



City of Fort Lauderdale



Investment Performance Review For the Quarter Ended December 31, 2018

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Executive Summary

The City of Ft. Lauderdale (the “City”) portfolio returned -7.67% (net of mutual fund fees) in the 4th quarter of 2018, underperforming its policy benchmark return of -7.25% by 0.42%. Over the prior 12-months, the portfolio returned -4.10%, underperforming its -2.60% benchmark return by 1.50%. In dollar terms, the portfolio lost \$2,041,826 in return on investment over the quarter, and lost \$1,131,476 year-to-date.

The significant market correction for the quarter ending December was largely driven by the return of volatility in the marketplace. Domestic and foreign uncertainty mostly stemming from the pace of Fed rate hikes, Brexit, and US-China trade war, drove a sell-off in the equity market for a flight to quality in the fixed income market. The S&P 500 Index (S&P) posted a negative return of -13.52% for the quarter, which brought the 2018 return down to -4.39%. Non-US equity performed slightly better than US equity for the quarter, with a return of -11.44% as measured by the MSCI ACWI ex US Index. In general, economic indicators remain strong. 4th quarter U.S. GDP is expected to be around 2.8%. There were 312,000 nonfarm payrolls added in December alone, and the labor participation rate increased to 63.1%, tied for the highest rate since September 2013.

Risks we continue to monitor closely include the effects of the Fed rate hikes, and escalating trade tensions between the U.S. and China with no timeline for resolution. The Fed had pegged 3% as the neutral rate, however due to market volatility they have stated a more patient approach to rate hikes is now required.



Executive Summary

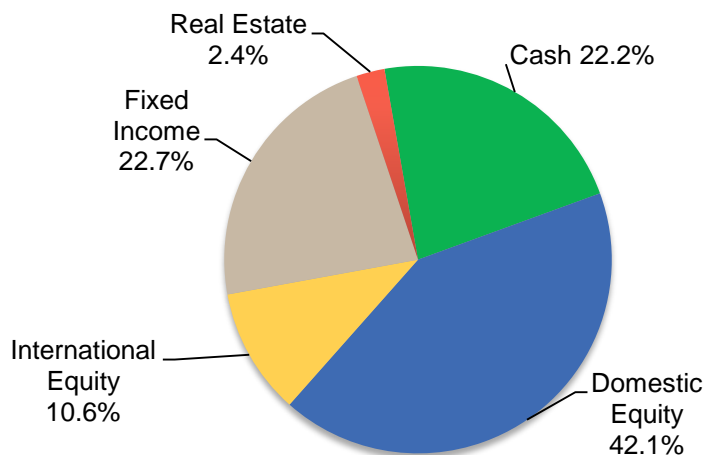
Current Asset Allocation

Asset Class	Market Value	Pct (%)
Cash	\$5,472,140	22.2%
Domestic Equity	10,370,894	42.1%
International Equity	2,606,478	10.6%
Fixed Income	5,601,741	22.7%
Real Estate	581,027	2.4%
Total	\$24,632,280	100.0%

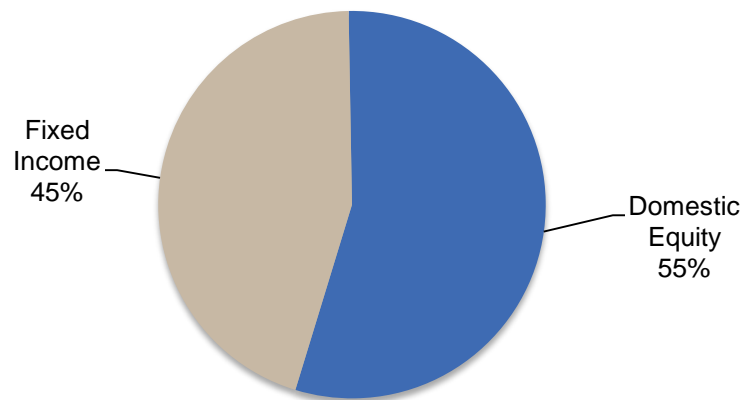
Target Asset Allocation

Asset Class	Market Value	Pct (%)	Range
Cash	(\$0)	0%	0%
Domestic Equity	13,547,755	55%	55%
International Equity	-	0%	0%
Fixed Income	11,084,526	45%	45%
Alternative Investments	-	0%	0%
Total	\$24,632,280	100%	

Current Asset Allocation



Target Asset Allocation



Markets & Economy



QUARTERLY MARKET SUMMARY

Market Index Performance

As of December 31, 2018

	QTD	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
DOMESTIC EQUITY								
S&P 500 Index	-13.52%	-4.39%	-4.39%	16.47%	9.24%	8.48%	12.68%	13.10%
Russell 3000 Index	-14.31%	-5.25%	-5.25%	14.76%	8.95%	7.90%	12.45%	13.17%
Russell 1000 Value Index	-11.73%	-8.28%	-8.28%	4.24%	6.93%	5.93%	11.01%	11.16%
Russell 1000 Growth Index	-15.89%	-1.52%	-1.52%	28.24%	11.14%	10.40%	14.13%	15.27%
Russell Midcap Index	-15.38%	-9.08%	-9.08%	7.74%	7.02%	6.24%	11.48%	14.00%
Russell 2500 Index	-18.50%	-10.02%	-10.02%	5.08%	7.30%	5.13%	10.97%	13.14%
Russell 2000 Index	-20.21%	-11.03%	-11.03%	1.99%	7.34%	4.40%	10.43%	11.95%
Russell 2000 Value Index	-18.68%	-12.85%	-12.85%	-6.04%	7.36%	3.60%	9.56%	10.38%
Russell 2000 Growth Index	-21.66%	-9.34%	-9.34%	10.73%	7.20%	5.11%	11.24%	13.50%
INTERNATIONAL EQUITY								
MSCI EAFE (net)	-12.49%	-13.32%	-13.32%	8.95%	3.44%	1.10%	6.34%	6.91%
MSCI AC World Index (net)	-12.67%	-8.95%	-8.95%	13.50%	7.19%	4.85%	8.99%	10.08%
MSCI AC World ex-U.S. (net)	-11.44%	-13.81%	-13.81%	10.18%	5.01%	1.20%	5.39%	7.12%
MSCI AC World ex-U.S. Small Cap (net)	-16.02%	-17.59%	-17.59%	10.00%	4.07%	3.40%	9.13%	10.88%
MSCI EM (net)	-7.58%	-14.48%	-14.48%	17.84%	9.60%	1.97%	3.56%	8.35%
ALTERNATIVES								
FTSE NAREIT Equity REIT Index	-6.06%	-4.04%	-4.04%	4.28%	4.24%	8.32%	9.06%	12.52%
FTSE EPRA/NAREIT Developed Index	-3.94%	0.29%	0.29%	-1.86%	2.02%	9.30%	10.18%	12.70%
Bloomberg Commodity Index Total Return	-9.41%	-11.25%	-11.25%	-9.73%	0.30%	-8.80%	-7.83%	-3.78%
FIXED INCOME								
Bloomberg Barclays U.S. Aggregate	1.64%	0.01%	0.01%	3.55%	2.05%	2.52%	2.10%	3.48%
Bloomberg Barclays U.S. Government/Credit	1.46%	-0.42%	-0.42%	3.56%	2.19%	2.53%	2.14%	3.46%
Bloomberg Barclays Intermediate U.S. Gov/Credit	1.65%	0.88%	0.88%	3.03%	1.70%	1.85%	1.75%	2.90%
Bloomberg Barclays U.S. Treasury: 1-3 Year	1.31%	1.56%	1.56%	1.99%	0.95%	0.81%	0.69%	0.96%
Bloomberg Barclays U.S.-Corp: High Yield	-4.53%	-2.08%	-2.08%	5.27%	7.22%	3.83%	5.98%	11.12%
Credit Suisse Leveraged Loan Index	-3.08%	1.14%	1.14%	2.68%	5.02%	3.32%	4.57%	8.29%
BofAML Global HY Constrained (USD)	-4.99%	-8.05%	-8.05%	-3.44%	0.42%	-2.31%	-0.35%	3.78%
Bloomberg Barclays Global Aggregate ex-USD	0.91%	-2.15%	-2.15%	8.14%	3.15%	-0.01%	0.12%	1.73%
JPM EMBI Global Diversified	-1.26%	-4.26%	-4.26%	2.74%	5.15%	4.79%	4.99%	8.20%
CASH EQUIVALENT								
90-Day U.S. Treasury Bill	0.56%	1.87%	1.87%	1.37%	1.02%	0.63%	0.47%	0.38%

Source: Investment Metrics. Returns are expressed as percentages. Please refer to the last page of this document for important disclosures relating to this material.

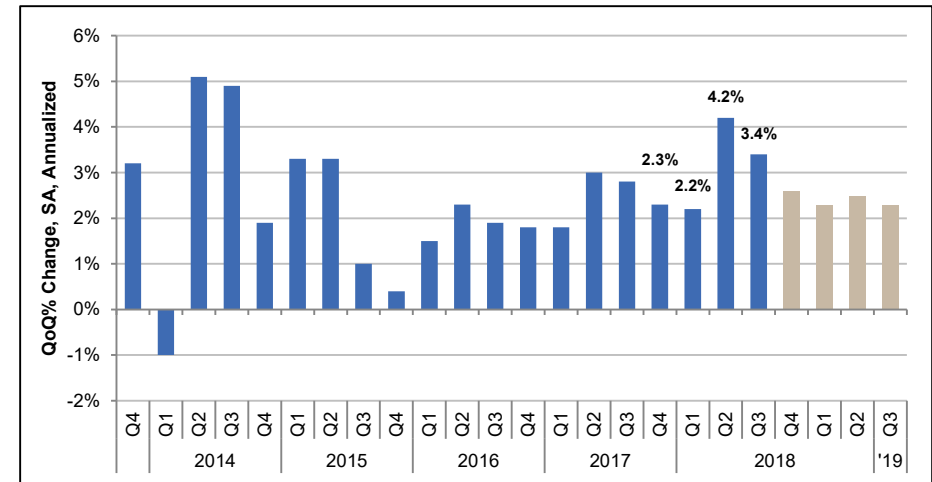


THE ECONOMY

- Real gross domestic product (GDP) for the fourth quarter of 2018 is projected to be 2.8 percent by the Federal Reserve Bank of Atlanta (Atlanta Fed) GDPNow forecast. The forecast is based on many factors including manufacturing, trade, home sales and inflation estimates. This is down from the third quarter's real GDP growth of 3.4 percent.
- The U.S. labor market continued its strong momentum through the fourth quarter. In December alone, nonfarm payrolls surged by 312,000, and the labor force participation rate increased to 63.1 percent, tied for highest rate since September 2013. The unemployment rate rose to 3.9 percent as of the end of 2018, as more Americans entered the labor force. Average hourly earnings also rose 3.2 percent from a year ago.
- The current inflation rate for the U.S. is 1.9 percent for the 12 months ended December 2018, meeting expectations. Disposable personal income (DPI) increased 0.3 percent and 0.2 percent in October and November respectively, while personal consumption expenditures (PCE) increased by 0.2 percent in October and 0.1 percent in November. The December Purchasing Managers' Index (PMI) registered 54.1 percent, a decrease of 5.2 percent from the November reading of 59.3 percent. Overall, the U.S. economy is exhibiting signs of strong, albeit moderating growth.
- The International Monetary Fund and the World Bank lowered global growth forecasts for 2018 and 2019 during the fourth quarter, citing trade headwinds, and growing geopolitical uncertainty. Global growth is projected at 3.7 percent in 2018 and 2019, down from 3.9 percent.

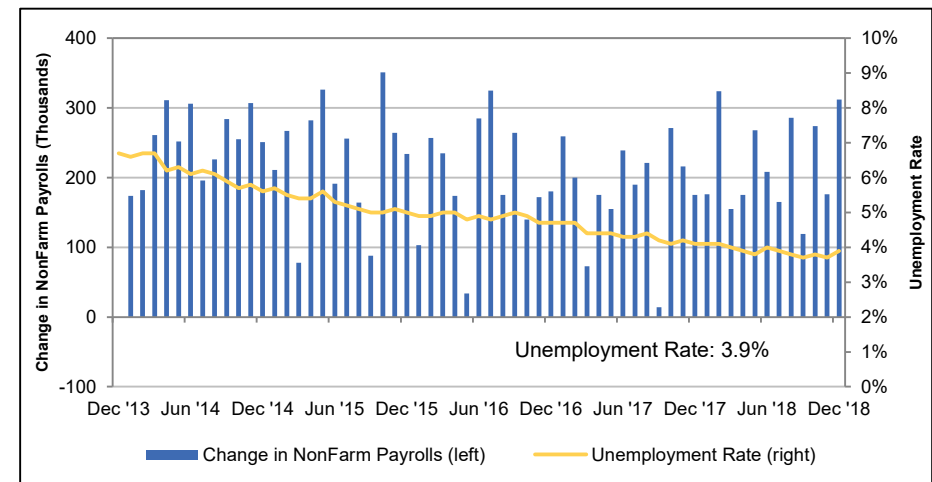
U.S. Real GDP Growth

(Seasonally Adjusted)



Source: Bloomberg. Blue bars indicate actual numbers; taupe bars indicate forecasted estimates.

Change in NonFarm Payrolls



Source: Bloomberg.

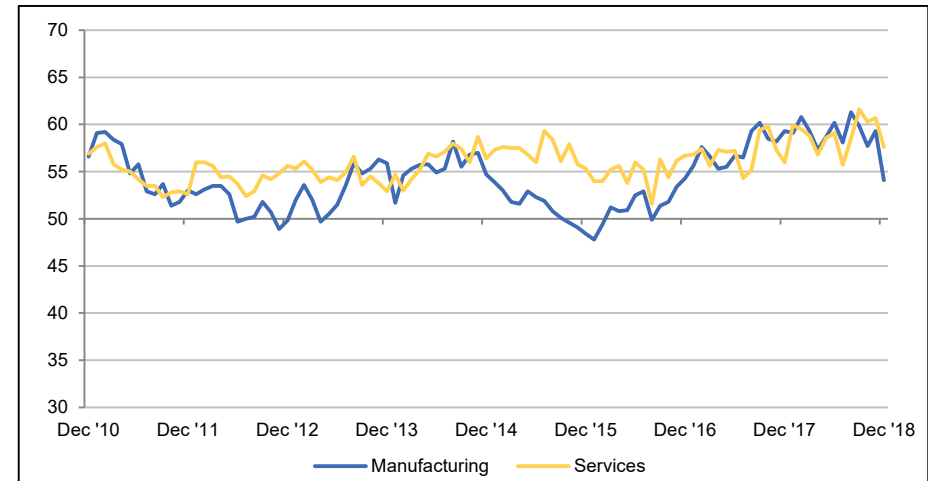


QUARTERLY MARKET SUMMARY

WHAT WE'RE WATCHING

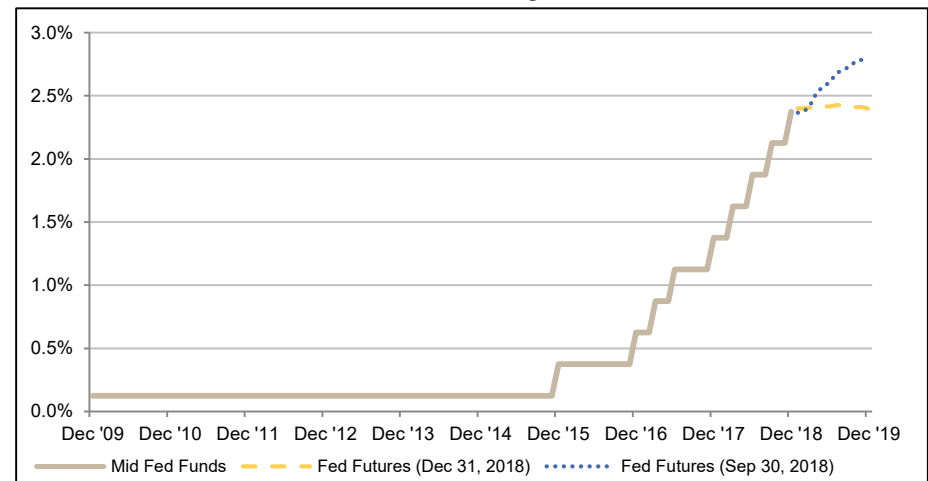
- Market volatility spiked in the fourth quarter of 2018, as uncertainty surrounding various economic conditions across the globe took a toll on the capital markets. The VIX volatility index peaked at 36.12 in December, and the S&P 500 saw a -13.52 percent correction during the quarter, pulling down 2018 returns to -4.39 percent.
- The U.S. and China finished the third quarter of 2018 by imposing additional tariffs and cancelling trade talks. Now the two sides enter 2019 under a 90-day trade truce with negotiations beginning to give investors hope of a deal in the near term. China's economy has shown signs of slowing growth as year over year GDP fell to 6.5 percent in the third quarter, its weakest pace since 2009. Estimates of China's 2019 GDP show a similar trajectory. U.S. GDP ticked down to 3.4 percent in the third quarter missing estimates of 3.5 percent.
- Uncertainty in the Eurozone kept global markets jittery approaching 2019. Brexit remains a focal point as the UK's deadline to leave the European Union looms. Prime Minister Theresa May's proposed exit deal was defeated in Parliament by historic margins with less than 80 days before the UK is scheduled to officially withdraw from the bloc. Elsewhere in Europe, Italy's banking system lost nearly 30 percent of its market value during 2018, and now seeks to navigate difficult political conditions to extend its debt crisis recovery.
- In December, the Federal Open Market Committee (FOMC) raised its benchmark interest rate range a quarter percentage point for the fourth time in 2018. Afterwards, Federal Reserve Chairman Jerome Powell offered guidance suggesting that the Fed would lower its 2019 rate hike estimate to two. With growth moderating, market participants were encouraged when Chairman Powell stated that the Fed would "be patient" with its policy in the coming year.
- Oil prices began the fourth quarter of 2018 at multi-year highs, but fell to near multi-year lows by the end of the year. Despite OPEC's December decision to cut supply, fears about the strength of the global economy have kept prices low. The West Texas Intermediate Index (WTI) finished the year at \$45.41 a barrel, down from its 2018 high of \$76.41 a barrel in October.

ISM Manufacturing & Services PMI



Source: Bloomberg.

Federal Funds Target Rate



Source: Bloomberg.



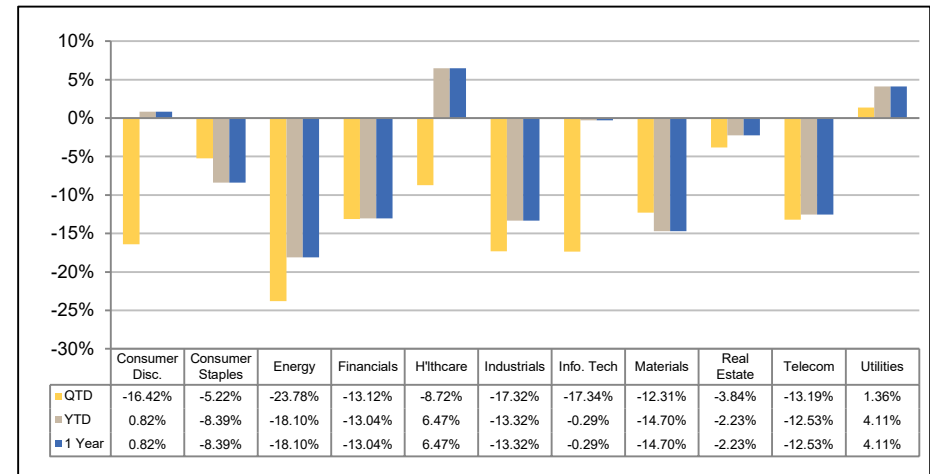
QUARTERLY MARKET SUMMARY

DOMESTIC EQUITY

- The S&P 500 Index (S&P) posted a negative return of -13.52 percent for the quarter, resulting in a 2018 return of -4.39 percent. For the quarter, according to FactSet Earnings Insight, the expected earnings growth is 10.6 percent and expected revenue growth is 5.9 percent. This is lower than the growth we have seen in 2018. Analysts are expecting lower earnings growth for 2019, impacted by lower global growth expectations. Returns were weakened by slowing economic growth and future uncertainty.
- Within the S&P 500, Energy was the worst performing sector, returning -23.78 percent due to oversupply and slowing global growth. IT and Industrials followed at -17.34 percent and -17.32 percent respectively, with trade tensions taking their toll, and end-of-year Purchasing Managers' Index readings slipping from recent highs. Utilities saw a boost with a return of 1.36 percent, followed by Real Estate and Consumer Staples returning -3.84 percent and -5.22 percent respectively, as investors moved into more defensive sectors.
- Value stocks, as represented by the Russell 1000 Value Index returned -11.73 percent, and outperformed Growth stocks, as represented by the Russell 1000 Growth Index which returned -15.89 percent. Value's outperformance over Growth stocks was seen across all market capitalizations.
- Small caps were the worst performers for the quarter, returning -20.21 percent, as represented by the Russell 2000 Index. Small caps were followed by mid-caps (Russell Mid Cap Index), which returned -15.38 percent. Large caps (S&P 500 Index) were the best performers returning -13.52 percent for the quarter.

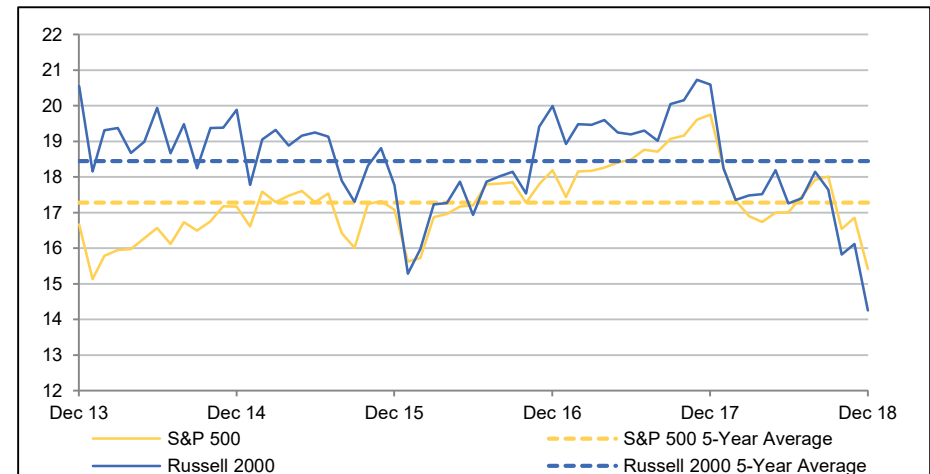
S&P 500 Index Performance by Sector

Periods Ended December 31, 2018



Source: Bloomberg.

P/E Ratios of Major Stock Indices*



Source: Bloomberg.

*P/E ratios are calculated based on one-year forward estimates and adjusted to include only positive earnings results for consistency.



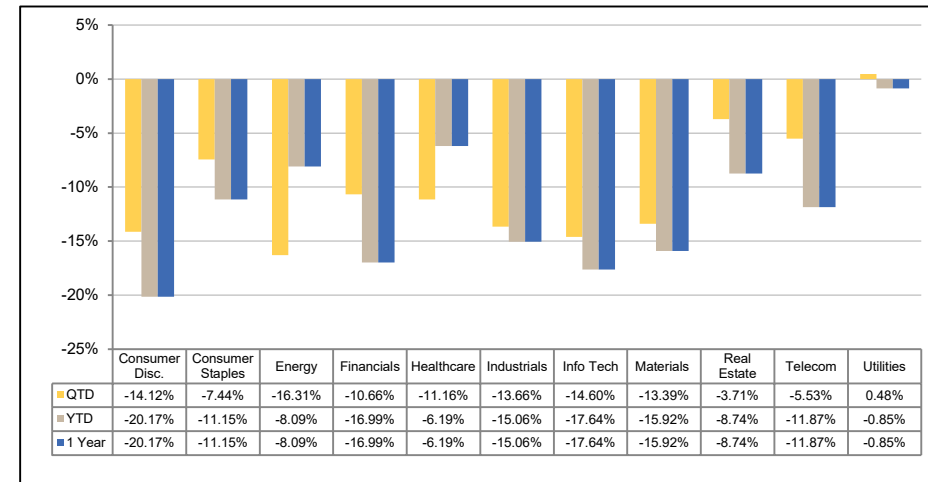
QUARTERLY MARKET SUMMARY

NON-U.S. EQUITY

- Markets outside of the U.S., as measured by the MSCI ACWI ex USA Index, fell -11.46 percent in the fourth quarter. The Utilities sector held up best returning 0.48 percent, followed by Telecom and Consumer Staples with returns of -5.53 percent and -7.44 percent respectively. Energy was the worst performing sector in the quarter, with a return of -16.31 percent, followed by Information Technology at -14.60 percent.
- Emerging markets (EM) did better than Developed markets in the quarter, but lagged for the year. EM Latin America, was the only region to post positive returns for the quarter at 0.36 percent, as record-low interest rates and tax incentives boosted growth in the region's largest economy, Brazil. Japan was the worst performer in the fourth quarter, with a return of -14.23 percent, as the country's economy continues its sluggish recovery.
- Trade tensions between the United States and China have improved, due to the truce called in early December, but uncertainty about a deal still looms over capital markets across the globe. Fears heightened in the fourth quarter as evidence surfaced of an economic slowdown in China. In the Eurozone, Brexit continues to threaten stability, as the UK continues to struggle finding a deal that will pass Parliament just 10 weeks before the UK's scheduled departure date from the EU.

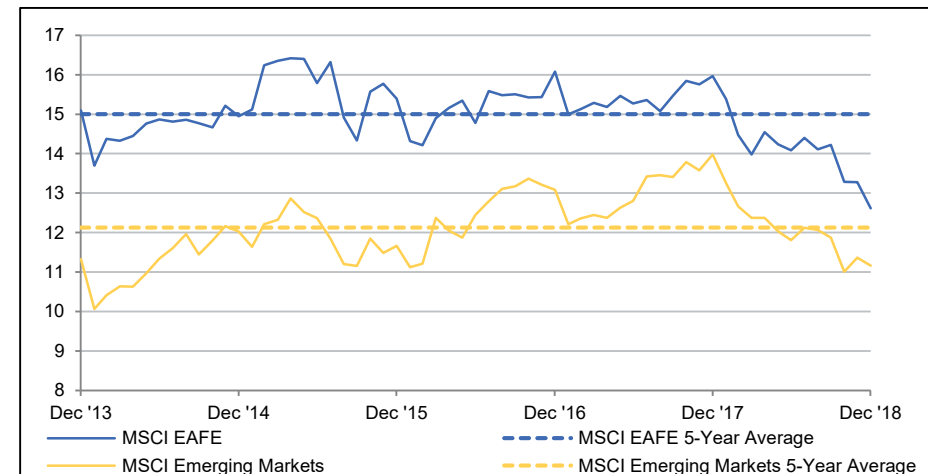
MSCI ACWI ex-U.S. Sectors

Periods Ended December 31, 2018



Source: Bloomberg.

P/E Ratios of MSCI Equity Indices*



Source: Bloomberg.

*P/E ratios are calculated based on one-year forward estimates and adjusted to include only positive earnings results for consistency.

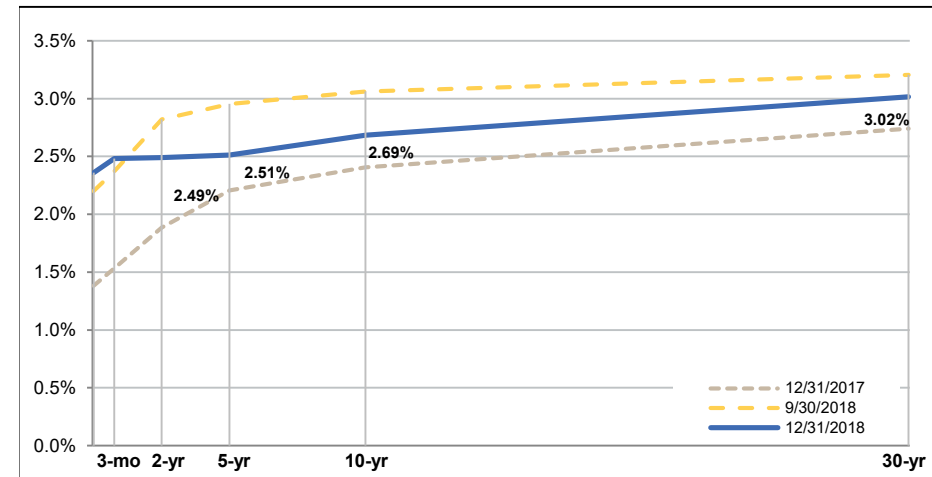


QUARTERLY MARKET SUMMARY

FIXED INCOME

- The U.S. bond market, represented by the Bloomberg Barclays U.S. Aggregate (Aggregate) Index, rose 1.64 percent in the fourth quarter.
- Rates were volatile during the quarter having initially risen before a sharp decline toward the end of the year. Intermediate rates represented by the 5- and 10-year Treasury decreased 43 and 36 basis points (bps) respectively in yield.
- Long-term Treasury yields also fell during the quarter, with the 30-year bond ending December at a yield of 3.02 percent. The selling of risk assets during the quarter led to the decline in rates of the treasury curve.
- Investment-grade (IG) corporate spreads rose during the quarter. The Bloomberg Barclays U.S. Corporate Index fell 18 bps (after rising 97 bps the prior quarter). High yield bonds, as represented by the Bloomberg Barclays U.S. Corporate High Yield (HY) Index had a sharp selloff, falling 4.53 percent. Spreads widened out to 2016 levels but remain relatively tight.
- The fixed-rate mortgage market, as measured by the Bloomberg Barclays U.S. Mortgage-Backed Securities (MBS) Index, gained 2.08 percent, while the Bloomberg Barclays U.S. CMBS Index (measuring commercial MBS) gained 1.67 percent.
- Global bond markets were generally positive during the quarter partially due to the slight weakening of the U.S. dollar and equity market declines. Emerging market local market bonds, as represented by the JP Morgan GBI-EM indices, rose over 3 percent.

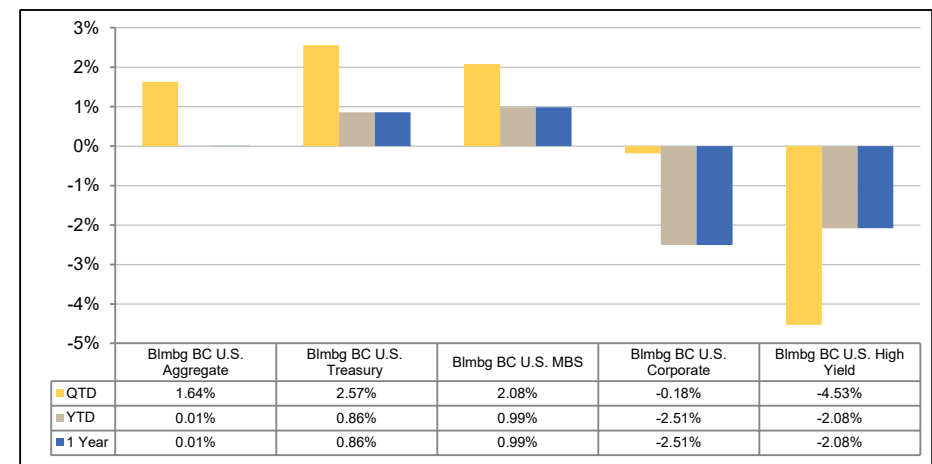
U.S. Treasury Yield Curve



Source: Bloomberg.

Returns for Fixed-Income Segments

Periods Ended December 31, 2018



Source: Bloomberg. "Bimbg BC" is Bloomberg Barclays.



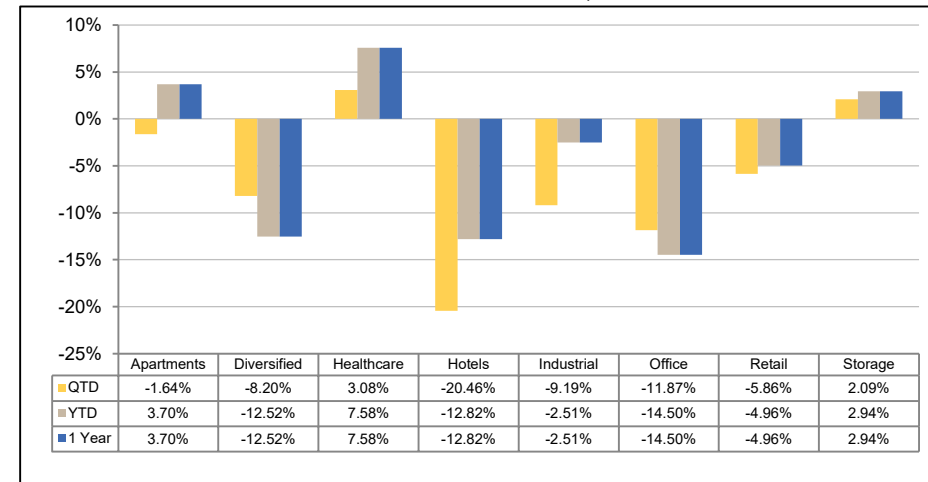
QUARTERLY MARKET SUMMARY

ALTERNATIVES

- REITs, as measured by the FTSE NAREIT Equity REITs Index, returned -6.73 percent in the fourth quarter. The sector losses were led by Lodging/Resorts, Data Centers, and Offices with returns of -20.46 percent, -13.34 percent, and -11.87 percent, respectively. Healthcare and Self-Storage were the only sectors to post gains in the fourth quarter with returns of 3.08 percent and 2.09 percent, respectively.
- Private real estate, as measured by the NCREIF Property Index of 7,786 commercial properties, totaling \$592 billion of market value, generated a total return of 1.67 percent in the third quarter, down slightly from 1.81 percent last quarter. U.S. Industrial properties, which are primarily warehouses, continue to be the top performing sector with a return of 3.36 percent for the quarter. Hotels followed closely with a return of 3.22 percent. Offices was third highest at 1.69 percent followed closely by Apartments at 1.55 percent. Retail was again in last place at 0.56 percent.
- Hedge funds experienced losses. In the fourth quarter and in fiscal year 2018 respectively the HFRI Fund Weighted Composite Index returned -5.34 percent and -4.07 percent; the HFRI Equity Hedge (Total) Index returned -8.26 percent and -6.90 percent; the HFRI Macro (Total) Index returned -1.43 percent and -3.21; and the HFRI Fund of Funds Index returned -6.66 percent and -3.48 percent.
- Private equity fundraising was strong in 2018, while capital continues to concentrate at the top end of the market. In 2018, 1,175 private equity funds raised a total of \$426 billion, down from 1,639 funds that raised \$552 billion in 2017. Funds of one billion dollars or more in size secured \$264 billion, 62 percent of total fundraising, and the 10 largest funds alone accounted for nearly a quarter of capital raised. The average fund size reached \$363 million, surpassing 2017 (\$339 million), and is the highest level since 2007 (\$422 million). Private equity dry powder continues to climb, setting a new record at \$1.20 trillion as of December 2018.
- Commodity futures, represented by the Bloomberg Commodity Index of 19 raw materials futures, fell 9.95 percent in the fourth quarter. Overall, the index declined 12.99 percent in 2018. The factors that impacted the lowering of the spot prices of commodities included a stronger U.S. dollar, rising U.S. interest rates, and concerns over international trade and the global economy. The U.S. Dollar Index (DXY), a measure of the value of the United States dollar relative to a basket of foreign currencies, increased 1.09 percent in the fourth quarter and increased 4.40 percent YTD.

FTSE Nareit Sectors

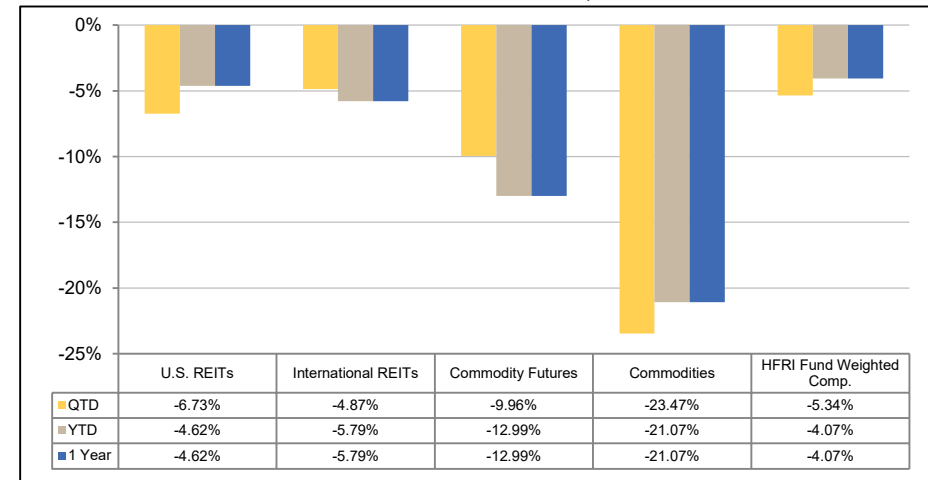
Periods Ended December 31, 2018



Source: Bloomberg.

Returns for Alternative Assets

Periods Ended December 31, 2018



Sources: Bloomberg and Hedge Fund Research, Inc.



Total Fund



Asset Allocation & Performance

	Allocation		Performance(%)			
	Market Value (\$)	%	Current Quarter	2018	Trailing 12-months	Fiscal Year To Date
Total Fund	24,632,280	100.00	-7.67	-4.10	-4.10	-7.67
Blended Benchmark			-7.25	-2.60	-2.60	-7.25
Domestic Equity	10,370,894	42.10	-14.05	N/A	N/A	-14.05
Fidelity 500 Index Fund	4,278,564	17.37	-13.53	N/A	N/A	-13.53
Vanguard 500 Index Fund	4,278,173	17.37	-13.53	N/A	N/A	-13.53
<i>S&P 500</i>			-13.52	-4.38	-4.38	-13.52
Vanguard Mid-Cap Value Index Fund	580,682	2.36	-15.06	N/A	N/A	-15.06
<i>Russell Midcap Value Index</i>			-14.95	-12.29	-12.29	-14.95
Vanguard Mid-Cap Growth Index Fund	632,182	2.57	-15.82	N/A	N/A	-15.82
<i>Russell Midcap Growth Index</i>			-15.99	-4.75	-4.75	-15.99
Vanguard Small Cap Index Fund	601,293	2.44	-18.33	N/A	N/A	-18.33
<i>Russell 2000 Index</i>			-20.20	-11.01	-11.01	-20.20
International Equity	2,606,478	10.58	-13.20	N/A	N/A	-13.20
Vanguard Developed Markets Index Fund	1,107,019	4.49	-13.06	N/A	N/A	-13.06
<i>MSCI EAFE (net)</i>			-12.54	-13.79	-13.79	-12.54
iShares MSCI EAFE Small-Cap ETF	1,036,400	4.21	-15.70	N/A	N/A	-15.70
<i>MSCI EAFE Small Cap (net)</i>			-16.05	-17.89	-17.89	-16.05
Fidelity Emerging Markets Index Fund	463,059	1.88	-7.34	N/A	N/A	-7.34
<i>MSCI EM (net)</i>			-7.47	-14.58	-14.58	-7.47
Real Estate	581,027	2.36	-6.44	N/A	N/A	-6.44
Vanguard Real Estate Index Fund	581,027	2.36	-6.44	N/A	N/A	-6.44
<i>FTSE NAREIT Equity REIT Index</i>			-6.73	-4.62	-4.62	-6.73
Fixed Income	5,601,741	22.74	0.99	N/A	N/A	0.99
U.S. Government Securities	3,867,602	15.70	1.77	N/A	N/A	1.77
<i>Blmbg. Barc. U.S. Treasury: 1-3 Year</i>			1.31	1.56	1.56	1.31
Vanguard Short-Term Corporate Bond Index Fund	1,259,348	5.11	0.74	N/A	N/A	0.74
<i>Blmbg. Barc. U.S. Corporate 1-5 Year Index</i>			0.76	0.95	0.95	0.76
Vanguard High-Yield Corporate Fund	474,792	1.93	-4.36	N/A	N/A	-4.36
<i>Blmbg. Barc. U.S. Corp: High Yield</i>			-4.53	-2.08	-2.08	-4.53
Cash Equivalent	5,472,140	22.22	0.63	N/A	N/A	0.63
U.S. Treasury Bill	5,430,166	22.04	0.63	N/A	N/A	0.63
Wells Fargo 100% Treasury Money Market	41,973	0.17	0.55	N/A	N/A	0.55

Returns are net of fees.

Segment data excludes cash position(s) and is gross of fees.

Returns are expressed as percentages.

2.1



Financial Reconciliation

Current Quarter				
	Market Value As of 10/01/2018	Net Flows	Return On Investment	Market Value As of 12/31/2018
Total Fund	26,677,176	(3,071)	(2,041,826)	24,632,280

YTD				
	Market Value As of 01/01/2018	Net Flows	Return On Investment	Market Value As of 12/31/2018
Total Fund	16,481,808	9,281,948	(1,131,476)	24,632,280



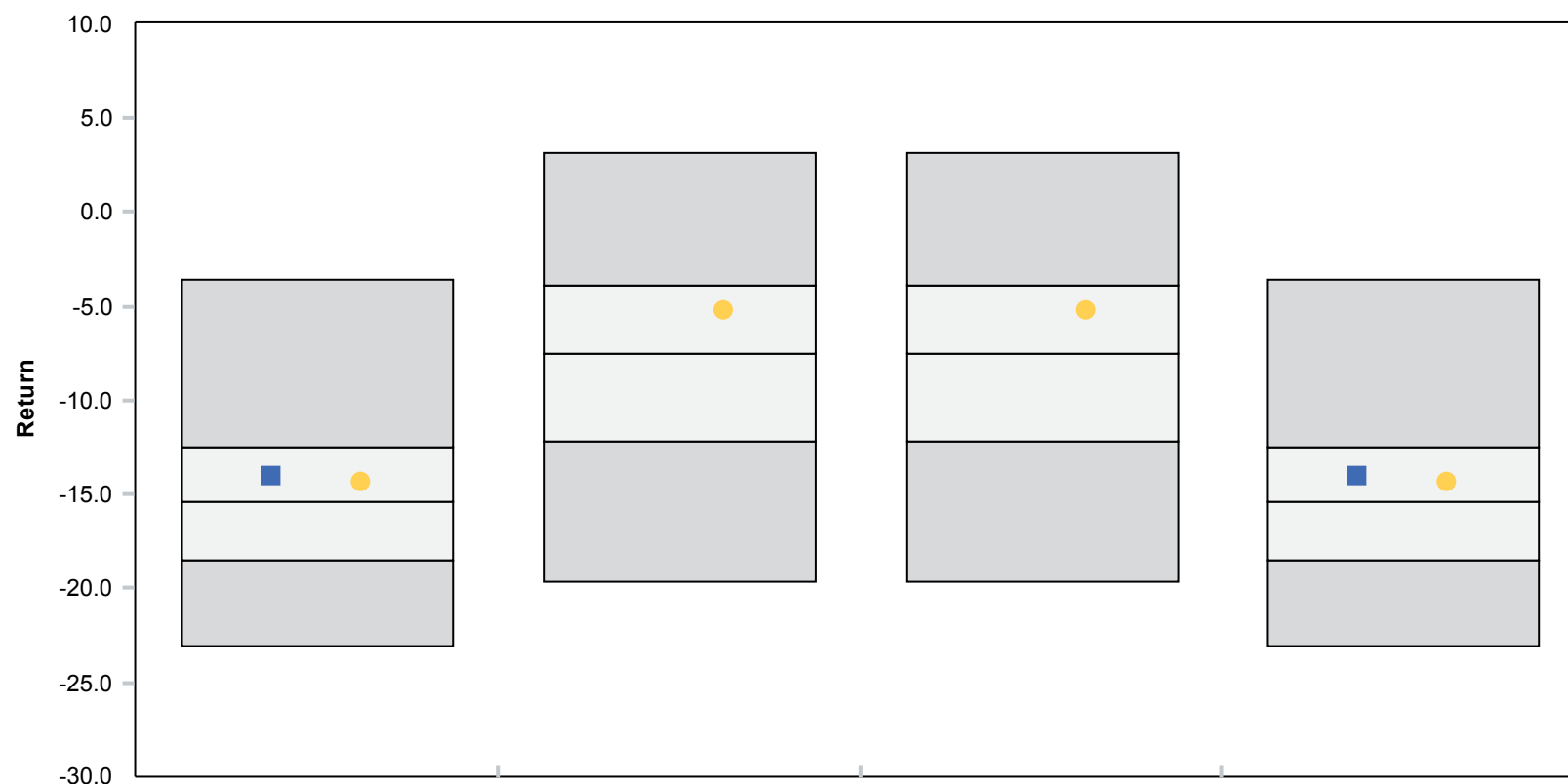
Benchmark Allocation	Weight (%)
Oct-2017	
Russell 3000 Index	55.0
Blmbg. Barc. U.S. Aggregate	45.0



Investment Manager Review



IM U.S. Equity (MF)



	Current Quarter	2018	Trailing 12-months	Fiscal Year To Date
■ Domestic Equity	-14.05 (39)	N/A	N/A	-14.05 (39)
● Russell 3000 Index	-14.30 (41)	-5.24 (35)	-5.24 (35)	-14.30 (41)
5th Percentile	-3.54	3.14	3.14	-3.54
1st Quartile	-12.52	-3.84	-3.84	-12.52
Median	-15.37	-7.49	-7.49	-15.37
3rd Quartile	-18.46	-12.23	-12.23	-18.46
95th Percentile	-23.10	-19.60	-19.60	-23.10
Population	9,427	9,126	9,126	9,427

Parentheses contain percentile rankings.
 Calculation based on monthly periodicity.
 Returns are net of fees and are expressed as percentages.



Domestic Equity vs. Russell 3000 Index

<u>Portfolio Characteristics</u>		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	164,521	167,103
Median Mkt. Cap (\$M)	3,053	1,418
Price/Earnings ratio	17.19	16.99
Price/Book ratio	3.06	3.04
5 Yr. EPS Growth Rate (%)	15.65	15.88
Current Yield (%)	2.16	2.14
Number of Stocks	1,980	3,015

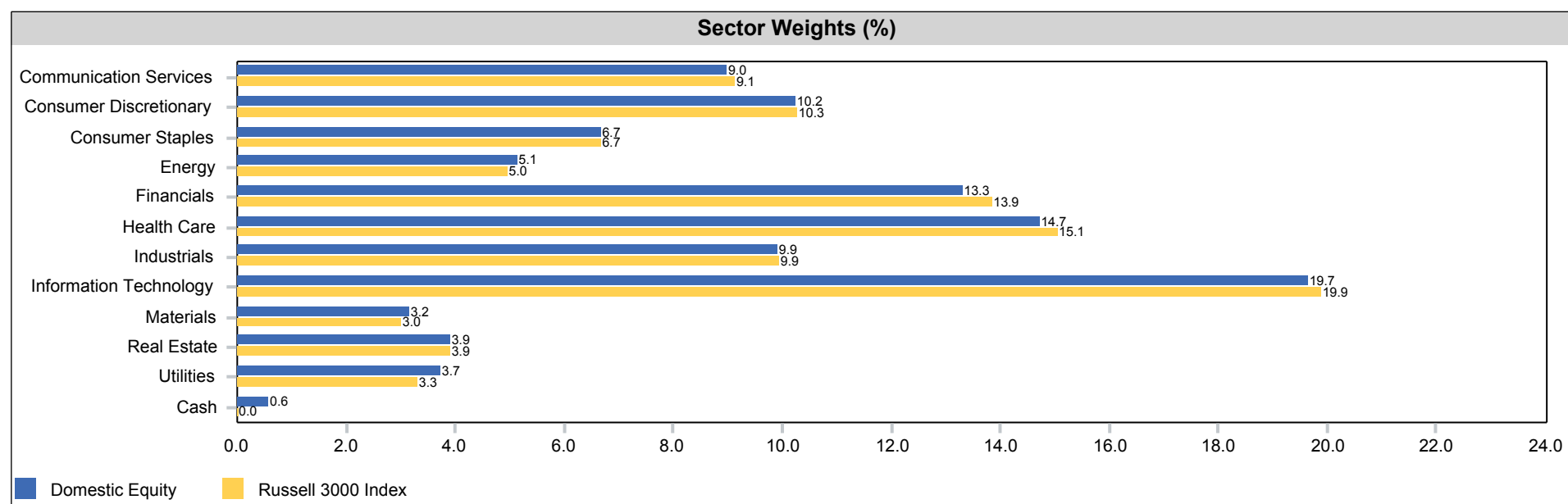
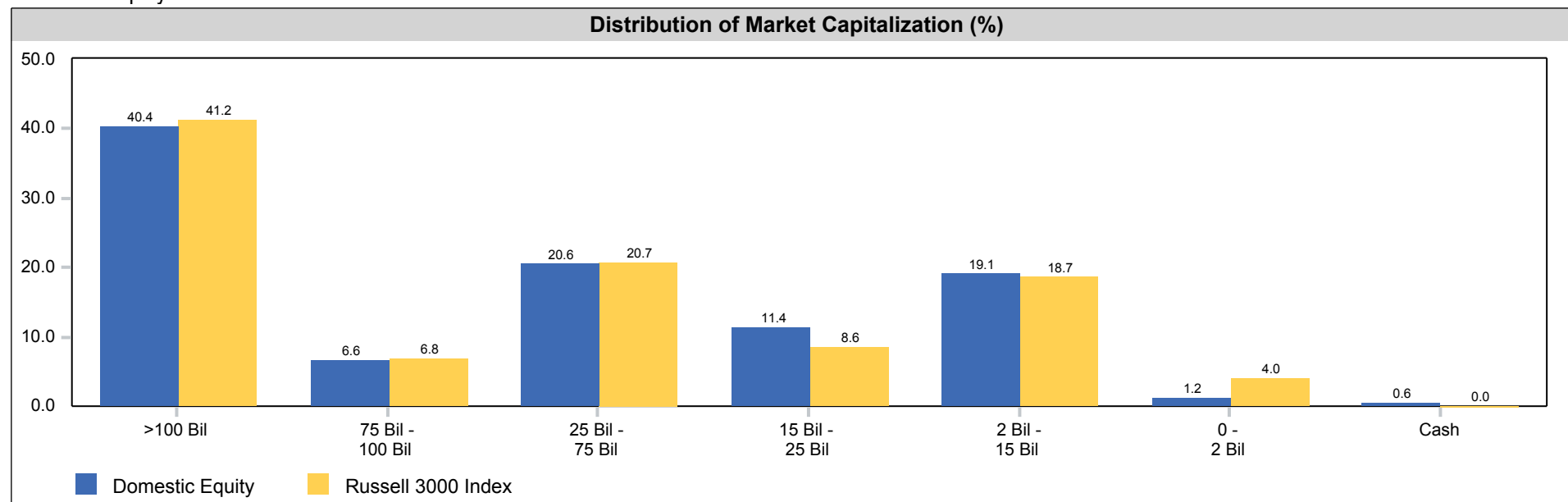
<u>Top Ten Equity Holdings</u>				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Microsoft Corp	3.06	3.06	0.00	-10.80
Apple Inc	2.78	2.98	-0.20	-29.88
Amazon.com Inc	2.41	2.43	-0.02	-25.01
Berkshire Hathaway Inc	1.52	1.57	-0.05	-4.64
Johnson & Johnson	1.35	1.38	-0.03	-6.01
JPMorgan Chase & Co	1.27	1.29	-0.02	-12.89
Alphabet Inc	1.24	1.25	-0.01	-13.23
Facebook Inc	1.23	1.24	-0.01	-20.29
Alphabet Inc	1.22	1.24	-0.02	-13.43
Exxon Mobil Corp	1.13	1.15	-0.02	-18.98
% of Portfolio	17.21	17.59	-0.38	

<u>Ten Best Performers</u>				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
TESARO Inc	0.01	0.01	0.00	90.34
Inovalon Holdings Inc	0.00	0.00	0.00	41.10
K12 Inc	0.00	0.00	0.00	40.06
Investment Technology Group Inc.	0.00	0.00	0.00	39.94
Belmond Ltd	0.00	0.01	-0.01	37.15
Esterline Technologies Corp.	0.01	0.01	0.00	33.53
Red Hat Inc	0.22	0.12	0.10	28.88
Virtu Financial Inc	0.00	0.00	0.00	27.15
Houghton Mifflin Harcourt Co	0.00	0.00	0.00	26.57
Globalstar Inc	0.00	0.00	0.00	25.93
% of Portfolio	0.24	0.15	0.09	

<u>Ten Worst Performers</u>				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Synergy Pharmaceuticals Inc	0.00	0.00	0.00	-93.30
Longfin Corp	0.00	0.00	0.00	-85.00
Weatherford International plc	0.00	0.00	0.00	-79.37
Alta Mesa Resources Inc	0.00	0.00	0.00	-76.08
Akorn Inc	0.00	0.00	0.00	-73.88
Denbury Resources Inc.	0.00	0.00	0.00	-72.42
Superior Industries International Inc.	0.00	0.00	0.00	-71.63
Bloom Energy Corp	0.00	0.00	0.00	-70.72
Invacare Corp	0.00	0.00	0.00	-70.42
EP Energy Corp	0.00	0.00	0.00	-70.09
% of Portfolio	0.00	0.00	0.00	



Domestic Equity vs. Russell 3000 Index



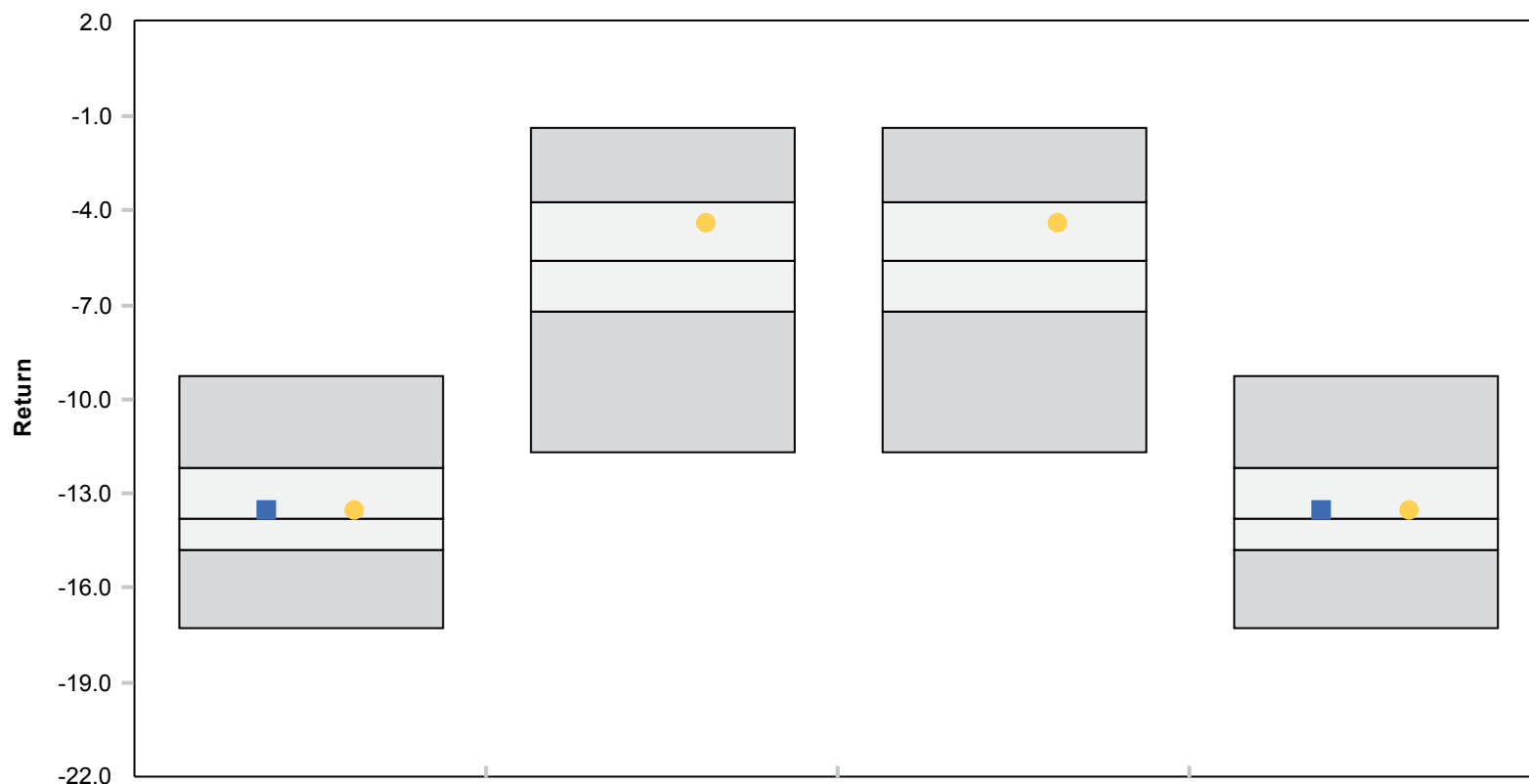
Domestic Equity vs. Russell 3000 Index

Buy-and-Hold Portfolio	-13.92
Portfolio Trading	-0.13
Actual Return	-14.05
Benchmark Return	-14.30
Actual Active Return	0.25
Stock Selection	0.24
Sector Selection	0.08
Interaction	0.00
Total Selection	0.31
Portfolio Trading	-0.13
Benchmark Trading	-0.07
Active Trading Impact	-0.06
Buy & Hold Active Return	0.25

	Allocation-10/01/2018		Performance-1 Quarter Ending December 31, 2018		Attribution			
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	Total
Communication Services	8.86	8.95	-13.42	-13.32	-0.01	0.00	0.00	-0.01
Consumer Discretionary	10.59	10.50	-16.73	-16.39	-0.04	0.00	0.00	-0.04
Consumer Staples	6.05	6.03	-5.33	-5.48	0.01	0.00	0.00	0.01
Energy	5.93	5.73	-25.36	-25.40	0.00	-0.02	0.00	-0.02
Financials	13.29	13.74	-13.56	-13.52	-0.01	0.00	0.00	-0.01
Health Care	14.35	14.65	-10.23	-10.79	0.08	-0.01	0.00	0.07
Industrials	10.50	10.43	-17.52	-18.00	0.05	0.00	0.00	0.05
Information Technology	20.43	20.74	-17.13	-17.32	0.04	0.01	0.00	0.05
Materials	2.93	2.87	-13.48	-14.82	0.04	0.00	0.00	0.04
Real Estate	3.53	3.58	-5.15	-6.30	0.04	0.00	0.00	0.04
Utilities	3.11	2.79	1.67	0.82	0.02	0.05	0.00	0.08
Cash	0.43	0.00	0.00	0.00	0.00	0.06	0.00	0.06
Total	100.00	100.00	-13.92	-14.23	0.24	0.08	0.00	0.31



IM U.S. Large Cap Core Equity (MF)



■ Fidelity 500 Index Fund
● S&P 500

5th Percentile	-9.27	-1.35	-1.35	-9.27
1st Quartile	-12.17	-3.75	-3.75	-12.17
Median	-13.78	-5.61	-5.61	-13.78
3rd Quartile	-14.79	-7.18	-7.18	-14.79
95th Percentile	-17.29	-11.67	-11.67	-17.29

Population	770	736	736	770
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Parentheses contain percentile rankings.
Calculation based on monthly periodicity.
Returns are net of fees and are expressed as percentages.



Fidelity 500 Index Fund vs. S&P 500

<u>Portfolio Characteristics</u>		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	197,328	198,165
Median Mkt. Cap (\$M)	18,449	18,449
Price/Earnings ratio	17.38	17.38
Price/Book ratio	3.16	3.16
5 Yr. EPS Growth Rate (%)	16.00	16.00
Current Yield (%)	2.23	2.23
Number of Stocks	508	505

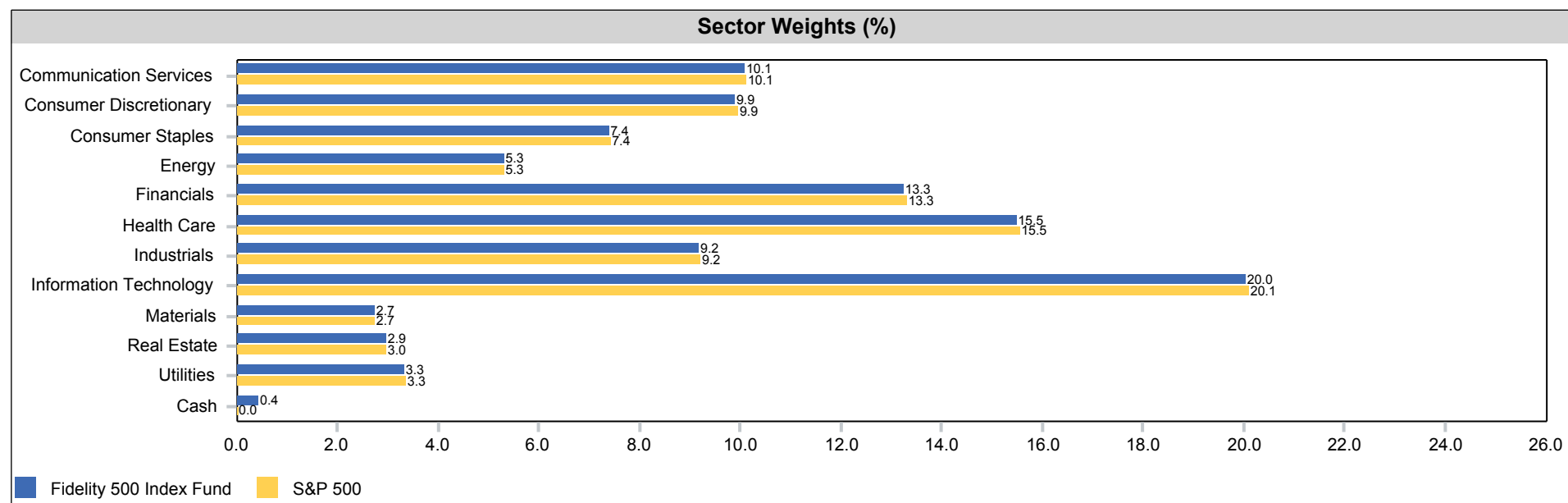
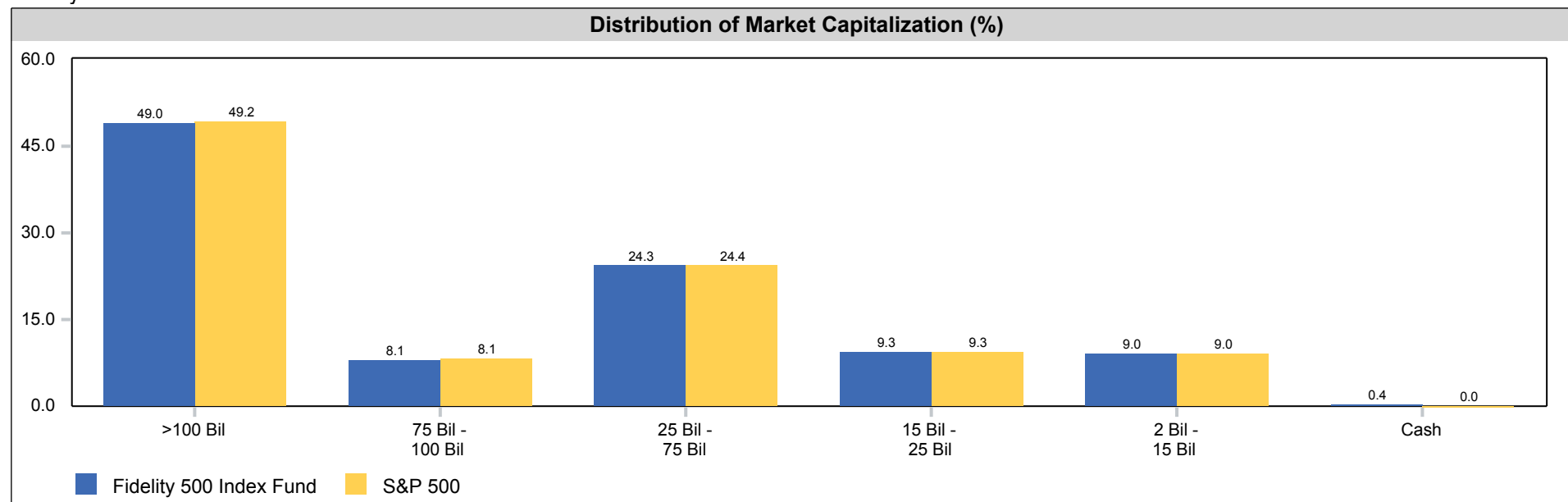
<u>Top Ten Equity Holdings</u>				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Microsoft Corp	3.72	3.73	-0.01	-10.80
Apple Inc	3.37	3.38	-0.01	-29.88
Amazon.com Inc	2.92	2.93	-0.01	-25.01
Berkshire Hathaway Inc	1.88	1.89	-0.01	-4.64
Johnson & Johnson	1.64	1.65	-0.01	-6.01
JPMorgan Chase & Co	1.54	1.54	0.00	-12.89
Alphabet Inc	1.51	1.52	-0.01	-13.23
Facebook Inc	1.49	1.50	-0.01	-20.29
Alphabet Inc	1.48	1.49	-0.01	-13.43
Exxon Mobil Corp	1.37	1.37	0.00	-18.98
% of Portfolio	20.92	21.00	-0.08	

<u>Ten Best Performers</u>				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Red Hat Inc	0.15	0.15	0.00	28.88
SCANA Corp	0.03	0.03	0.00	23.18
Newmont Mining Corp	0.09	0.09	0.00	15.21
Starbucks Corp	0.38	0.38	0.00	13.91
Realty Income Corp.	0.09	0.09	0.00	11.99
CME Group Inc	0.32	0.32	0.00	11.99
Procter & Gamble Co (The)	1.08	1.09	-0.01	11.43
Church & Dwight Co. Inc.	0.08	0.08	0.00	11.13
Dollar Tree Inc	0.10	0.10	0.00	10.75
Lamb Weston Holdings Inc	0.05	0.05	0.00	10.72
% of Portfolio	2.37	2.38	-0.01	

<u>Ten Worst Performers</u>				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
NVIDIA Corp	0.39	0.39	0.00	-52.45
Newfield Exploration Co	0.01	0.01	0.00	-49.15
PG&E Corp	0.06	0.06	0.00	-48.38
Coty Inc	0.01	0.01	0.00	-47.00
Align Technology Inc	0.07	0.07	0.00	-46.47
Nektar Therapeutics	0.03	0.03	0.00	-46.08
Perrigo Co Plc	0.02	0.02	0.00	-45.11
Capri Holdings Ltd	0.03	0.03	0.00	-44.69
Apache Corp	0.05	0.05	0.00	-44.61
Fluor Corp	0.02	0.02	0.00	-44.30
% of Portfolio	0.69	0.69	0.00	



Fidelity 500 Index Fund vs. S&P 500



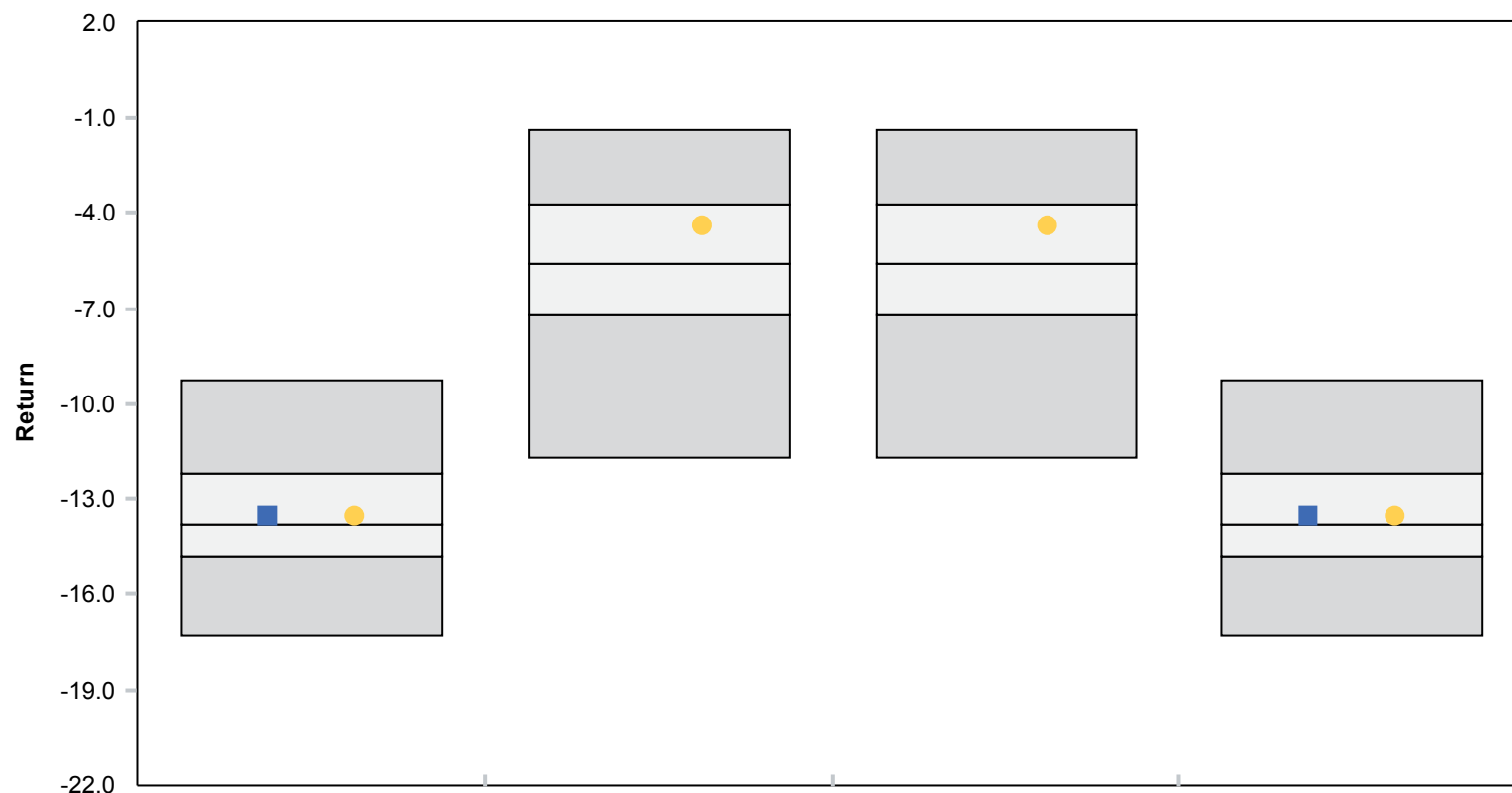
Fidelity 500 Index Fund vs. S&P 500

Buy-and-Hold Portfolio	-13.44
Portfolio Trading	-0.09
Actual Return	-13.53
Benchmark Return	-13.52
Actual Active Return	-0.01
Stock Selection	0.00
Sector Selection	0.03
Interaction	0.00
Total Selection	0.03
Portfolio Trading	-0.09
Benchmark Trading	-0.06
Active Trading Impact	-0.03
Buy & Hold Active Return	-0.01

	Allocation-10/01/2018		Performance-1 Quarter Ending December 31, 2018		Attribution			
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	Total
Communication Services	10.01	10.03	-13.18	-13.18	0.00	0.00	0.00	0.00
Consumer Discretionary	10.28	10.30	-16.40	-16.40	0.00	0.00	0.00	0.00
Consumer Staples	6.69	6.71	-5.17	-5.17	0.00	0.00	0.00	0.00
Energy	5.99	6.00	-23.29	-23.29	0.00	0.00	0.00	0.00
Financials	13.28	13.31	-13.13	-13.13	0.00	0.00	0.00	0.00
Health Care	15.02	15.05	-8.64	-8.64	0.00	0.00	0.00	0.00
Industrials	9.68	9.70	-17.20	-17.20	0.00	0.00	0.00	0.00
Information Technology	20.95	20.99	-17.31	-17.31	0.00	0.00	0.00	0.00
Materials	2.42	2.43	-12.14	-12.14	0.00	0.00	0.00	0.00
Real Estate	2.65	2.65	-3.83	-3.83	0.00	0.00	0.00	0.00
Utilities	2.83	2.83	1.36	1.36	0.00	0.00	0.00	0.00
Cash	0.20	0.00	0.00	0.00	0.00	0.03	0.00	0.03
Total	100.00	100.00	-13.44	-13.46	0.00	0.03	0.00	0.03



IM U.S. Large Cap Core Equity (MF)



■ Vanguard 500 Index Fund

● S&P 500

5th Percentile	-9.27	-1.35	-1.35	-9.27
1st Quartile	-12.17	-3.75	-3.75	-12.17
Median	-13.78	-5.61	-5.61	-13.78
3rd Quartile	-14.79	-7.18	-7.18	-14.79
95th Percentile	-17.29	-11.67	-11.67	-17.29

Population	770	736	736	770
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Parentheses contain percentile rankings.
 Calculation based on monthly periodicity.
 Returns are net of fees and are expressed as percentages.



Vanguard 500 Index Fund vs. S&P 500

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	196,967	198,165
Median Mkt. Cap (\$M)	18,346	18,449
Price/Earnings ratio	17.39	17.38
Price/Book ratio	3.16	3.16
5 Yr. EPS Growth Rate (%)	16.00	16.00
Current Yield (%)	2.23	2.23
Number of Stocks	510	505

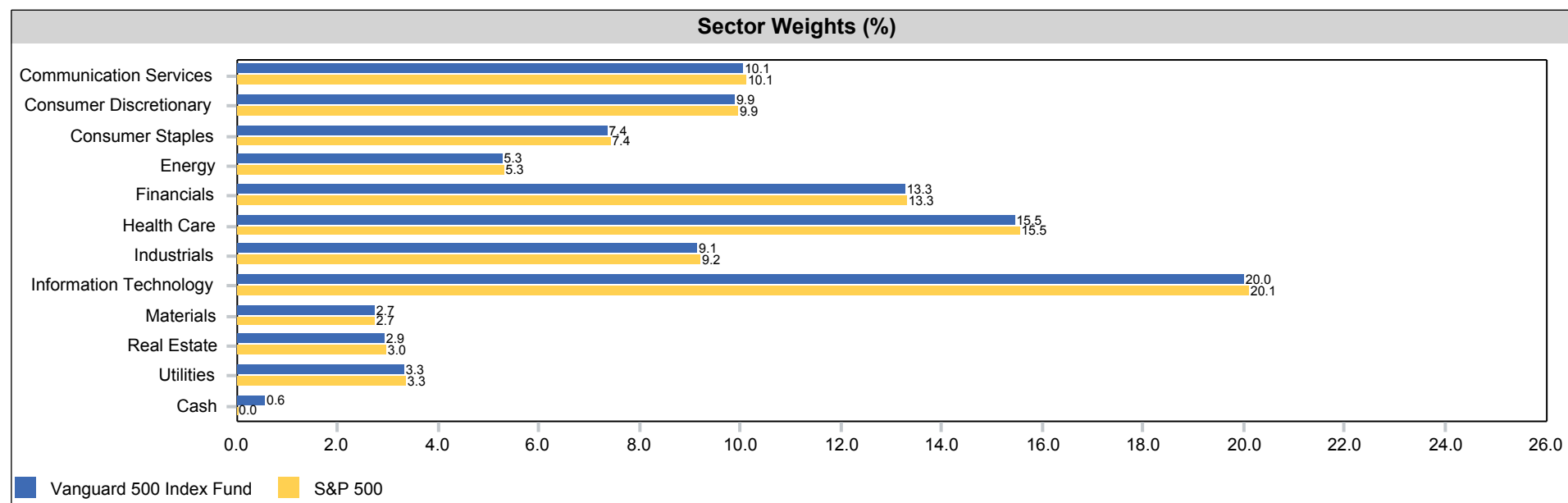
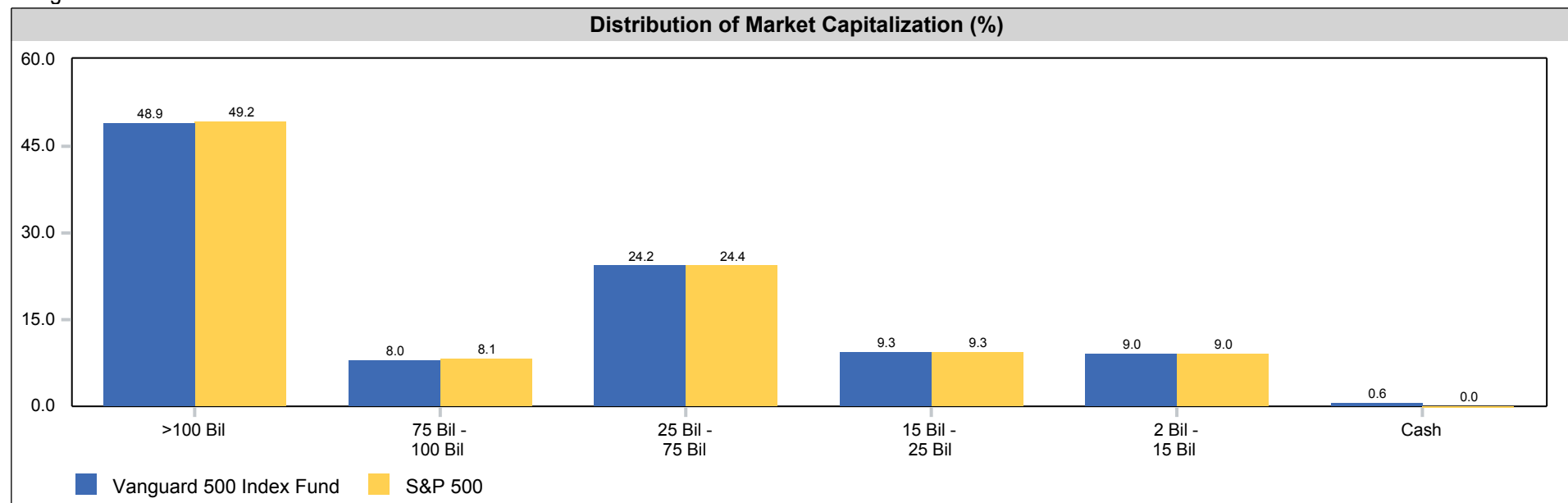
Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Microsoft Corp	3.71	3.73	-0.02	-10.80
Apple Inc	3.36	3.38	-0.02	-29.88
Amazon.com Inc	2.92	2.93	-0.01	-25.01
Berkshire Hathaway Inc	1.81	1.89	-0.08	-4.64
Johnson & Johnson	1.64	1.65	-0.01	-6.01
JPMorgan Chase & Co	1.53	1.54	-0.01	-12.89
Alphabet Inc	1.51	1.52	-0.01	-13.23
Facebook Inc	1.49	1.50	-0.01	-20.29
Alphabet Inc	1.48	1.49	-0.01	-13.43
Exxon Mobil Corp	1.36	1.37	-0.01	-18.98
% of Portfolio	20.81	21.00	-0.19	

Ten Best Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Red Hat Inc	0.15	0.15	0.00	28.88
SCANA Corp	0.03	0.03	0.00	23.18
Newmont Mining Corp	0.09	0.09	0.00	15.21
Starbucks Corp	0.38	0.38	0.00	13.91
Realty Income Corp.	0.09	0.09	0.00	11.99
CME Group Inc	0.32	0.32	0.00	11.99
Procter & Gamble Co (The)	1.08	1.09	-0.01	11.43
Church & Dwight Co. Inc.	0.08	0.08	0.00	11.13
Dollar Tree Inc	0.10	0.10	0.00	10.75
Lamb Weston Holdings Inc	0.05	0.05	0.00	10.72
% of Portfolio	2.37	2.38	-0.01	

Ten Worst Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
NVIDIA Corp	0.38	0.39	-0.01	-52.45
Newfield Exploration Co	0.01	0.01	0.00	-49.15
PG&E Corp	0.06	0.06	0.00	-48.38
Coty Inc	0.01	0.01	0.00	-47.00
Align Technology Inc	0.07	0.07	0.00	-46.47
Nektar Therapeutics	0.03	0.03	0.00	-46.08
Perrigo Co Plc	0.02	0.02	0.00	-45.11
Capri Holdings Ltd	0.03	0.03	0.00	-44.69
Apache Corp	0.05	0.05	0.00	-44.61
Fluor Corp	0.02	0.02	0.00	-44.30
% of Portfolio	0.68	0.69	-0.01	



Vanguard 500 Index Fund vs. S&P 500



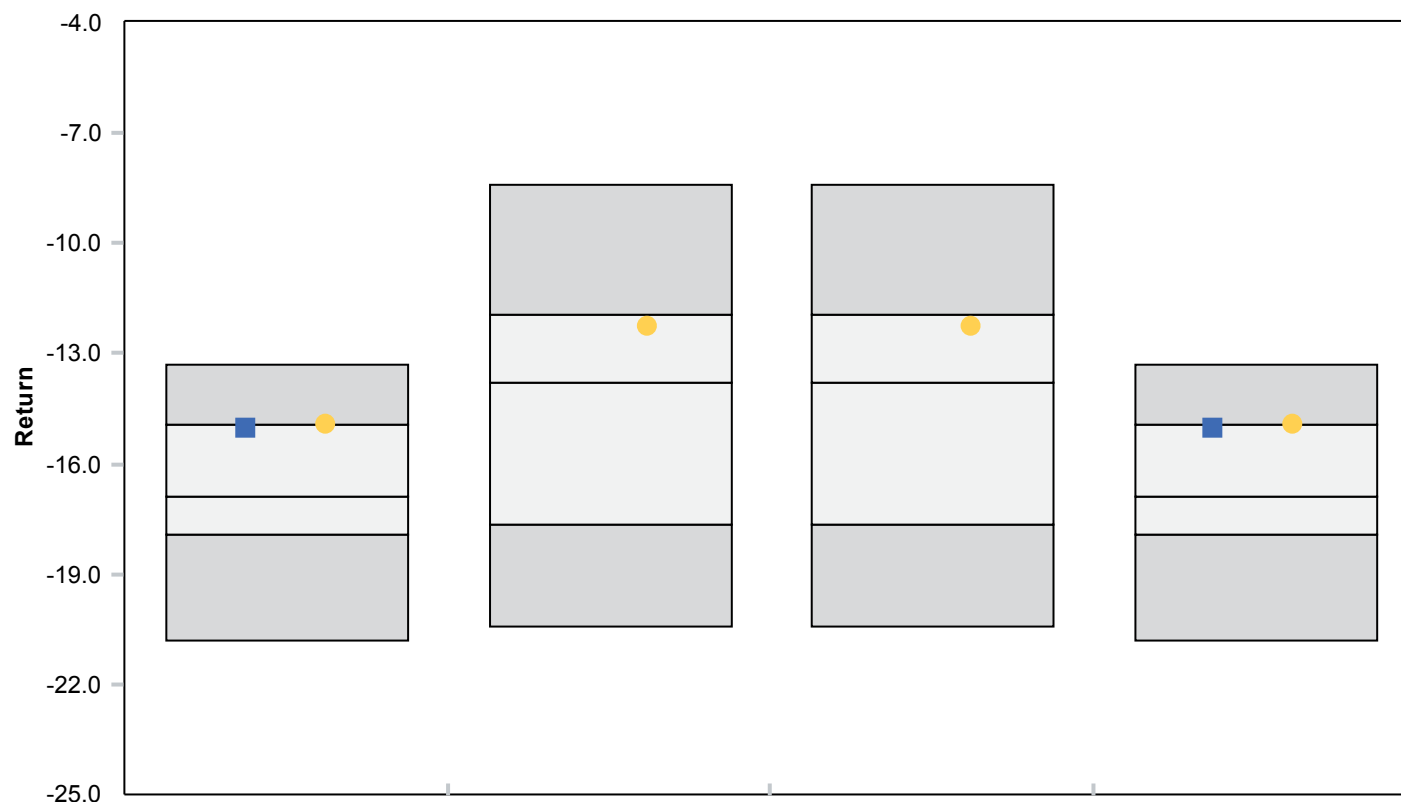
Vanguard 500 Index Fund vs. S&P 500

Buy-and-Hold Portfolio	-13.39
Portfolio Trading	-0.14
Actual Return	-13.53
Benchmark Return	-13.52
Actual Active Return	-0.01
Stock Selection	0.00
Sector Selection	0.07
Interaction	0.00
Total Selection	0.07
Portfolio Trading	-0.14
Benchmark Trading	-0.06
Active Trading Impact	-0.08
Buy & Hold Active Return	-0.01

	Allocation-10/01/2018		Performance-1 Quarter Ending December 31, 2018		Attribution			
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	Total
Communication Services	9.97	10.03	-13.18	-13.18	0.00	0.00	0.00	0.00
Consumer Discretionary	10.24	10.30	-16.40	-16.40	0.00	0.00	0.00	0.00
Consumer Staples	6.67	6.71	-5.17	-5.17	0.00	0.00	0.00	0.00
Energy	5.96	6.00	-23.29	-23.29	0.00	0.00	0.00	0.00
Financials	13.23	13.31	-13.13	-13.13	0.00	0.00	0.00	0.00
Health Care	14.97	15.05	-8.64	-8.64	0.00	0.00	0.00	0.00
Industrials	9.67	9.70	-17.19	-17.20	0.00	0.00	0.00	0.00
Information Technology	20.88	20.99	-17.31	-17.31	0.00	0.00	0.00	0.00
Materials	2.42	2.43	-12.12	-12.14	0.00	0.00	0.00	0.00
Real Estate	2.64	2.65	-3.83	-3.83	0.00	0.00	0.00	0.00
Utilities	2.82	2.83	1.36	1.36	0.00	0.00	0.00	0.00
Cash	0.52	0.00	0.00	0.00	0.00	0.07	0.00	0.07
Total	100.00	100.00	-13.39	-13.46	0.00	0.07	0.00	0.07



IM U.S. Mid Cap Value Equity (MF)



■ Vanguard Mid-Cap Value Index Fund

● Russell Midcap Value Index

5th Percentile

1st Quartile

Median

3rd Quartile

95th Percentile

Population

**Current
Quarter**

-15.06 (31)

-14.95 (28)

-13.29

-14.94

-16.88

-17.93

-20.79

191

2018

N/A

-12.29 (28)

-8.41

-11.94

-13.80

-17.66

-20.42

186

**Trailing
12-months**

N/A

-12.29 (28)

-8.41

-11.94

-13.80

-17.66

-20.42

186

**Fiscal Year
To Date**

-15.06 (31)

-14.95 (28)

-13.29

-14.94

-16.88

-17.93

-20.79

191

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.
Returns are net of fees and are expressed as percentages.



Vanguard Mid-Cap Value Index Fund vs. Russell Midcap Value Index

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	12,122	12,942
Median Mkt. Cap (\$M)	10,259	6,467
Price/Earnings ratio	12.39	13.50
Price/Book ratio	2.01	1.95
5 Yr. EPS Growth Rate (%)	9.06	11.84
Current Yield (%)	2.77	2.71
Number of Stocks	205	592

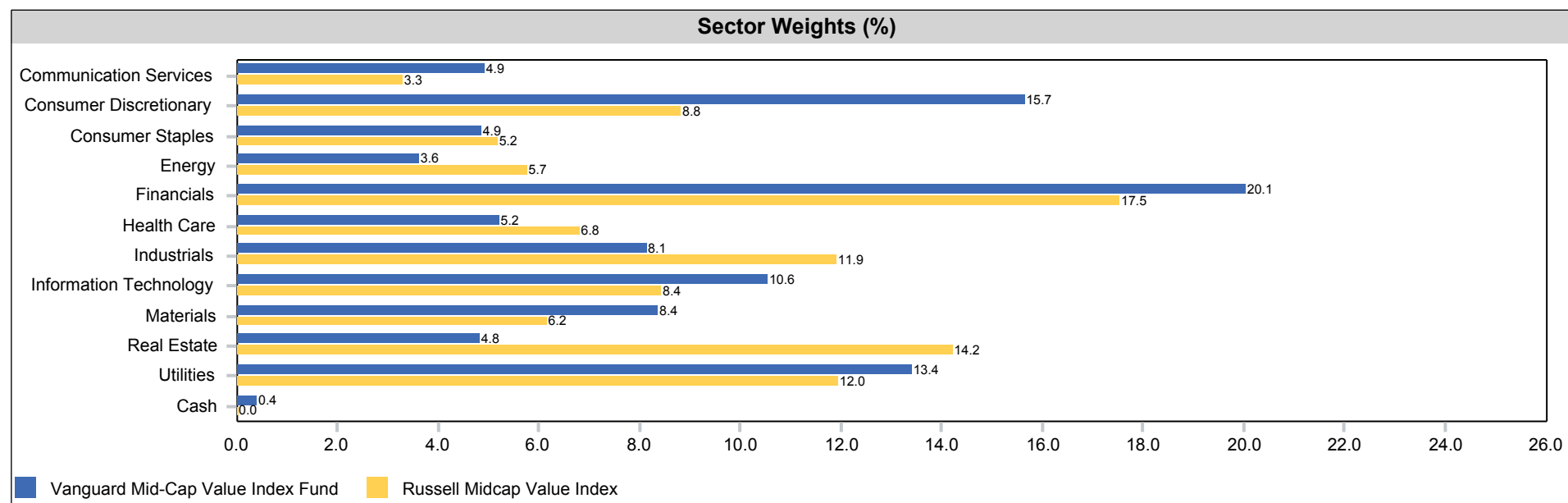
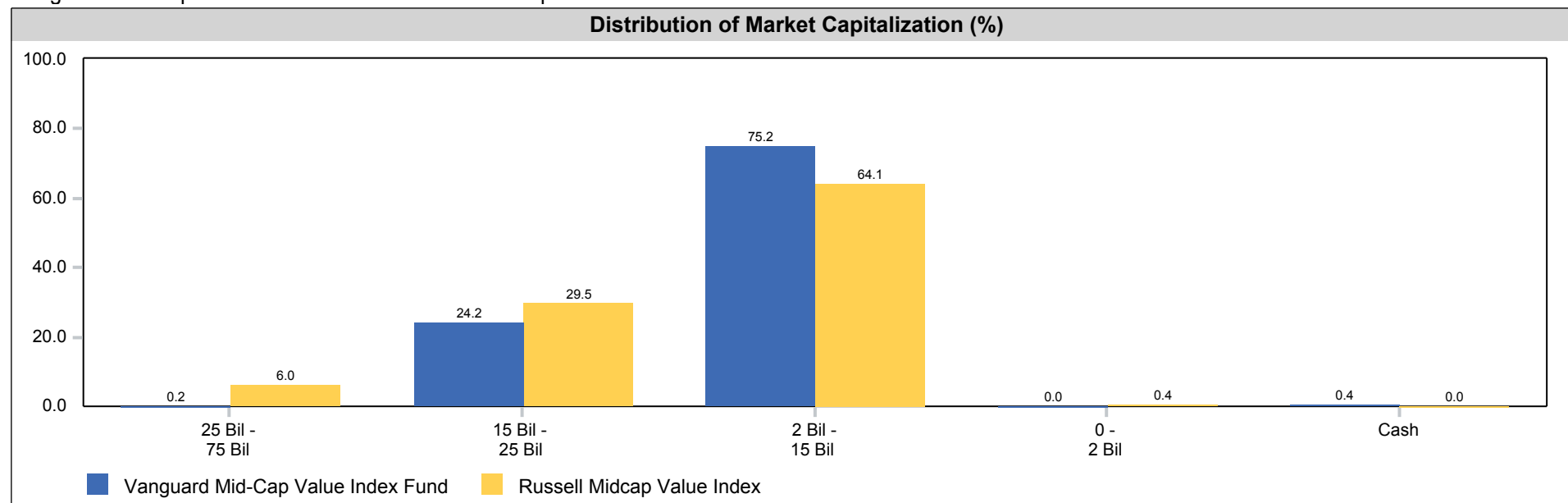
Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
WEC Energy Group Inc	1.23	0.58	0.65	4.56
Eversource Energy	1.16	0.55	0.61	6.65
DTE Energy Co	1.13	0.53	0.60	1.88
Willis Towers Watson plc	1.11	0.53	0.58	8.18
Clorox Co (The)	1.11	0.07	1.04	3.12
FirstEnergy Corp.	1.08	0.49	0.59	1.99
Motorola Solutions Inc	1.06	0.44	0.62	-11.21
Newmont Mining Corp	1.04	0.49	0.55	15.21
M&T Bank Corp	1.02	0.54	0.48	-12.50
American Water Works Company Inc	0.93	0.44	0.49	3.71
% of Portfolio	10.87	4.66	6.21	

Ten Best Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Newmont Mining Corp	1.04	0.49	0.55	15.21
Keurig Dr Pepper Inc	0.15	0.00	0.15	11.40
OGE Energy Corp.	0.44	0.21	0.23	8.95
Hormel Foods Corp	0.32	0.31	0.01	8.81
Omnicom Group Inc.	0.46	0.15	0.31	8.57
Pinnacle West Capital Corp	0.54	0.25	0.29	8.57
Willis Towers Watson plc	1.11	0.53	0.58	8.18
AutoZone Inc	0.60	0.07	0.53	8.08
HCP Inc	0.74	0.35	0.39	7.54
Entergy Corp.	0.88	0.42	0.46	7.22
% of Portfolio	6.28	2.78	3.50	

Ten Worst Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
PG&E Corp	0.35	0.33	0.02	-48.38
Coty Inc	0.17	0.08	0.09	-47.00
Perrigo Co Plc	0.27	0.13	0.14	-45.11
Capri Holdings Ltd	0.31	0.07	0.24	-44.69
Fluor Corp	0.26	0.12	0.14	-44.30
Devon Energy Corp	0.57	0.28	0.29	-43.40
Hess Corp	0.64	0.28	0.36	-43.14
National Oilwell Varco Inc	0.56	0.26	0.30	-40.25
Noble Energy Inc	0.25	0.24	0.01	-39.60
Marathon Oil Corp	0.67	0.32	0.35	-38.21
% of Portfolio	4.05	2.11	1.94	



Vanguard Mid-Cap Value Index Fund vs. Russell Midcap Value Index



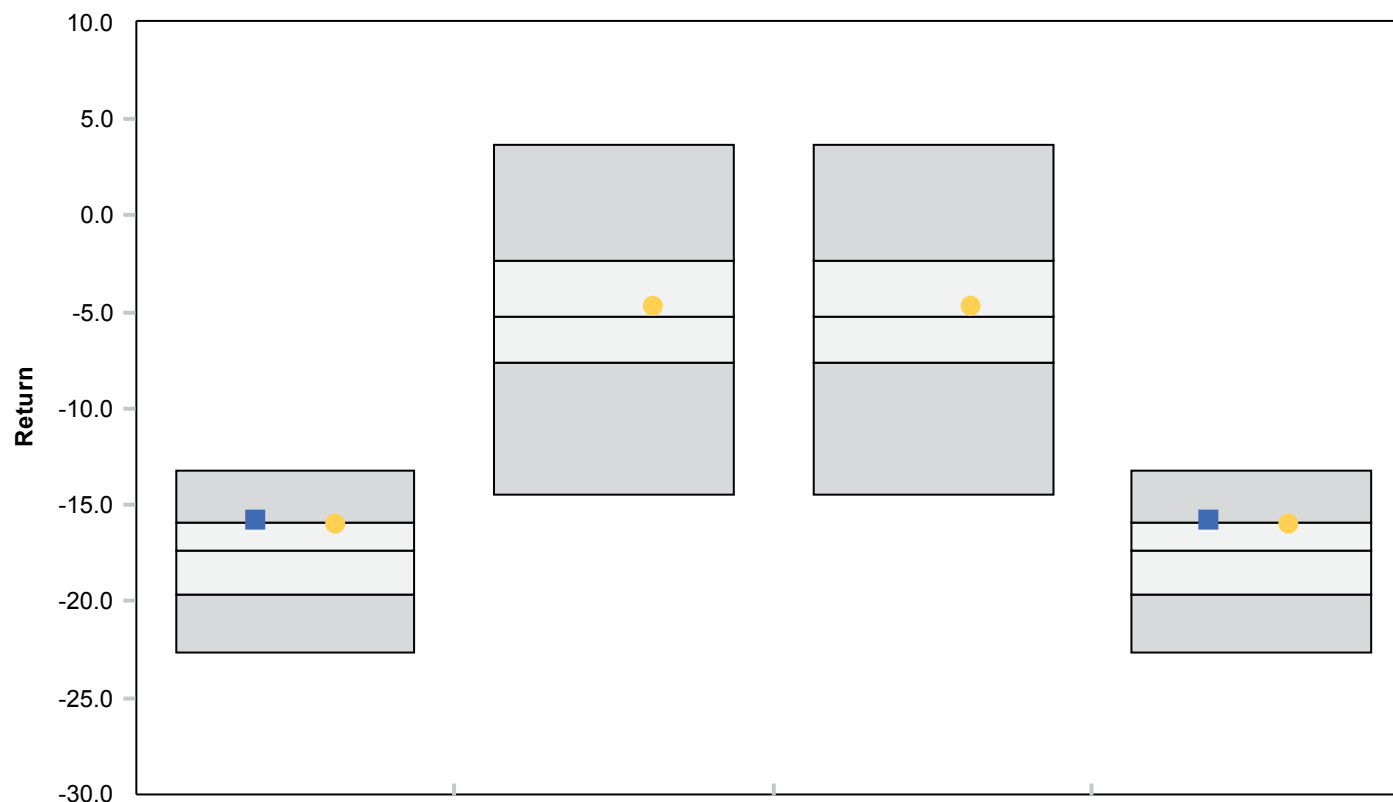
Vanguard Mid-Cap Value Index Fund vs. Russell Midcap Value Index

Buy-and-Hold Portfolio	-15.17
Portfolio Trading	0.12
Actual Return	-15.06
Benchmark Return	-14.95
Actual Active Return	-0.10
Stock Selection	-0.54
Sector Selection	-0.41
Interaction	0.50
Total Selection	-0.44
Portfolio Trading	0.12
Benchmark Trading	-0.23
Active Trading Impact	0.34
Buy & Hold Active Return	-0.10

	Allocation-10/01/2018		Performance-1 Quarter Ending December 31, 2018		Attribution			
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	Total
Communication Services	4.86	3.29	-17.16	-17.22	0.00	-0.04	0.00	-0.04
Consumer Discretionary	15.71	8.97	-18.14	-17.72	-0.04	-0.20	-0.03	-0.27
Consumer Staples	5.07	4.91	-11.39	-9.61	-0.09	0.01	0.00	-0.08
Energy	5.02	7.90	-36.45	-32.50	-0.31	0.51	0.11	0.31
Financials	20.62	17.54	-15.16	-15.95	0.14	-0.04	0.02	0.12
Health Care	5.31	6.84	-17.55	-15.97	-0.11	0.02	0.02	-0.06
Industrials	8.89	12.58	-21.72	-17.44	-0.54	0.10	0.16	-0.28
Information Technology	11.95	9.07	-17.33	-17.12	-0.02	-0.07	-0.01	-0.09
Materials	7.92	6.11	-13.48	-15.80	0.14	-0.02	0.04	0.16
Real Estate	4.26	12.72	-8.12	-6.19	-0.25	-0.72	0.16	-0.80
Utilities	10.39	10.08	3.80	-1.44	0.53	0.04	0.02	0.58
Cash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	-15.17	-14.73	-0.54	-0.41	0.50	-0.44



IM U.S. Mid Cap Growth Equity (MF)



■ Vanguard Mid-Cap Growth Index Fund
 ● Russell Midcap Growth Index

5th Percentile	-13.17	3.63	3.63	-13.17
1st Quartile	-15.96	-2.33	-2.33	-15.96
Median	-17.34	-5.19	-5.19	-17.34
3rd Quartile	-19.64	-7.66	-7.66	-19.64
95th Percentile	-22.60	-14.42	-14.42	-22.60
Population	393	386	386	393

Parentheses contain percentile rankings.
 Calculation based on monthly periodicity.
 Returns are net of fees and are expressed as percentages.



Vanguard Mid-Cap Growth Index Fund vs. Russell Midcap Growth Index

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	15,693	14,201
Median Mkt. Cap (\$M)	11,505	7,274
Price/Earnings ratio	24.31	21.19
Price/Book ratio	3.85	5.19
5 Yr. EPS Growth Rate (%)	16.38	17.44
Current Yield (%)	0.99	1.04
Number of Stocks	169	418

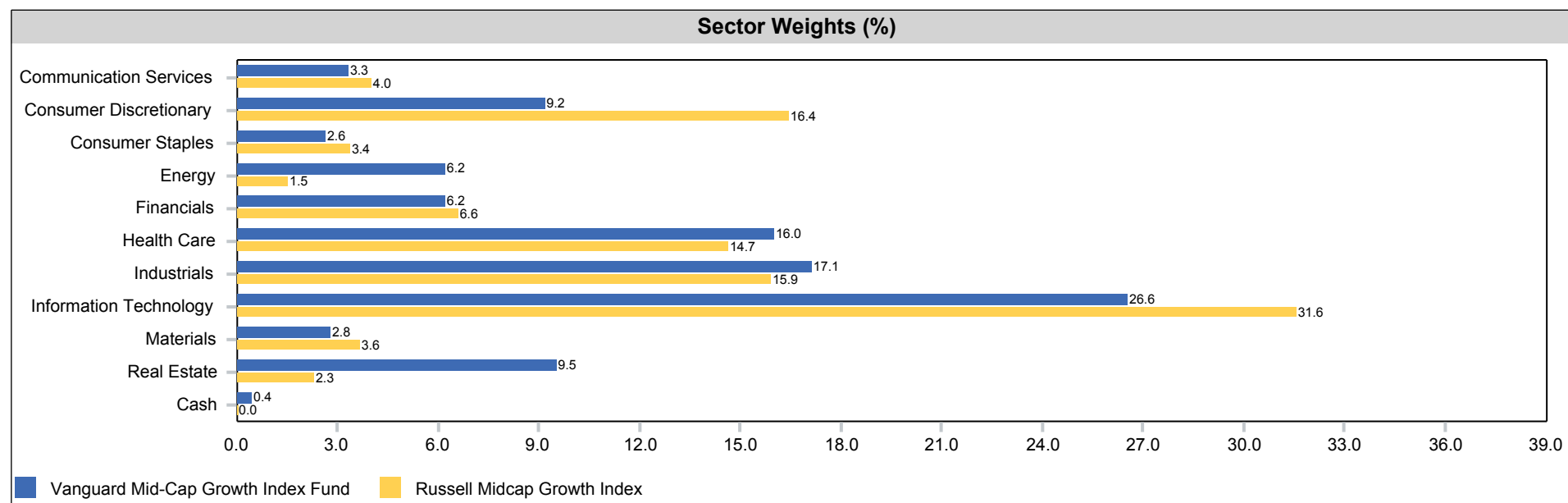
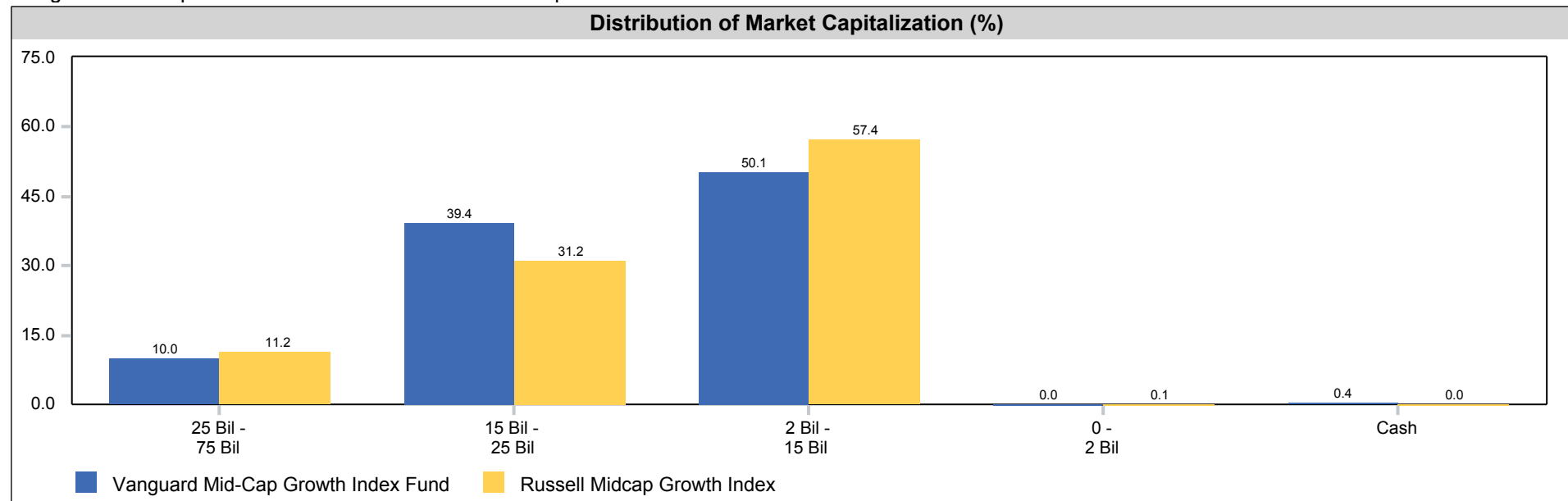
Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Edwards Lifesciences Corp	1.71	1.23	0.48	-12.02
Red Hat Inc	1.65	1.19	0.46	28.88
Fiserv Inc.	1.56	1.12	0.44	-10.79
Autodesk Inc.	1.50	0.91	0.59	-17.62
Roper Technologies Inc	1.47	0.19	1.28	-9.90
Amphenol Corp	1.30	0.91	0.39	-13.59
Worldpay Inc	1.23	0.08	1.15	-24.53
Moody's Corp.	1.22	0.89	0.33	-15.99
Centene Corp	1.20	0.79	0.41	-20.36
ONEOK Inc.	1.18	0.35	0.83	-19.33
% of Portfolio	14.02	7.66	6.36	

Ten Best Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Red Hat Inc	1.65	1.19	0.46	28.88
Realty Income Corp.	0.99	0.00	0.99	11.99
Church & Dwight Co. Inc.	0.86	0.52	0.34	11.13
Dollar Tree Inc	1.15	0.14	1.01	10.75
Lamb Weston Holdings Inc	0.57	0.00	0.57	10.72
Workday Inc	0.63	0.89	-0.26	9.39
Hormel Foods Corp	0.30	0.00	0.30	8.81
Xilinx Inc.	1.15	0.83	0.32	6.68
McCormick & Co Inc	0.90	0.04	0.86	6.53
TripAdvisor Inc	0.15	0.21	-0.06	5.62
% of Portfolio	8.35	3.82	4.53	

Ten Worst Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
XPO Logistics Inc	0.39	0.27	0.12	-50.04
Align Technology Inc	0.85	0.63	0.22	-46.47
Nektar Therapeutics	0.30	0.20	0.10	-46.08
Carvana Co	0.03	0.00	0.03	-44.64
Apache Corp	0.53	0.02	0.51	-44.61
GrubHub Inc	0.19	0.26	-0.07	-44.59
Square Inc	0.44	0.63	-0.19	-43.35
Continental Resources Inc	0.20	0.06	0.14	-41.14
Advanced Micro Devices Inc	0.94	0.66	0.28	-40.24
Noble Energy Inc	0.24	0.00	0.24	-39.60
% of Portfolio	4.11	2.73	1.38	



Vanguard Mid-Cap Growth Index Fund vs. Russell Midcap Growth Index



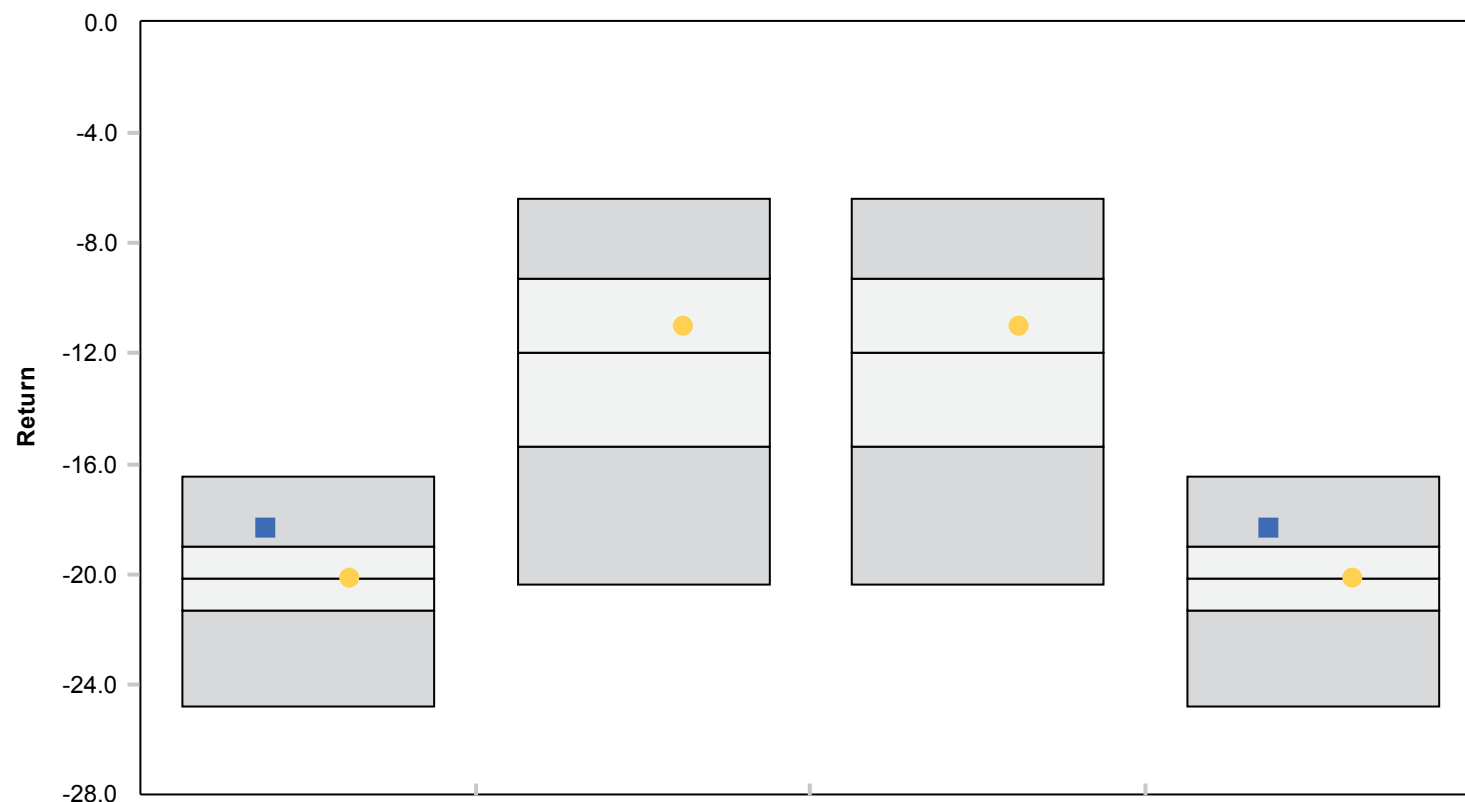
Vanguard Mid-Cap Growth Index Fund vs. Russell Midcap Growth Index

Buy-and-Hold Portfolio	-15.75
Portfolio Trading	-0.07
Actual Return	-15.82
Benchmark Return	-15.99
Actual Active Return	0.17
Stock Selection	0.42
Sector Selection	-0.08
Interaction	-0.11
Total Selection	0.23
Portfolio Trading	-0.07
Benchmark Trading	-0.02
Active Trading Impact	-0.06
Buy & Hold Active Return	0.17

	Allocation-10/01/2018		Performance-1 Quarter Ending December 31, 2018		Attribution			
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	Total
Communication Services	3.09	3.82	-15.94	-12.68	-0.12	-0.02	0.02	-0.12
Consumer Discretionary	9.90	16.37	-17.56	-15.01	-0.42	-0.06	0.17	-0.31
Consumer Staples	1.80	2.90	8.97	-2.04	0.32	-0.15	-0.12	0.05
Energy	7.32	1.69	-29.68	-25.02	-0.08	-0.51	-0.26	-0.85
Financials	6.14	6.65	-15.62	-16.35	0.05	0.00	0.00	0.05
Health Care	15.59	15.28	-18.19	-19.74	0.24	-0.01	0.00	0.23
Industrials	18.30	16.47	-15.98	-17.80	0.30	-0.03	0.03	0.30
Information Technology	26.53	31.25	-15.13	-15.72	0.19	-0.01	-0.03	0.14
Materials	2.95	3.55	-16.37	-14.54	-0.07	-0.01	0.01	-0.06
Real Estate	8.39	2.01	-3.50	-4.49	0.02	0.73	0.06	0.81
Cash	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	-15.75	-15.98	0.42	-0.08	-0.11	0.23



IM U.S. Small Cap Core Equity (MF)



■ Vanguard Small Cap Index Fund

● Russell 2000 Index

5th Percentile	-16.49	-6.36	-6.36	-16.49
1st Quartile	-19.02	-9.30	-9.30	-19.02
Median	-20.15	-11.94	-11.94	-20.15
3rd Quartile	-21.36	-15.37	-15.37	-21.36
95th Percentile	-24.82	-20.37	-20.37	-24.82

Population	151	147	147	151
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Parentheses contain percentile rankings.
Calculation based on monthly periodicity.
Returns are net of fees and are expressed as percentages.



Vanguard Small Cap Index Fund vs. Russell 2000 Index

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	3,885	2,012
Median Mkt. Cap (\$M)	1,974	707
Price/Earnings ratio	15.24	15.07
Price/Book ratio	2.49	2.26
5 Yr. EPS Growth Rate (%)	15.25	11.86
Current Yield (%)	1.87	1.64
Number of Stocks	1,408	2,032

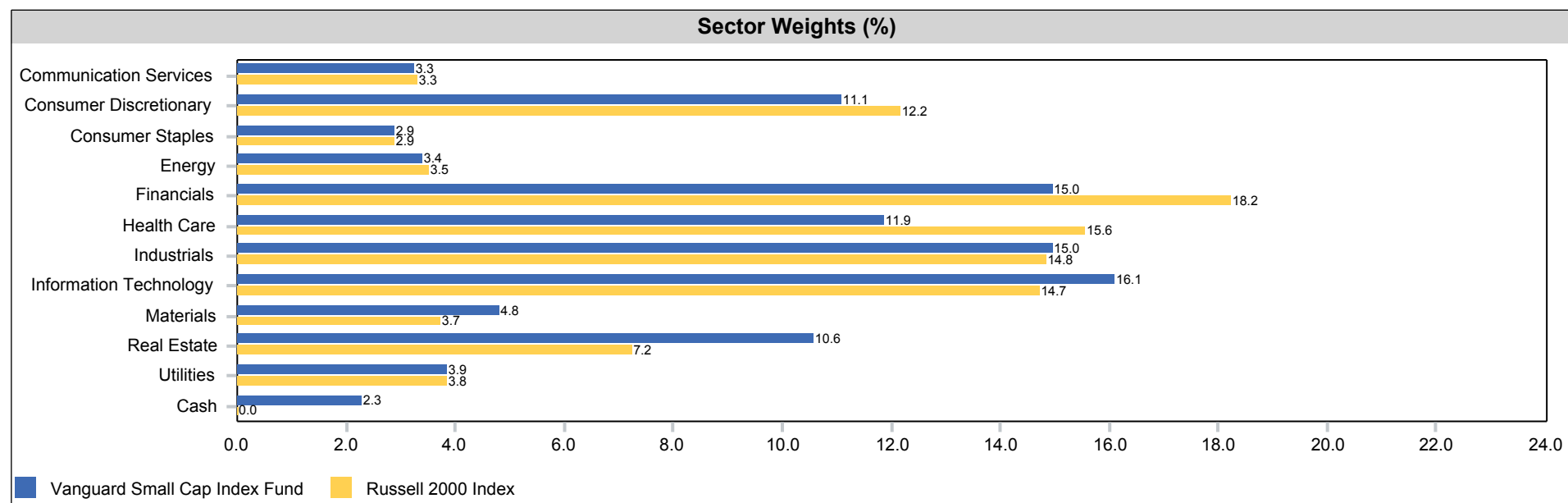
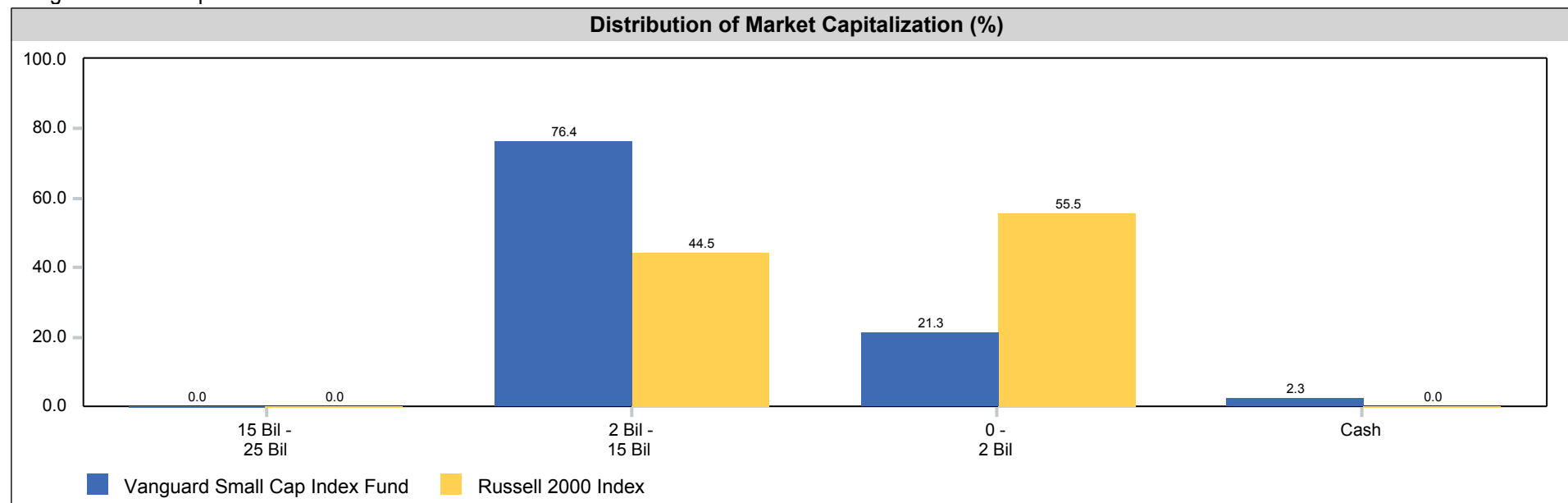
Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
CASH	2.27	0.00	2.27	N/A
Burlington Stores Inc	0.36	0.00	0.36	-0.15
NRG Energy Inc	0.36	0.00	0.36	5.97
W. P. Carey Inc	0.34	0.00	0.34	3.21
Atmos Energy Corp	0.34	0.00	0.34	-0.73
IDEX Corporation	0.32	0.00	0.32	-15.93
UGI Corp	0.30	0.00	0.30	-3.41
Steris Plc	0.29	0.00	0.29	-6.32
PTC Inc	0.29	0.00	0.29	-21.93
PerkinElmer Inc.	0.28	0.00	0.28	-19.18
% of Portfolio	5.15	0.00	5.15	

Ten Best Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
TESARO Inc	0.09	0.00	0.09	90.34
Inovalon Holdings Inc	0.03	0.05	-0.02	41.10
K12 Inc	0.03	0.05	-0.02	40.06
Investment Technology Group Inc.	0.03	0.05	-0.02	39.94
Belmond Ltd	0.07	0.13	-0.06	37.15
Esterline Technologies Corp.	0.12	0.18	-0.06	33.53
Virtu Financial Inc	0.05	0.00	0.05	27.15
Houghton Mifflin Harcourt Co	0.03	0.05	-0.02	26.57
Globalstar Inc	0.01	0.00	0.01	25.93
Xperi Corporation	0.03	0.05	-0.02	25.68
% of Portfolio	0.49	0.56	-0.07	

Ten Worst Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Synergy Pharmaceuticals Inc	0.00	0.00	0.00	-93.30
Longfin Corp	0.00	0.00	0.00	-85.00
Weatherford International plc	0.02	0.00	0.02	-79.37
Alta Mesa Resources Inc	0.00	0.01	-0.01	-76.08
Akorn Inc	0.01	0.02	-0.01	-73.88
Denbury Resources Inc.	0.03	0.04	-0.01	-72.42
Superior Industries International Inc.	0.00	0.01	-0.01	-71.63
Bloom Energy Corp	0.01	0.00	0.01	-70.72
Invacare Corp	0.00	0.01	-0.01	-70.42
EP Energy Corp	0.00	0.00	0.00	-70.09
% of Portfolio	0.07	0.09	-0.02	



Vanguard Small Cap Index Fund vs. Russell 2000 Index



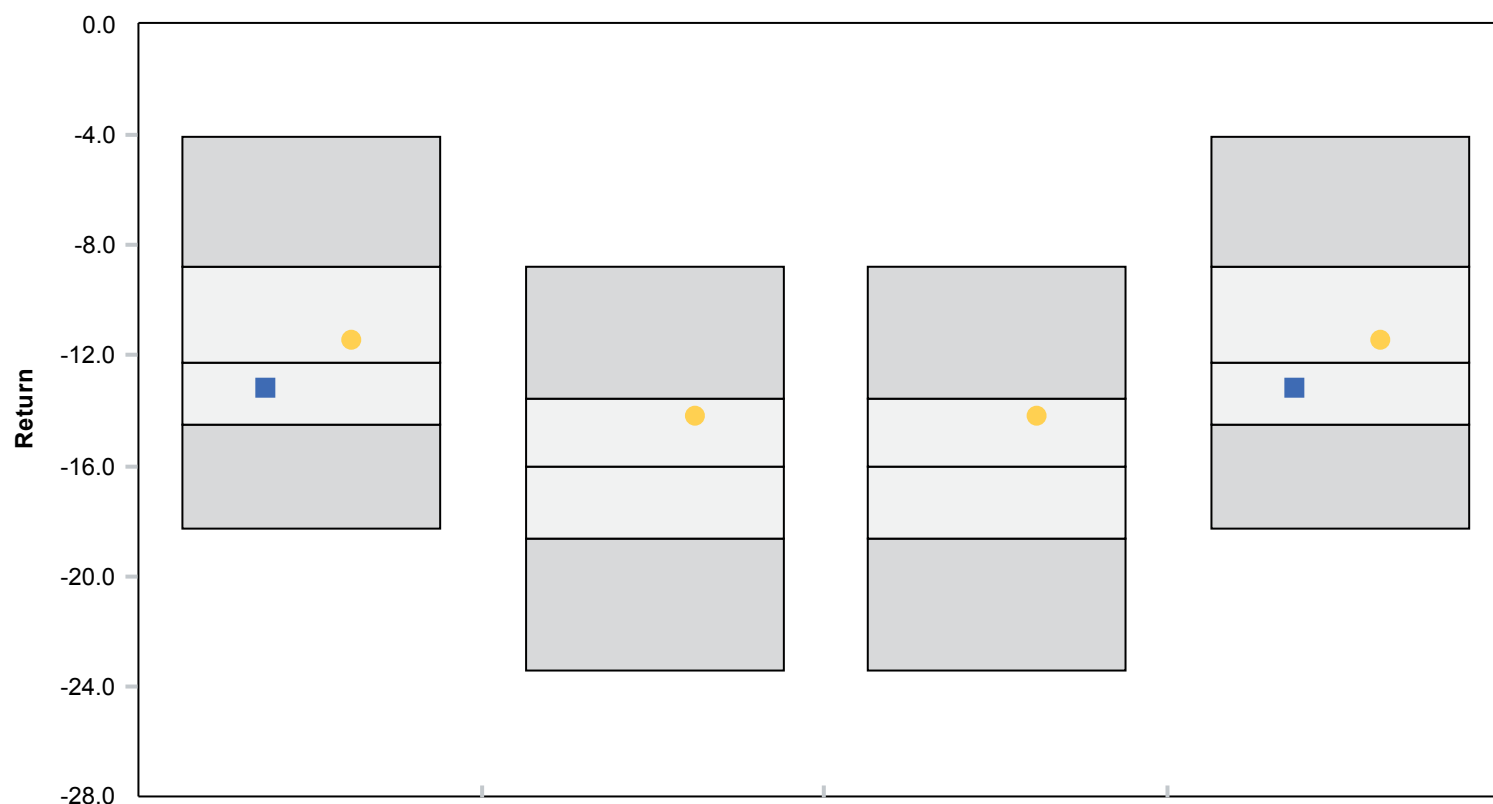
Vanguard Small Cap Index Fund vs. Russell 2000 Index

Buy-and-Hold Portfolio	-17.70
Portfolio Trading	-0.63
Actual Return	-18.33
Benchmark Return	-20.20
Actual Active Return	1.87
Stock Selection	1.48
Sector Selection	0.81
Interaction	-0.01
Total Selection	2.28
Portfolio Trading	-0.63
Benchmark Trading	-0.22
Active Trading Impact	-0.41
Buy & Hold Active Return	1.87

	Allocation-10/01/2018		Performance-1 Quarter Ending December 31, 2018		Attribution			
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	Total
Communication Services	3.22	3.26	-15.64	-18.69	0.10	0.00	0.00	0.10
Consumer Discretionary	11.02	12.25	-18.22	-19.95	0.21	0.00	-0.02	0.19
Consumer Staples	2.85	2.65	-9.72	-13.01	0.09	0.01	0.01	0.11
Energy	4.73	4.82	-42.71	-40.94	-0.09	0.02	0.00	-0.06
Financials	14.25	17.44	-15.91	-16.31	0.07	-0.12	-0.01	-0.06
Health Care	12.79	16.46	-22.46	-25.63	0.52	0.21	-0.12	0.61
Industrials	15.10	15.04	-19.98	-21.17	0.18	0.00	0.00	0.18
Information Technology	15.55	13.94	-17.18	-16.58	-0.08	0.06	-0.01	-0.04
Materials	5.05	4.18	-20.48	-25.81	0.22	-0.05	0.05	0.22
Real Estate	9.85	6.87	-10.12	-13.29	0.22	0.20	0.09	0.51
Utilities	3.46	3.10	-0.90	-2.02	0.03	0.06	0.00	0.10
Cash	2.11	0.00	0.00	0.00	0.00	0.42	0.00	0.42
Total	100.00	100.00	-17.70	-19.98	1.48	0.81	-0.01	2.28



IM International Equity (MF)



■ International Equity
● MSCI AC World ex USA (Net)

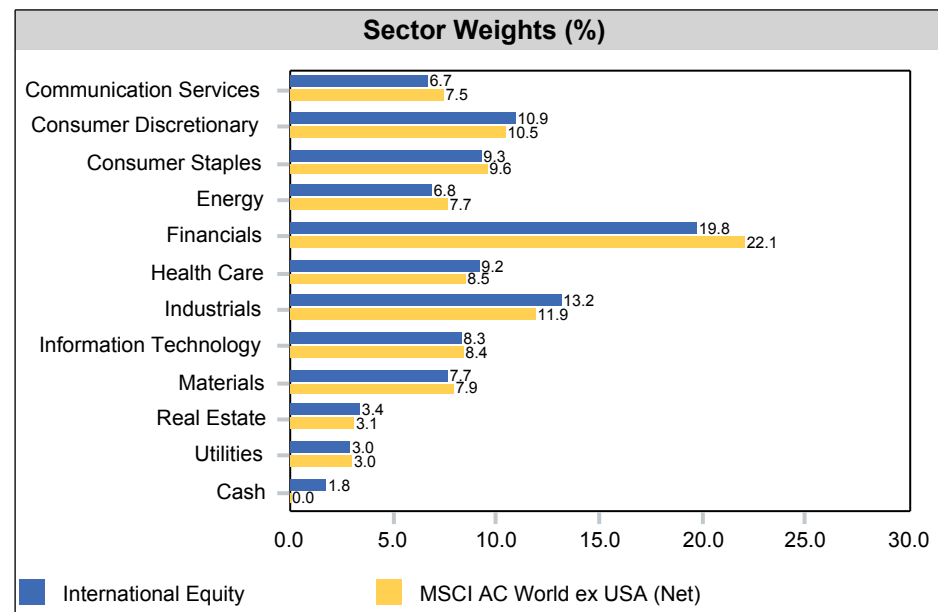
5th Percentile	-4.10	-8.79	-8.79	-4.10
1st Quartile	-8.76	-13.55	-13.55	-8.76
Median	-12.23	-16.01	-16.01	-12.23
3rd Quartile	-14.52	-18.61	-18.61	-14.52
95th Percentile	-18.27	-23.43	-23.43	-18.27
Population	3,249	3,094	3,094	3,249

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.
Returns are net of fees and are expressed as percentages.
3.25

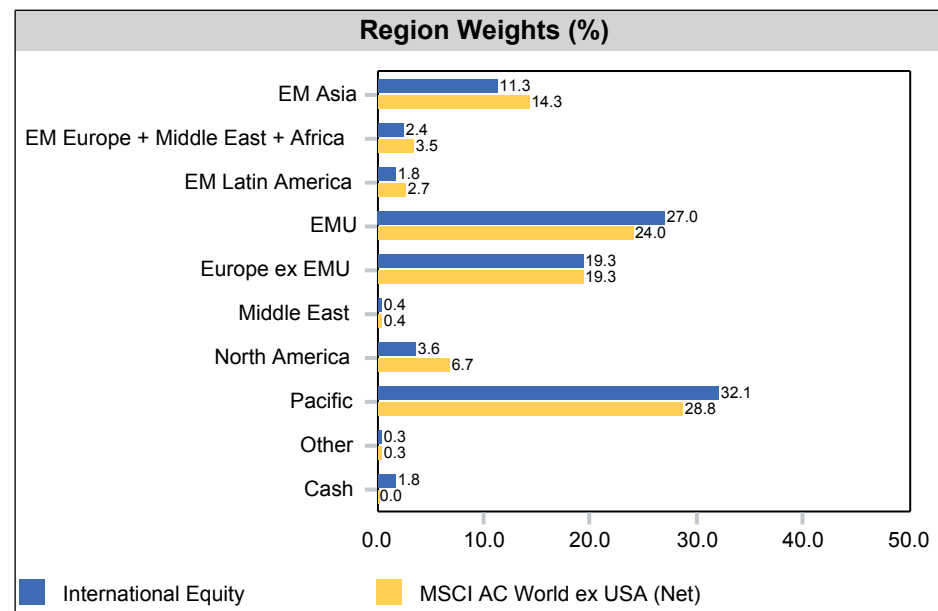


International Equity vs. MSCI AC World ex USA (Net)

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	56,793	64,560
Median Mkt. Cap (\$M)	2,252	8,009
Price/Earnings ratio	13.97	14.09
Price/Book ratio	2.19	2.20
5 Yr. EPS Growth Rate (%)	12.08	11.33
Current Yield (%)	3.09	3.15
Number of Stocks	4,991	2,166



Top Ten Equity Holdings			
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)
CASH	1.77	0.00	1.77
Nestle SA, Cham Und Vevey	1.33	1.24	0.09
Samsung Electronics Co Ltd	1.02	0.96	0.06
Novartis AG	0.97	0.89	0.08
HSBC Holdings PLC	0.92	0.83	0.09
Roche Holding AG	0.88	0.81	0.07
TOTAL SA	0.82	0.74	0.08
Royal Dutch Shell PLC	0.82	0.75	0.07
Toyota Motor Corp	0.77	0.68	0.09
Tencent Holdings LTD	0.73	1.12	-0.39
% of Portfolio	10.03	8.02	2.01



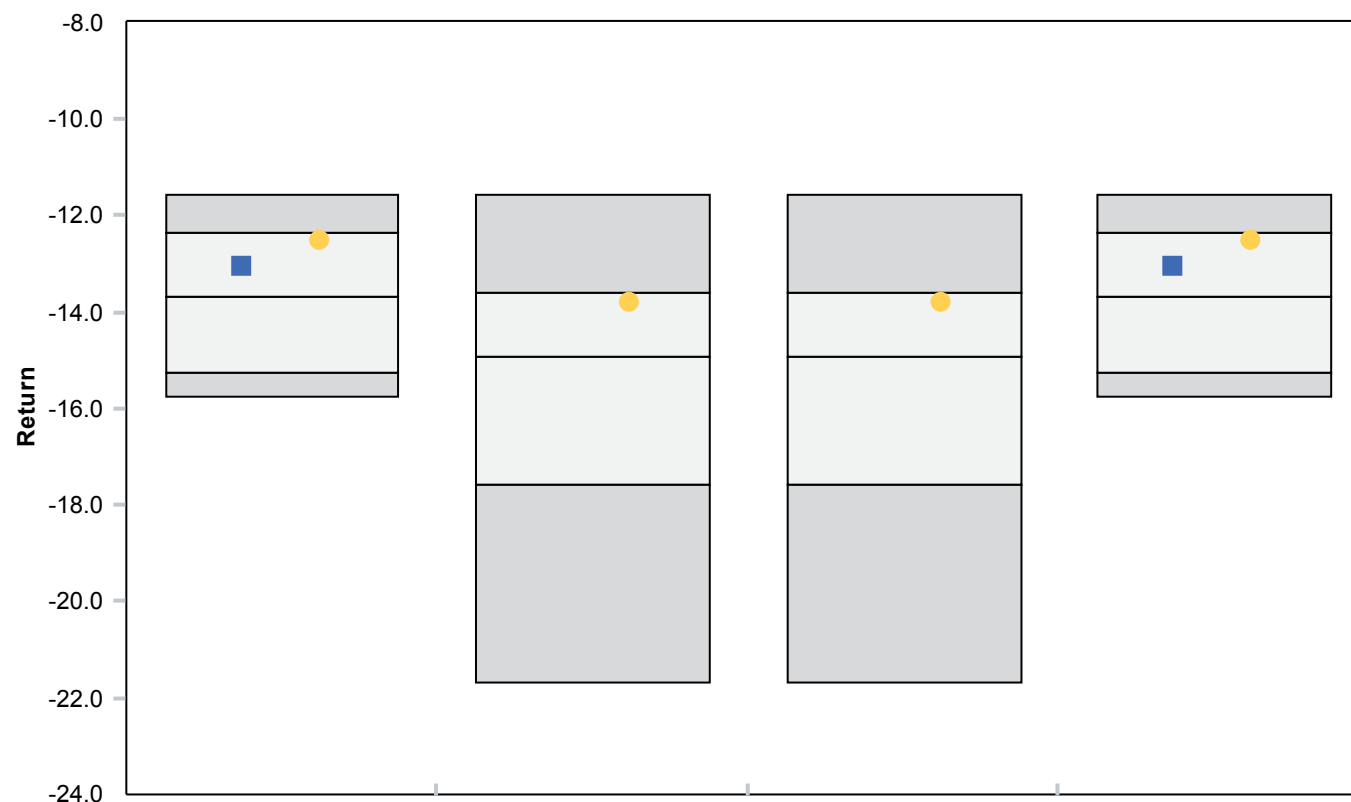
International Equity vs. MSCI AC World ex USA (Net)

Buy-and-Hold Portfolio	0.97
Portfolio Trading	-1.00
Actual Return	-0.04
Benchmark Return	0.71
Actual Active Return	-0.74
Stock Selection	0.09
Sector Selection	0.00
Interaction	0.00
Total Selection	0.10
Portfolio Trading	-1.00
Benchmark Trading	-0.16
Active Trading Impact	-0.84
Buy & Hold Active Return	-0.74

	Allocation-07/01/2018		Performance-1 Quarter Ending September 30, 2018		Attribution			
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	Total
Communication Services	6.90	7.69	-1.72	-2.92	0.09	0.03	-0.01	0.11
Consumer Discretionary	11.30	10.80	-1.99	-2.95	0.10	-0.02	0.00	0.09
Consumer Staples	9.64	9.66	-0.26	-0.37	0.01	0.00	0.00	0.01
Energy	6.70	7.42	4.20	4.59	-0.03	-0.03	0.00	-0.05
Financials	20.20	21.91	1.49	1.82	-0.07	-0.02	0.01	-0.08
Health Care	8.78	8.12	4.70	4.46	0.02	0.02	0.00	0.04
Industrials	13.13	11.64	2.72	2.91	-0.02	0.03	0.00	0.01
Information Technology	8.37	8.36	0.88	1.43	-0.05	0.00	0.00	-0.05
Materials	8.08	8.19	0.39	0.37	0.00	0.00	0.00	0.00
Real Estate	3.57	3.21	-2.81	-3.50	0.02	-0.02	0.00	0.01
Utilities	3.03	3.00	-0.75	-0.93	0.01	0.00	0.00	0.01
Cash	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	0.97	0.87	0.09	0.00	0.00	0.10



IM International Large Cap Core Equity (MF)



■ Vanguard Developed Markets Index Fund
● MSCI EAFE (net)

5th Percentile	-11.58	-11.57	-11.57	-11.58
1st Quartile	-12.34	-13.61	-13.61	-12.34
Median	-13.68	-14.90	-14.90	-13.68
3rd Quartile	-15.25	-17.57	-17.57	-15.25
95th Percentile	-15.74	-21.66	-21.66	-15.74

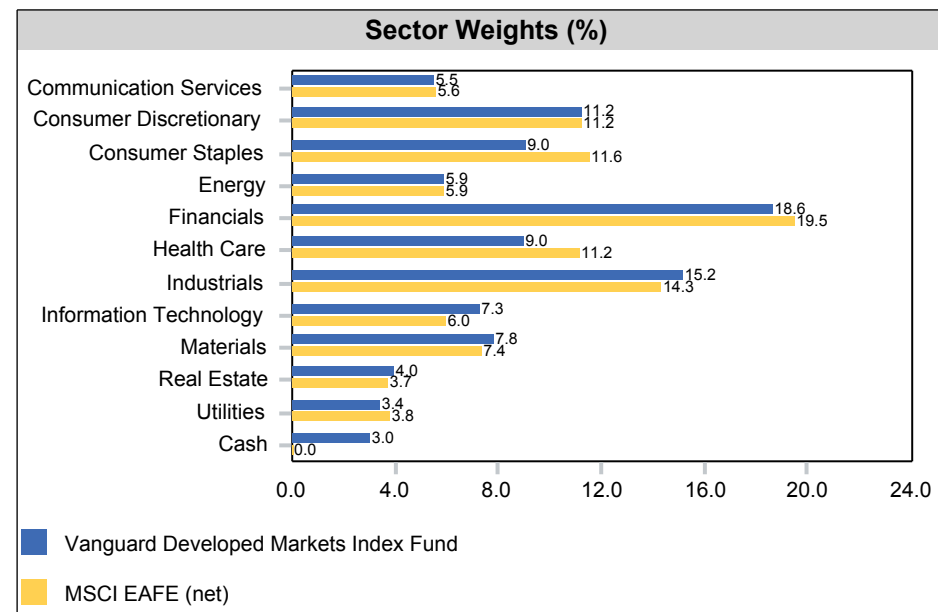
Population	87	82	82	87
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Parentheses contain percentile rankings.
Calculation based on monthly periodicity.
Returns are net of fees and are expressed as percentages.
3.28

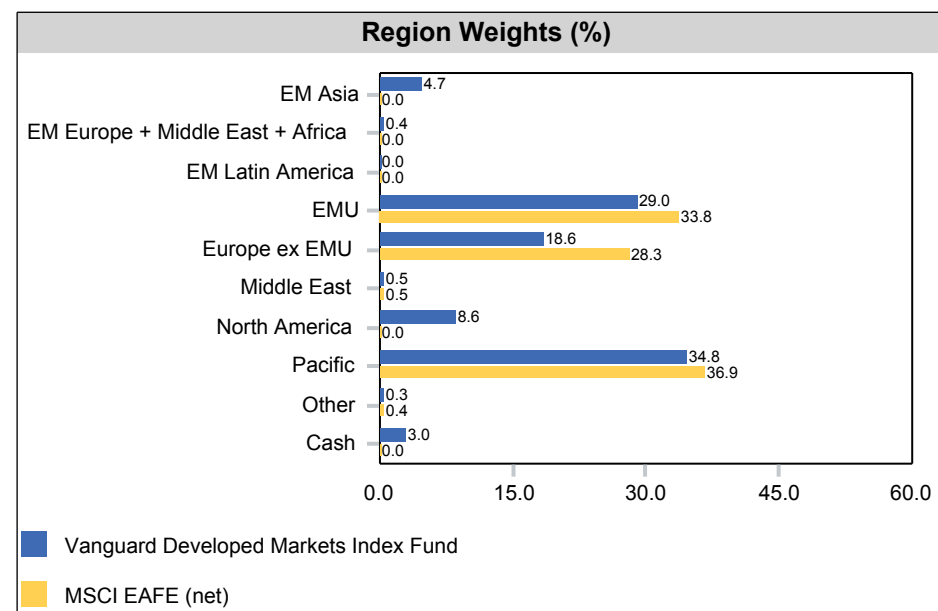


Vanguard Developed Markets Index Fund vs. MSCI EAFE (net)

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	43,355	55,194
Median Mkt. Cap (\$M)	1,502	9,372
Price/Earnings ratio	12.28	12.27
Price/Book ratio	2.04	2.12
5 Yr. EPS Growth Rate (%)	10.82	9.78
Current Yield (%)	3.43	3.73
Number of Stocks	3,950	920



Top Ten Equity Holdings			
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)
CASH	2.99	0.00	2.99
Nestle SA, Cham Und Vevey	1.53	1.99	-0.46
Novartis AG	1.17	1.48	-0.31
Roche Holding AG	1.07	1.39	-0.32
Samsung Electronics Co Ltd	0.93	0.00	0.93
Toyota Motor Corp	0.93	1.07	-0.14
Royal Dutch Shell PLC	0.84	1.08	-0.24
TOTAL SA	0.83	1.01	-0.18
Royal Dutch Shell PLC	0.70	0.89	-0.19
AIA Group Ltd	0.63	0.80	-0.17
% of Portfolio	11.62	9.71	1.91



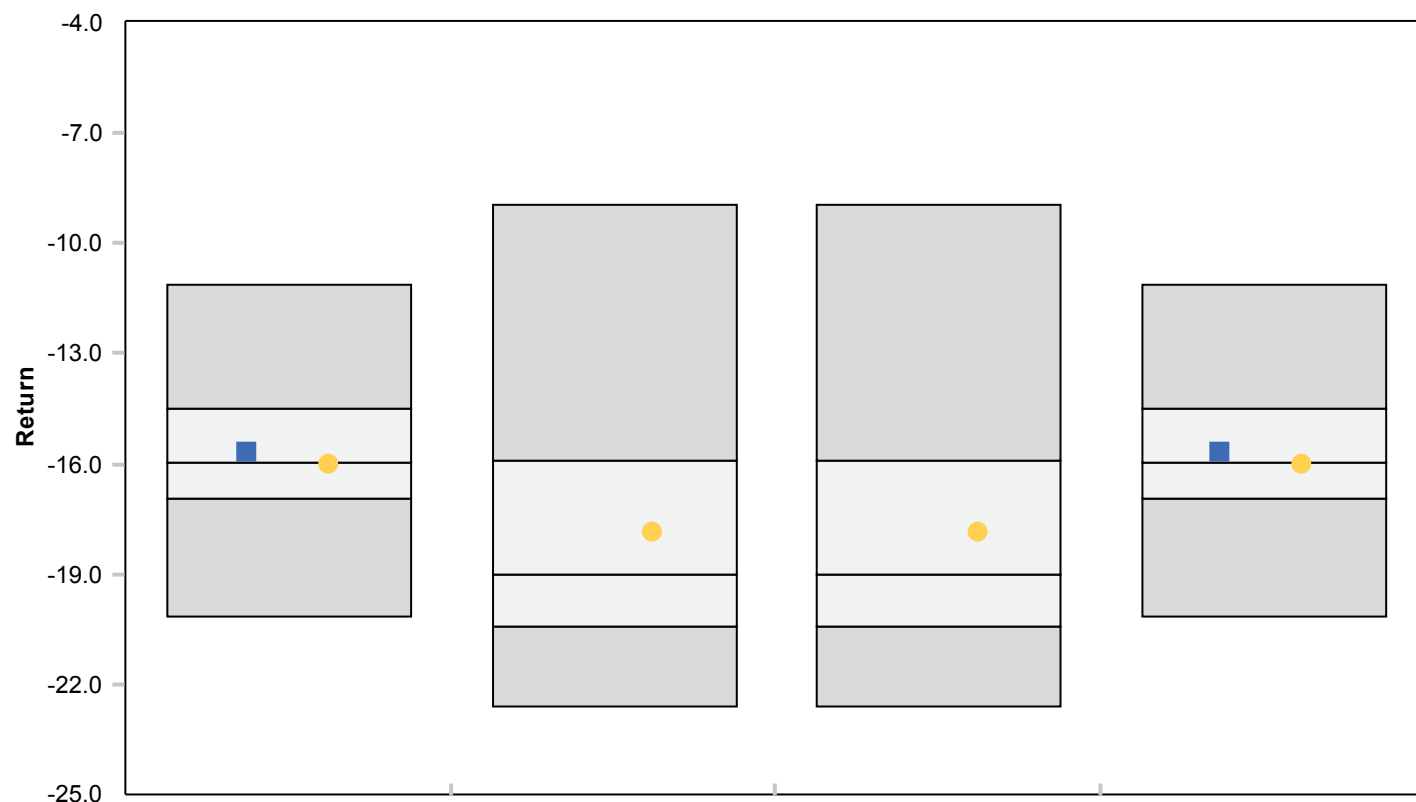
Vanguard Developed Markets Index Fund vs. MSCI EAFE (net)

Buy-and-Hold Portfolio	-12.87
Portfolio Trading	-0.19
Actual Return	-13.06
Benchmark Return	-12.54
Actual Active Return	-0.52
Stock Selection	-0.50
Sector Selection	0.15
Interaction	0.01
Total Selection	-0.33
Portfolio Trading	-0.19
Benchmark Trading	0.00
Active Trading Impact	-0.19
Buy & Hold Active Return	-0.52

	Allocation-10/01/2018		Performance-1 Quarter Ending December 31, 2018		Attribution			
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	Total
Communication Services	5.07	5.52	-10.20	-9.64	-0.03	-0.01	0.00	-0.04
Consumer Discretionary	10.75	11.02	-14.51	-14.68	0.02	0.01	0.00	0.02
Consumer Staples	8.87	11.17	-9.03	-8.84	-0.02	-0.09	0.00	-0.10
Energy	6.90	6.16	-18.88	-17.33	-0.10	-0.04	-0.01	-0.14
Financials	19.36	19.66	-13.96	-13.64	-0.06	0.00	0.00	-0.06
Health Care	9.53	11.11	-11.95	-10.01	-0.22	-0.04	0.03	-0.23
Industrials	14.84	14.51	-14.99	-14.64	-0.05	-0.01	0.00	-0.06
Information Technology	7.38	6.14	-17.18	-16.48	-0.04	-0.05	-0.01	-0.10
Materials	7.74	8.09	-14.65	-15.21	0.05	0.01	0.00	0.05
Real Estate	3.58	3.38	-6.03	-5.22	-0.03	0.01	0.00	-0.01
Utilities	2.90	3.24	-0.43	0.03	-0.01	-0.04	0.00	-0.06
Cash	3.09	0.00	0.00	0.00	0.00	0.39	0.00	0.39
Total	100.00	100.00	-12.87	-12.54	-0.50	0.15	0.01	-0.33



IM International Small Cap Core Equity (SA+CF)



■ iShares MSCI EAFE Small-Cap ETF

● MSCI EAFE Small Cap (net)

5th Percentile
1st Quartile
Median
3rd Quartile
95th Percentile

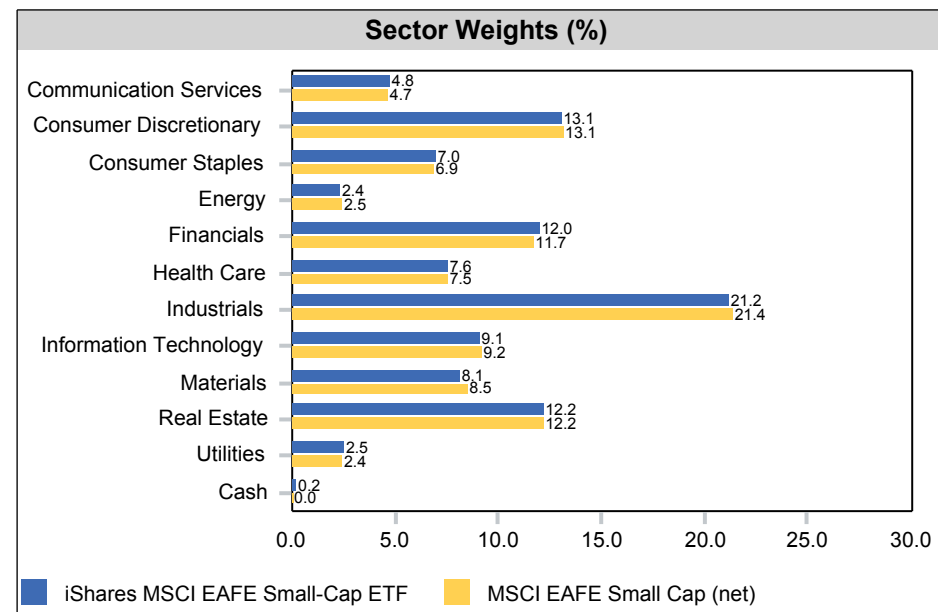
Current Quarter	2018	Trailing 12-months	Fiscal Year To Date
-15.70 (42)	N/A	N/A	-15.70 (42)
-16.05 (52)	-17.89 (46)	-17.89 (46)	-16.05 (52)
-11.11	-8.97	-8.97	-11.11
-14.48	-15.89	-15.89	-14.48
-16.00	-19.04	-19.04	-16.00
-16.94	-20.42	-20.42	-16.94
-20.14	-22.59	-22.59	-20.14
Population 41	41	41	41

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.
Returns are net of fees and are expressed as percentages.
3.31

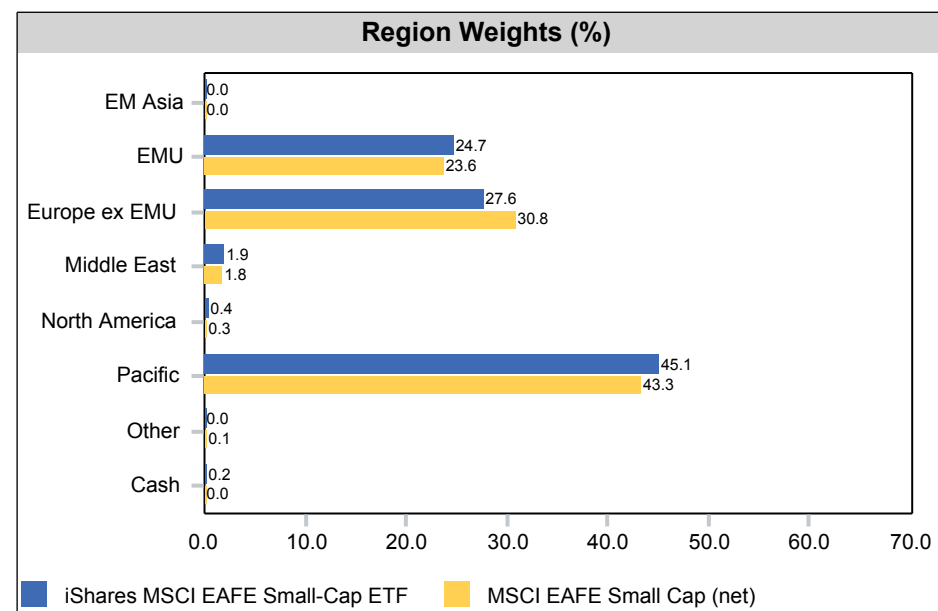


iShares MSCI EAFE Small-Cap ETF vs. MSCI EAFE Small Cap (net)

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	2,357	2,292
Median Mkt. Cap (\$M)	1,270	949
Price/Earnings ratio	12.87	12.93
Price/Book ratio	2.08	2.06
5 Yr. EPS Growth Rate (%)	12.52	12.36
Current Yield (%)	3.09	3.11
Number of Stocks	1,666	2,348



Top Ten Equity Holdings			
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)
Rentokil Initial PLC	0.40	0.38	0.02
Halma PLC	0.36	0.31	0.05
LEG Immobilien AG	0.35	0.31	0.04
Hiscox Ltd	0.32	0.28	0.04
Rightmove PLC	0.29	0.24	0.05
Ocado Group PLC	0.29	0.27	0.02
Spirax-Sarco Engineering PLC	0.28	0.28	0.00
ASR Nederland NV	0.28	0.27	0.01
Sojitz Corporation	0.27	0.21	0.06
GN Store Nord A/S	0.27	0.25	0.02
% of Portfolio	3.11	2.80	0.31



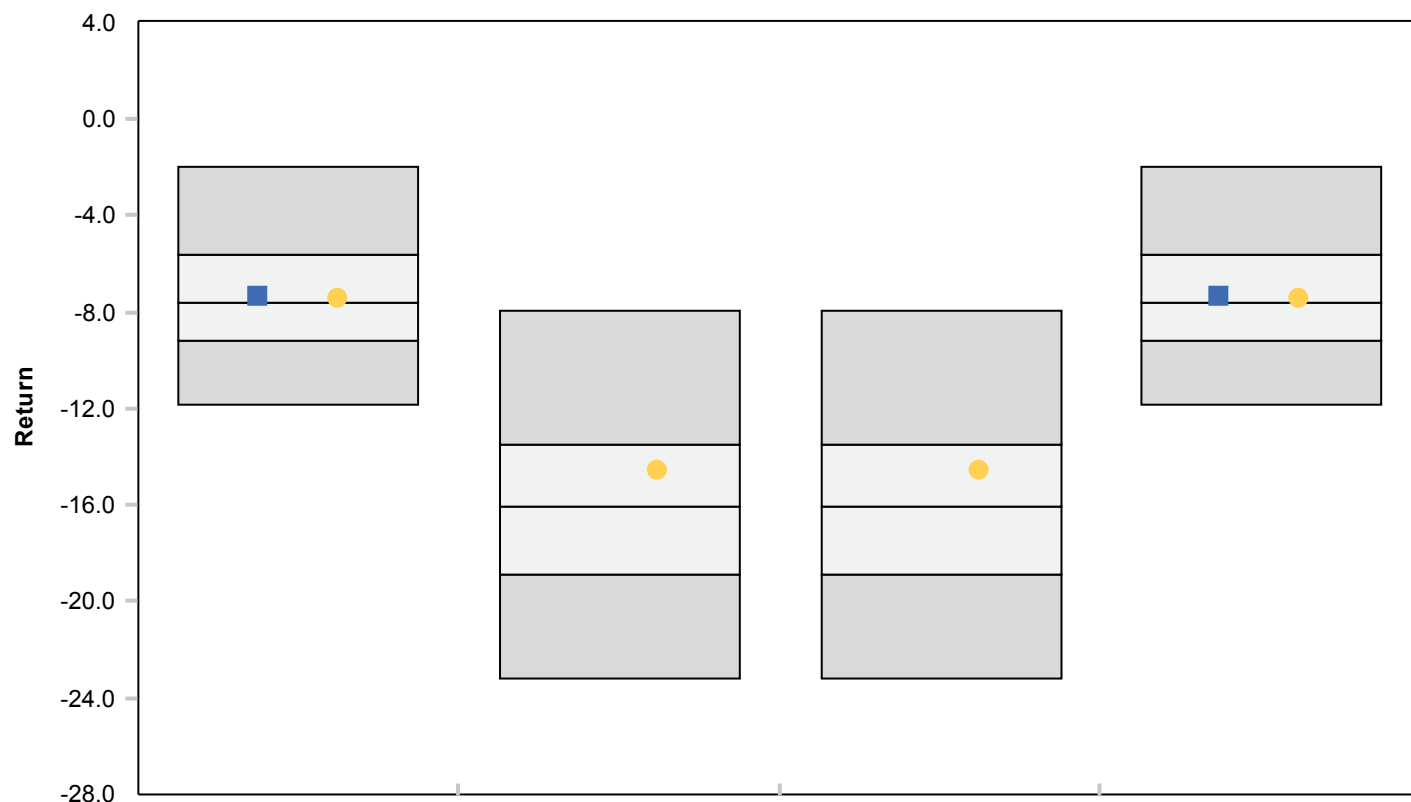
iShares MSCI EAFE Small-Cap ETF vs. MSCI EAFE Small Cap (net)

Buy-and-Hold Portfolio	-12.52
Portfolio Trading	-3.18
Actual Return	-15.70
Benchmark Return	-16.05
Actual Active Return	0.35
Stock Selection	3.37
Sector Selection	-0.55
Interaction	0.53
Total Selection	3.35
Portfolio Trading	-3.18
Benchmark Trading	-0.18
Active Trading Impact	-3.01
Buy & Hold Active Return	0.35

	Allocation-10/01/2018		Performance-1 Quarter Ending December 31, 2018		Attribution			
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	Total
Communication Services	5.50	4.67	-10.02	-13.62	0.17	0.02	0.03	0.22
Consumer Discretionary	11.30	13.05	-14.62	-15.98	0.18	0.00	-0.02	0.16
Consumer Staples	11.02	6.66	-8.49	-11.35	0.19	0.20	0.12	0.51
Energy	6.33	3.07	-17.22	-31.66	0.44	-0.51	0.47	0.40
Financials	19.05	11.78	-13.52	-16.56	0.36	-0.05	0.22	0.53
Health Care	11.45	7.53	-10.30	-14.93	0.35	0.04	0.18	0.57
Industrials	14.62	22.00	-14.26	-19.14	1.07	0.24	-0.36	0.95
Information Technology	6.39	9.71	-16.45	-20.59	0.40	0.16	-0.14	0.42
Materials	7.63	8.65	-16.26	-18.39	0.18	0.03	-0.02	0.19
Real Estate	3.42	10.83	-4.87	-4.65	-0.02	-0.83	0.02	-0.84
Utilities	3.26	2.04	0.23	-2.10	0.05	0.17	0.03	0.24
Cash	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	-12.52	-15.87	3.37	-0.55	0.53	3.35



IM Emerging Markets Equity (SA+CF+MF)



■ Fidelity Emerging Markets Index Fund

● MSCI EM (net)

5th Percentile

-1.93

-7.97

-7.97

-1.93

1st Quartile

-5.63

-13.50

-13.50

-5.63

Median

-7.59

-16.09

-16.09

-7.59

3rd Quartile

-9.22

-18.88

-18.88

-9.22

95th Percentile

-11.87

-23.21

-23.21

-11.87

Population

1,321

1,260

1,260

1,321

Parentheses contain percentile rankings.

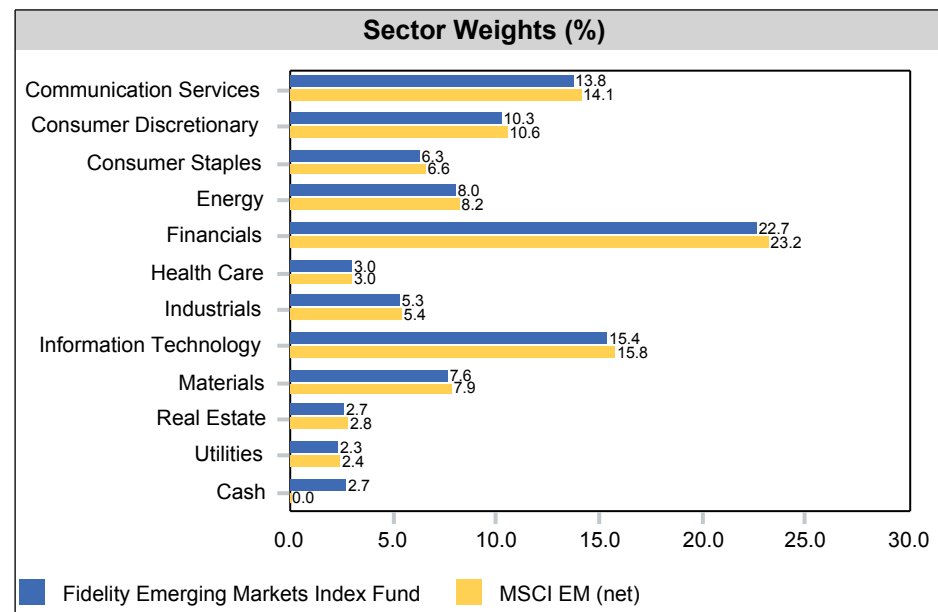
Calculation based on monthly periodicity.

Returns are net of fees and are expressed as percentages.

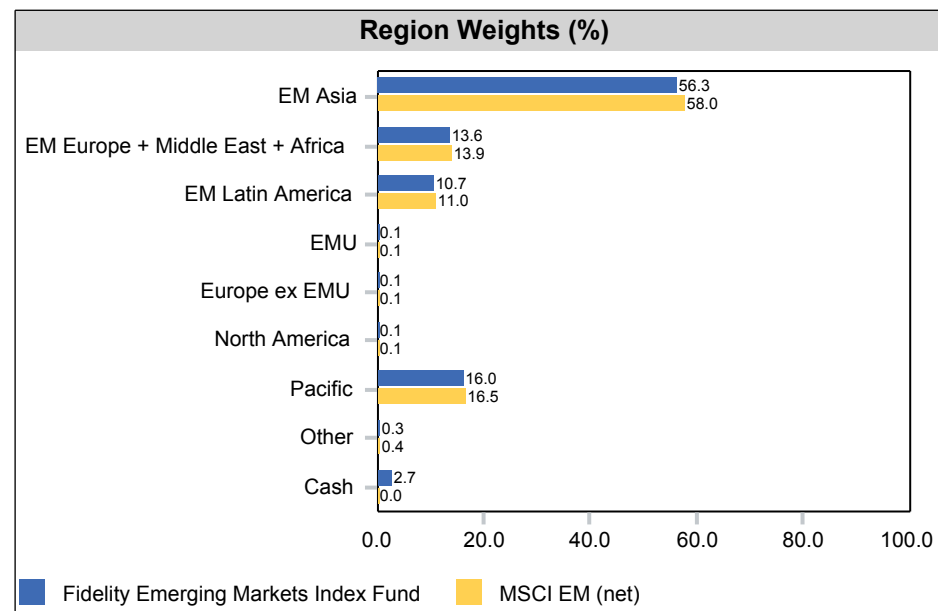


Fidelity Emerging Markets Index Fund vs. MSCI EM (net)

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	75,840	78,602
Median Mkt. Cap (\$M)	5,197	5,211
Price/Earnings ratio	12.83	12.71
Price/Book ratio	2.30	2.30
5 Yr. EPS Growth Rate (%)	13.39	13.69
Current Yield (%)	2.84	2.83
Number of Stocks	1,133	1,151



Top Ten Equity Holdings			
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)
Tencent Holdings LTD	4.44	4.54	-0.10
Taiwan Semicon Manufctrng Co Ltd	3.99	4.09	-0.10
Samsung Electronics Co Ltd	3.79	3.89	-0.10
Alibaba Group Holding Ltd	3.59	3.68	-0.09
CASH	2.74	0.00	2.74
Naspers Ltd	1.78	1.83	-0.05
China Construction Bank Corp	1.58	1.62	-0.04
Baidu Inc	1.19	1.22	-0.03
China Mobile Ltd	1.14	1.17	-0.03
Ping An Insurance Group	1.03	1.02	0.01
% of Portfolio	25.27	23.06	2.21



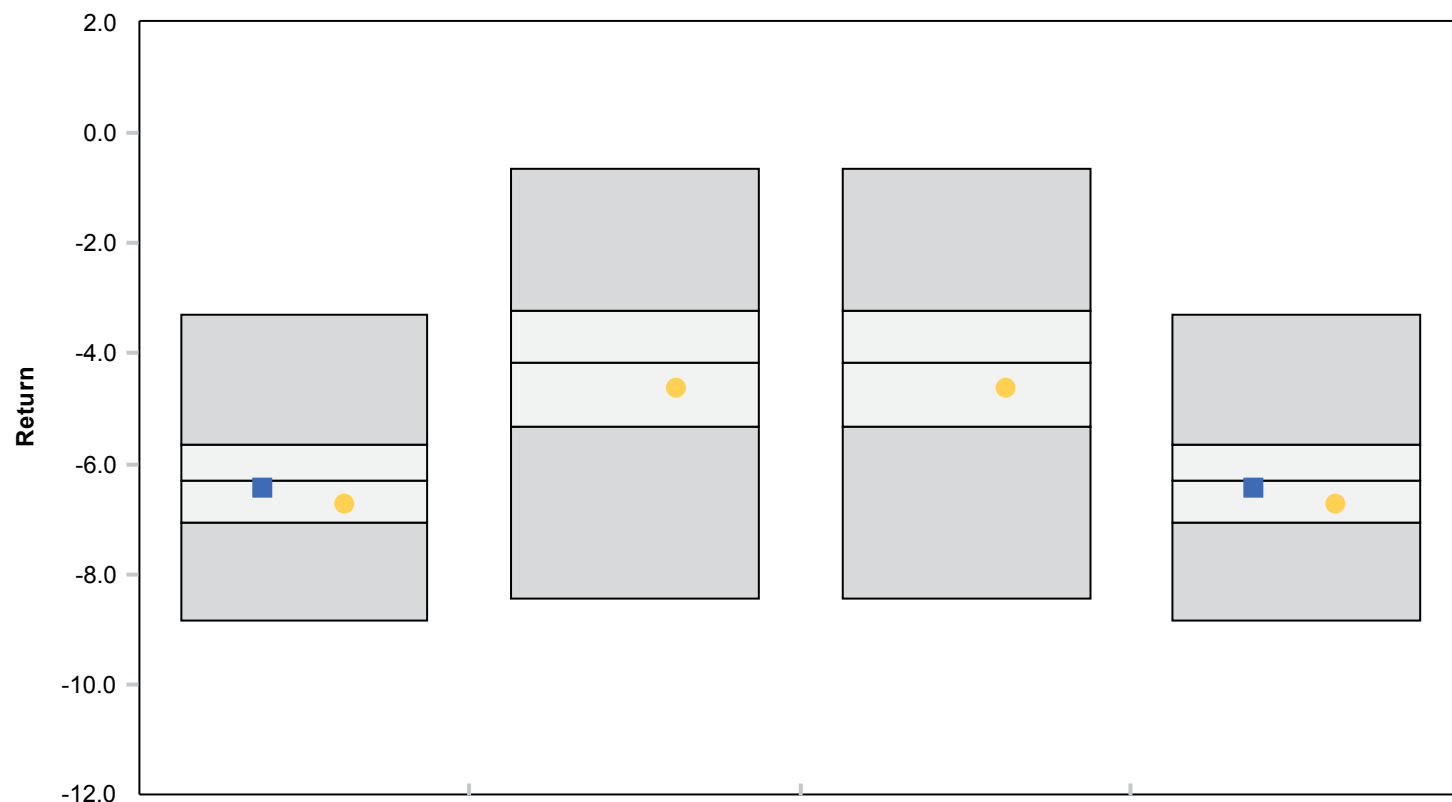
Fidelity Emerging Markets Index Fund vs. MSCI EM (net)

Buy-and-Hold Portfolio	-1.03
Portfolio Trading	-0.10
Actual Return	-1.13
Benchmark Return	-1.09
Actual Active Return	-0.03
Stock Selection	-0.11
Sector Selection	0.02
Interaction	0.00
Total Selection	-0.09
Portfolio Trading	-0.10
Benchmark Trading	-0.15
Active Trading Impact	0.05
Buy & Hold Active Return	-0.03

	Allocation-07/01/2018		Performance-1 Quarter Ending September 30, 2018		Attribution			
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	Total
Communication Services	15.02	15.23	-9.42	-9.37	-0.01	0.02	0.00	0.01
Consumer Discretionary	11.13	11.35	-9.96	-9.79	-0.02	0.02	0.00	0.00
Consumer Staples	6.50	6.66	-2.72	-2.56	-0.01	0.00	0.00	-0.01
Energy	7.03	7.14	14.37	14.65	-0.02	-0.02	0.00	-0.04
Financials	22.53	22.83	1.68	1.72	-0.01	-0.01	0.00	-0.02
Health Care	3.14	3.20	-8.12	-7.30	-0.03	0.00	0.00	-0.02
Industrials	5.16	5.18	2.73	2.73	0.00	0.00	0.00	0.00
Information Technology	15.13	15.37	2.25	2.27	0.00	-0.01	0.00	-0.01
Materials	7.45	7.61	3.83	3.86	0.00	-0.01	0.00	-0.01
Real Estate	2.90	3.00	-6.22	-5.74	-0.01	0.00	0.00	-0.01
Utilities	2.34	2.43	-2.06	-1.96	0.00	0.00	0.00	0.00
Cash	1.67	0.00	0.00	0.00	0.00	0.02	0.00	0.02
Total	100.00	100.00	-1.03	-0.94	-0.11	0.02	0.00	-0.09



IM U.S. REIT (SA+CF)



■ Vanguard Real Estate Index Fund

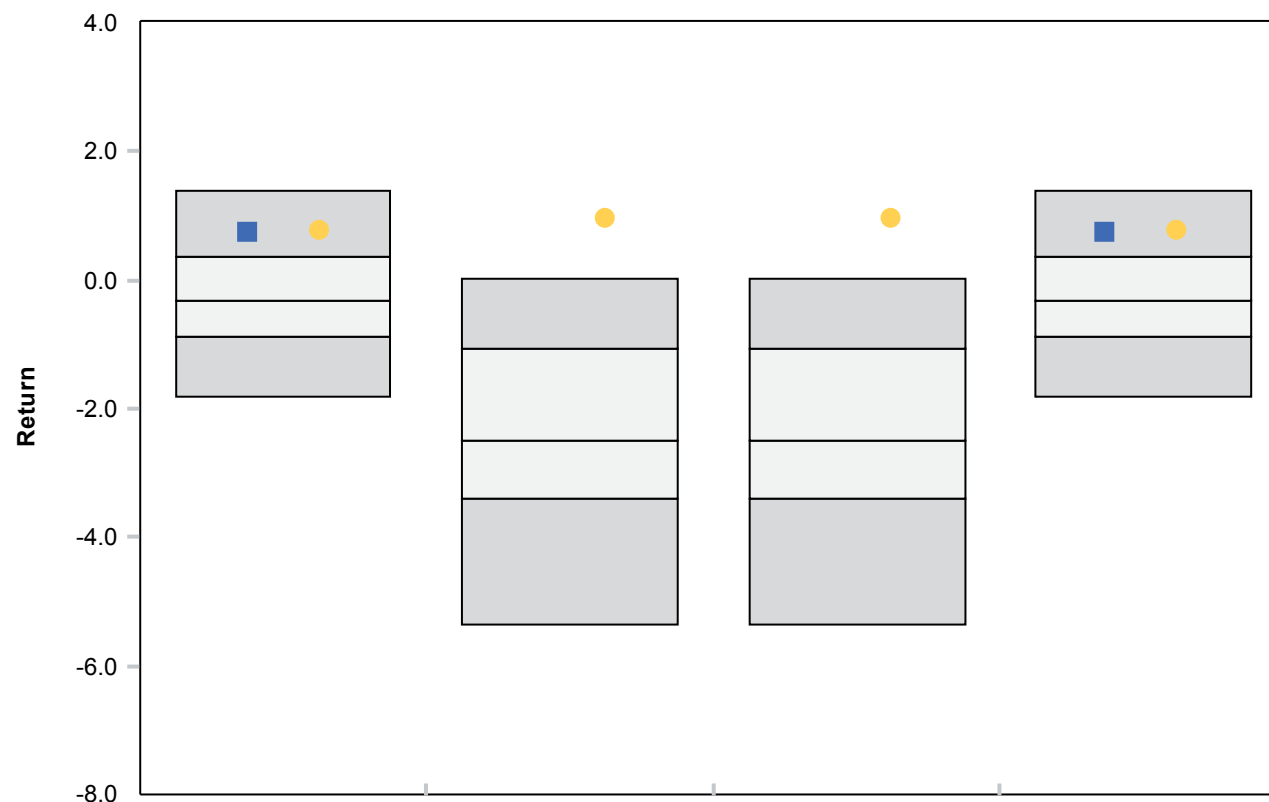
● FTSE NAREIT Equity REIT Index

	Current Quarter	2018	Trailing 12-months	Fiscal Year To Date
	-6.44 (56)	N/A	N/A	-6.44 (56)
	-6.73 (68)	-4.62 (68)	-4.62 (68)	-6.73 (68)
5th Percentile	-3.29	-0.66	-0.66	-3.29
1st Quartile	-5.67	-3.22	-3.22	-5.67
Median	-6.32	-4.15	-4.15	-6.32
3rd Quartile	-7.06	-5.32	-5.32	-7.06
95th Percentile	-8.84	-8.46	-8.46	-8.84
Population	49	49	49	49

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.
Returns are net of fees and are expressed as percentages.



IM U.S. Corporate Bonds (MF)



■ Vanguard Short-Term Corporate Bond Index Fund
 ● Blmbg. Barc. U.S. Corporate 1-5 Year Index

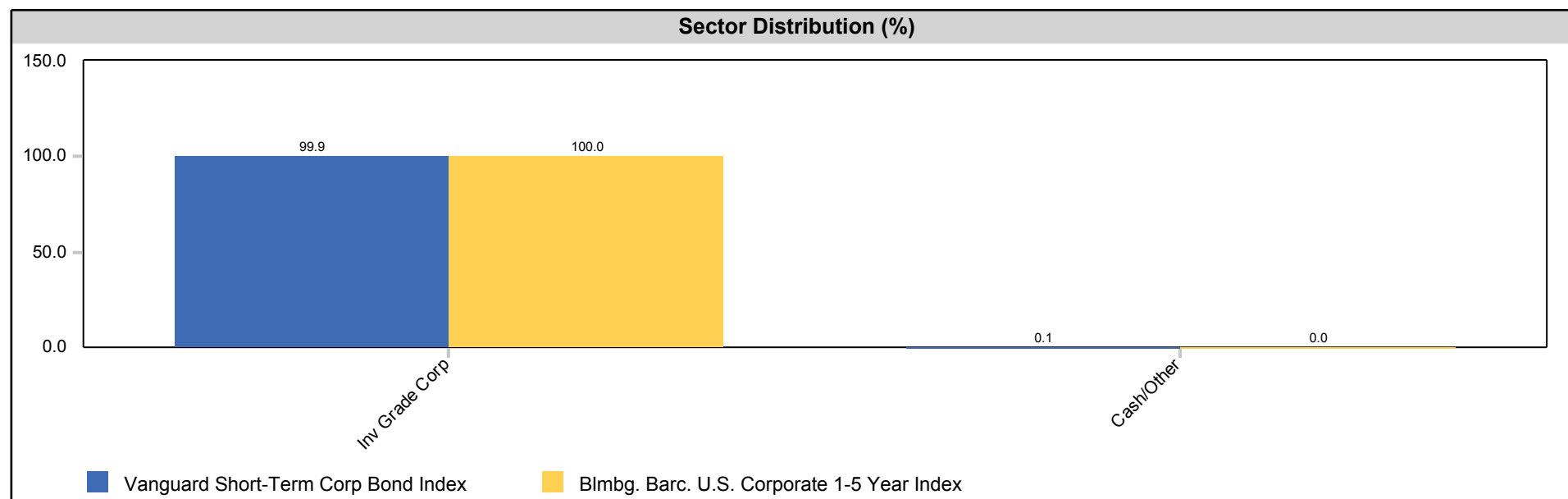
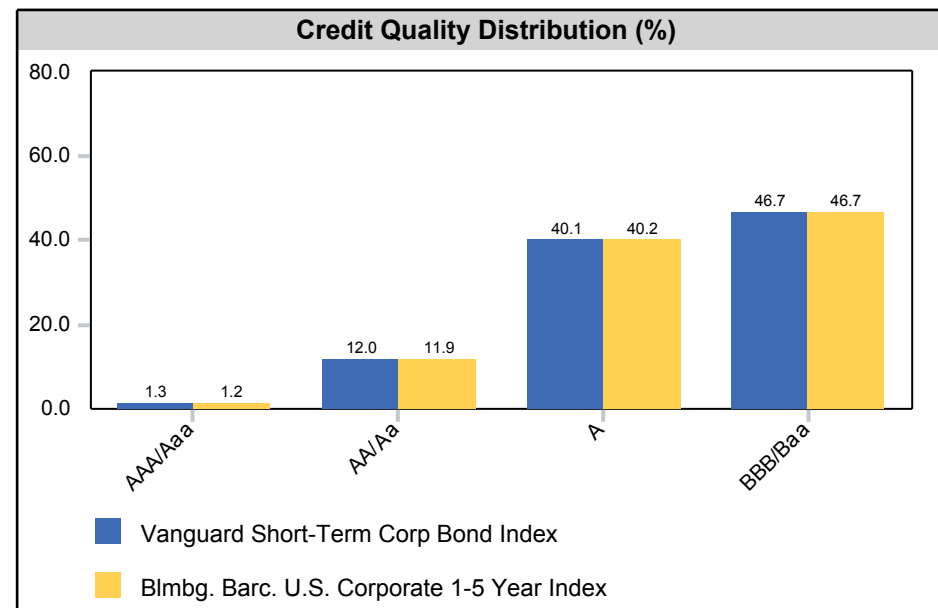
5th Percentile	1.38	0.02	0.02	1.38
1st Quartile	0.35	-1.06	-1.06	0.35
Median	-0.31	-2.50	-2.50	-0.31
3rd Quartile	-0.89	-3.39	-3.39	-0.89
95th Percentile	-1.82	-5.36	-5.36	-1.82
Population	327	319	319	327

Parentheses contain percentile rankings.
 Calculation based on monthly periodicity.
 Returns are net of fees and are expressed as percentages.
 3.38

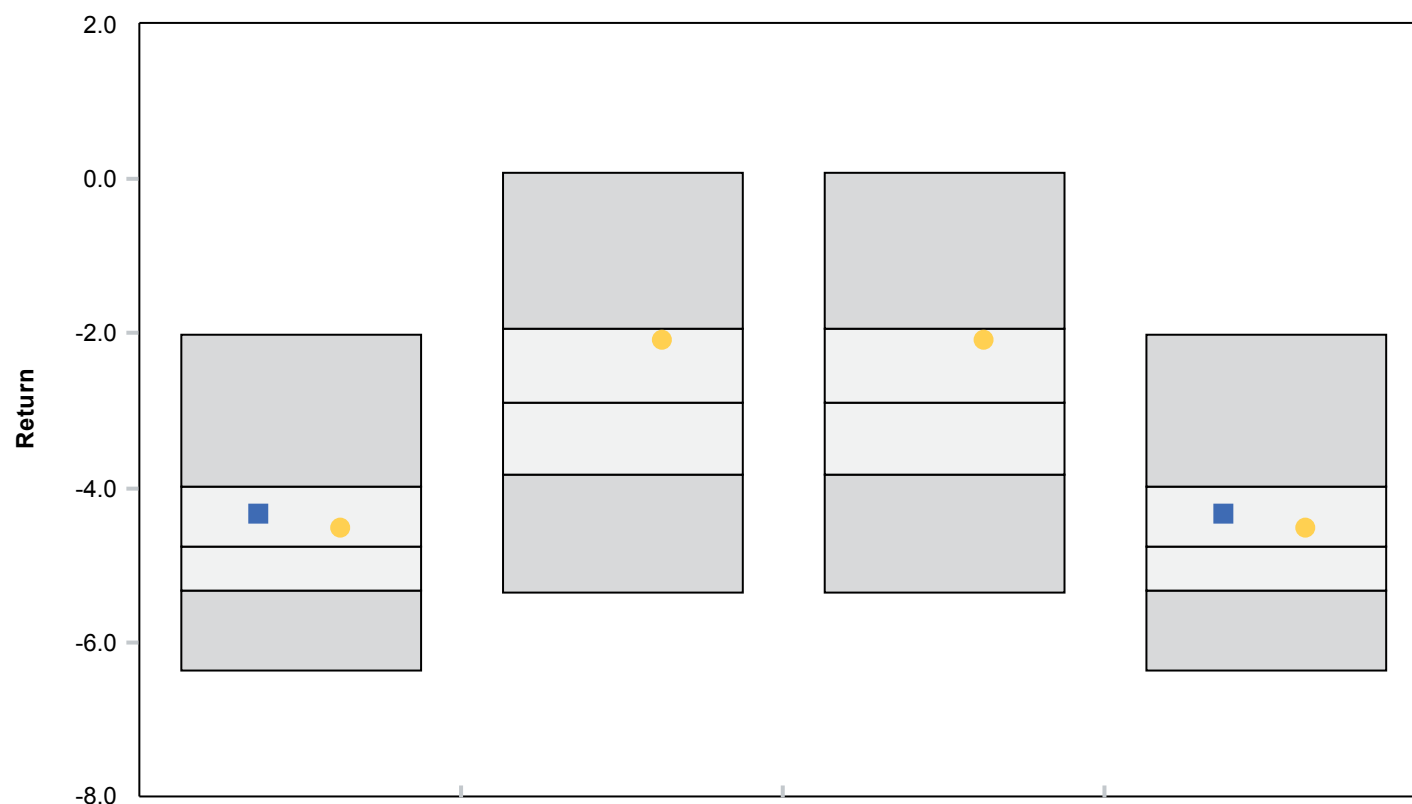


Vanguard Short-Term Corp Bond Index vs. Blmbg. Barc. U.S. Corporate 1-5 Year Index

Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	2.70	2.65
Yield To Maturity (%)	3.58	3.58
Avg. Maturity	2.90	3.01
Avg. Quality	A	A
Coupon Rate (%)	3.29	3.34



IM U.S. High Yield Bonds (MF)



■ Vanguard High-Yield Corporate Fund
● Blmbg. Barc. U.S. Corp: High Yield

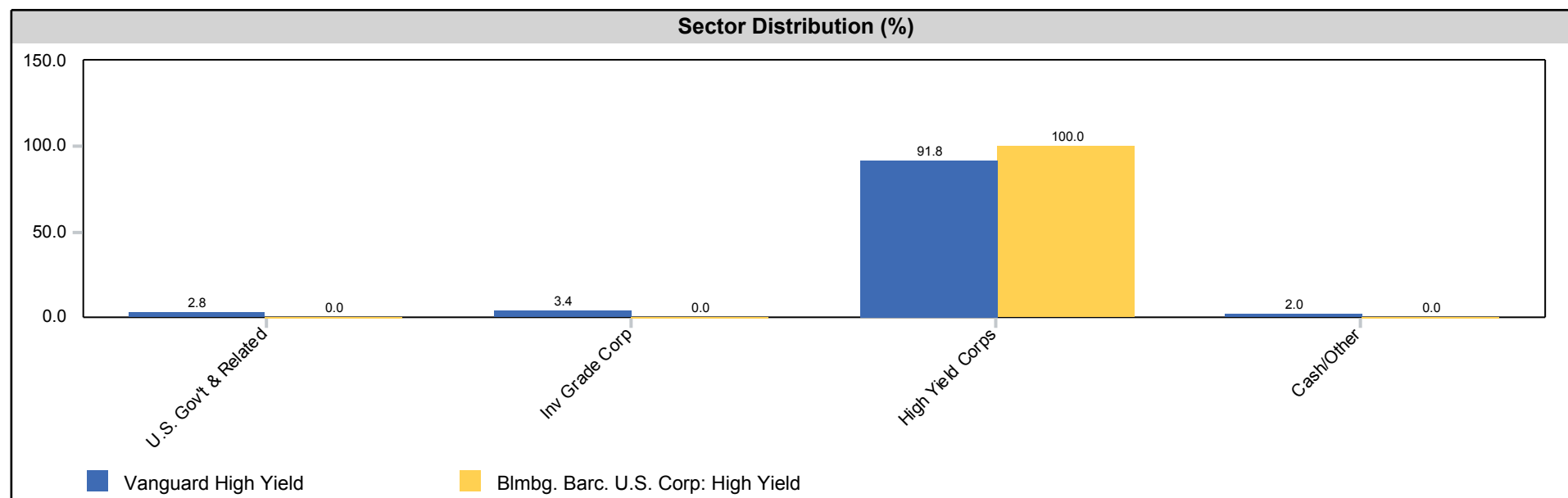
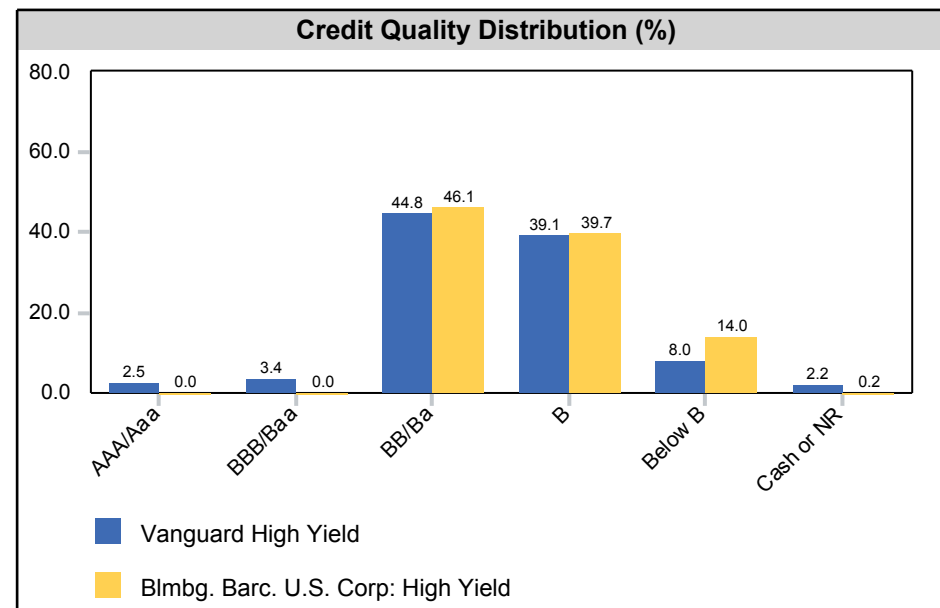
5th Percentile	-2.02	0.08	0.08	-2.02
1st Quartile	-4.00	-1.95	-1.95	-4.00
Median	-4.76	-2.91	-2.91	-4.76
3rd Quartile	-5.33	-3.82	-3.82	-5.33
95th Percentile	-6.36	-5.36	-5.36	-6.36
Population	695	672	672	695

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.
Returns are net of fees and are expressed as percentages.
3.40



Vanguard High Yield vs. Blmbg. Barc. U.S. Corp: High Yield

Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	4.40	3.96
Yield To Maturity (%)	7.25	7.99
Avg. Maturity	6.80	5.94
Avg. Quality	BB	B
Coupon Rate (%)	5.85	6.36



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