

City of San José 457 Plan Investment Performance Evaluation Report As of September 30, 2019

December 9, 2019 / Thomas D. Coughlin



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Introduction

- This report reviews the investment performance of the City of San José 457 Plan for the quarter ending September 30, 2018, as well as other periods ending on that date. While the most recent quarter is the focus point of this report, we recommend concentration on longer time periods for the consideration of any changes to the investment policy or manager structure.
- Performance measurement in this report is designed to:
 - Provide an understanding of the environment in which the funds were managed;
 - Verify that the assets were managed in compliance with guidelines;
 - Assess the managers' strengths, continuity of style, and the means of achieving the performance; and
 - Serve as a communications tool for internal focus, as well as to fulfill fiduciary obligations.
- This report is based upon data provided by The City of San José, Voya, Morningstar, and fund management firms.

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Plan Overview

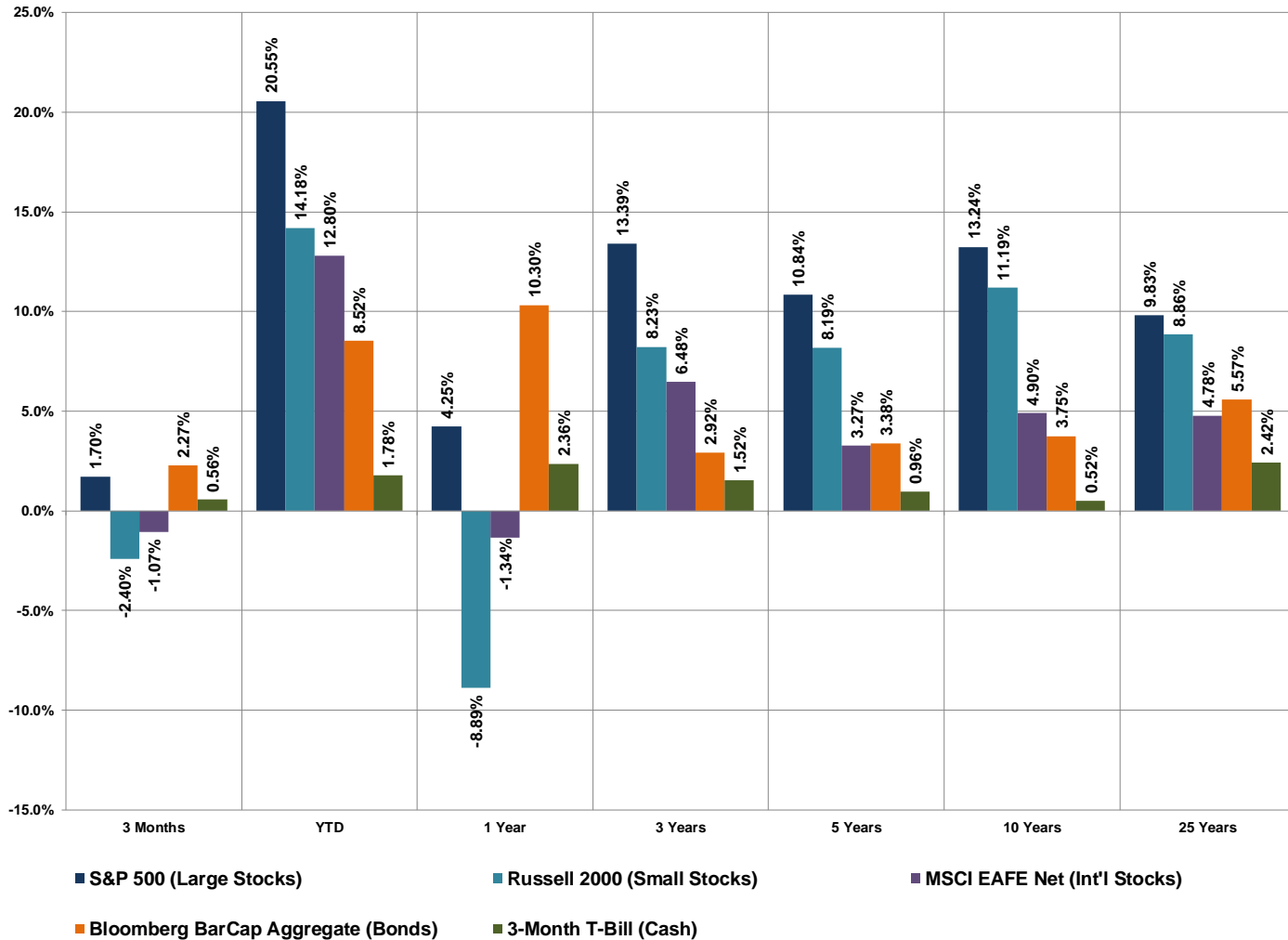
- Net Assets
 - Plan assets totaled \$1,015.0 million, as of September 30, 2019, which is up from \$985.4 million, as of June 30, 2019. One year ago assets were \$883.9 million at the beginning of the year.
- Asset Allocation
 - Plan assets were allocated 25% to Short-Term funds, 4% to Bond funds, 29% to Asset Allocation funds, 37% to U.S. Equity funds, 4% to International Equity funds and 1% to Real Estate.
- Watch List
 - BlackRock Inflation Protected Bond remains on the WL given the manager turnover.
 - Buck recommends the City of San Jose replace the BlackRock Inflation Protected Bond due to a manager change, relative underperformance and the availability of a lower fee option.

Capital Market Highlights

- U.S. equities were mostly higher as accommodative central bank policies helped offset concerns that an escalating trade war with China and a U.S. yield curve inversion could lead to a recession. Overall, the S&P 500 rose 1.7% higher for the quarter, while the smaller-cap Russell 2000 Index lost 2.4%. The Federal Reserve (Fed) appears to be on pause with rate hikes, even cutting rates for the second time this year. The 10yr Treasury yield declined 32 bps over the quarter to end at 1.68%. Rates fell across most of the curve, and the shape of the curve flattened further, even inverting over several segments. The Bloomberg Barclays Capital US Aggregate index returned +2.3%.
- International equities struggled in Q3. Emerging market equities were negative and lagged developed markets with the MSCI Emerging Market (EM) index returning -4.3%. Continued trade talks drove investors away from EM stocks during the quarter. Returns on developed international equities were negative with the MSCI EAFE index returning -1.1%. Emerging markets debt had a positive third quarter with the JP Morgan Emerging Markets Bond index returning +1.5%.
- The Federal Reserve reduced the federal funds rate target by 25 basis points in both July and September, citing weakening global growth and modest inflation. The rate ended the quarter in the range of 1.75% to 2.00%. Fed Chairman Jerome Powell announced the Fed will begin expanding the balance sheet with Wall Street estimating the central bank will buy \$250 billion to \$330 billion worth of short-term Treasury bills.
- The unemployment rate decreased to 3.5%, down from 3.7% in June. The pace of hiring has slowed with the U.S. economy adding 136,000 jobs in September.
- Average hourly earnings grew 2.9% year-over-year, which is the weakest growth since July 2018 and below economists expectations. Between August and September, average hourly earnings were flat.
- In September, the labor force participation rate was 63.2%. Employment growth has averaged 161,000 per month thus far this year, compared with an average monthly gain of 223,000 in 2018.
- As of quarter-end, core CPI edged up to 1.7%, slightly below market expectations of 1.8%. The further decline in energy prices and a slower increase in the cost of rent contributed to US consumer prices rising less than expected.
- U.S. crude prices decreased by 7.5% in the third quarter of 2019 with West Texas Intermediate (WTI) Crude oil ending the quarter at \$55.91 per barrel.

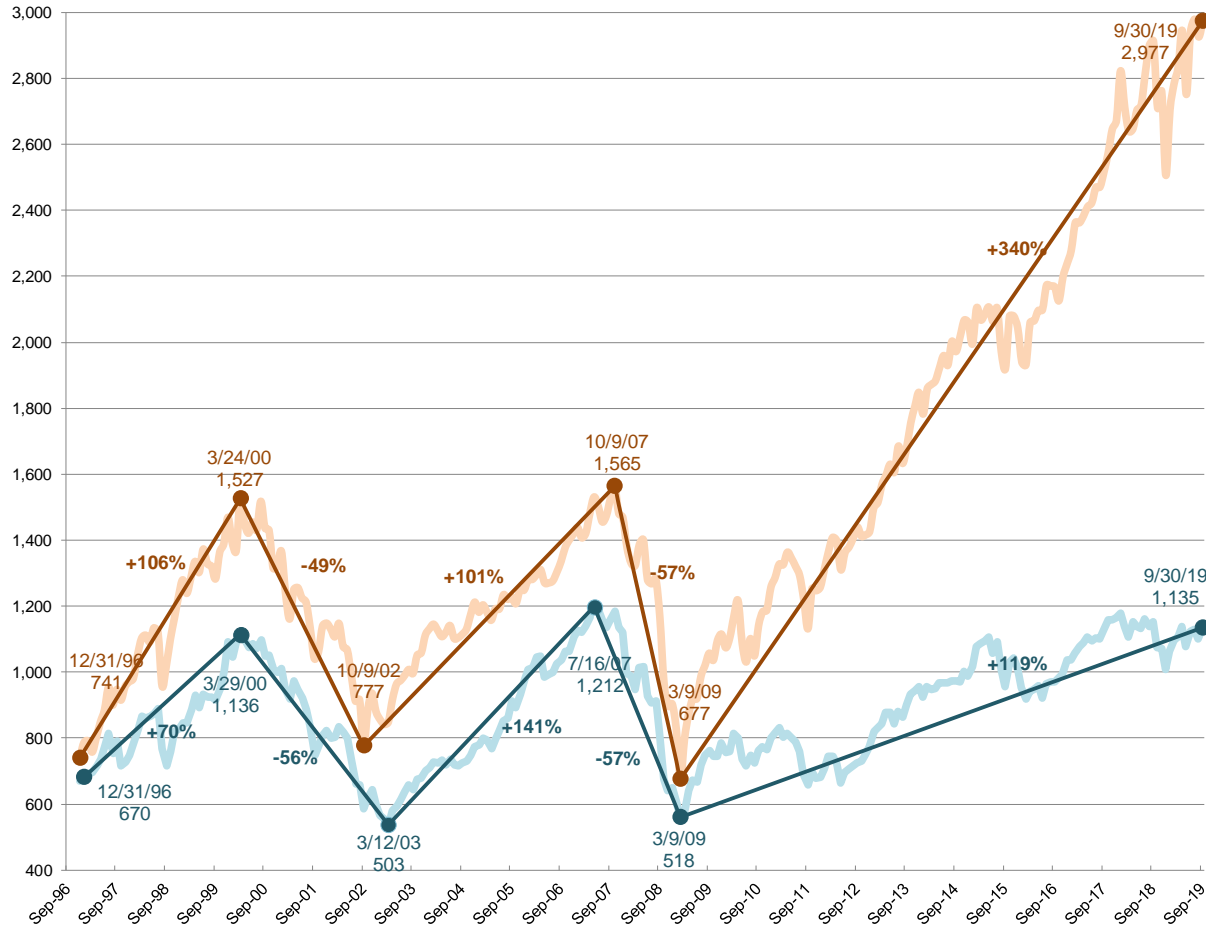
Capital Market Highlights

Capital Market Performance as of September 30, 2019



Capital Market Highlights

S&P 500 and MSCI EAFE at Inflection Points



S&P 500	P/E (fwd)
Dec. 31, 1996	16.0
Mar. 24, 2000	25.6
Oct. 9, 2002	14.1
Oct. 9, 2007	15.2
Mar. 9, 2009	10.3
Sep. 30, 2018	16.8
Sep. 30, 2019	16.8

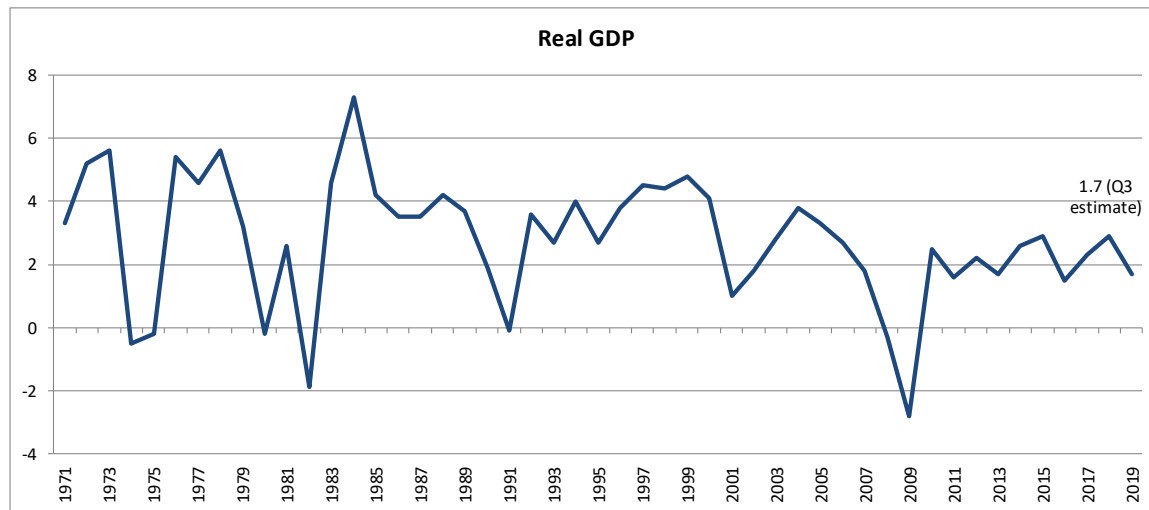
MSCI EAFE	P/E (fwd)
Dec. 31, 1996	19.5
Mar. 29, 2000	28.7
Mar. 12, 2003	13.2
Jul. 16, 2007	14.5
Mar. 9, 2009	10.2
Apr. 27, 2015	18.1
Sep. 30, 2018	14.2
Sep. 30, 2019	13.9

Source: Standard & Poor's,
Morgan Stanley Capital International,
J.P Morgan Asset Management

Returns based on S&P 500 Index Price Movement and
MSCI EAFE Local Currency Index Price Movement

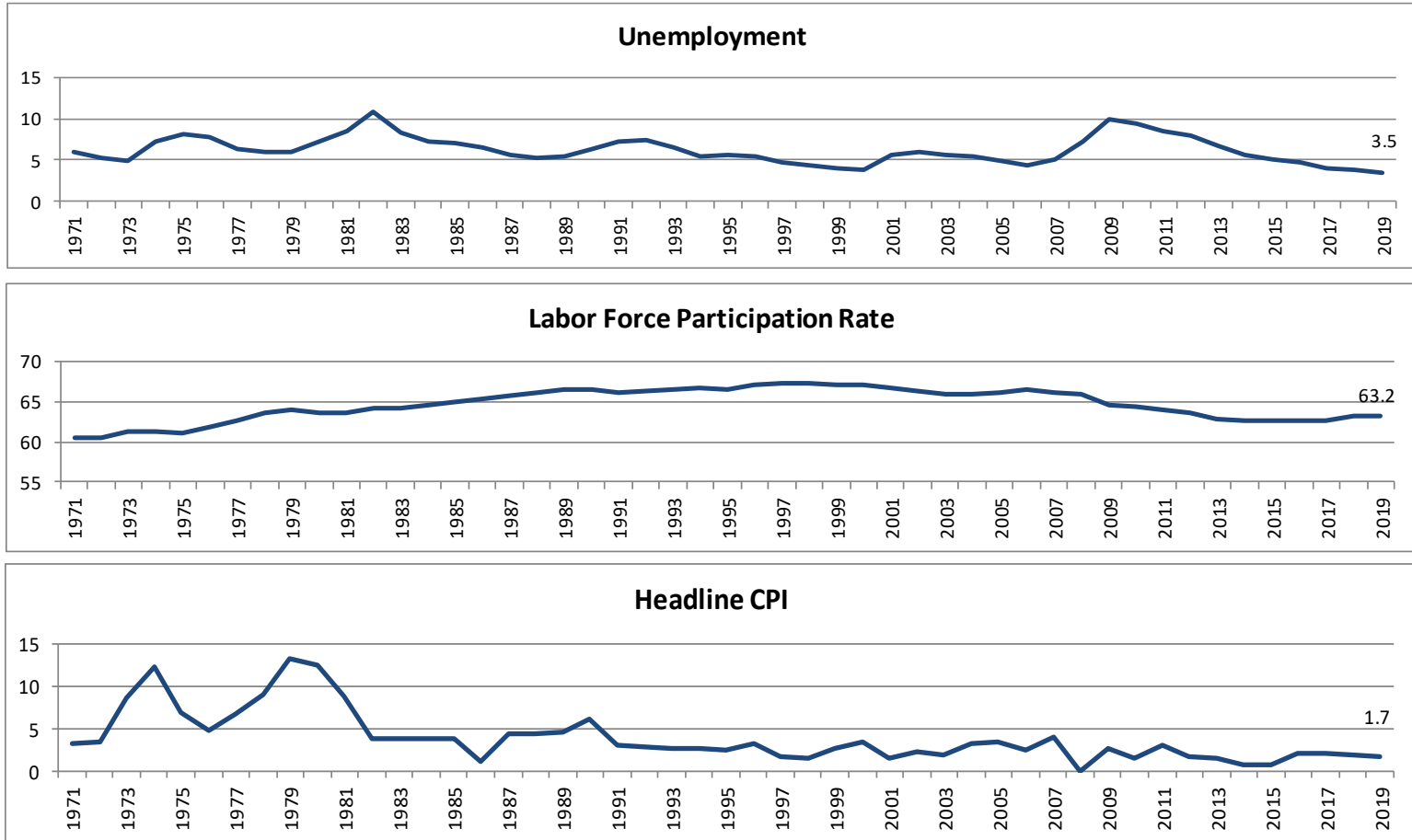
US Economy

- Real GDP over the second quarter of 2019 increased to 2.0%, reflecting a deceleration from the previous quarter's 3.1% growth. The deceleration in real GDP growth reflected negative contributions from private inventory investments, exports, nonresidential fixed investment, and residential fixed investment.
- The Federal Reserve Bank of Atlanta forecasts third quarter GDP growth to be +1.7%.



Source: BEA
*updated as of October 10, 2019.

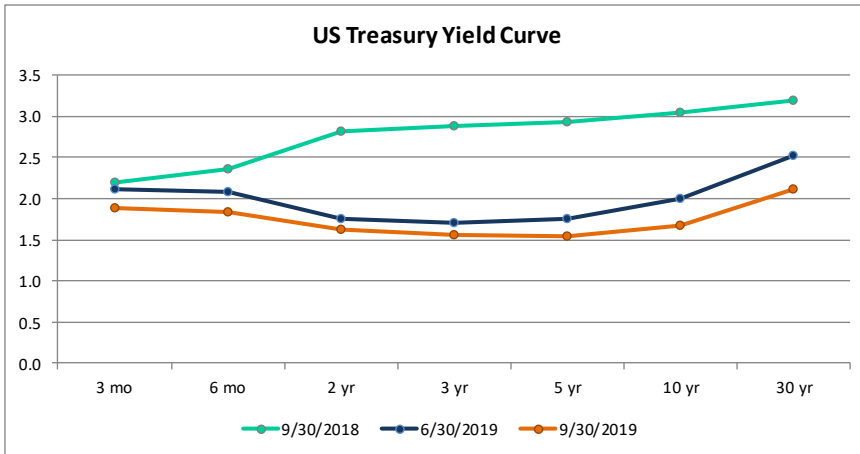
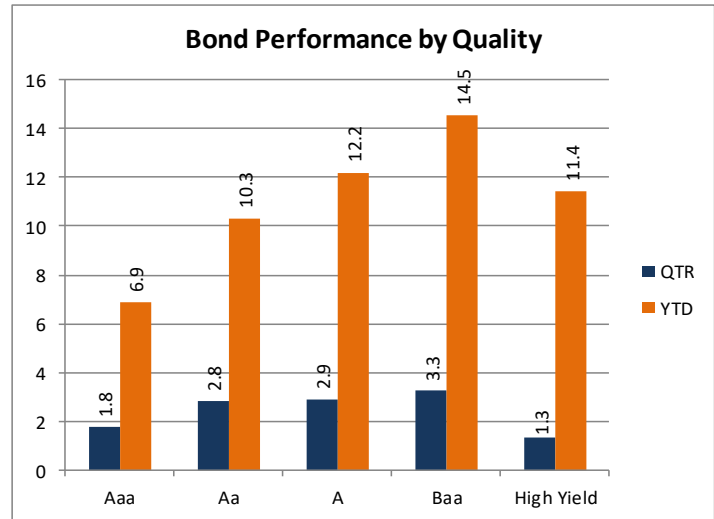
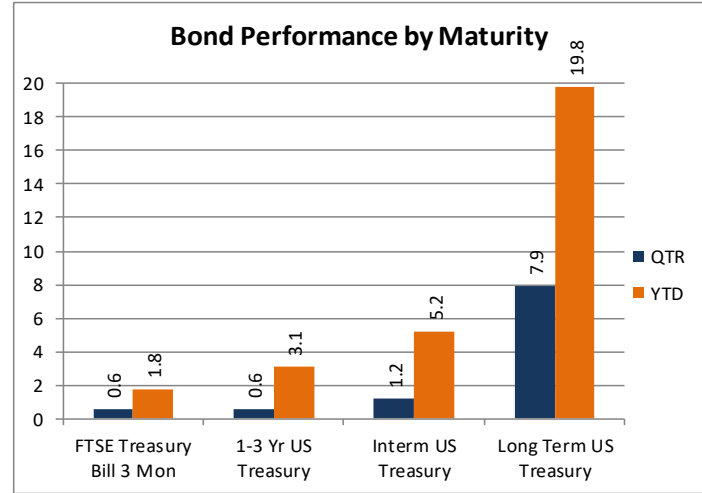
US Economy



Source: BLS, St. Louis Federal Reserve
 (1) 2019 data shown is as of 9/30/19

Fixed Income

- Returns were positive across the board in the quarter with longer maturities outperforming shorter bonds. **Long Treasuries** returned +7.9% for the quarter. At quarter end, the spread between two-year Treasuries and ten-year Treasuries stands at 5 basis points.
- Corporates** (+3.2%) were the top performing investment-grade sector this quarter. High-quality, short-duration sectors such as **MBS** (+1.4%) posted more modest quarterly returns.
- Emerging Market Government Debt** (+1.3%) posted positive returns, as major central banks signaled plans to keep interest rates low to support global growth.

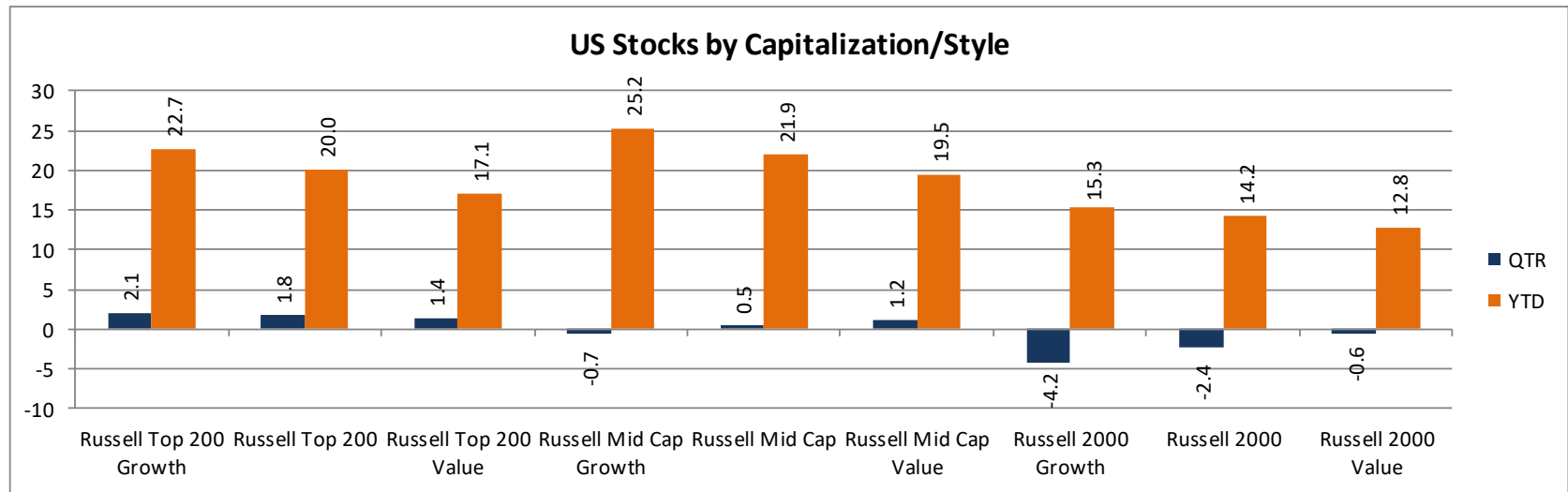


Source: Treasury.gov

Source: Morningstar, Barclays Indices

U.S. Equities

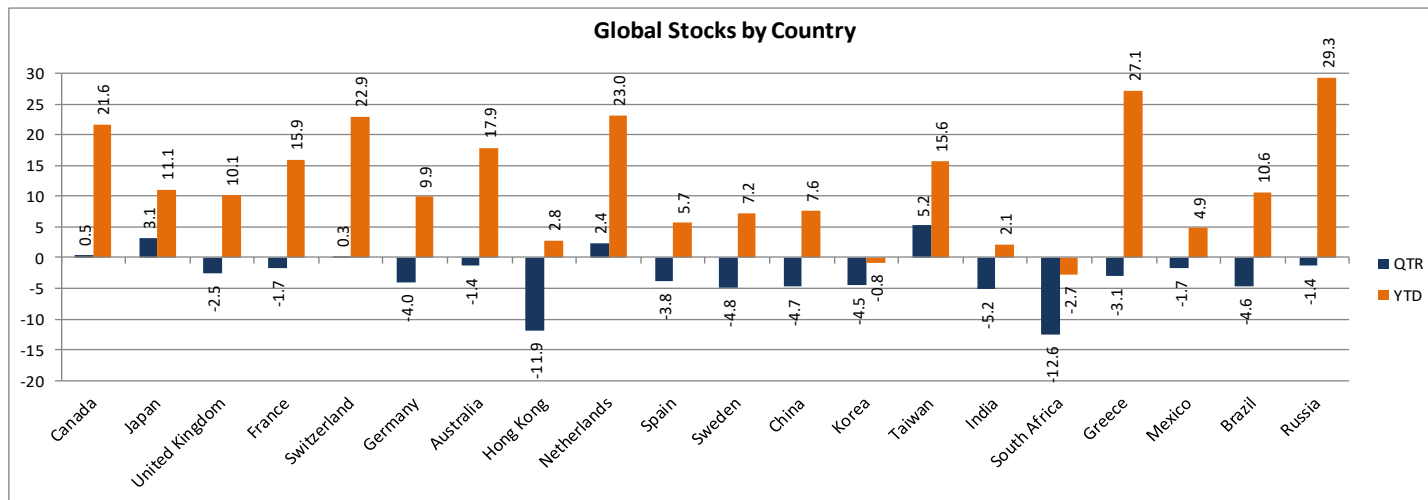
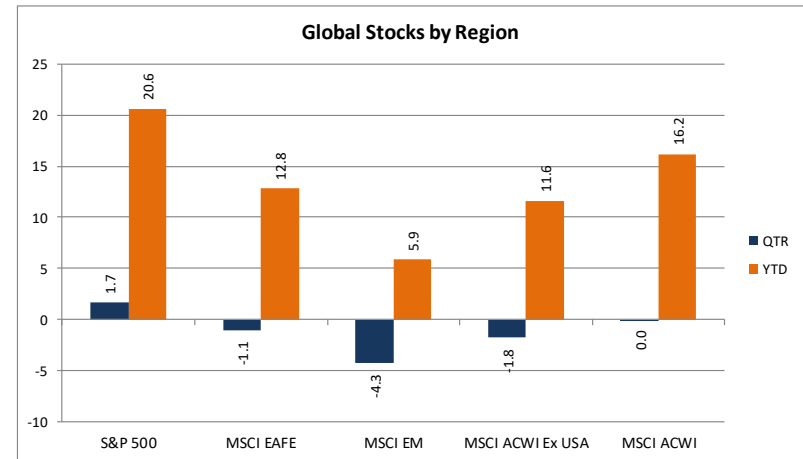
- The **S&P 500** eked out a modest increase (+1.7%) in the third quarter, helping stocks hold on to their biggest year-to-date gains in more than two decades and prolonging the longest bull market on record. The broad stock-market index enters the fourth quarter with a 20.5% gain for the year—its best performance since 1997.
- Defensive stocks generally outperformed more economically sensitive sectors in the 3Q. Among the top performing sectors were utilities (+9%), real estate (+8%), and consumer staples (+6%). Energy (-6%) and health care (-2%) were weak.
- All 11 of the S&P 500 sectors have increased YTD. **Technology** stocks continue to lead markets higher through the third quarter of the year, rising more than 31%. Traditionally defensive sectors, including real estate and health care, also produced positive results while returning +29.7% and +5.6% respectively.
- Equity classes had mixed returns over the quarter. Growth lagged value in multiple indices, and mid and small cap growth stocks lagged their large cap counterparts. The best performing index for the YTD period has been the **Russell Mid Cap Growth**, returning 25.2%.



Source: Morningstar

Non-U.S. Equities

- Developed International Equities** had negative returns of -1.1% for the quarter. Within developed markets, Japan (+3.1%) was the best performer while Hong Kong slumped 11.9% as protests took their toll on the economy. Brexit politics and uncertainty continued to weigh on U.K. and European stocks. Markets seem to be pricing in the likelihood of the United Kingdom leaving the European Union without a formal deal on October 31. German markets also dropped 4%, as disappointing economic data persisted.
- Emerging Market Equities** had negative returns over the quarter, returning -4.3%. Taiwan posted the lone positive return of +5.2%, driven by Taiwan Semiconductor. Emerging Asian markets declined overall. Trade tensions with the U.S. continued to weigh down the Chinese market for most of the period. The worst performer for the quarter was South Africa with returns of -12.6% as the country faces prolonged geopolitical and economic trouble.



Source: Morningstar, MSCI Indices

Market Indices

For Periods Ended September 30, 2019

Index	3 Months Return	6 Months Return	9 Months Return	1 Year Return	2 Years Return	3 Years Return	4 Years Return	5 Years Return	10 Years Return
S&P 500 Index	1.70	6.08	20.55	4.25	10.87	13.39	13.90	10.84	13.24
Russell 1000 Index	1.42	5.73	20.53	3.87	10.60	13.19	13.62	10.62	13.23
Russell Midcap Index	0.48	4.63	21.93	3.19	8.45	10.69	11.57	9.10	13.07
Russell 2000 Index	-2.40	-0.36	14.18	-8.89	2.47	8.23	9.99	8.19	11.19
Russell 3000 Index	1.16	5.31	20.09	2.92	10.00	12.83	13.36	10.44	13.08
Russell 1000 Growth Index	1.49	6.20	23.30	3.71	14.45	16.89	16.10	13.39	14.94
Russell 1000 Value Index	1.36	5.25	17.81	4.00	6.69	9.43	11.08	7.79	11.46
Russell Midcap Growth Index	-0.67	4.69	25.23	5.20	12.87	14.50	13.68	11.12	14.08
Russell Midcap Value Index	1.22	4.45	19.47	1.60	5.14	7.82	10.10	7.55	12.29
Russell 2000 Growth Index	-4.17	-1.54	15.34	-9.63	4.60	9.79	10.37	9.08	12.25
Russell 2000 Value Index	-0.57	0.79	12.82	-8.24	0.16	6.54	9.48	7.17	10.06
MSCI EAFE Index	-1.07	2.57	12.80	-1.34	0.68	6.48	6.49	3.27	4.90
MSCI Emerging Markets Index	-4.25	-3.66	5.89	-2.02	-1.42	5.97	8.58	2.33	3.37
MSCI All Country World ex USA	-1.80	1.13	11.56	-1.23	0.26	6.33	7.06	2.90	4.45
NAREIT Equity REITs	7.80	9.14	26.96	18.42	10.87	7.36	10.35	10.26	13.04
Bloomberg Barclays Capital Aggregate Bond Index	2.27	5.42	8.52	10.30	4.38	2.92	3.49	3.38	3.75
Bloomberg Barclays Capital Intermediate G/C Bond Index	1.37	3.99	6.41	8.17	3.50	2.40	2.68	2.68	3.05
Bloomberg Barclays Capital Long Term G/C Bond Index	6.58	13.61	20.93	21.88	8.88	5.56	7.76	6.81	7.42
Bloomberg Barclays Capital U.S. TIPS	1.35	4.25	7.58	7.13	3.71	2.21	3.29	2.45	3.46
Bloomberg Barclays Capital U.S. Government	2.39	5.44	7.66	10.40	4.24	2.27	2.70	2.90	3.00
Bloomberg Barclays Capital U.S. Corporate Inv Grade	3.18	7.61	12.65	13.05	5.43	3.99	5.02	4.63	5.20
Bloomberg Barclays Capital U.S. Corporate High Yield	1.33	3.87	11.41	6.36	4.69	6.07	7.70	5.37	7.94
FTSE Non-US WGBI USD	-0.11	3.82	5.39	6.78	2.52	0.60	3.47	1.28	1.15
JP Morgan EMBI Global Diversified USD	1.50	5.64	12.99	11.57	4.61	4.61	7.39	5.74	6.88
JP Morgan GBI EM Global Diversified USD	-0.79	4.80	7.86	10.13	0.99	3.06	6.39	0.55	2.47
FTSE 90-Day Treasury Bills	0.56	1.18	1.78	2.36	1.97	1.52	1.19	0.96	0.52

Note: Returns greater than one year are annualized.

Market Indices

Annual Returns

Index	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
S&P 500 Index	-4.38	21.83	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46	-37.00
Russell 1000 Index	-4.78	21.69	12.05	0.92	13.24	33.11	16.42	1.50	16.10	28.43	-37.60
Russell Midcap Index	-9.06	18.52	13.80	-2.44	13.22	34.76	17.28	-1.55	25.48	40.48	-41.46
Russell 2000 Index	-11.01	14.65	21.31	-4.41	4.89	38.82	16.35	-4.18	26.85	27.17	-33.79
Russell 3000 Index	-5.24	21.13	12.74	0.48	12.56	33.55	16.42	1.03	16.93	28.34	-37.31
Russell 1000 Growth Index	-1.51	30.21	7.08	5.67	13.05	33.48	15.26	2.64	16.71	37.21	-38.44
Russell 1000 Value Index	-8.27	13.66	17.34	-3.83	13.45	32.53	17.51	0.39	15.51	19.69	-36.85
Russell Midcap Growth Index	-4.75	25.27	7.33	-0.20	11.90	35.74	15.81	-1.65	26.38	46.29	-44.32
Russell Midcap Value Index	-12.29	13.34	20.00	-4.78	14.75	33.46	18.51	-1.38	24.75	34.21	-38.44
Russell 2000 Growth Index	-9.31	22.17	11.32	-1.38	5.60	43.30	14.59	-2.91	29.09	34.47	-38.54
Russell 2000 Value Index	-12.86	7.84	31.74	-7.47	4.22	34.52	18.05	-5.50	24.50	20.58	-28.92
MSCI EAFE Index	-13.79	25.03	1.00	-0.81	-4.90	22.78	17.32	-12.14	7.75	31.78	-43.38
MSCI Emerging Markets Index	-14.58	37.28	11.19	-14.92	-2.19	-2.60	18.22	-18.42	18.88	78.51	-53.33
MSCI All Country World ex USA	-14.20	27.19	4.50	-5.66	-3.87	15.29	16.83	-13.71	11.15	41.45	-45.53
NAREIT Equity REITs	-4.62	5.23	8.52	3.20	30.14	2.47	18.06	8.29	27.96	27.99	-37.73
Bloomberg Barclays Capital Aggregate Bond Index	0.01	3.54	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93	5.24
Bloomberg Barclays Capital Intermediate G/C Bond Index	0.88	2.14	2.08	1.07	3.13	-0.86	3.89	5.80	5.89	5.24	5.08
Bloomberg Barclays Capital Long Term G/C Bond Index	-4.68	10.71	6.67	-3.30	19.31	-8.83	8.78	22.49	10.16	1.92	8.44
Bloomberg Barclays Capital U.S. TIPS	-1.26	3.01	4.68	-1.44	3.64	-8.61	6.98	13.56	6.31	11.41	-2.35
Bloomberg Barclays Capital U.S. Government	0.88	2.30	1.05	0.86	4.92	-2.60	2.02	9.02	5.52	-2.20	12.39
Bloomberg Barclays Capital U.S. Corporate Inv Grade	-2.50	6.05	4.47	0.65	7.59	-2.11	8.90	7.97	8.57	13.19	-2.13
Bloomberg Barclays Capital U.S. Corporate High Yield	-2.08	7.50	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16
FTSE Non-US WGBI USD	-1.82	10.33	1.81	-5.54	-2.68	-4.56	1.51	5.17	5.21	4.39	10.11
JP Morgan EMBI Global Diversified USD	-4.26	10.26	10.15	1.18	7.43	-5.25	17.44	7.35	12.24	29.82	-12.03
JP Morgan GBI EM Global Diversified USD	-6.21	15.21	9.94	-14.92	-5.72	-8.98	16.76	-1.75	15.68	21.98	-5.22
FTSE 90-Day Treasury Bills	1.86	0.84	0.27	0.03	0.03	0.05	0.07	0.08	0.13	0.16	1.80

Asset Allocation as of September 30, 2019

Options	Plan Assets	% of Plan	# of Participants
Vanguard Federal Money Market Inv	\$16,384,329	1.6%	625
San Jose Stable Value	\$236,218,938	23.3%	3,140
Total Assets in Short-Term Funds	\$252,603,267	25%	
BlackRock Inflation Prot. Bond Instl	\$7,234,965	<1%	532
Loomis Sayles Core Plus Bond N	\$28,191,954	2.8%	1,080
Templeton Global Bond VIP CI 1	\$6,619,076	<1%	617
Total Assets in Bond Funds	\$42,045,995	4%	
Custom Lifestyle Portfolios	\$235,202,769	23.2%	3,100
Vanguard Target Date Funds	\$55,872,989	5.5%	2,639
Total Asset Allocation Funds	\$291,075,758	29%	
Vanguard Equity Income Adm	\$22,361,464	2.2%	893
Vanguard Instl Index I	\$38,995,305	3.8%	1,091
AMG Yacktman I	\$33,948,267	3.3%	829
Parnassus Core Equity Instl	\$7,746,232	<1%	244
Vanguard Total Stock Market Index Instl	\$56,503,783	5.6%	1,206
Fidelity Advisor New Insights I	\$29,447,426	2.9%	837
Amer Funds Growth Fund of Amer R5	\$106,474,435	10.5%	1,869
Janus Henderson Enterprise N	\$28,390,769	2.8%	1,005
Janus Henderson Small Cap Value I	\$2,909,737	<1%	207
JP Morgan Mid Cap Value I	\$6,030,261	<1%	585
Vanguard Mid Cap Index Instl	\$19,886,413	2.0%	848
Vanguard Small Cap Index Instl	\$20,579,590	2.0%	961
Emerald Growth Instl	\$3,896,633	<1%	259
Total U.S. Equity Funds	\$377,170,315	37%	
Vanguard Total Int'l Stock Index Adm	\$7,636,845	<1%	586
Amer Funds EuroPac Growth R5	\$21,869,903	2.2%	940
DFA International Small Company I	\$3,729,630	<1%	363
Oppenheimer Developing Markets Y	\$11,388,369	1.1%	999
Total International Equity Funds	\$44,624,747	4%	
Voya Clarion Real Estate Portfolio I	\$7,485,075	<1%	680
Total Assets in Other	\$7,485,075	1%	
TOTAL	\$1,015,005,156		

Asset Allocation for Lifestyle and Target Date Fund as of September 30, 2019

Options	Plan Assets	% of Plan	# of Participants
Conservative Custom Lifestyle Portfolio	\$21,825,958	2.2%	341
Moderate Custom Lifestyle Portfolio	\$119,643,618	11.8%	1,554
Aggressive Custom Lifestyle Portfolio	\$93,733,193	9.2%	1,205
Total Custom Lifestyle Portfolios	\$235,202,769	23%	
Vanguard Target Retirement Income Inv	\$1,916,856	<1%	65
Vanguard Target Retirement 2015 Inv	\$3,028,167	<1%	57
Vanguard Target Retirement 2020 Inv	\$5,793,895	<1%	75
Vanguard Target Retirement 2025 Inv	\$6,105,459	<1%	146
Vanguard Target Retirement 2030 Inv	\$4,718,021	<1%	147
Vanguard Target Retirement 2035 Inv	\$6,558,022	<1%	207
Vanguard Target Retirement 2040 Inv	\$3,902,963	<1%	204
Vanguard Target Retirement 2045 Inv	\$6,555,101	<1%	350
Vanguard Target Retirement 2050 Inv	\$7,342,498	<1%	443
Vanguard Target Retirement 2055 Inv	\$9,319,609	<1%	774
Vanguard Target Retirement 2060 Inv	\$461,929	<1%	144
Vanguard Target Retirement 2065 Inv	\$170,470	<1%	27
Total Target Date Funds	\$55,872,989	6%	
Total Asset Allocation Funds	\$291,075,758		

Range of Investment Options

Lower Expected Risk/
Lower Expected Return

Higher Expected Risk/
Higher Expected Return

Money Market/ Stable Value	Fixed Income	Target Date/ Risk Portfolios	Domestic Equity			Int'l Equity	Other
1. Vanguard Federal Prime Money Mkt Inv	1. Loomis Sayles Core Plus Bond N	1. Vanguard Target Date (10 Funds)	Large Value	Large Blend	Large Growth	1. Vanguard Total Int'l Stk Index Adm	1. TD Ameritrade SDBA
2. San Jose Stable Value	2. BlackRock Infl-Prot Bond Instl	2. Target Risk (3 Custom Portfolios)	1. Vanguard Equity Income Adm	1. Vanguard Instl Index I	1. AF Growth Fund Amer R5	2. AF EuroPacific Growth R5	2. Voya Clarion Real Estate I
	3. Templeton Global VIP CI 1			2. Vanguard Total Stk Mkt Index I	2. Fidelity Advisor New Insights I	3. Oppenheimer Developing Mkts Y	
				3. Parnassus Core Equity Instl		4. DFA Int'l Small Company Instl	
				4. AMG Yackman I			
			Mid Value	Mid Blend	Mid Growth		
			1. JP Morgan Mid Cap Value L	1. Vanguard Mid Cap Index Instl	1. Janus Enterprise N		
			Small Value	Small Blend	Small Growth		
			1. Perkins Small Cap Value Instl	1. Vanguard Small Cap Index Instl	1. Emerald Growth Instl		

Net-of-Fee Total Returns and Standard Deviations as of September 30, 2019

Fund/Benchmark	YTD	(periods longer than 1 year are annualized)						Standard Deviation		Expense Ratio
	11/18/19	3 Months	YTD	1 Year	3 Years	5 Years	10 Years	3 Years	5 Years	
Vanguard Federal Money Market Inv	1.95	0.54	1.71	2.26	1.46	0.93	0.47	0.21	0.25	0.11
VOYA Stable Value (Book Value)	-	0.64	1.85	2.54	2.53	2.45	2.39	-	-	0.47
FTSE Treasury Bill 3 Mon	-	0.56	1.78	2.36	1.52	0.96	0.52	0.22	0.26	-
BlackRock Inflation Prot Bond I	7.36	1.05	6.96	6.15	1.85	1.84	3.03	3.20	3.39	0.39
BarCap US Treasury US TIPS	7.79	1.35	7.58	7.13	2.21	2.45	3.46	3.28	3.51	-
Avg Inflation-Protected Bond	7.16	1.12	7.00	5.97	1.94	1.86	2.92	3.06	3.43	0.74
Loomis Sayles Core Plus Bond N	8.60	1.97	8.67	8.85	3.61	3.40	5.28	3.01	3.55	0.53
BarCap US Agg Bond	8.45	2.27	8.52	10.30	2.92	3.38	3.75	3.35	3.08	-
Avg Intermediate Core Plus Bond	8.50	1.94	8.49	9.16	3.19	3.28	4.39	2.97	2.88	0.80
Templeton Global Bond VIP CI 1	0.60	-2.37	0.79	2.42	3.79	0.54	3.91	6.03	5.89	0.53
FTSE World Government Bond Idx	5.71	0.85	6.27	8.13	1.19	1.80	1.69	5.52	5.35	-
Avg World Bond	5.54	-0.11	5.40	5.35	1.44	1.15	2.12	5.13	5.32	0.96
Conservative Lifestyle Portfolio	-	0.67	7.62	3.77	5.46	4.87	5.63	-	-	0.35
Avg Allocation - 30% to 50% Equity	12.90	1.19	11.16	4.52	5.13	4.18	6.16	5.60	5.75	1.11
Moderate Lifestyle Portfolio	-	0.09	12.22	3.69	8.16	6.70	7.93	-	-	0.43
Avg Allocation - 50% to 70% Equity	16.32	0.92	13.42	3.53	7.13	5.60	7.80	7.84	7.82	1.10
Aggressive Lifestyle Portfolio	-	-0.23	17.06	3.73	10.74	8.51	10.12	-	-	0.47
Avg Allocation - 70% to 85% Equity	17.93	0.53	14.33	1.33	7.55	5.66	8.26	9.91	9.93	1.17

Green indicates fund outperformed both benchmarks / Blue indicates fund performed between benchmarks / Red indicates fund underperformed both benchmarks

Net-of-Fee Total Returns and Standard Deviations as of September 30, 2019

Fund/Benchmark	YTD (periods longer than 1 year are annualized)							Standard Deviation		Expense Ratio
	11/18/19	3 Months	YTD	1 Yr	3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	
Vanguard Target Retirement Inc Inv	11.72	1.52	10.29	6.75	5.10	4.57	5.76	3.72	3.72	0.27
Avg Target Date Retirement	11.44	1.31	10.11	5.90	4.78	4.01	5.28	4.06	4.17	0.76
Vanguard Target Retirement 2015	13.13	1.38	11.26	6.08	6.18	5.33	7.26	4.71	5.11	0.27
Avg Target Date 2015	13.38	1.06	11.25	5.36	5.88	4.91	6.75	5.09	5.39	0.67
Vanguard Target Retirement 2020	15.30	1.19	12.61	5.29	7.08	5.97	7.96	6.10	6.40	0.27
Avg Target Date 2020	14.00	1.04	11.83	5.02	6.20	5.07	6.91	5.67	5.94	0.75
Vanguard Target Retirement 2025	16.93	1.10	13.70	4.89	7.77	6.39	8.48	7.13	7.36	0.28
Avg Target Date 2025	15.70	0.93	12.91	4.54	7.01	5.57	7.66	6.75	7.05	0.74
Vanguard Target Retirement 2030	18.01	0.89	14.28	4.15	8.29	6.67	8.92	7.98	8.22	0.28
Avg Target Date 2030	17.14	0.76	13.83	3.85	7.65	6.00	7.99	7.81	8.11	0.78
Vanguard Target Retirement 2035	19.02	0.70	14.77	3.37	8.78	6.92	9.35	8.83	9.11	0.28
Avg Target Date 2035	18.64	0.56	14.68	3.09	8.32	6.37	8.57	8.87	9.16	0.77
Vanguard Target Retirement 2040	20.09	0.49	15.35	2.63	9.28	7.15	9.61	9.71	9.97	0.29
Avg Target Date 2040	19.50	0.37	15.14	2.50	8.58	6.56	8.64	9.61	9.77	0.80
Vanguard Target Retirement 2045	20.88	0.26	15.69	2.06	9.41	7.23	9.66	10.32	10.37	0.29
Avg Target Date 2045	20.39	0.27	15.65	2.10	8.91	6.72	8.94	10.22	10.33	0.77
Vanguard Target Retirement 2050	20.88	0.29	15.71	2.07	9.42	7.24	9.65	10.34	10.38	0.29
Avg Target Date 2050	20.53	0.22	15.74	1.99	8.88	6.76	8.86	10.37	10.40	0.81
Vanguard Target Retirement 2055	20.88	0.27	15.69	2.09	9.41	7.21	-	10.31	10.36	0.29
Avg Target Date 2055	20.81	0.20	15.86	1.84	9.04	6.84	9.09	10.52	10.59	-
Vanguard Target Retirement 2060	20.88	0.28	15.68	2.07	9.41	7.20	-	10.33	10.38	0.29
Vanguard Target Retirement 2065	20.91	0.27	15.71	2.09	-	-	-	-	-	0.29
Avg Target Date 2060+	20.81	0.20	15.86	1.84	9.04	6.84	9.09	10.52	10.59	-

Net-of-Fee Total Returns and Standard Deviations as of September 30, 2019

Fund/Benchmark	YTD	(periods longer than 1 year are annualized)						Standard Deviation		Expense Ratio
	11/18/19	3 Months	YTD	1 Year	3 Years	5 Years	10 Years	3 Years	5 Years	
Vanguard Equity Income Adm	21.27	2.26	17.51	6.51	11.24	9.62	12.93	11.00	10.77	0.31
Russell 1000 Value	22.68	1.36	17.81	4.00	9.43	7.79	11.46	12.34	11.92	-
Avg Large Value	21.44	1.52	16.43	1.93	9.43	7.30	10.66	12.73	12.28	1.00
Vanguard Institutional Index I	26.75	1.69	20.54	4.23	13.36	10.81	13.22	12.18	11.93	0.18
AMG Yacktman I	13.65	-0.28	10.50	6.31	11.32	8.23	11.25	7.58	8.68	0.76
Parnassus Core Equity Instl	26.66	2.39	23.18	11.43	13.75	11.03	13.31	10.93	10.57	0.68
S&P 500	26.76	1.70	20.55	4.25	13.39	10.84	13.24	12.18	11.93	-
Avg Large Blend	24.57	1.45	18.98	3.00	11.70	8.98	11.76	12.47	12.20	0.95
Vanguard Total Stock Mkt Idx Instl	26.08	1.09	20.00	2.89	12.81	10.42	13.10	12.54	12.17	0.18
Custom Vanguard Total Stk Mkt Index ⁽¹⁾	26.09	1.11	20.03	2.92	12.82	10.43	13.11	12.54	12.16	-
Avg Large Blend	24.57	1.45	18.98	3.00	11.70	8.98	11.76	12.47	12.20	0.95
Fidelity Advisor New Insights I	25.16	-2.28	18.94	-0.04	13.48	10.50	12.84	13.22	12.47	0.68
Amer Funds Growth of Amer R5	23.07	-2.09	15.44	-1.98	13.04	10.91	12.70	13.04	12.63	0.47
S&P 500 Growth	25.88	0.72	21.06	3.25	15.73	12.82	14.72	12.33	12.34	-
Avg Large Growth	26.73	-0.47	20.54	1.87	14.62	11.04	13.13	13.84	13.47	1.07
JPMorgan Mid Cap Value L	22.77	1.10	19.53	1.88	7.85	7.78	12.63	13.10	12.19	0.79
Russell Mid-Cap Value	22.83	1.22	19.47	1.60	7.82	7.55	12.29	13.39	12.61	-
Avg Mid-Cap Value	21.12	0.41	16.26	-2.14	7.04	6.26	10.65	14.84	13.86	1.08
Vanguard Mid Cap Index Instl	26.84	0.60	22.62	3.65	10.68	9.21	13.06	13.30	12.77	0.18
Custom Vanguard MC Index ⁽²⁾	26.86	0.62	22.66	3.70	10.70	9.24	13.10	13.30	12.78	-
Avg Mid-Cap Blend	22.35	0.10	17.73	-1.36	8.47	6.61	10.94	14.32	13.67	1.07
Janus Henderson Enterprise N	31.31	1.11	27.80	10.38	17.23	14.98	15.61	12.87	12.22	0.81
Russell Mid-Cap Growth	31.85	-0.67	25.23	5.20	14.50	11.12	14.08	14.38	13.60	-
Avg Mid-Cap Growth	28.16	-1.80	22.76	1.10	13.10	9.89	12.56	15.13	14.37	1.18

(1) Reflects changes to fund's index over time. Wilshire 5000 Index through 4/23/05; MSCI US Broad Market Index through 6/03/13; and the CRSP US Total Market Index thereafter.

(2) Reflects changes to fund's index over time. S&P MidCap 400 Index through 5/14/03; MSCI US Mid Cap 450 Index through 1/29/13; and the CRSP US Mid Cap Index thereafter.

Net-of-Fee Total Returns and Standard Deviations as of September 30, 2019

Fund/Benchmark	YTD (periods longer than 1 year are annualized)							Standard Deviation		Expense Ratio
	11/18/19	3 Months	YTD	1 Year	3 Years	5 Years	10 Years	3 Years	5 Years	
Janus Henderson Small Value I	21.45	1.21	17.88	1.49	8.44	8.83	10.11	13.93	12.95	1.07
Russell 2000 Value	17.15	-0.57	12.82	-8.24	6.54	7.17	10.06	17.67	16.08	-
Avg Small Value	16.59	-0.57	12.30	-9.38	4.92	5.03	9.36	18.23	16.72	1.23
Vanguard Small Cap Index Instl	22.92	-1.45	17.81	-3.80	9.64	8.63	12.40	15.76	14.65	0.18
Custom Vanguard SC Index ⁽¹⁾	22.89	-1.47	17.79	-3.80	9.61	8.60	12.35	15.74	14.65	-
Avg Small Blend	18.94	-1.27	14.25	-7.72	7.21	6.89	10.68	16.94	15.71	1.14
Emerald Growth Instl	21.77	-7.54	14.84	-10.93	10.78	10.21	14.02	18.50	17.46	0.71
Russell 2000 Growth	21.73	-4.17	15.34	-9.63	9.79	9.08	12.25	17.47	16.91	-
Avg Small Growth	22.22	-4.17	16.80	-7.52	11.52	9.63	12.29	17.42	16.53	1.24
Vanguard Total Intl Stock Index Adm	17.05	-1.60	11.46	-1.56	6.06	3.16	4.53	11.52	12.09	0.25
Custom Vanguard Intl Index ⁽²⁾	17.23	-1.65	11.48	-1.66	6.19	3.19	4.58	11.35	12.33	-
Avg Foreign Large Blend	17.69	-1.28	12.13	-2.04	5.55	2.92	4.51	11.55	12.16	1.01
Amer Funds EuroPac Gr R5	21.69	-1.59	15.70	1.10	7.33	4.97	6.02	12.26	12.14	0.62
MSCI ACWI Ex USA	17.14	-1.80	11.56	-1.23	6.33	2.90	4.45	11.45	12.48	-
Avg Foreign Large Growth	22.70	-1.24	16.79	0.61	7.18	4.94	6.29	12.39	12.40	1.13
DFA Int'l Small Company I	18.00	-1.48	10.65	-7.65	4.39	4.50	6.89	12.24	12.29	0.67
MSCI EAFE Small Cap	19.28	-0.44	12.05	-5.93	5.94	6.02	7.45	12.05	12.44	-
Avg Foreign Small/Mid Value	13.36	-2.09	7.54	-7.96	3.30	2.01	4.38	12.69	13.41	1.15
Oppenheimer Developing Mkts Y	18.04	-3.80	11.17	2.50	7.86	2.65	5.80	13.46	14.56	1.07
MSCI EM Net	11.46	-4.25	5.89	-2.02	5.97	2.33	3.37	14.04	15.55	-
Avg Diversified Emerging Markets	12.93	-3.64	7.99	-0.03	5.06	1.66	3.40	13.70	14.73	1.35
Voya Clarion Real Estate I	28.84	7.83	27.94	18.24	6.12	8.99	12.44	12.42	14.06	0.71
FTSE NAREIT Equity REITs	27.98	7.73	28.49	20.70	9.03	11.07	13.59	12.47	13.59	-
Avg Real Estate	27.12	6.89	26.60	17.47	7.22	9.33	12.15	12.43	13.55	1.21

(1) Reflects changes to fund's index over time. Russell 2000 Index through 5/14/03; MSCI US Small Cap 1750 Index through 1/29/13; and the CRSP US Small Cap Index thereafter.

(2) Reflects changes to fund's index over time. MSCI EAFE & EM Index through 12/15/10; MSCI ACWI ex US Index through 6/02/13; and the FTSE Global All Cap ex US Index thereafter.

Modern Portfolio Theory (MPT) Analytics as of September 30, 2019

Fund/Benchmark	5 - Year						10 Year Batting Average
	Alpha	Beta	Tracking Error	Information Ratio	Upside Capture	Downside Capture	
Vanguard Equity Income Adm	0.05	0.87	3.25	-0.37	88	88	43
Avg Large Value	-2.81	0.96	4.51	-0.82	86	103	42
Vanguard Institutional Index I	-0.03	1.00	0.01	-2.35	100	100	27
AMG Yacktman I	0.84	0.64	5.86	-0.44	70	65	43
Parnassus Core Equity Instl	1.54	0.85	3.50	0.06	90	80	47
Vanguard Total Stock Idx Instl	-0.51	1.02	1.13	-0.37	100	103	48
Avg Large Blend	-1.54	0.99	2.91	-1.21	93	103	41
Fidelity Advisor New Insights I	-0.19	0.99	3.85	-0.09	99	100	52
Amer Funds Growth of Amer R5	0.07	1.01	3.87	0.02	103	105	48
Avg Large Growth	-0.04	1.04	5.05	0.03	104	105	51
JPMorgan Mid Cap Value L	-2.31	0.95	4.47	-0.68	83	93	47
Avg Mid-Cap Value	-4.38	1.04	6.41	-0.71	86	111	46
Vanguard Mid Cap Index Instl	-1.69	1.03	3.51	-0.46	95	103	53
Avg Mid-Cap Blend	-4.05	1.03	5.99	-0.67	87	110	46
Janus Henderson Enterprise N	4.37	0.94	4.99	0.83	105	77	54
Avg Mid-Cap Growth	-1.19	1.06	6.72	-0.12	100	108	50

Note: Reported modern portfolio theory (MPT) statistics are calculated with respect to the S&P 500 Index for domestic equity funds. Statistics are calculated relative to the MSCI EAFE Index for international equity funds.

Modern Portfolio Theory (MPT) Analytics as of September 30, 2019

	5 - Year					10 Year Batting Average	
	Alpha	Beta	Tracking Error	Information Ratio	Upside Capture		Downside Capture
Janus Henderson Small Value I	-1.00	0.93	6.81	-0.30	88	93	42
Avg Small Value	-5.80	1.11	10.44	-0.56	86	121	46
Vanguard Small Cap Index Instl	-2.77	1.11	6.43	-0.34	99	115	52
Avg Small Blend	-4.10	1.10	8.81	-0.45	91	116	47
Emerald Growth Instl	-1.03	1.13	11.28	-0.06	112	128	52
Avg Small Growth	-1.81	1.13	9.57	-0.13	106	121	50
Vanguard Total Intl Stock Index Adm	0.30	0.96	1.66	0.15	96	94	50
Amer Funds EuroPac Gr R5	2.13	0.93	3.56	0.58	98	85	50
Avg Foreign Large Blend	0.17	0.93	3.68	0.01	92	91	50
DFA Int'l Small Company I	1.72	0.93	4.34	0.37	95	84	58
Avg Foreign Small/Mid Value	-0.67	0.96	5.70	-0.09	93	98	51
Oppenheimer Developing Mkts Y	-0.10	1.05	6.36	-0.04	101	102	57
Avg Diversified Emerging Markets	-0.94	1.01	7.74	-0.16	97	105	49

Note: Reported modern portfolio theory (MPT) statistics are calculated with respect to the S&P 500 Index for domestic equity funds. Statistics are calculated relative to the MSCI EAFE Index for international equity funds.

Annual Net-of-Fee Total Returns

Fund/Benchmark	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
BlackRock Inflation Prot Bond I	-1.88	3.09	4.11	-2.10	2.63	-8.11	6.94	11.88	6.23	10.42	0.42
BarCap US Treasury US TIPS	-1.26	3.01	4.68	-1.44	3.64	-8.61	6.98	13.56	6.31	11.41	-2.35
Avg Inflation-Protected Bond	-1.64	2.72	4.59	-2.36	1.80	-7.85	6.45	10.93	5.94	10.88	-4.08
Loomis Sayles Core Plus Bond N	-0.52	5.31	7.59	-3.84	6.39	-0.49	11.31	7.68	10.35	16.62	0.61
BarCap US Agg Bond	0.01	3.54	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93	5.24
Avg Intermediate Bond	-0.50	3.71	3.23	-0.26	5.18	-1.42	7.01	5.86	7.72	13.97	-4.70
Templeton Global Bond VIP CI 1	2.21	2.15	3.21	-4.10	2.12	1.89	15.31	-0.61	14.71	18.98	6.46
FTSE World Government Bond Idx	-0.84	7.49	1.60	-3.57	-0.48	-4.00	1.65	6.35	5.17	2.55	10.89
Avg World Bond	-1.48	6.87	3.63	-4.00	1.72	-2.62	8.09	3.39	6.35	13.12	-1.57
Conservative Lifestyle Portfolio	-0.35	7.32	7.32	7.32	7.32	7.32	7.32	7.32	7.32	13.64	-11.36
Avg Allocation - 30% to 50% Equity	-5.04	9.86	6.62	-2.32	4.02	7.23	9.40	1.70	10.03	20.77	-18.61
Moderate Lifestyle Portfolio	-2.81	15.51	7.33	-0.04	5.12	17.69	12.34	-1.10	11.70	23.14	-23.98
Avg Allocation - 50% to 70% Equity	-5.76	13.21	7.34	-1.93	6.21	16.48	11.72	-0.11	11.83	24.13	-28.00
Aggressive Lifestyle Portfolio	-4.95	21.43	8.94	-0.76	5.91	25.60	16.37	-4.08	15.97	32.07	-34.17
Avg Allocation - 70% to 85% Equity	-7.93	15.80	7.93	-2.77	5.71	21.31	13.42	-3.80	13.49	29.37	-34.34

Green indicates fund outperformed both benchmarks / Blue indicates fund performed between benchmarks / Red indicates fund underperformed both benchmarks

Annual Net-of-Fee Total Returns

Fund/Benchmark	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Vanguard Target Retirement Inc Inv	-1.99	8.47	5.25	-0.17	5.54	5.87	8.23	5.25	9.39	14.28	-10.93
Avg Target Date Retirement	-3.16	8.81	5.10	-1.50	4.36	7.36	9.01	1.60	8.94	18.36	-18.06
Vanguard Target Retirement 2015	-2.97	11.50	6.16	-0.46	6.56	13.00	11.37	1.71	12.47	21.30	-24.06
Avg Target Date 2015	-3.86	11.29	6.12	-1.34	4.48	9.65	10.65	-0.27	11.50	23.55	-27.76
Vanguard Target Retirement 2020	-4.24	14.08	6.95	-0.68	7.11	15.85	12.35	0.60	13.12	23.10	-27.04
Avg Target Date 2020	-4.49	12.46	6.23	-1.57	4.72	11.57	11.68	-0.22	12.27	24.25	-29.46
Vanguard Target Retirement 2025	-5.15	15.94	7.48	-0.85	7.17	18.14	13.29	-0.37	13.84	24.81	-30.05
Avg Target Date 2025	-5.34	14.67	6.73	-1.59	5.07	15.30	13.03	-2.06	13.29	28.32	-34.15
Vanguard Target Retirement 2030	-5.86	17.52	7.85	-1.03	7.17	20.49	14.24	-1.27	14.43	26.72	-32.91
Avg Target Date 2030	-6.25	16.57	7.33	-1.79	5.04	16.65	13.59	-2.26	13.47	28.87	-36.04
Vanguard Target Retirement 2035	-6.58	19.12	8.26	-1.26	7.24	22.82	15.16	-2.24	15.14	28.17	-34.66
Avg Target Date 2035	-7.04	18.43	7.57	-1.76	5.24	20.00	14.64	-3.51	14.28	30.06	-37.04
Vanguard Target Retirement 2040	-7.32	20.71	8.73	-1.59	7.15	24.37	15.56	-2.55	15.17	28.32	-34.53
Avg Target Date 2040	-7.74	19.52	7.95	-1.99	5.25	19.97	14.64	-3.49	14.37	30.90	-37.94
Vanguard Target Retirement 2045	-7.90	21.42	8.87	-1.57	7.16	24.37	15.58	-2.51	15.19	28.15	-34.56
Avg Target Date 2045	-8.14	20.51	7.93	-1.87	5.35	22.00	15.31	-4.10	14.60	30.88	-38.11
Vanguard Target Retirement 2050	-7.90	21.39	8.85	-1.58	7.18	24.34	15.58	-2.54	15.20	28.31	-34.62
Avg Target Date 2050	-8.41	20.67	8.22	-2.01	5.42	21.02	15.07	-3.82	14.53	32.02	-38.67
Vanguard Target Retirement 2055	21.21	21.38	8.88	-1.72	7.19	24.33	15.58	-2.27	-	-	-
Avg Target Date 2055	-8.44	21.08	8.00	-1.71	5.49	23.14	15.52	-4.13	14.45	32.20	-38.86

Annual Net-of-Fee Total Returns

Fund/Benchmark	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Vanguard Equity Income Adm	-5.65	18.49	14.82	0.86	11.38	30.19	13.58	10.69	14.99	17.26	-30.86
Russell 1000 Value	-8.27	13.66	17.34	-3.83	13.45	32.53	17.51	0.39	15.51	19.69	-36.85
Avg Large Value	-8.53	15.94	14.81	-4.05	10.21	31.21	14.57	-0.75	13.66	24.13	-37.09
Vanguard Institutional Index I	-4.42	21.79	11.93	1.37	13.65	32.35	15.98	2.09	15.05	26.63	-36.95
AMG Yacktman I	2.69	18.23	11.20	-5.63	11.33	27.74	11.47	7.30	12.64	59.31	-26.05
Parnassus Core Equity Instl	0.05	16.81	10.60	-0.33	14.70	34.15	15.64	3.38	9.10	28.96	-22.74
S&P 500	-4.38	21.83	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46	-37.00
Avg Large Blend	-6.27	20.44	10.37	-1.07	10.96	31.50	14.96	-1.27	14.01	28.17	-37.79
Vanguard Total Stock Mkt Idx Instl	-5.16	21.17	12.67	0.42	12.56	33.49	16.42	1.09	17.23	28.83	-36.94
Custom Vanguard Total Stk Mkt Index	-5.17	21.19	12.68	0.40	12.58	33.54	16.44	1.08	17.28	28.76	-37.04
Avg Large Blend	-6.27	20.44	10.37	-1.07	10.96	31.50	14.96	-1.27	14.01	28.17	-37.79
Fidelity Advisor New Insights I	-4.14	28.30	6.55	2.64	9.51	32.73	16.11	-0.73	16.34	29.37	-37.75
Amer Funds Growth of Amer R5	-2.66	26.44	8.75	5.65	9.61	34.20	20.92	-4.59	12.63	34.91	-38.88
S&P 500 Growth	-0.01	27.44	6.89	5.52	14.89	32.75	14.61	4.65	15.05	31.57	-34.92
Avg Large Growth	-2.09	27.67	3.23	3.60	10.00	33.92	15.34	-2.46	15.53	35.68	-40.67
JPMorgan Mid Cap Value L	-11.65	13.67	14.62	-2.35	15.14	31.99	20.48	2.42	23.34	26.75	-32.90
Russell Mid-Cap Value	-12.29	13.34	20.00	-4.78	14.75	33.46	18.51	-1.38	24.75	34.21	-38.44
Avg Mid-Cap Value	-12.86	13.22	18.06	-5.41	9.31	35.14	16.60	-3.96	21.92	35.41	-36.77
Vanguard Mid Cap Index Instl	-9.24	19.29	11.23	-1.33	13.78	35.17	16.01	-1.96	25.67	40.51	-41.76
Custom Vanguard MC Index	-9.22	19.30	11.25	-1.28	13.83	35.21	16.04	-1.91	25.69	40.49	-41.80
Avg Mid-Cap Blend	-11.15	15.93	14.14	-4.75	7.80	34.10	16.15	-3.81	22.52	37.39	-39.18
Janus Henderson Enterprise N	-0.81	26.65	12.18	3.57	12.19	30.94	17.79	-1.78	25.93	42.90	-43.13
Russell Mid-Cap Growth	-4.75	25.27	7.33	-0.20	11.90	35.74	15.81	-1.65	26.38	46.29	-44.32
Avg Mid-Cap Growth	-6.65	23.91	6.03	-0.95	7.00	34.93	14.07	-3.96	24.61	39.11	-43.77

Annual Net-of-Fee Total Returns

Fund/Benchmark	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Janus Henderson Small Value I	-13.04	12.81	26.45	-2.56	7.42	29.82	9.13	-3.28	18.13	36.99	-21.63
Russell 2000 Value	-12.86	7.84	31.74	-7.47	4.22	34.52	18.05	-5.50	24.50	20.58	-28.92
Avg Small Value	-15.46	8.54	25.99	-6.71	3.34	36.22	16.00	-4.45	26.17	31.32	-32.24
Vanguard Small Cap Index Instl	-9.32	16.25	18.32	-3.63	7.53	37.80	18.26	-2.65	27.95	36.40	-35.98
Custom Vanguard SC Index	-9.33	16.24	18.26	-3.68	7.54	37.77	18.20	-2.75	27.82	36.15	-36.20
Avg Small Blend	-12.72	12.28	20.78	-5.38	3.79	37.39	15.46	-4.07	25.61	31.80	-36.56
Russell 2000	-11.01	14.65	21.31	-4.41	4.89	38.82	16.35	-4.18	26.85	27.17	-33.79
Emerald Growth Instl	-11.57	28.11	10.89	1.24	7.19	49.89	17.82	-1.17	28.00	33.50	-36.83
Russell 2000 Growth	-9.31	22.17	11.32	-1.38	5.60	43.30	14.59	-2.91	29.09	34.47	-38.54
Avg Small Growth	-5.76	21.50	11.20	-2.41	2.44	40.91	13.15	-3.55	26.98	35.46	-41.55
Vanguard Total Intl Stock Index Adm	-14.43	27.55	4.67	-4.26	-4.17	15.14	18.21	-14.52	11.04	36.73	-44.10
Custom Vanguard Intl Index	-14.62	27.41	4.72	-4.29	-3.39	15.76	17.04	-14.31	10.70	40.44	-45.52
Avg Foreign Large Blend	-14.59	25.12	0.79	-1.59	-4.98	19.44	18.29	-13.97	10.24	31.24	-43.99
Amer Funds EuroPac Gr R5	-14.95	31.09	1.00	-0.53	-2.35	20.54	19.57	-13.33	9.72	39.55	-40.38
MSCI ACWI Ex USA	-14.20	27.19	4.50	-5.66	-3.87	15.29	16.83	-13.71	11.15	41.45	-45.53
Avg Foreign Large Blend	-14.59	25.12	0.79	-1.59	-4.98	19.44	18.29	-13.97	10.24	31.24	-43.99
DFA Int'l Small Company I	-19.42	30.24	5.80	5.91	-6.30	27.44	18.86	-15.35	23.91	41.96	-43.87
MSCI EAFE Small Cap	-17.89	33.01	2.18	9.59	-4.95	29.30	20.00	-15.94	22.04	46.78	-47.01
Avg Foreign Small/Mid Value	-19.13	27.52	4.24	2.27	-6.56	25.71	21.38	-15.99	21.00	44.06	-47.29
Oppenheimer Developing Mkts Y	-11.95	35.10	7.17	-13.84	-4.55	8.68	21.29	-17.85	27.39	82.10	-47.84
MSCI EM Net	-14.58	37.28	11.19	-14.92	-2.19	-2.60	18.22	-18.42	18.88	78.51	-53.33
Avg Diversified Emerging Markets	-16.07	34.17	8.47	-13.79	-3.01	-0.14	18.15	-19.86	19.26	73.81	-54.44
Voya Clarion Real Estate I	-7.42	5.47	4.47	3.20	30.27	2.27	15.85	9.76	28.29	36.29	-38.36
FTSE NAREIT Equity REITs	-4.04	8.67	8.63	2.83	28.03	2.86	19.70	8.28	27.95	27.99	-37.73
Avg Real Estate	-5.97	6.22	6.89	2.41	28.03	1.55	17.60	7.51	27.08	31.26	-39.55

Peer Group Rankings as of September 30, 2019

Yellow shading indicates above median performance in Morningstar peer group (1 = Best Ranking / 100 = Worst Ranking)

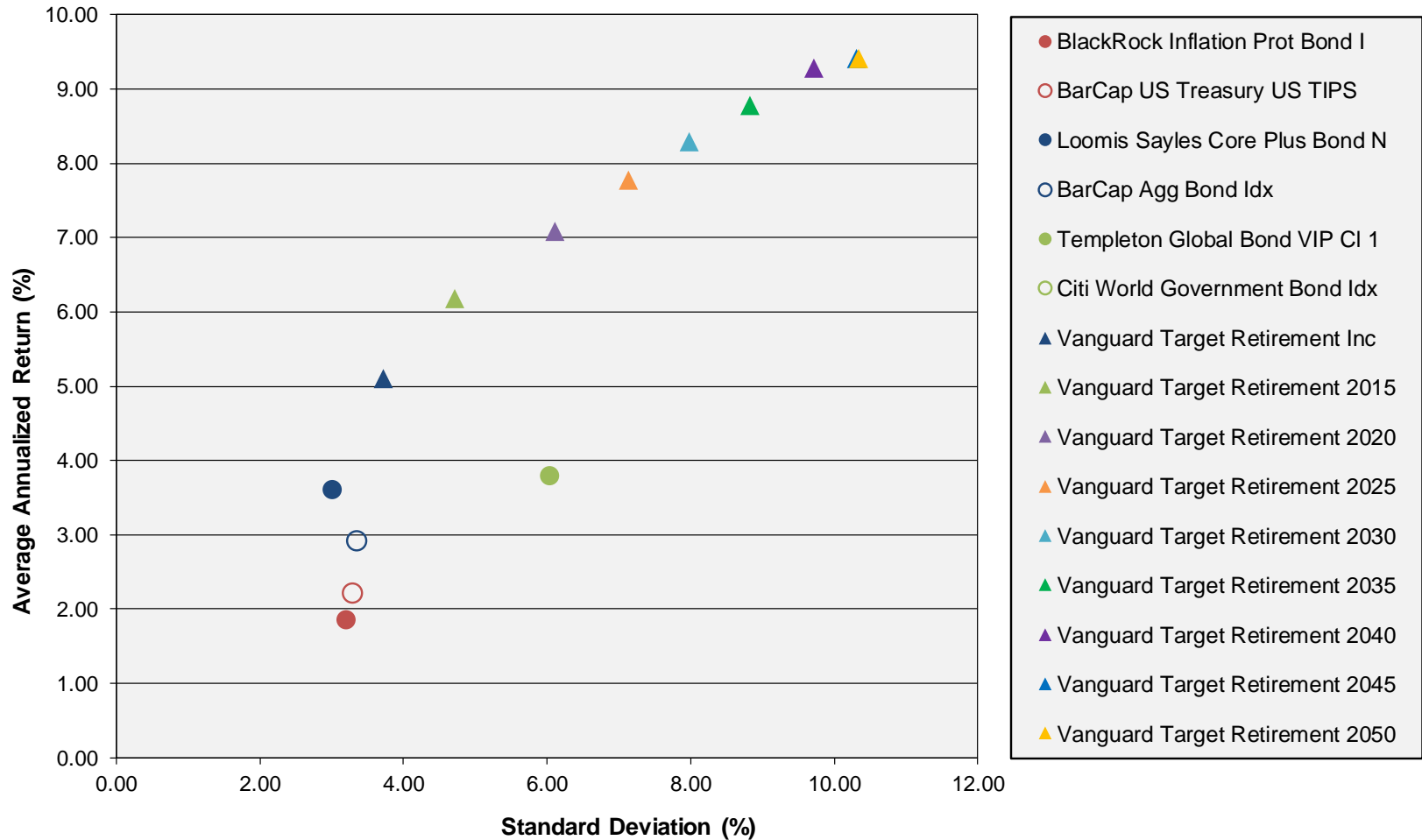
Fund	Morningstar Category	3 Mo	YTD	1 Yr	3 Yr	5 Yr	10 Yr
BlackRock Inflation Prot Bond I	Inflation-Protected Bond	50	56	46	56	56	48
Loomis Sayles Core Plus Bond N	Intermediate Core-Plus Bond	61	58	69	21	45	11
Templeton Global Bond VIP CI 1	World Bond	89	95	87	6	74	13
Vanguard Target Retirement Inc	Target Date Retirement Income	26	52	21	39	23	34
Vanguard Target Retirement 2015	Target Date 2015	21	50	21	42	34	29
Vanguard Target Retirement 2020	Target Date 2020	36	30	38	17	5	9
Vanguard Target Retirement 2025	Target Date 2025	35	25	39	18	8	11
Vanguard Target Retirement 2030	Target Date 2030	36	38	44	31	21	16
Vanguard Target Retirement 2035	Target Date 2035	41	55	46	32	27	15
Vanguard Target Retirement 2040	Target Date 2040	43	48	46	24	26	16
Vanguard Target Retirement 2045	Target Date 2045	57	54	52	28	26	18
Vanguard Target Retirement 2050	Target Date 2050	44	53	45	35	27	20
Vanguard Target Retirement 2055	Target Date 2055	44	56	43	37	31	
Vanguard Target Retirement 2060	Target Date 2060+	41	67	44	48	60	
Vanguard Target Retirement 2065	Target Date 2060+	43	63	41			

Peer Group Rankings as of September 30, 2019

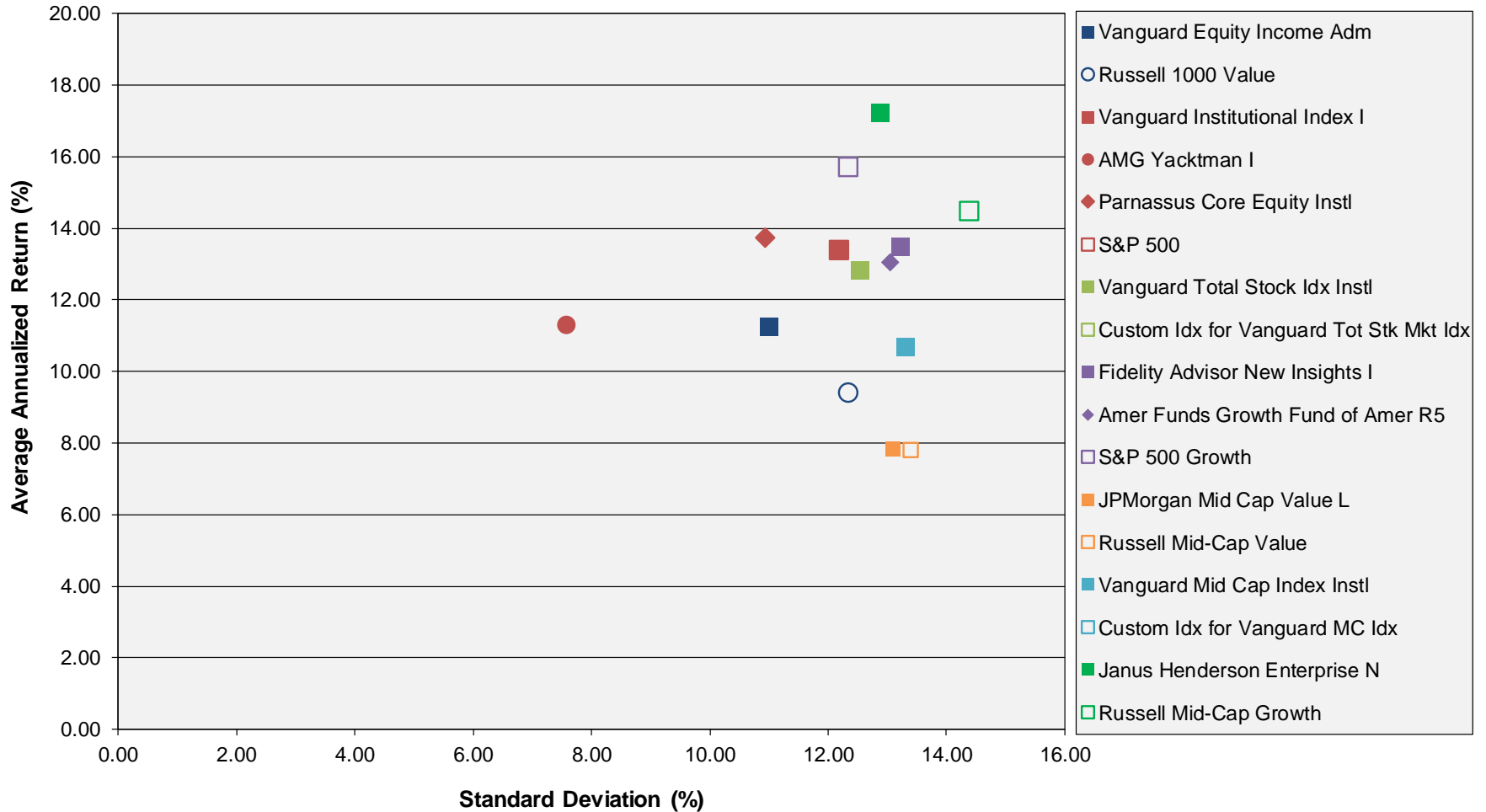
Yellow shading indicates above median performance in Morningstar peer group (1 = Best Ranking / 100 = Worst Ranking)

Fund	Morningstar Category	3 Mo	YTD	1 Yr	3 Yr	5 Yr	10 Yr
Vanguard Equity Income Adm	Large Value	32	39	17	15	10	5
Vanguard Institutional Index I	Large Blend	41	31	33	19	13	8
AMG Yacktman I	Large Value	91	96	18	15	31	36
Parnassus Core Equity Instl	Large Blend	23	8	4	13	10	7
Vanguard Total Stock Idx Instl	Large Blend	68	46	56	36	27	13
Fidelity Advisor New Insights I	Large Growth	83	71	71	66	63	60
Amer Funds Growth of Amer R5	Large Growth	80	90	84	71	56	63
JPMorgan Mid Cap Value L	Mid-Cap Value	41	29	23	44	25	6
Vanguard Mid Cap Index Instl	Mid-Cap Blend	40	11	20	20	15	8
Janus Henderson Enterprise N	Mid-Cap Growth	12	16	5	10	3	4
Janus Henderson Small Value I	Small Value	22	11	3	8	4	38
Vanguard Small Cap Index Instl	Small Blend	59	19	20	13	22	9
Emerald Growth Instl	Small Growth	87	63	73	56	44	19
Vanguard Total Intl Stock Index Adm	Foreign Large Blend	62	66	42	41	43	53
Amer Funds EuroPac Gr R5	Foreign Large Growth	62	66	41	40	46	58
DFA Int'l Small Company I	Foreign Sm/Mid Blend	51	45	53	40	39	28
Oppenheimer Developing Mkts Y	Diversified Emerging Mkts	54	24	27	12	33	5
Voya Clarion Real Estate I	Real Estate	23	40	48	74	61	45

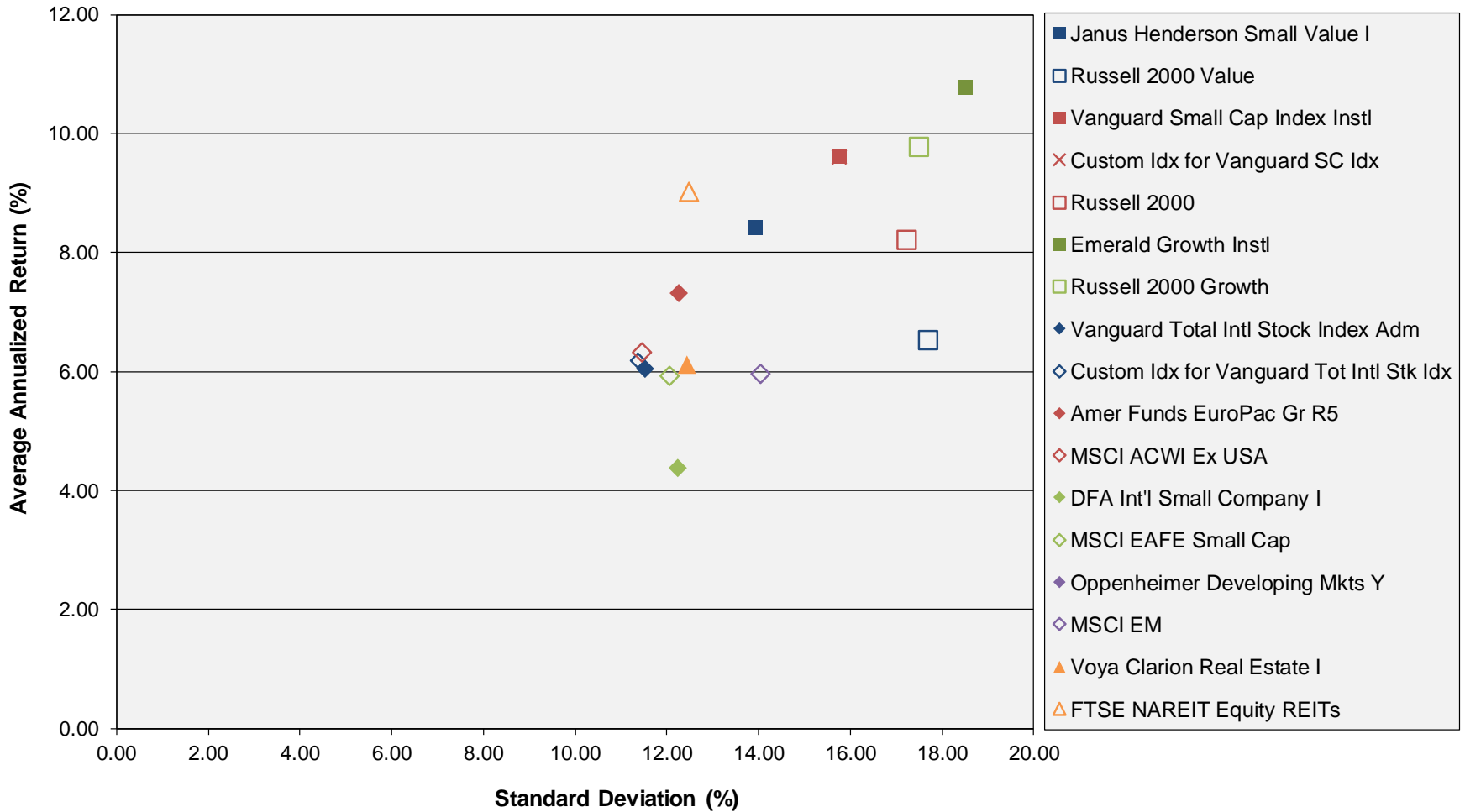
Three Year Risk/Return Profile as of September 30, 2019



Three Year Risk/Return Profile as of September 30, 2019



Three Year Risk/Return Profile as of September 30, 2019



Stable Value Performance as of September 30, 2019 (Market value, gross of fees)

	Quarter	YTD	1 Year	Annualized		Inception	Fees
				3 Years	5 years		
VOYA Stable Value (market, gross)	1.47	6.43	8.01	3.02	3.27	3.84	0.30
BarCap US Agg Interm Bond Index*	1.38	6.18	8.08	2.39	2.74	4.12	-

* Inception date is October 6, 2006. The benchmark from inception through June 30, 2012, was the Barclay's Capital US Aggregate. Effective July 1, 2012, the benchmark was changed to the Barclays Capital Intermediate US Aggregate.

Stable Value Portfolio Characteristics as of September 30, 2019

	Yield-to Maturity (%)	Duration (years)	Investment Grade				High Yield Below BBB/NR
			AAA	AA	A	BBB	
VOYA Stable Value	2.25	3.70	74.3	2.4	9.8	13.5	0.0
BarCap US Agg Interm Bond Index	2.14	3.68	87.0	2.5	8,7	10.5	0.0

History of Market to Book Value Ratios

History of Market to Book Value Ratios

End of Month	Jun-09	Jun-10	Dec-10	Jun-11	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14	Jun-15	Dec-15	Jun-16	Dec-16	Jun-17	Jun-18	Dec-18	Jun-19	Sep-19
Market-to-Book Value Ratio (%)	85.8	93.8	93.9	95.3	97.9	99.7	101.4	98.5	98.6	100.9	100.4	99.8	98.9	101.5	99.3	100.2	97.5	98.3	101.3	101.8

Fixed Income Portfolio Characteristics as of September 30, 2019

Fund/Benchmark	Average Maturity (years)	Average Duration (years)	Average Credit Quality	Total Number of Holdings
BlackRock Inflation Prot Bond I	9.3	7.7	AA	120
BarCap US Treasury US TIPS	0.4	7.6	AAA	42
Loomis Sayles Core Plus Bond N	8.5	6.2	BBB	579
BarCap Aggregate	2.2	5.5	AA	7644
Avg Intermediate Term Bond	7.9	5.3	BBB	731
Templeton Global Bond VIP CI 1	0.9	-1.4	BBB	172
Avg World Bond	7.9	5.6	BBB	625

Fund/Benchmark	Investment Grade				High Yield Bonds			Other
	AAA	AA	A	BBB	BB	B	Below B	NR/NA
BlackRock Inflation Prot Bond I	97	0	0	2	0	0	0	0
BarCap US Treasury US TIPS	100	0	0	0	0	0	0	0
Loomis Sayles Core Plus Bond N	52	5	15	20	5	1	0	0
BarCap Aggregate	73	3	11	14	-	-	-	0
Avg Intermediate Term Bond	51	5	12	20	5	3	1	3
Templeton Global Bond VIP CI 1	20	11	28	22	16	2	2	-1
Avg World Bond	30	12	24	21	6	3	1	3

Custom Portfolio Asset Allocation

Conservative Custom Lifestyle Portfolio

Voya Stable Value	50%
Loomis Sayles Core Plus	20%
Vanguard Institutional Index	10%
AMG Yacktman	5%
AF Growth Fund of America	5%
Vanguard Small Cap Index	5%
AF Euro Pacific Growth	5%

Total Fixed/Stable Value	70%
Total Equity	30%

Large Cap Domestic Equity	20%
Mid Cap Domestic Equity	0%
Small Cap Domestic Equity	5%
International Equity	5%

Total Active Exposure	35%
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Moderate Custom Lifestyle Portfolio

Voya Stable Value	25%
Loomis Sayles Core Plus	15%
Vanguard Institutional Index	5%
AMG Yacktman	10%
AF Growth Fund of America	10%
Janus Enterprise	10%
Vanguard Small Cap Index	10%
AF Euro Pacific Growth	15%

Total Fixed/Stable Value	40%
Total Equity	60%

Large Cap Domestic Equity	25%
Mid Cap Domestic Equity	10%
Small Cap Domestic Equity	10%
International Equity	15%

Total Active Exposure	60%
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Aggressive Custom Lifestyle Portfolio

Loomis Sayles Core Plus	15%
Vanguard Institutional Index	5%
AMG Yacktman	10%
AF Growth Fund of America	15%
Janus Enterprise	20%
Vanguard Small Cap Index	15%
AF Euro Pacific Growth	20%

Total Fixed/Stable Value	15%
Total Equity	85%

Large Cap Domestic Equity	30%
Mid Cap Domestic Equity	20%
Small Cap Domestic Equity	15%
International Equity	20%

Total Active Exposure	80%
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Equity Portfolio Style Allocation as of September 30, 2019

Vanguard Equity Income Adm	Vanguard Institutional Index I	AMG Yacktman I	Parnassus Core Equity Instl	Vanguard Total Stock Idx Instl	Fidelity Advisor New Insights I
51 35 5	28 33 29	34 43 12	15 42 29	24 28 25	15 18 51
6 3 0	4 4 2	9 2 0	2 7 6	5 6 6	4 5 6
1 0 0	0 0 0	0 1 0	0 0 0	2 2 2	0 0 1
Amer Funds Gr of Amer R5	JPMorgan Mid Cap Value L	Janus Henderson Enterprise N	Vanguard Mid Cap Index I	Janus Henderson Small Value I	Vanguard Small Cap Index I
10 21 55	14 18 6	1 14 22	5 12 15	0 0 0	0 0 0
2 4 7	27 22 9	5 19 36	23 25 21	16 17 8	16 20 23
0 0 0	2 2 0	1 1 1	0 0 0	19 25 15	14 14 13
Emerald Growth Instl	Amer Funds EuroPac Gr R5	DFA Int'l Small Company I	Oppenheimer Dev Mkt Y	Vanguard Total Intl Stock Idx Adm	Style Legend
0 0 0	15 18 55	0 0 0	11 28 52	26 25 24	Large Value Large Core Large Growth 50% < 54
0 6 23	2 3 6	12 13 12	1 1 7	7 6 6	Mid Value Mid Core Mid Growth 25% < 27
10 19 42	0 0 0	24 21 19	0 0 1	2 2 2	Small Value Small Core Small Growth 10% < 19

Equity Portfolio Characteristics as of September 30, 2019

Fund/Benchmark	Geo Avg Market Cap \$MM	P/E Ratio	P/B Ratio	Total Number of Holdings	% Assets in Top 10 Holdings	Turnover Ratio	% Non-US Equity	% Emerging Mkts Equity
Vanguard Equity Income Adm	\$90,731	16.6	2.5	199	24	37	10	0
Russell 1000 Value	\$59,216	16.9	2.0	766	22			
Avg Large Value	\$108,259	16.7	2.3	511	33	64	6	0
Vanguard Institutional Index I	\$115,039	20.9	3.2	509	22	6	1	0
AMG Yacktman I	\$80,644	15.3	2.1	48	42	12	18	1
Parnassus Core Equity Instl	\$78,316	25.3	4.1	40	36	31	3	0
Vanguard Total Stock Mkt Idx Instl	\$67,469	20.6	3.0	3,613	18	3	1	0
S&P 500	\$115,036	20.9	3.2	505	22			
CRSP US Total Market	\$67,543	20.5	3.0	3,541	18			
Avg Large Blend	\$178,696	21.1	3.7	435	49	65	3	0
Fidelity Advisor New Insights I	\$87,933	24.5	3.4	384	30	36	9	2
Amer Funds Growth of Amer R5	\$92,962	23.3	3.8	334	29	36	10	2
S&P 500 Growth	\$140,838	25.7	5.1	297	32			
Avg Large Growth	\$180,697	27.2	6.1	530	49	56	6	2
JPMorgan Mid Cap Value L	\$14,874	17.3	2.0	113	19	11	0	0
Russell Mid-Cap Value	\$12,538	17.4	1.9	633	7			
Avg Mid-Cap Value	\$11,373	17.2	1.9	563	20	60	5	1
Vanguard Mid Cap Index Instl	\$15,961	21.3	2.7	352	7	16	2	0
CRSP US Mid Cap	\$15,962	21.3	2.7	344	7			
Avg Mid-Cap Blend	\$8,193	19.6	2.3	516	18	61	2	1
Janus Henderson Enterprise N	\$14,496	25.4	4.3	84	20	13	10	0
Russell Mid-Cap Growth	\$15,637	26.1	6.1	401	12			
Avg Mid-Cap Growth	\$13,888	31.0	4.8	585	29	58	4	1

Equity Portfolio Characteristics as of September 30, 2019

Fund/Benchmark	Geo Avg Market Cap \$MM	P/E Ratio	P/B Ratio	Total Number of Holdings	% Assets in Top 10 Holdings	Turnover Ratio	% Non-US Equity	% Emerging Mkts Equity
Janus Henderson Small Value I	\$2,929	16.4	1.8	81	24	39	4	0
Russell 2000 Value	\$1,601	13.8	1.3	1,392	5			
Avg Small Value	\$2,767	15.4	1.5	488	20	82	2	0
Vanguard Small Cap Index Instl	\$4,132	18.0	2.2	1,379	3	15	1	0
CRSP US Small Cap	\$4,134	18.0	2.2	1,364	3			
Russell 2000	\$1,838	17.0	1.9	1,992	3			
Avg Small Blend	\$3,079	19.2	2.1	489	18	62	2	0
Emerald Growth Instl	\$2,130	23.8	3.5	132	21	64	0	0
Russell 2000 Growth	\$2,100	23.2	3.9	1,158	5			
Avg Small Growth	\$3,832	27.8	4.0	450	28	75	3	0
Vanguard Total Intl Stock Index Adm	\$23,166	15.0	1.5	7,407	8	3	97	19
FTSE Global All Cap ex US	\$23,359	15.0	1.5	7,124	9			
Avg Foreign Large Blend	\$39,589	16.1	1.7	825	14	54	90	7
Amer Funds EuroPac Gr R5	\$44,148	18.1	2.3	322	21	35	90	29
MSCI ACWI Ex USA	\$34,605	15.2	1.6	2,217	10			
Avg Foreign Large Blend	\$39,589	16.1	1.7	825	14	54	90	7
DFA Int'l Small Company I	\$1,440	13.5	1.2	4,457	3	22	98	1
MSCI EAFE Small Cap	\$2,063	15.0	1.5	2,333	3			
Avg Foreign Small/Mid Value	\$4,434	11.5	1.1	815	17	57	88	7
Oppenheimer Developing Mkts Y	\$42,390	19.0	3.0	100	42	28	88	72
MSCI EM Net	\$31,190	13.1	1.6	1,202	23			
Avg Diversified Emerging Markets	\$34,126	14.3	2.0	744	29	62	93	72
Voya Clarion Real Estate I	\$12,873	31.5	2.4	47	43	103	0	0
Avg Real Estate	\$18,417	33.8	2.8	496	49	77	1	0

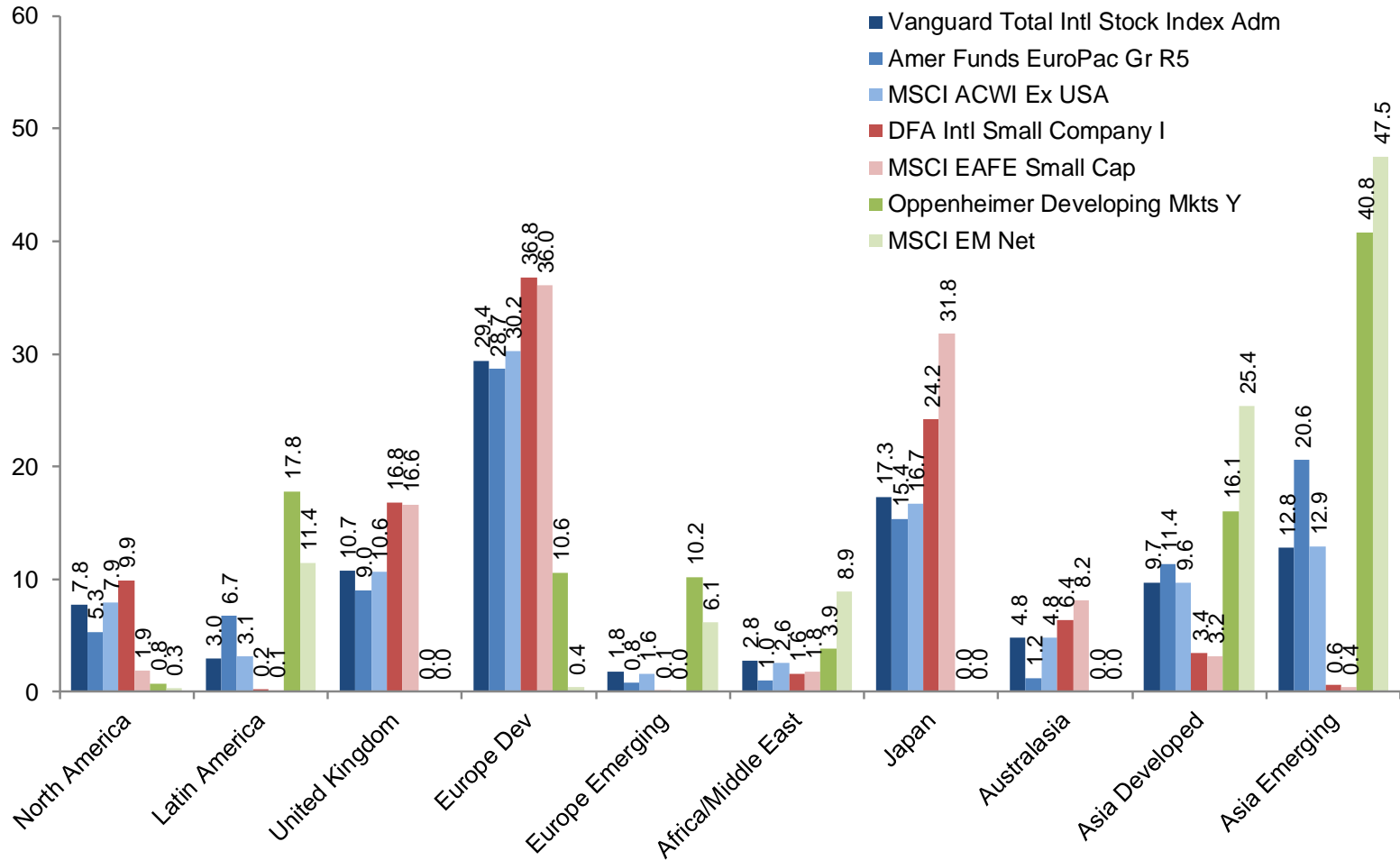
Equity Portfolio Sector Allocations as of September 30, 2019

Fund/Benchmark	Energy	Materials	Industrials	Consumer Discretionary	Consumer Staples	Healthcare	Financials	Information Technology	Telecom Services	Utilities
Vanguard Equity Income Adm	8.6	3.1	9.5	4.4	13.4	15.4	17.9	10.6	7.0	8.7
Russell 1000 Value	8.1	4.3	9.6	6.0	9.0	12.6	23.7	6.1	8.2	6.8
Avg Large Value	8.3	4.5	10.1	4.7	9.4	13.3	20.7	10.6	9.4	5.5
Vanguard Institutional Index I	4.3	2.7	9.2	10.0	7.4	14.0	12.9	22.3	10.4	3.5
AMG Yacktman I	2.8	0.0	9.7	8.3	25.2	8.0	9.2	24.7	12.1	0.0
Parnassus Core Equity Instl	0.0	5.9	14.9	3.6	15.4	14.1	10.8	23.6	7.0	0.0
Vanguard Total Stock Mkt Idx Instl	4.0	2.9	10.2	10.2	6.7	13.8	13.5	21.6	9.5	3.4
S&P 500	4.3	2.7	9.2	10.0	7.4	14.0	13.0	22.3	10.4	3.5
CRSP US Total Market	4.0	2.8	10.2	10.2	6.7	13.8	13.6	21.5	9.5	3.4
Avg Large Blend	4.3	2.8	10.8	12.4	7.6	13.7	13.7	25.1	3.6	3.0
Fidelity Advisor New Insights I	4.2	2.6	7.4	13.1	5.2	12.3	14.4	24.0	14.0	1.4
Amer Funds Growth of Amer R5	3.7	2.2	8.8	13.3	3.7	15.9	8.2	24.8	17.7	0.0
S&P 500 Growth	2.6	2.2	8.5	12.4	5.6	16.8	5.5	26.9	14.3	2.0
Avg Large Growth	0.9	1.8	7.9	14.0	4.9	14.3	5.5	36.5	11.7	0.7
JPMorgan Mid Cap Value L	5.1	4.9	8.5	12.0	4.1	6.8	22.9	7.0	2.6	11.8
Russell Mid-Cap Value	5.3	6.6	11.7	9.1	4.4	6.6	18.9	7.2	3.7	11.5
Avg Mid-Cap Value	5.5	7.0	15.9	9.7	5.7	7.7	21.6	9.1	2.6	7.1
Vanguard Mid Cap Index Instl	4.1	6.1	12.9	11.7	3.3	11.0	12.5	17.2	5.4	7.0
CRSP US Mid Cap	4.1	6.1	12.9	11.6	3.4	11.0	12.6	17.2	5.4	7.0
Avg Mid-Cap Blend	2.8	8.2	18.2	9.6	3.5	9.7	16.1	13.8	3.3	5.0
Janus Henderson Enterprise N	1.9	1.4	19.5	8.9	0.0	17.0	12.2	34.2	1.3	0.0
Russell Mid-Cap Growth	1.2	2.9	17.2	15.0	3.3	14.8	4.5	33.1	5.1	0.0
Avg Mid-Cap Growth	1.4	3.5	16.9	13.7	2.1	18.3	8.8	28.6	2.6	0.7

Equity Portfolio Sector Allocations as of September 30, 2019

Fund/Benchmark	Energy	Materials	Industrials	Consumer Discretionary	Consumer Staples	Healthcare	Financials	Information Technology	Telecom Services	Utilities
Janus Henderson Small Value I	3.8	8.4	18.0	9.7	8.3	0.8	32.4	6.0	0.4	3.2
Russell 2000 Value	5.5	4.5	12.6	9.7	2.5	5.1	30.5	9.1	2.4	6.3
Avg Small Value	4.4	8.7	16.1	11.3	4.1	4.2	26.7	10.2	0.8	4.0
Vanguard Small Cap Index Instl	2.3	4.7	16.1	11.5	2.8	11.8	15.6	17.5	2.8	3.6
CRSP US Small Cap	2.3	4.7	16.1	11.5	2.8	11.8	15.6	17.5	2.8	3.6
Russell 2000	3.1	3.9	16.4	11.1	2.9	16.6	18.0	13.7	2.4	3.7
Avg Small Blend	3.2	3.7	18.5	12.0	3.5	12.8	18.5	14.8	1.4	3.5
Emerald Growth Instl	1.4	1.1	15.8	21.0	4.0	27.4	9.1	15.0	4.5	0.0
Russell 2000 Growth	0.6	3.1	19.8	12.2	3.4	27.8	6.0	18.1	2.4	1.7
Avg Small Growth	1.4	3.2	17.9	14.5	2.4	23.8	9.6	20.9	1.5	1.2
Vanguard Total Intl Stock Index Adm	6.3	7.8	13.4	11.8	9.2	8.6	19.9	9.1	6.4	3.4
FTSE Global All Cap ex US	6.2	7.8	13.3	11.8	9.2	8.6	20.4	9.0	6.3	3.5
Avg Foreign Large Blend	5.3	6.8	14.2	13.1	10.6	10.5	19.1	8.4	5.9	3.0
Amer Funds EuroPac Gr R5	5.9	8.2	12.3	15.3	6.0	10.2	17.4	14.4	5.6	3.3
MSCI ACWI Ex USA	5.1	7.1	15.2	11.7	11.5	11.8	18.4	7.0	5.3	3.6
Avg Foreign Large Blend	5.3	6.8	14.2	13.1	10.6	10.5	19.1	8.4	5.9	3.0
DFA Int'l Small Company I	4.2	10.4	24.4	14.9	5.8	4.9	11.6	9.7	5.3	3.5
MSCI EAFE Small Cap	2.5	7.8	21.5	12.6	6.3	7.6	10.5	10.2	5.1	2.5
Avg Foreign Small/Mid Value	6.5	9.5	19.9	11.6	6.4	6.9	17.7	7.0	7.2	2.7
Oppenheimer Developing Mkts Y	6.8	7.0	4.3	26.6	10.8	4.2	25.3	7.3	5.6	0.0
MSCI EM Net	7.7	7.1	5.3	13.4	6.7	2.8	24.6	15.8	11.1	2.7
Avg Diversified Emerging Markets	6.1	5.1	5.4	14.7	9.8	3.0	25.1	15.5	11.0	2.0

International Equity Regional Allocations as of September 30, 2019



International Equity Country Allocations as of September 30, 2019

	Argentina	Australia	Austria	Belgium	Brazil	Canada	Chile	China	Czech Republic	Denmark	Finland	France	Germany	Greece	Hong Kong	Hungary	India	Indonesia	Ireland	Israel	Italy	Japan	Malaysia	Mexico	Netherlands
Vanguard Total Intl Stock Index Adm	4.5	0.2	0.8	2.0	6.7	0.2	7.8		1.1	0.8	6.7	5.7		2.1		2.5	0.5		0.4	1.6	17.3	0.6	0.6	1.9	
FTSE Global All Cap ex US	4.7	0.2	0.8	2.0	6.7	0.2	7.8		1.1	0.8	6.7	5.6		2.1		2.5	0.5		0.4	1.6	17.4	0.6	0.7	1.9	
Amer Funds EuroPac Gr R5	1.1		0.4	6.6	3.6		9.2		2.2		9.1	5.1		4.7		9.3	0.4		0.4	1.1	15.4		0.1	4.0	
MSCI ACWI Ex USA	4.6	0.2	0.6	2.0	6.7	0.2	8.4		1.2	0.8	7.5	5.8		2.3		2.3	0.5		0.3	1.5	16.7	0.5	0.7	2.1	

	New Zealand	Norway	Pakistan	Philippines	Poland	Portugal	Russia	Singapore	Slovakia	South Africa	South Korea	Spain	Sweden	Switzerland	Taiwan	Thailand	Turkey	United Kingdom	United States	Non-US	Venezuela	Vietnam	Lithuania	Latvia	Estonia
Vanguard Total Intl Stock Index Adm	0.3	0.5		0.3	0.2	0.1	1.3	1.0		1.2	3.2	1.8	2.0	5.9	3.4	0.9	0.2	10.7	1.1	98.9					
FTSE Global All Cap ex US	0.3	0.5		0.3	0.2	0.1	1.0	1.0		1.2	3.2	1.8	2.0	5.9	3.4	0.8	0.2	10.6	1.0	99.0					
Amer Funds EuroPac Gr R5				0.5			0.6	0.5		0.6	3.9	1.8	0.3	4.2	1.9	0.9	0.1	9.0	1.7	98.3					
MSCI ACWI Ex USA	0.2	0.4		0.3	0.3		1.1	0.9		1.2	3.2	1.9	1.6	6.4	3.1	0.7	0.1	10.6	1.2	98.8					

International Equity Country Allocations as of September 30, 2019

	Argentina	Australia	Austria	Belgium	Brazil	Canada	Chile	China	Czech Republic	Denmark	Finland	France	Germany	Greece	Hong Kong	Hungary	India	Indonesia	Ireland	Israel	Italy	Japan	Malaysia	Mexico	Netherlands
DFA Int'l Small Company I		5.6	1.5	1.6	0.2	8.9		0.4		1.9	2.3	4.8	6.6		2.0				0.2	1.3	4.0	24.2			2.0
MSCI EAFE Small Cap		7.2	1.2	2.1	0.1			0.3		1.7	1.2	3.5	5.8		1.3				0.4	1.7	3.6	31.8			1.8
Oppenheimer Developing Mkts Y					6.5		1.2	25.4				5.8			7.0		10.8	1.1			1.5			7.5	
MSCI EM Net					7.4		0.7	31.1	0.1					0.3	0.8	0.3	8.7	2.0					2.0	2.5	

	New Zealand	Norway	Pakistan	Philippines	Poland	Portugal	Russia	Singapore	Slovakia	South Africa	South Korea	Spain	Sweden	Switzerland	Taiwan	Thailand	Turkey	United Kingdom	United States	Non-US	Venezuela	Vietnam	Lithuania	Latvia	Estonia
DFA Int'l Small Company I	0.8	0.9				0.4		1.4				2.4	3.0	4.8				16.8	1.0	99.0					
MSCI EAFE Small Cap	0.9	1.9				0.4		1.8				2.1	5.7	4.3				16.6	1.8	98.2					
Oppenheimer Developing Mkts Y				2.7			9.4	1.1		2.8	3.1	0.5		2.9	4.9	0.5	0.7		0.7	99.3		0.3			
MSCI EM Net				1.1	1.0		4.1			4.6	12.4				12.0	2.8	0.5		0.3	99.7					

General Fund Information as of September 30, 2019

Fund	Manager	Average Tenure (years)	Longest Tenure (years)	Total Assets (\$MM)	Morningstar Rating Overall	Morningstar Analyst Rating
BlackRock Inflation Prot Bond I	Christopher Allen (2)*	2	3	\$2,009	3	Neutral
Loomis Sayles Core Plus Bond N	Peter W. Palfrey (2)*	22	23	\$8,408	3	Gold
Templeton Global Bond VIP CI 1	Michael J. Hasenstab (2)*	9	18	\$2,736	3	
Vanguard Target Retirement Inc	William A. Coleman (2)*	7	7	\$17,108	4	Gold
Vanguard Target Retirement 2015	William A. Coleman (2)*	7	7	\$15,733	4	Gold
Vanguard Target Retirement 2020	William A. Coleman (2)*	7	7	\$33,174	5	Gold
Vanguard Target Retirement 2025	William A. Coleman (2)*	7	7	\$44,962	5	Gold
Vanguard Target Retirement 2030	William A. Coleman (2)*	7	7	\$39,996	4	Gold
Vanguard Target Retirement 2035	William A. Coleman (2)*	7	7	\$38,033	4	Gold
Vanguard Target Retirement 2040	William A. Coleman (2)*	7	7	\$29,817	4	Gold
Vanguard Target Retirement 2045	William A. Coleman (2)*	7	7	\$27,457	4	Gold
Vanguard Target Retirement 2050	William A. Coleman (2)*	7	7	\$20,146	4	Gold
Vanguard Target Retirement 2055	William A. Coleman (2)*	7	7	\$10,606	4	Gold

* Longest tenured manager listed with total number of fund managers listed in parentheses

General Fund Information as of September 30, 2019

Fund	Manager	Average Tenure (years)	Longest Tenure (years)	Total Assets (\$MM)	Morningstar Rating Overall	Morningstar Analyst Rating
Vanguard Equity Income Adm	James P. Stetler (3)*	11	16	\$36,609	5	Silver
Vanguard Institutional Index I	Donald M. Butler (2)*	10	19	\$230,449	5	Gold
AMG Yacktman I	Stephen A. Yacktman (2)*	13	17	\$8,249	4	Gold
Parnassus Core Equity Instl	Todd C. Ahlsten (2)*	13	19	\$17,662	5	Silver
Vanguard Total Stock Idx Instl	Gerard C. O'Reilly (2)*	14	25	\$848,300	4	Gold
Fidelity Advisor New Insights I	William Danoff (2)*	11	16	\$25,564	3	Silver
Amer Funds Growth Fund of Amer R5	Donald D. O'Neal (13)*	11	26	\$186,265	3	Bronze
JPMorgan Mid Cap Value L	Jonathan K.L. Simon (2)*	18	22	\$16,766	4	Gold
Vanguard Mid Cap Index Instl	Donald M. Butler (2)*	13	22	\$106,994	5	Gold
Janus Henderson Enterprise N	Brian Demain (2)*	8	12	\$21,550	5	Silver
Janus Henderson Small Value I	Justin Tugman (2)*	6	11	\$3,398	5	Silver
Vanguard Small Cap Index Instl	Gerard C. O'Reilly (2)*	4	4	\$92,854	5	Gold
Emerald Growth Instl	Kenneth G. Mertz (3)*	19	27	\$1,222	4	
Vanguard Total Intl Stock Index Adm	Michael Perre (2)*	7	11	\$401,955	3	Gold
Amer Funds EuroPac Gr R5	Carl M. Kawaja (9)*	13	18	\$158,488	3	Gold
DFA Int'l Small Company I	Jed S. Fogdall (4)*	5	10	\$12,240	4	Bronze
Oppenheimer Developing Mkts Y	Justin M. Leverenz	13	13	\$40,644	5	Silver
Voya Clarion Real Estate I	T. Ritson Ferguson (2)*	11	11	\$351	3	Neutral

* Longest tenured manager listed with total number of fund managers listed in parentheses

Glossary of Key Terms

- **Alpha** is a measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. A positive Alpha figure indicates the portfolio has performed better than its beta would predict. In contrast, a negative Alpha indicates the portfolio has underperformed, given the expectations established by beta.
- **Average Credit Quality** gives a snapshot of the portfolio's overall credit quality. It is an average of each bond's credit rating, adjusted for its relative weighting in the portfolio. For corporate bond and municipal bond funds, Morningstar also shows the percentage of fixed-income securities that fall within each credit-quality rating, as assigned by Standard & Poor's or Moody's. Because it's rare to find individual bonds in a portfolio with a rating below B, the average credit quality of bond funds in Morningstar's database ranges from AAA (highest) to B (lowest). AAA bonds carry the highest credit rating, while bonds issued by speculative companies usually carry the lowest credit ratings. For taxable bonds, anything at or below BB is considered a high-yield or junk bond. For the purpose of Morningstar's calculations, U.S. government bonds are considered AAA and other nonrated bonds generally are considered B.
- **Average Duration** is a measure of a fund's interest-rate sensitivity. The longer a fund's duration, the more sensitive the fund is to shifts in interest rates. Duration is determined by a formula that includes coupon rates and bond maturities. Small coupons tend to increase duration, while shorter maturities and higher coupons shorten duration.
- **Average Maturity** is a weighted average of all the maturities of the bonds in a portfolio, computed by weighting each bond's effective maturity by the market value of the security. Average effective maturity takes into consideration all mortgage prepayments, puts, and adjustable coupons. Longer-maturity funds are generally considered more interest-rate sensitive than their shorter counterparts.
- **Batting Average** is 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. For example, a manager who meets or outperforms the market every month in a given period would have a batting average of 100. A manager who beats the market half of the time would have a batting average of 50.
- **Beta** is a measure of systematic risk with respect to a benchmark. Systematic risk is the tendency of the value of the fund and the value of benchmark to move together. Beta measures the sensitivity of the fund's excess return (total return minus the risk-free return) with respect to the benchmark's excess return that results from their systematic co-movement. It is the ratio of what the excess return of the fund would be to the excess return of the benchmark if there were no fund-specific sources of return. If beta is greater than one, movements in value of the fund that are associated with movements in the value of the benchmark tend to be amplified. If beta is one, they tend to be the same, and if beta is less than one, they tend to be dampened. If such movements tend to be in opposite directions, beta is negative. Beta is measured as the slope of the regression of the excess return on the fund as the dependent variable and the excess return on the benchmark as the independent variable. The beta of the market is 1.00 by definition. Morningstar calculates beta by comparing a portfolio's excess return over T-bills to the benchmark's excess return over T-bills, so a beta of 1.10 shows that the portfolio has performed 10% better than its benchmark in up markets and 10% worse in down markets, assuming all other factors remain constant. Conversely, a beta of 0.85 indicates that the portfolio's excess return is expected to perform 15% worse than the benchmark's excess return during up markets and 15% better during down markets.
- **Downside Capture Ratio** measures a manager's performance in down markets relative to the market (benchmark) itself. For example, if the ratio is 90%, the manager has captured 90% of the down-market and outperformed the market on the downside.

Glossary of Key Terms

- **Geometric Average Market Cap** provides a measure of the size of the companies in which the fund invests. It is the weighted mean of the market capitalizations of the stocks in the fund's portfolio and is calculated by raising the market capitalization of each stock to a power equal to that stock's stake in the portfolio. The resulting numbers are multiplied together to produce the geometric mean of the market caps of the stocks in the portfolio, which is reported as average market capitalization.
- **Information Ratio** is a risk-adjusted performance measure. The information ratio is a special version of the Sharpe Ratio in that the benchmark is typically the fund's performance benchmark instead of the risk free rate. A higher information ratio indicates higher active returns per unit of active risk while a lower information ratio may indicate low levels of active returns, high levels of active risk or both.
- **Morningstar Analyst Rating** is based on the Morningstar analyst's conviction in the fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over the long term. The 5 ratings include Gold, Silver, Bronze, Neutral, and Negative. If a fund receives a positive rating of Gold, Silver, or Bronze, it means Morningstar analysts think highly of the fund and expect it to outperform over a full market cycle of at least five years.
- **Morningstar Star Rating** funds are ranked within their Morningstar categories according to their risk-adjusted return (after accounting for all sales charges and expenses), and stars are assigned such that the distribution reflects a classic bell-shaped curve with the largest section in the center. The 10% of funds in each category with the highest risk-adjusted return receive five stars, the next 22.5% receive four stars, the middle 35% receive three stars, the next 22.5% receive two stars, and the bottom 10% receive one star.
- **P/B Ratio** is the weighted average of the price/book ratios of all the stocks in a portfolio. The P/B ratio of a company is calculated by dividing the market price of its stock by the company's per-share book value. Stocks with negative book values are excluded from this calculation. In theory, a high P/B ratio indicates that the price of the stock exceeds the actual worth of the company's assets, while a low P/B ratio indicates that the stock is a bargain. In practice, book value is an accounting number and for a variety of reasons may not reflect the actual value assigned to a company or security by market participants.
- **P/E Ratio** is the weighted average of the price/earnings ratios of all the stocks in a portfolio. A fund's price/earnings ratio can act as a gauge of the fund's investment strategy in the current market climate, and whether it has a value or growth orientation. Companies in those industries enjoying a surge of popularity tend to have high P/E ratios, reflecting a growth orientation. More staid industries tend to have low P/E ratios, reflecting a value orientation. Morningstar generates this figure in-house on a monthly basis, based on the most-recent portfolio holdings submitted by the fund and stock statistics gleaned from our internal U.S. equities databases. Negative P/E's are not used, and any P/E greater than 60 is capped at 60 in the calculation of the average.
- **Peer Group Ranking** is the fund's total-return percentile rank relative to all funds that have the same Morningstar Category. Morningstar categorizes funds based on their portfolio holdings (portfolio statistics and compositions over the past 3 years). The highest (or most favorable) percentile rank is 1 and the lowest (or least favorable) percentile rank is 100. The top-performing fund in a category will always receive a rank of 1.
- **Sharpe Ratio** is a risk-adjusted measure developed by Nobel Laureate William Sharpe. It is calculated by using standard deviation and excess return to determine reward per unit of risk. The higher the Sharpe Ratio, the better the fund's historical risk-adjusted performance. The Sharpe ratio is calculated for the past 36-month period by dividing a fund's annualized excess returns by the standard deviation of a fund's annualized excess returns. Since this ratio uses standard deviation as its risk measure, it is most appropriately applied when analyzing a fund that is an investor's sole holding. The Sharpe Ratio can be used to compare two funds directly on how much risk a fund had to bear to earn excess return over the risk-free rate.

Glossary of Key Terms

- **Standard Deviation** is a statistical measurement of dispersion about an average, which, for a mutual fund, depicts how widely the returns varied over a certain period of time. Investors use the standard deviation of historical performance to try to predict the range of returns that are most likely for a given fund. When a fund has a high standard deviation, the predicted range of performance is wide, implying greater volatility.
- **Total Return** is determined by taking the change in net asset value, reinvesting all income and capital-gains distributions, and dividing by the starting net asset value (NAV). Reinvestments are made using the actual reinvestment NAV, and daily payoffs are reinvested monthly. Total return is expressed as a percentage.
- **Tracking Error** is a measure of the volatility of excess returns relative to a benchmark.
- **Turnover Ratio** is a measure of the fund's trading activity which is computed by taking the lesser of purchases or sales (excluding all securities with maturities of less than one year) and dividing by average monthly net assets. A turnover ratio of 100% or more does not necessarily suggest that all securities in the portfolio have been traded. In practical terms, the resulting percentage loosely represents the percentage of the portfolio's holdings that have changed over the past year. A low turnover figure (20% to 30%) would indicate a buy-and-hold strategy while a high turnover (more than 100%) would indicate an investment strategy involving considerable buying and selling of securities.
- **Upside Capture Ratio** measures a manager's performance in up markets relative to the market (benchmark) itself. For example, if the ratio is 110%, the manager has captured 110% of the up-market and outperformed the market on the upside.

Sector Definitions

- **Energy Sector:** The Energy Sector comprises companies whose businesses are dominated by either of the following activities: The construction or provision of oil rigs, drilling equipment and other energy related service and equipment, including seismic data collection. Companies engaged in the exploration, production, marketing, refining, and/or transportation of oil and gas products, coal and other consumer fuels.
- **Materials Sector:** The Materials Sector encompasses a wide range of commodity-related manufacturing industries. Included in this sector are companies that manufacture chemicals, construction materials, glass, paper, forest products and related packaging products, and metals, minerals and mining companies, including producers of steel.
- **Industrials Sector:** The Industrials Sector includes companies whose businesses are dominated by one of the following activities: The manufacture and distribution of capital goods, including aerospace and defense, construction, engineering and building products, electrical equipment and industrial machinery. The provision of commercial services and supplies, including printing, employment, environmental and office services. The provision of transportation services, including airlines, couriers, marine, road and rail and transportation infrastructure.
- **Consumer Discretionary Sector:** The Consumer Discretionary Sector encompasses those industries that tend to be the most sensitive to economic cycles. Its manufacturing segment includes automotive, household durable goods, textiles and apparel and leisure equipment. The services segment includes hotels, restaurants and other leisure facilities, media production and services, and consumer retailing and services.
- **Consumer Staples Sector:** The Consumer Staples Sector comprises companies whose businesses are less sensitive to economic cycles. It includes manufacturers and distributors of food, beverages and tobacco and producers of non-durable household goods and personal products. It also includes food and drug retailing companies as well as hypermarkets and consumer super centers.
- **Health Care Sector:** The Health Care Sector encompasses two main industry groups. The first includes companies who manufacture health care equipment and supplies or provide health care related services, including distributors of health care products, providers of basic health-care services, and owners and operators of health care facilities and organizations. The second regroups companies primarily involved in the research, development, production and marketing of pharmaceuticals and biotechnology products.
- **Financials Sector:** The Financials Sector contains companies involved in banking, thrifts & mortgage finance, specialized finance, consumer finance, asset management and custody banks, investment banking and brokerage and insurance. It also includes Financial Exchanges & Data and Mortgage REITs.
- **Real Estate Sector:** The Real Estate Sector contains companies engaged in real estate development and operation. It also includes companies offering real estate related services and Equity Real Estate Investment Trusts (REITs).
- **Information Technology Sector:** The Information Technology Sector covers the following areas: firstly, Technology Software and Services, including companies that primarily develop software in various fields such as the Internet, applications, systems, database management and/or home entertainment, and companies that provide information technology consulting and services, as well as data processing and outsourced services; secondly, Technology Hardware and Equipment, including manufacturers and distributors of communications equipment, computers and peripherals, electronic equipment and related instruments; and thirdly, Semiconductors and Semiconductor Equipment Manufacturers.
- **Telecommunications Services Sector:** The Telecommunications Services Sector contains companies that provide communications services primarily through a fixed-line, cellular, wireless, high bandwidth and/or fiber optic cable network.
- **Utilities Sector:** The Utilities Sector encompasses those companies considered electric, gas or water utilities, or companies that operate as independent producers and/or distributors of power.

Regional Definitions

- **North America:** United States and Canada
- **Emerging Central & Latin America:** Mexico and Central and South America
- **United Kingdom:** England, Northern Ireland, Scotland, Wales
- **Developed Europe:** Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain
- **Emerging Europe:** Russia and other Eastern European countries
- **Africa/Middle East:** Africa and Western Asian countries
- **Japan:** Japan
- **Australasia:** Australia and New Zealand
- **Developed Asia:** Hong Kong, Singapore, South Korea
- **Emerging Asia:** China, India, Indonesia, Malaysia, Philippines, Thailand



Client has the authority to select investments and investment managers. Past performance is not indicative of future results. We do not guarantee the performance of any investment, fund, or manager.

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