297,548
Total Fixed Income	**3,313,310**	**155,963**	**-**	**-**	**-6,124**	**-**	**87,561**	**-159,412**	**3,391,298**
Domestic Fixed Income	**2,775,919**	**30,260**	**-**	**-**	**-6,124**	**-**	**67,317**	**-121,926**	**2,745,446**
Insight Core Fixed Income	2,775,919	-2,711,743	-	-	-6,124	-	35,795	-93,817	29
Dodge & Cox Income Fund (DODIX)	-	1,371,002	-	-	-	-	21,131	-22,908	1,369,225
Metropolitan West Total Return (MWTIX)	-	1,371,002	-	-	-	-	10,391	-5,201	1,376,192
Global Fixed Income	**537,391**	**125,703**	**-**	**-**	**-**	**-**	**20,244**	**-37,486**	**645,852**
Templeton Global Bond R6 (FBNRX)	537,391	125,703	-	-	-	-	20,244	-37,486	645,852
Total Real Estate	**1,068,284**	**86,414**	**-**	**-**	**-5,999**	**-**	**32,085**	**10,267**	**1,191,051**
American Core Realty	1,068,284	86,414	-	-	-5,999	-	32,085	10,267	1,191,051
Cash Accounts									
Receipt & Disbursement	265,170	-116,539	913,933	-685,546	-	-25,606	2,446	-	353,859
Total Fund	**12,327,749**	**-**	**913,933**	**-685,546**	**-30,753**	**-25,606**	**214,451**	**562,438**	**13,276,668**

	QTR	FYTD	1 YR	3 YR	5 YR	Inception	Inception Date
Total Fund (Gross)	**1.76 (29)**	**6.25 (12)**	**9.90 (17)**	**7.30 (35)**	**8.36 (42)**	**7.91 (34)**	**06/01/1994**
Total Fund Policy	1.70 (31)	5.38 (33)	8.96 (39)	7.75 (20)	8.54 (38)	7.81 (38)	
All Public Plans-Total Fund Median	1.26	4.79	8.56	6.86	8.10	7.45	
Total Fund (Net)	**1.70**	**6.00**	**9.54**	**6.81**	**7.84**	**7.35**	**06/01/1994**
Total Equity	**3.07**	**10.49**	**15.80**	**10.24**	**11.73**	**9.12**	**06/01/1994**
Total Equity Policy	2.82	8.33	13.59	10.58	12.15	9.25	
Domestic Equity	**4.21 (16)**	**12.10 (8)**	**17.06 (11)**	**10.94 (25)**	**12.37 (37)**	**6.57 (54)**	**07/01/2007**
Domestic Equity Policy	3.89 (22)	9.76 (28)	14.78 (28)	11.58 (13)	13.29 (17)	7.79 (24)	
IM U.S. All Cap Core Equity (SA+CF+MF) Median	2.73	8.13	12.66	9.36	11.71	6.68	
International Equity	**-2.81 (70)**	**2.34 (10)**	**9.35 (8)**	**6.51 (1)**	**8.31 (2)**	**2.30 (27)**	**07/01/2007**
International Equity Policy	-2.39 (62)	1.45 (20)	7.79 (14)	5.56 (3)	6.48 (16)	1.43 (46)	
IM International Large Cap Core Equity (MF) Median	-2.02	0.27	5.17	3.62	5.44	1.13	
Total Fixed Income	**-0.66**	**-2.09**	**-1.15**	**1.67**	**2.35**	**5.67**	**06/01/1994**
Total Fixed Income Policy	-0.71	-1.00	0.00	1.93	2.40	5.42	
Domestic Fixed Income	**-0.20 (83)**	**-1.97 (100)**	**-1.08 (100)**	**1.61 (97)**	**2.34 (80)**	**4.80 (34)**	**07/01/2007**
Domestic Fixed Income Policy	-0.16 (76)	-1.23 (79)	-0.40 (81)	1.72 (87)	2.27 (87)	4.05 (88)	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-0.09	-0.95	0.00	2.08	2.66	4.47	
Global Fixed Income	**-2.54 (53)**	**-2.91 (93)**	**-1.72 (98)**	**1.39 (86)**	**1.98 (40)**	**2.40 (32)**	**07/01/2011**
FTSE World Government Bond Index	-3.35 (65)	0.09 (17)	1.90 (17)	2.81 (29)	1.11 (76)	0.51 (79)	
IM Global Fixed Income (MF) Median	-2.21	-0.95	0.44	2.27	1.76	1.88	
Total Real Estate	**0.00 (N/A)**	**4.00 (N/A)**	**5.96 (N/A)**	**N/A**	**N/A**	**6.97 (N/A)**	**01/01/2016**
NCREIF Fund Index-Open End Diversified Core (EW)	2.10 (N/A)	6.56 (N/A)	8.57 (N/A)	9.61 (N/A)	11.11 (N/A)	8.59 (N/A)	
IM U.S. Open End Private Real Estate (SA+CF) Median	N/A	N/A	N/A	N/A	N/A	N/A	

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.

	QTR	FYTD	1 YR	3 YR	5 YR	Inception	Inception Date
Domestic Equity Strategies							
Anchor All Cap Value	**2.18 (56)**	**4.60 (74)**	**8.47 (70)**	**8.74 (61)**	**10.72 (60)**	**14.47 (60)**	**05/01/2009**
Russell 3000 Value Index	1.71 (69)	3.86 (83)	7.25 (80)	8.48 (62)	10.40 (65)	14.15 (67)	
IM U.S. All Cap Value Equity (SA+CF) Median	2.43	6.78	10.09	9.12	10.96	15.03	
Brown Large Cap Growth	**6.63 (24)**	**23.95 (5)**	**30.03 (5)**	**14.51 (36)**	**14.67 (65)**	**13.04 (62)**	**04/01/2011**
Russell 1000 Growth Index	5.76 (40)	15.69 (43)	22.51 (42)	14.98 (26)	16.36 (38)	14.45 (31)	
IM U.S. Large Cap Growth Equity (SA+CF) Median	5.22	14.71	21.32	13.38	15.55	13.65	
Vanguard Total Stock Market Index (VITSX)	**3.91 (20)**	**9.83 (25)**	**14.81 (26)**	**N/A**	**N/A**	**13.50 (28)**	**03/01/2017**
Russell 3000 Index	3.89 (21)	9.76 (27)	14.78 (27)	11.58 (12)	13.29 (16)	13.45 (29)	
IM U.S. Multi-Cap Core Equity (MF) Median	2.71	8.08	12.49	9.36	11.67	11.87	
International Equity Strategies							
American Funds EuroPacific Gr R6 (RERGX)	**-2.81 (70)**	**2.34 (10)**	**9.36 (8)**	**6.51 (1)**	**8.35 (1)**	**8.79 (3)**	**11/01/2012**
MSCI AC World ex USA	-2.39 (62)	1.45 (20)	7.79 (14)	5.56 (3)	6.48 (16)	6.74 (35)	
IM International Large Cap Core Equity (MF) Median	-2.02	0.27	5.17	3.62	5.44	6.20	
Domestic Fixed Income Strategies							
Dodge & Cox Income Fund (DODIX)	**-0.33 (64)**	**N/A**	**N/A**	**N/A**	**N/A**	**-0.14 (84)**	**03/01/2018**
Blmbg. Barc. U.S. Aggregate Index	-0.16 (30)	-1.23 (33)	-0.40 (34)	1.72 (37)	2.27 (40)	0.48 (16)	
IM U.S. Broad Market Core Fixed Income (MF) Median	-0.25	-1.41	-0.59	1.60	2.14	0.22	
Metropolitan West Total Return (MWTIX)	**-0.09 (22)**	**N/A**	**N/A**	**N/A**	**N/A**	**0.39 (27)**	**03/01/2018**
Blmbg. Barc. U.S. Aggregate Index	-0.16 (30)	-1.23 (33)	-0.40 (34)	1.72 (37)	2.27 (40)	0.48 (16)	
IM U.S. Broad Market Core Fixed Income (MF) Median	-0.25	-1.41	-0.59	1.60	2.14	0.22	
Global Fixed Income Strategies							
Templeton Global Bond R6 (FBNRX)	**-2.54 (53)**	**-2.94 (93)**	**-1.75 (98)**	**1.38 (86)**	**1.99 (40)**	**2.40 (32)**	**07/01/2011**
FTSE World Government Bond Index	-3.35 (65)	0.09 (17)	1.90 (17)	2.81 (29)	1.11 (76)	0.51 (79)	
IM Global Fixed Income (MF) Median	-2.21	-0.95	0.44	2.27	1.76	1.88	
Real Estate Strategies							
American Core Realty	**0.00 (N/A)**	**4.00 (N/A)**	**5.96 (N/A)**	**N/A**	**N/A**	**6.97 (N/A)**	**01/01/2016**
NCREIF Fund Index-Open End Diversified Core (EW)	2.10 (N/A)	6.56 (N/A)	8.57 (N/A)	9.61 (N/A)	11.11 (N/A)	8.59 (N/A)	
IM U.S. Open End Private Real Estate (SA+CF) Median	N/A	N/A	N/A	N/A	N/A	N/A	

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.

St. Pete Beach Firefighters' Retirement System
Fiscal Year Returns
As of June 30, 2018

	FYTD	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012
Total Fund (Gross)	**6.25 (12)**	**10.36 (84)**	**10.19 (32)**	**-0.22 (44)**	**10.56 (42)**	**12.34 (54)**	**18.04 (48)**
Total Fund Policy	5.38 (32)	11.80 (58)	11.03 (13)	-0.49 (51)	10.69 (39)	11.27 (72)	17.76 (54)
All Public Plans-Total Fund Median	4.78	12.20	9.67	-0.49	10.19	12.50	17.96
Total Fund (Net)	**6.00**	**9.85**	**9.60**	**-0.73**	**9.99**	**11.75**	**17.49**
Total Equity	**10.49**	**14.95**	**13.84**	**-1.23**	**13.64**	**21.04**	**26.00**
Total Equity Policy	8.33	19.01	14.09	-2.46	15.56	20.87	26.17
Domestic Equity	**12.10 (8)**	**13.92 (83)**	**14.84 (18)**	**-0.53 (34)**	**14.86 (66)**	**21.06 (68)**	**28.16 (40)**
Domestic Equity Policy	9.76 (28)	18.71 (35)	14.96 (16)	-0.49 (33)	17.76 (31)	21.60 (61)	30.20 (19)
IM U.S. All Cap Core Equity (SA+CF+MF) Median	8.13	17.38	11.67	-1.79	16.29	22.91	26.66
International Equity	**2.34 (10)**	**20.62 (18)**	**8.52 (11)**	**-4.90 (6)**	**6.81 (11)**	**20.92 (59)**	**14.62 (59)**
International Equity Policy	1.45 (20)	20.15 (23)	9.80 (6)	-11.78 (85)	5.22 (27)	16.98 (78)	14.88 (54)
IM International Large Cap Core Equity (MF) Median	0.27	18.70	5.55	-7.88	3.98	21.41	15.12
Total Fixed Income	**-2.09**	**2.09**	**4.88**	**1.37**	**5.11**	**-0.68**	**7.90**
Total Fixed Income Policy	-1.00	-0.39	6.08	2.94	3.96	-1.68	5.16
Domestic Fixed Income	**-1.97 (100)**	**0.18 (74)**	**5.58 (56)**	**2.68 (73)**	**4.91 (33)**	**-1.28 (52)**	**7.18 (39)**
Domestic Fixed Income Policy	-1.23 (79)	0.07 (86)	5.19 (80)	2.94 (59)	3.96 (81)	-1.68 (80)	5.16 (91)
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-0.95	0.63	5.66	3.02	4.50	-1.24	6.66
Global Fixed Income	**-2.91 (93)**	**13.35 (1)**	**0.84 (100)**	**-7.56 (90)**	**6.39 (11)**	**3.52 (2)**	**13.25 (3)**
FTSE World Government Bond Index	0.09 (17)	-2.69 (94)	9.71 (19)	-3.83 (49)	-0.07 (96)	-4.60 (82)	3.29 (96)
IM Global Fixed Income (MF) Median	-0.95	1.02	7.39	-3.89	3.37	-1.81	7.17
Total Real Estate	**4.00 (N/A)**	**7.52 (67)**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
NCREIF Fund Index-Open End Diversified Core (EW)	6.56 (N/A)	7.81 (60)	10.62 (69)	14.71 (62)	12.39 (68)	12.47 (67)	11.77 (66)
IM U.S. Open End Private Real Estate (SA+CF) Median	N/A	8.29	11.32	15.45	12.78	13.18	12.90

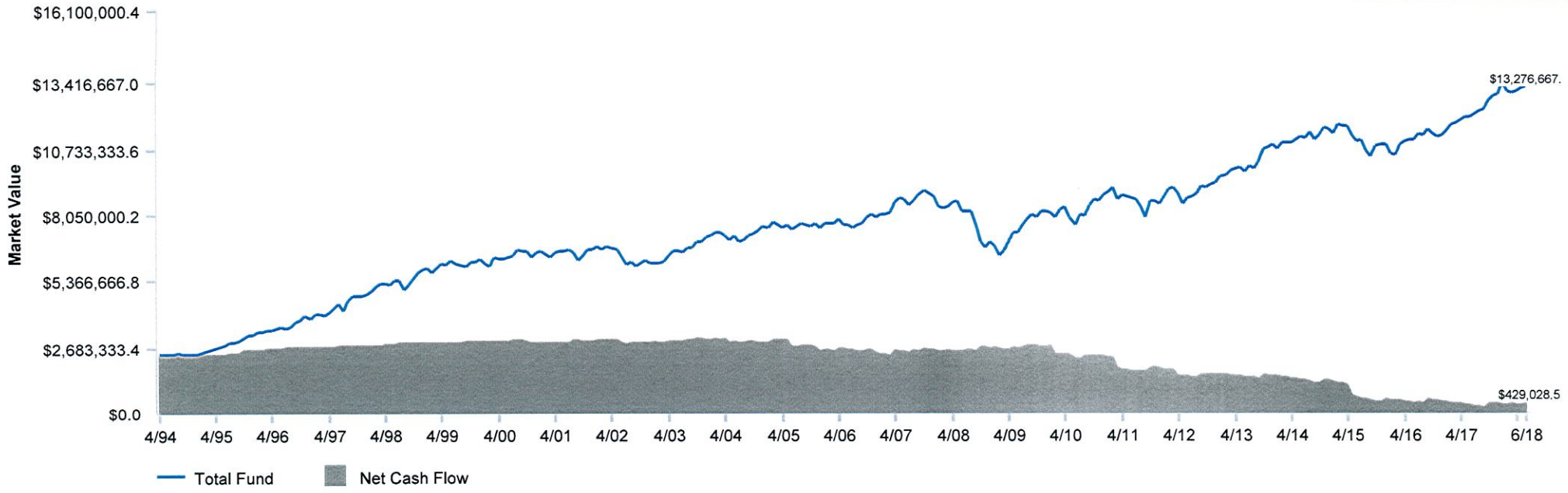
Returns for periods greater than one year are annualized.
Returns are expressed as percentages.

St. Pete Beach Firefighters' Retirement System
Fiscal Year Returns
As of June 30, 2018

	FYTD	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012
Domestic Equity Strategies							
Anchor All Cap Value	**4.60 (74)**	**12.59 (90)**	**19.97 (10)**	**-6.16 (78)**	**18.59 (15)**	**22.65 (74)**	**25.54 (65)**
Russell 3000 Value Index	3.86 (83)	15.53 (72)	16.38 (28)	-4.22 (68)	17.66 (26)	22.67 (74)	31.05 (19)
IM U.S. All Cap Value Equity (SA+CF) Median	6.78	17.64	14.16	-2.77	15.29	26.41	27.69
Brown Large Cap Growth	**23.95 (5)**	**15.69 (90)**	**10.15 (69)**	**5.02 (32)**	**10.47 (98)**	**19.47 (61)**	**31.09 (23)**
Russell 1000 Growth Index	15.69 (43)	21.94 (37)	13.76 (22)	3.17 (55)	19.15 (40)	19.27 (64)	29.19 (39)
IM U.S. Large Cap Growth Equity (SA+CF) Median	14.71	20.81	11.64	3.61	18.15	20.25	27.65
Vanguard Total Stock Market Index (VITSX)	**9.83 (25)**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Russell 3000 Index	9.76 (27)	18.71 (34)	14.96 (16)	-0.49 (32)	17.76 (31)	21.60 (59)	30.20 (18)
IM U.S. Multi-Cap Core Equity (MF) Median	8.08	17.32	11.67	-1.83	16.29	22.80	26.64
International Equity Strategies							
American Funds EuroPacific Gr R6 (RERGX)	**2.34 (10)**	**20.63 (18)**	**8.52 (11)**	**-4.91 (6)**	**6.99 (10)**	**N/A**	**N/A**
MSCI AC World ex USA	1.45 (20)	20.15 (23)	9.80 (6)	-11.78 (85)	5.22 (27)	16.98 (78)	15.04 (52)
IM International Large Cap Core Equity (MF) Median	0.27	18.70	5.55	-7.88	3.98	21.41	15.12
Domestic Fixed Income Strategies							
Dodge & Cox Income Fund (DODIX)	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Blmbg. Barc. U.S. Aggregate Index	-1.23 (33)	0.07 (64)	5.19 (51)	2.94 (8)	3.96 (59)	-1.68 (53)	5.16 (81)
IM U.S. Broad Market Core Fixed Income (MF) Median	-1.41	0.48	5.21	1.87	4.19	-1.62	6.79
Metropolitan West Total Return (MWTIX)	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Blmbg. Barc. U.S. Aggregate Index	-1.23 (33)	0.07 (64)	5.19 (51)	2.94 (8)	3.96 (59)	-1.68 (53)	5.16 (81)
IM U.S. Broad Market Core Fixed Income (MF) Median	-1.41	0.48	5.21	1.87	4.19	-1.62	6.79
Global Fixed Income Strategies							
Templeton Global Bond R6 (FBNRX)	**-2.94 (93)**	**13.35 (1)**	**0.84 (100)**	**-7.57 (90)**	**6.46 (10)**	**3.52 (2)**	**13.25 (3)**
FTSE World Government Bond Index	0.09 (17)	-2.69 (94)	9.71 (19)	-3.83 (49)	-0.07 (96)	-4.60 (82)	3.29 (96)
IM Global Fixed Income (MF) Median	-0.95	1.02	7.39	-3.89	3.37	-1.81	7.17
Real Estate Strategies							
American Core Realty	**4.00 (N/A)**	**7.52 (67)**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
NCREIF Fund Index-Open End Diversified Core (EW)	6.56 (N/A)	7.81 (60)	10.62 (69)	14.71 (62)	12.39 (68)	12.47 (67)	11.77 (66)
IM U.S. Open End Private Real Estate (SA+CF) Median	N/A	8.29	11.32	15.45	12.78	13.18	12.90

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.

Plan Growth



Trailing Returns

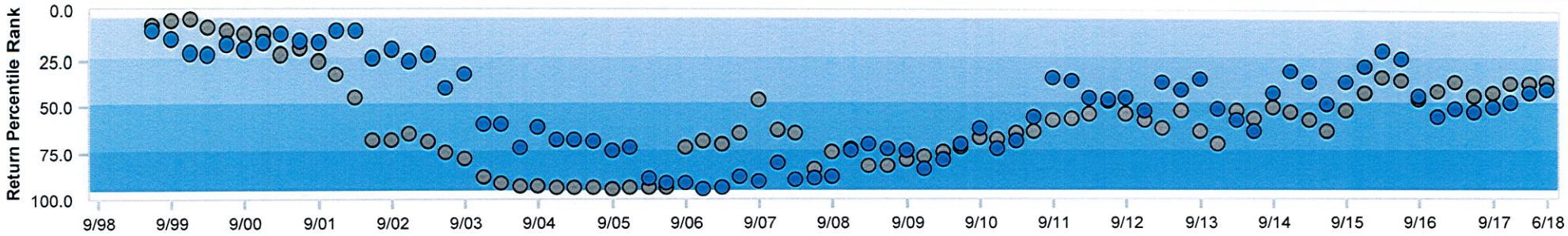
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
Total Fund	1.76 (29)	2.45 (8)	9.90 (17)	9.74 (69)	7.30 (36)	8.36 (42)	8.12 (36)	7.21 (44)	6.79 (74)
Total Fund Policy	1.70 (31)	1.30 (33)	8.96 (38)	10.29 (48)	7.75 (20)	8.54 (38)	8.12 (36)	7.20 (45)	6.84 (71)
Median	1.26	0.99	8.55	10.20	6.84	8.09	7.78	7.11	7.11

Fiscal Year Returns

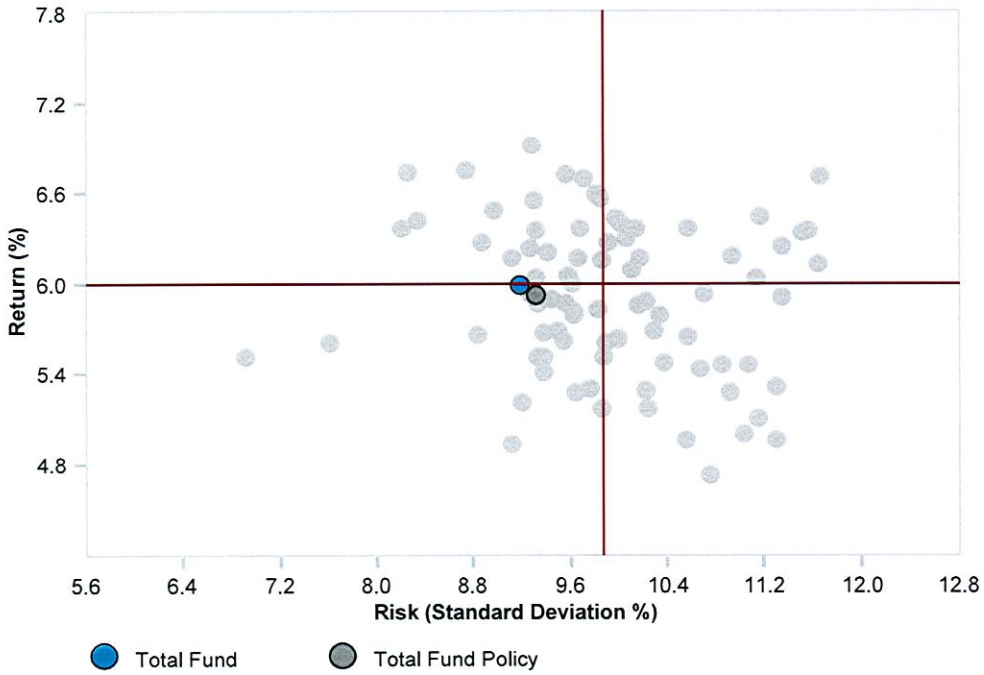
	FYTD	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
Total Fund	6.25 (12)	10.36 (84)	10.19 (33)	-0.22 (42)	10.56 (42)	12.34 (52)	18.04 (61)	1.11 (20)	10.31 (38)
Total Fund Policy	5.38 (32)	11.80 (62)	11.03 (11)	-0.49 (49)	10.69 (37)	11.27 (77)	17.76 (65)	1.27 (17)	10.10 (39)
Median	4.78	12.23	9.61	-0.67	10.19	12.37	18.29	-0.04	9.75

Peer Group: All Public Plans-Total Fund

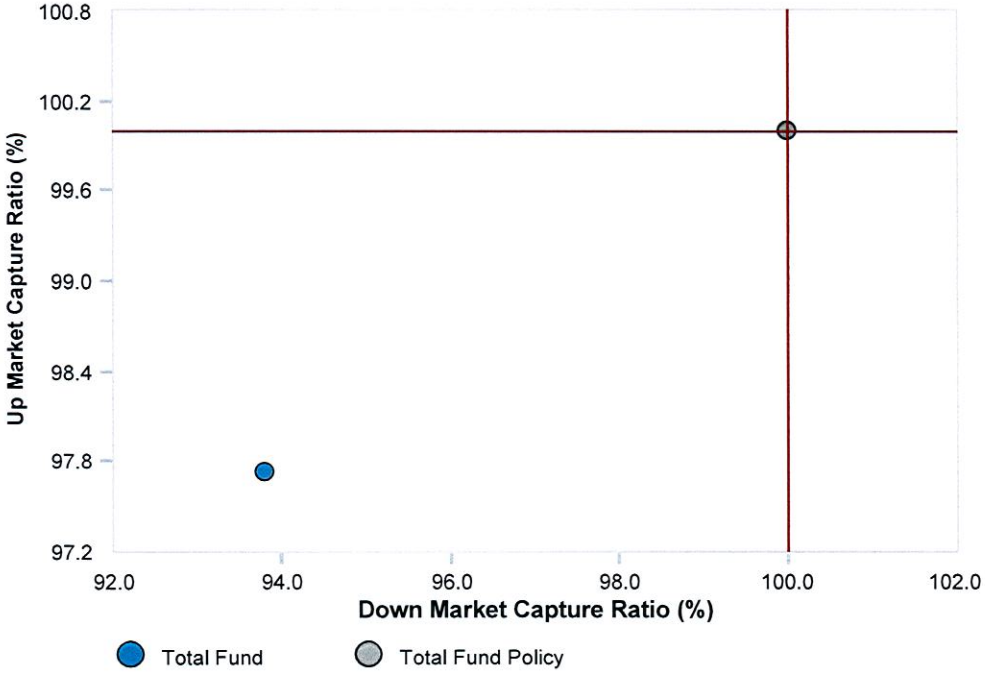
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present



Historical Statistics: October 1, 2007 To June 30, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
Total Fund	55.81	-26.38	0.23	0.05	0.62	0.03	0.06	0.97	1.59
Total Fund Policy	0.00	-27.92	0.00	0.00	0.60	N/A	0.06	1.00	0.00

Peer Group: All Public Plans-Total Fund

Multi Timeperiod Statistics

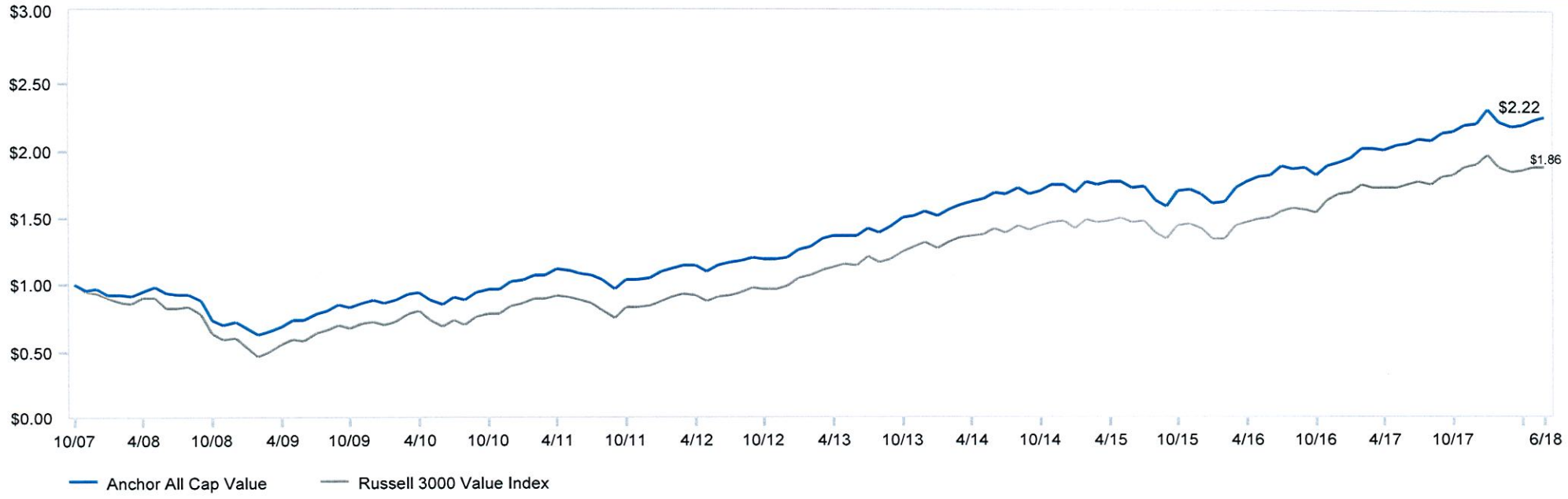
	1 Qtr Return		1 Quarter Ending Mar-2018 Return		1 Quarter Ending Dec-2017 Return		1 Quarter Ending Sep-2017 Return		3 YR Return		5 YR Return		3 YR Down Market Capture		5 YR Down Market Capture	
Total Fund (Gross)	**1.76**	**(29)**	**0.67**	**(7)**	**3.71**	**(53)**	**3.43**	**(52)**	**7.30**	**(36)**	**8.36**	**(42)**	**78.25**	**(90)**	**78.43**	**(87)**
Total Fund Policy	1.70	(31)	-0.39	(57)	4.02	(29)	3.40	(56)	7.75	(20)	8.54	(38)	100.00		100.00	
All Public Plans-Total Fund Median	1.26		-0.30		3.74		3.45		6.84		8.09		114.58		118.45	
Total Fund (Net)	**1.70**		**0.58**		**3.62**		**3.34**		**6.81**		**7.84**		**82.66**		**86.37**	
Total Fund Policy	1.70		-0.39		4.02		3.40		7.75		8.54		100.00		100.00	
Total Equity	**3.07**		**1.42**		**5.70**		**4.80**		**10.24**		**11.73**		**67.39**		**67.34**	
Total Equity Policy	2.82		-0.72		6.12		4.86		10.58		12.15		100.00		100.00	
Domestic Equity	**4.21**	**(16)**	**1.49**	**(8)**	**5.98**	**(52)**	**4.42**	**(45)**	**10.94**	**(25)**	**12.37**	**(37)**	**68.27**	**(87)**	**68.27**	**(89)**
Domestic Equity Policy	3.89	(22)	-0.64	(52)	6.34	(40)	4.57	(39)	11.58	(13)	13.29	(17)	100.00		100.00	
IM U.S. All Cap Core Equity (SA+CF+MF) Median	2.73		-0.61		6.01		4.29		9.36		11.71		106.08		106.76	
International Equity	**-2.81**	**(70)**	**1.03**	**(8)**	**4.23**	**(47)**	**6.84**	**(15)**	**6.51**	**(1)**	**8.31**	**(2)**	**105.33**	**(73)**	**92.10**	**(96)**
International Equity Policy	-2.39	(62)	-1.08	(47)	5.06	(17)	6.25	(28)	5.56	(3)	6.48	(16)	100.00		100.00	
IM International Large Cap Core Equity (MF) Median	-2.02		-1.16		4.18		5.50		3.62		5.44		113.63		107.87	
Total Fixed Income	**-0.66**		**-1.58**		**0.14**		**0.96**		**1.67**		**2.35**		**55.99**		**58.64**	
Total Fixed Income Policy	-0.71		-0.79		0.50		1.01		1.93		2.40		100.00		100.00	
Domestic Fixed Income	**-0.20**	**(83)**	**-2.27**	**(100)**	**0.51**	**(52)**	**0.91**	**(54)**	**1.61**	**(97)**	**2.34**	**(80)**	**106.41**	**(3)**	**104.14**	**(4)**
Domestic Fixed Income Policy	-0.16	(76)	-1.46	(67)	0.39	(80)	0.85	(77)	1.72	(87)	2.27	(87)	100.00		100.00	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-0.09		-1.38		0.51		0.93		2.08		2.66		92.22		88.53	
Global Fixed Income	**-2.54**	**(53)**	**1.39**	**(29)**	**-1.74**	**(100)**	**1.23**	**(69)**	**1.39**	**(86)**	**1.98**	**(40)**	**-61.56**	**(100)**	**-39.36**	**(100)**
FTSE World Government Bond Index	-3.35	(65)	2.50	(5)	1.04	(19)	1.81	(29)	2.81	(29)	1.11	(76)	100.00		100.00	
IM Global Fixed Income (MF) Median	-2.21		0.74		0.67		1.59		2.27		1.76		64.04		62.87	
Total Real Estate	**0.00**	**(N/A)**	**2.23**	**(46)**	**1.73**	**(89)**	**1.88**	**(44)**	**N/A**		**N/A**		**N/A**		**N/A**	
NCREIF Fund Index-Open End Diversified Core (EW)	2.10	(N/A)	2.17	(59)	2.15	(57)	1.89	(44)	9.61	(N/A)	11.11	(N/A)	N/A		N/A	
IM U.S. Open End Private Real Estate (SA+CF) Median	N/A		2.22		2.25		1.75		N/A		N/A		N/A		N/A	

	1 Qtr Return		1 Quarter Ending Mar-2018 Return		1 Quarter Ending Dec-2017 Return		1 Quarter Ending Sep-2017 Return		3 YR Return		5 YR Return		3 YR Down Market Capture		5 YR Down Market Capture	
Domestic Equity Strategies																
Anchor All Cap Value	**2.18**	**(56)**	**-0.65**	**(25)**	**3.04**	**(95)**	**3.70**	**(51)**	**8.74**	**(61)**	**10.72**	**(60)**	**84.56**	**(65)**	**76.04**	**(49)**
Russell 3000 Value Index	1.71	(69)	-2.82	(77)	5.08	(82)	3.27	(68)	8.48	(62)	10.40	(65)	100.00		100.00	
IM U.S. All Cap Value Equity (SA+CF) Median	2.43		-1.77		5.93		3.73		9.12		10.96		92.45		75.86	
Brown Large Cap Growth	**6.63**	**(24)**	**7.49**	**(4)**	**8.13**	**(16)**	**4.91**	**(65)**	**14.51**	**(36)**	**14.67**	**(65)**	**93.53**	**(69)**	**93.53**	**(69)**
Russell 1000 Growth Index	5.76	(40)	1.42	(61)	7.86	(22)	5.90	(35)	14.98	(26)	16.36	(38)	100.00		100.00	
IM U.S. Large Cap Growth Equity (SA+CF) Median	5.22		1.99		6.92		5.42		13.40		15.56		110.32		110.25	
Vanguard Total Stock Market Index (VITSX)	**3.91**	**(20)**	**-0.60**	**(48)**	**6.34**	**(40)**	**4.54**	**(41)**	**N/A**		**N/A**		**N/A**		**N/A**	
Russell 3000 Index	3.89	(21)	-0.64	(52)	6.34	(40)	4.57	(38)	11.58	(12)	13.29	(16)	100.00		100.00	
IM U.S. Multi-Cap Core Equity (MF) Median	2.71		-0.63		5.99		4.28		9.36		11.67		106.55		107.47	
International Equity Strategies																
American Funds EuroPacific Gr R6 (RERGX)	**-2.81**	**(70)**	**1.03**	**(8)**	**4.23**	**(47)**	**6.86**	**(15)**	**6.51**	**(1)**	**8.35**	**(1)**	**105.33**	**(73)**	**91.52**	**(96)**
MSCI AC World ex USA	-2.39	(62)	-1.08	(47)	5.06	(17)	6.25	(28)	5.56	(3)	6.48	(16)	100.00		100.00	
IM International Large Cap Core Equity (MF) Median	-2.02		-1.16		4.18		5.50		3.62		5.44		113.63		107.87	
Domestic Fixed Income Strategies																
Dodge & Cox Income Fund (DODIX)	**-0.33**	**(64)**	**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**	
Blmbg. Barc. U.S. Aggregate Index	-0.16	(30)	-1.46	(46)	0.39	(39)	0.85	(42)	1.72	(37)	2.27	(40)	100.00		100.00	
IM U.S. Broad Market Core Fixed Income (MF) Median	-0.25		-1.48		0.34		0.81		1.60		2.14		100.06		95.54	
Metropolitan West Total Return (MWTIX)	**-0.09**	**(22)**	**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**	
Blmbg. Barc. U.S. Aggregate Index	-0.16	(30)	-1.46	(46)	0.39	(39)	0.85	(42)	1.72	(37)	2.27	(40)	100.00		100.00	
IM U.S. Broad Market Core Fixed Income (MF) Median	-0.25		-1.48		0.34		0.81		1.60		2.14		100.06		95.54	
Global Fixed Income Strategies																
Templeton Global Bond R6 (FBNRX)	**-2.54**	**(53)**	**1.39**	**(29)**	**-1.77**	**(100)**	**1.23**	**(69)**	**1.38**	**(86)**	**1.99**	**(40)**	**-61.56**	**(100)**	**-39.58**	**(100)**
FTSE World Government Bond Index	-3.35	(65)	2.50	(5)	1.04	(19)	1.81	(29)	2.81	(29)	1.11	(76)	100.00		100.00	
IM Global Fixed Income (MF) Median	-2.21		0.74		0.67		1.59		2.27		1.76		64.04		62.87	
Real Estate Strategies																
American Core Realty	**0.00**	**(N/A)**	**2.23**	**(46)**	**1.73**	**(89)**	**1.88**	**(44)**	**N/A**		**N/A**		**N/A**		**N/A**	
NCREIF Fund Index-Open End Diversified Core (EW)	2.10	(N/A)	2.17	(59)	2.15	(57)	1.89	(44)	9.61	(N/A)	11.11	(N/A)	N/A		N/A	
IM U.S. Open End Private Real Estate (SA+CF) Median	N/A		2.22		2.25		1.75		N/A		N/A		N/A		N/A	

	Estimated Annual Fee (%)	06/30/18 Market Value	06/30/18 Allocation (%)	Estimated Annual Fee ($)
Domestic Equity				
Anchor All Cap Value	0.75	1,681,691	12.67	12,613
Brown Large Cap Growth	0.80	1,824,468	13.74	14,596
Vanguard Total Stock Market Index (VITSX)	0.04	3,536,753	26.64	1,415
International Equity				
American Funds EuroPacific Gr R6 (RERGX)	0.50	1,297,548	9.77	6,488
Domestic Fixed Income				
Dodge & Cox Income Fund (DODIX)	0.43	1,369,225	10.31	5,888
Metropolitan West Total Return (MWTIX)	0.44	1,376,192	10.37	6,055
Global Fixed Income				
Templeton Global Bond R6 (FBNRX)	0.48	645,852	4.86	3,100
Real Estate				
American Core Realty	1.10	1,191,051	8.97	13,102
Cash Accounts				
Receipt & Disbursement	0.00	353,859	2.67	-
Total Fund	0.48	13,276,668	100.00	63,256

Long-Term
Manager Composite Performance

Growth of a Dollar



Trailing Returns

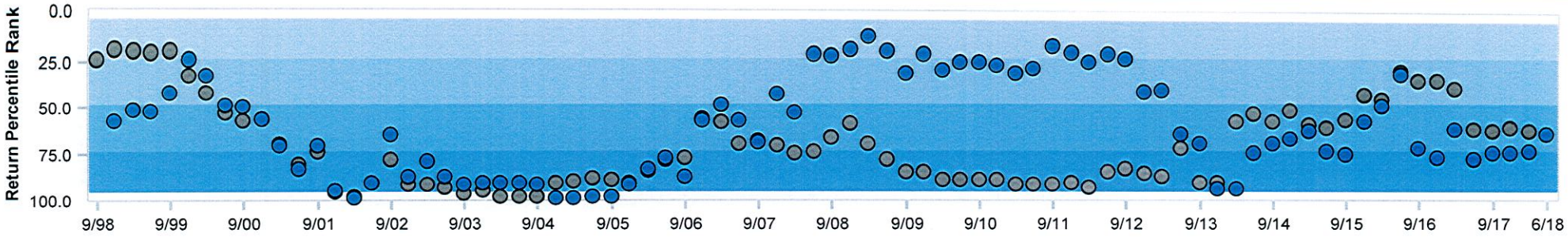
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
Anchor All Cap Value	2.72 (44)	1.86 (23)	9.30 (65)	10.94 (82)	9.21 (49)	10.48 (65)	10.89 (58)	9.01 (76)	10.50 (45)
Russell 3000 Value Index	1.71 (69)	-1.16 (85)	7.25 (80)	11.64 (78)	8.48 (62)	10.40 (65)	11.25 (50)	8.60 (83)	8.73 (87)
Median	2.43	0.29	10.09	14.60	9.12	10.96	11.21	9.92	10.32

Fiscal Year Returns

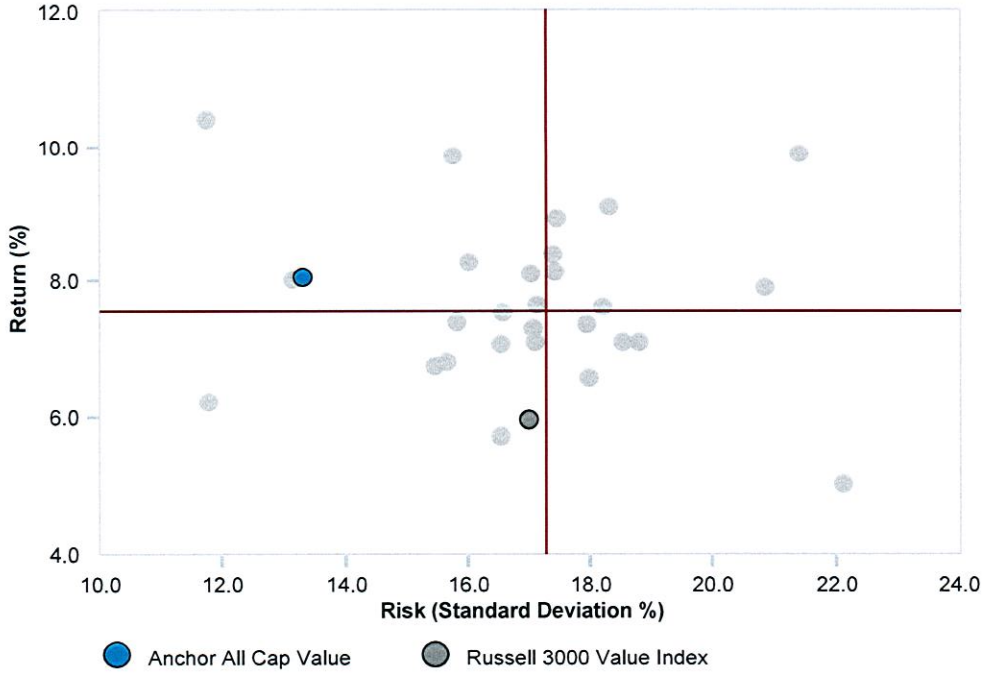
	FYTD	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
Anchor All Cap Value	5.37 (63)	13.37 (86)	18.64 (16)	-5.51 (78)	17.28 (30)	19.08 (94)	24.77 (71)	1.62 (26)	11.62 (48)
Russell 3000 Value Index	3.86 (83)	15.53 (72)	16.38 (28)	-4.22 (68)	17.66 (26)	22.67 (74)	31.05 (19)	-2.22 (62)	9.15 (74)
Median	6.78	17.64	14.16	-2.77	15.29	26.41	27.69	-1.23	11.23

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. All Cap Value Equity (SA+CF)

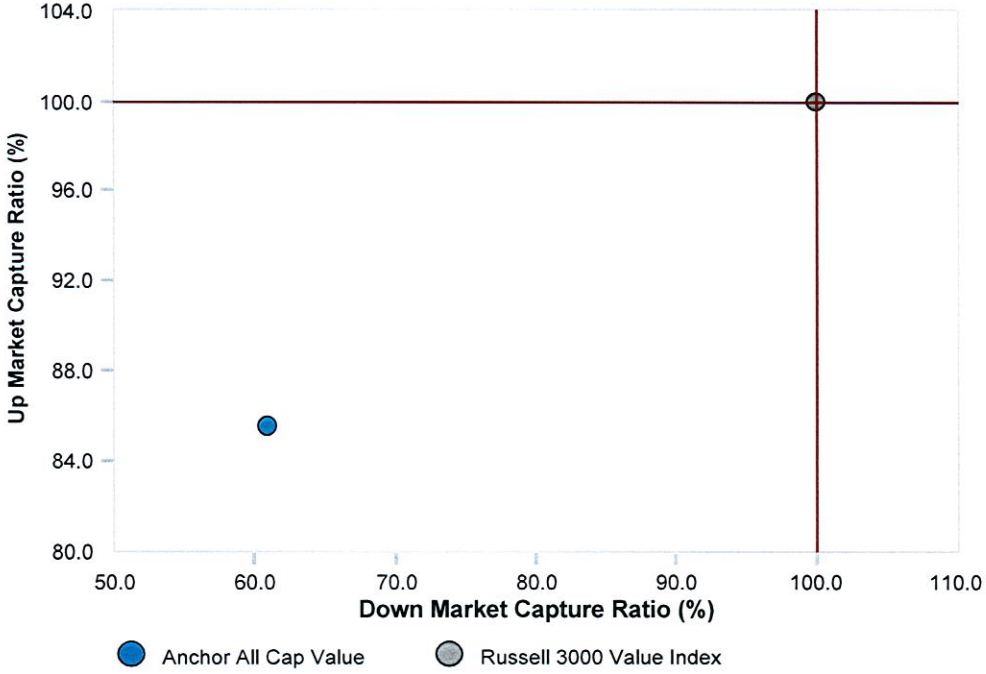
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present

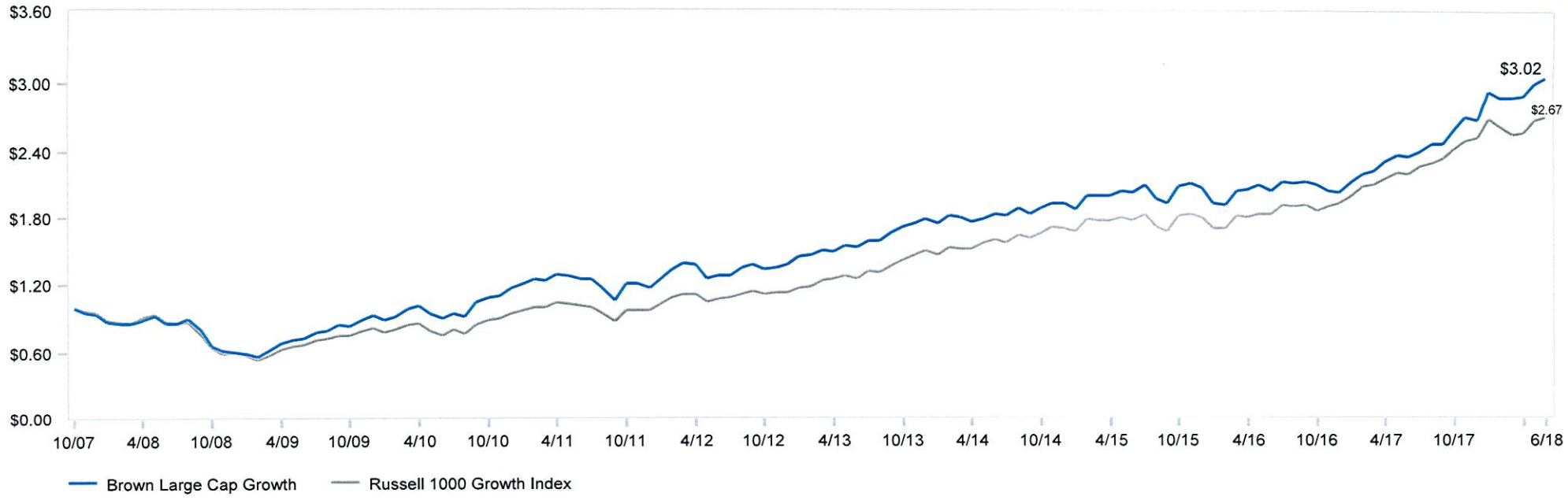


Historical Statistics: October 1, 2007 To June 30, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
Anchor All Cap Value	58.14	-33.61	3.28	1.40	0.61	0.24	0.11	0.75	5.78
Russell 3000 Value Index	0.00	-50.22	0.00	0.00	0.40	N/A	0.07	1.00	0.00

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. All Cap Value Equity (SA+CF)

Growth of a Dollar



Trailing Returns

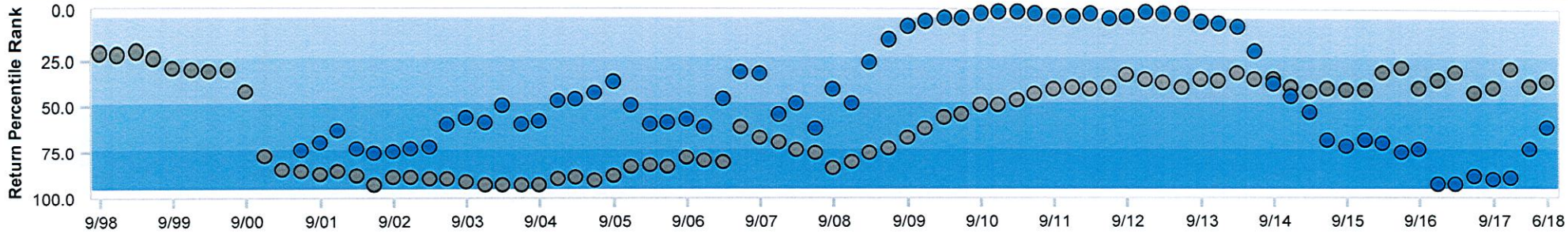
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
Brown Large Cap Growth	6.63 (24)	14.49 (6)	30.00 (5)	22.19 (38)	14.69 (32)	14.79 (62)	13.47 (61)	13.41 (8)	11.65 (21)
Russell 1000 Growth Index	5.76 (40)	7.25 (50)	22.51 (42)	21.46 (42)	14.98 (26)	16.36 (38)	14.88 (30)	11.83 (34)	10.30 (62)
Median	5.22	6.85	21.29	20.73	13.40	15.56	13.96	11.34	10.59

Fiscal Year Returns

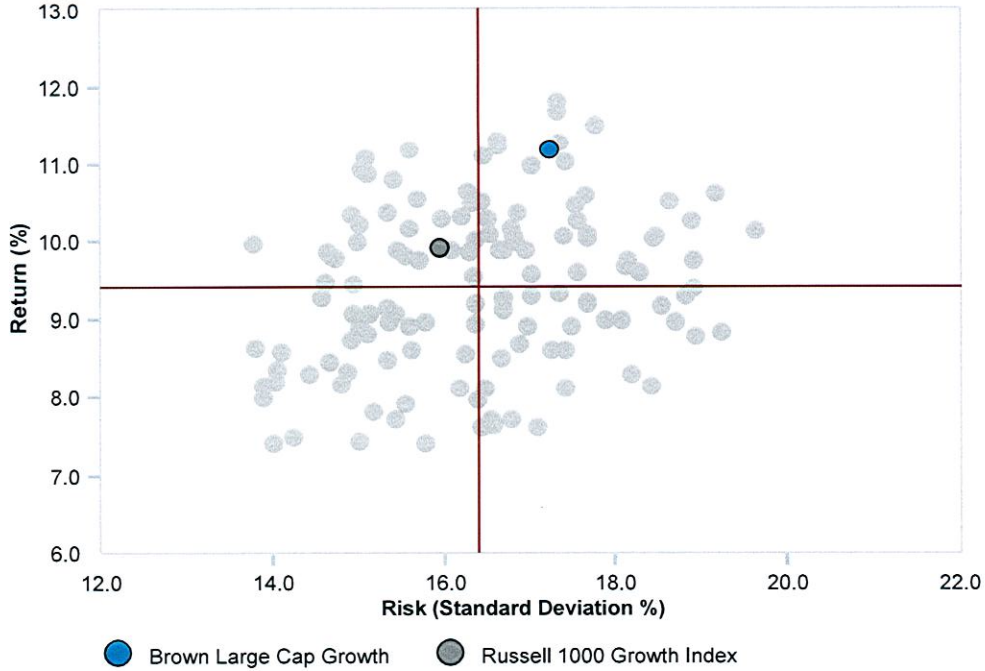
	FYTD	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
Brown Large Cap Growth	23.82 (5)	16.12 (88)	10.38 (66)	5.09 (32)	10.50 (98)	19.49 (60)	31.32 (21)	0.70 (58)	22.25 (4)
Russell 1000 Growth Index	15.69 (43)	21.94 (37)	13.76 (22)	3.17 (55)	19.15 (40)	19.27 (64)	29.19 (39)	3.78 (30)	12.65 (35)
Median	14.70	20.81	11.64	3.61	18.15	20.25	27.65	1.37	11.27

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Large Cap Growth Equity (SA+CF)

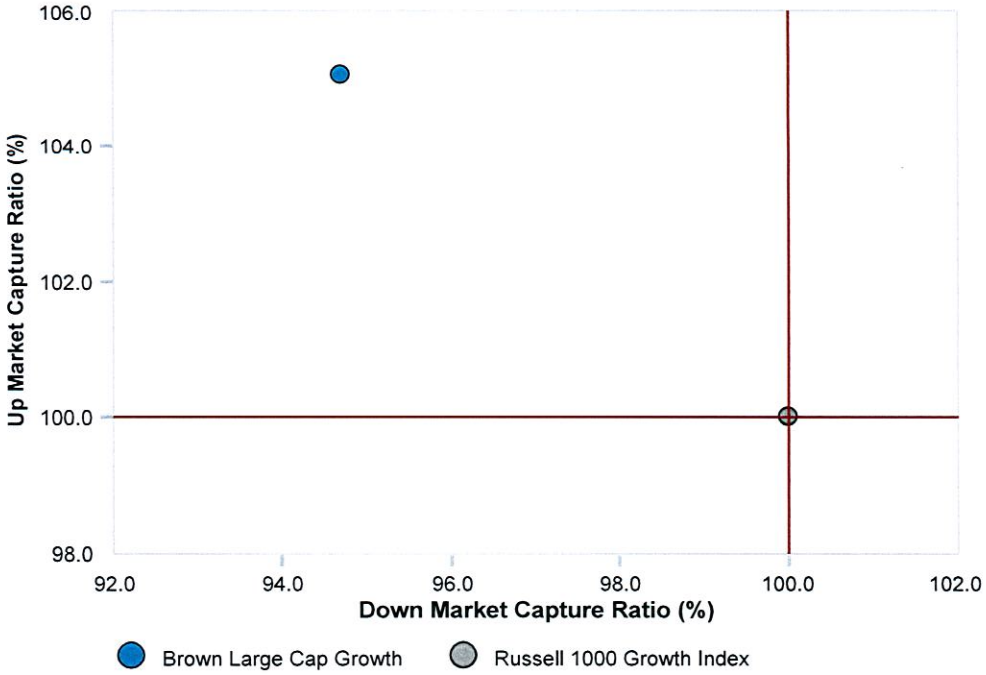
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present

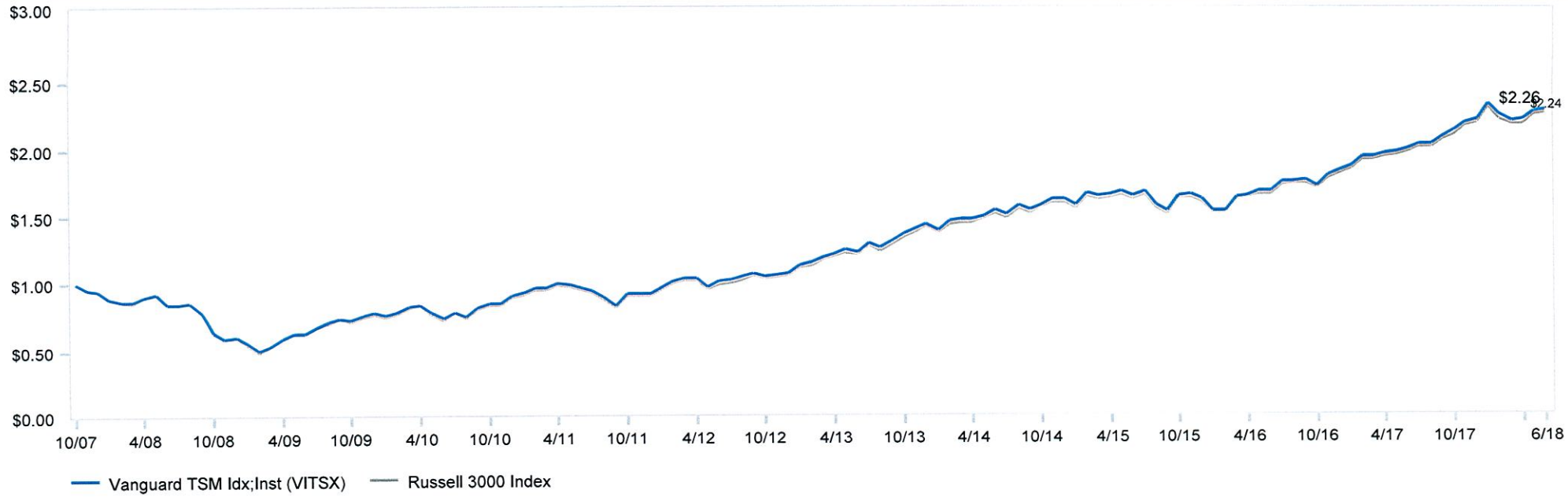


Historical Statistics: October 1, 2007 To June 30, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
Brown Large Cap Growth	65.12	-37.90	0.91	1.38	0.67	0.30	0.11	1.04	4.61
Russell 1000 Growth Index	0.00	-41.43	0.00	0.00	0.64	N/A	0.10	1.00	0.00

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Large Cap Growth Equity (SA+CF)

Growth of a Dollar



Trailing Returns

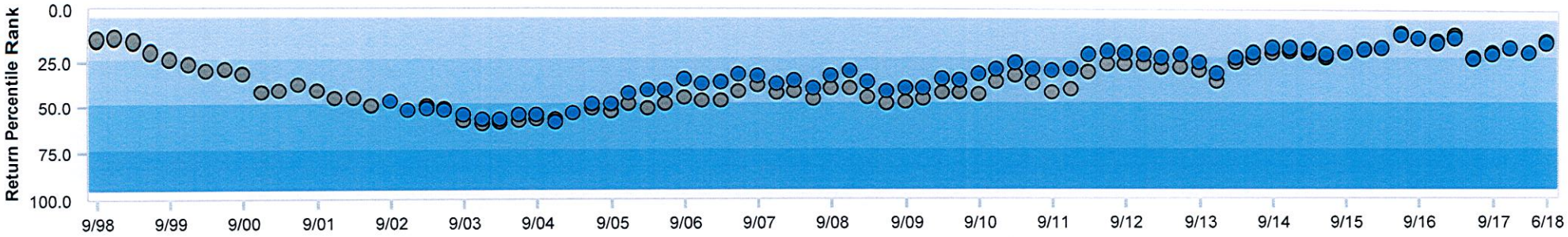
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
Vanguard TSM Idx;Inst (VITSX)	3.91 (20)	3.28 (25)	14.82 (26)	16.64 (32)	11.59 (12)	13.27 (17)	13.01 (14)	10.34 (13)	9.78 (17)
Russell 3000 Index	3.89 (21)	3.22 (26)	14.78 (27)	16.63 (32)	11.58 (12)	13.29 (16)	13.01 (14)	10.23 (17)	9.61 (23)
Median	2.71	1.98	12.49	15.43	9.36	11.67	11.23	8.83	8.72

Fiscal Year Returns

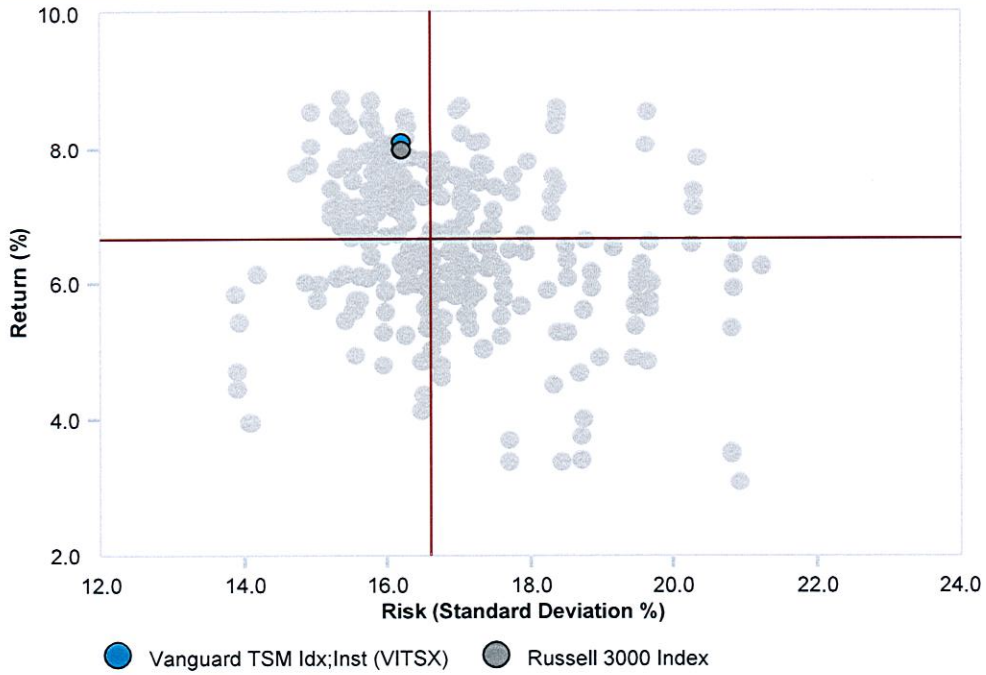
	FYTD	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
Vanguard TSM Idx;Inst (VITSX)	9.83 (25)	18.64 (36)	15.00 (15)	-0.57 (33)	17.76 (31)	21.52 (60)	30.24 (16)	0.72 (25)	11.13 (28)
Russell 3000 Index	9.76 (27)	18.71 (34)	14.96 (16)	-0.49 (32)	17.76 (31)	21.60 (59)	30.20 (18)	0.55 (29)	10.96 (31)
Median	8.08	17.32	11.67	-1.83	16.29	22.80	26.64	-1.49	9.38

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Multi-Cap Core Equity (MF)

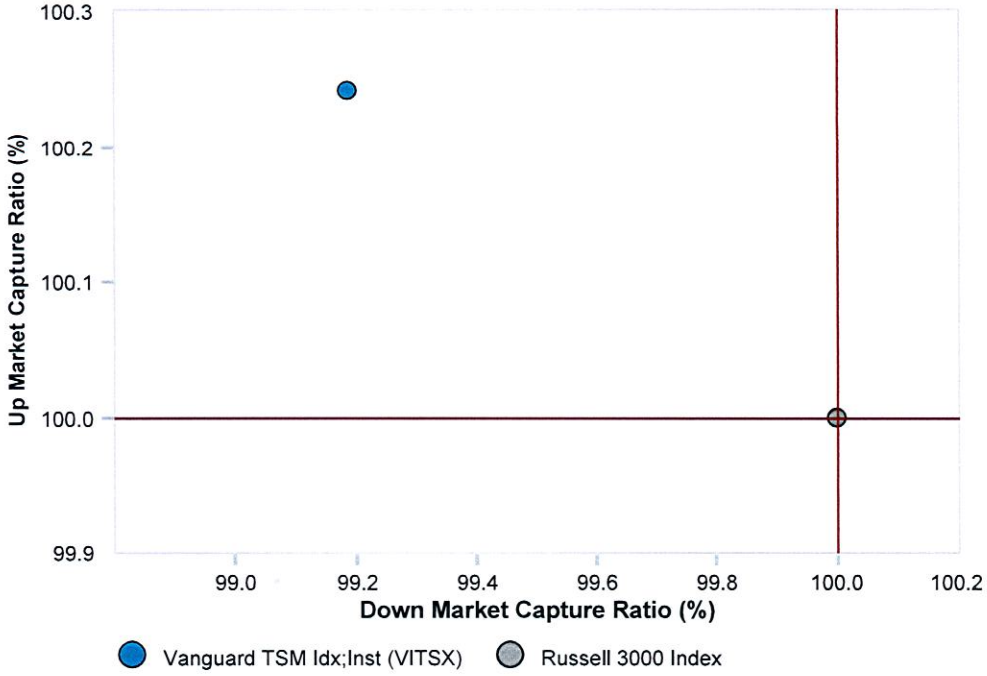
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present

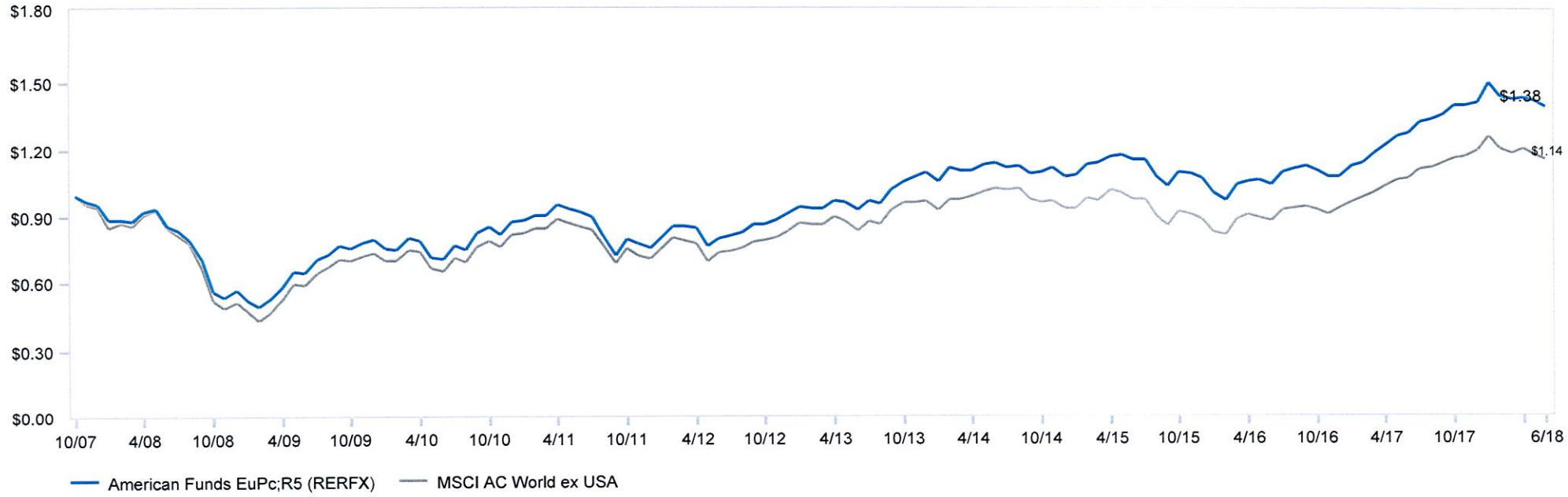


Historical Statistics: October 1, 2007 To June 30, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
Vanguard TSM Idx;Inst (VITSX)	60.47	-45.55	0.12	0.11	0.53	0.87	0.09	1.00	0.13
Russell 3000 Index	0.00	-45.95	0.00	0.00	0.52	N/A	0.09	1.00	0.00

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Multi-Cap Core Equity (MF)

Growth of a Dollar



Trailing Returns

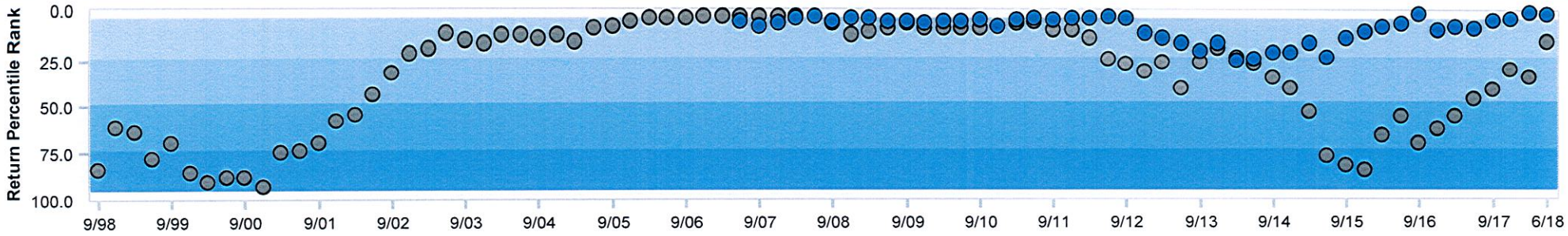
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
American Funds EuPc;R5 (RERFX)	-2.82 (70)	-1.83 (10)	9.30 (8)	15.53 (8)	6.46 (1)	8.29 (2)	6.03 (1)	4.80 (9)	9.34 (2)
MSCI AC World ex USA	-2.39 (62)	-3.44 (55)	7.79 (14)	14.20 (24)	5.56 (3)	6.48 (16)	4.28 (43)	3.01 (37)	8.21 (10)
Median	-2.02	-3.38	5.17	12.78	3.62	5.44	4.15	2.36	7.13

Fiscal Year Returns

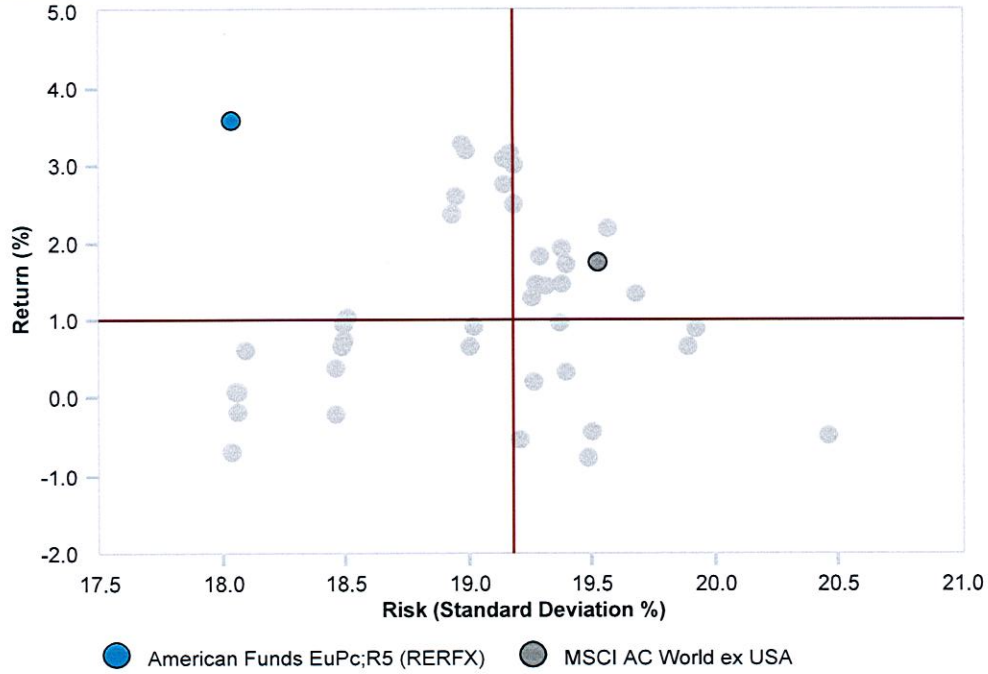
	FYTD	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
American Funds EuPc;R5 (RERFX)	2.32 (10)	20.56 (19)	8.47 (11)	-4.97 (6)	6.93 (10)	18.22 (75)	18.39 (13)	-12.38 (71)	7.35 (9)
MSCI AC World ex USA	1.45 (20)	20.15 (23)	9.80 (6)	-11.78 (85)	5.22 (27)	16.98 (78)	15.04 (52)	-10.42 (26)	8.00 (4)
Median	0.27	18.70	5.55	-7.88	3.98	21.41	15.12	-11.31	3.35

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM International Large Cap Core Equity (MF)

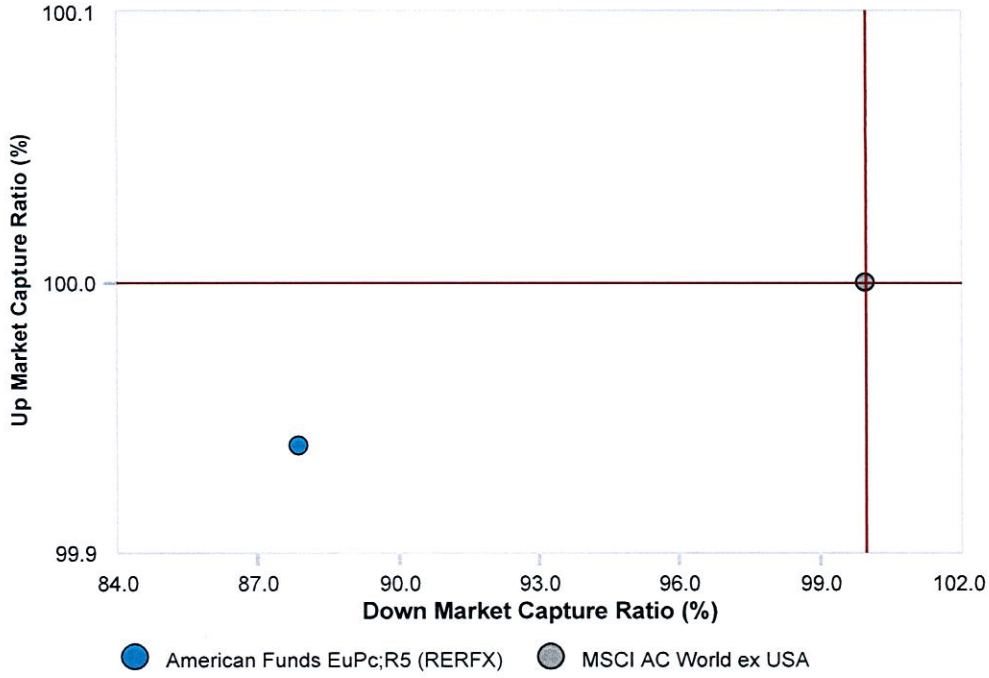
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present

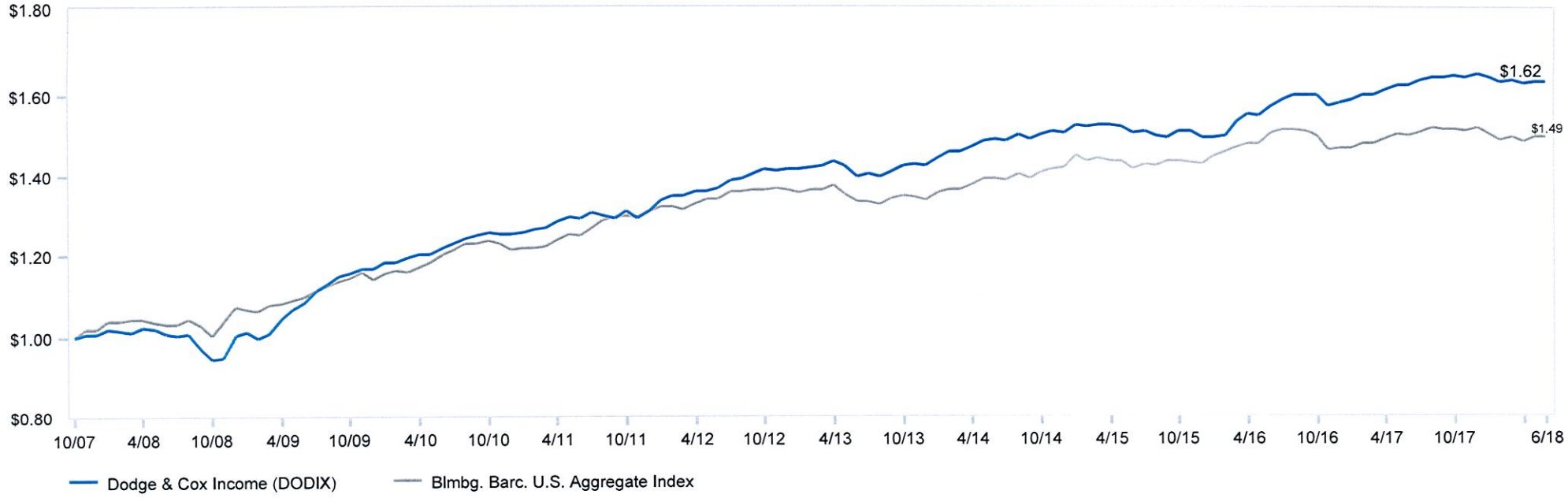


Historical Statistics: October 1, 2007 To June 30, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
American Funds EuPc;R5 (RERFX)	60.47	-45.07	1.84	1.50	0.26	0.43	0.05	0.91	3.50
MSCI AC World ex USA	0.00	-51.36	0.00	0.00	0.16	N/A	0.03	1.00	0.00

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM International Large Cap Core Equity (MF)

Growth of a Dollar



Trailing Returns

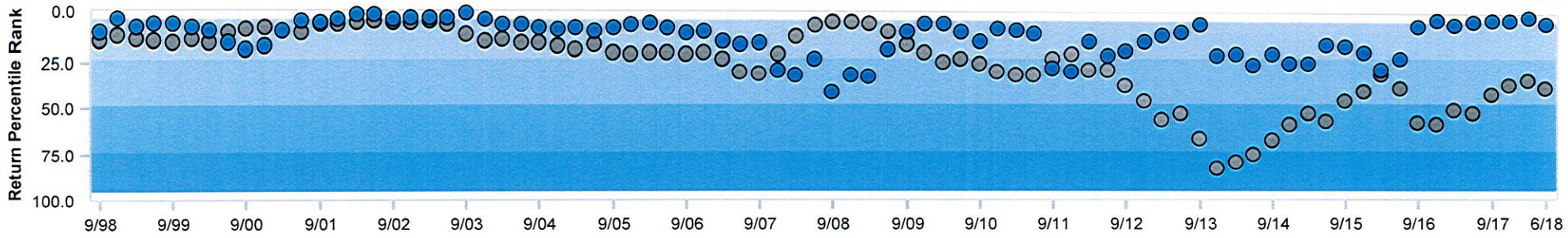
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
Dodge & Cox Income (DODIX)	-0.33 (64)	-1.23 (15)	0.37 (8)	1.79 (4)	2.64 (4)	3.09 (5)	3.35 (7)	4.86 (4)	4.40 (5)
Blmbg. Barc. U.S. Aggregate Index	-0.16 (30)	-1.62 (35)	-0.40 (34)	-0.36 (62)	1.72 (37)	2.27 (40)	2.57 (47)	3.72 (54)	3.77 (38)
Median	-0.25	-1.73	-0.59	-0.14	1.60	2.14	2.53	3.79	3.60

Fiscal Year Returns

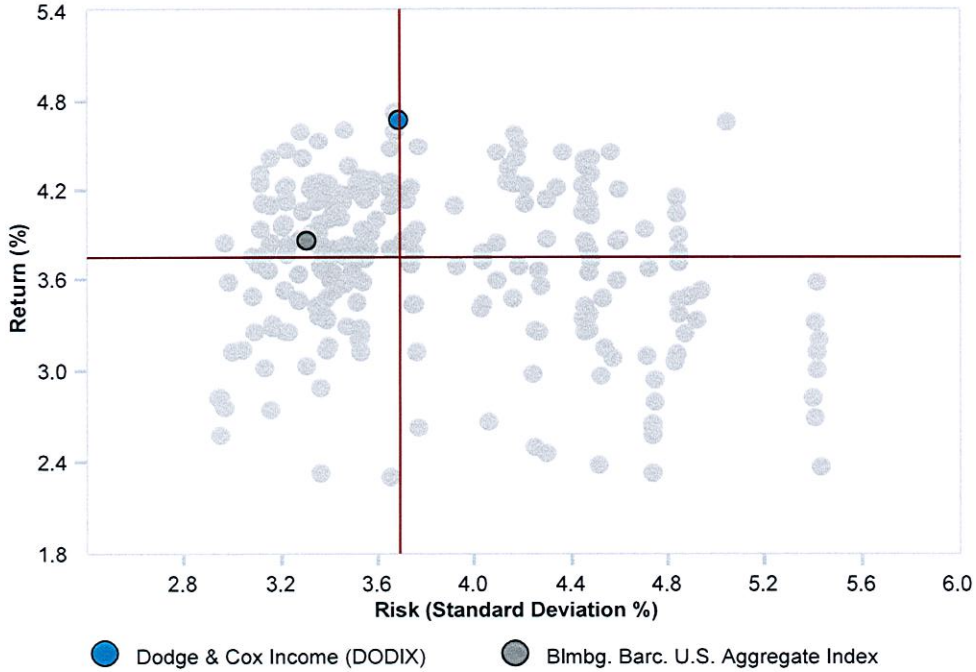
	FYTD	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
Dodge & Cox Income (DODIX)	-0.75 (12)	2.57 (3)	7.09 (3)	0.16 (93)	5.76 (9)	0.46 (5)	8.37 (15)	3.55 (72)	8.84 (63)
Blmbg. Barc. U.S. Aggregate Index	-1.23 (33)	0.07 (64)	5.19 (51)	2.94 (8)	3.96 (59)	-1.68 (53)	5.16 (81)	5.26 (14)	8.16 (76)
Median	-1.41	0.48	5.21	1.87	4.19	-1.62	6.79	4.30	9.34

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Broad Market Core Fixed Income (MF)

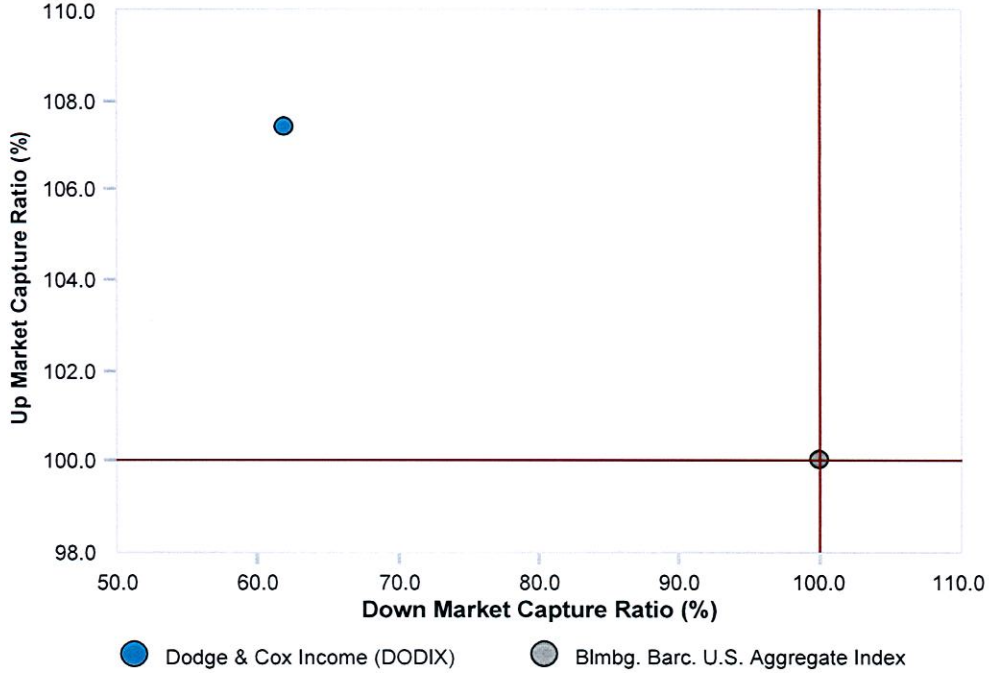
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present

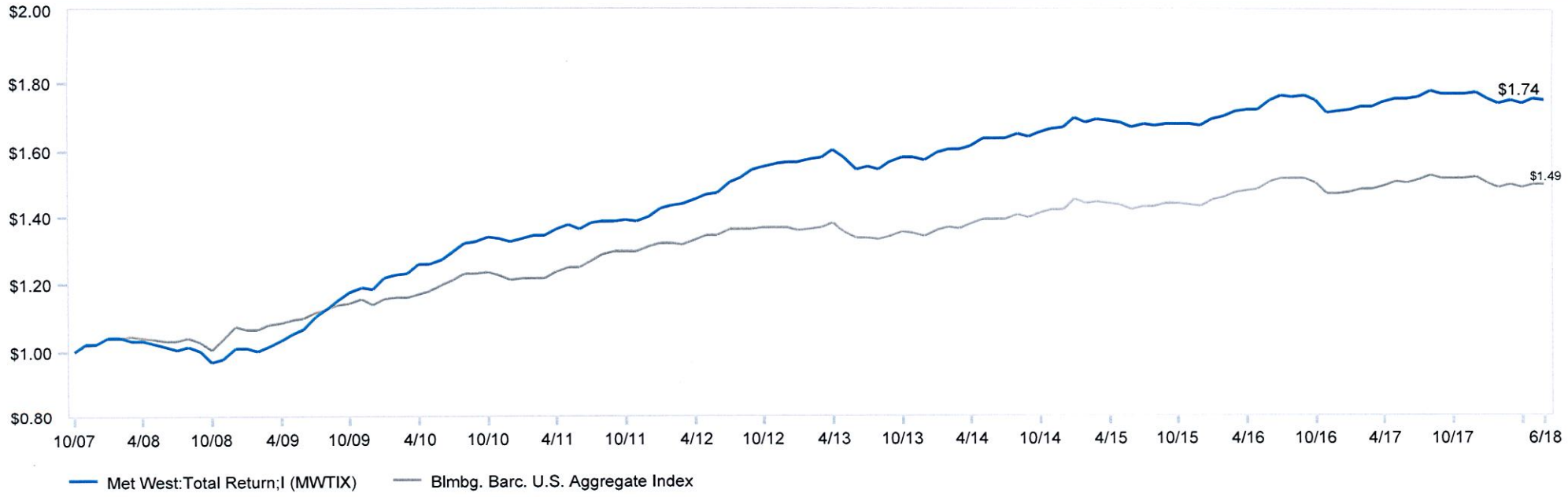


Historical Statistics: October 1, 2007 To June 30, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
Dodge & Cox Income (DODIX)	67.44	-4.08	1.95	0.80	1.08	0.27	0.06	0.71	3.02
Blmbg. Barc. U.S. Aggregate Index	0.00	-2.98	0.00	0.00	1.01	N/A	0.03	1.00	0.00

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Broad Market Core Fixed Income (MF)

Growth of a Dollar



Trailing Returns

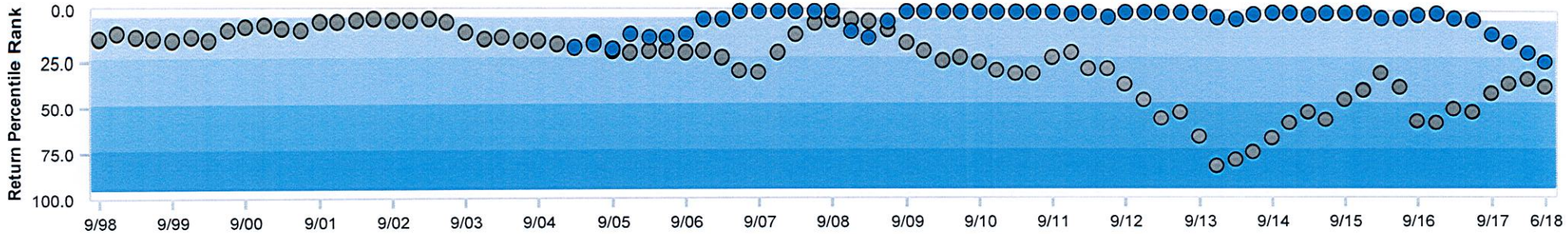
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
Met West:Total Return;I (MWTIX)	-0.09 (20)	-1.39 (21)	-0.21 (24)	0.02 (43)	1.56 (54)	2.49 (27)	3.56 (3)	5.54 (1)	5.47 (1)
Blmbg. Barc. U.S. Aggregate Index	-0.16 (30)	-1.62 (35)	-0.40 (34)	-0.36 (62)	1.72 (37)	2.27 (40)	2.57 (47)	3.72 (54)	3.77 (38)
Median	-0.25	-1.73	-0.59	-0.14	1.60	2.14	2.53	3.79	3.60

Fiscal Year Returns

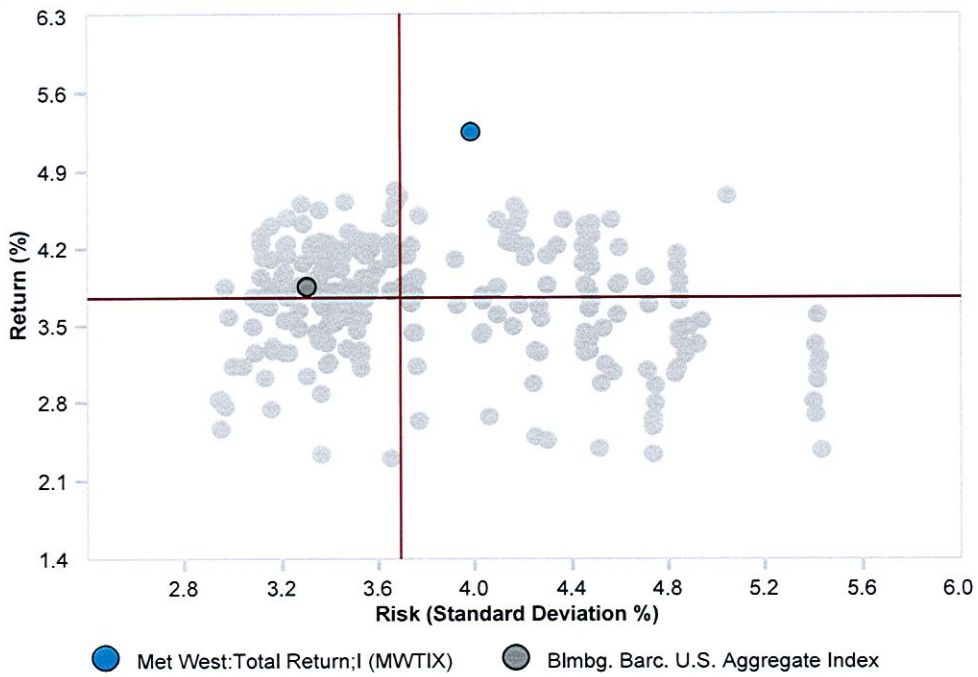
	FYTD	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
Met West:Total Return;I (MWTIX)	-1.01 (21)	0.31 (56)	4.82 (70)	2.27 (35)	4.95 (23)	1.38 (2)	11.02 (1)	4.37 (47)	15.16 (2)
Blmbg. Barc. U.S. Aggregate Index	-1.23 (33)	0.07 (64)	5.19 (51)	2.94 (8)	3.96 (59)	-1.68 (53)	5.16 (81)	5.26 (14)	8.16 (76)
Median	-1.41	0.48	5.21	1.87	4.19	-1.62	6.79	4.30	9.34

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Broad Market Core Fixed Income (MF)

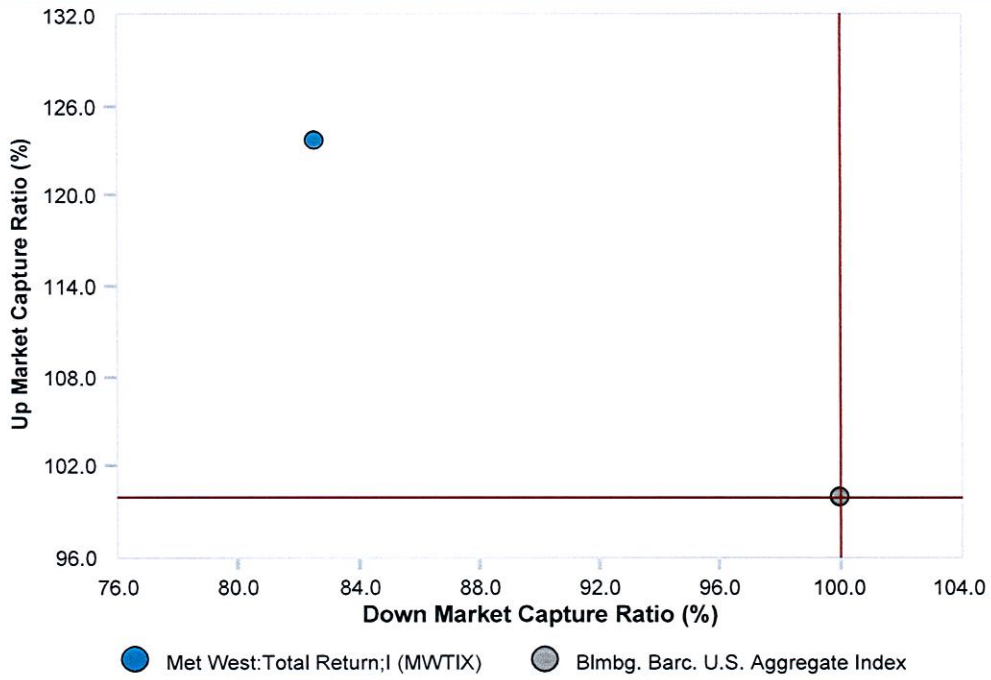
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present

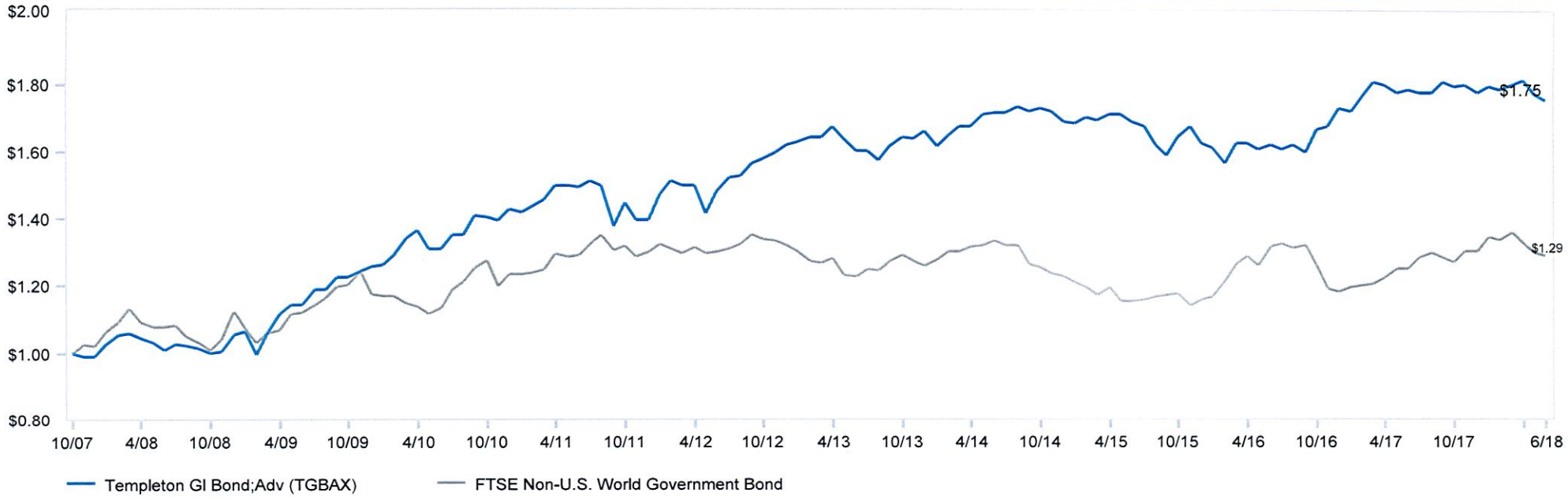


Historical Statistics: October 1, 2007 To June 30, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
Met West:Total Return;I (MWTIX)	58.14	-3.50	1.87	1.38	1.15	0.50	0.05	0.88	2.77
Blmbg. Barc. U.S. Aggregate Index	0.00	-2.98	0.00	0.00	1.01	N/A	0.03	1.00	0.00

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Broad Market Core Fixed Income (MF)

Growth of a Dollar



Trailing Returns

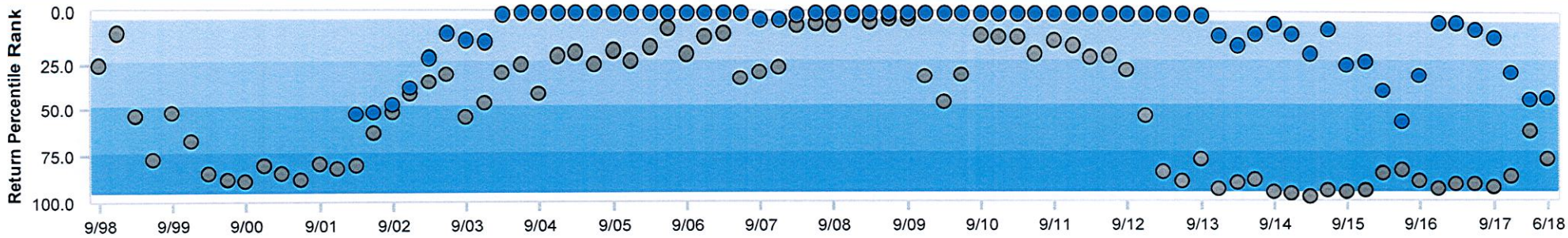
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
Templeton Gl Bond;Adv (TGBAX)	-2.57 (53)	-1.24 (39)	-1.88 (99)	4.09 (5)	1.23 (89)	1.85 (45)	2.31 (35)	5.67 (2)	6.72 (1)
FTSE Non-U.S. World Government Bond	-5.11 (96)	-0.92 (26)	3.22 (1)	-0.98 (91)	3.74 (8)	1.01 (78)	-0.06 (90)	1.77 (84)	3.51 (64)
Median	-2.21	-1.52	0.44	0.83	2.27	1.76	1.88	3.13	3.99

Fiscal Year Returns

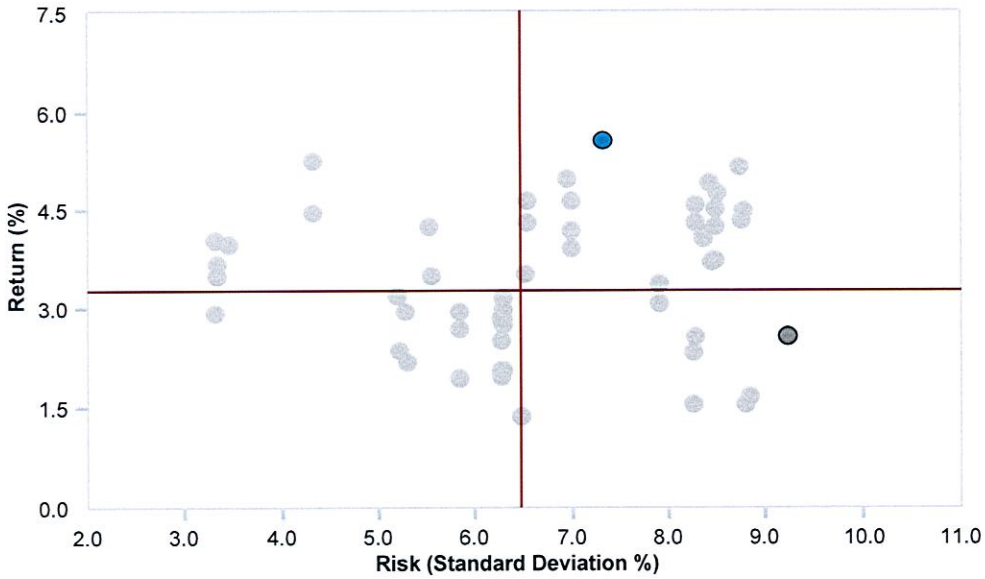
	FYTD	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
Templeton Gl Bond;Adv (TGBAX)	-3.03 (94)	13.17 (1)	0.68 (100)	-7.69 (91)	6.34 (11)	3.52 (2)	13.25 (3)	-2.10 (98)	14.57 (2)
FTSE Non-U.S. World Government Bond	0.63 (9)	-3.14 (94)	12.61 (2)	-7.01 (86)	-0.99 (98)	-5.63 (87)	3.45 (95)	4.13 (8)	4.46 (95)
Median	-0.95	1.02	7.39	-3.89	3.37	-1.81	7.17	1.74	7.68

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM Global Fixed Income (MF)

5 Year Rolling Percentile Ranking



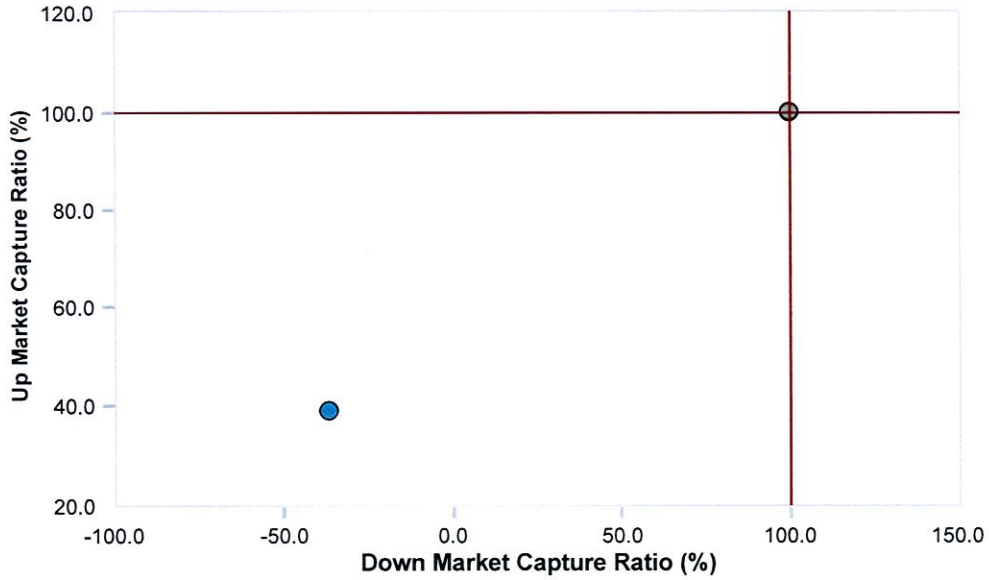
Risk vs Return: October 2007 to Present



Templeton Gl Bond;Adv (TGBAX)

FTSE Non-U.S. World Government Bond

Up/Down Markets: October 2007 to Present



Templeton Gl Bond;Adv (TGBAX)

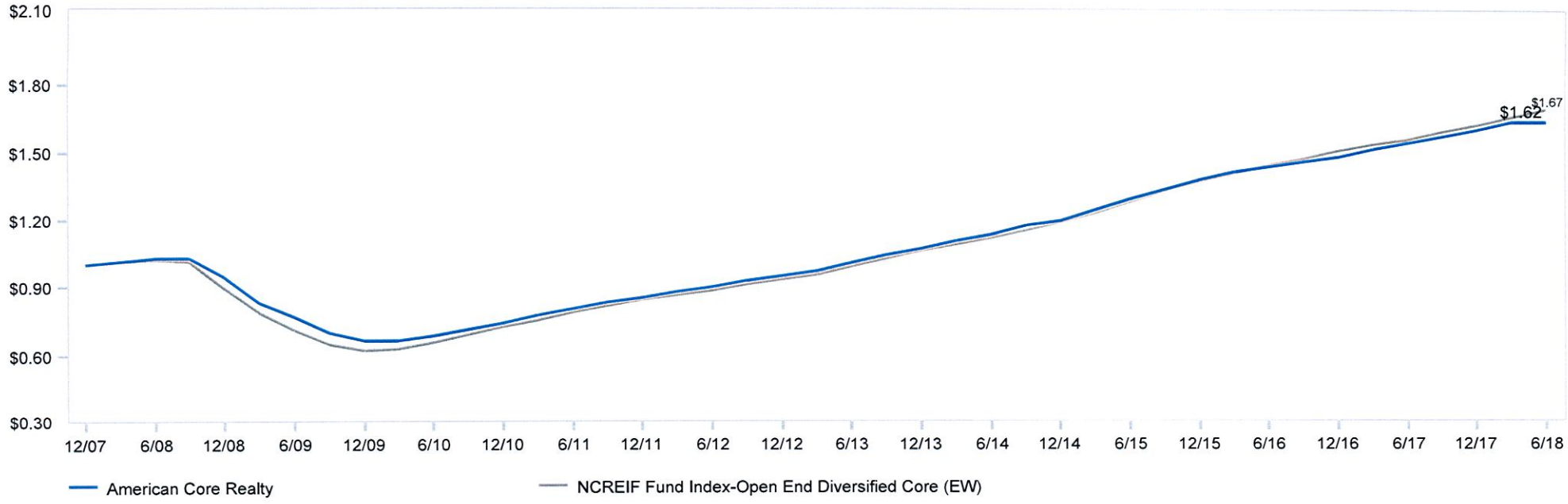
FTSE Non-U.S. World Government Bond

Historical Statistics: October 1, 2007 To June 30, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
Templeton Gl Bond;Adv (TGBAX)	53.49	-7.73	5.16	2.77	0.71	0.27	0.24	0.22	10.11
FTSE Non-U.S. World Government Bond	0.00	-14.58	0.00	0.00	0.26	N/A	0.02	1.00	0.00

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM Global Fixed Income (MF)

Growth of a Dollar



Trailing Returns

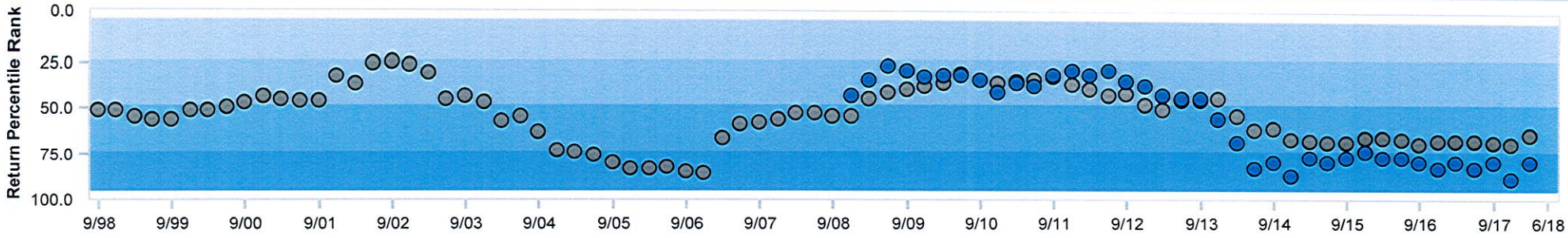
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
American Core Realty	0.00 (N/A)	2.23 (N/A)	5.95 (N/A)	6.70 (N/A)	7.99 (N/A)	10.07 (N/A)	10.56 (N/A)	4.63 (N/A)	N/A
NCREIF Fund Index-Open End Diversified Core (EW)	2.10 (N/A)	4.32 (N/A)	8.57 (N/A)	8.35 (N/A)	9.61 (N/A)	11.11 (N/A)	11.42 (N/A)	5.07 (N/A)	8.05 (N/A)
Median	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Fiscal Year Returns

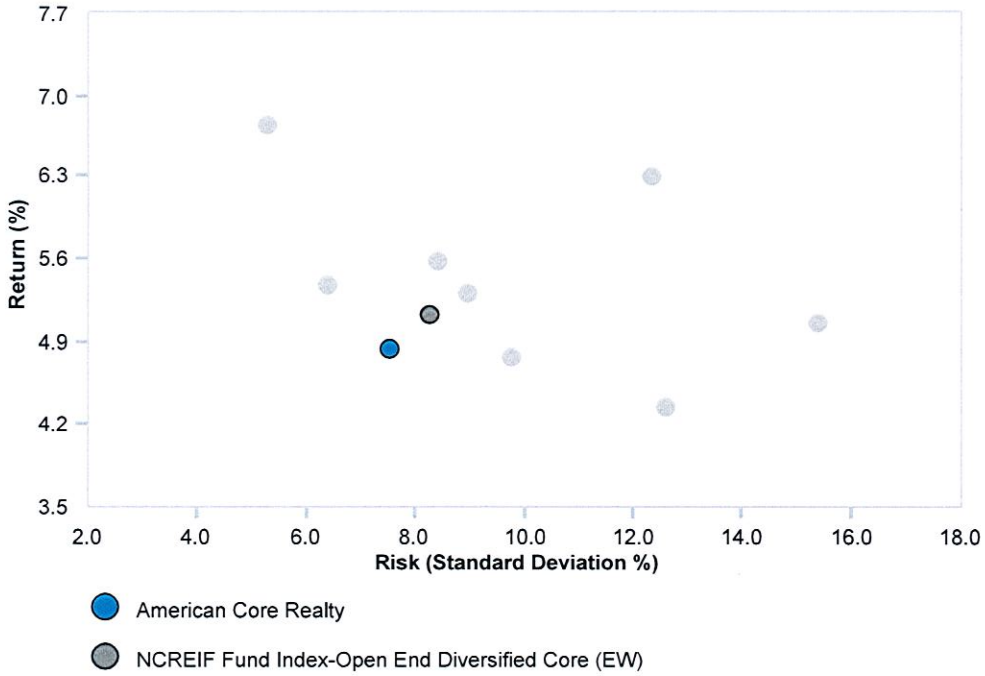
	FYTD	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
American Core Realty	3.99 (N/A)	7.51 (67)	9.03 (97)	13.97 (69)	12.48 (65)	12.26 (71)	11.55 (70)	16.10 (71)	2.71 (77)
NCREIF Fund Index-Open End Diversified Core (EW)	6.56 (N/A)	7.81 (60)	10.62 (69)	14.71 (62)	12.39 (68)	12.47 (67)	11.77 (66)	18.03 (44)	6.14 (55)
Median	N/A	8.29	11.32	15.45	12.78	13.18	12.90	16.96	6.43

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Open End Private Real Estate (SA+CF)

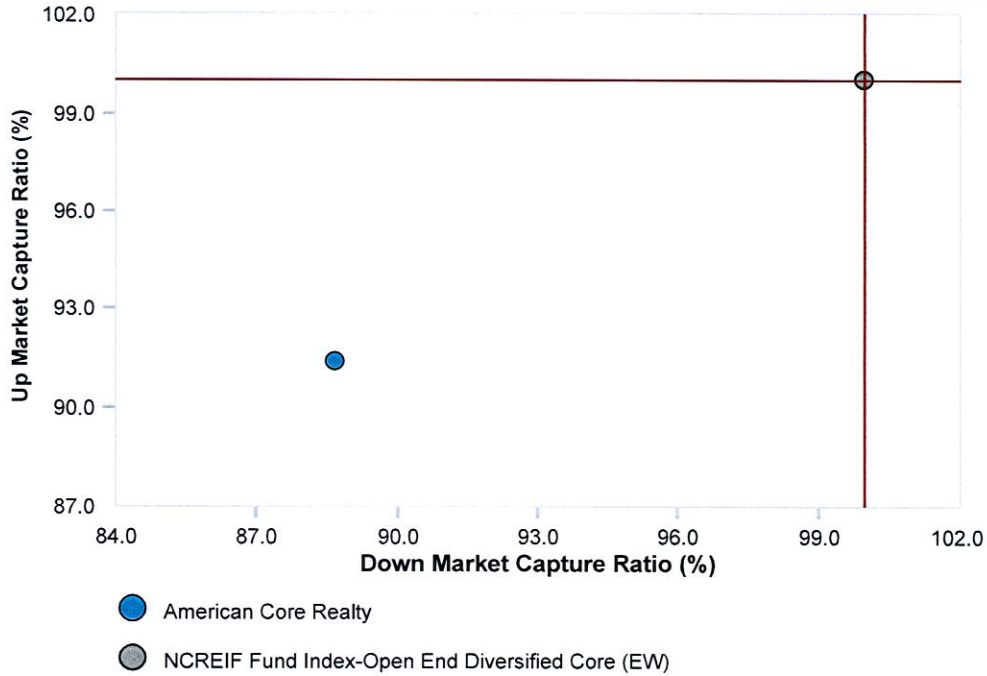
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present



Historical Statistics: October 1, 2007 To June 30, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
American Core Realty	39.53	-35.88	0.27	-0.35	0.60	-0.17	0.05	0.88	2.03
NCREIF Fund Index-Open End Diversified Core (EW)	53.49	-39.11	0.00	0.00	0.59	-0.04	0.05	1.00	0.00

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Open End Private Real Estate (SA+CF)

Total Fund Compliance:	Yes	No	N/A
1. The Total Plan return equaled or exceeded the Net 7.65% actuarial earnings assumption over the trailing three year period.		✓	
2. The Total Plan return equaled or exceeded the Net 7.65% actuarial earnings assumption over the trailing five year period.	✓		
3. The Total Plan return equaled or exceeded the total plan benchmark over the trailing three year period.		✓	
4. The Total Plan return equaled or exceeded the total plan benchmark over the trailing five year period.		✓	
5. The Total Plan return ranked within the top 40th percentile of its peer group over the trailing three year period.	✓		
6. The Total Plan return ranked within the top 40th percentile of its peer group over the trailing five year period.		✓	

Equity Compliance:	Yes	No	N/A
1. Domestic Equity return equaled or exceeded the benchmark over the trailing three year period.		✓	
2. Domestic Equity return equaled or exceeded the benchmark over the trailing five year period.		✓	
3. International Equity return equaled or exceeded the benchmark over the trailing three year period.	✓		
4. International Equity return equaled or exceeded the benchmark over the trailing five year period.	✓		
5. Total Equity investments do not exceed 75% of the market value of Plan assets.	✓		
6. Total International Equity investments do not exceed 25% of the market value of Plan assets.	✓		

Fixed Income Compliance:	Yes	No	N/A
1. Domestic Fixed Income return equaled or exceeded the benchmark over the trailing three year period.		✓	
2. Domestic Fixed Income return equaled or exceeded the benchmark over the trailing five year period.	✓		
3. Global Fixed Income return equaled or exceeded the benchmark over the trailing three year period.		✓	
4. Global Fixed Income return equaled or exceeded the benchmark over the trailing five year period.	✓		
5. 80% of the fixed income investments have a minimum rating of investment grade or higher.			✓

Manager Compliance:	Anchor			Brown			Vanguard (VITSX)			EuroPacific (RERGX)			Dodge & Cox (DODIX)		
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three year period.	✓				✓				✓	✓					✓
2. Manager outperformed the index over the trailing five year period.	✓				✓				✓	✓					✓
3. Manager has had less than 4 consecutive quarters of underperformance.	✓			✓			✓			✓					✓
4. Manager ranked within the top 40th percentile over the trailing three year period.		✓		✓					✓	✓					✓
5. Manager ranked within the top 40th percentile over the trailing five year period.		✓			✓				✓	✓					✓
6. Manager three year down market capture ratio is less than the index.	✓			✓					✓		✓				✓
7. Manager five year down market capture ratio is less than the index.	✓			✓					✓	✓					✓
8. Manager reports compliance with PFIA			✓	✓					✓			✓			✓

Manager Compliance:	Met West (MWTIX)			Templeton (FBNRX)			American RE		
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three year period.			✓		✓				✓
2. Manager outperformed the index over the trailing five year period.			✓	✓					✓
3. Manager has had less than 4 consecutive quarters of underperformance.			✓	✓					✓
4. Manager ranked within the top 40th percentile over the trailing three year period.			✓		✓				✓
5. Manager ranked within the top 40th percentile over the trailing five year period.			✓	✓					✓
6. Manager three year down market capture ratio is less than the index.			✓	✓					✓
7. Manager five year down market capture ratio is less than the index.			✓	✓					✓
8. Manager reports compliance with PFIA			✓			✓			✓

Total Fund Policy

Allocation Mandate	Weight (%)
May-1994	
S&P 500 Index	50.00
Blmbg. Barc. U.S. Gov't/Credit	40.00
FTSE 3 Month T-Bill	10.00
Jan-1997	
Blmbg. Barc. U.S. Gov't/Credit	30.00
FTSE 3 Month T-Bill	10.00
S&P 500 Index	60.00
Apr-2002	
S&P 500 Index	60.00
Blmbg. Barc. U.S. Gov't/Credit	40.00
Oct-2010	
Russell 3000 Index	45.00
MSCI EAFE Index	15.00
Blmbg. Barc. U.S. Aggregate Index	40.00
Jul-2012	
Russell 3000 Index	50.00
MSCI AC World ex USA	10.00
Blmbg. Barc. U.S. Aggregate Index	35.00
FTSE World Government Bond Index	5.00
Jan-2016	
Russell 3000 Index	50.00
MSCI AC World ex USA	10.00
Blmbg. Barc. U.S. Aggregate Index	25.00
FTSE World Government Bond Index	5.00
NCREIF Fund Index-Open End Diversified Core (EW)	10.00

Total Domestic Fixed Income Policy

Allocation Mandate	Weight (%)
Jan-1973	
Blmbg. Barc. U.S. Gov't/Credit	100.00
Oct-2010	
Blmbg. Barc. U.S. Aggregate Index	100.00

Total Domestic Equity Policy

Allocation Mandate	Weight (%)
Jan-1990	
S&P 500 Index	100.00
Oct-2010	
Russell 3000 Index	100.00

Total International Equity Policy

Allocation Mandate	Weight (%)
Jul-2007	
MSCI EAFE Index	100.00
Jul-2012	
MSCI AC World ex USA	100.00

Total Fixed Income Policy

Allocation Mandate	Weight (%)
Jan-1973	
Blmbg. Barc. U.S. Gov't/Credit	100.00
Oct-2010	
Blmbg. Barc. U.S. Aggregate Index	100.00
Jan-2016	
Blmbg. Barc. U.S. Aggregate Index	83.00
FTSE World Government Bond Index	17.00

Total Equity Policy

Allocation Mandate	Weight (%)
Jan-1990	
S&P 500 Index	100.00
Oct-2010	
Russell 3000 Index	75.00
MSCI EAFE Index	25.00
Jul-2012	
Russell 3000 Index	83.00
MSCI AC World ex USA	17.00

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.

The strategies listed may not be suitable for all investors. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. Past performance is not an indication of future performance. Any information contained in this report is for informational purposes only and should not be construed to be an offer to buy or sell any securities, investment consulting, or investment management services.

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U.S. Large Cap Growth Equity Manager Analysis
March 31, 2018

St. Pete Beach Firefighters' Retirement Fund

Purpose for this Manager Evaluation Report

This search is intended to evaluate alternatives for the Plan if the board elects to terminate the services provided by Brown Advisory.

nvestment Options for this Manager Evaluation Report

Firm Name	Strategy Name	Vehicle	Management Fee
American Funds/Capital Research and Management	The Growth Fund of America R6 (RGAGX)	MF	0.33%
Massachusetts Financial Services	Growth Fund R6 (MFEKX)	MF	0.62%
PRIMECAP Odyssey Funds/PRIMECAP Management	Odyssey Growth Fund (POGRX)	MF	0.67%
Brown Advisory	Large Cap Growth	SA	0.80% on the first $10 million; 0.65% on the next $15 million; 0.50% on the next $25 million; 0.40% thereafter

Brown Advisory Equity Instl (BAFGX) will be used as a net-of-fees proxy for the separate account composite of the same strategy.

Definition and Characteristics

US Large Cap Growth is typically defined as US-based companies with a market capitalization over $5 billion that have higher price-to-book, price-to-earnings, and forecasted growth rates. The primary benchmark for strategies in this space is the Russell 1000 Growth Index. The index contains those stocks with higher than average price-to-book and price- to-earnings ratios and higher 3-yr forecasted growth rates within the Russell 1000 on Russell's annual reconstitution day, typically calculated at the end of May. The Technology sector dominates the index, accounting for approximately 30% of the weight by market cap. The Consumer Discretionary, Healthcare, Consumer Staples and Industrials sectors also all have meaningful weights. The index contains approximately 600 individual names, but the largest companies by market cap dominate the index. The weighted average market cap of the index typically exceeds $125 Billion, while the median market cap is closer to $10 Billion. The five largest names account for over 15% of the index.

Role within a Portfolio

The primary role of a US Large Cap Growth strategy is to provide diversified exposure to the US stock market with a style tilt toward those names with higher future growth prospects. Active managers in the space typically evaluate a stock's growth rate relative to its valuation. As a group, growth stocks have lower dividend yields than value stocks. The group can often demonstrate higher volatility when broader economic expectations deteriorate. Within the portfolio, a Large Cap Growth strategy is usually paired with a Large Cap Value strategy to provide additional diversification across different economic environments.

Benchmark and Peer Group

This US Large Cap Growth search report will use the following benchmark and peer group:

Index – Russell 1000 Growth: Consists of the stocks in the Russell 1000 Index with higher than average forecasted growth rates and higher price-to-book and price-to-earnings ratios.

Morningstar Category - Large Growth: Large-growth portfolios invest primarily in big US companies that are projected to grow faster than other large-cap stocks. Stocks in the top 70% of the capitalization of the US equity market are defined as large cap. Growth is defined based on fast growth (high growth rates for earnings, sales, book value, and cash flow) and high valuations (high price ratios and low dividend yields). Most of these portfolios focus on companies in rapidly expanding industries.

Investment Option Comparison

	American Funds Growth Fund of Amer R6	MFS® Growth R6	PRIMECAP Odyssey Growth
Firm Information			
Year Founded	1/1/1931	1/1/1924	1/1/1983
US Headquarters Location	Los Angeles, CA	Boston, MA	Pasadena, CA
Number of Major Global Offices	13	9	1
Year Began Managing Ext. Funds	12/1/1934	1/1/1924	1/1/1983
Firm AUM ($ M)	1,473,446	440,610	106,352
Ownership Type	Independent	Subsidiary	Independent
Largest Owner (%)	3	94	Not Provided
Largest Owner (Name)	Not Provided	Sun Life Financial	Not Provided
Employee Ownership (%)	100	6	100
Qualify as Emerging Manager?	No	No	No
Strategy Information			
Inception Date	12/1/1973	8/1/1995	11/1/2004
Open/Closed	Open	Open	Open
Primary Benchmark	S&P 500	Russell 1000 Growth	Russell 1000 Growth
Secondary Benchmark	Russell 1000 Growth	None	S&P 500
Peer Universe	US Large Cap Growth	US Large Cap Growth	US Large Cap Growth
Outperformance Estimate (%)	1-3	1-2	2-4
Tracking Error Estimate (%)	2-4	2-8	6-8
Strategy AUM ($ M)	145,579	20,310	7,073
Estimated Capacity ($ M)	Not Provided	Not Provided	Not Provided
Strategy AUM as % Firm Assets	10	5	7
Investment Approach - Primary	Bottom-up	Bottom-up	Bottom-up
Investment Approach - Secondary	Fundamental	Fundamental	Fundamental

All data represents AndCo's view and may differ from the manager's interpretation.

	American Funds Growth Fund of Amer R6	MFS® Growth R6	PRIMECAP Odyssey Growth
Team Information			
Decision Making Structure	Team	Team	Multi-Manager
Number of Decision Makers	12	3	5
Names of Decision Makers	12 Person PM Team	E. Fischman, M. Sabel, P. Gordon	5 Person PM Team
Date Began Managing Strategy	1993-2016	2004, 2014, 2017	2004-2014
Date Began with Firm	1985-1997	2000, 2009, 2004	1983-2005
Number of Products Managed by Team	1	1	6
Number of Investment Analysts	104	71	14
nvestment Analyst Team Structure	Combination	Sector/Industry Specialists	Sector/Industry Specialists
Portfolio Construction Information			
Broad Style Category	Growth	Growth	Growth
Style Bias	GARP	Core Growth	GARP
Sector Constraint Type	None	None	None
Sector Constraints (%)	None	None	None
Typical Sector/s Overweight	None	None	None
Typical Sector/s Underweight	None	None	None
Typical Number of Holdings	250	90-110	120
Average Full Position Size (%)	0.5	1.25	PM Dependent
Maximum Position Size (%)	None	5 or 1.5x	5
Annual Typical Asset Turnover (%)	30	30-50	10-15
Annual Typical Name Turnover (%)	Not Provided	20-30	<5
Maximum Cash Allocation (%)	None	5	7
Maximum Foreign Exposure (%)	25	None	15

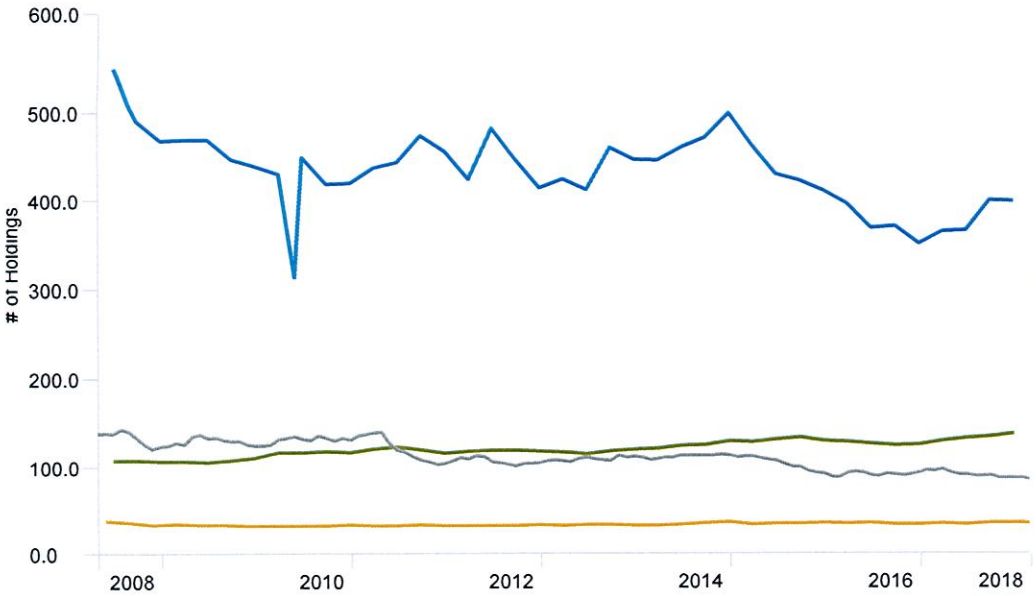
All data represents AndCo's view and may differ from the manager's interpretation.

Current Portfolio Comparisor

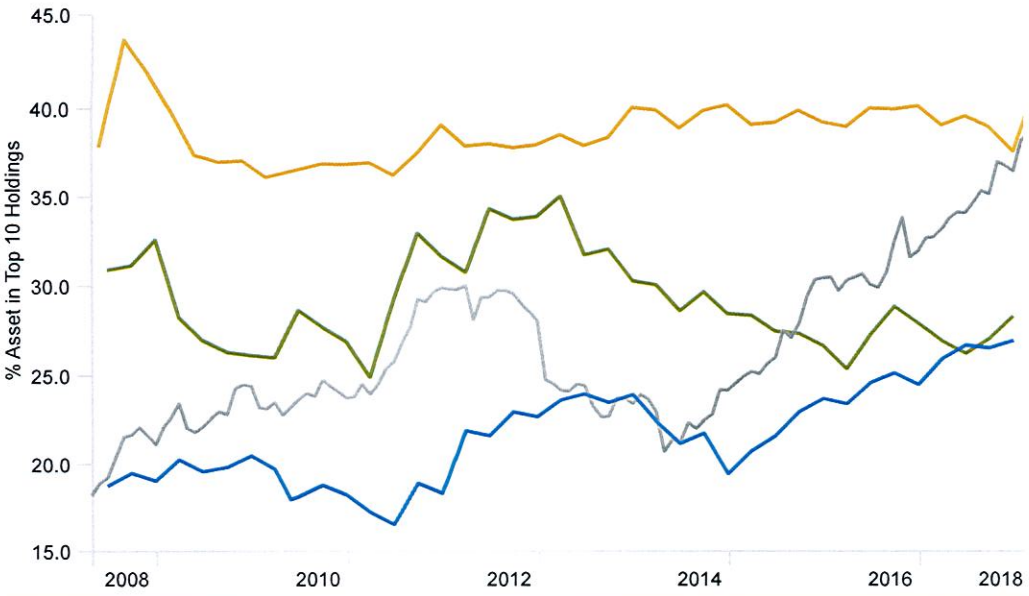
As of 3/31/2018

	American Funds Growth Fund of Amer R6	MFS® Growth R6	PRIMECAP Odyssey Growth	Brown Advisory Growth Equity Inst	Russell 1000 Growth TR USD
COMPOSITION					
# of Holdings	398	84	136	35	553
% Asset in Top 10 Holdings	26.98	38.67	28.37	40.05	30.45
Asset Alloc Cash %	7.29	1.56	3.62	1.65	0.00
Asset Alloc Equity %	90.32	98.50	96.38	98.35	100.00
Asset Alloc Bond %	1.87	0.00	0.00	0.00	0.00
Asset Alloc Other %	0.52	0.00	0.00	0.00	0.00
CHARACTERISTICS					
Average Market Cap (mil)	85,773.92	109,668.87	28,913.11	57,236.34	91,052.27
P/E Ratio (TTM)	27.23	33.91	21.70	36.60	25.91
P/B Ratio (TTM)	3.75	6.17	3.73	6.97	6.26
LT Earn Growth	13.48	15.76	10.43	16.45	13.61
Dividend Yield	1.15	0.77	1.06	0.41	1.40
ROE % (TTM)	18.86	22.84	14.18	23.77	28.57
GICS SECTORS %					
Energy %	8.04	0.77	0.30	0.00	0.83
Materials %	2.73	3.25	0.60	3.64	3.48
Industrials %	5.55	6.49	13.16	12.44	12.70
Consumer Discretionary %	23.36	16.11	11.79	11.87	18.62
Consumer Staples %	4.36	5.43	0.20	6.37	6.37
Healthcare %	14.12	12.36	32.88	18.64	12.51
Financials %	10.72	5.34	7.63	0.00	3.49
Information Technology %	29.63	48.69	33.43	43.86	38.68
Telecom Services %	0.63	0.00	0.00	0.00	0.91
Utilities %	0.00	0.00	0.00	0.00	0.01
Real Estate %	0.87	1.57	0.00	3.18	2.40
MARKET CAPITALIZATION					
Market Cap Giant %	45.11	53.65	22.44	33.26	54.54
Market Cap Large %	28.94	37.36	31.24	51.06	29.35
Market Cap Mid %	12.27	3.68	34.44	7.59	13.34
Market Cap Small %	1.19	0.00	5.52	0.00	0.29
Market Cap Micro %	0.05	0.00	1.60	0.00	0.00

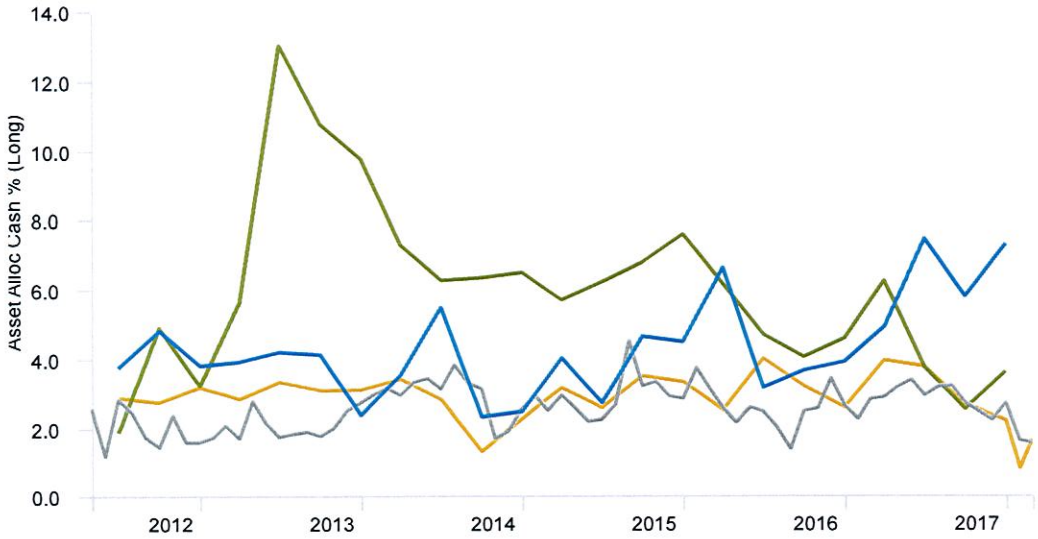
Historical Number of Holdings



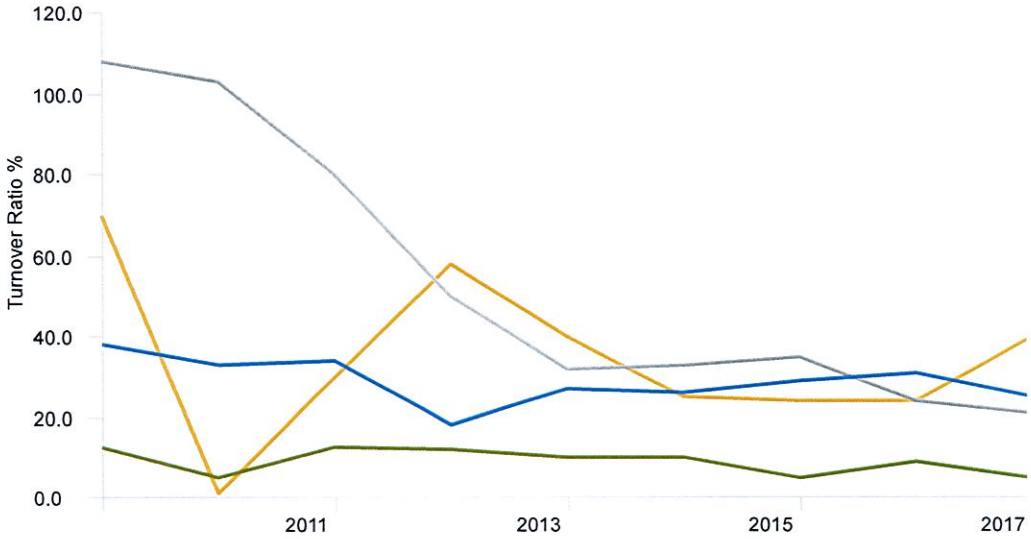
Historical Percentage of Assets in Top 10 Holdings



Historical Cash Allocation

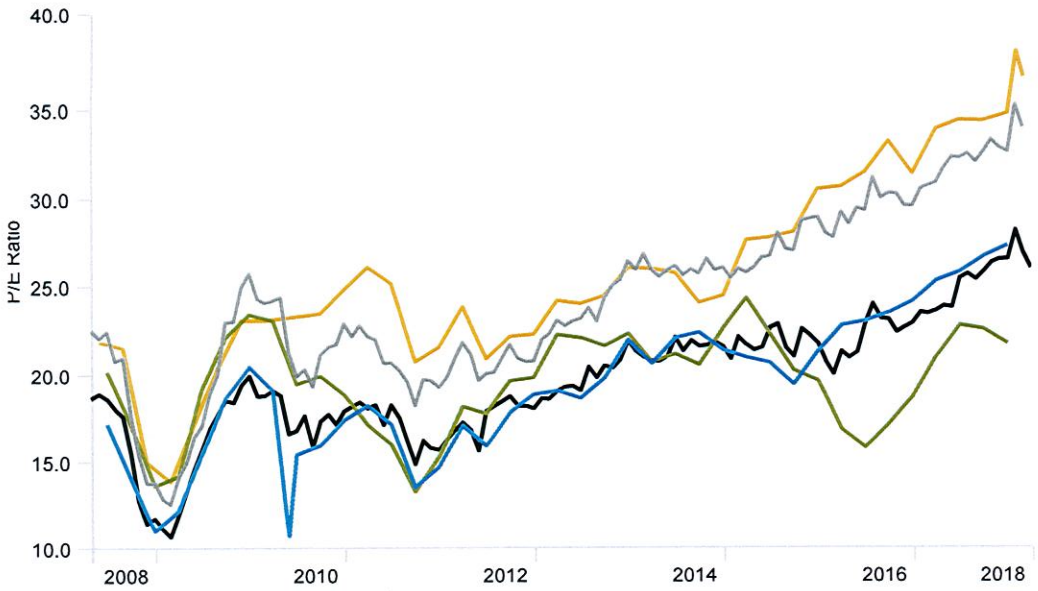


Historical Portfolio Turnover

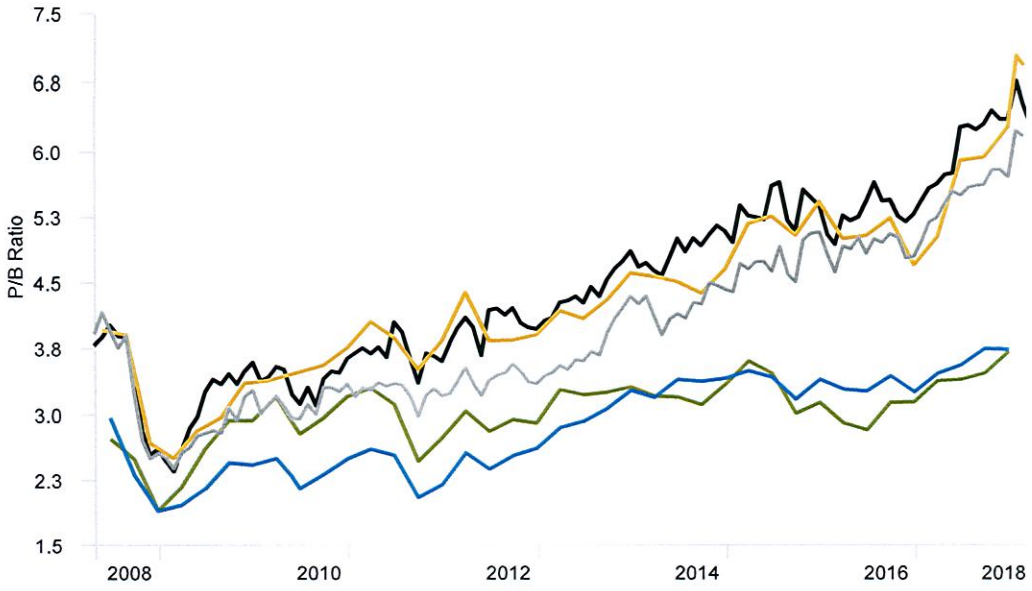


- American Funds Growth Fund of Amer R6
- MFS® Growth R6
- PRIMECAP Odyssey Growth
- Brown Advisory Growth Equity Inst

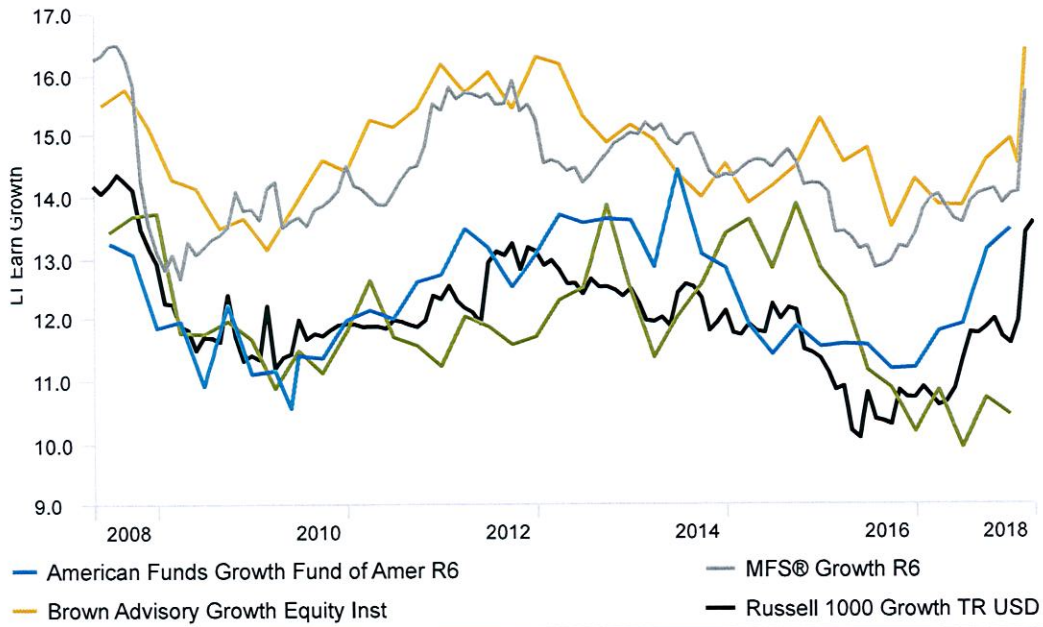
Historical P/E Ratio



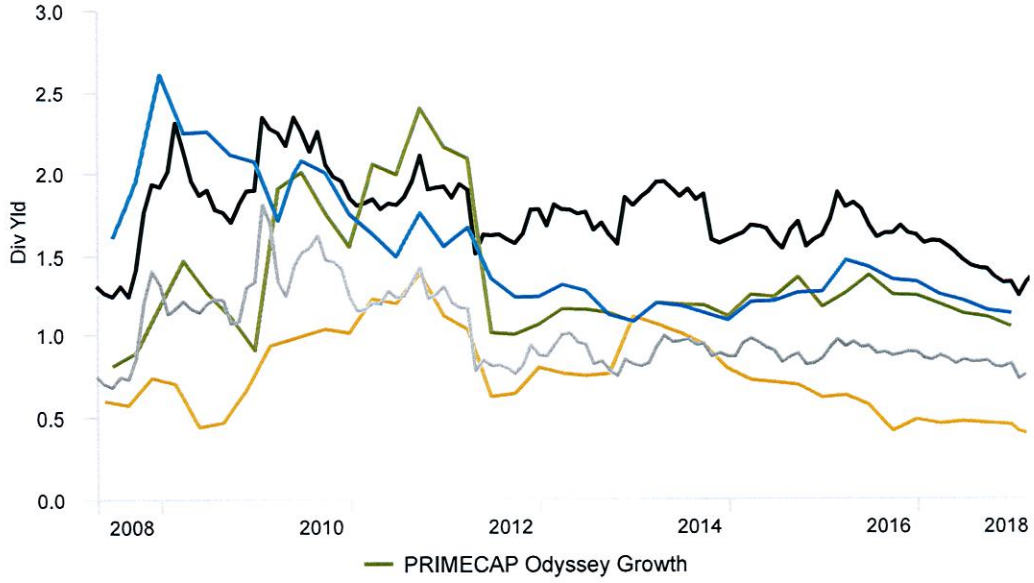
Historical P/B Ratio



Historical Earnings Growth



Historical Dividend Yield

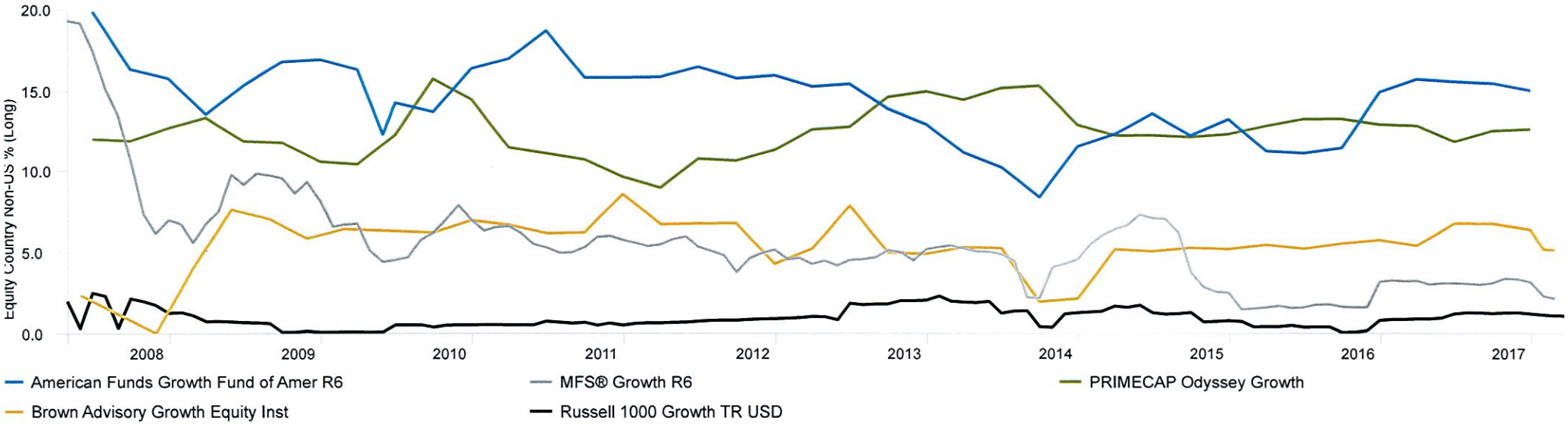


Current Portfolio Region Allocation

Portfolio Date: 12/31/2017

	American Funds Growth Fund of Amer R6	MFS® Growth R6	PRIMECAP Odyssey Growth	Brown Advisory Growth Equity Inst	Russell 1000 Growth TR USD
Equity Country United States %	83.38	96.74	86.84	93.38	98.82
Equity Region North America %	85.42	97.68	88.76	93.38	98.82
Equity Region Latin America %	0.48	0.00	0.00	0.00	0.00
Equity Region United Kingdom %	1.39	0.00	1.22	0.00	0.00
Equity Region Europe dev %	4.25	0.65	3.77	0.00	0.06
Equity Region Europe emrg %	0.00	0.00	0.00	0.00	0.00
Equity Region Japan %	0.81	0.00	1.79	0.00	0.00
Equity Region Australasia %	0.00	0.00	0.00	0.00	0.00
Equity Region Asia dev %	2.56	0.00	0.00	0.00	0.00
Equity Region Asia emrg %	4.57	1.68	3.50	6.62	1.13
Equity Region Africa/Middle East %	0.52	0.00	0.96	0.00	0.00
Equity Region Developed %	94.69	98.32	96.50	93.38	98.87
Equity Region Emerging %	5.31	1.68	3.50	6.62	1.13

Historical Non-US Portfolio Exposure

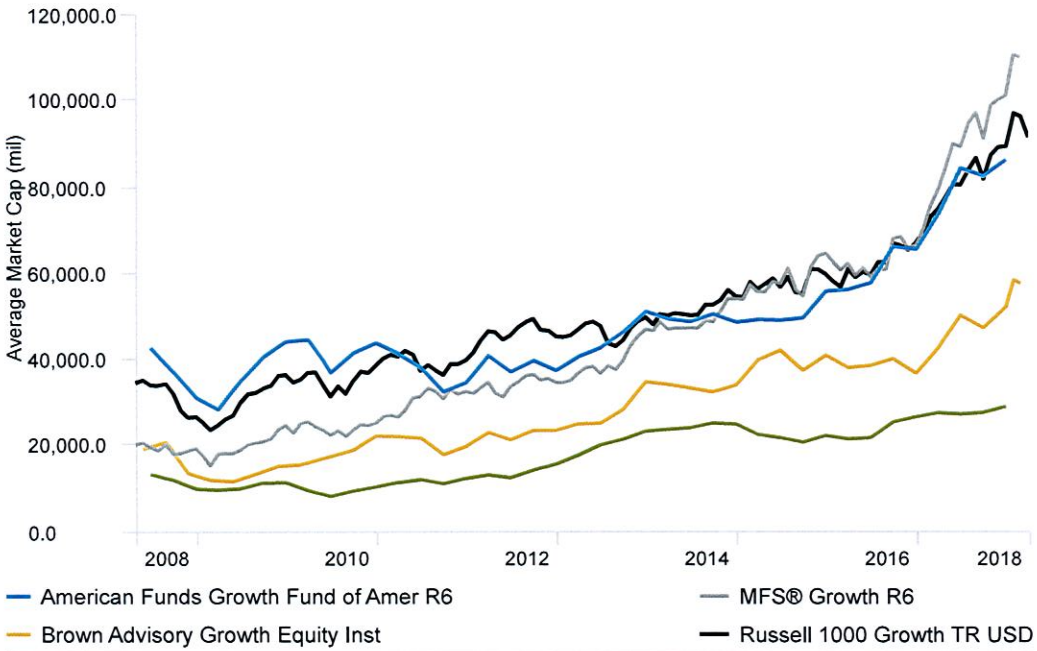


Style Allocation

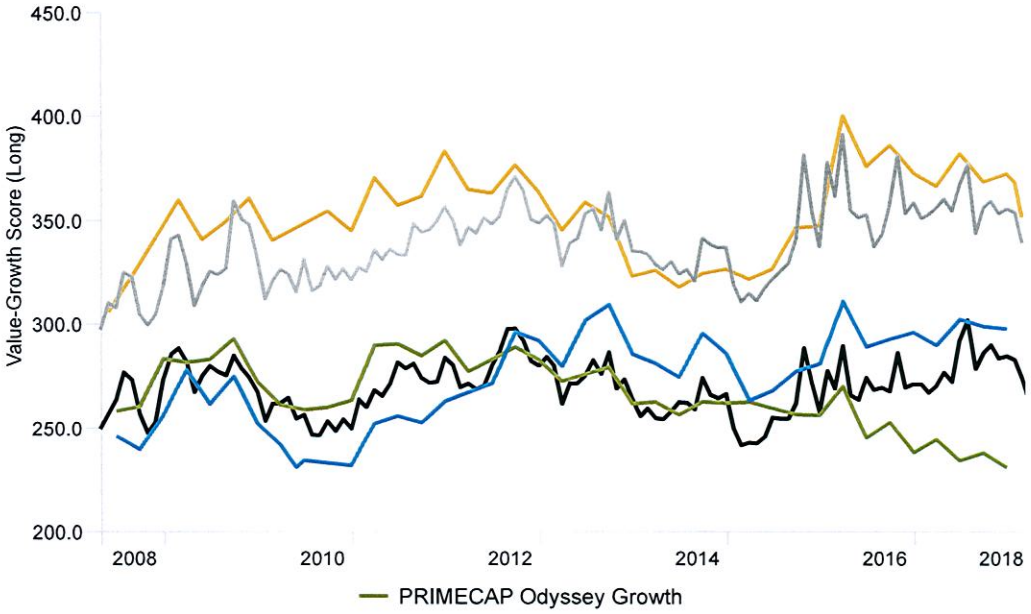
Portfolio Date: 12/31/2017

	American Funds Growth Fund of Amer R6	MFS® Growth R6	PRIMECAP Odyssey Growth	Brown Advisory Growth Equity Inst	Russell 1000 Growth TR USD
Equity Style Large Value %	9.49	0.60	16.45	0.00	9.06
Equity Style Large Core %	17.55	14.73	19.60	11.61	23.27
Equity Style Large Growth %	48.90	74.45	16.28	68.62	49.62
Equity Style Mid Value %	2.06	0.00	3.48	0.00	1.89
Equity Style Mid Core %	3.68	2.19	13.46	1.64	5.51
Equity Style Mid Growth %	6.50	4.84	17.31	13.62	9.61
Equity Style Small Value %	0.41	0.00	0.91	0.00	0.30
Equity Style Small Core %	0.14	0.14	1.60	0.00	0.21
Equity Style Small Growth %	0.42	0.00	4.61	0.00	0.37

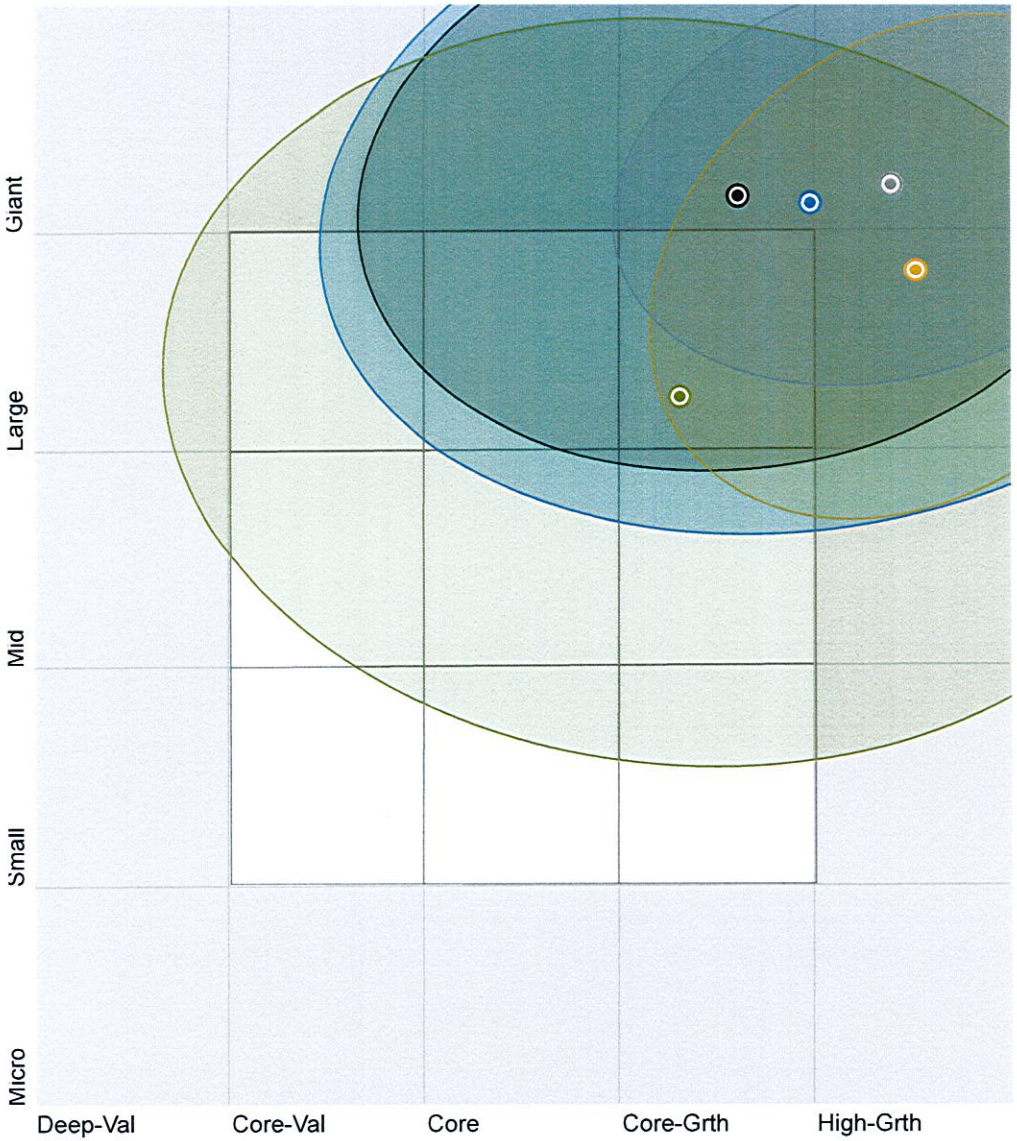
Historical Average Market Capitalization



Historical Value - Growth Score

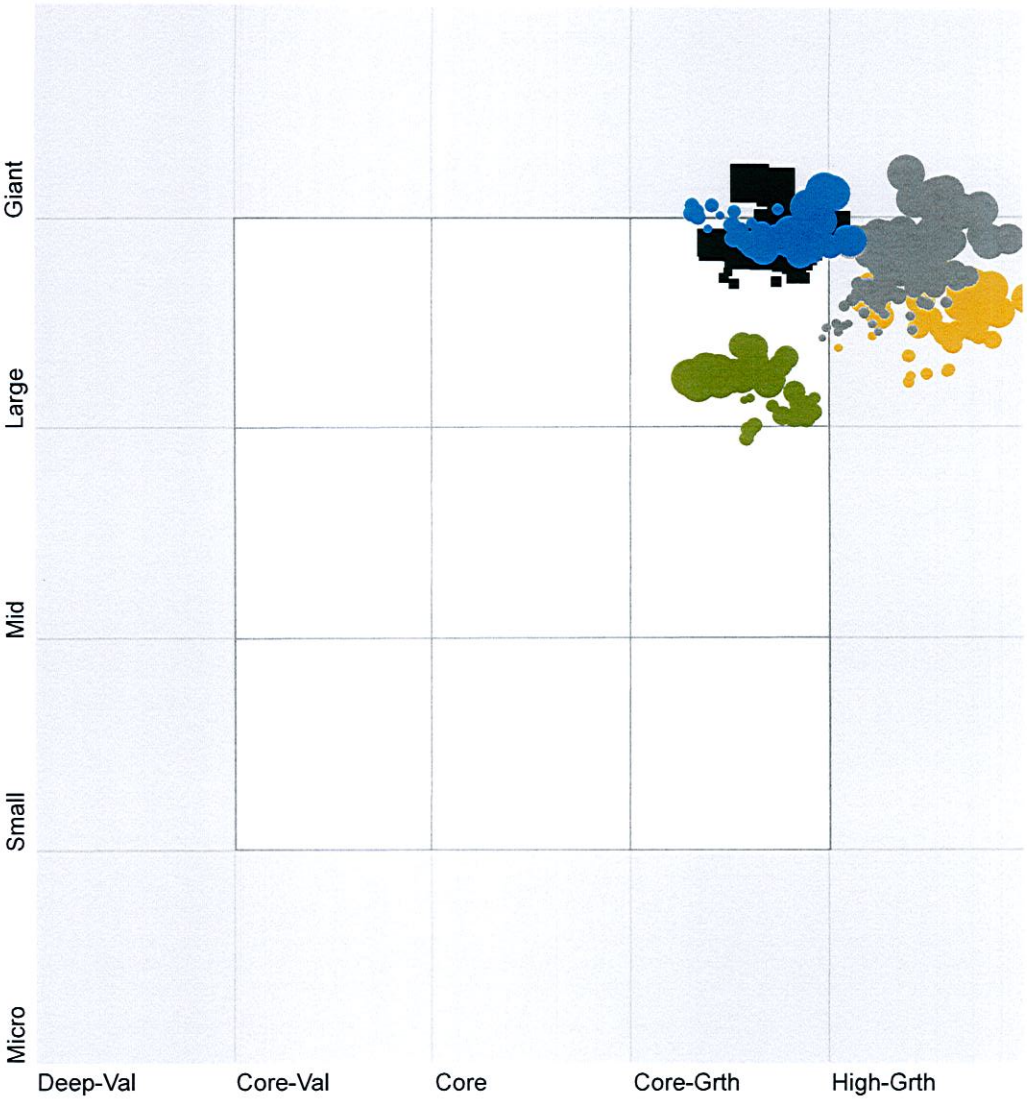


Current Portfolio Holdings-Style Map



Historical Holdings-Based Style Trail

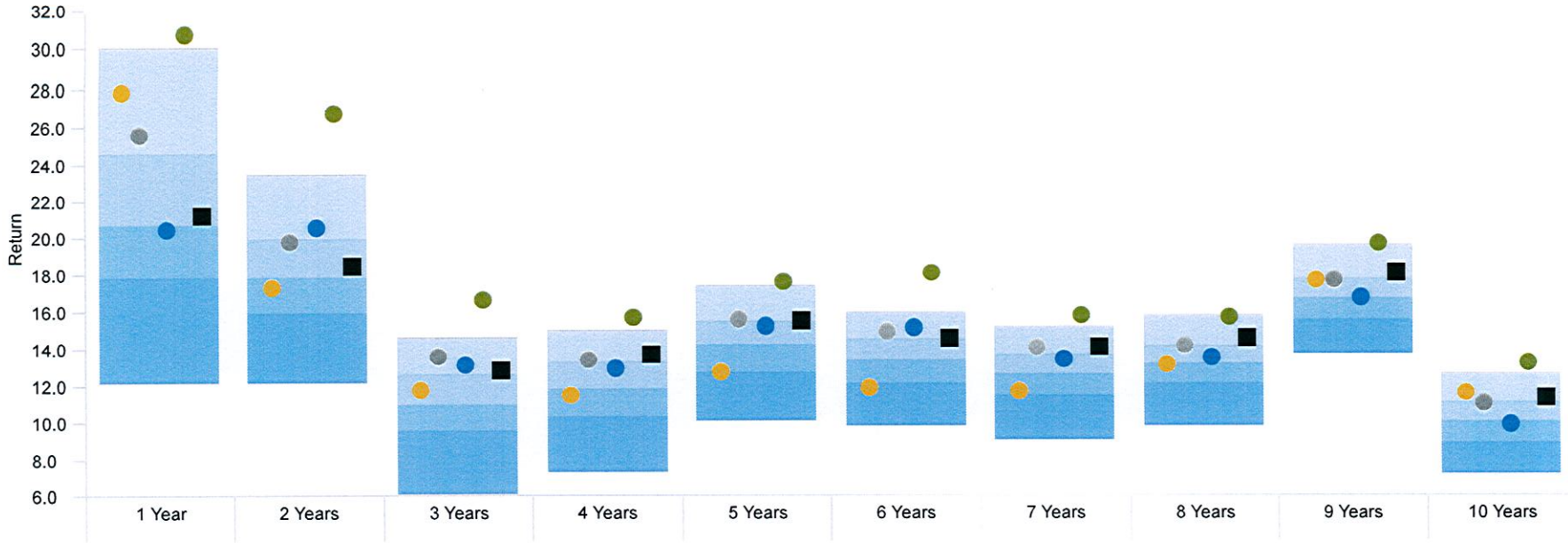
Time Period: 4/30/2008 to 3/31/2018



- American Funds Growth Fund of Amer R6
- Brown Advisory Growth Equity Inst
- MFS® Growth R6
- Russell 1000 Growth TR USD
- PRIMECAP Odyssey Growth

Quantitative Review

Peer Group (5-95%): Open End Funds - U.S. - Large Growth



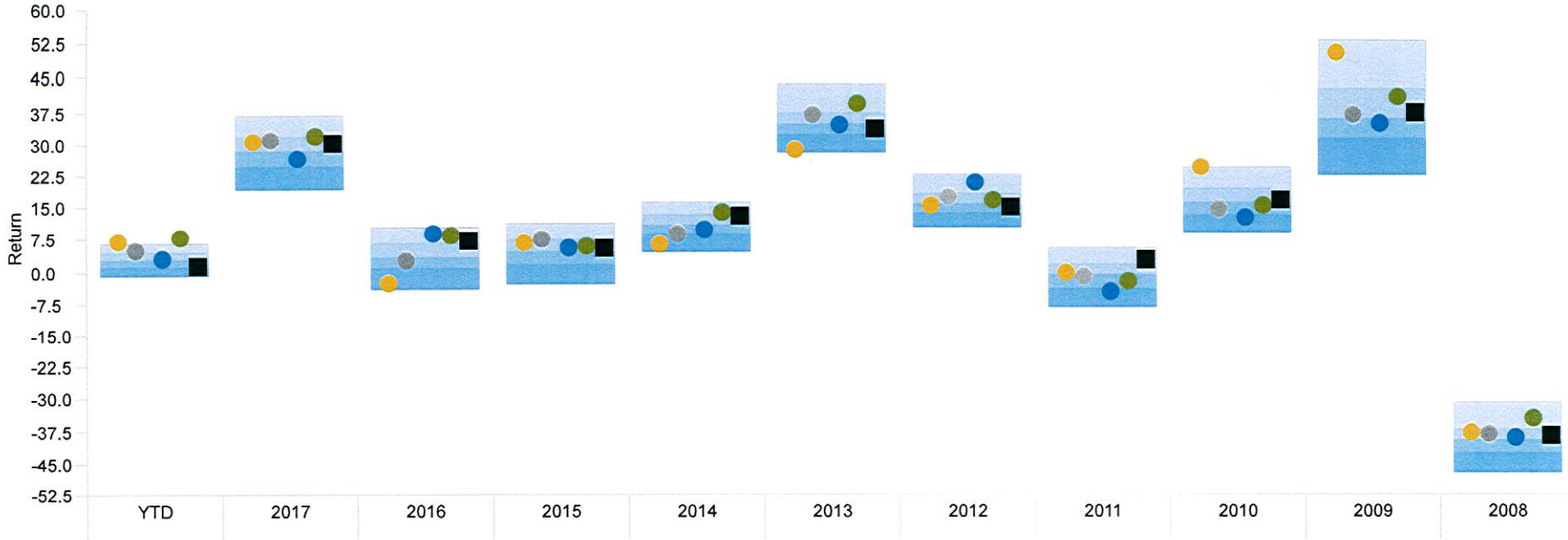
	1 Year	Rank	2 Years	Rank	3 Years	Rank	4 Years	Rank	5 Years	Rank	6 Years	Rank	7 Years	Rank	8 Years	Rank	9 Years	Rank	10 Years	Rank
American Funds Growth Fund of Amer R6	20.47	51	20.59	20	13.15	17	12.94	28	15.23	28	15.12	12	13.45	30	13.50	40	16.75	46	9.85	54
MFS® Growth R6	25.61	21	19.77	27	13.64	11	13.45	22	15.59	23	14.91	15	14.05	16	14.16	24	17.70	24	11.06	25
PRIMECAP Odyssey Growth	30.77	4	26.77	3	16.63	2	15.74	3	17.64	4	18.12	1	15.84	3	15.74	5	19.73	4	13.27	2
Brown Advisory Growth Equity Inst	27.89	11	17.37	56	11.84	36	11.56	55	12.75	74	11.88	79	11.69	70	13.18	48	17.68	25	11.59	17
Russell 1000 Growth TR USD	21.25	44	18.47	42	12.90	20	13.69	19	15.53	23	14.61	22	14.09	15	14.60	16	18.06	17	11.34	20

- American Funds Growth Fund of Amer R6
- MFS® Growth R6
- PRIMECAP Odyssey Growth
- Brown Advisory Growth Equity Inst
- Russell 1000 Growth TR USD

Returns Net of Fees.

Performance data shown prior to fund's inception date represents extended performance of an older share class of the same strategy.

Peer Group (5-95%): Open End Funds - U.S. - Large Growth



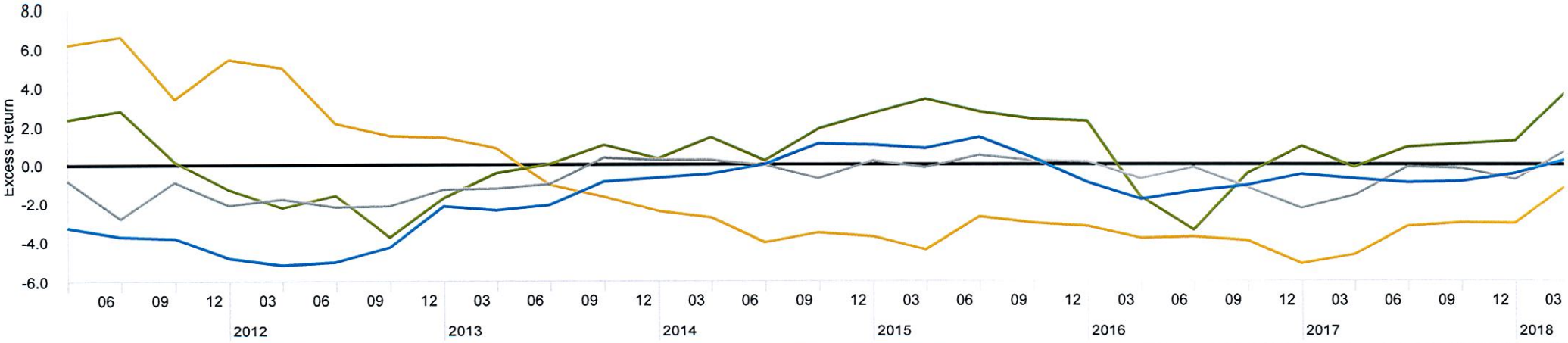
	YTD	Rank	2017	Rank	2016	Rank	2015	Rank	2014	Rank	2013	Rank	2012	Rank	2011	Rank	2010	Rank	2009	Rank	2008	Rank
American Funds Growth Fund of Amer R6	3.01	41	26.53	62	8.82	9	5.70	39	9.63	60	34.29	53	20.98	7	-4.53	77	12.67	79	34.76	57	-39.07	42
MFS® Growth R6	5.21	14	30.99	30	2.55	53	7.49	21	8.88	70	36.74	28	17.39	30	-1.04	49	14.82	59	37.09	44	-38.07	32
PRIMECAP Odyssey Growth	8.05	3	32.05	24	8.42	12	6.18	35	13.92	14	39.30	14	16.76	37	-2.22	61	15.37	54	40.95	32	-34.25	12
Brown Advisory Growth Equity Inst	7.15	4	30.57	33	-2.86	91	7.01	26	6.39	87	28.76	92	15.48	52	-0.31	40	24.44	4	51.47	8	-37.56	27
Russell 1000 Growth TR USD	1.42	64	30.21	36	7.08	21	5.67	40	13.05	23	33.48	60	15.26	55	2.64	16	16.71	41	37.21	43	-38.44	37

- American Funds Growth Fund of Amer R6
- MFS® Growth R6
- PRIMECAP Odyssey Growth
- Brown Advisory Growth Equity Inst
- Russell 1000 Growth TR USD

Rolling Excess Returns

Time Period: 4/1/2008 to 3/31/2018

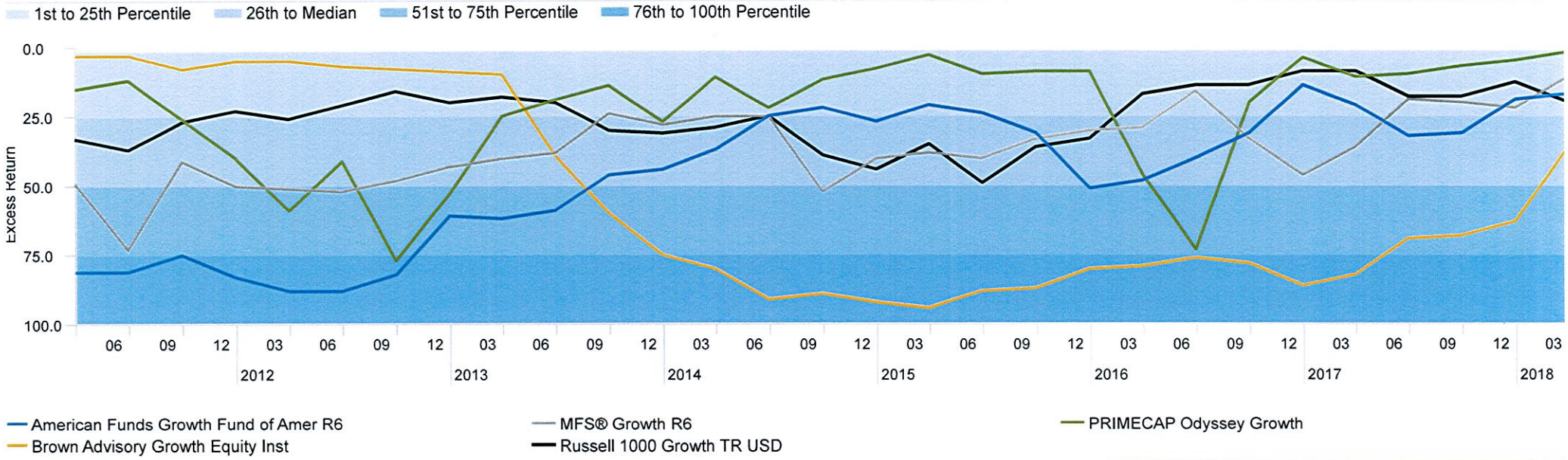
Rolling Window: 3 Years 3 Months shift Calculation Benchmark: Russell 1000 Growth TR USD



Rolling Excess Return Rankings

Time Period: 4/1/2008 to 3/31/2018

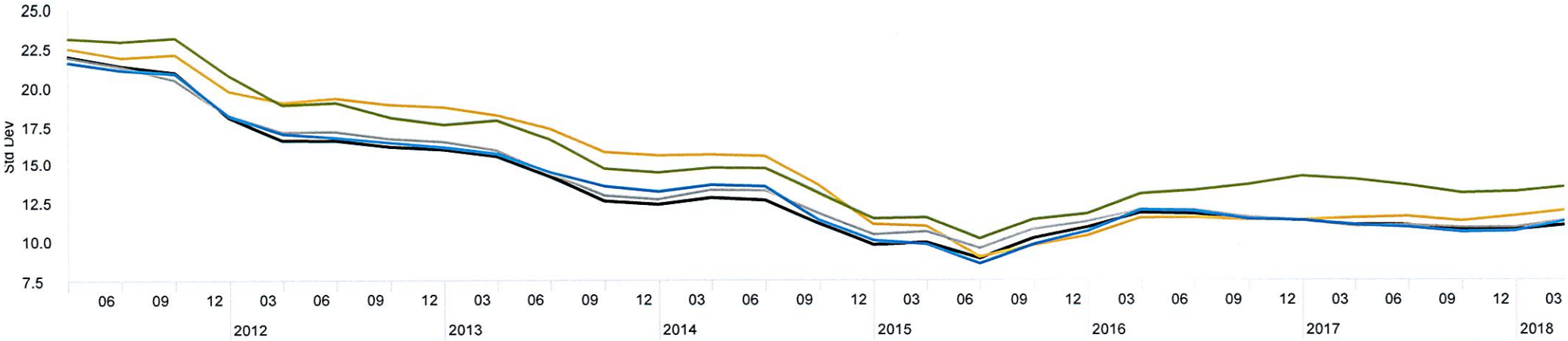
Rolling Window: 3 Years 3 Months shift Calculation Benchmark: Russell 1000 Growth TR USD



Rolling Standard Deviation

Time Period: 4/1/2008 to 3/31/2018

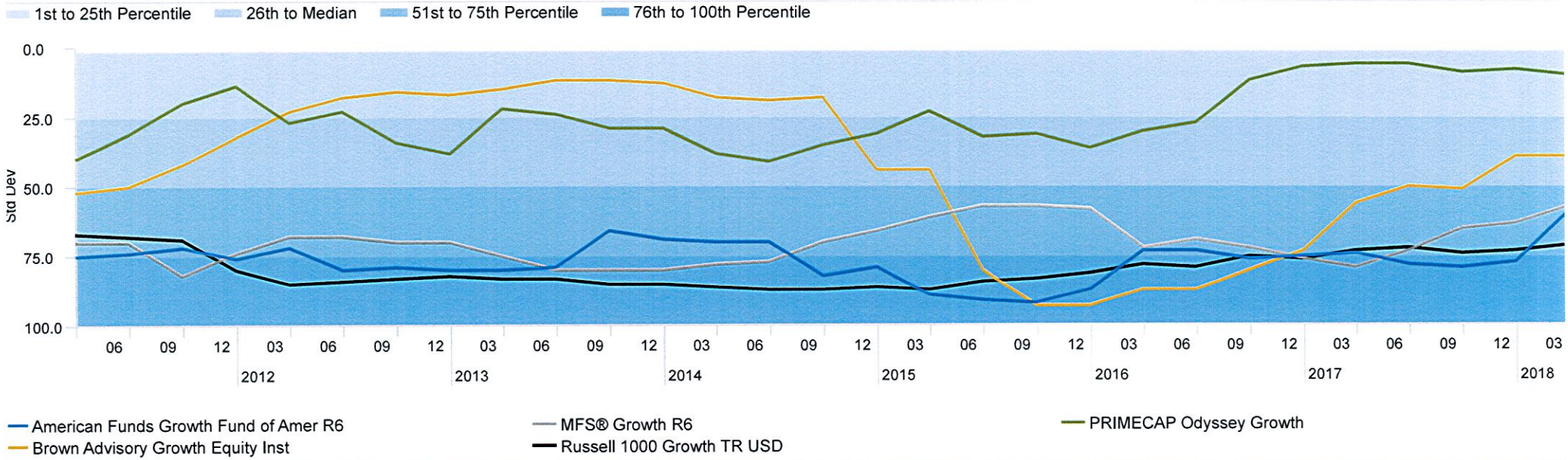
Rolling Window: 3 Years 3 Months shift



Rolling Standard Deviation Rankings

Time Period: 4/1/2008 to 3/31/2018

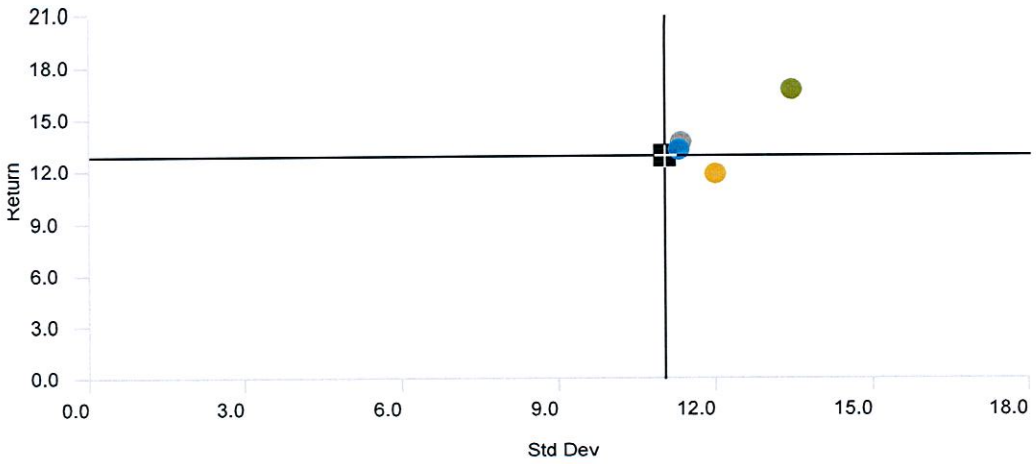
Rolling Window: 3 Years 3 Months shift



Risk-Reward: 3-Year

Time Period: 4/1/2015 to 3/31/2018

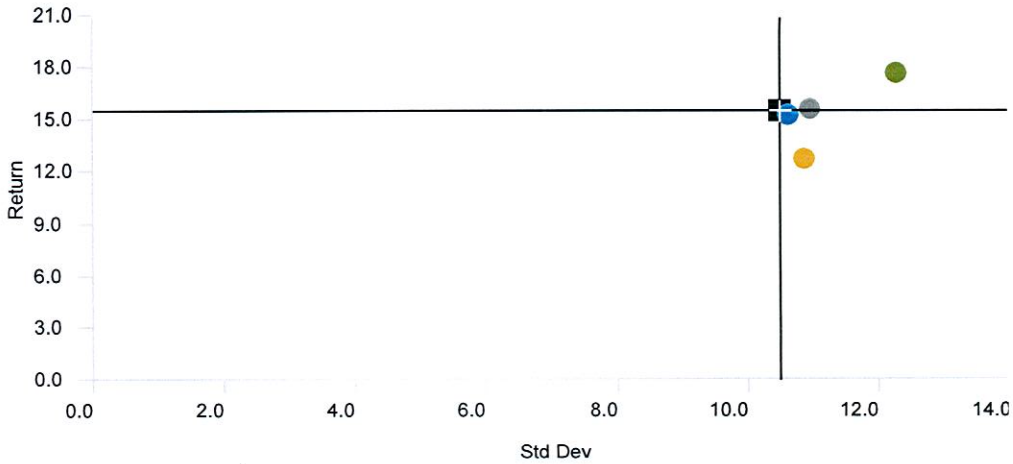
Calculation Benchmark: Russell 1000 Growth TR USD



Risk-Reward: 5-Year

Time Period: 4/1/2013 to 3/31/2018

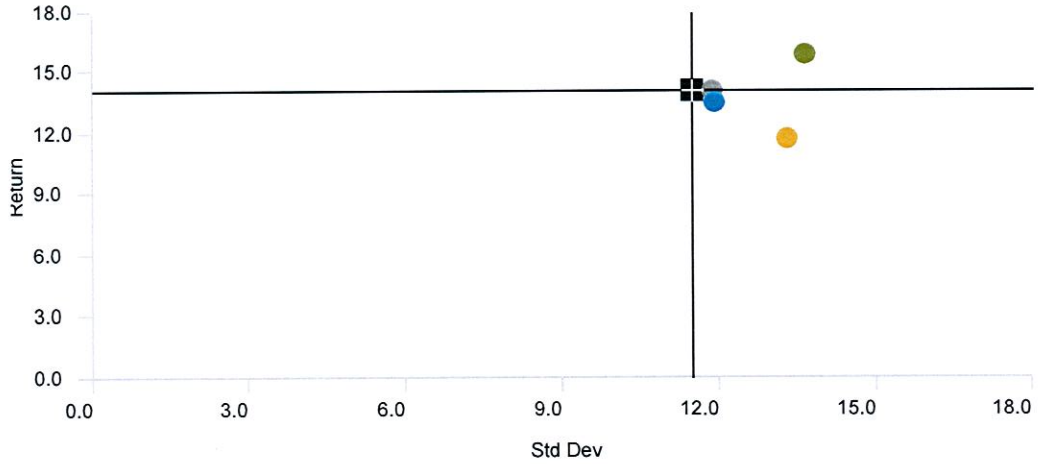
Calculation Benchmark: Russell 1000 Growth TR USD



Risk-Reward: 7-Year

Time Period: 4/1/2011 to 3/31/2018

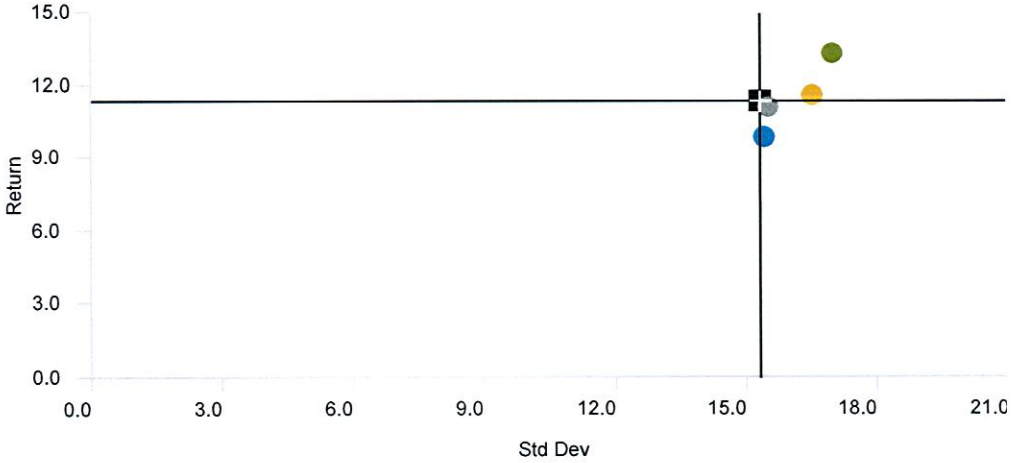
Calculation Benchmark: Russell 1000 Growth TR USD



Risk-Reward: 10-Year

Time Period: 4/1/2008 to 3/31/2018

Calculation Benchmark: Russell 1000 Growth TR USD

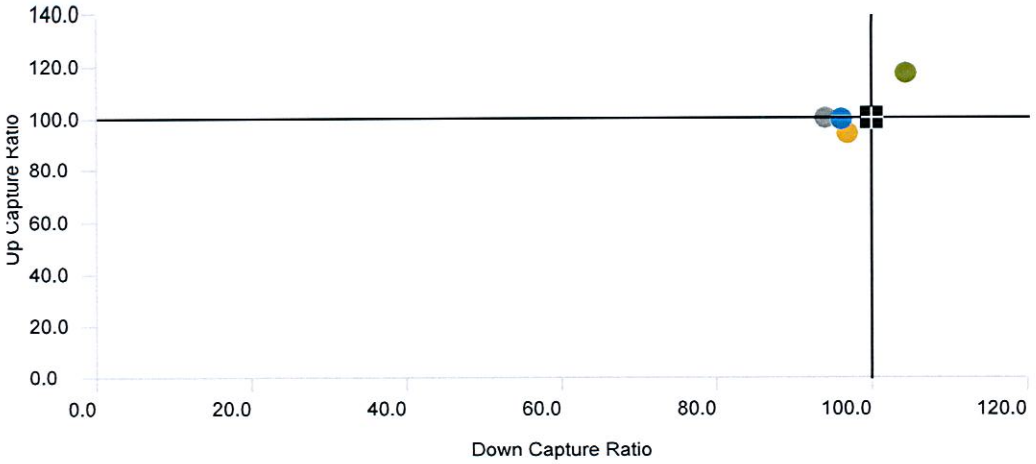


- American Funds Growth Fund of Amer R6
- MFS® Growth R6
- PRIMECAP Odyssey Growth
- Brown Advisory Growth Equity Inst
- Russell 1000 Growth TR USD

Jp and Down Market Capture: 3-Year

Time Period: 4/1/2015 to 3/31/2018

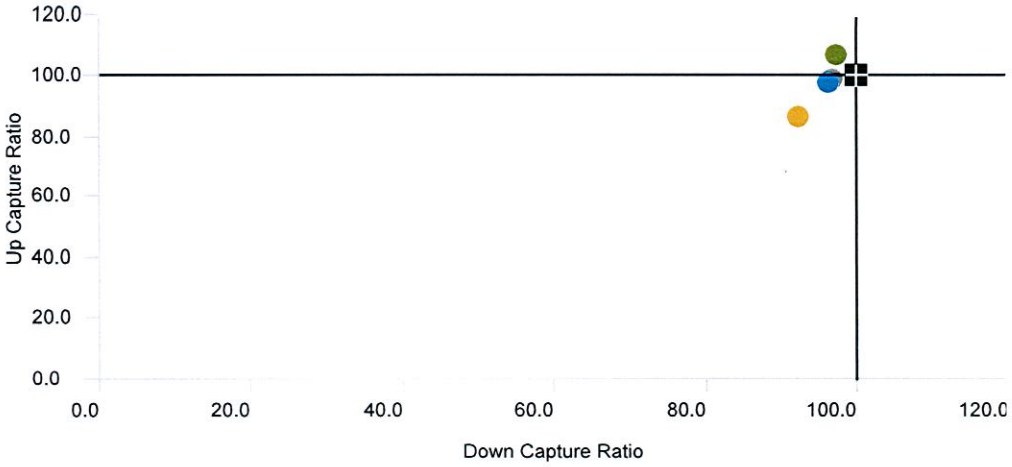
Calculation Benchmark: Russell 1000 Growth TR USD



Up and Down Market Capture: 5-Year

Time Period: 4/1/2013 to 3/31/2018

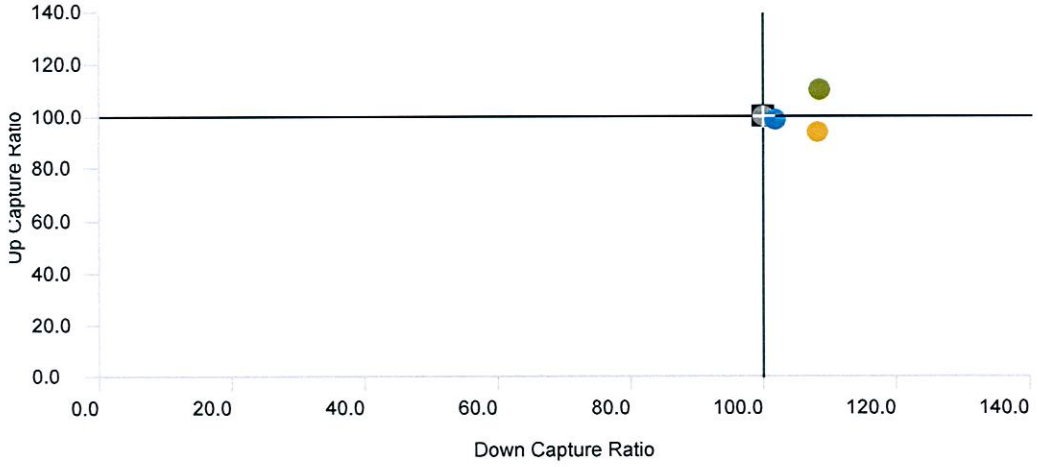
Calculation Benchmark: Russell 1000 Growth TR USD



Jp and Down Market Capture: 7-Year

Time Period: 4/1/2011 to 3/31/2018

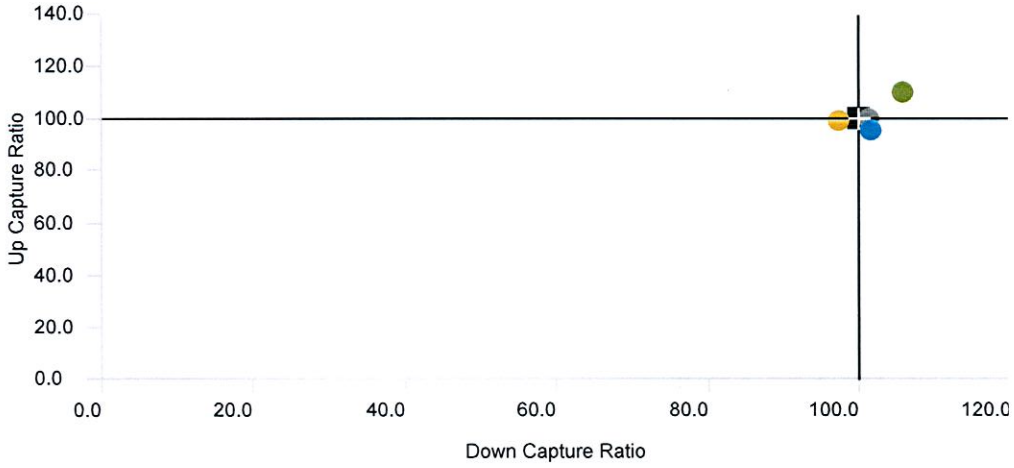
Calculation Benchmark: Russell 1000 Growth TR USD



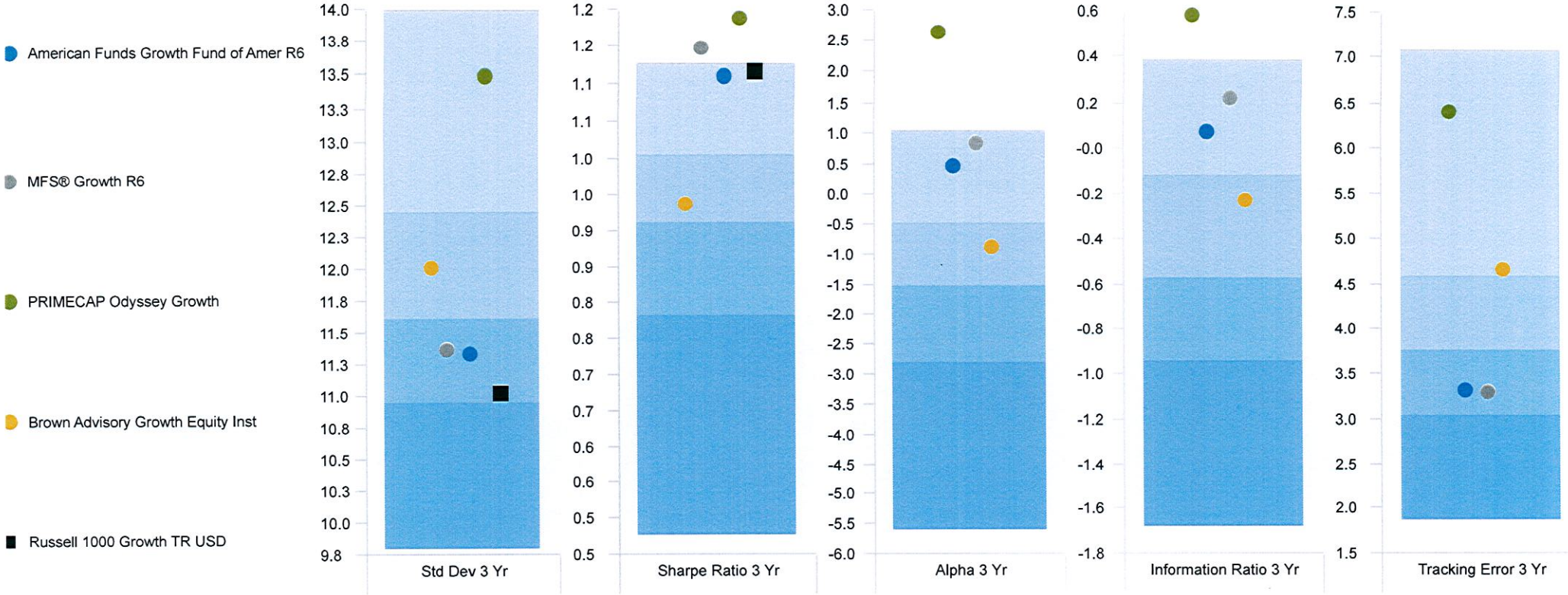
Up and Down Market Capture: 10-Year

Time Period: 4/1/2008 to 3/31/2018

Calculation Benchmark: Russell 1000 Growth TR USD

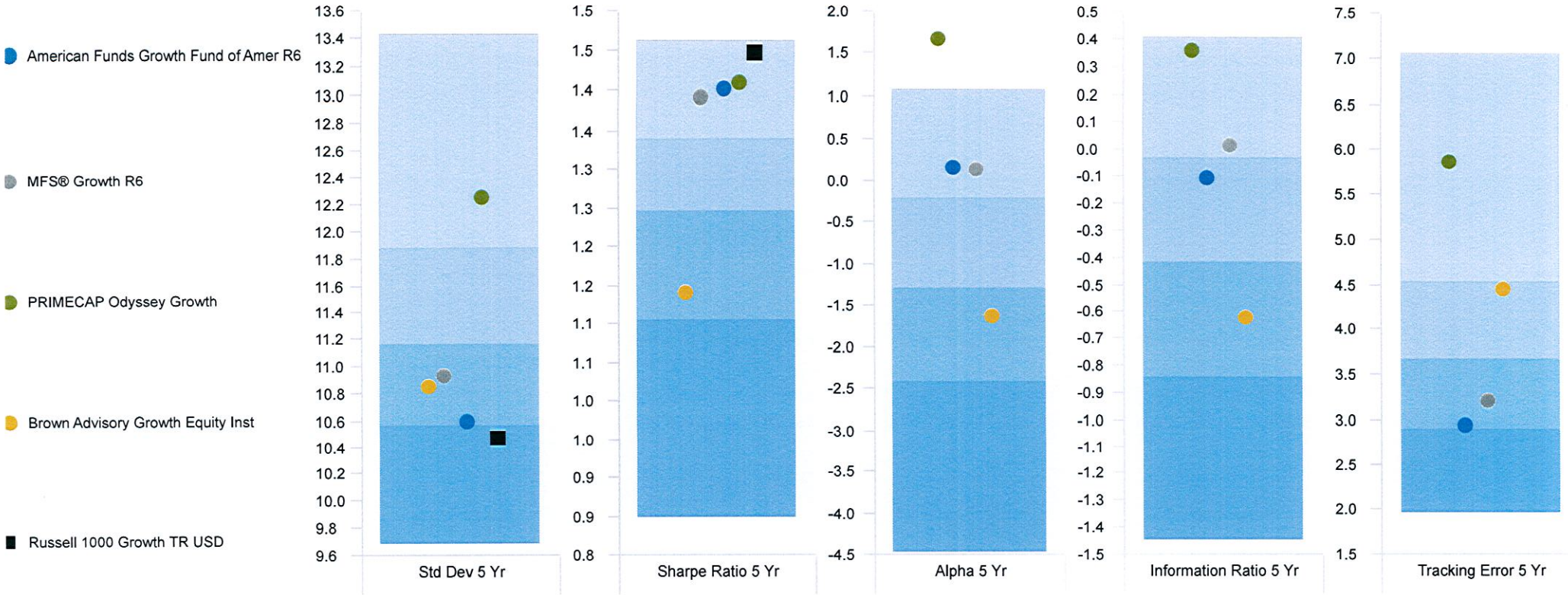


- American Funds Growth Fund of Amer R6
- MFS® Growth R6
- PRIMECAP Odyssey Growth
- Brown Advisory Growth Equity Inst
- Russell 1000 Growth TR USD



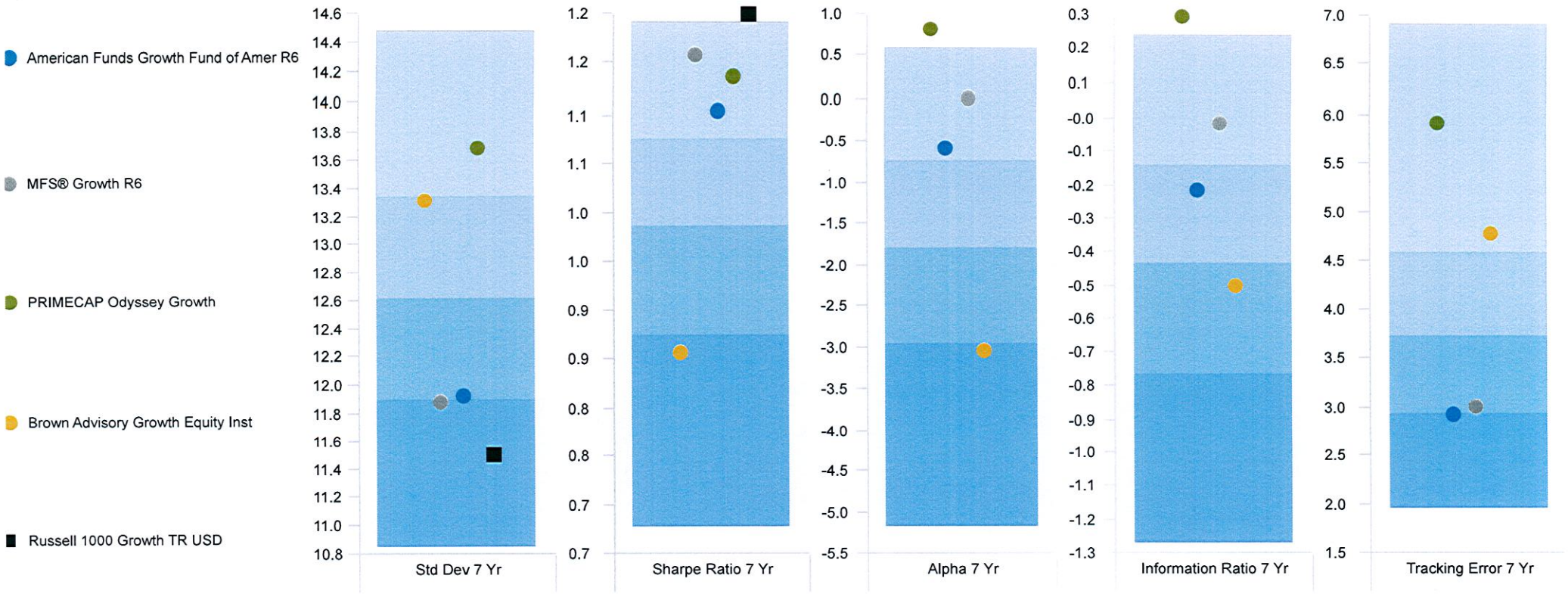
Time Period: 4/1/2015 to 3/31/2018

	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
American Funds Growth Fund of Amer R6	11.33	59	1.11	7	0.48	9	0.08	16	3.32	63
MFS® Growth R6	11.37	57	1.15	4	0.87	6	0.23	10	3.30	65
PRIMECAP Odyssey Growth	13.49	10	1.19	3	2.65	1	0.58	2	6.41	9
Brown Advisory Growth Equity Inst	12.01	39	0.94	44	-0.88	34	-0.23	31	4.65	23
Russell 1000 Growth TR USD	11.03	71	1.12	6	0.00	15			0.00	100



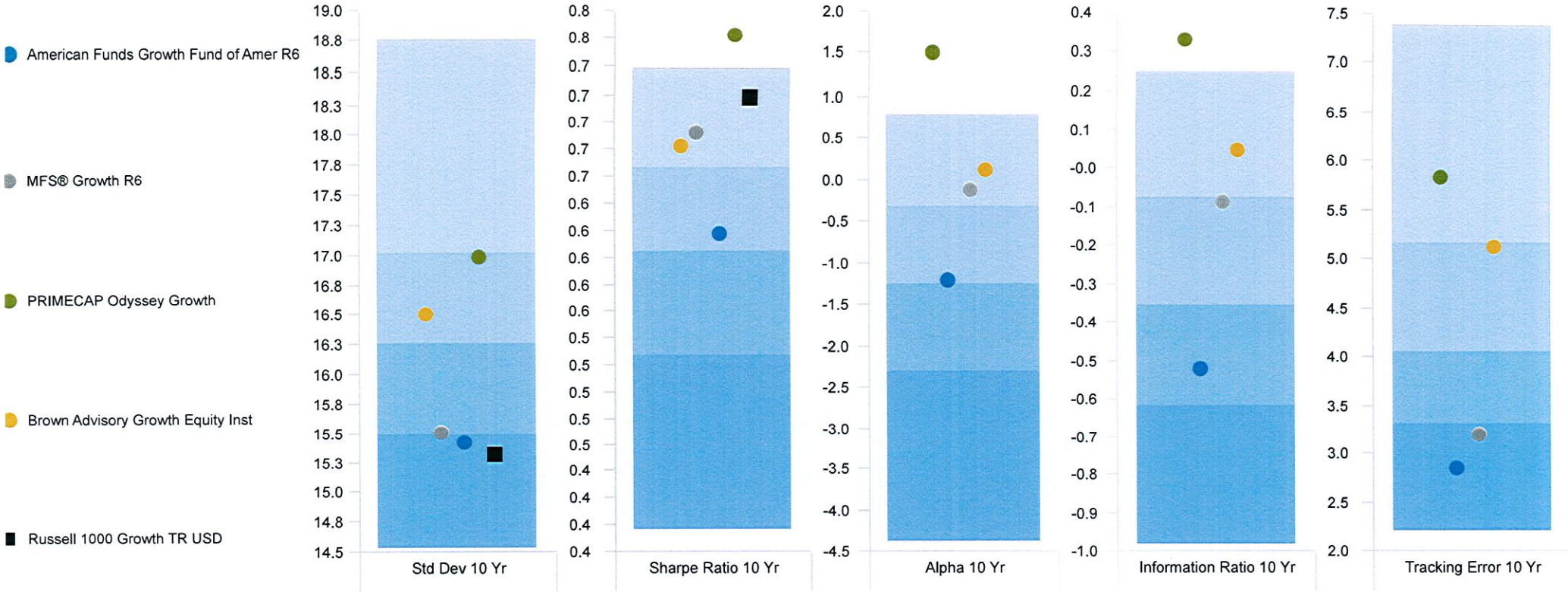
Time Period: 4/1/2013 to 3/31/2018

	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
American Funds Growth Fund of Amer R6	10.60	72	1.40	13	0.16	17	-0.10	29	2.95	73
MFS® Growth R6	10.94	59	1.39	14	0.14	18	0.02	23	3.22	63
PRIMECAP Odyssey Growth	12.25	19	1.41	12	1.67	2	0.36	7	5.88	9
Brown Advisory Growth Equity Inst	10.86	62	1.14	70	-1.61	58	-0.62	63	4.46	28
Russell 1000 Growth TR USD	10.48	80	1.45	7	0.00	21			0.00	100



Time Period: 4/1/2011 to 3/31/2018

	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
American Funds Growth Fund of Amer R6	11.93	72	1.10	19	-0.58	21	-0.22	31	2.94	74
MFS® Growth R6	11.88	76	1.16	9	0.02	11	-0.01	16	3.01	72
PRIMECAP Odyssey Growth	13.68	17	1.14	12	0.82	4	0.30	4	5.92	8
Brown Advisory Growth Equity Inst	13.31	27	0.86	77	-3.04	76	-0.50	55	4.78	19
Russell 1000 Growth TR USD	11.51	86	1.20	5	0.00	11			0.00	100

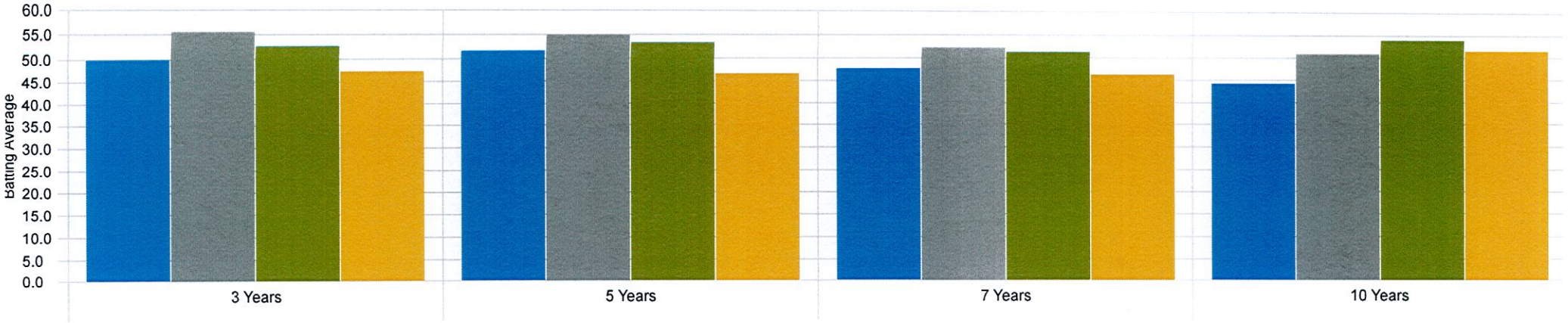


Time Period: 4/1/2008 to 3/31/2018

	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
American Funds Growth Fund of Amer R6	15.42	78	0.62	44	-1.21	49	-0.52	65	2.85	87
MFS® Growth R6	15.50	74	0.69	15	-0.11	19	-0.09	26	3.20	77
PRIMECAP Odyssey Growth	16.99	26	0.76	3	1.51	2	0.33	3	5.83	13
Brown Advisory Growth Equity Inst	16.50	45	0.68	18	0.13	14	0.05	17	5.12	26
Russell 1000 Growth TR USD	15.32	82	0.72	8	0.00	16			0.00	100

Batting Average

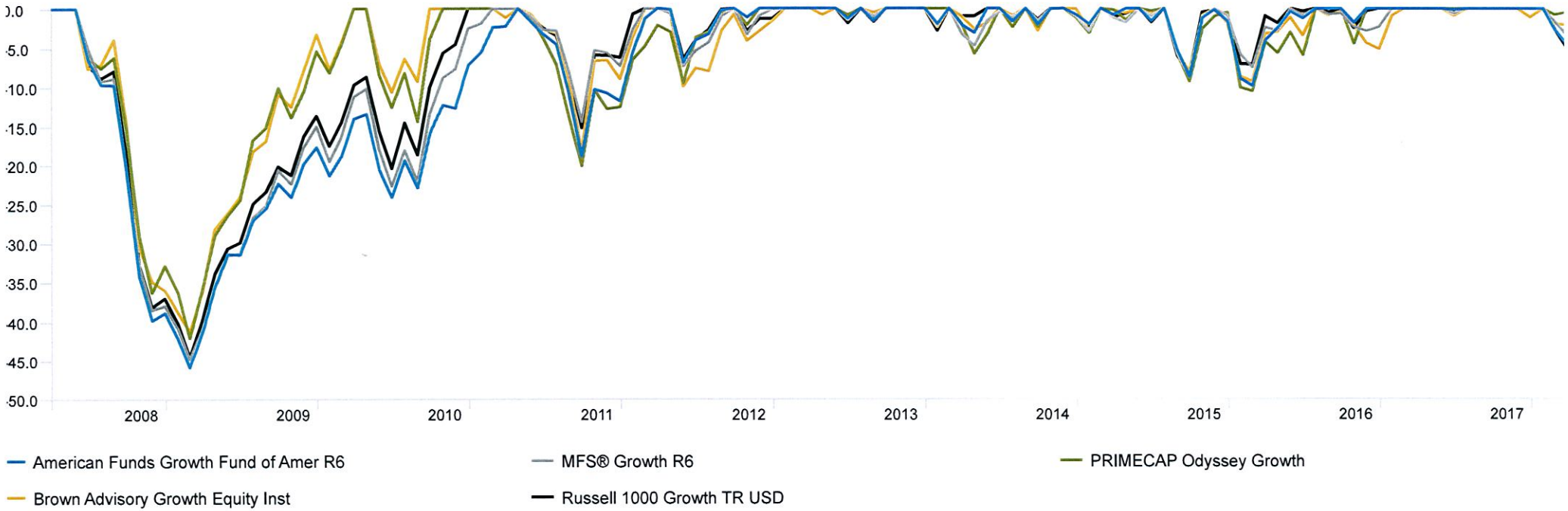
Source Data: Monthly Return Calculation Benchmark: Russell 1000 Growth TR USD



Drawdown

Time Period: 4/1/2008 to 3/31/2018

Source Data: Monthly Return



MPT Statistics: 3-Year

Time Period: 4/1/2015 to 3/31/2018 Calculation Benchmark: Russell 1000 Growth TR USD

	American Funds Growth Fund of Amer R6	MFS® Growth R6	PRIMECAP Odyssey Growth	Brown Advisory Growth Equity Inst	Russell 1000 Growth TR USD
Return	13.15	13.64	16.63	11.84	12.90
Excess Return	0.26	0.75	3.74	-1.06	0.00
Std Dev	11.33	11.37	13.49	12.01	11.03
Beta	0.98	0.99	1.08	1.00	1.00
Tracking Error	3.32	3.30	6.41	4.65	0.00
Sharpe Ratio	1.10	1.14	1.17	0.95	1.11
Alpha	0.48	0.87	2.65	-0.88	0.00
Information Ratio	0.08	0.23	0.58	-0.23	
Batting Average	50.00	55.56	52.78	47.22	100.00
Up Capture Ratio	99.29	100.47	117.38	94.12	100.00
Down Capture Ratio	95.96	94.01	104.25	96.79	100.00

MPT Statistics: 5-Year

Time Period: 4/1/2013 to 3/31/2018 Calculation Benchmark: Russell 1000 Growth TR USD

Return	15.23	15.59	17.64	12.75	15.53
Excess Return	-0.31	0.05	2.11	-2.78	0.00
Std Dev	10.60	10.94	12.25	10.86	10.48
Beta	0.97	1.00	1.02	0.94	1.00
Tracking Error	2.95	3.22	5.88	4.46	0.00
Sharpe Ratio	1.36	1.35	1.37	1.13	1.40
Alpha	0.16	0.14	1.67	-1.61	0.00
Information Ratio	-0.10	0.02	0.36	-0.62	
Batting Average	51.67	55.00	53.33	46.67	100.00
Up Capture Ratio	97.39	98.97	107.00	86.25	100.00
Down Capture Ratio	96.20	96.71	97.21	92.17	100.00

MPT Statistics: 7-Year

Time Period: 4/1/2011 to 3/31/2018 Calculation Benchmark: Russell 1000 Growth TR USD

	American Funds Growth Fund of Amer R6	MFS® Growth R6	PRIMECAP Odyssey Growth	Brown Advisory Growth Equity Inst	Russell 1000 Growth TR USD
Return	13.45	14.05	15.84	11.69	14.09
Excess Return	-0.64	-0.04	1.76	-2.40	0.00
Std Dev	11.93	11.88	13.68	13.31	11.51
Beta	1.00	1.00	1.07	1.08	1.00
Tracking Error	2.94	3.01	5.92	4.78	0.00
Sharpe Ratio	1.10	1.15	1.13	0.88	1.18
Alpha	-0.58	0.02	0.82	-3.04	0.00
Information Ratio	-0.22	-0.01	0.30	-0.50	
Batting Average	47.62	52.38	51.19	46.43	100.00
Up Capture Ratio	98.33	99.88	110.49	94.17	100.00
Down Capture Ratio	101.85	100.08	108.50	108.09	100.00

MPT Statistics: 10-Year

Time Period: 4/1/2008 to 3/31/2018 Calculation Benchmark: Russell 1000 Growth TR USD

Return	9.85	11.06	13.27	11.59	11.34
Excess Return	-1.49	-0.28	1.93	0.25	0.00
Std Dev	15.42	15.50	16.99	16.50	15.32
Beta	0.99	0.99	1.04	1.02	1.00
Tracking Error	2.85	3.20	5.83	5.12	0.00
Sharpe Ratio	0.67	0.74	0.80	0.73	0.76
Alpha	-1.21	-0.11	1.51	0.13	0.00
Information Ratio	-0.52	-0.09	0.33	0.05	
Batting Average	44.17	50.83	54.17	51.67	100.00
Up Capture Ratio	95.73	99.82	110.28	99.18	100.00
Down Capture Ratio	101.54	101.30	105.87	97.25	100.00

Investment Option Narratives

Firm Overview

The Capital Group (CG) traces its roots back to 1931. CG is one of the largest privately held investment management organizations in the world and serves as adviser to the American Funds. CG is headquartered in Los Angeles, California and employs more than 7,000 associates across all subsidiaries with full-service locations in New York, London, and Singapore. The firm is 100% owned by over 400 active employees, and manages total fund assets of over $1 trillion across the asset class spectrum.

Team Overview

CG's portfolio management style is differentiated. The firm employs a multiple portfolio counselor system whereby each portfolio counselor manages his/her portion of the assets completely autonomously. Each has his/her own investing style. The Growth Fund of America utilizes 12 portfolio counselors with average tenure with the firm of over 25 years. In addition, senior analysts manage a sleeve of the portfolio with their best ideas.

CG's team of investment analysts specialize by industry and provide company research to all equity products. CG utilizes around 100 analysts, split between US and non-US competencies. The US team is located in Los Angeles, San Francisco and New York, while the non-US team resides in Hong Kong, London, Tokyo, Beijing, Singapore, Mumbai and Geneva. Between 25 and 35 analysts are selected to participate in the research portfolio sleeve.

Strategy Overview

The process is based on fundamental, bottom-up research conducted on a global basis. CG believes that on-the-ground, in-person research is key to understanding businesses and companies. The team conducts thousands of company meetings annually. Analysts focus their efforts on determining an accurate value of the company in order to find the most attractively priced stocks based on their future earnings power. They then must communicate their findings and recommendations effectively to portfolio counselors. The portfolio counselors and analysts have regular discussions about companies to attempt to address multiple perspectives. In the end, the portfolio counselors and analysts make independent buy and sell decisions. The Fund typically holds 250-300 securities. There is no formal rating system that communicates the research group's collective opinion on a stock, or one that dictates buy/sell activity. These decisions are solely up to the individual portfolio counselors and analysts as long as they are within the parameters dictated by the Fund's investment objectives.

CG utilizes a system that monitors recent activity in securities to ensure appropriate communication among the investment professionals and to facilitate coordination if needed. Besides having to invest at least 65% of assets in common stocks, the only other formal constraint on the portfolio is a maximum weighting of 25% in securities domiciled outside of the US. Cash is determined at the portfolio counselor level and is typically between 5-12%. The Fund will hedge currency as a defensive measure via forward currency contracts.

Expectations

The relative performance will tend to fall between the S&P 500 Index and Russell 1000 Growth Index over time. We would expect the strategy to outperform the growth index in periods where value outperforms given the team's attention to valuation. In addition, we would expect the strategy to hold up better in general in down markets given the higher cash levels and fixed income investments that would serve as a buffer.

We would expect the strategy to struggle on a relative basis in a hyper growth environment and in periods where smaller cap stocks outperform. In addition, cash has caused a drag on performance in these types of markets.

Points to Consider

The massive asset level of the Fund is an ongoing issue to watch. We would expect the large assets to limit flexibility and force the PMs to only own larger, more liquid securities. CG has not communicated any ultimate capacity level of the Fund.

CG does not publicly provide individual portfolio counselor performance attribution. This makes it difficult—if not impossible—to know if all 12 are adding value on a consistent basis.

Given the size of the fund and cash flows, cash and/or cash equivalents can be high at times and averages about 9% over the past ten years. The highest cash allocation during that period was 17.3% at the nadir of the Great Recession (Feb 2009).

The larger allocation to non-US equities relative to peers can be a significant driver of relative performance during periods where the returns differ between U.S.-domiciled and non-U.S.-domiciled stocks.

Recommendation Summary

The Research Group recommends The Growth Fund of America as an inexpensive, diversified large cap growth equity allocation for both defined benefit and defined contribution plans. The flexible approach to growth leads the Fund to have exposure to a combination of typical fast growing companies, as well as cyclicals and turnarounds. Even though the portfolio is very diversified, it is not an index hugger and over the long-term we would expect it to have the ability to add value net of fees.

The multiple portfolio counselor system utilized by CG makes PM turnover less impactful and disruptive to the investor, process, and ultimately to performance. With the exception of retirements, CG has experienced very little turnover in its key investment staff.

Firm Overview

MFS' investment management history dates back to 1924. MFS began managing tax-exempt capital in 1970. Headquartered in Boston, MFS has been a majority-owned subsidiary of Sun Life of Canada since 1982. The firm maintains considerable autonomy in managing its day-to-day business. Up to 22% of MFS' common stock is available for ownership by senior management, investment professionals and other key employees. MFS has nine offices around the world. Total firm assets under management (AUM) are over $400 billion across a plethora of equity, fixed income and balanced/blended strategies. The client mix is about 50/50 institutional/retail.

Team Overview

PMs Eric Fischman and Matthew Sabel lead the Growth Equity strategy. Institutional PMs Andrew Boyd and Rob Almeida manage the cash for the strategy, and oversee portfolios with any client-level restrictions. Fischman was the sole PM for 11 years and Sabel was promoted to co-PM in April 2014 after being MFS' lead Technology analyst. The two have similar styles and processes and only really differ occasionally on valuation analysis. The PMs are supported by MFS' global sector team. The team is made up of over 80 research analysts, with about 25 of those focused on US equities. The PMs work closely with the global sector teams on bottom-up company analysis, but ultimately have final decision-making authority for all buys and sells.

Strategy Overview

The team's investment philosophy is based on the belief that: 1) fundamentals drive earnings and cash flow, 2) earnings and cash flow growth drive share price performance over the long term, and 3) investors often underestimate the rate and duration of growth.

Idea generation comes mainly from the analysts, but the PMs also actively participate in the research process. The goal is to find high quality companies with sustainable earnings growth of 10-15%. MFS defines quality as leading brands, low leverage, high free cash flow and strong management teams. Sector analysts are responsible for conducting bottom-up fundamental due diligence, developing and maintaining their own in-depth financial models, and ranking companies either "buy", "hold", or "sell". Analysts and PMs exchange ideas both formally and informally. In addition, analysts distinguish their best ideas through the firm's research portfolios that are live strategies with outside assets. Those portfolios are expected to received the analysts' top ideas. Ultimately, for the Growth Equity portfolio, the PMs have final discretion on buys and sells. The portfolio is well diversified across 80-110 stocks. The strategy is characterized as large cap, but will dip down into more mid cap names as well. Industry exposure is limited to 25% of the portfolio. Individual stock positions are limited to 5% at time of purchase. The strategy allows investments in non-US domiciled companies and does not have a stated maximum. Historically, the portfolio has averaged about 6% , but has had periods where the weighting was above 10%.

Stocks are reviewed for sale when: 1) the target price is reached, 2) there is a change in the investment thesis, and/or 3) better alternatives exist. Average annual portfolio turnover has historically been about 70%.

Expectations

The strategy is expected to perform well on a relative basis during periods where the market rewards high quality growth companies with strong or improving fundamentals. For example, in 2007 the strategy outperformed the index by over 10% as companies with strong cash flow, rising earnings per share, and high returns outperformed.

The strategy tends to be underweight mega cap companies due to the lower rates of sustainable growth so we would expect it to underperform when those stocks drive market returns. In addition, during periods where risk appetite is high and the market favors low quality/higher beta companies, we would expect the strategy to struggle on a relative basis.

Points to Consider

MFS does not typically give specific dollar amounts for product capacity because it is a moving target due to the changing market and asset levels in overlapping strategies. However, the firm communicates that it takes capacity constraints very seriously and has a track record of closing strategies when necessary (and typically early).

The minimum separate account size is $50 million. However, MFS also offers CIT and mutual fund vehicles that are attractively priced.

Recommendation Summary

MFS touts a highly collaborative and integrated investment management culture, which lends itself well to building experienced, long-standing investment teams that have consistently added value via bottom-up research. The Growth Equity strategy is characterized by a diverse portfolio of high quality, attractively-valued growth stocks with moderate tracking error and consistent value add over its history.

The Research Group recommends MFS Growth Equity for all client types looking for a diversified, active large cap growth strategy with the flexibility to dip down into middle capitalization companies on an opportunistic basis. Given the stock-level diversification and less volatile relative performance pattern, we believe the strategy is appropriate to utilize on a standalone basis. While the strategy is actively managed, tracking error tends to be on the low end of the active management spectrum. The strategy would also work well complemented by a more concentrated, index agnostic strategy in a client's overall domestic growth allocation.

Firm Overview

PRIMECAP Management Company (PRIMECAP) was founded in September 1983 in Pasadena, California to manage equity portfolios for a select group of employee benefit plans, endowment funds, foundations, sovereign wealth funds, Taft Hartley plans and The Vanguard Group. The firm is 100% employee-owned by 13 partners. One of the co-founders previously worked for Capital Group/American Funds and mirrored his ex-employer's multi-manager approach across all PRIMECAP strategies. Vanguard is PRIMECAP's largest client by far, distributing three sub-advised funds all of which are closed to new investors.

Team Overview

As we mentioned above, the firm employs a multiple portfolio manager system whereby each PM manages his/her portion of the assets completely autonomously. Each has his/her own investing style within the contrarian growth framework. PRIMECAP Odyssey Growth fund utilizes five PMs with average tenure with the firm of over 20 years. The five PMs are co-founder Theo Kolokotrones, Joel Fried, Al Mordecai, Mohsin Ansari, and James Marchetti.

PRMECAP's team of 14 investment analysts specialize by industry and provide company research the three equity products. Senior analysts manage a sleeve of the Odyssey Aggressive Growth Fund and Odyssey Stock Fund, but do not currently manage part of the Odyssey Growth Fund.

Strategy Overview

The fund invests mainly in stocks of U.S. companies, emphasizing those companies with above average earnings growth potential that is not reflected in their current market prices. The fund's portfolio consists predominantly of mid- and large-cap stocks and may include stocks of foreign companies. Through bottom-up research, the team identifies stocks that it believes over a three- to five-year time frame will outperform the S&P 500 Index.

PRIMECAP does not use front-end screens to identify new ideas, but rather scours quarterly earnings reports, news articles, industry periodicals and speaks with management teams to come up with a focus list of buying opportunities. Both PMs and analysts conduct company research. The process is collaborative, but ultimately each PM is responsible for a distinct portfolio of the fund and has complete autonomy and decision making authority. Even though PMs are drawing from the same analyst ideas and research, each have unique style biases that will show up in the individual sleeves. For example, Ansari gravitates toward Industrials names given his background and experience in the sector, while Marchetti's background in software has influence over his portfolio. In addition, certain PMs are more valuation sensitive, while others are comfortable with higher valuations for faster-growing companies. There will be some overlap in names across a majority of the PMs and this will be reflected in the individual stock weightings at the portfolio level (higher weightings reflect more consensus across the PMs).

Final portfolios hold between 100 and 130 stocks. Industry exposure is limited to 25% and individual stocks are limited to 5% at purchase. Average annual portfolio turnover is typically between 10% and 20% and has mostly been towards the lower end of that range over the past decade.

Expectations

The relative performance will tend to fall between the S&P 500 Index and Russell 1000 Growth Index over time. We would expect the strategy to outperform the growth index in periods where value outperforms given the team's attention to valuation. Given the strategy's smaller relative weighted average market cap, we would expect the strategy to outperform in periods where small caps outperform large caps. In addition, we would expect the strategy to hold up better in general in down markets.

We would expect the strategy to struggle on a relative basis in narrow markets that are driven by cyclicals and/or lower-growth sectors (e.g., 2007). In addition, the Fund would be expected to underperform in a yield-seeking environment (e.g., Q1 2016) as dividend yield is not a focus of the team/process.

Points to Consider

There is extensive overlap among all six of the strategies managed by the team so ultimate capacity should take into consideration the liquidity of the combined exposures. For example, there are several stocks held by all PRIMECAP funds that equate to close to 10% of the stocks' outstanding shares (e.g, NetApp, Blackberry, Insulet, Nektar Therapeutics, Shutterfly). If markets should experience a liquidity event similar to the Great Recession, it is likely PRIMECAP would not be able to exit these stocks without putting considerable pressure on prices. The long-term, contrarian and patient nature of the process/team makes this less of a concern simply because the team is highly unlikely to be selling into pressured markets.

The firm has no stated limit on the allocation to cash, although they attempt to stay fully-invested (less than 5%). There have been short periods of time where cash has approached 10% simply due to PMs eliminating stocks and not immediately buying others.

There is no stated limit on non-US domiciled securities, however the average historical weighting has been less than 15%. In 2013, the Fund had over 12% in western Europe. This non-index allocation can at times drive relative performance when there is significant dispersion between U.S. and non-U.S. equities.

Recommendation Summary

The Research Group recommends PRIMECAP Odyssey Growth as a diversified large cap growth equity allocation with an attractive expense ratio for both defined benefit and defined contribution plans. The patient, contrarian approach to growth leads the fund to have exposure to high growth stocks at a time when they are out of favor or going through a temporary (in the team's opinion) transition the market has viewed unfavorably. Even though the portfolio is diversified, it is by no means an index hugger and over the long-term we would expect it to have the ability to add value net of fees. Historically, the fund has done this on a consistent basis. The average weighted market cap of the Fund has historically been considerably smaller than the index and will have significant relative industry bets at any given time.

The sleeved multi-manager system utilized by PRIMECAP makes PM turnover less impactful and disruptive to the investor, process, and ultimately to performance. PRIMECAP has experienced zero turnover in its key investment staff since inception.

Firm Overview

Brown Advisory was formed in 1993 as an affiliate of investment banking firm Alex Brown & Sons (AB). Following Bankers Trust's acquisition of AB, Brown conducted a management-led buyout and became privately owned. Active employees own 70% of the firm, while the remaining 30% is held by members of the Board of Directors and a small group of clients and private investors.

Headquartered in Baltimore, Maryland, Brown manages over $20 billion across primarily domestic equity and fixed income strategies.

Team Overview

PM Ken Stuzin is ultimately responsible for all buy/sell decisions and for monitoring names in the LCG strategy. Stuzin joined Brown in 1996 and has been managing the firm's large cap growth portfolios since that time. He is supported by a shared equity research team (20-25) that is divided by sector. The team averages over 10 years of industry experience. Analysts' total compensation can be commensurate with portfolio managers so it is a viable career path. The team structure leads to a very open, flat, and collaborative culture.

Strategy Overview

Brown's investment philosophy is based on the belief that concentrated portfolios of fundamentally strong businesses should generate returns in excess of the index and the board market over a full market cycle on a risk-adjusted basis.

The LCG process begins by screening out companies with market capitalizations below $2 billion with less than 14% earnings growth over a full market cycle. The investable universe is very limited given the growth rate requirements, and is typically less than 100 companies. Ideas can come from Stuzin to an analyst or from an analyst directly. Both Stuzin and the analysts travel extensively to meet with company managements. The team engages in "inside-out investing", where the fundamental research is focused on identifying how the company makes money and how management allocates capital in different environments. They are valuation sensitive and form upside/downside price targets so they can compare companies on an apples-to-apples basis across sectors. Stuzin makes the portfolio construction decisions after engaging in multiple, active discussions with the analysts. The resulting portfolio typically holds 30-35 stocks.

Brown does not have pre-defined sector/industry limitations, however they strive to diversify the portfolio along sectors in a prudent manner to mitigate risk. Typically, the LCG portfolio does not hold an individual position above 5% of the portfolio at market, however the maximum state position size is 7%. The team may invest up to 15% of its net assets in foreign securities, including emerging markets. Average annual portfolio turnover is low (25-30%) and primarily comes from Stuzin's disciplined dollar turnover—trimming those stocks that have appreciated and adding to those that have declined (as long as the fundamentals remain intact). Brown has the term "Darwinian Capitalism" in the pitch book, which refers to the "one in, one out" mentality.

Expectations

Historically, the LG strategy has outperformed in a variety of market environments. In market environments where investors reward high quality growth companies, we would expect Brown to outperform. In addition, given the team's valuation discipline, the strategy tends to protect better than the index in down markets. Interestingly, the strategy outperformed the index in both 2008 and 2009. The strategy held up better during the Great Recession of 2008, but as the market continued to hit news lows in late 2008 and early 2009, the team took the opportunity to "upgrade" the portfolio. This laid the foundation for 2009 to be the strategy's best relative performing calendar year in its history.

The toughest relative market environments for the strategy are "hyper-momentum" bull markets, where the sole or primary driver of price appreciation is price momentum. In addition, as we witnessed during 2014 and early 2016, yield-seeking market environments are not favorable in regards to relative performance.

Points to Consider

Brown soft closed the strategy to new separate accounts in early 2014 at around $15B in assets. In 2014 and 2015, over $2B in client assets exited the strategy due primarily to the rough relative performance period of 2013-2014. Brown has reopened selectively and the mutual fund likely will remain open.

There is some level of key man risk with Brown's LCG strategy. Stuzin has been at the helm for two decades, and while he has a deep, very experienced team of analysts supporting him, we do not view anyone in particular as being a direct replacement for him. However, with that said, Brown identified Head of Investments Paul Chew in the firm's response to our due diligence question regarding who would take over the PM role should Stuzin leave.

Recommendation Summary

We would expect Brown's performance pattern relative to the index to be volatile from quarter to quarter given the stock-level portfolio concentration and bottom-up, benchmark agnostic nature of the sector allocation. The strategy typically underperforms during hyper-momentum bull markets, as we saw in 2013. As with most concentrated bottom-up strategies, a majority of the value-add is expected to come from stock selection.

The Research Group recommends current clients invested in Brown's Large Cap Growth consider alternative strategies. Our lowered conviction is based not only on the strategy's poor relative performance over the past several years, but more so on the continued stock-picking mistakes that have exacerbated what had been a tough market environment in general for active managers in the space. Our recommendation is in spite of the fact that the strategy's relative performance has rebounded over the past several quarters. The portfolio's penchant for owning meaningful positions in out-of-favor growth stocks increases the risk of future missteps. AndCo's Research Group has higher conviction going forward in our other approved large cap traditional growth strategies. We recommend clients seek alternatives in the normal course of business.

Alpha - A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta.

Batting Average – A measure of a manager's ability to consistently beat the market. It is calculated by dividing the number of months in which the manager beat or matched an index by the total number of months in the period.

Best Quarter- This is the highest quarterly (3 month) return of the investment since its inception.

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.

Down Period Percent - Number of months below 0 divided by the total number of months.

Downmarket Capture Ratio - The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance.

Downside Std Dev - This measures only deviations below a specified benchmark.

Excess Return- This is a measure of an investment's return in excess of a benchmark.

Information Ratio - This calculates the value-added contribution of the manager and is derived by dividing the excess 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.

Longest Down-Streak Return - Return for the longest series of negative monthly returns.

Longest Down-Streak # of Periods - Longest series of negative monthly returns.

Longest Up-Streak Return - Return for the longest series of positive monthly returns.

Longest Up-Streak - Longest series of positive monthly returns.

Kurtosis - Kurtosis indicates the peakedness of a distribution. For normal distribution, Kurtosis is 3.

Max Drawdown - The peak to trough decline during a specific record period of an investment or fund. It is usually quoted as the percentage between the peak to the trough.

Max Drawndown # of Periods - This is the number of months that encompasses the max drawdown for an investment.

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.

Skewness - Skewness reflects the degree of asymmetry of a distribution. If the distribution has a longer left tail, the function has negative skewness. Otherwise, it has positive skewness. A normal distribution is symmetric with skewness 0.

Sortino Ratio - The Sortino Ratio is similar to Sharpe Ratio except it uses downside risk (Downside Deviation) in the denominator. It was developed in early 1980's by Frank Sortino. Since upside variability is not necessarily a bad thing, Sortino ratio is sometimes more preferable than Sharpe ratio.

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.

Tracking Error - This is a measure of the standard deviation of a portfolio's excess returns versus its designated market benchmark.

Treynor Ratio - Similar to Sharpe Ratio, Treynor Ratio is a measurement of efficiency utilizing the relationship between annualized risk-adjusted return and risk. Unlike Sharpe Ratio, Treynor Ratio utilizes "market" risk (beta) instead of total risk (standard deviation). Good performance efficiency is measured by a high ratio.

Up period Percent - Number of months above 0 divided by the total number of months.

Upmarket Capture Ratio - The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.

Value-Growth Score - Morningstar assigns an Overall Value score and an Overall Growth score to each stock within a fund. Morningstar then calculates a net value-core-growth score for each stock by subtracting the stock's Overall Value score from its Overall Growth score. Once this is done, these raw scores are rescaled to range between -100 to 400 in order to fit within the Morningstar Style Box. Scores below 67 are classified as value, scores above 233 are classified as growth, and scores between 67 and 233 fit within the core boundaries.

Worst Quarter - This is the lowest quarterly (3 month) return of the investment since its inception.

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When client-specific performance is shown, AndCo uses time-weighted calculations, which are founded on standards recommended by the CFA Institute. In these cases, the performance-related data shown are based on information that is received from custodians. As a result, this provides AndCo with a reasonable basis that the investment information presented is free from material misstatement.

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