Contra Costa Water District
OPEB Trust

Investment Performance Evaluation Report

As of September 30, 2017

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Conduent Human Resource Services
Investment Consulting

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Introduction

This report reviews the investment performance of Contra Costa Water District OPEB Trust for the quarter ending September 30, 2017, 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 individual managers, Wells Fargo, and Morningstar.

Plan Overview

Net Assets

- Plan assets totaled $41.4 million, as of September 30, 2017. This is up from $39.6 million, as of June 30, 2017.

Asset Allocation

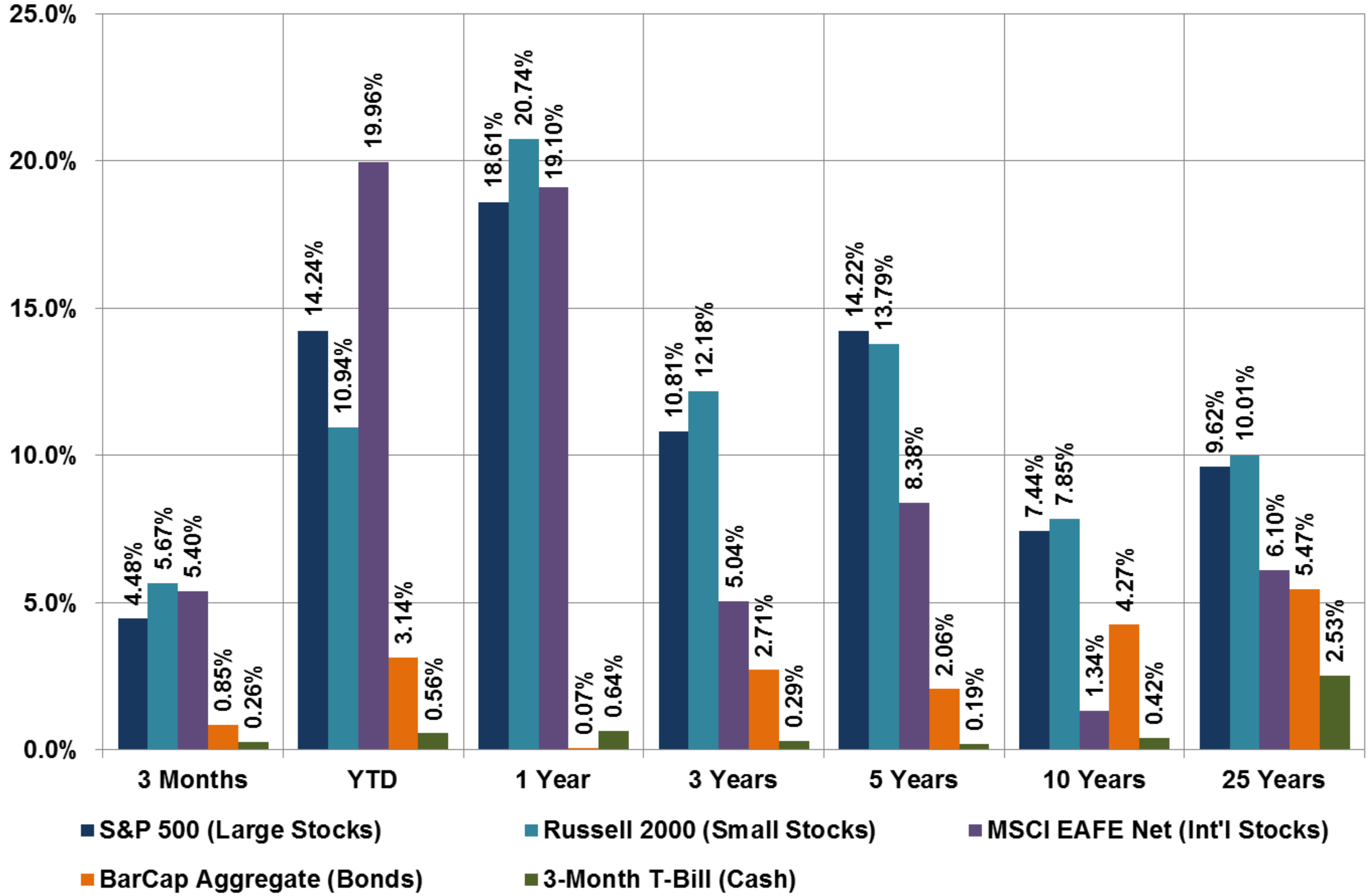
- Plan assets were allocated 31% to Cash/Fixed Income, 5% to International & Emerging Markets Debt, 32% to U.S. Large Cap Equity, 7% to Mid Cap Equity, 5% to Small Cap Equity, 16% to International Equity, and 4% to Real Estate.

Capital Market Highlights

- U.S. stocks produced positive returns during the third quarter with the S&P 500 index returning +4.5%. Bonds were positive during the third quarter with the Barclay's Capital US Aggregate index up +0.8%.
- International developed markets continued their strong performance with the MSCI EAFE index returning +5.4% for the quarter. Returns on emerging markets stocks were also strong with the MSCI Emerging Markets index returning +7.9%. Emerging markets debt had a positive third quarter with the JP Morgan Emerging Markets Bond index returning +10.2%.
- The Fed's guidance has signaled it may raise rates three times in 2017 and have so far implemented two of these increases. The first raise was on March 16, and the second on June 15, both with a 25 bps increase to reach 1.25%. The Fed has indicated they intend to begin normalizing their balance sheet by unwinding the $4.5 trillion they have accumulated.
- Average hourly earnings continue to trend up with the hourly earnings of all private employees reaching $26.39 in September, from $26.25 in June.
- The unemployment rate dropped to 4.2% in September, below the forecast of 4.3% by the end of the year, and well below the Fed's 5% target. February 2001 was the last time this rate was presented.
- The labor force participation rate is near its lowest levels in 40 years and ended the third quarter at 63.1%, which is the highest level since 2012.
- Inflation finally moved above 2% in 2016 and held above this level over the first quarter of 2017 before dropping to 1.6% at the end of the second quarter due largely to decreasing energy and food prices. At the end of August 2017, inflation increased to 1.8%.
- West Texas Intermediate (WTI) oil futures ended the third quarter at $51.67. Volatility has been over the year: from $50.54 at the beginning of the second quarter, $45.24 at end of the second quarter, with prices dropping sharply through April, rebounded in May, and fell again throughout June.

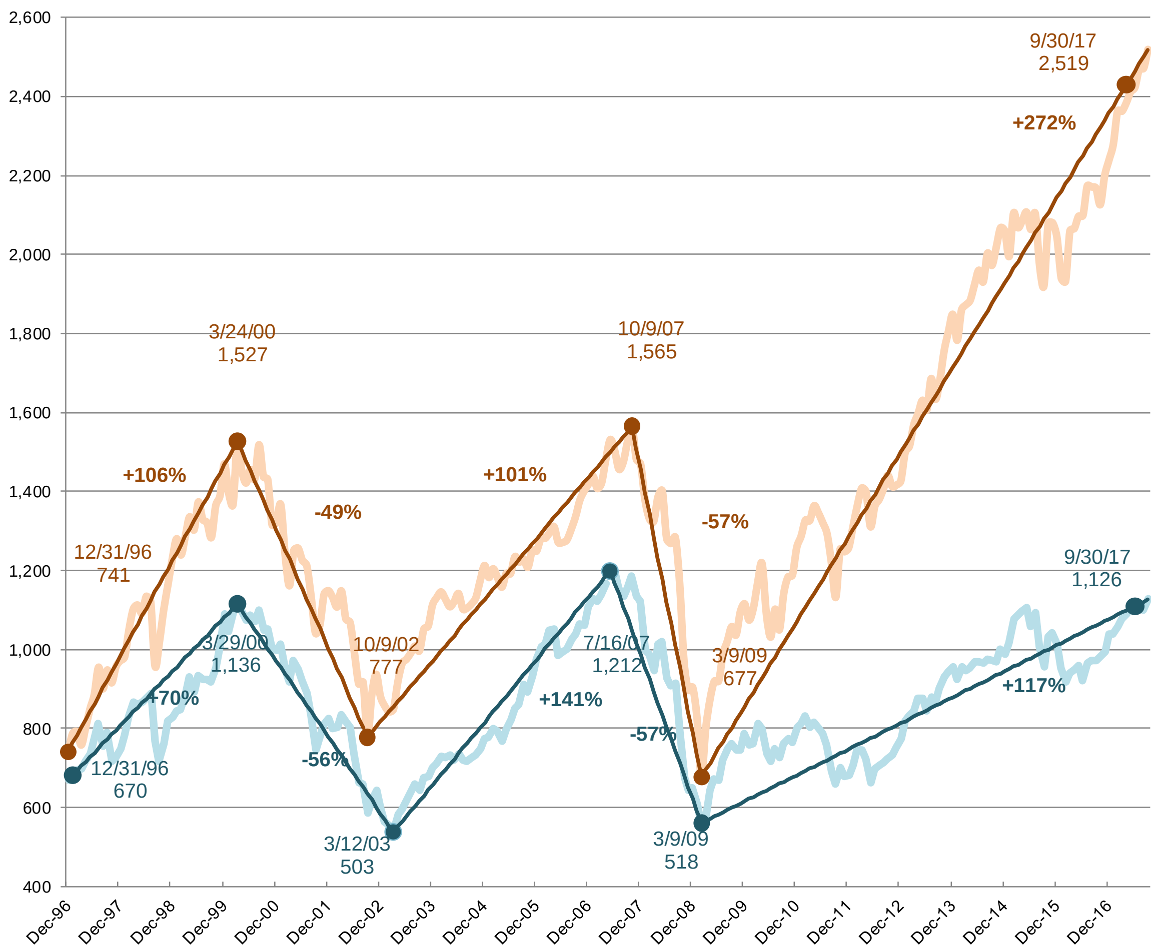
Capital Market Highlights

Capital Market Performance as of September 30, 2017



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, 2017	17.7

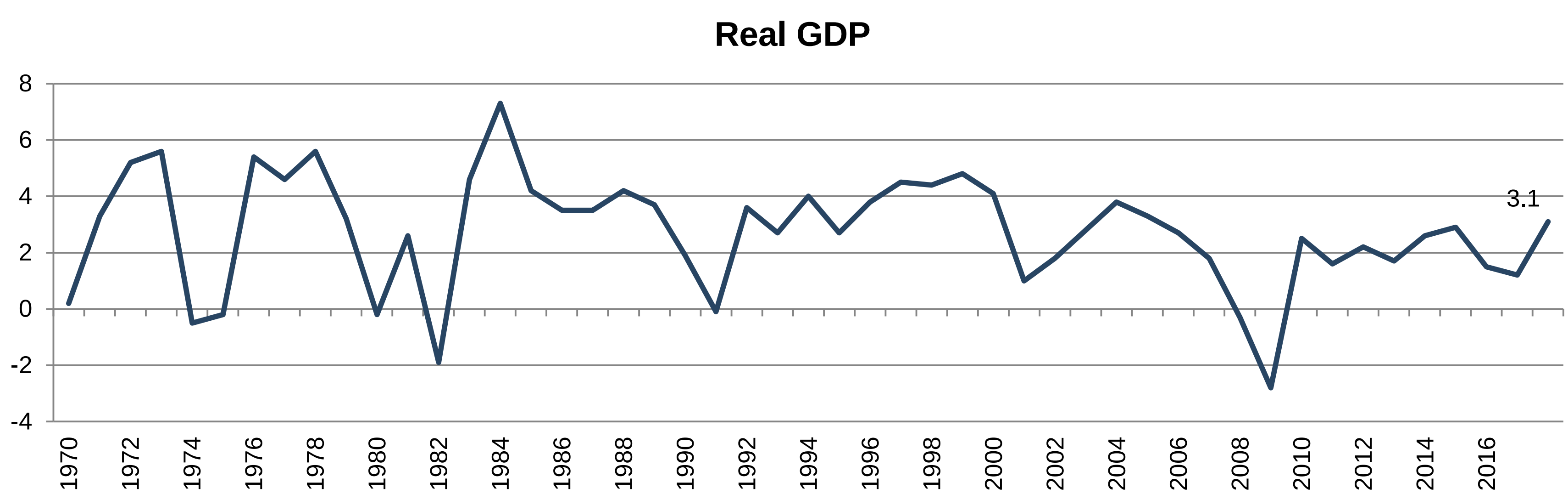
MSCI EAFE	P/E (fwd)
Dec. 31, 1996	19.5
Mar. 29, 2000	28.7
Mar. 12, 2003	13.2
Jul. 16, 2007	14.5
Mar. 9, 2009	10.2
Apr. 27, 2015	18.1
Sep. 30, 2017	14.2

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

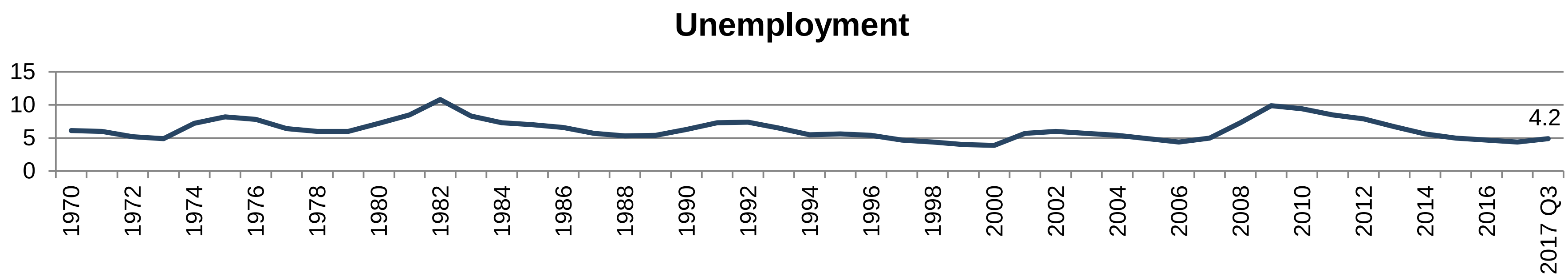
Returns based on S&P 500 Index Price Movement and MSCI EAFE Local Currency Index Price Movement

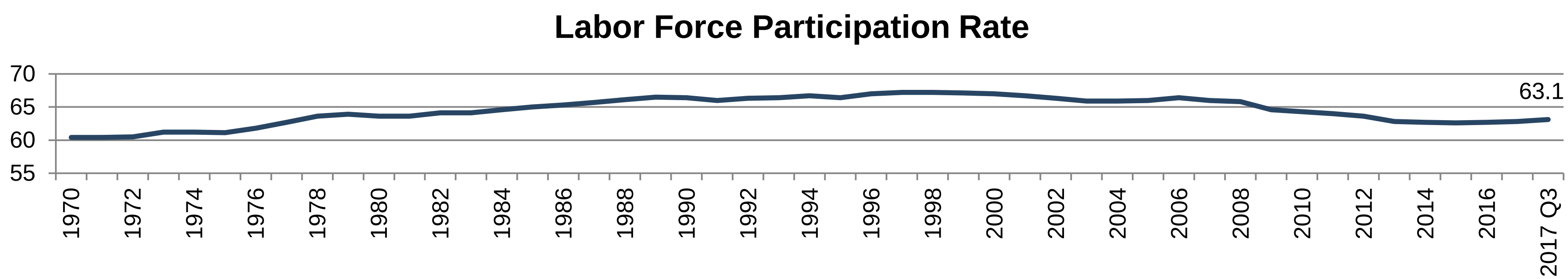
US Economy

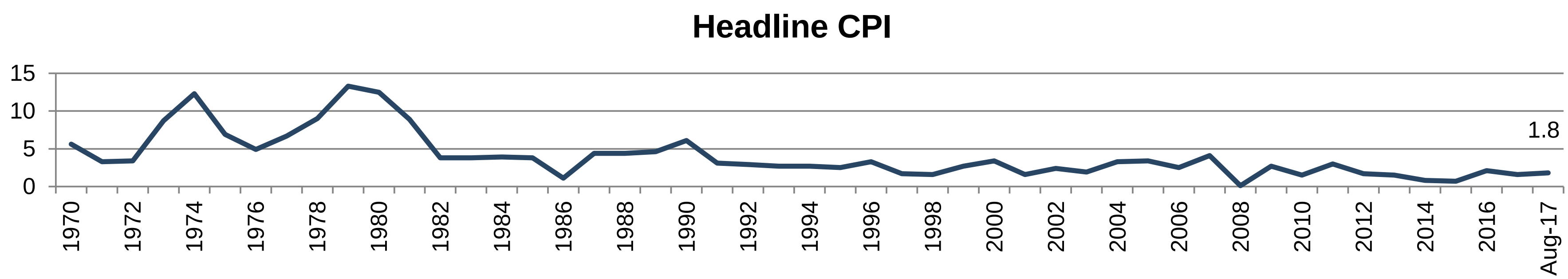
- GDP growth has been increasing steadily thorough 2017 reaching an annual rate of 3.1 through the second quarter, after increasing from a 1.2 in the first quarter. The common theme for growth in 2016 has been strong personal consumption expenditures, exports, inventory investment, nonresidential fixed investment and federal government spending. On the contrary, residential fixed investment, and state and local government spending were the main detractors.
- The Federal Reserve Bank of Atlanta forecasts third quarter GDP to be +2.5%, from previous estimate of +2.8%*. Official third quarter GDP numbers have not been released.



US Economy

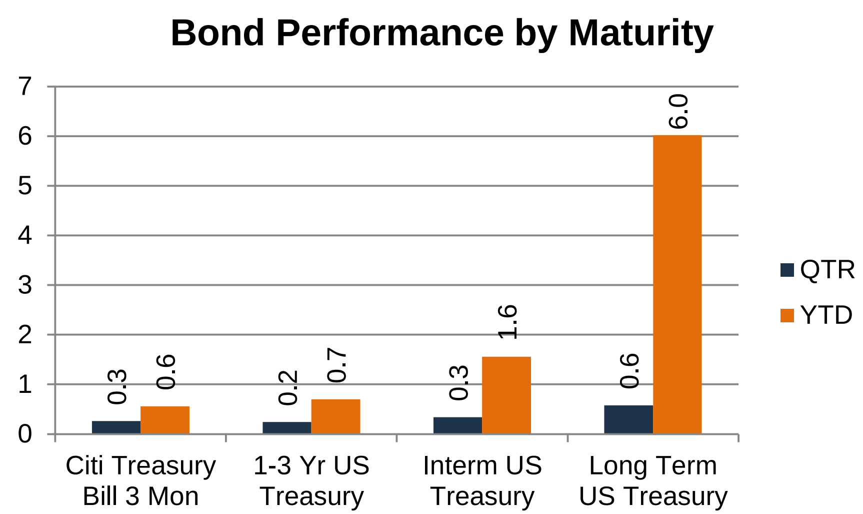

Unemployment
15
10
5
0
4.2
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2017 Q3

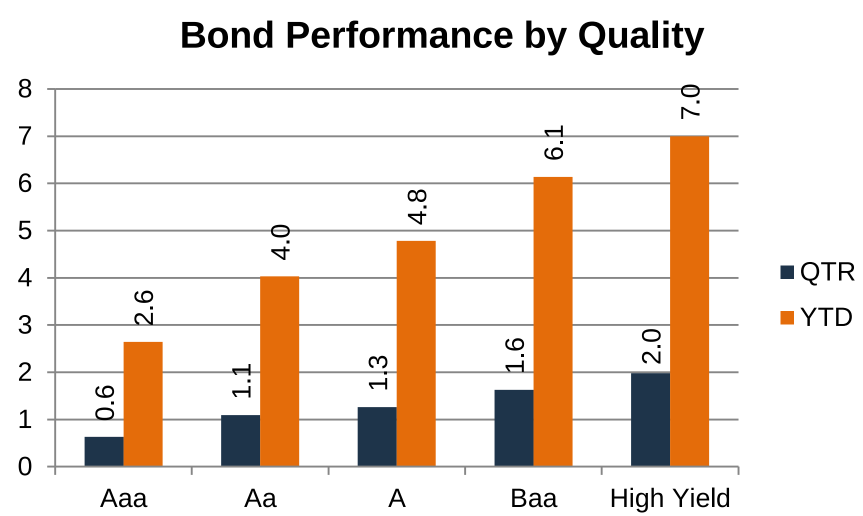

Labor Force Participation Rate
70
65
60
55
63.1
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2017 Q3


Headline CPI
15
10
5
0
1.8
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Aug-17

Fixed Income

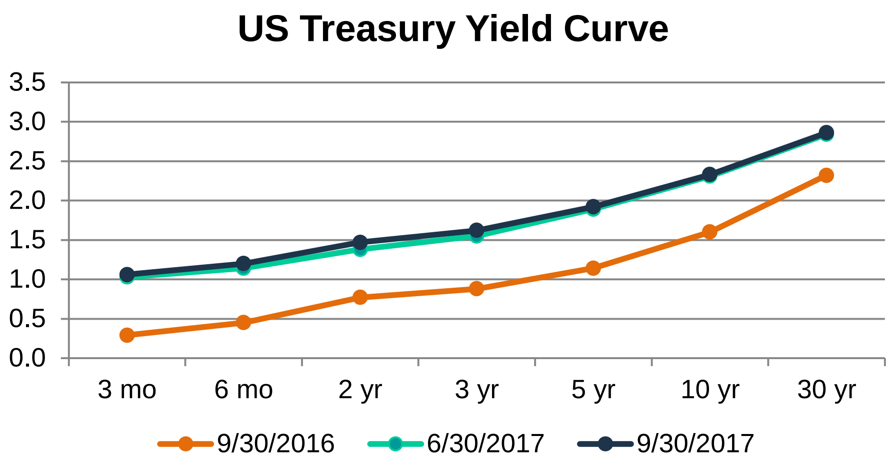
- **High Yield** outperformed investment grade credit during the quarter. High Yield returned +2.0% in the third quarter vs +1.3% return for investment grade. High yield is up +7.0% YTD relative to the return of +5.2% on investment grade credit.
- **Long Govt/Credit** and **Long Treasuries** continued with positive returns returning +1.5% and +0.6%, respectively. Both indices outperformed their intermediate siblings which returned +0.6% and +0.3%, respectively.

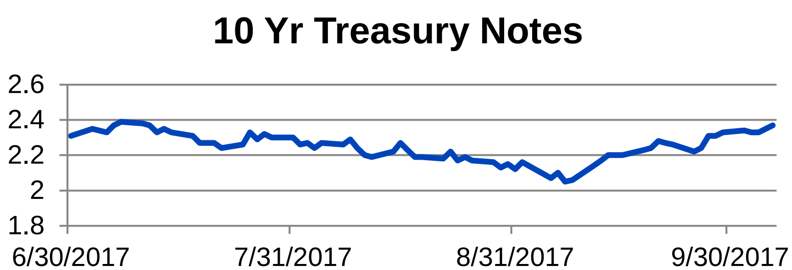


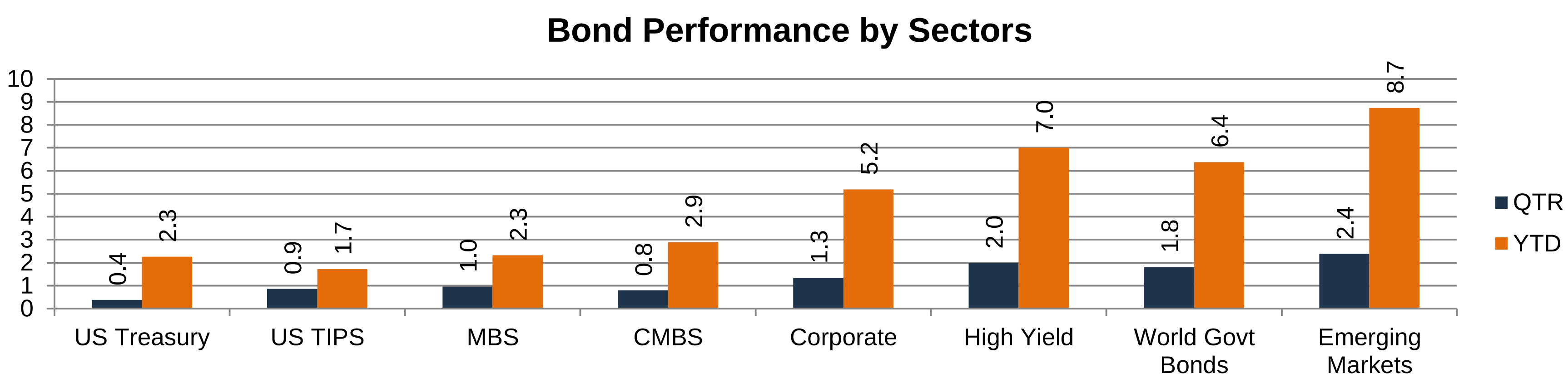


Fixed Income

- The **Barclays Aggregate Index** returned +0.8% for the quarter and is up +3.1% YTD.
- The yield on **10 Year Treasury Notes** was volatile during the quarter although it remained the same at the end of the period. It started on 2.31%, and in the beginning of July it went up to 2.39%, decreasing then until reaching 2.05% in mid-August, when finally it went up again to 2.33%.

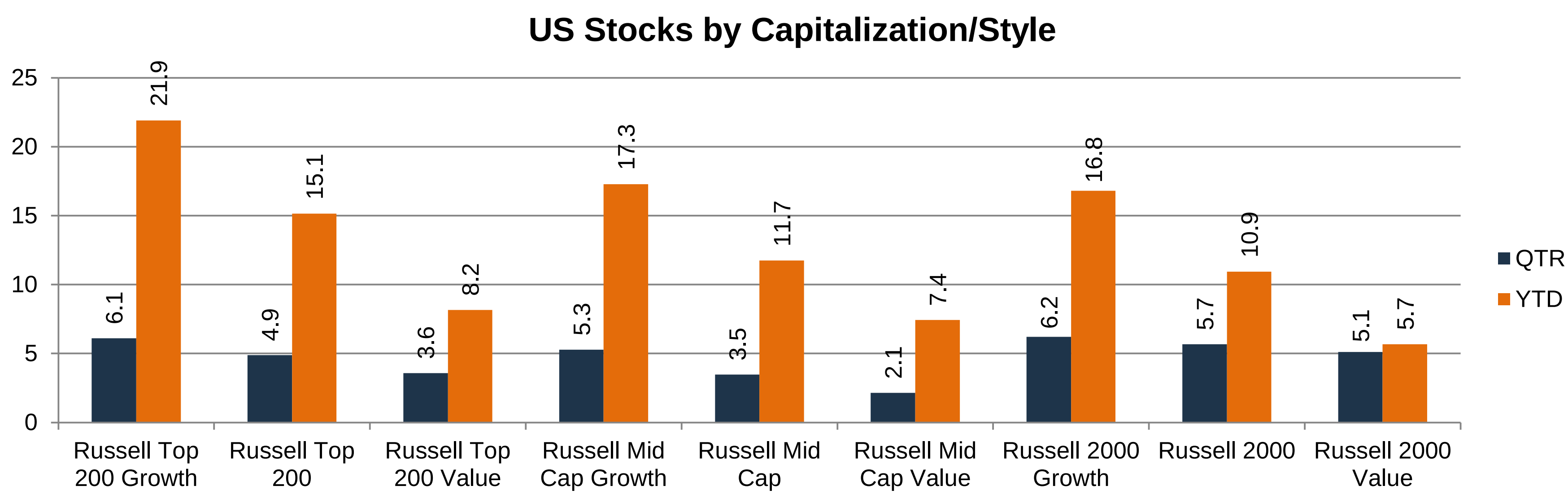






Equities

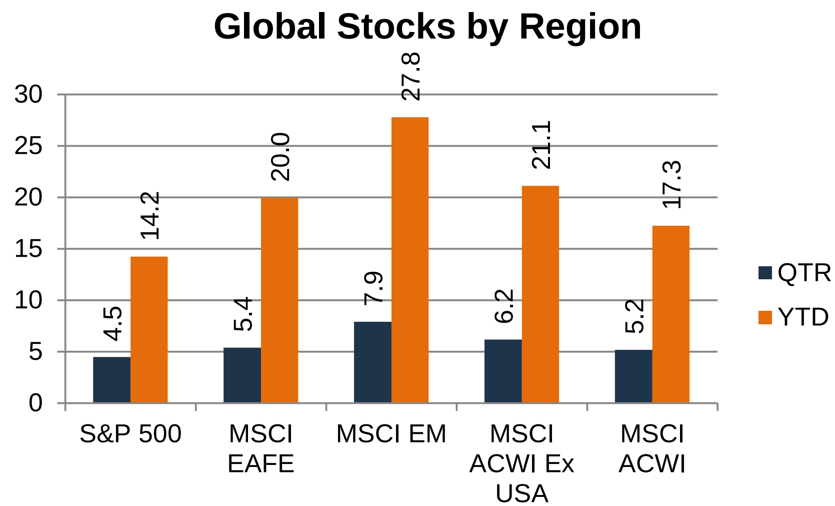
- US Equities were up for the quarter, with the **S&P 500** returning +4.5% and is up +14.2% YTD.
- In terms of market capitalization, small-cap equities with growth characteristics (**Russell 2000 Growth**) were the best performing, returning +6.2% for the quarter, followed by large cap stocks (**Russell Top 200**) with +6.1%. In comparison, mid-cap value and mid-cap returned +2.1% and +3.5%, respectively, as measured by the **Russell Mid Cap Value and Russell Mid Cap.**
- Value and growth stocks that posted negative returns on August, recovered during September. The Dow delivered a return of +4.9% during the third quarter.

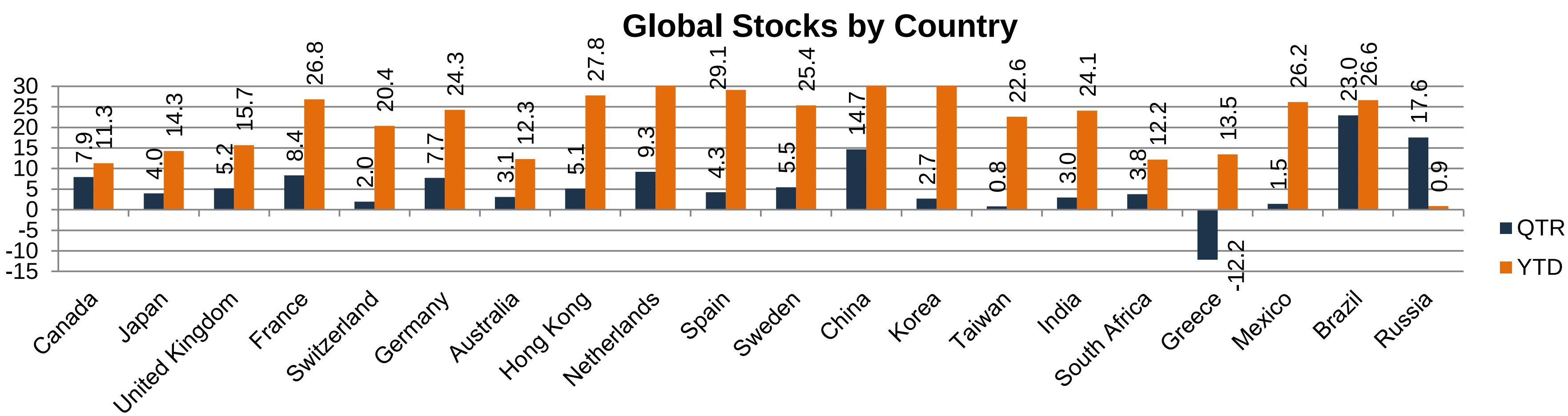


Equities

- **Emerging Market Equities** were the best performing asset class over the quarter, and YTD, with emerging market equities returning +7.9%. Brazil returned 23.0%, Russian outperformed with 17.6%, China returned +14.7%, South Korea was up +2.7%, Mexico was up 1.5%, and India was up 3.0%.

- **International Equities** returned positive returns except Greece, that underperformed with -12.2%. Canada returned a positive +7.9%, German equities gained +7.7%, French equities gained +8.4%, and Switzerland was up +2.0%. The United Kingdom was up +5.2% and Japan was up with a +4.0% third quarter return.





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Market Indices

For Periods Ended September 30, 2017

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	4.48	7.71	14.24	18.61	17.01	10.81	12.98	14.22	7.44
Russell 1000 Index	4.48	7.68	14.17	18.54	16.72	10.63	12.67	14.27	7.55
Russell Midcap Index	3.47	6.27	11.74	15.32	14.79	9.54	11.08	14.26	8.08
Russell 2000 Index	5.67	8.27	10.94	20.74	18.08	12.18	10.06	13.79	7.85
Russell 3000 Index	4.57	7.72	13.91	18.71	16.82	10.74	12.45	14.23	7.57
Russell 1000 Growth Index	5.90	10.84	20.72	21.94	17.78	12.69	14.27	15.26	9.08
Russell 1000 Value Index	3.11	4.50	7.92	15.12	15.66	8.53	11.03	13.20	5.92
Russell Midcap Growth Index	5.28	9.72	17.29	17.82	14.48	9.96	11.06	14.18	8.20
Russell Midcap Value Index	2.14	3.54	7.43	13.37	15.30	9.19	11.20	14.33	7.85
Russell 2000 Growth Index	6.22	10.88	16.81	20.98	16.47	12.17	10.01	14.28	8.47
Russell 2000 Value Index	5.11	5.81	5.68	20.55	19.68	12.12	10.06	13.27	7.14
MSCI EAFE Index	5.40	11.86	19.96	19.10	12.63	5.04	4.84	8.38	1.34
MSCI Emerging Markets Index	7.89	14.66	27.78	22.46	19.59	4.90	4.75	3.99	1.32
MSCI All Country World ex USA	6.16	12.30	21.13	19.61	14.32	4.70	4.72	6.97	1.28
NAREIT Equity REITs	0.94	2.47	3.67	0.67	9.85	9.86	10.67	9.69	5.83
Barclays Capital Aggregate Bond Index	0.85	2.31	3.14	0.07	2.60	2.71	3.02	2.06	4.27
Barclays Capital Intermediate G/C Bond Index	0.60	1.55	2.34	0.23	1.86	2.13	2.15	1.61	3.64
Barclays Capital Long Term G/C Bond Index	1.53	5.98	7.65	-0.79	6.66	5.45	7.26	3.94	7.37
Barclays Capital U.S. TIPS	0.86	0.46	1.72	-0.73	2.86	1.62	1.61	0.02	3.90
Barclays Capital U.S. Government	0.38	1.56	2.25	-1.56	1.18	2.01	2.08	1.25	3.61
Barclays Capital U.S. Corporate Inv Grade	1.34	3.91	5.19	2.21	5.34	4.10	4.76	3.46	5.74
Barclays Capital U.S. Corporate High Yield	1.98	4.19	7.00	8.88	10.79	5.83	6.17	6.36	7.84
Citigroup Non-US WGBI USD	2.57	6.48	8.63	-3.14	4.44	0.47	0.10	-1.07	2.67
JP Morgan EMBI Global Diversified USD	2.63	4.93	8.99	4.61	10.25	6.50	7.29	4.91	7.46
JP Morgan GBI EM Global Diversified USD	3.55	7.30	14.28	7.32	12.08	0.26	-0.19	-0.91	3.80
Citigroup 90-Day Treasury Bills	0.26	0.44	0.56	0.64	0.42	0.29	0.22	0.19	0.42

Note: Returns greater than one year are annualized.

Market Indices

Annual Returns

Index	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
S&P 500 Index	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46	-37.00	5.49
Russell 1000 Index	12.05	0.92	13.24	33.11	16.42	1.50	16.10	28.43	-37.60	5.77
Russell Midcap Index	13.80	-2.44	13.22	34.76	17.28	-1.55	25.48	40.48	-41.46	5.60
Russell 2000 Index	21.31	-4.41	4.89	38.82	16.35	-4.18	26.85	27.17	-33.79	-1.57
Russell 3000 Index	12.74	0.48	12.56	33.55	16.42	1.03	16.93	28.34	-37.31	5.14
Russell 1000 Growth Index	7.08	5.67	13.05	33.48	15.26	2.64	16.71	37.21	-38.44	11.81
Russell 1000 Value Index	17.34	-3.83	13.45	32.53	17.51	0.39	15.51	19.69	-36.85	-0.17
Russell Midcap Growth Index	7.33	-0.20	11.90	35.74	15.81	-1.65	26.38	46.29	-44.32	11.43
Russell Midcap Value Index	20.00	-4.78	14.75	33.46	18.51	-1.38	24.75	34.21	-38.44	-1.42
Russell 2000 Growth Index	11.32	-1.38	5.60	43.30	14.59	-2.91	29.09	34.47	-38.54	7.05
Russell 2000 Value Index	31.74	-7.47	4.22	34.52	18.05	-5.50	24.50	20.58	-28.92	-9.78
MSCI EAFE Index	1.00	-0.81	-4.90	22.78	17.32	-12.14	7.75	31.78	-43.38	11.17
MSCI Emerging Markets Index	11.19	-14.92	-2.19	-2.60	18.22	-18.42	18.88	78.51	-53.33	39.42
MSCI All Country World ex USA	4.50	-5.66	-3.87	15.29	16.83	-13.71	11.15	41.45	-45.53	16.65
NAREIT Equity REITs	8.52	3.20	30.14	2.47	18.06	8.29	27.96	27.99	-37.73	-15.69
Barclays Capital Aggregate Bond Index	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93	5.24	6.97
Barclays Capital Intermediate G/C Bond Index	2.08	1.07	3.13	-0.86	3.89	5.80	5.89	5.24	5.08	7.39
Barclays Capital Long Term G/C Bond Index	6.67	-3.30	19.31	-8.83	8.78	22.49	10.16	1.92	8.44	6.60
Barclays Capital U.S. TIPS	4.68	-1.44	3.64	-8.61	6.98	13.56	6.31	11.41	-2.35	11.64
Barclays Capital U.S. Government	1.05	0.86	4.92	-2.60	2.02	9.02	5.52	-2.20	12.39	8.66
Barclays Capital U.S. Corporate Inv Grade	6.11	-0.68	7.46	-1.53	9.82	8.15	9.00	18.68	-4.94	4.56
Barclays Capital U.S. Corporate High Yield	17.13	-4.47	2.45	7.44	15.81	4.98	15.12	58.21	-26.16	1.87
Citigroup Non-US WGBI USD	1.81	-5.54	-2.68	-4.56	1.51	5.17	5.21	4.39	10.11	11.45
JP Morgan EMBI Global Diversified USD	10.15	1.18	7.43	-5.25	17.44	7.35	12.24	29.82	-12.03	6.16
JP Morgan GBI EM Global Diversified USD	9.94	-14.92	-5.72	-8.98	16.76	-1.75	15.68	21.98	-5.22	18.11
Citigroup 90-Day Treasury Bills	0.27	0.03	0.03	0.05	0.07	0.08	0.13	0.16	1.80	4.74

Asset Allocation

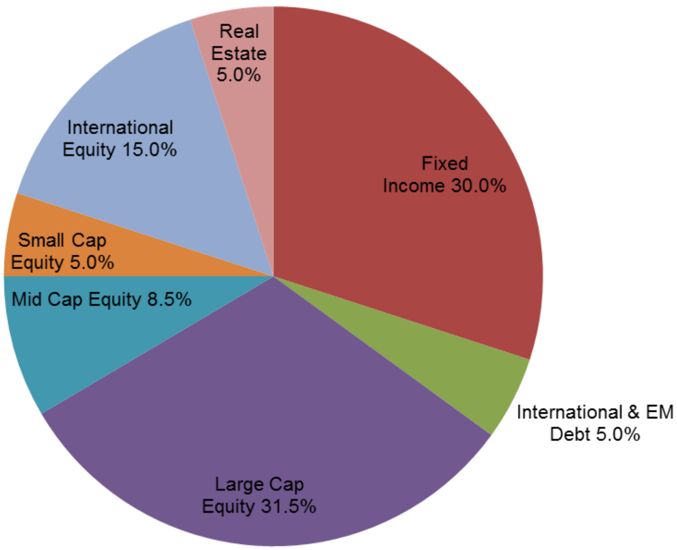
As of September 30, 2017

Manager	Cash & Equivalents	Fixed Income	International & EM Debt	Large Cap Equity	Mid Cap Equity	Small Cap Equity	International Equity	Real Estate	Total	Percent of Total
Wells Fargo Money Market	$1,459,211								**$1,459,211**	**3.5%**
Baird Core Bond I		$3,510,827							**$3,510,827**	**8.5%**
DoubleLine Total Return Bond I		$3,454,448							**$3,454,448**	**8.3%**
Vanguard Total Bond Market Idx Adm		$3,403,814							**$3,403,814**	**8.2%**
Vanguard Intermediate Inv Grade Adm		$865,804							**$865,804**	**2.1%**
Templeton Global Bond R6			$2,062,605						**$2,062,605**	**5.0%**
Berkshire Hathaway B				$1,384,983					**$1,384,983**	**3.3%**
Vanguard Dividend Growth Inv				$1,753,019					**$1,753,019**	**4.2%**
American Funds Washington Mutual R6				$1,825,439	$96,076				**$1,921,515**	**4.6%**
Vanguard Equity Income Adm				$1,743,607	$193,734				**$1,937,341**	**4.7%**
Vanguard Total Stock Market Idx Instl				$6,525,335	$1,864,382	$932,191			**$9,321,908**	**22.5%**
Vanguard Explorer Adm					$436,035	$654,052			**$1,090,087**	**2.6%**
DFA US Targeted Value I					$269,062	$627,811			**$896,873**	**2.2%**
American Funds EuroPacific Growth R6							$2,759,531		**$2,759,531**	**6.7%**
American Funds New World R6							$1,376,775		**$1,376,775**	**3.3%**
Vanguard Developed Markets Idx Adm							$2,376,424		**$2,376,424**	**5.7%**
Vanguard REIT Idx Adm								$1,834,219	**$1,834,219**	**4.4%**
Total	**$1,459,211**	**$11,234,893**	**$2,062,605**	**$13,232,384**	**$2,859,288**	**$2,214,054**	**$6,512,730**	**$1,834,219**	**$41,409,384**	
Percent of Total	**3.5%**	**27.1%**	**5.0%**	**32.0%**	**6.9%**	**5.3%**	**15.7%**	**4.4%**		
Policy Target	**0.0%**	**30.0%**	**5.0%**	**31.5%**	**8.5%**	**5.0%**	**15.0%**	**5.0%**		

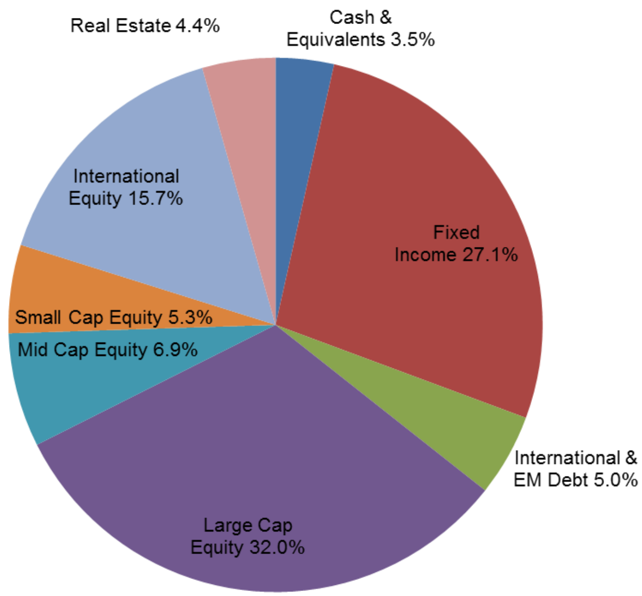
Policy Target vs. Actual Allocation

As of September 30, 2017

Policy Targets



Asset Allocation



Performance Summary – Net of Fees

As of September 30, 2017

Fund/Benchmark	Qtr	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	Standard Deviation 3 Years	Standard Deviation 5 Years	Expense Ratio
	(periods longer than 1 year are annualized)								
Total Portfolio Return (gross)	**3.47**	**3.47**	**12.21**	**6.11**	**7.22**	**-**	**5.30**	**5.51**	**-**
Custom Benchmark*	3.32	3.32	11.23	7.42	8.69	-	6.11	5.94	-
Wells Fargo Cash Account	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Citi Treasury Bill 3 Month	0.26	0.26	0.64	0.29	0.19	0.42	0.09	0.08	-
Avg Money Market	0.17	0.16	0.37	0.16	0.09	0.35	0.07	0.06	0.51
Baird Core Plus Bond Inst	**1.05**	**1.05**	**1.60**	**3.50**	**2.98**	**5.45**	**2.83**	**2.99**	**0.30**
Barclays US Universal	1.01	1.01	0.96	3.11	2.53	4.56	2.72	2.79	-
Avg Intermediate-Term Bond	0.88	0.88	0.83	2.51	2.12	4.26	2.74	2.84	0.78
DoubleLine Total Return Bond I	**1.08**	**1.08**	**1.66**	**3.15**	**3.10**	**-**	**2.00**	**2.30**	**0.48**
Vanguard Total Bond Market Index Adm	**0.73**	**0.73**	**-0.13**	**2.62**	**1.97**	**4.22**	**3.06**	**2.98**	**0.05**
Barclays US Agg Bond	0.85	0.85	0.07	2.71	2.06	4.27	2.86	2.85	-
Avg Intermediate-Term Bond	0.88	0.88	0.83	2.51	2.12	4.26	2.74	2.84	0.78
Vanguard Interm-Term Investment-Grade Adm	**1.11**	**1.11**	**0.98**	**3.64**	**3.01**	**5.43**	**3.18**	**3.34**	**0.10**
Barclays US Credit 5-10 Yr	1.40	1.40	1.66	4.16	3.50	6.11	3.76	4.07	-
Avg Corporate Bond	1.24	1.27	2.15	3.74	3.37	5.32	3.81	3.99	0.85
Templeton Global Bond R6	**1.23**	**1.23**	**13.36**	**1.85**	**3.06**	**6.22**	**6.59**	**5.99**	**0.52**
Citi WGBI	1.81	1.81	-2.69	0.88	-0.43	2.95	5.81	5.39	-
Avg World Bond	1.63	1.66	1.96	1.48	1.15	3.68	5.01	4.96	0.96

*The Custom Index is comprised of 31.5% S&P 500, 8.5% S&P MidCap 400, 5% Russell 2000, 15% MSCI ACWI ex-US, 30% BarCap US Aggregate Bond, 2.5% BarCap Global Agggregate Bond ex-US, 1.25% JPM EM Bond Global Diversified, 1.25% JPM Government Bond EM Global Diversified, and 5% Wilshire US REIT.

*Prior to 1/1/2016, the Index was comprised of 28% S&P 500, 8% Russell 2000, 14% MSCI ACWI ex-US, 33% BarCap US Aggregate Bond, 7% Wilshire US REIT, and 10% Citi T-bills.

*Prior to 6/30/14, the Index was comprised of 31.50% S&P 500 Composite, 13.50% Russell 2000, 10% MSCI EAFE, 40% BarCap US Aggregate Bond, and 5% FTSE NAREIT.

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

Performance Summary – Net of Fees

As of September 30, 2017

	(periods longer than 1 year are annualized)						Standard Deviation		Expense
Fund/Benchmark	**Qtr**	**Fiscal YTD**	**1 Year**	**3 Years**	**5 Years**	**10 Years**	**3 Years**	**5 Years**	**Ratio**
Vanguard Equity-Income Adm	4.49	4.49	16.75	10.31	13.38	7.76	**9.31**	**9.03**	**0.17**
Russell 1000 Value	3.11	3.11	15.12	8.53	13.20	5.92	10.31	9.93	-
Avg Large Value	3.80	3.77	16.17	7.99	12.23	5.72	10.79	10.24	1.04
American Funds Washington Mutual R6	5.66	5.66	19.58	10.07	13.82	7.08	**9.71**	**9.08**	**0.30**
Berkshire Hathaway Inc Class B	8.24	8.24	26.89	9.89	15.76	8.78	**12.96**	**12.61**	**-**
S&P 500	4.48	4.48	18.61	10.81	14.22	7.44	10.07	9.55	-
Avg Large Blend	4.19	4.22	17.65	9.03	12.91	6.58	10.38	9.96	0.98
Vanguard Dividend Growth Inv	2.76	2.76	14.11	9.56	12.81	8.20	**9.08**	**8.81**	**0.30**
Russell 1000	4.48	4.48	18.54	10.63	14.27	7.55	10.11	9.64	-
Avg Large Blend	4.19	4.22	17.65	9.03	12.91	6.58	10.38	9.96	0.98
Vanguard Total Stock Market Idx Instl	4.54	4.54	18.64	10.70	14.19	7.70	**10.23**	**9.78**	**0.04**
Vanguard Tot Stk Mkt Custom Index*	4.55	4.55	18.64	10.71	14.20	7.69	10.22	9.78	-
Avg Large Blend	4.19	4.22	17.65	9.03	12.91	6.58	10.38	9.96	0.98
DFA US Targeted Value I	5.26	5.26	19.00	9.21	14.08	7.90	**14.76**	**14.20**	**0.37**
Russell 2000 Value	5.11	5.11	20.55	12.12	13.27	7.14	14.57	13.93	-
Avg Small Value	4.69	4.72	17.89	9.17	12.32	7.10	14.86	14.20	1.30
Vanguard Explorer Adm	4.48	4.48	18.83	10.06	14.11	7.83	**13.20**	**12.95**	**0.34**
Russell 2500 Growth	5.78	5.78	20.07	11.27	7.74	1.22	13.27	13.00	-
Avg Small Growth	5.62	5.56	20.40	11.15	13.02	7.57	14.23	13.88	1.29

*Reflects changes to fund's index over time. Wilshire 5000 Tot Mkt Index through 4/22/05; MSCI US Broad Mkt Index through 6/02/13; and the CRSP US Tot Mkt Index thereafter.

Performance Summary – Net of Fees

As of September 30, 2017

Fund/Benchmark	Qtr	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	Standard Deviation 3 Years	Standard Deviation 5 Years	Expense Ratio
	(periods longer than 1 year are annualized)								
Vanguard Developed Markets Idx Adm	5.49	5.49	19.27	5.87	8.92	1.68	**11.45**	**11.32**	**0.07**
Vanguard Dev Mkt Custom Index*	5.65	5.65	19.08	5.79	8.63	1.72	12.13	11.53	-
Avg Foreign Large Blend	5.34	5.36	18.01	5.07	7.74	1.22	11.65	11.26	1.07
American Funds Europacific Growth R6	6.86	6.86	20.63	7.56	9.51	3.60	**11.09**	**10.56**	**0.50**
MSCI ACWI Ex USA	6.16	6.16	19.61	4.70	6.97	1.28	12.25	11.55	-
Avg Foreign Large Growth	6.51	6.67	18.47	6.96	8.81	2.25	11.68	11.32	1.23
American Funds New World R6	7.34	7.34	20.58	6.18	6.97	3.49	**11.33**	**10.74**	**0.65**
50% MSCI EAFE / 50% EM	6.65	6.65	20.82	5.06	6.26	1.46	13.10	12.20	-
Avg Emerging Markets	7.32	6.92	19.93	3.86	4.09	1.27	14.71	13.96	1.44
Vanguard REIT Index Adm	0.89	0.89	0.42	9.54	9.48	6.03	**14.46**	**13.74**	**0.12**
MSCI REIT Index	0.63	0.63	-0.69	8.28	8.23	4.40	14.40	13.70	-
Avg Real Estate	0.76	0.72	1.78	8.76	8.73	5.13	13.46	12.93	1.20

*Reflects changes to fund's index over time. FTSE Developed ex North America prior to 12/21/2015 and FTSE Developed ex US All Cap thereafter.

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Annual Returns

Fund/Benchmark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total Portfolio Return (gross)	**8.07**	**-2.38**	**5.66**	**13.77**	**12.70**	**2.76**	**13.27**	**18.31**	-	-
Custom Benchmark	8.72	-0.06	7.70	16.17	11.76	3.09	13.63	19.74	-	-
Wells Fargo Cash Account	-	-	-	-	-	-	-	-	-	-
Citi Treasury Bill 3 Month	0.27	0.03	0.03	0.05	0.07	0.08	0.13	0.16	1.80	4.74
Avg Money Market	0.09	0.02	0.01	0.02	0.03	0.02	0.04	0.17	2.00	4.63
Baird Core Plus Bond Inst	**4.73**	**0.14**	**6.59**	**-1.32**	**7.95**	**7.89**	**9.81**	**15.36**	**-1.79**	**5.99**
Barclays US Universal	3.91	0.43	5.56	-1.35	5.53	7.40	7.16	8.60	2.38	6.50
Avg Intermediate-Term Bond	3.23	-0.26	5.18	-1.42	7.01	5.86	7.72	13.97	-4.70	4.70
DoubleLine Total Return Bond I	**2.17**	**2.32**	**6.73**	**0.02**	**9.16**	**9.51**	-	-	-	-
Vanguard Total Bond Market Index Adm	**2.60**	**0.40**	**5.89**	**-2.15**	**4.15**	**7.69**	**6.54**	**6.04**	**5.15**	**7.02**
Barclays US Agg Bond	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93	5.24	6.97
Avg Intermediate-Term Bond	3.23	-0.26	5.18	-1.42	7.01	5.86	7.72	13.97	-4.70	4.70
Vanguard Interm-Term Investment-Grade Adm	**3.93**	**1.63**	**5.91**	**-1.27**	**9.24**	**7.62**	**10.59**	**17.87**	**-6.06**	**6.26**
Barclays US Credit 5-10 Yr	5.23	0.69	7.38	-2.05	11.26	8.21	10.54	18.96	-4.66	5.04
Avg Corporate Bond	6.51	-1.39	6.93	-1.06	11.06	7.46	10.00	22.61	-7.90	4.17
Templeton Global Bond R6	**6.78**	**-3.91**	**1.97**	**2.36**	**15.81**	**-2.37**	**12.68**	**18.86**	**6.28**	**10.86**
Citi WGBI	1.60	-3.57	-0.48	-4.00	1.65	6.35	5.17	2.55	10.89	10.95
Avg World Bond	3.63	-4.00	1.72	-2.62	8.09	3.39	6.35	13.12	-1.57	7.28

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

CONDUENT

Annual Returns

Fund/Benchmark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Vanguard Equity-Income Adm	**14.82**	**0.86**	**11.38**	**30.19**	**13.58**	**10.69**	**14.99**	**17.26**	**-30.86**	**4.99**
Russell 1000 Value	17.34	-3.83	13.45	32.53	17.51	0.39	15.51	19.69	-36.85	-0.17
Avg Large Value	14.81	-4.05	10.21	31.21	14.57	-0.75	13.66	24.13	-37.09	1.42
American Funds Washington Mutual R6	**13.73**	**0.12**	**11.53**	**32.34**	**12.85**	**7.35**	**13.69**	**19.24**	**-33.10**	**3.97**
Berkshire Hathaway Inc Class B	**23.43**	**-12.06**	**26.64**	**32.17**	**17.56**	**-4.76**	**21.90**	**2.24**	**-32.14**	**29.19**
S&P 500	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46	-37.00	5.49
Avg Large Blend	10.37	-1.07	10.96	31.50	14.96	-1.27	14.01	28.17	-37.79	6.16
Vanguard Dividend Growth Inv	**7.53**	**2.62**	**11.85**	**31.53**	**10.39**	**9.43**	**11.42**	**21.74**	**-25.57**	**7.00**
Russell 1000	12.05	0.92	13.24	33.11	16.42	1.50	16.10	28.43	-37.60	5.77
Avg Large Blend	10.37	-1.07	10.96	31.50	14.96	-1.27	14.01	28.17	-37.79	6.16
Vanguard Total Stock Market Idx Instl	**12.67**	**0.42**	**12.56**	**33.49**	**16.42**	**1.09**	**17.23**	**28.83**	**-36.94**	**5.56**
Vanguard Tot Stk Mkt Custom Index	12.68	0.40	12.58	33.54	16.44	1.08	17.28	28.76	-37.04	5.59
Avg Large Blend	10.37	-1.07	10.96	31.50	14.96	-1.27	14.01	28.17	-37.79	6.16
DFA US Targeted Value I	**26.86**	**-5.72**	**2.94**	**43.03**	**19.19**	**-6.29**	**29.01**	**31.87**	**-33.78**	**-8.19**
Russell 2000 Value	31.74	-7.47	4.22	34.52	18.05	-5.50	24.50	20.58	-28.92	-9.78
Avg Small Value	25.99	-6.71	3.34	36.22	16.00	-4.45	26.17	31.32	-32.24	-6.08
Vanguard Explorer Adm	**12.47**	**-4.22**	**4.08**	**44.59**	**15.07**	**-1.72**	**27.64**	**36.45**	**-40.29**	**5.26**
Russell 2500 Growth	9.73	-0.19	7.05	40.65	16.13	-1.57	28.86	41.66	-41.50	9.69
Avg Small Growth	11.20	-2.41	2.44	40.91	13.15	-3.55	26.98	35.46	-41.55	7.59

CONDUENT

Annual Returns

Fund/Benchmark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Vanguard Developed Markets Idx Adm	**2.45**	**-0.18**	**-5.66**	**22.06**	**18.56**	**-12.51**	**8.36**	**28.27**	**-41.27**	**11.15**
Vanguard Dev Mkt Custom Index	2.87	-0.53	-5.04	21.47	17.98	-12.45	8.68	33.41	-43.44	12.48
Avg Foreign Large Blend	0.79	-1.59	-4.98	19.44	18.29	-13.97	10.24	31.24	-43.99	12.71
American Funds Europacific Growth R6	**1.01**	**-0.48**	**-2.29**	**20.58**	**19.64**	**-13.31**	**9.76**	**39.35**	**-40.53**	**18.96**
MSCI ACWI Ex USA	4.50	-5.66	-3.87	15.29	16.83	-13.71	11.15	41.45	-45.53	16.65
Avg Foreign Large Growth	-2.14	0.95	-3.92	18.58	17.70	-12.30	14.78	38.02	-46.56	16.26
American Funds New World R6	**4.31**	**-5.62**	**-3.29**	**10.46**	**20.22**	**-13.82**	**17.73**	**52.53**	**-46.32**	**32.85**
50% MSCI EAFE / 50% EM	6.10	-8.02	-3.54	9.55	17.79	-15.31	13.24	54.03	-48.48	24.84
Avg Emerging Markets	8.47	-13.79	-3.01	-0.14	18.15	-19.86	19.26	73.81	-54.44	36.68
Vanguard REIT Index Adm	**8.50**	**2.39**	**30.32**	**2.42**	**17.69**	**8.62**	**28.49**	**29.76**	**-36.98**	**-16.39**
MSCI REIT Index	7.14	1.28	28.82	1.26	16.47	7.48	26.97	26.27	-39.05	-17.84
Avg Real Estate	6.89	2.41	28.03	1.55	17.60	7.51	27.08	31.26	-39.55	-14.66

Performance Analytics

As of September 30, 2017

Fund/Benchmark	5 - Year Sharpe Ratio	5 - Year Alpha	5 - Year Beta	5 - Year Tracking Error	5 - Year Information Ratio	5 - Year Upside Capture	5 - Year Downside Capture	10 Year Batting Average
Vanguard Equity-Income Adm	**1.42**	**0.38**	**0.91**	**2.47**	**-0.34**	**94**	**93**	**44**
Avg Large Value	1.17	-1.50	0.98	4.00	-0.53	93	103	43
American Funds Washington Mutual R6	**1.45**	**0.54**	**0.93**	**1.95**	**-0.21**	**95**	**90**	**43**
Vanguard Dividend Growth Inv	**1.39**	**0.25**	**0.88**	**2.79**	**-0.51**	**89**	**85**	**50**
Vanguard Total Stock Mkt Idx Adm	**1.39**	**-0.25**	**1.02**	**1.17**	**-0.04**	**101**	**104**	**57**
Avg Large Blend	1.26	-1.12	1.00	2.55	-1.25	96	105	42
DFA US Targeted Value I	**0.99**	**-1.89**	**1.17**	**8.92**	**-0.02**	**110**	**129**	**53**
Avg Small Value	0.90	-2.39	1.09	9.67	-0.20	101	126	50
Vanguard Explorer Adm	**1.07**	**-1.85**	**1.16**	**6.93**	**-0.02**	**111**	**131**	**55**
Avg Small Growth	0.95	-1.91	1.10	9.09	-0.13	105	127	53
Vanguard Developed Markets Idx Adm	**0.79**	**2.11**	**0.96**	**2.59**	**0.75**	**103**	**90**	**51**
Avg Foreign Large Blend	0.71	1.26	0.92	3.80	0.21	97	89	49
American Funds Europacific Growth R6	**0.90**	**3.19**	**0.87**	**3.61**	**0.70**	**98**	**78**	**53**
Avg Foreign Large Growth	0.78	2.44	0.89	4.74	0.38	97	82	52
American Funds New World R6	**0.66**	**0.77**	**0.88**	**3.72**	**0.00**	**89**	**84**	**58**
Avg Emerging Markets	0.34	-2.46	1.00	7.90	-0.37	93	111	51
Vanguard REIT Index Adm	**0.71**	**3.91**	**0.59**	**13.10**	**-0.06**	**66**	**38**	**55**
Avg Real Estate	0.71	2.91	0.61	12.11	-0.13	67	46	53

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.

Peer Group Rankings

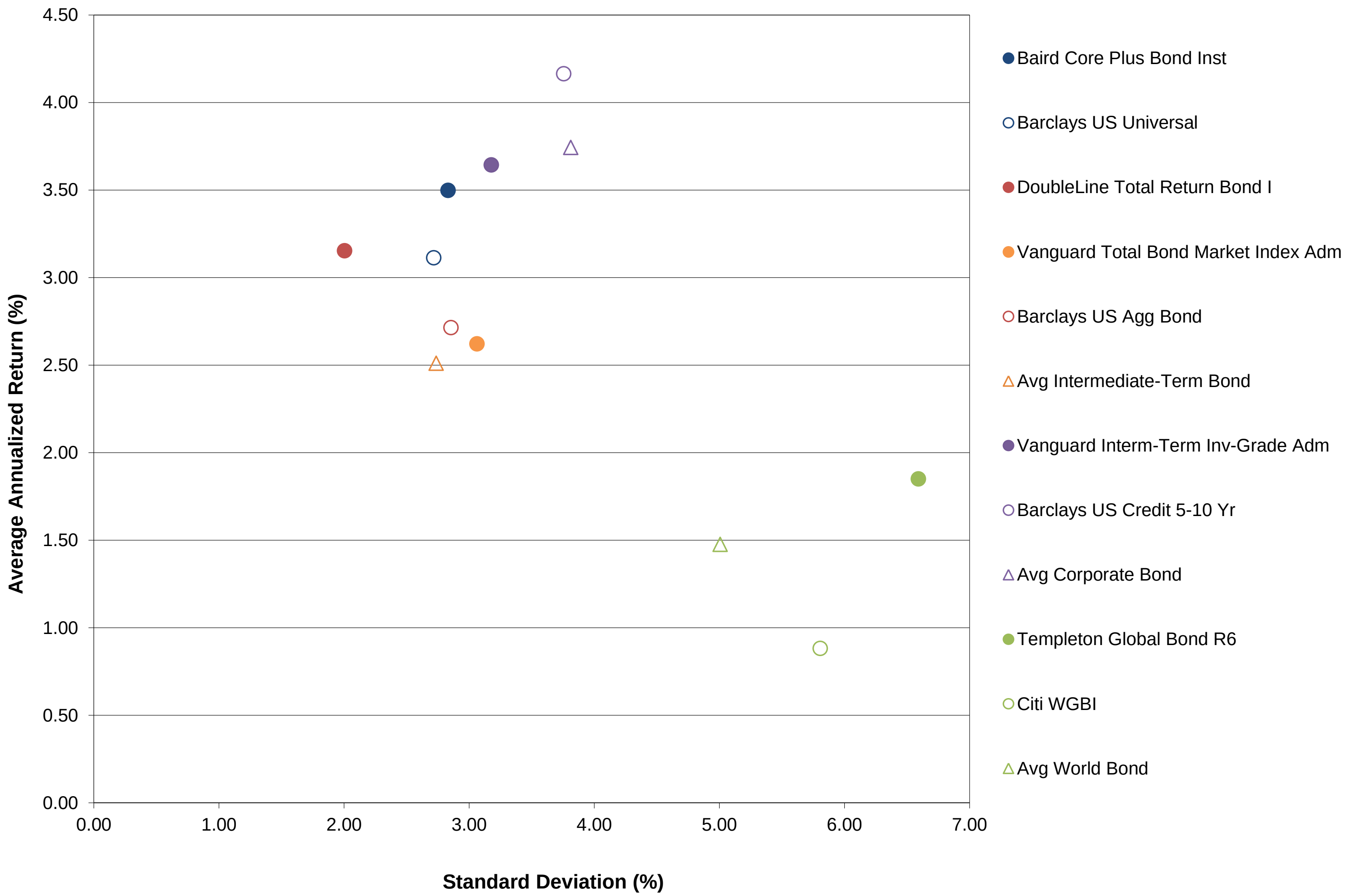
As of September 30, 2017

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

Fund	Morningstar Category	3 Months	YTD	1 Year	3 Years	5 Years	10 Years
Baird Core Plus Bond Inst	Intermediate-Term Bond	28	20	24	6	13	8
DoubleLine Total Return Bond I	Intermediate-Term Bond	25	40	23	19	10	
Vanguard Total Bond Market Index Adm	Intermediate-Term Bond	74	59	81	45	59	58
Vanguard Interm-Term Investment-Grade Adm	Corporate Bond	69	72	88	57	62	48
Templeton Global Bond R6	World Bond	67	66	1	42	16	2
Vanguard Equity-Income Adm	Large Value	26	24	46	8	25	6
American Funds Washington Mutual R6	Large Value	7	8	19	10	16	17
Vanguard Dividend Growth Inv	Large Blend	88	61	86	49	63	8
Vanguard Total Stock Market Idx Instl	Large Blend	32	39	34	17	18	13
DFA US Targeted Value I	Small Value	38	54	44	58	27	34
Vanguard Explorer Adm	Small Growth	73	45	67	67	32	44
Vanguard Developed Markets Idx Adm	Foreign Large Blend	47	39	36	31	19	32
American Funds Europacific Growth R6	Foreign Large Growth	36	40	22	31	27	17
American Funds New World R6	Diversified Emerging Mkts	54	56	52	18	9	10
Vanguard REIT Index Adm	Real Estate	41	48	44	27	20	21

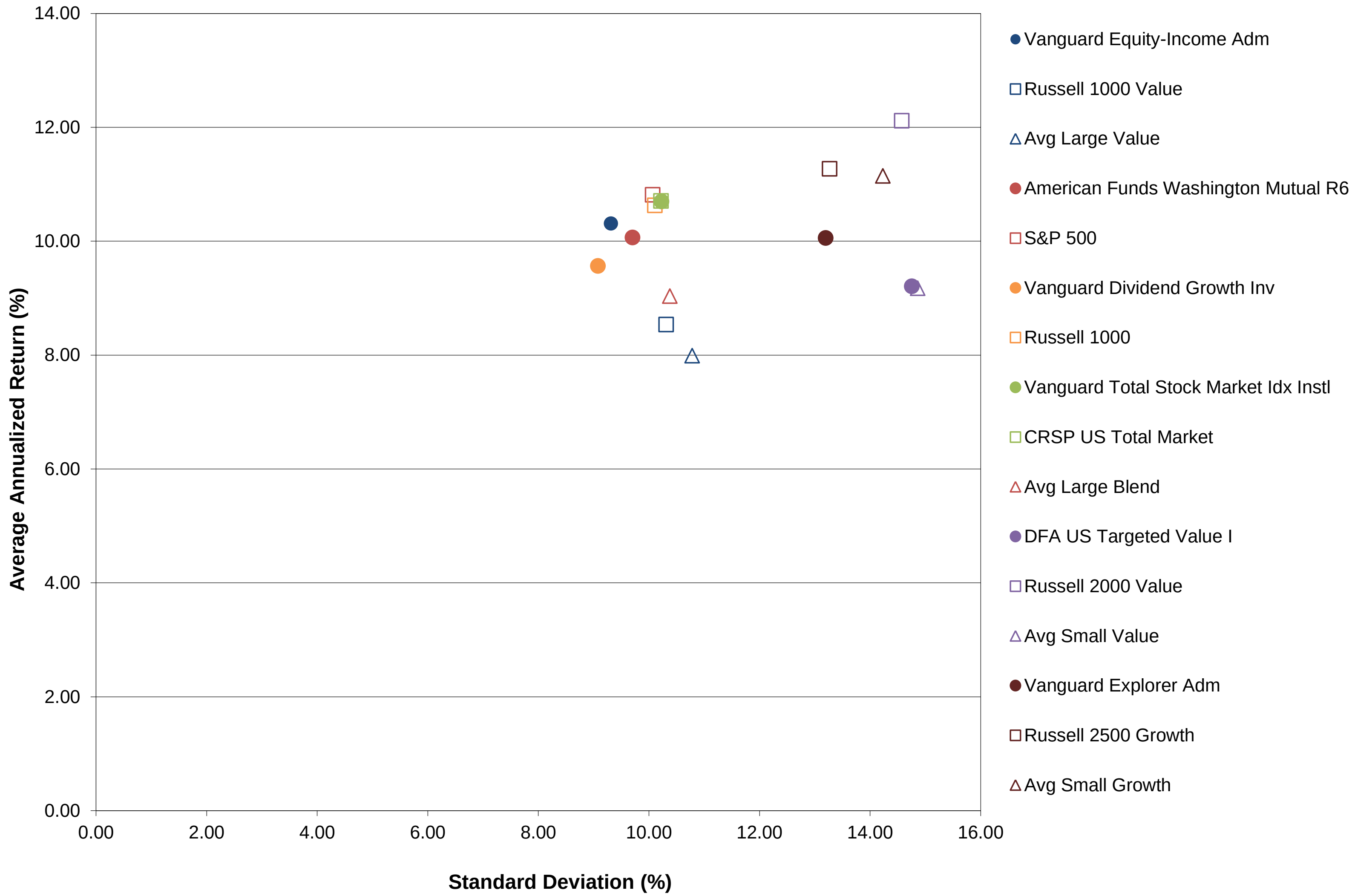
Risk/Return Comparison

For the Three-Year Period Ending September 30, 2017



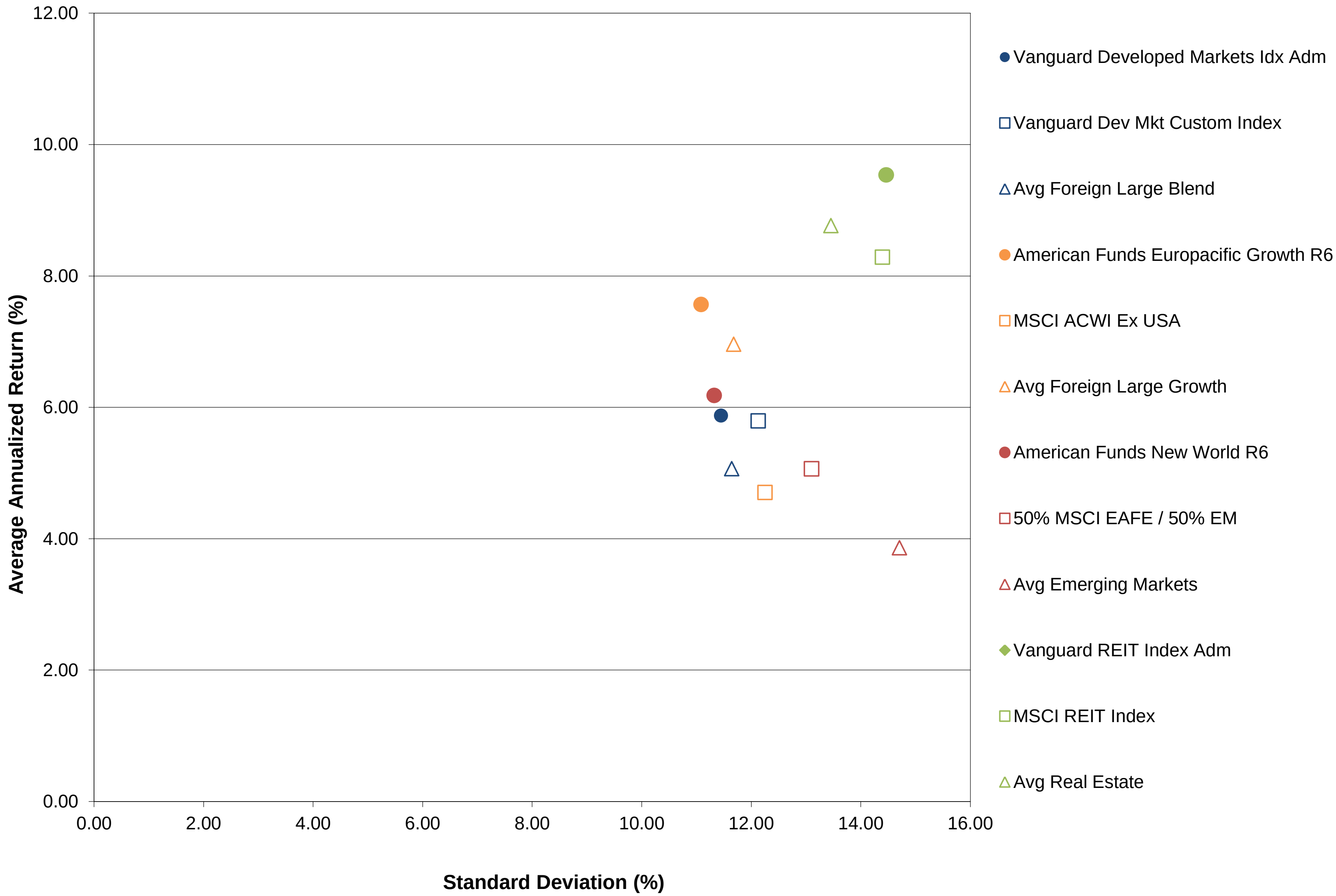
Risk/Return Comparison

For the Three-Year Period Ending September 30, 2017



Risk/Return Comparison

For the Three-Year Period Ending September 30, 2017



Equity Fund Portfolio Characteristics

As of September 30, 2017

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	**$95,650**	**21.1**	**2.7**	**197**	**28**	**26**	**9**	**0**
Russell 1000 Value	$58,237	18.8	2.0	-	22	-	1	0
Avg Large Value	$91,104	19.0	2.3	515	31	59	5	0
American Funds Washington Mutual R6	**$105,259**	**22.5**	**3.2**	**189**	**28**	**21**	**9**	**1**
S&P 500	$93,364	22.3	3.1	-	20	-	1	0
Avg Large Blend	$132,847	22.2	3.1	437	46	55	3	1
Vanguard Dividend Growth Inv	**$92,440**	**22.3**	**4.3**	**49**	**28**	**27**	**9**	**0**
Russell 1000	$71,369	22.0	3.1	-	18	-	1	1
Avg Large Blend	$132,847	22.2	3.1	437	46	55	3	1
Vanguard Total Stock Market Idx Instl	**$53,092**	**22.0**	**3.0**	**3,600**	**16**	**4**	**1**	**0**
CRSP US Total Market	$53,028	22.0	3.0	-	16	-	1	0
Avg Large Blend	$132,847	22.2	3.1	437	46	55	3	1
DFA US Targeted Value I	**$2,413**	**19.0**	**1.5**	**1,405**	**7**	**28**	**1**	**0**
Russell 2000 Value	$1,579	18.7	1.5	-	5	-	2	0
Avg Small Value	$3,089	19.7	1.8	526	23	87	3	0
Vanguard Explorer Adm	**$3,919**	**24.4**	**3.6**	**549**	**8**	**66**	**4**	**1**
Russell 2000 Growth	$2,080	26.2	4.3	-	5	-	0	0
Avg Small Growth	$3,755	29.4	4.2	533	25	75	3	0

Equity Fund Portfolio Characteristics

As of September 30, 2017

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 Developed Markets Idx Adm	**$23,996**	**17.3**	**1.7**	**3,840**	**9**	**11**	**95**	**0**
FTSE Developed ex US All Cap	$23,929	17.3	1.7	-	9	-	97	1
Avg Foreign Large Blend	$42,117	18.3	1.9	752	15	56	92	7
American Funds Europacific Growth R6	**$47,831**	**20.5**	**2.3**	**408**	**22**	**36**	**90**	**24**
MSCI ACWI Ex USA	$35,671	17.0	1.7	-	10	-	99	18
Avg Foreign Large Growth	$36,628	22.2	2.8	817	13	56	91	12
American Funds New World R6	**$30,984**	**20.9**	**2.7**	**589**	**15**	**30**	**73**	**45**
50% MSCI EAFE / 50% EM	$35,387	16.3	1.8	-	-	-	99	36
Avg Emerging Markets	$30,408	16.1	2.2	735	27	65	92	71
Vanguard REIT Index Adm	**$10,214**	**28.0**	**2.3**	**156**	**39**	**7**	**0**	**0**
MSCI REIT Index	$10,207	28.0	2.3	-	35	-	0	0
Avg Real Estate	$13,893	27.8	2.4	389	47	81	0	0

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Equity Fund Style Allocation

As of September 30, 2017

Vanguard Equity-Income Adm

39	31	20
6	1	0
2	0	0

American Funds Washington Mutual R6

27	32	36
3	1	1
0	0	0

Vanguard Dividend Growth Inv

21	50	30
0	0	0
0	0	0

Vanguard Total Stock Market Idx I

23	24	25
6	6	6
3	3	3

DFA US Targeted Value I

0	0	0
15	11	2
30	30	12

Vanguard Explorer Adm

0	0	2
6	9	31
10	14	27

Vanguard Developed Markets Idx Adm

29	28	23
5	6	5
1	1	1

American Funds Europacific Growth R6

19	30	47
1	2	2
0	0	0

American Funds New World R6

14	26	48
3	3	4
1	1	1

Vanguard REIT Index Adm

6	17	10
12	28	6
10	8	3

Style Legend

54	>50%
27	>25%
19	>10%

Large Value	Large Core	Large Growth
Mid Value	Mid Core	Mid Growth
Small Value	Small Core	Small Growth

Equity Fund Sector Allocation

As of September 30, 2017

Fund/Benchmark	Energy	Materialds	Industrials	Consumer Discretionary	Consumer Staples	Healthcare	Financials	Real Estate	Information Technology	Telecom Services	Utilities
Vanguard Equity-Income Adm	**10.8**	**4.2**	**11.4**	**4.9**	**12.0**	**14.3**	**17.4**	**0.0**	**14.3**	**3.8**	**7.1**
Russell 1000 Value	10.7	2.9	8.2	6.8	8.7	13.7	26.1	5.0	8.8	2.8	6.4
Avg Large Value	9.9	3.4	10.0	9.1	8.7	13.8	23.4	2.3	11.8	3.0	4.7
American Funds Washington Mutual R6	**10.3**	**4.9**	**14.1**	**11.4**	**7.2**	**13.2**	**14.8**	**0.8**	**17.5**	**3.0**	**2.8**
S&P 500	5.9	3.0	10.0	11.9	7.9	14.1	14.7	2.9	24.5	1.9	3.2
Avg Large Blend	5.8	3.0	11.8	12.9	7.8	14.6	14.2	2.9	22.7	1.6	2.6
Vanguard Dividend Growth Inv	**4.5**	**3.6**	**18.5**	**12.5**	**17.9**	**16.3**	**12.2**	**4.5**	**10.0**	**0.0**	**0.0**
Russell 1000	5.7	3.3	10.2	12.4	7.6	13.4	14.5	3.7	24.3	1.8	3.2
Avg Large Blend	5.8	3.0	11.8	12.9	7.8	14.6	14.2	2.9	22.7	1.6	2.6
Vanguard Total Stock Market Idx Instl	**5.6**	**3.5**	**10.8**	**12.1**	**7.1**	**13.6**	**15.1**	**4.0**	**23.3**	**1.8**	**3.2**
CRSP US Total Market	5.6	3.5	10.8	12.1	7.1	13.6	15.1	4.0	23.3	1.8	3.2
Avg Large Blend	5.8	3.0	11.8	12.9	7.8	14.6	14.2	2.9	22.7	1.6	2.6
DFA US Targeted Value I	**9.3**	**5.7**	**21.5**	**16.0**	**2.6**	**5.9**	**24.5**	**0.5**	**12.5**	**0.7**	**0.7**
Russell 2000 Value	6.3	4.3	11.9	10.5	2.7	6.1	30.8	10.7	9.3	0.5	6.8
Avg Small Value	5.0	10.3	15.5	9.9	3.0	4.9	26.8	7.6	12.8	0.4	3.8
Vanguard Explorer Adm	**1.9**	**4.6**	**19.8**	**14.4**	**3.4**	**18.2**	**8.1**	**3.6**	**24.9**	**0.5**	**0.6**
Russell 2000 Growth	1.3	4.7	18.1	13.7	2.7	23.3	6.1	3.5	24.9	1.1	0.7
Avg Small Growth	2.2	4.3	16.2	14.2	1.9	23.0	10.3	3.4	23.0	0.5	0.9

Equity Fund Sector Allocation

As of September 30, 2017

Fund/Benchmark	Energy	Materialds	Industrials	Consumer Discretionary	Consumer Staples	Healthcare	Financials	Real Estate	Information Technology	Telecom Services	Utilities
Vanguard Developed Markets Idx Adm	**6.2**	**8.7**	**15.0**	**12.4**	**9.9**	**8.8**	**20.5**	**3.7**	**8.4**	**3.4**	**3.0**
FTSE Developed ex US All Cap	6.1	8.7	15.3	12.1	9.9	8.1	21.5	3.7	8.2	3.4	3.1
Avg Foreign Large Blend	5.4	8.1	13.2	12.4	10.7	9.0	21.0	2.6	10.8	4.3	2.5
American Funds Europacific Growth R6	**5.5**	**6.3**	**10.1**	**13.5**	**8.9**	**6.2**	**18.9**	**1.2**	**22.6**	**3.3**	**3.3**
MSCI ACWI Ex USA	6.6	7.9	11.8	11.4	9.6	7.7	22.8	3.1	11.9	4.2	3.0
Avg Foreign Large Growth	2.9	6.3	15.5	14.3	12.8	10.5	17.1	0.8	17.4	1.4	0.8
American Funds New World R6	**5.5**	**7.4**	**7.9**	**14.9**	**9.2**	**6.3**	**14.9**	**0.9**	**25.9**	**2.4**	**4.6**
50% MSCI EAFE / 50% EM	6.1	7.6	10.0	11.2	8.7	6.2	22.1	3.1	17.6	4.5	2.9
Avg Emerging Markets	5.2	5.8	5.0	11.3	10.0	3.1	23.4	2.8	27.0	4.4	2.1
Vanguard REIT Index Adm	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**100.0**	**0.0**	**0.0**	**0.0**
Avg Real Estate	0.0	0.3	0.2	1.9	0.0	0.1	0.3	97.0	0.2	0.0	0.0

CONDUENT

General Characteristics

As of September 30, 2017

Fund	Manager	Manager Tenure (avg/long)	Total Assets ($MM)	Morningstar Rating Overall	Morningstar Analyst Rating	Ticker	Expense Ratio
Baird Core Plus Bond Inst	Mary Ellen Stanek (6)*	17/17	15,531.9	★★★★★	Silver	BCOIX	0.30
DoubleLine Total Return Bond I	Philip A. Barach (2)*	8/8	53,844.5	★★★★★	Neutral	DBLTX	0.48
Vanguard Total Bond Market Index Adm	Joshua C. Barrickman	5/5	195,252.9	★★★	Silver	VBTLX	0.05
Vanguard Interm-Term Investment-Grade Adm	Gregory S. Nassour	10/10	28,779.2	★★★	Silver	VFIDX	0.10
Templeton Global Bond R6	Michael J. Hasenstab (2)*	11/16	39,728.8	★★★	Gold	FBNRX	0.52
Vanguard Equity-Income Adm	James P. Stetler (3)*	9/14	29,574.2	★★★★★	Silver	VEIRX	0.17
American Funds Washington Mutual R6	Alan N. Berro (7)*	8/20	92,769.4	★★★★★	Gold	RWMGX	0.30
Vanguard Dividend Growth Inv	Donald J. Kilbride	12/12	32,280.2	★★★★	Gold	VDIGX	0.30
Vanguard Total Stock Market Idx Instl	Gerard C. O'Reilly (2)*	12/23	637,483.3	★★★★	Gold	VITSX	0.04
DFA US Targeted Value I	Jed S. Fogdall (3)*	5/6	10,418.0	★★★	Gold	DFFVX	0.37
Vanguard Explorer Adm	Kenneth L. Abrams (11)*	4/24	13,152.9	★★★	Bronze	VEXRX	0.34
Vanguard Developed Markets Idx Adm	Christine D. Franquin (2)*	3/5	103,837.4	★★★★	Silver	VTMGX	0.07
American Funds Europacific Growth R6	Mark E. Denning (9)*	13/26	145,198.7	★★★★	Gold	RERGX	0.50
American Funds New World R6	Mark E. Denning (9)*	9/18	31,667.6	★★★★★	Gold	RNWGX	0.65
Vanguard REIT Index Adm	Gerard C. O'Reilly (2)*	12/22	63,194.1	★★★★	Silver	VGSLX	0.12

* 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.

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/Es 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.

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.

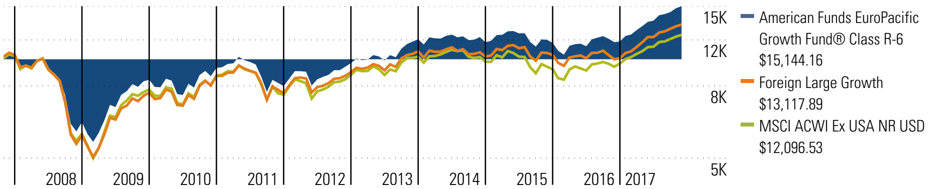
This report was prepared by Conduent HR Consulting, LLC, a Conduent Company
420 Lexington Ave, 10th Floor, New York, NY 10170-2220

American Funds EuroPacific Growth Fund® Class R-6 RERGX

Morningstar Analyst Rating
Gold

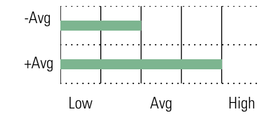
NAV $	NAV Day Change %	Yield TTM %	Total Assets $ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
58.12	↑0.06 | 0.10	1.55	162.9	Open	$250	None	0.50%	★★★★	Foreign Large Growth	Large Growth

Growth of 10,000 11-23-2007 - 11-23-2017



3 Year Average Morningstar Risk Measures

Risk vs. Category (325)
Return vs. Category (325)



Investment Strategy

The investment seeks long-term growth of capital. The fund invests primarily in common stocks of issuers in Europe and the Pacific Basin that the investment adviser believes have the potential for growth. Growth stocks are stocks that the investment adviser believes have the potential for above-average capital appreciation. It normally will invest at least 80% of its net assets in securities of issuers in Europe and the Pacific Basin. The fund may invest a portion of its assets in common stocks and other securities of companies in emerging markets.

Pillars

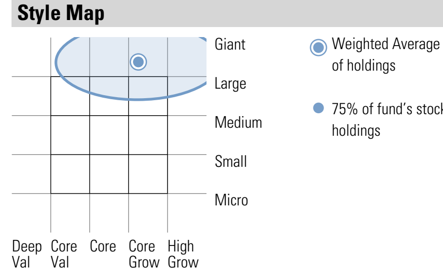
Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive
Rating	Gold

Performance 11-22-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	13,184	10,243	13,262	12,874	16,543	15,144
Fund	31.84	2.43	32.62	8.78	10.59	4.24
+/- MSCI ACWI Ex USA NR USD	6.75	0.82	3.27	2.83	3.18	2.40
+/- Category	2.19	0.38	1.62	1.16	1.05	1.24
% Rank in Cat	28	34	31	25	22	—
# of Funds in Cat	402	426	395	324	280	204

* Currency is displayed in BASE

Style Map

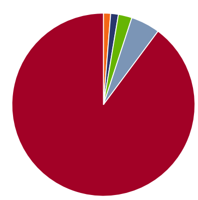


Top Holdings 09-30-2017

	Weight %	Last Price	Day Chg %	52 Week Range
⊕ Samsung Electronics Co Ltd	3.01	— BASE	0.29 ↑	1,633,000.00 - 2,876,000.00
⊖ Alibaba Group Holding Ltd ADR	2.76	191.47 BASE	0.82 ↑	86.01 - 191.75
British American Tobacco PLC	2.34	— BASE	-0.89 ↓	2,879.89 - 17,365.43
AIA Group Ltd	2.28	68.35 BASE	1.26 ↑	42.65 - 69.15
⊖ Taiwan Semiconductor Manufacturing Co Ltd	2.12	244.00 BASE	0.62 ↑	178.00 - 245.00
% Assets in Top 5 Holdings	12.50			

⊕ Increase ⊖ Decrease ☼ New to Portfolio

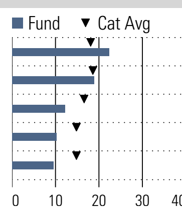
Asset Allocation



Asset Class	% Net
Cash	2.41
US Stock	1.36
Non US Stock	89.83
Bond	1.27
Other	5.14

Top Sectors 09-30-2017

	Fund	3 Yr High	3 Yr Low	Cat Avg
Technology	22.34	22.34	16.40	17.17
Financial Services	18.89	20.32	18.89	17.68
Consumer Cyclical	12.16	12.76	11.19	15.67
Industrials	10.17	10.58	10.10	13.89
Consumer Defensive	9.51	9.51	9.39	13.90



Management

	Start Date
Mark E. Denning	12-31-1991
Carl M. Kawaja	06-01-2001
Nicholas J. Grace	06-01-2002
Sung Lee	06-01-2002
Jesper Lyckeus	06-01-2004
Jonathan Knowles	06-01-2006
Andrew B. Suzman	06-01-2007
Christopher M. Thomsen	06-01-2008
Lawrence Kymisis	06-01-2014

Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Captial Gain	Return of Capital	Dividend Income	Distribution Total
06-14-2017	51.95	0.9630	0.0000	0.0000	0.1654	1.1284
12-22-2016	44.95	0.0000	0.0000	0.0000	0.7373	0.7373
12-23-2015	45.72	0.5900	0.0000	0.0000	0.9665	1.5565
12-26-2014	47.56	0.0000	0.0000	0.0000	0.8240	0.8240
12-26-2013	48.37	0.0000	0.0000	0.0000	0.6146	0.6146

American Funds EuroPacific Growth Fund® Class R-6 RERGX

Analysis

Still a reliable choice.
By Gregg Wolper 10/2/2017

American Funds Europacific Growth remains impressive: It has a very experienced management group, an appealingly low cost, a strong performance record, and a reliable parent. It retains its Morningstar Analyst Rating of Gold.

All but one of this fund's nine managers, who run sleeves of the portfolio independently, have been on the roster for at least nine years, several for much longer. In theory, combining many managers with differing styles could result in a bland overall portfolio, but it hasn't here. While the top of the portfolio certainly includes many household names, the fund's consistently heavy stake in emerging markets--much higher than those of most peers--itself shows that the fund goes its own way. Sector weightings also differ markedly from those of the MSCI ACWI ex-US Index and the foreign large-growth Morningstar Category averages.

Another advantage enjoyed by this fund is its relatively low cost. At 0.85%, the expense ratio for its A shares is 45 basis points below the median for front-load funds in the foreign large-cap Morningstar Categories. Other share classes are also far cheaper than nearly all actively managed competitors.

That low cost is made possible in part by a massive asset base--currently around $150 billion--which could raise concerns. Many funds that have had major growth spurts change their styles to accommodate the bulk, and performance suffers. That possibility should not be ignored here; the fund did own a greater percentage of mid-caps 15 to 20 years ago when it was much smaller. But it still has mid-single-digit exposure to such stocks and that hasn't changed in more than 10 years, nor has the cash stake expanded. Meanwhile, outperformance has continued. The fund has beaten the index and the foreign large-growth and foreign large-blend Morningstar Category averages not just for the trailing 15-year period but also the three- and five-year stretches, when it already had more than $120 billion.

This fund will have down periods due if nothing else to its hefty emerging-markets stake, but it remains a strong choice.

Process Pillar: ⊕ Positive
This fund has grown to an extraordinary size over the years, but, other than reducing the percentage of assets devoted to mid-caps, the overall approach has remained largely intact over the years. American's multimanager approach lets managers independently run their own sleeves of the portfolio. Each does so in line with his own style, and their combination fulfills the fund's growth mandate while also muting overall volatility. The managers don't shy away from risk, though; emerging-markets stakes are usually relatively high. The fund receives a Positive Process rating.

The managers' investment styles range from concentrated growth to more-diffuse, value-oriented strategies. High portfolio turnover, however, is frowned upon. The fund's annual turnover has a typical range of 25%-35%; managers often hold positions for many years. This long-term orientation is an advantage. The managers can develop multiyear investment theses and buy stocks that may take several years to work out, rather than worry about finding stocks with a near-term catalyst. The below-average turnover also helps keep trading costs in check.

The fund's managers have this freedom, in part, because their compensation is based on weighted one-, three-, five-, and eight-year rolling averages, with greater emphasis on the five- and eight-year periods. This is a longer time horizon than most other firms use to evaluate managers.

It is not surprising to see that this fund had a sizable chunk of assets in emerging-markets stocks in its June 2017 portfolio, for that has been a consistent trait for many years. Still, the latest percentage was even higher than usual for the fund.

Morningstar's Take

Morningstar Analyst Rating: Gold

Morningstar Pillars

Process	⊕ Positive
Performance	⊕ Positive
People	⊕ Positive
Parent	⊕ Positive
Price	⊕ Positive

Morningstar Analyst Rating
Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold | Silver | Bronze | Neutral | Negative

Fund Performance

	Total Return %	+/- Category
YTD	31.84	2.19
2016	1.01	3.16
2015	-0.48	-1.44
2014	-2.29	1.63
2013	20.58	1.99

American Funds EuroPacific Growth Fund® Class R-6 RERGX

Analysis

Its roughly 30% stake in emerging markets (using MSCI's classification, which includes South Korea and Taiwan) was about twice as high as the foreign-large-growth Morningstar Category average and was even bigger than the weighting in the fund's emerging-markets-heavy benchmark, the MSCI All-Country World ex-U.S. Index. A substantial overweighting in Indian stocks as well as a notable stake in Chinese Internet companies--which have been on fire this year--and other Asian tech firms accounted for a good portion of the fund's emerging-markets weight.

Although portfolio turnover at this fund is moderate--in the 25% to 35% range per year--the managers certainly don't stand still. A noteworthy example is drugmaker Novo Nordisk NVO, which was the top holding at the end of 2015 with nearly 5% of assets. Shares were sold regularly after that, however, and by June 2017 that firm made up just 0.5% of assets. Over the same time period, another pharma firm, Novartis NVS, dropped to 0.8% from 2.3% of assets. The fund had underweightings in the healthcare and consumer defensive sectors in the June 2017 portfolio, while having an overweighting in the technology arena. No individual stock had more than 3% of assets.

Performance Pillar: Positive

Strong long-term, risk-adjusted results earn the fund a Positive Performance rating. Its 9.1% annualized return during the trailing 15 years through August 2017 beats the MSCI All-Country World ex-U.S. Index and the foreign large-growth Morningstar Category by more than a percentage point and the foreign large-blend Morningstar Category (the fund was classified in that group until late 2014) by 2 percentage points.

The fund has achieved this record without suffering excessive volatility. Although it usually has relatively high exposure to emerging markets, the fund has consistently been less volatile than the index. The fund also held up well during the bear markets of 2001-02 and 2007-09. In both, it helped to build the fund’s stakes in cash and bonds to more than 10% of assets combined. Without a similar buffer in 2011, the fund had middling returns during the market’s May to late-September plunge. It did regain its usual pattern in 2014 and 2015, though, losing much less than the index in those years.

The fund's asset base has expanded greatly over the 15-year period, so it is important to note that, unlike some funds, this one has not suffered a performance decline as it grew to its massive size. The fund's trailing three- and five-year returns beat the index and both category averages--by substantial margins, in fact. And it has been less volatile than peers over these more recent periods, as well.

People Pillar: Positive

American Funds’ multimanager approach helps this fund handle its massive asset base. The fund’s Positive People rating reflects its systemic strengths as well as the managers’ experience, ability, and aligned interests.

Capital Group, the parent of American Funds, splits the fund’s assets between subsidiaries Capital World Investors and Capital Research Global Investors. Carl Kawaja heads up the whole fund and CWI’s team, which includes Nicholas Grace, Jonathan Knowles, and Andrew Suzman, while Mark Denning heads up CRGI’s side, composed of Sung Lee, Jesper Lyckeus, Christopher Thomsen, and Lawrence Kymisis. Each manager oversees a separate sleeve of the portfolio, with Kawaja and Denning helping to ensure that their respective teams are balanced across different investing styles. For example, Knowles likes firms with high returns on invested capital and runs a very top-heavy portfolio of about 30 stocks; Kawaja is more opportunistic and spreads his bets across roughly 50 stocks. It is a veteran group. Thomsen is the least-experienced manager and yet he has been in the industry for roughly two decades. The CWI and CRGI teams are each supported by about 25 analysts, with each analyst group also responsible for its own slice of the portfolio.

All nine managers have at least $100,000 of their own money in the fund, with three investing more than $1 million.

Parent Pillar: Positive

With roots tracing to 1931, Capital Group has long been a standard-bearer in asset management. Widely known in the United States for its American Funds open-end lineup, the active manager boasts some of the industry’s more reliable equity and allocation offerings. The firm’s multimanager system is key to its success. Dividing each fund into independently run sleeves lets managers invest in line with their styles, enhancing diversification and reducing volatility of the overall portfolio. The funds’ analyst-led research portfolios help develop the next generation and recruit top talent with the promise of running money from the start. The result is an investment culture marked by lengthy tenures, strong manager co-investment, and competitive long-term records.

Capital Group has improved its fixed-income approach through greater coordination and the addition of veteran managers, but the firm still must show it can achieve the kind of excellence in that asset class that it has with equities. Capacity monitoring, a perennial issue given the funds’ massive asset bases, could become a more pressing concern if the firm’s efforts to grow its business in Europe and Asia succeed or if U.S. fund flows shift back to active management. In the meantime, investors benefit from Capital Group’s modest fees, consistent results, and sound stewardship. The firm earns a Positive Parent rating.

Price Pillar: Positive

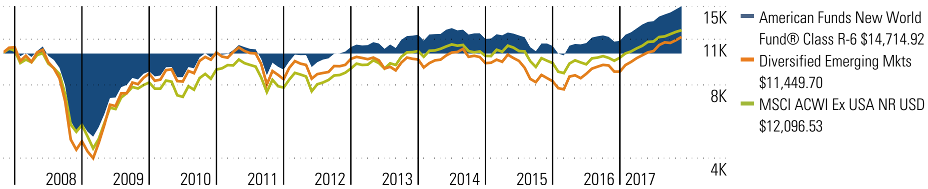
Low fees earn the fund a Positive Price Pillar rating. The A shares’ 0.85% fiscal 2017 expense ratio was 45 basis points below the median for foreign large-cap funds with a front load. That easily ranked in the cheapest decile of those peers. In addition, nearly all of the fund’s other share classes had expense ratios that landed in the cheapest quintile versus similarly distributed rivals; the few that didn't fell in the second-least-expensive quintile.

American Funds New World Fund® Class R-6 RNWGX

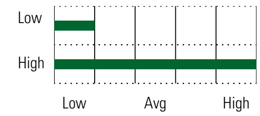
Morningstar Analyst Rating
Gold

NAV $	NAV Day Change %	Yield TTM %	Total Assets $ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
68.20	↑0.09 | 0.13	1.06	34.6	Open	$250	None	0.65%	★★★★★	Diversified Emerging Mkts	Large Growth

Growth of 10,000 11-23-2007 - 11-23-2017



3 Year Average Morningstar Risk Measures



Investment Strategy

The investment seeks long-term capital appreciation. The fund invests primarily in common stocks of companies with significant exposure to countries with developing economies and/or markets. Under normal market conditions, the fund will invest at least 35% of its assets in equity and debt securities of issuers primarily based in qualified countries that have developing economies and/or markets.

Pillars

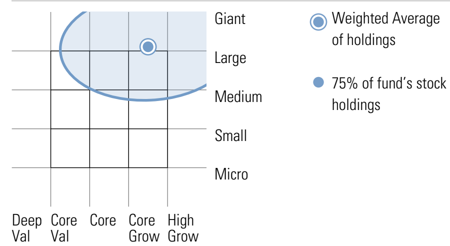
Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive
Rating	Gold

Performance 11-22-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	13,266	10,321	13,382	12,444	14,785	14,715
Fund	32.66	3.21	33.82	7.56	8.13	3.94
+/- MSCI ACWI Ex USA NR USD	7.57	1.60	4.47	1.61	0.72	2.10
+/- Category	0.11	0.77	0.75	2.00	2.72	1.84
% Rank in Cat	54	34	49	24	12	—
# of Funds in Cat	815	867	795	636	453	184

* Currency is displayed in BASE

Style Map

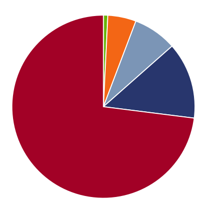


Top Holdings 09-30-2017

	Weight %	Last Price	Day Chg %	52 Week Range
⊖ Samsung Electronics Co Ltd	2.08	— BASE	0.29 ↑	1,633,000.00 - 2,876,000.00
⊕ Reliance Industries Ltd	1.81	951.10 BASE	0.43 ↑	492.05 - 959.50
⊖ Tencent Holdings Ltd	1.71	415.80 BASE	-0.91 ↓	179.60 - 439.60
⊖ Taiwan Semiconductor Manufacturing Co Ltd	1.57	244.00 BASE	0.62 ↑	178.00 - 245.00
Alphabet Inc C	1.49	— BASE	0.55 ↑	737.02 - 1,048.39
% Assets in Top 5 Holdings	8.65			

⊕ Increase ⊖ Decrease ☼ New to Portfolio

Asset Allocation



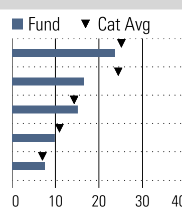
Asset Class	% Net
Cash	0.77
US Stock	13.51
Non US Stock	73.00
Bond	5.00
Other	7.72

Management

	Start Date
Mark E. Denning	06-17-1999
Robert W. Lovelace	06-17-1999
Wahid Butt	01-01-2008
Nicholas J. Grace	01-01-2008
Winnie Kwan	01-01-2009
Christopher M. Thomsen	01-01-2009
Robert H. Neithart	01-01-2012
Jonathan Knowles	01-01-2016
Bradford F. Freer	01-01-2017

Top Sectors 09-30-2017

	Fund	3 Yr High	3 Yr Low	Cat Avg
Technology	23.61	23.61	18.48	24.24
Financial Services	16.60	17.55	16.13	23.52
Consumer Cyclical	15.07	15.07	13.96	13.37
Consumer Defensive	9.74	10.80	9.74	9.99
Basic Materials	7.57	8.09	3.71	6.08



Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Captial Gain	Return of Capital	Dividend Income	Distribution Total
12-22-2016	50.87	0.0000	0.0000	0.0000	0.7056	0.7056
12-23-2015	50.34	0.0000	0.0000	0.0000	0.5173	0.5173
12-26-2014	53.86	2.6330	0.0000	0.0000	0.7286	3.3616
12-26-2013	58.13	0.6140	0.0000	0.0000	0.7999	1.4139
12-26-2012	53.85	0.0000	0.0000	0.0000	0.9323	0.9323

American Funds New World Fund® Class R-6 RNWGX

Analysis

Impressive through a cycle.
By Alec Lucas, Ph.D. 5/23/2017

While American Funds New World is unlikely to top the charts when emerging markets are at their best, it should outperform through a market cycle by losing less in downturns. With a relatively conservative process, skilled management, and modest fees, the fund earns a Morningstar Analyst Rating of Gold.

The fund taps emerging markets' growth through a revenue-centric approach. As long as a firm gets at least 20% of its revenue or profits from the developing world, it's fair game--provided that at least 35% of the fund's assets are invested directly in emerging-markets securities, which typically include some bonds. As current top-10 holdings Alphabet GOOG and Facebook FB show, the fund makes use of its flexible mandate. Both profit from the growth of Internet usage in developing countries like India, which means they meet the fund’s revenue requirements. In March 2017, developed-markets equity exposure stood at 42%, while the fund's emerging-markets equity stake was 43%. Judged by revenue sources, however, the fund's portfolio now receives about half of its revenues from emerging-markets regions.

Regardless of domicile, the fund's managers have shown strong stock-picking skills and requisite caution when wading into downtrodden sectors, like energy and materials in 2015. That's poised to continue even with the early 2017 departure of manager Galen Hoskin, who left for personal reasons. Capital Group added veteran Bradford Freer around the same time. He's a growth-oriented investor who has expertise in international small-cap stocks, especially in India.

The fund’s typical performance traits were on display from late April 2015 to mid-May 2017. Between April 29, 2015, and Jan. 21, 2016, emerging-markets equities fell into a bear market. The MSCI Emerging Markets Index lost 34.2% during that stretch, while the typical diversified emerging-markets Morningstar Category peer lost 29.9%. The fund, in contrast, dropped 21.1%. While it lagged in the subsequent recovery through May 16, 2017, the fund posted a top-quartile 3.5% gain for the whole period, whereas the benchmark essentially broke even.

Process Pillar: Positive

This fund earns a Positive Process Pillar rating for its relatively low-risk approach to emerging markets. Rather than being a pure play on developing-markets equity, it often keeps a third or more of its assets invested in developed-markets stocks and a tenth in emerging-markets debt. Those two elements have made the fund far less volatile than most peers without sacrificing too much upside.

Management's revenue-centric approach to investing means that results are driven more by emerging-markets growth than might otherwise be the case. While the team recognizes that emerging markets are growing faster than developed markets, emerging-markets companies don't necessarily offer the best way to capitalize on that growth. In some cases, the fund's developed-markets holdings, which must derive at least 20% of their revenues or profits from emerging markets, may be better positioned. For instance, although mobile phone usage and Internet penetration is growing rapidly in the emerging world, countries like India lack home-based companies poised to capture that market. This fund takes advantage through developed-markets holdings that are tapping into that growth, such as Alphabet and Facebook. The same applies to many consumer-oriented firms. Plus, the managers contend that emerging-markets sales can sometimes be acquired more cheaply through developed-markets multinationals.

Investing in developed markets to access emerging ones is standard practice for this fund. Since its 1999 inception, the fund has on average kept more than 30% of assets in developed-markets stocks (excluding South Korea and Taiwan), while its typical diversified emerging-markets peer has held less than 10%. There's been a fair amount of variability in these averages, though. Developed-markets equity exposure has increased since bot-

Morningstar’s Take

Morningstar Analyst Rating: Gold

Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Fund Performance

	Total Return %	+/- Category
YTD	32.66	0.11
2016	4.31	-4.16
2015	-5.62	8.17
2014	-3.29	-0.28
2013	10.46	10.60

American Funds New World Fund® Class R-6 RNWGX

Analysis

toming at roughly 20% in June 2005. As of March 2017, that weighting stood at 42%, while the fund's emerging-markets equity stake was 43%, versus its 51% peak in March 2007. Judged by revenue sources, however, the fund has more emerging-markets exposure. The equity portfolio receives about half its revenues from the developing world.

Having the ability to delve into developed markets allows the fund to maintain a more diversified portfolio across sectors than most. The portfolio is typically less dominated by the materials, energy, and financials sectors than the MSCI Emerging Markets Index. In early 2017, those three sectors combined consumed 38.7% of that index but only 25.4% of this portfolio. On the other hand, the fund has greater exposure to the consumer and healthcare sectors, reflecting the managers' belief that developed-markets companies with branded products and established treatments are capitalizing more on rising emerging-markets incomes.

Performance Pillar: Positive

This fund has a Positive Performance Pillar rating for delivering over the long haul. From its 1999 inception through April 2017, the fund's 7.8% annualized gain beat the MSCI Emerging Markets Index and diversified emerging-markets category norm by 31 and 59 basis points, respectively. It fared even better against the MSCI All Country World Index ex USA's 4.3%.

The fund performs its best relative to peers during bear markets. Although it dropped 19.9% from May 2015 to Jan. 21, 2016, that was much better than its average rival's 28.9% loss. This showing was in keeping with prior bear-market results, as it finished both 2000 and 2008 in the category's top decile.

What's particularly impressive is that the fund has been less volatile than many developed-markets funds. Its 15-year standard deviation is slightly below that of the MSCI ACWI ex USA and is in line with that of the foreign large-blend category average. Thanks to better relative performance during that period for both emerging-markets stocks and bonds, the fund's returns are well ahead of that category norm, giving it superior risk-adjusted results.

Yet it's unlikely that the fund's bond sleeve, typically 5% to 15% of assets, will produce similar returns over the next 15 years. The dramatic credit upgrades and reratings that have led to fantastic returns for emerging-markets bonds are unlikely to be repeated.

People Pillar: Positive

American Funds' multimanager system helps to handle this fund's roughly $30 billion asset base. The fund's Positive People Pillar rating reflects its systemic strengths as well as the managers' experience, ability, and aligned interests.

Since late 2012, Capital Group, the parent of American Funds, has split the fund's equity stake between subsidiaries Capital International Investors (CII), Capital World Investors (CWI), and Capital Research Global Investors (CRGI). Robert Lovelace, the lone CII manager, co-heads the fund with Nicholas Grace, who's joined by fellow CWI managers Jonathan Knowles and Bradford Freer, who joined in early 2017 when manager Galen Hoskin left for personal reasons. Mark Denning oversees CRGI's side, which includes Christopher Thomsen, Winnie Kwan, and Wahid Butt. Robert Neithart runs the fixed-income stake. The managers each oversee a separate sleeve of the portfolio, with Lovelace, Grace, and Denning helping to ensure that their investing styles complement one another. Butt, who is formally an equity manager, also typically invests up to a fifth of his portfolio in debt.

Within their respective divisions, the managers are each supported by teams ranging in size from 20 to 35 analysts. A number of these analysts contribute to their own slices of the portfolio as well.

All nine managers have at least $100,000 in the fund, with three investing over $1 million.

Parent Pillar: Positive

With roots tracing to 1931, Capital Group has long been a standard-bearer in asset management. Widely known in the United States for its American Funds open-end lineup, the active manager boasts some of the industry's more reliable equity and allocation offerings. The firm's multimanager system is key to its success. Dividing each fund into independently run sleeves lets managers invest in line with their styles, enhancing diversification and reducing volatility of the overall portfolio. The funds' analyst-led research portfolios help develop the next generation and recruit top talent with the promise of running money from the start. The result is an investment culture marked by lengthy tenures, strong manager co-investment, and competitive long-term records.

Capital Group has improved its fixed-income approach through greater coordination and the addition of veteran managers, but the firm still must show it can achieve the kind of excellence in that asset class that it has with equities. Capacity monitoring, a perennial issue given the funds' massive asset bases, could become a more pressing concern if the firm's efforts to grow its business in Europe and Asia succeed or if U.S. fund flows shift back to active management. In the meantime, investors benefit from Capital Group's modest fees, consistent results, and sound stewardship. The firm earns a Positive Parent rating.

Price Pillar: Positive

Low fees earn the fund a Positive Price Pillar rating. The A shares' current 1.07% expense ratio, which applies to two fifths of the fund's assets, is 54 basis points below the emerging-markets stock, front-load peer median. That ranks in the cheapest decile of those peers and is also competitive with the category's better-priced no-load options. Plus, 14 of the fund's remaining 16 share classes sport Low Morningstar Fee Levels versus similarly distributed rivals.

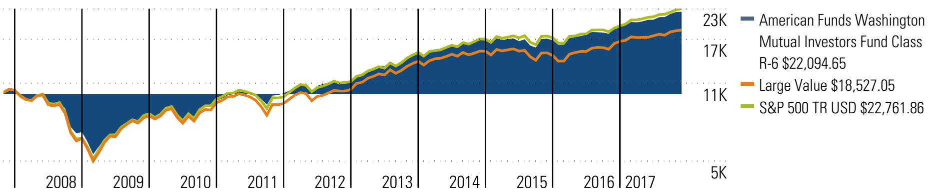
Investors also benefited from modest trading costs in fiscal 2016. Brokerage fees of 0.06% of average net assets fell below the 0.17% category median.

American Funds Washington Mutual Investors Fund Class R-6
RWMGX

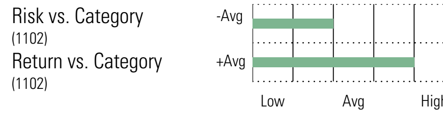
Morningstar Analyst Rating
Gold

NAV $	NAV Day Change %	Yield TTM %	Total Assets $ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
45.49	-0.05 | -0.11	1.91	97.7	Open	$250	None	0.30%	★★★★★	Large Value	Large Blend

Growth of 10,000 11-23-2007 - 11-23-2017



3 Year Average Morningstar Risk Measures



Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive
Rating	Gold

Investment Strategy

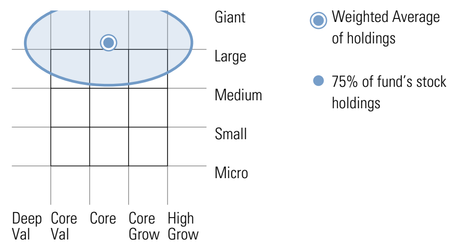
The investment seeks to produce income and to provide an opportunity for growth of principal consistent with sound common stock investing. The fund invests primarily in common stocks of established companies that are listed on, or meet the financial listing requirements of, the New York Stock Exchange and have a strong record of earnings and dividends. Its advisor strives to maintain a fully invested, diversified portfolio, consisting primarily of high-quality common stocks.

Performance 11-22-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	11,554	10,040	11,799	13,117	19,926	22,095
Fund	15.54	0.40	17.99	9.47	14.78	8.25
+/- S&P 500 TR USD	-2.57	-0.65	-2.31	-0.79	-0.93	-0.32
+/- Category	4.16	0.52	3.98	2.28	1.62	1.46
% Rank in Cat	12	26	12	8	16	—
# of Funds in Cat	1,278	1,361	1,263	1,105	963	682

* Currency is displayed in BASE

Style Map

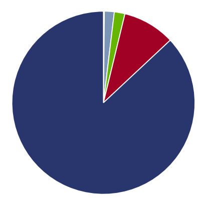


Top Holdings 09-30-2017

	Weight %	Last Price	Day Chg %	52 Week Range
⊖ Microsoft Corp	5.80	83.29 BASE	0.23 ↑	58.80 - 86.20
⊖ The Home Depot Inc	3.42	172.71 BASE	0.37 ↑	128.68 - 173.10
⊖ Boeing Co	2.94	266.06 BASE	0.37 ↑	148.32 - 267.62
⊖ Lockheed Martin Corp	2.77	315.74 BASE	0.27 ↑	245.50 - 322.19
⊖ Comcast Corp Class A	2.73	35.90 BASE	-1.36 ↓	34.01 - 42.18
% Assets in Top 5 Holdings	17.65			

⊕ Increase ⊖ Decrease ✲ New to Portfolio

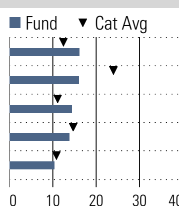
Asset Allocation



Asset Class	% Net
Cash	1.87
US Stock	86.97
Non US Stock	9.25
Bond	0.16
Other	1.75

Top Sectors 09-30-2017

	Fund	3 Yr High	3 Yr Low	Cat Avg
Technology	16.08	16.08	12.74	11.52
Financial Services	15.94	15.94	12.25	23.07
Industrials	14.38	16.42	14.38	10.19
Healthcare	13.75	13.75	13.08	13.77
Energy	10.32	12.34	9.48	9.91



Management

	Start Date
Alan N. Berro	07-01-1997
Jeffrey T. Lager	07-01-2004
J. David Carpenter	07-01-2010
Alan J. Wilson	07-01-2013
Jin Lee	07-01-2014
Eric H. Stern	11-01-2014
Brady L. Enright	07-01-2016

Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
09-15-2017	43.96	0.0000	0.0000	0.0000	0.2255	0.2255
06-16-2017	42.75	1.0450	0.0000	0.0000	0.2245	1.2695
03-17-2017	42.95	0.0000	0.0000	0.0000	0.2234	0.2234
12-19-2016	41.36	1.8250	0.0000	0.0000	0.2465	2.0715
09-16-2016	40.19	0.0000	0.0000	0.0000	0.2209	0.2209

American Funds Washington Mutual Investors Fund Class R-6 RWMGX

Analysis

Best when markets are at their worst.
By Alec Lucas, Ph.D. 1/26/2017

American Funds Washington Mutual earns a Morningstar Analyst Rating of Gold for its ability to hold up well in cratering markets.

The fund once again proved its worth amidst turbulence during the 2015-16 correction. From the S&P 500's July 20, 2015, peak to its Feb. 11, 2016, trough, the fund's 10.7% loss was 2.2 percentage points better than the bogy's. That's impressive given that the fund had a modest overweighting in battered energy stocks, including top-25 positions in Royal Dutch Shell RDS.B and Enbridge ENB. Losing less in corrections and bear markets, such as the 2007-09 credit crisis, has helped the fund post a competitive long-term record. Its 6.5% annualized gain during the past decade through year-end 2016 ranked in the large-value Morningstar Category's top quartile, and its risk-adjusted returns were in line with the S&P 500's.

The fund's robust downside protection is no accident. Its strict investment criteria keep the portfolio centered on investment-grade companies with a long history of paying dividends and strong prospects for continuing to do so. Energy holding Enbridge, for example, plans to acquire fellow oil and gas pipeline company Spectra Energy SE in an effort to add a natural gas revenue stream and reinforce its dividend growth.

The fund's value orientation shows in the managers' willingness to buy franchises within out-of-favor sectors. In addition to energy stocks, the managers have found opportunity within the materials sector. Since 2015's fourth quarter, they've kept a top-15 stake in Dupont DD, which plans to merge with fellow chemicals firm Dow DOW and subsequently split into three separate companies. At year-end 2016, the fund's 17% combined energy and materials stake was 7 percentage points more than the S&P 500's.

The managers' record inspires confidence that they can navigate the dicey parts of the market. So too does their experience: The least-experienced member of the eight-person team has been in the industry for more than 20 years. The fund remains a great option for risk-averse investors.

Process Pillar: Positive

This fund's inclusion requirements are the strictest among American Funds' large-cap offerings, but they've proven their worth and merit a Positive Process Pillar rating. Founded in 1952, the fund's investing criteria are rooted in rules formed in the Great Depression's aftermath to ensure prudent management of trust funds. Potential investments must clear a number of hurdles, including largely shunning the sale of alcohol and tobacco products. Firms must meet New York Stock Exchange listing requirements, even if they are not listed on the exchange. S&P 500 constituents, however, must make up 90% of the portfolio, which naturally leads to extensive overlap with the index. In 2010, American raised the limit on foreign holdings to 10% of assets from 5%, but the fund still remains one of its purest plays on U.S. large-cap stocks.

The fund's focus on income is similarly old-school, as it pursues yield in a disciplined way. It aims for a dividend yield greater than that of the S&P 500, but the fund largely sticks to investment-grade companies with a long history of paying dividends. In fact, only 5% of the portfolio may be invested in non-dividend-paying companies. Plus, firms must have paid their dividends in eight of the past 10 years and earned them in four of the past five years, which generally disqualifies those that have borrowed to cover their dividend in lieu of an earnings shortfall.

This fund has a sturdy portfolio. As of December 2016, its $100 billion average market cap ranks among the large-value category's highest. So too does having 56.4% of assets invested in stocks with a wide Morningstar Economic Moat Rating. Plus, the overall portfolio's average return on assets during the past year ranks within the category's top third. The fund's focus on well-capitalized mega-caps shows in its muted Morningstar Risk ratings for the short and long term.

Morningstar's Take

Morningstar Analyst Rating: Gold

Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Fund Performance

	Total Return %	+/- Category
YTD	15.54	4.16
2016	13.73	-1.08
2015	0.12	4.17
2014	11.53	1.32
2013	32.34	1.12

American Funds Washington Mutual Investors Fund Class R-6 RWMGX

Analysis

The fund's dividend requirements can have a big effect on its sector weightings. At year-end 2006, nearly one fourth of the fund's assets were in financials firms that at that point still had histories of steady payouts, like Bank of America BAC. As the 2007-08 credit crisis deepened, the fund's financials stake fell to a low of 7.5% of assets in mid-2009, as Bank of America and about 20 other financials firms cut or eliminated their dividends and thus dropped off the fund's eligibility list. That kept the fund from buying battered bank stocks, which rebounded strongly in 2009's last three quarters and more recently in late 2016. At year-end 2016, the fund had 11% of its assets in financials, versus 27% for the Russell 1000 Value Index.

The fund's investing criteria also keep it from owning alcohol or tobacco companies. It can, however, hold defense stocks, like Lockheed Martin LMT, a top-10 name since September 2014.

Performance Pillar: Positive
The fund receives a Positive Performance Pillar rating for its strong record. From longest-tenured manager Alan Berro's July 1997 start date through year-end 2016, the fund's 7.5% annualized gain beat the S&P 500 and typical large-value peer by 0.6 and 1.3 percentage points, respectively, with lower volatility than both.

The portfolio's grounding in mega-cap dividend payers has a big impact on the fund's short-term relative performance. When more speculative fare leads the way, the fund tends to lag. That was the case in the late 1990s, 2009, and 2012. The fund's 12.5% gain in 2012, for example, trailed the index by 3.5 percentage points and finished in the category's bottom quartile.

In turbulent conditions, however, the fund tends to hold up better than most. It outperformed in the early-2000s bear market and the 2007-09 credit crisis, as well as in years in which the market experienced a sharp drop. In 2011, treading lightly in financials helped the fund to a top-decile 7% gain, which beat the index by nearly 5 percentage points. Even with an overweighting in hard-hit energy stocks, the fund again held up well in the 2015-16 correction. Peak (July 20, 2015) to trough (Feb. 11, 2016), its top-quintile 10.7% loss was 2.2 percentage points better than the S&P 500's. The fund's downside protection is impressive considering it remains fully invested by mandate and can't benefit from a cash cushion.

People Pillar: Positive
American Funds' multimanager approach helps to handle this fund's nearly $90 billion asset base. The fund's Positive People rating reflects its systemic strengths and the managers' experience, ability, and aligned interests.

Capital Group, the parent of American Funds, has split these assets between subsidiaries Capital World Investors and Capital International Investors since early 2014. Longest-tenured manager Alan Berro, who started here in 1997, heads up the whole fund and CWI's team, composed of Gregory Johnson, Jeffrey Lager, David Carpenter, Alan Wilson, and Brady Enright. Eric Stern heads up CII's side, which currently includes only Jin Lee. The managers, based in Los Angeles and San Francisco, each oversee a separate sleeve of the portfolio, with Berro and Stern helping to ensure their investing styles complement one another. For example, Johnson runs a compact, very top-heavy portfolio, while Carpenter's is more diffuse. Seasoned leadership characterizes the combined eight-person group. Lee, whom the firm publicly named in July 2016, is the least experienced manager and yet has more than 20 years of industry experience. The CWI and CII teams are each supported by about 25 analysts. Each analyst group also oversees its own slice of the portfolio.

All eight managers invest in the fund. One invests at least $100,000, four at least $500,000, and three more than $1 million.

Parent Pillar: Positive
With roots tracing to 1931, Capital Group has long been a standard-bearer in asset management. Widely known in the United States for its American Funds open-end lineup, the active manager boasts some of the industry's more reliable equity and allocation offerings. The firm's multimanager system is key to its success. Dividing each fund into independently run sleeves lets managers invest in line with their styles, enhancing diversification and reducing volatility of the overall portfolio. The funds' analyst-led research portfolios help develop the next generation and recruit top talent with the promise of running money from the start. The result is an investment culture marked by lengthy tenures, strong manager co-investment, and competitive long-term records.

Capital Group has improved its fixed-income approach through greater coordination and the addition of veteran managers, but the firm still must show it can achieve the kind of excellence in that asset class that it has with equities. Capacity monitoring, a perennial issue given the funds' massive asset bases, could become a more pressing concern if the firm's efforts to grow its business in Europe and Asia succeed or if U.S. fund flows shift back to active management. In the meantime, investors benefit from Capital Group's modest fees, consistent results, and sound stewardship. The firm earns a Positive Parent rating.

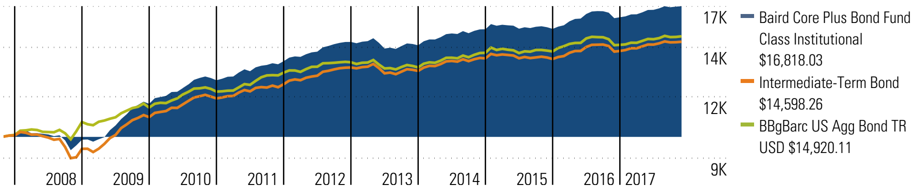
Price Pillar: Positive
Low fees earn the fund a Positive Price Pillar rating. The A shares' 0.58% fiscal 2016 expense ratio, which applied to more than half of the fund's assets, was 57 basis points below the large-cap, front-load peer median. That easily ranked in the cheapest decile of those peers and was also competitive with the category's better-priced no-load options. Plus, 14 of the fund's remaining 17 share classes sported Morningstar Fee Levels of Low versus similarly distributed rivals. Investors also benefited from modest trading costs, as brokerage fees of 0.02% of average net assets fell below the 0.05% category median.

Baird Core Plus Bond Fund Class Institutional BCOIX

Morningstar Analyst Rating
Silver

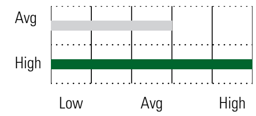
NAV $	NAV Day Change %	Yield TTM %	Total Assets $ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
11.27	↑0.02 | 0.18	2.80	16.0	Open	$25,000	None	0.30%	★★★★★	Intermediate-Term Bond	

Growth of 10,000 11-23-2007 - 11-23-2017



3 Year Average Morningstar Risk Measures

Risk vs. Category (854)
Return vs. Category (854)



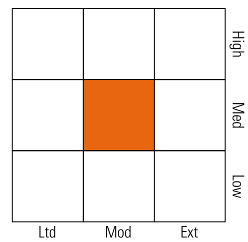
Investment Strategy

The investment seeks an annual rate of total return, before fund expenses, greater than the annual rate of total return of the Barclays U.S. Universal Bond Index. The fund normally invests at least 80% of its net assets in the following types of U.S. dollar-denominated debt obligations: U.S. government and other public-sector entities; asset-backed and mortgage-backed obligations of U.S. and foreign issuers; corporate debt of U.S. and foreign issuers. It invests primarily in investment-grade debt obligations, but may invest up to 20% of its net assets in non-investment grade debt obligations (sometimes referred to as "high yield" or "junk" bonds).

Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive
Rating	Silver

Style Map 09-30-2017



Performance 11-22-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,451	10,042	10,474	11,021	11,581	16,818
Fund	4.51	0.42	4.74	3.29	2.98	5.34
+/- BBgBarc US Agg Bond TR USD	1.04	-0.02	1.22	0.86	0.87	1.25
+/- Category	0.86	0.12	0.97	0.98	0.84	1.23
% Rank in Cat	19	27	18	6	13	7
# of Funds in Cat	1,003	1,046	991	854	779	546

* Currency is displayed in BASE

Bond Statistics

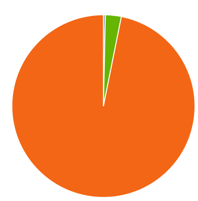
Bond Statistics	Value
Average Effective Duration	5.75
Average Effective Maturity (Years)	7.59
Average Credit Quality	BBB
Average Weighted Coupon	3.75
Average Weighted Price	104.05

Top Holdings 09-30-2017

	Weight %	Maturity Date	Amount Mil	Value Mil
⊕ US Treasury Bond 2.875%	3.71	05-15-2043	570.85	575.40
⊕ US Treasury Bond 3.5%	3.03	02-15-2039	416.67	470.48
⊕ US Treasury Note 1.875%	1.79	03-31-2022	277.83	277.74
⊕ US Treasury Note 1.75%	1.49	03-31-2022	232.50	231.18
⊖ US Treasury Note 2.5%	1.02	05-15-2024	154.40	157.92
% Assets in Top 5 Holdings	11.03			

⊕ Increase ⊖ Decrease ☼ New to Portfolio

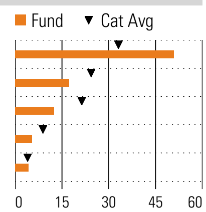
Asset Allocation



Asset Class	% Net
Cash	2.80
US Stock	0.00
Non US Stock	0.00
Bond	96.85
Other	0.34

Top Sectors 09-30-2017

	Fund	BMark	Cat Avg
Corporate Bond	50.80	—	31.81
Agency MBS Pass-Through	17.32	—	23.06
U.S. Treasury	12.43	—	20.06
Asset-Backed	5.37	—	7.62
Commercial MBS	4.30	—	2.70



Management

	Start Date
M. Sharon deGuzman	09-29-2000
Gary A. Elfe	09-29-2000
Charles B. Groeschell	09-29-2000
Warren D. Pierson	09-29-2000
Mary Ellen Stanek	09-29-2000
Daniel A. Tranchita	09-29-2000

Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Captial Gain	Return of Capital	Dividend Income	Distribution Total
10-25-2017	11.20	0.0000	0.0000	0.0000	0.0271	0.0271
09-25-2017	11.29	0.0000	0.0000	0.0000	0.0248	0.0248
08-25-2017	11.29	0.0000	0.0000	0.0000	0.0262	0.0262
07-25-2017	11.21	0.0000	0.0000	0.0000	0.0263	0.0263
06-26-2017	11.28	0.0000	0.0000	0.0000	0.0259	0.0259

Baird Core Plus Bond Fund Class Institutional BCOIX

Analysis

This fund is honest about its capabilities, anchored in experience, and positioned to its strengths.
By Emory Zink 3/6/2017

While Baird Core Plus Bond inhabits a well-trodden investment-grade landscape, management's experience, nimble implementation, and low fees have given the fund an edge, delivering attractive and dependable results to investors over the longer term and earning the fund a Morningstar Analyst Rating of Silver.

Mary Ellen Stanek leads a team of six named co-portfolio managers who average 33 years of experience in the industry and have contributed to this strategy from its inception in 2000. The team is rounded out with three additional senior portfolio managers and eight analysts. Although this is fewer in number than many larger firms with comparable funds, Stanek and her support counter this by sticking to sectors and investments that they can thoroughly research with the fund's given resources.

It is not only the firm's leadership that has remained stalwart--the process has been consistent as well. Similar to many intermediate-bond Morningstar Category peers, the team invests in a mix of corporates, mortgages, and Treasuries. However, this strategy includes the flexibility to allocate up to 20% in high-yield bonds, an exposure that has historically remained in the low single digits. The fund benchmarks itself against the Bloomberg Barclays U.S. Universal Bond Index, which includes distressed debt in addition to the holdings of the Bloomberg Barclays U.S. Aggregate Bond Index. Over the life of the strategy, the fund has maintained a persistent overweighting to credit and underweighting to Treasuries and government-related securities. As of early 2017, the credit allocation occupied 54% of the portfolio--at the higher end of its historical allocation range.

The fund's lack of leverage and derivatives as well as its duration-neutral approach enable management to focus on its strengths--security selection and sector rotation. Over the 10 years ended February 2017, the portfolio generated 5.4% of annualized return, 82 basis points ahead of its index and better than 90% of intermediate-term category peers.

Process Pillar: Positive

Mary Ellen Stanek and her co-portfolio managers have consistently followed a straightforward and risk-conscious process since the fund's inception in 2000. Allocations span a mix of corporate bonds, mortgages, Treasuries--similar to the fund's sibling Baird Aggregate Bond BAGIX--but this version includes up to 20% in non-investment-grade debt as well. The team avoids making interest-rate bets and keeps duration close to its Bloomberg Barclays U.S. Universal Bond Index benchmark. There are no derivatives, foreign currency, or leverage at work in the portfolio. Although the fund is overwhelmingly dedicated to investment-grade fare, within the lower-quality credit brackets, the securities are smaller in allocation and diverse across issuers as an additional risk control in the portfolio-construction process.

All members of the team source, analyze, and secure investments for the portfolio--which is possible given its smaller size and the industry experience across the bench of contributors. Stanek and her co-portfolio managers regularly discuss a macroeconomic context for the fund's positioning, but when it comes to curating the portfolio, they stick to sectors and bonds that they can thoroughly research, avoiding overly esoteric or exotic fare. The team's straightforward and cohesive process has worked well over the long haul and supports the fund's Positive Process Pillar rating.

Relative to its Bloomberg Barclays U.S. Universal Bond Index, the fund maintains a persistent overweighting to credit, ranging between a fourth to modestly greater than half of the portfolio over the trailing 10 years. At the start of 2017, the credit allocation sat at around 54%. Within the credit bucket, management cited financials as a bright spot, given the extensive banking legislation and shored-up balance sheets required across the sector. The weighting exceeded that of its index by roughly 14 percentage points. Other exposures in-

Morningstar's Take

Morningstar Analyst Rating: Silver

Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Fund Performance

	Total Return %	+/- Category
YTD	4.51	0.86
2016	4.73	1.50
2015	0.14	0.40
2014	6.59	1.41
2013	-1.32	0.10

Baird Core Plus Bond Fund Class Institutional BCOIX

Analysis

cluded out-of-benchmark nonagency residential mortgage-backed securities (2% investment-grade and 6% non-investment-grade) and a modest 3% corporate high-yield allocation, consisting mostly of fallen angels, which are securities downgraded from investment-grade but higher quality than most distressed debt.

Management searches for value in an investment-grade range that tilts the portfolio to a higher credit quality than many category peers but remains more opportunistic than the Treasury-heavy index. The allocation to credits rated A and BBB was 19 percentage points above the median category peer and 21 percentage points above the index at the beginning of 2017. Management remains light in short maturities in favor of intermediate and floating-rate securities--a positioning that anticipates market volatility in the near term. Duration typically matches that of the index and was 5.7 years at the start of 2017.

Performance Pillar: Positive

Over the 10 years ended February 2017, the fund generated a 5.4% annualized return, 82 basis points ahead of its Bloomberg Barclays U.S. Universal Bond Index and better than 90% of its category peers, earning the fund a Positive Performance Pillar rating.

When credit markets take a dive, as they did during the 2008 financial crisis, the fund's credit-heavy allocation causes the fund to tumble a bit beyond the index, but the higher-quality bias of its securities tends to buoy the fund's performance over its average category peer in such situations. For example, when credit markets sold off in August 2015, the fund lost around 3.7%--more than the roughly 3.4% loss of the index but less than the 4.6% loss of the category.

Challenging positions from 2015--particularly exposure to commodity-sensitive industrial sectors--proved a boon to the fund's performance the following year. Holdings, such as those in Glencore, exhibited the team's patience in the face of market stress as commodity prices bounced back from a rough start to 2016. A steepening of the yield curve in the second half of 2016 improved the outlook for its life insurance holdings, such as Mass Mutual, while AAA rated commercial mortgage-backed securities and nonagency RMBS also proved additive. The portfolio generated 4.7% for 2016, outpacing its index by 82 basis points and landing ahead of 85% of category peers.

People Pillar: Positive

As managing director and chief investment officer of Baird Advisors, Mary Ellen Stanek leads a six-member formal portfolio management team that collaborates on a variety of funds in Baird's fixed-income suite, including Silver-rated Baird Aggregate Bond and Silver-rated Baird Short-Term Bond BSBIX. Averaging 33 years of experience in the industry, the formal leadership roster has remained consistent since the fund's 2000 inception. Portfolio recommendations are further bolstered by the input of three additional senior portfolio managers--with credit research, securitized research, and portfolio risk focuses--and eight dedicated fixed-income analysts.

Stanek, formerly president and CEO of Firstar Investment Research & Management (Firstar Corp's money-management division) where she worked for 21 years, left for Baird with a group of Firstar veterans in March 2000. The team's strength derives heavily from its deep bench of experience and cohesive culture, but, perhaps most importantly, the team benefits from recognizing its limitations. Stanek and her co-portfolio managers don't pursue highly illiquid or esoteric investments that would require resources beyond those that currently exist to support the fund. Seasoned management leading an effectively collaborative team earns this fund a Positive People Pillar rating.

Parent Pillar: Positive

Robert W. Baird & Co. is a Milwaukee, Wisconsin-based financial-services firm providing investment banking, private wealth advising, and asset-management services. This employee-owned entity's asset-management division encourages investor-first principles by maintaining low fees, investing in core competencies, and developing straightforward lineups of investment products. It earns a Positive Parent rating.

Fixed-income-focused Baird Advisors comprises 95% of mutual fund assets under management, and, in conjunction with Baird Equity Asset Management, oversees 14 mutual funds. Baird has been growing its investment capabilities: In mid-2015, it hired a well-regarded municipal team led by Duane McAllister to add to the firm's existing core and municipal-bond investments. On the equity side, it acquired in early 2016 Chautauqua Capital Management, a global equity shop run out of Boulder, Colorado. Product development is thoughtful and deliberate, complementing the firm's existing strengths.

Mary Ellen Stanek, CIO of Baird Advisors, and her long-tenured team of collaborators demonstrate solid stewardship traits. The team develops portfolio managers and analysts internally, with an eye to cultural compatibility and cross-functional roles. Turnover among investment personnel is low. The fixed-income group claims an impressive performance track record across its suite of offerings.

Price Pillar: Positive

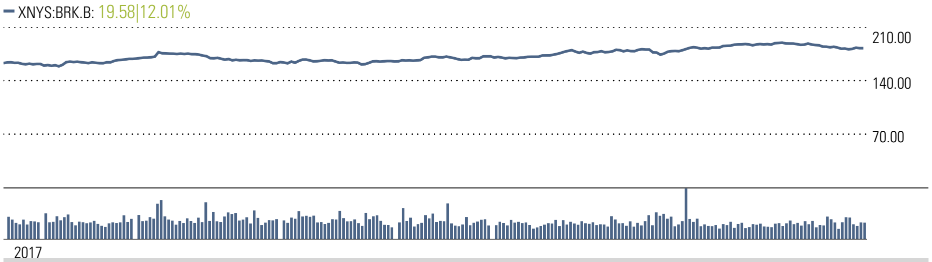
The fund's institutional share class, where 78% of assets are invested, charges an exceptionally low fee of 0.30%, which makes it competitive with many index funds. Relative to actively managed peers, this fund's fee is 20 basis points lower than the median of its intermediate-term bond institutional category. The fund's retail share class charges 0.55% and registers below-average fees relative to its intermediate-term no-load peers. This fund's competitively priced fees qualify it for a Positive Price Pillar rating.

Berkshire Hathaway Inc B BRK.B

Morningstar Analyst Rating
—

Last Price	Day Change	Open Price	Day Range	52-Week Range	Proj. Yield	Market Cap	Volume	Avg Vol.	Forward P/E	P/B	P/S	P/CF
182.55	↑0.04 | 0.02 %	182.66	182.36-182.98	156.82-190.68		450.29 bil	586,918	3.0 mil	19.06	1.46	1.86	10

Stock Price 2017-01-02 - 2017-11-23



Morningstar's Take

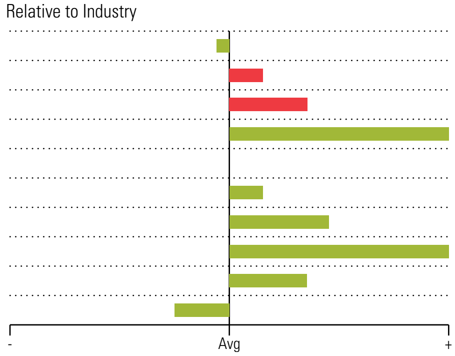
We think two big concerns--a belief that Berkshire Hathaway's size will prevent it from growing at a decent clip in the future and the worry that company's shares will get pummeled...

Fair Value Estimate	$ 193.00
Consider Buying	$ 135.10
Consider Selling	$ 260.55
Fair Value Uncertainty	Medium
Economic Moat	Wide
Stewardship	Exemplary
Growth	C
Profitability	C
Morningstar Credit Rating	—

Key Stats

	Stock	Ind Avg
Price/Earnings TTM	24.1	25.6
Price/Book	1.5	1.3
Price/Sales TTM	1.9	1.4
Rev Growth (3 Yr Avg)	7.1	2
Net Income Growth (3 Yr Avg)	7.3	-4.7
Operating Margin % TTM	10.6	9.2
Net Margin % TTM	7.7	5.3
ROA TTM	2.9	1
ROE TTM	6.5	4.8
Debt/Equity	0.3	0.4

Relative to Industry



Financials

Income Statement	2016-12 (Annual)	2015-12 (Annual)	2014-12 (Annual)	2017-09 (Quarterly)	2016-09 (Quarterly)
Revenue	223,604	210,821	194,673	60,525	59,068
	45,881	41,294	41,253	13,349	11,364
Net Income	24,074	24,083	19,872	4,067	7,198
Earnings Per Share	9.76	9.77	8.06	1.65	2.92
Shares Outstanding	2,466	2,465	2,465	2,467	2,466

Balance Sheet					
	248,534	194,524	190,775	273,052	172,123
Total Assets	620,854	552,257	526,186	681,554	604,038
	76,918	73,144	71,477	100,138	75,469
Total Liabilities	337,853	296,707	286,016	373,276	334,774
Stockholders' Equity	283,001	255,550	240,170	308,278	269,264

Cash Flow					
Cash From Operations	32,535	31,491	32,010	10,870	9,860
Cash From Investing	-84,267	-26,668	-19,369	6,777	1,865
Cash From Financing	12,791	3,803	2,731	-1,398	443

Dividends

Declared Date	--
Ex-Dividend Date	--
Latest Indicated Dividend Amount	
Projected Yield	%

Recent Dividends & Splits	Type	Amount
01/21/2010	Split	50:1

Purchase Options

Direct Investment	No
Dividend Reinvestment Plan	No

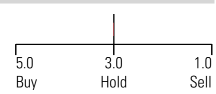
Competitors

Name	Price	% Chg	TTM Sales $ mil
Berkshire Hathaway Inc B	$182.55	0.02 ↑	241,574
Berkshire Hathaway Inc A	$274,480.00	-0.05 ↓	241,574
AXA SA	$29.47	-1.64 ↓	156,316
AXA SA ADR	$30.29	1.37 ↑	156,316
Allianz SE ADR	$23.62	1.42 ↑	130,713
Allianz SE	$235.08	1.90 ↑	130,713

Wall St. Recommendations

Current 3.0

Total Analysts: 1



Ownership

Fund Owners	Star Rating	% Shares Held	% Total Assets
Vanguard Total Stock Mkt Idx	—	1.82	1.32
Vanguard 500 Index Inv	★★★★	1.23	1.55
SPDR® S&P 500 ETF	★★★★	0.85	1.58
Vanguard Institutional Index I	★★★★	0.77	1.53
Financial Select Sector SPDR® ETF	★★★	0.71	10.98

Insiders	% Change TTM	% Shares Outstanding
Warren E. Buffett	115,151	0.01
Ronald L. Olson	0	0.00
Thomas S. Murphy	-1,111	0.00
Meryl B. Witmer	0	0.00
Charles T. Munger	0	0.00

MORNINGSTAR®

Berkshire Hathaway Inc B BRK.B

Quote

Stock Type	Last Close 11/24/2017	Fair Value Estimate	Morningstar Rating™
Classic Growth	182.55	193.00	★★★

Industry Classification

NAICS	Direct Property and Casualty Insurance Carriers (524126)
SIC	Other Property and Casualty Insurers (7339);Fire, Marine, and Casualty Insurance (6331)
ISIC	Reinsurance (6520)

Operation Details

Fiscal Year Ends	2017-12-31
CIK	1067983
Year Established	
Employees (12/31/2016)	
Full Time	
Part Time	
Auditor (12/31/2016)	Deloitte & Touche LLP
Legal Advisor (04/15/2011)	Munger, Tolles & Olson LLP
Key Executives	Warren E. Buffett/Chairman of the Board and Chief Executive Officer; Daniel J. Jaksich/Principal Accounting Officer and Vice President; Marc D. Hamburg/Senior Vice President and Chief Financial Officer

Business Description

Berkshire Hathaway Inc is engaged in the financial services domain. Its core activity includes provision of insurance services.

30-day Avg Volume	3.0Mil
Market Cap	451.3Bil
Net Income	18.7Bil
Sales	241.6Bil
Sector	Financial Services
Industry	Insurance - Diversified
Stock Style	Large Core
Direct Investment	No
Dividend Reinvestment	No

Berkshire Hathaway Inc B BRK.B

Quote

Stock Type	Last Close 11/24/2017	Fair Value Estimate	Morningstar Rating™
Classic Growth	182.55	193.00	★★★

Industry Peers

	Morningstar Rating	Market Cap $Mil	Net Income $Mil	P/S	P/B	P/E	Dividend Yield%	5 Yr Rev CAGR%	Med Oper. Margin%	Interest Coverage	D/E
Berkshire Hathaway Inc	★★★	451,283	18,675	1.9	1.5	24.1		9.2	14.6	10.6	0.3
Berkshire Hathaway Inc (USD)	★★★	451,283	18,675	1.9	1.5	24.2		9.2	14.6	10.6	0.3
Allianz SE (USD,EUR)	★★	105,400	7,462	0.8	1.4	12.0	3.6	3.1	9.3	9.5	0.1
Allianz SE (USD,EUR)		105,400	7,462	0.8	1.4	11.9	3.6	3.1	9.3	9.5	0.1
AXA SA (USD,EUR)		70,641	5,890	0.5	0.9	10.3		4.3	5.8		0.5
AXA SA (USD,EUR)	★★★	70,641	5,890	0.5	0.9	10.4	4.2	4.3	5.8		0.5
American International Group Inc (USD)	★★★★	53,245	-2,465	1.1	0.7		2.2	-4.3	5.6	0.9	0.4
Zurich Insurance Group AG (USD)		44,987	3,101	0.7	1.5	14.6		4.9	7.9	6.9	0.1
Zurich Insurance Group AG (USD)	★★★	44,987	3,101	0.7	1.5	14.7	3.7	4.9	7.9	6.9	0.1
Assicurazioni Generali (USD,EUR)		27,874	2,124	0.3	1.0	11.6		1.1	3.4	3.8	0.3
Assicurazioni Generali (USD,EUR)		27,874	2,124	0.3	1.0	11.5	5.0	1.1	3.4	3.8	0.3
Aviva PLC (USD,GBP)	★★★	26,477	703	0.4	1.1	33.9	4.7	12.5	4.2	3.9	0.6
Aviva PLC (USD,GBP)		26,477	703	0.4	1.1	33.0	4.8	12.5	4.2	3.9	0.6
Sun Life Financial Inc (USD,CAD)	★★★	24,109	2,763	1.4	1.5	11.7	3.3	7.6	12.1	11.9	0.2
The Hartford Financial Services Group Inc (USD)		19,897	491	1.1	1.2	41.0	1.6	-3.4	7.1	3.4	0.3
MS&AD Insurance Group Holdings Inc (USD,JPY)		18,175	187,763	0.4	0.7	11.0		7.2	6.0	32.4	0.1
MS&AD Insurance Group Holdings Inc (USD,JPY)		18,175	187,763	0.4	0.7	11.4	2.0	7.2	6.0	32.4	0.1
Sompo Holdings Inc (USD,JPY)		14,633	173,487	0.5	0.9	10.5	1.1	4.1	6.5	25.0	0.3
Sompo Holdings Inc (USD,JPY)		14,633	173,487	0.5	0.9	10.0		4.1	6.5	25.0	0.3
NN Group NV (USD,EUR)		14,008	1,266	0.7	0.5	9.5		-2.7	5.4	3.4	0.4
NN Group NV (USD,EUR)		14,008	1,266	0.7	0.5	9.5		-2.7	5.4	3.4	0.4
Aegon NV (USD,EUR)		12,256	1,697	0.3	0.4	6.6	5.1	10.8	2.0	2.8	0.6
Aegon NV (USD,EUR)	★★★	12,256	1,697	0.3	0.4	6.8	5.0	10.8	2.0	2.8	0.6
Swiss Life Holding AG (USD,CHF)		10,741	944	0.7	0.8	12.5		1.8	5.9	4.6	0.3
Swiss Life Holding AG (USD,CHF)		10,741	944	0.7	0.8	12.5	3.1	1.8	5.9	4.6	0.3
Talanx AG (USD,EUR)		10,105	715	0.3	1.0	9.4	3.5	5.4	8.0	9.9	0.2
Athene Holding Ltd (USD)		9,857	1,385	1.7	1.1	7.1			20.7	36.9	
Gjensidige Forsikring ASA (USD,NOK)		9,159	4,610	2.2	2.9	13.8		7.4	22.0	10.0	1.0
Gjensidige Forsikring ASA (USD,NOK)		9,156	4,610	2.7	3.4	16.5	6.9	7.4	22.0	10.0	1.0
Baloise Holding AG (USD,CHF)		7,546	610	0.8	1.3	12.7	3.3	2.8	7.7	10.4	0.3
Baloise Holding AG (USD,CHF)		7,546	610	0.8	1.3	12.1	3.4	2.8	7.7	10.4	0.3
Sony Financial Holdings Inc (USD,JPY)		6,805	38,098	0.5	1.3	20.4		5.1	5.5	8.0	0.3
Sony Financial Holdings Inc (USD,JPY)		6,805	38,098	0.5	1.3	21.0	3.0	5.1	5.5	8.0	0.3
Tryg A/S (USD,DKK)		6,726	2,550	2.0	4.2	13.2	6.0	-2.6	15.8	29.5	0.3
Direct Line Insurance Group PLC (USD,GBP)		6,483	318	1.5	1.9	15.7	1.8	-6.9	12.3	8.6	
Direct Line Insurance Group PLC (USD,GBP)		6,483	318	1.4	1.9	15.4	4.4	-6.9	12.3	8.6	
UnipolSai SPA (USD,EUR)		6,206	453	0.5	0.9	14.5	7.4	-0.5	5.1	9.3	0.0
ASR Nederland NV (USD,EUR)		5,999	686	0.6	0.9	6.6			9.2	105.8	0.0
BB Seguridade Participacoes SA (USD,BRL)		5,711	4,122	10.5	1.9	13.4	6.2	26.4	89.4		
Old Republic International Corp (USD)		5,495	392	1.0	1.2	15.3	3.6	4.9	11.0	14.7	0.3
Assurant Inc (USD)		5,295	237	0.9	1.3	22.4	2.2	-1.9	8.7	15.7	0.3
Industrial Alliance Insurance and Financial Services Inc (USD,CAD)		5,020	555	0.7	1.3	11.5	1.7	3.1	6.0	10.0	0.2
Enstar Group Ltd (USD)		4,419	206	4.4	1.5	22.0		58.7	32.0	16.9	0.2
Vienna Insurance Group AG (USD,EUR)		3,778	281	0.3	0.7	12.0		0.9	4.2		
Vienna Insurance Group AG (USD,EUR)		3,778	281	0.3	0.7	11.7		0.9	4.2		
Topdanmark A/S (USD,DKK)		3,548	1,775	1.2	4.0	13.2	3.4	9.5	11.5	25.9	0.2
Kemper Corp (USD)		3,529	115	1.3	1.7	31.5	1.4	0.2	5.0	1.0	0.3
Unipol Gruppo SpA (USD,EUR)		3,116	-319	0.0	0.0	0.4	100.9	10.5	4.1	4.1	0.7
Delek Group Ltd (USD,ILS)		1,890	286	1.0	1.5	22.9	13.8	-31.7	5.6	1.3	3.5
Delek Group Ltd (USD,ILS)		1,890	286	1.1	1.7	25.0	12.7	-31.7	5.6	1.3	3.5

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Stock Type	Last Close 11/24/2017	Fair Value Estimate	Morningstar Rating™
Classic Growth	182.55	193.00	★★★

Industry Peers

	Morningstar Rating	Market Cap $Mil	Net Income $Mil	P/S	P/B	P/E	Dividend Yield%	5 Yr Rev CAGR%	Med Oper. Margin%	Interest Coverage	D/E
Horace Mann Educators Corp (USD)		1,848	63	1.6	1.3	29.7	2.4	2.5	13.8	10.7	0.2
Genworth Financial Inc (USD)		1,722	342	0.2	0.1	4.9		-3.3	3.8	1.9	0.3
Harel Insurance Investments & Finances Ltd (USD,ILS)		1,426	813	0.3	1.0	6.5	8.6	10.5	5.1	4.3	
Triple-S Management Corp (USD)		664	42	0.2	0.7	16.0		6.7	2.4	2.5	0.0
China United Insurance Service Inc (USD)		121	5	1.6	6.1	21.2			7.4	363.0	0.0
Sundance Strategies Inc (USD)		110	1	22.0	4.3	59.7			4.7	1.4	0.2
Conduit Capital Ltd (USD,ZAR)		77	-136	1.1	1.3				-7.8	-290.6	
Esure Group PLC (USD,GBP)			275					5.4	16.7	9.4	0.5
Acheron Portfolio Corp (Luxembourg) SA (USD)			2					-4.1	31.5	3.7	
European Reliance General Insurance Co SA (USD,EUR)			15						9.3	726.4	
Saga PLC (USD,GBP)			152					-5.8	19.5	11.9	0.4
Tower Ltd (USD,NZD)			-8					-8.7	-3.0	-6.2	0.1
PT Lippo General Insurance Tbk (USD,IDR)			132,880					21.9	12.0	197.7	
Porto Seguro SA (USD,BRL)			954					10.5	9.1		0.0
Talanx AG (USD,EUR)			715					5.4	8.0	9.9	0.2
Genworth Mortgage Insurance Australia Ltd (USD,AUD)			155						56.3	21.4	0.1
Medibank Private Ltd (USD,AUD)			449	1.3	5.1	19.3	2.1		8.7		
Phoenix Holdings Ltd (USD,ILS)			1,002					13.2	6.3	9.1	0.1
Migdal Insurance & Financial Holdings Ltd (USD,ILS)			351	0.2	0.5	8.1	7.0	-1.1	82.8	688.6	
UnipolSai SPA (USD,EUR)			453					-0.5	5.1	9.3	0.0
Seibels Bruce Group Inc							2.3				
Kentucky Central Life Insurance Co											
Novus Acquisition & Development Corp											
Wyncrest Group Inc											
Helvetia Holding AG (USD,CHF)			401					4.5	5.3	28.4	0.3
ASR Nederland NV (USD,EUR)			686						9.2	105.8	0.0
Industry Average	—	32,325	14,554	1.4	1.3	25.6	0.6	3.8	11.3	38.3	0.4

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Analyst Note | 17 Nov 2017 | Greggory Warren, CFA, Sector Strategist

Despite a difficult third quarter, in which wide-moat-rated Berkshire Hathaway's insurance operations were affected by $2.8 billion in catastrophe-related losses, our fair value estimate is unchanged at $290,000 ($193) per Class A (B) share. The more broadly diversified nature of Berkshire's portfolio generally allows the company to offset losses in any one segment, which was the case in the third quarter, as strong results from its insurance equity portfolio and railroad operations, as well as solid results from the rest of its businesses, helped offset the insurer's underwriting losses. From a valuation perspective, it helped that our modeling of Berkshire's insurance operations had already included the possibility of large natural catastrophe losses, even though the exact timing of these events was unknown.

We use a sum-of-the-parts methodology to derive our fair value estimate for Berkshire. Following our updates to the different models we use to value the company, our valuation of the insurance operations decreased 3% to $94,200 ($63) per Class A (B) share, primarily because of the impact of this year's large catastrophe losses. Our estimate for Kraft Heinz, which we value separately from the insurance operations, is $14,900 ($10) per Class A (B) share.

Following a strong recovery in rail volume (especially for coal) during 2017, our estimate for BNSF increased 3% to $63,100 ($42) per Class A (B) share. As for the company's utilities and energy division, our fair value estimate increased slightly to $26,000 ($17) per Class A (B) share after we backed out assumptions for the Oncor acquisition and adjusted the model for year-to-date results. While our value for Berkshire's manufacturing, service, and retail operations increased slightly to $82,600 ($55) per Class A (B) share, our estimate for the finance and financial products division remains in place at $9,200 ($6) per Class A (B) share.

Investment Thesis | 16 Nov 2017 | Greggory Warren, CFA, Sector Strategist

We think two big concerns--a belief that Berkshire Hathaway's size will prevent it from growing at a decent clip in the future and the worry that company's shares will get pummeled once Warren Buffett no longer runs the show--have not only kept some investors on the sidelines but also put a ceiling on the share price, which has rarely risen above 1.5 times book value per share in the eight-plus years since the global equity markets bottomed out during the 2008-09 financial crisis. While we believe Berkshire is unlikely to consistently increase its book value per share at a double-digit rate--something that happened 10 times during 2001-16--we think it will continue to increase book value per share at a high-single-digit to low-double-digit rate of growth going forward. This will leave results solidly and consistently above Berkshire's cost of capital, which is what we've come to expect from companies with wide economic moats. As for succession planning, we expect Buffett's three main roles--chairman, CEO, and investment manager--to be split after his retirement. Our long-standing view has been that Buffett's son, Howard Buffett, will serve as nonexecutive chairman and that Ted Weschler and Todd Combs will serve as co-investment managers of Berkshire's investment portfolio. We think there are two fine candidates for the CEO role--Ajit Jain and Greg Abel--both of whom would bring unique insights to the role; our preference would be to have Jain take control of all of Berkshire's insurance operations, while Abel (who has experience with both operations and acquisitions) fills the role of chief capital allocator. With investment opportunities few and far between, the company continues to build up large amounts of cash on its balance sheet, which we think (absent sizable investment opportunities) should be dedicated to dividends and share repurchases. While Berkshire's share-repurchase policy is well known, we believe the firm could comfortably return one third of its annual free cash flow to shareholders. At the very least, the firm should consider a large one-time special dividend, returning a decent amount of excess cash to shareholders in the near to medium term.

Economic Moat™ | 16 Nov 2017

Berkshire's wide economic moat is more than just a sum of its parts. That said, the parts that make up the whole are fairly moaty in their own regard. The company's insurance operations--Geico, General Re, Berkshire Hathaway Reinsurance Group, and Berkshire Hathaway Primary Group--continue to be important contributors to the overall business. Not only do the insurance operations (sans the investment in Kraft Heinz) generally account for around one third of Berkshire's pretax earnings (and our estimate of the company's fair value), but they also generate low-cost float--the temporary cash holdings that arise from premiums being collected in advance of future claims, which is a major source of funding for investments. From an economic moat perspective, we don't believe the insurance industry is particularly conducive to the development of sustainable competitive advantages. While there are some quality companies operating in the industry (with Berkshire having some of the best operators in the different segments where it competes), the product that insurers sell is basically a commodity, with excess returns being difficult to achieve on a consistent basis. Buyers of insurance are not inclined to pay a premium for brands, and the products themselves are easily replicable. Competition among insurance firms is fierce, and participants have been known to slash prices or simply undercut competitors to gain market share. Insurance is also one of the few industries where the cost of goods sold (signified by claims) may not be known for many years, providing an incentive for companies to sacrifice long-term profitability in favor of near-term growth. In reinsurance, this dynamic can be even more pronounced, as losses in this business tend to be large in nature and may not be realized for years after a policy is written. Insurers can, however, develop sustainable cost advantages by either focusing on less commodified areas of the market or by developing efficient and/or scalable distribution platforms. What they can't do is gain a sustainable competitive advantage through investing,

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even when gains are the result of the investing prowess of someone like Buffett. We believe insurers that consistently achieve positive underwriting profitability are better bets in the long run, as insurance profitability tends to be more sustainable than investment income. Geico has made strides with its direct-selling operations, moving from a position as the fourth-largest private auto insurer in the U.S. a decade ago (with 7% of the market) to the second-largest underwriter at the end of 2016 (with a 12% share). Much like its closest competitor, Progressive, Geico has set itself apart from the rest of the industry by its scale in the direct-response channel. While scaling is typically difficult for insurance companies, personal line insurers like Geico and Progressive have been better at spreading fixed costs over a wider base, as their business models do not require as much human capital and specialized underwriters as other insurance lines. This has been reflected in Geico's expense ratio, which over the past five calendar years has averaged around 17%, leaving it more than 700 basis points below the industry average and around 400 basis points better than Progressive. Geico has, however, trailed its closest peer on an underwriting basis, allowing Progressive to produce a combined ratio of 94% on average the past five calendar years, compared with Geico at 96%. Given the similarity in their operations, though, as well as the level and consistency of their profitability, we think that Geico, much like Progressive, has a narrow economic moat around its operations. We do not believe Berkshire's two reinsurance businesses--General Re and BHRG--have economic moats. For a premium, reinsurers assume all or part of an insurance or reinsurance policy written by another insurer. While any insurance company can underwrite reinsurance, a handful of larger companies--Munich Re, Swiss Re, Hannover Re, Lloyd's, and Berkshire Hathaway--hold sway over the lion's share of the global reinsurance market. The policies underwritten by reinsurers often contain large long-tail risks that few companies have the capacity to endure and, when priced appropriately, can generate favorable long-term returns. That said, reinsurers compete almost exclusively on price and capital strength, making it almost impossible to build structural cost advantages. More important, losses in the reinsurance market are lumpy and may not be realized for years after a policy is written, magnifying the importance of disciplined and accurate underwriting skills. While Berkshire's reinsurance arms are unique in that they have the luxury of walking away from business when an appropriate premium cannot be obtained--something their peers cannot always do--their underwriting profitability has been less consistent (due to the nature of the risks they are underwriting) and much narrower than Berkshire's other insurance businesses. The company sticks with reinsurance because it generates large amounts of float that can be invested for longer periods of time than short-tail lines like auto insurance. While our standard view on reinsurance is that firms operating in this segment cannot carve out economic moats, we think Berkshire's two reinsurance arms have come closer than most. We believe BHPG, which has been Berkshire's most profitable insurance business the past 10 calendar years, benefits from a narrow economic moat around its operations. What is all the more remarkable about this is the fact that BHPG is a conglomeration of multiple insurance operations--including National Indemnity's primary group, Medical Protective Company, U.S. Investment Corporation, and Applied Underwriters--that offer coverage as varied as workers' compensation and commercial auto and property coverage. It is also where the company's Berkshire Hathaway Specialty Insurance business resides. Formed in June 2013, this business is focused on U.S. excess and surplus lines, looking to take advantage of the growing demand for tailored insurance. We view this as a net positive for Berkshire's insurance operations overall, as we've long believed that insurers that are able to focus on the least commodified areas of the insurance market, such as excess and surplus lines, are much more likely to generate consistent underwriting profitability. Of the more than 70 noninsurance businesses that make up the remainder of Berkshire's operating subsidiaries, Burlington Northern Santa Fe and Berkshire Hathaway Energy are the next two largest contributors to the firm's profitability and overall value, typically generating around 30% of pretax earnings (and our fair value estimate) for the firm. The most interesting thing about these two particular businesses is that neither of them was a major contributor to Berkshire's pretax earnings a decade ago. Buffett's shift into such debt-heavy, capital-intensive businesses as railroads and utilities has represented a marked departure from many of Berkshire's other acquisitions over the years, which have tended to require less ongoing capital investment and have had little to no debt. By definition, these higher-capital businesses will have lower returns than the asset-light businesses Berkshire has acquired over the years. That said, were Buffett to focus on buying more asset-light companies with fewer capital reinvestment needs, it would leave his successors with even greater levels of cash to reinvest longer term. During the past three calendar years, the firm generated an average of $17.3 billion annually in free cash flow and is on pace to generate upwards of $25 billion in free cash flow during 2017. The amount of excess cash that Buffett would have needed to find a home for would have been meaningfully higher had Berkshire purchased similar-size companies such as BNSF and BHE with similar cash flow profiles that were not investing more than $4 billion each on average in their own property and equipment the past five calendar years. With BNSF, which was acquired in full in February 2010, Berkshire picked up a Class I railroad operator--an industry designation for a large operator with an extensive system of interconnected rails, yards, terminals, and expansive fleets of motive power and rolling stock. We believe the North American Class I railroads benefit from colossal barriers to entry because of their established, practically impossible-to-replicate networks of rights of way and continuously welded steel rail. While barges, ships, aircraft, and trucks also haul freight, railroads are by far the lowest-cost option when no waterway connects the origin and destination, especially for freight with low value per unit weight. That said, customers have

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few choices and thus wield limited buyer power, with most Class I railroads operating as duopolies and some being a monopoly supplier to the end client in many markets. This provides the major North American Class I railroads with efficient scale. Believing that railroad operators like BNSF will continue to leverage their competitive advantages of low cost and efficient scale to generate returns on invested capital in excess of their cost of capital over the long run, we have awarded them wide moat ratings. As for Berkshire Hathaway Energy, which Buffett built up through investments in MidAmerican Energy (supplanting a 76% equity stake taken in early 2000 with additional purchases that have raised its interest to 90.0%), PacifiCorp (acquired in full during 2005), NV Energy (acquired in full at the end of 2013), and AltaLink (acquired in full at the end of 2014), we think the business overall is endowed with a narrow economic moat. While BHE has picked up pipeline assets--which have wide-moat characteristics--the majority of its revenue and profitability (and ongoing capital investment) are driven by its three main regulated utilities: MidAmerican Energy, PacifiCorp, and NV Energy. We think that regulated utilities cannot establish more than a narrow moat around their businesses, even with their difficult-to-replicate networks of power generation, transmission, and distribution, given that their rates, as well as their returns, are set by state and federal regulators. While Berkshire's manufacturing, service, and retailing operations are generally the next-largest contributor to pretax earnings as well as our overall estimate of the value of the firm, they comprise a wide array of businesses operating in more than a handful of different industries. Unlike BNSF and BHE, both of which file quarterly and annual reports with the Securities and Exchange Commission, there is little financial information available on the firms operating in this segment. For past deals like Lubrizoil and Precision Castparts, we've generally had a good sense of the operating profitability and moat characteristics of the operations (with both firms viewed as having narrow economic moats), but once they were folded into the manufacturing, service, and retailing segment, it became more difficult to conduct a proper assessment. Given Buffett's penchant for acquiring companies that have consistent earnings power, generate above-average returns on capital, hold little debt, and are run by solid management teams, though, we believe the businesses that make up the segment are collectively endowed with a narrow economic moat. The same could be said for Berkshire's finance and financial products segment, which includes Clayton Homes (manufactured housing and finance), CORT Business Services (furniture rental), Marmon (rail car and other transportation equipment manufacturing, repair and leasing), and XTRA (over-the-road trailer leasing). While the recession (and collapse of the housing market) that followed the 2008-09 financial crisis affected many of these businesses, they all benefited from being under the Berkshire umbrella, which allowed them to recover on their own terms. With Buffett running Berkshire on a decentralized basis, the managers of the company's operating subsidiaries are empowered to make their own business decisions. In most cases, the managers running Berkshire's subsidiaries are the same individuals who originally sold their firms to Buffett, leaving them with a vested interest in the businesses they are running. Barring a truly disruptive event in their industries, we expect these firms to continue to have the same advantages that attracted Buffett to them in the first place. That does not mean that there won't be subsidiaries whose competitive advantages diminish over time (exemplified by the demise of the textile manufacturer that Berkshire Hathaway derives its own name from), it's just that the large collection of moaty firms that reside within Berkshire's manufacturing, service, and retailing operations, as well as its finance and financial products division, is more likely to maintain a narrow economic moat in aggregate, even as a few firms along the way succumb to changing competitive dynamics within their industries.

Valuation | 16 Nov 2017

Our fair value estimate for Berkshire Hathaway's Class B shares is $193. This is equivalent to 1.6 times the firm's reported book value per share of $125 at the end of the third quarter. With book value per share expected to expand at a high-single to double-digit rate this year and next, our fair value estimate is equivalent to 1.5/1.4 times projected book value at the end of 2017/2018, respectively. Our valuation includes an eventual reduction in the statutory U.S. federal income tax rate to 25% (from 35%). Absent tax reform, our fair value estimate would be $188 per Class B share. We use a sum-of-the-parts methodology to derive our fair value estimate. Our value for Berkshire's insurance operations has decreased to $63 per Class B share from $65, due primarily to large catastrophe losses during 2017, which have been offset somewhat by strong market gains in the segment's equity portfolio. Our longer-term assumptions include an improvement in underwriting results, slightly higher yields on the credit portfolio (as interest rates increase over time), and a lower statutory tax rate. Berkshire's investment in Kraft Heinz, which we value separately from the insurance operations, is worth $10 per Class B share. Our fair value estimate for BNSF increased to $42 per Class B share from $41. This valuation assumes a more normalized volume outlook for the railroad following a strong year of recovery (especially for coal) during 2017, along with increased expectations about operating profitability and a decrease on the firm's tax rate, longer term. As for the company's utilities and energy division, which is unlikely to benefit from a lower statutory tax rate (as any savings will get passed on to customers), our fair value estimate for Berkshire Hathaway Energy increased slightly to $17 per Class B share from $16 after we backed out assumptions for the Oncor acquisition and adjusted our valuation model to account for year-to-date results. Our fair value estimate for Berkshire's manufacturing, service, and retail operations increased slightly to $55 per Class B share, and assumes mid-single-digit annual revenue growth and high-single-digit operating margins during 2017-21. As for the firm's finance and financial products division, our fair value estimate remains in place at $6 per Class B share.

Berkshire Hathaway Inc B BRK.B

Analysis

Risk | 16 Nov 2017

Berkshire is exposed to large potential losses through its insurance operations. While the company believes its catastrophe and supercatastrophe underwriting can generate solid long-term results, the volatility of these particular lines of business, which has the potential to subject the firm to especially large losses, tends to be high. Berkshire maintains much higher capital levels than almost all other insurers, though, which we believe mitigates some of this risk. Several of the firm's key businesses--insurance, energy generation and distribution, and rail transport--operate in industries that are subject to higher degrees of regulatory oversight, which could have an impact on future business combinations, as well as the setting of rates that are charged to customers. On top of that, many of the firm's noninsurance operations are exposed to the cyclicality of the economy, with results typically suffering during economic slowdowns and recessions. Berkshire is also exposed to foreign currency, equity price, and credit default risk through its various investments and operating companies. The company's derivative contracts, in particular, can affect the firm's earnings and capital position, especially during more volatile markets, given that they are recorded at fair value and are, therefore, updated periodically to reflect the ongoing changes in the value of these contracts. Berkshire depends on two key employees, Warren Buffett and Charlie Munger, for almost all of its investment and capital-allocation decisions. With Buffett turning 87 in August of this year and Munger turning 94 in January of next year, it has become increasingly likely that our valuation horizon will end up exceeding their life spans, with the quality of investment returns and capital allocation likely to deteriorate under new management.

Management | 16 Nov 2017

Warren Buffett has been chairman and CEO of Berkshire Hathaway since 1970. Charlie Munger has served as vice chairman since 1978. Berkshire has two classes of common stock, with Class B shares holding 1/1,500th of the economic rights of Class A shares and only 1/10,000th of the voting rights. Buffett is Berkshire's largest shareholder, with a 31.9% voting stake and a 17.2% economic interest in the firm. He has been a strong steward of investor capital, consistently aligning his own interests with those of shareholders, with Berkshire's wide economic moat derived in part from the success that he has had in melding the firm's financial strength and underwriting ability with his own investment acumen. Buffett's stewardship has allowed Berkshire to increase its book value per share at a compound annual rate of 19.0% during 1965-2016, compared with a 9.7% return for the S&P 500 TR Index. The firm has not only increased its book value per share at a double-digit rate annually 41 separate times during 1965-2016, but it has reported declines in its book value just twice during the past 52 years (in 2001 and 2008). Even with the firm's overall results being affected by the 9/11 terrorist attack and the 2008-09 financial crisis during the first decade of the new millennium, Berkshire still generated double-digit rates of annual growth in its book value per share seven times during 2001-10. While we think the firm is unlikely to consistently increase its book value per share at a double-digit rate going forward, given the ever-increasing size and complexity of its operations, we believe it can increase book value per share at a high-single-digit to low-double-digit rate of growth during the next five years, much as we've seen since the start of the new millennium. Given Buffett's impressive long-term record, it is important that much of what he has built over the years will remain intact once he is gone. Succession was not formally addressed by Berkshire until 2005, when the company noted that Buffett's three main jobs--chairman, chief executive, and chief investment officer--would be handled by one chairman (expected to be his son, Howard Buffett), one CEO (with candidates identified but not revealed), and several external hires (reporting directly to the CEO) to manage the investment portfolio. While we have clarity on the investment side of things, with Todd Combs and Ted Weschler expected to be the only outside hires to work with Berkshire's investment portfolio, questions linger over who the firm's next CEO will be. We continue to envision the main role of the next chief executive to be one of capital allocator in chief. With all of Berkshire's operating businesses managed on a decentralized basis, eliminating the need for layers of management control and pushing responsibility for each business down to the subsidiary level, Buffett has had (and whoever follows him as CEO should have) the freedom to focus on managing the investments in the firm's portfolio and making capital-allocation decisions. Buffett has noted, though, that the job requires more than just investing prowess and, as such, he would not advocate for a candidate to run Berkshire who only had investing experience, with no operational experience to speak of. Buffett has also been vocal about the fact that the next CEO will come from within the company's ranks. At this point, we believe that Ajit Jain, who heads Berkshire Hathaway Reinsurance Group, is one of the top choices to succeed Buffett as chief executive. Not only does Jain understand risk better than anyone else at Berkshire, but Buffett has admitted on countless occasions that Jain has "probably made a lot more money" for the firm than he has over the years. While Jain's experience has primarily been on the underwriting side of the business, his success there has been built on his ability to avoid making "dumb decisions" rather than making "brilliant" ones. If the firm's next CEO is expected to do nothing more than act as a caretaker for the business, tending to the needs of the managers of the different subsidiaries, overseeing the actions of the investment managers handling the company's investment portfolio, and dealing with the capital-allocation and risk assessments that need to be made along the way, then we could not think of a better candidate than Jain. The only problem with this choice is that Jain has been on the record several times saying that he does not want the job, which is the main reason why we regard Greg Abel--who not only brings with him the operational experience of running Berkshire Hathaway Energy for many years but has a ton of experience doing acquisitions--as the

Berkshire Hathaway Inc B BRK.B

Analysis

most likely choice to succeed Buffett. With insurance still being such a complex and integral part of Berkshire's operations, we'd prefer to see Jain eventually oversee all of these businesses and have Abel assume the CEO role once Buffett leaves the scene.

Bulls Say

Book value per share, which is a good proxy for measuring changes in Berkshire's intrinsic value, increased at a 19.0% compound annual growth rate during 1965-2016, compared with a 9.7% return for the S&P 500 TR Index.

Berkshire's stock performance has been equally strong, increasing at a 20.8% CAGR during 1965-2016. The shares increased at a 16.3% CAGR during 2012-16, compared with a 14.7% CAGR for the S&P 500.

At the end of the third quarter of 2017, Berkshire had $113 billion in insurance float. The cost of the firm's float has been negative for much of the past decade.

Bears Say

Given the size and scale of its operations, Berkshire's biggest hurdle longer term will be its ability to consistently find deals that not only add value but are large enough to be meaningful.

The other big issue facing the firm is the longevity of chairman and CEO Warren Buffett (who turned 87 in August) and managing partner Charlie Munger (who turns 94 in January of 2018).

Berkshire's insurance operations face competitive and highly cyclical markets that occasionally produce large losses, and much of its other operations are economically sensitive and focused more on U.S. markets.

Overview

Berkshire Hathaway is a holding company with a wide array of subsidiaries engaged in diverse activities. The firm's core business segment is insurance, run primarily through Geico, General Re, Berkshire Hathaway Reinsurance Group, and Berkshire Hathaway Primary Group. The company's second-largest segment includes Burlington Northern Santa Fe (railroad) and Berkshire Hathaway Energy (utilities and energy distributors), followed closely in size and importance by its manufacturing, service, and retailing operations. The rest of Berkshire's portfolio consists of its finance and financial products segment, which is involved in manufactured housing and finance, furniture rental, and rail car and other transportation equipment manufacturing, repair, and leasing.

Competitors

Name	Price	% Chg	TTM Sales $ mil
Berkshire Hathaway Inc B	$182.55	0.02 ↑	241,574
Berkshire Hathaway Inc A	$274,480.00	-0.05 ↓	241,574
AXA SA	$29.47	-1.64 ↓	156,316
AXA SA ADR	$30.29	1.37 ↑	156,316
Allianz SE ADR	$23.62	1.42 ↑	130,713
Allianz SE	$235.08	1.90 ↑	130,713

Analyst

Price 11-24-2017	182.55 BASE
Fair Value Estimate	193 BASE
Uncertainty	Medium
Consider Buy	135.1 BASE
Consider Sell	260.55 BASE
Economic Moat	Wide
Stewardship Rating	Exemplary

Quantitative

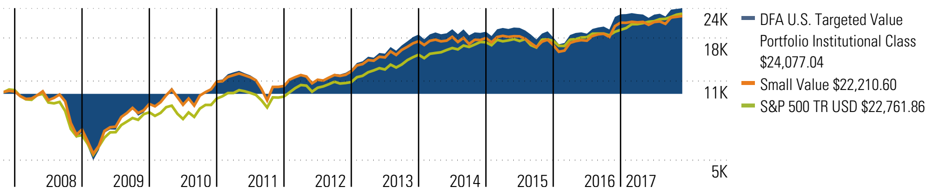
Price 11-24-2017	182.55 BASE
Quantitative Fair Value	181.73 BASE
Quantitative Uncertainty	Medium
Quantitative Moat	Wide
As of 11-23-2017	

DFA U.S. Targeted Value Portfolio Institutional Class DFFVX

Morningstar Analyst Rating
Gold

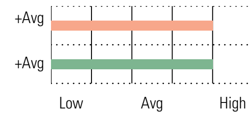
NAV $	NAV Day Change %	Yield TTM %	Total Assets $ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
25.35	↑0.01 | 0.04	1.01	10.8	Open	—	None	0.37%	★★★	Small Value	Small Value

Growth of 10,000 11-23-2007 - 11-23-2017



3 Year Average Morningstar Risk Measures

Risk vs. Category (337)
Return vs. Category (337)



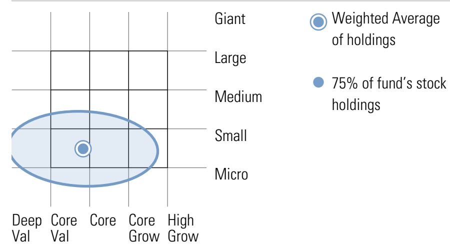
Investment Strategy

The investment seeks long-term capital appreciation. The fund, using a market capitalization weighted approach, purchases a broad and diverse group of the readily marketable securities of U.S. small and midcap companies that the Advisor determines to be value stocks. It may purchase or sell futures contracts and options on futures contracts for U.S. equity securities and indices, to adjust market exposure based on actual or expected cash inflows to or outflows from the fund. The fund does not intend to sell futures contracts to establish short positions in individual securities or to use derivatives for purposes of speculation or leveraging investment returns.

Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive
Rating	Gold

Style Map

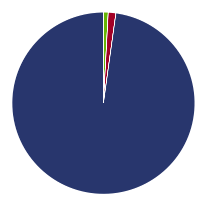


Performance 11-22-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,642	10,064	10,983	12,725	20,000	24,077
Fund	6.42	0.64	9.83	8.36	14.87	9.18
+/- S&P 500 TR USD	-11.69	-0.41	-10.47	-1.90	-0.84	0.61
+/- Category	-0.04	0.35	-0.42	0.40	1.59	0.90
% Rank in Cat	56	33	62	52	30	34
# of Funds in Cat	395	415	390	337	297	198

* Currency is displayed in BASE

Asset Allocation



Asset Class	% Net
Cash	0.83
US Stock	97.81
Non US Stock	1.35
Bond	0.00
Other	0.00

Top Holdings 09-30-2017

	Weight %	Last Price	Day Chg %	52 Week Range
PulteGroup Inc	0.87	33.17 BASE	0.97 ↑	18.18 - 33.17
✲ S+P500 EMINI FUT DEC17 XCME 20171215	0.85	—	—	—
Arrow Electronics Inc	0.78	78.51 BASE	-0.23 ↓	67.39 - 84.53
Toll Brothers Inc	0.77	48.75 BASE	1.44 ↑	29.11 - 48.69
Owens-Corning Inc	0.76	87.60 BASE	0.31 ↑	50.77 - 88.36
% Assets in Top 5 Holdings	4.03			

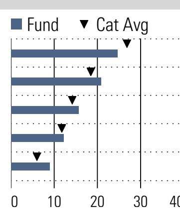
⊕ Increase ⊖ Decrease ✲ New to Portfolio

Management

	Start Date
Joseph H. Chi	02-28-2012
Jed S. Fogdall	02-28-2012
Joel P. Schneider	07-21-2015

Top Sectors 09-30-2017

	Fund	3 Yr High	3 Yr Low	Cat Avg
Financial Services	24.64	28.54	24.64	25.92
Industrials	20.77	20.77	19.54	17.56
Consumer Cyclical	15.69	15.69	12.55	13.26
Technology	12.18	13.91	12.18	10.85
Energy	8.93	8.96	6.80	5.09



Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Captial Gain	Return of Capital	Dividend Income	Distribution Total
09-28-2017	24.95	0.0000	0.0000	0.0000	0.0710	0.0710
06-29-2017	23.78	0.0000	0.0000	0.0000	0.0610	0.0610
03-30-2017	23.99	0.0000	0.0000	0.0000	0.0608	0.0608
12-15-2016	24.26	0.7368	0.0422	0.0000	0.0701	0.8491
09-29-2016	21.62	0.0000	0.0000	0.0000	0.0534	0.0534

DFA U.S. Targeted Value Portfolio Institutional Class DFFVX

Analysis

Targeted exposure to the cheaper half of U.S. small- and mid-cap stocks.
By Adam McCullough 6/26/2017

DFA U.S. Targeted Value is a great choice for diversified exposure to mid- and small-cap U.S. value stocks. Its well-constructed portfolio, low turnover, flexible trading approach, and low fee support its Morningstar Analyst Rating of Gold.

This fund targets stocks representing the cheaper half of the U.S. mid- and small-cap equity market, based on price/book ratio, and excludes stocks with poor profitability, highly regulated utilities, and REITs. But these exclusions are modest. and the portfolio still holds more than 1,400 stocks, which it weights by market cap. This broad reach effectively diversifies firm-specific risk. The fund has a wider market-cap range than most of its small-value peers, venturing further into both mid- and micro-cap territory. Stocks can qualify for inclusion with a market cap of only $10 million. Yet, the average market cap of the fund's holdings is about 20% less than that of its typical peer. And it has a comparable value orientation.

Prior to 2014, the fund did not filter out stocks with poor profitability. But Dimensional updated the strategy based on research indicating that more-profitable stocks tend to offer higher returns. It expanded its reach in the mid-cap segment to help offset the reduction in diversification that would have otherwise resulted from excluding the least profitable stocks. Although the managers apply rules-based screens to construct the portfolio, they have the flexibility to substitute one stock for another and trade patiently to reduce transaction costs. This flexibility allows the firm's traders to negotiate from a position of strength, and DFA often acts as a liquidity provider, which allows them to obtain better prices. To further enhance returns, the managers can use momentum as a reason not to trade, like holding off on buying names with poor recent performance.

This approach has worked well over the long term. During the past 15 years through May 2017, the fund topped the small-value Morningstar Category average and the Russell 2000 Value Index by 0.9 and 1.3 percentage points annualized, respectively, with slightly greater volatility.

Process Pillar: Positive
A time-tested approach, efficient market-cap-weighted construction, and flexible trading support the fund's Positive Process Pillar Rating.

The fund starts with the cheaper half of U.S. stocks as measured by price/book that fall outside of the largest 500 names by market cap. Next it removes REITs, highly regulated utilities, recent IPOs, acquisition targets, and the least-profitable names. DFA measures profitability as operating income before depreciation and amortization minus interest expense, over book value. To determine which of the least profitable stocks to exclude, DFA divides this fund's selection universe into four quartiles on a valuation/size plane. It excludes the least profitable 80% of names that land in the cheapest 25th–50th percentile of the mid-cap region. The managers are less stringent in the cheapest mid-cap quartile, where they only exclude the least profitable 10% of companies. In the small-cap market, it only excludes the least profitable 10% in the more expensive quartile and keeps all the cheapest small-cap stocks. Stocks that make the cut are weighted by market cap, which reduces turnover. The managers can substitute one stock for another to reduce transaction costs. The fund may also refrain from buying stocks with strong negative momentum and hold on to some of its winners as they move out of the targeted value zone.

This is among the most broadly diversified funds in the small-value category. It holds more than 1,400 stocks, and its top 10 holdings only account for about 8% of the portfolio. The fund covers a wider swath of the market-cap spectrum than many of its peers, extending its reach further up the market-cap ladder and offering greater exposure to micro-cap stocks than the average fund in the small-value category. The average market cap of the fund's holdings is about 20% less than that of its typical peer. Overall, the portfolio tends to have a

Morningstar's Take

Morningstar Analyst Rating Gold

Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating
Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Fund Performance

	Total Return %	+/- Category
YTD	6.42	-0.04
2016	26.86	0.88
2015	-5.72	0.99
2014	2.94	-0.40
2013	43.03	6.81

DFA U.S. Targeted Value Portfolio Institutional Class DFFVX

Analysis

similar value tilt to the category norm. But the portfolio is distinctive.

The fund has greater exposure to industrials stocks than the average small-cap value fund. It is most underweighted in both the real estate and utilities sectors because of its exclusion of REITs and highly regulated utilities. DFA excludes REITs because it believes they should be treated as a separate asset class from equities and that regulated utilities do not behave like other value stocks because their earnings potential is capped and they are generally less risky.

The portfolio's turnover is consistently among the lowest in the category, largely because of its broad market-cap-weighted approach. Its price/book value selection criterion also helps because this metric is more stable than many alternatives, such as price/earnings.

Performance Pillar: Positive
The fund earns a Positive Performance rating because it has generated strong long-term returns compared with its category peers.

During the past 15 years through May 2017, this fund's return bested the small-value category average and the Russell 2000 Value Index by 0.9 and 1.3 percentage points annualized, respectively, with slightly higher volatility. Favorable stock exposure rather than sector allocation contributed the most to this outperformance. Performance was also strong over shorter windows. Its rolling three-year returns ranked in the category's top half 81% of the time in the past 13 years.

The strategy can underperform for long periods of time. During the market downturn from October 2007 through March 2009, the fund lost 61.9% and the category average lost 58.3%. But the fund has rebounded nicely. From October 2007 through May 2017, it cumulatively returned 91.8% against the category average of 83.7%. Favorable stock exposure in the consumer cyclical, financial services, and technology sectors helped the most.

Although the fund has low turnover, it has distributed capital gains in eight of the trailing 10 years, the largest of which measured 7.8% of the fund's NAV in 2013. Despite these distributions, the fund's post-tax 15-year return still lands in the top third of the category.

People Pillar: Positive
Joseph Chi and Jed Fogdall have been listed as comanagers of the fund since February 2012. Chi and Fogdall co-lead the firm's portfolio management team and have served as portfolio managers at the firm since 2004 and 2005, respectively. Chi also serves as chairman of the investment committee. Joel Schneider rejoined the fund in July 2015. Schneider has served as a portfolio manager at DFA since 2015. These named managers lead a broader team of portfolio managers who assist with the fund's day-to-day operations. Chi and Fogdall sit on Dimensional's investment committee, which provides additional fund oversight.

Henry Gray announced in February 2017 that he planned to leave DFA to pursue an interest in education. Gray had served as head of global equity trading and as a portfolio manager on this fund. Schneider replaced Gray as a portfolio manager on this fund. DFA removed Bhanu Singh and Stephen Clark as named managers on the fund in February and July 2015, respectively. Clark is now in charge of DFA's North American institutional group and not a portfolio manager. Singh transferred to the Sydney office to head the Asia-Pacific portfolio management team. According to the Statement of Additional Information, Chi and Schneider have small investments in this fund while Fogdall does not.

Parent Pillar: Positive
Dimensional Fund Advisors is one of the industry's best stewards, so it earns a Positive Parent Pillar rating. All its strategies are grounded in an unwavering belief in market efficiency and transaction cost management. They attempt to profit from the types of risk that the market compensates by emphasizing securities with characteristics that historically have been associated with higher returns.

The firm generally has been disciplined about launching new strategies in each of the markets where it operates. Each strategy must be economically sound, consistent with its philosophy, and backed by empirical evidence. That said, the firm has adapted some of its strategies to meet client demand in all markets. This behavior bears watching, but for the most part the firm has maintained strong research integrity. It is also selective about the clients it works with. Individual investors can gain access to the firm's funds only through an intermediary or financial advisor that the firm has screened to mitigate short-term trading that can hurt long-term investors.

Manager retention here is high. The firm's team- and rules-based approach to portfolio management mitigates the impact of departures when they do occur. An investment committee provides additional oversight and continuity. Dimensional is organized as a private partnership, with significant employee ownership.

Price Pillar: Positive
Although there are cheaper small-value index alternatives, this fund is among the least expensive small-value-focused funds. It earns a Positive Price Pillar rating.

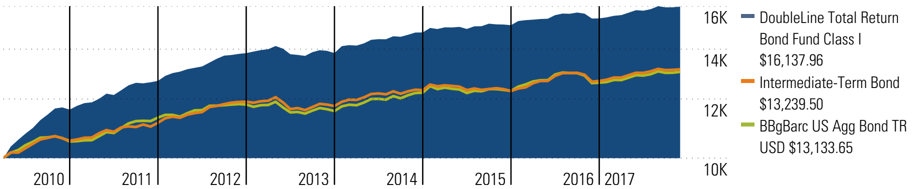
The fund charges an expense ratio of 0.37%, almost half the category median fee of 1.00%. Dimensional's flexible trading approach and low turnover help reduce transaction costs, which can be more meaningful in the small-cap arena. The fund uses securities-lending revenue to offset its expenses, which further benefits fundholders. Like all Dimensional funds, this offering is available to individual investors only through a qualified financial advisor or select platform such as a 401(k).

DoubleLine Total Return Bond Fund Class I DBLTX

Morningstar Analyst Rating
Neutral

NAV $	NAV Day Change %	Yield TTM %	Total Assets $ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
10.69	↑0.02 | 0.19	3.70	54.1	Open	$100,000	None	0.48%	★★★★★	Intermediate-Term Bond	

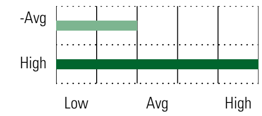
Growth of 10,000 04-06-2010 - 11-23-2017



3 Year Average Morningstar Risk Measures

Risk vs. Category (854)

Return vs. Category (854)



Pillars

Process	Neutral
Performance	Positive
People	Positive
Parent	Neutral
Price	Positive
Rating	**Neutral**

Investment Strategy

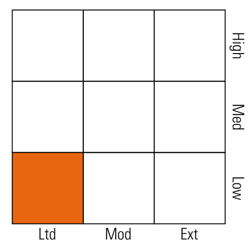
The investment seeks to maximize total return. The advisor intends to invest at least 80% of the fund's net assets (plus the amount of borrowings for investment purposes) in bonds. Bonds include bonds, debt securities, and other fixed income instruments issued by governmental or private-sector entities. Under normal circumstances, the advisor intends to invest more than 50% of the fund's net assets in residential and commercial mortgage-backed securities.

Performance 11-22-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,377	10,030	10,366	10,900	11,629	—
Fund	3.77	0.30	3.66	2.91	3.06	—
+/- BBgBarc US Agg Bond TR USD	0.30	-0.14	0.15	0.48	0.95	—
+/- Category	0.12	0.00	-0.11	0.60	0.93	—
% Rank in Cat	44	57	51	19	10	—
# of Funds in Cat	1,003	1,046	991	854	779	546

* Currency is displayed in BASE

Style Map 06-30-2017



Top Holdings 10-31-2017

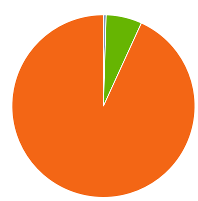
	Weight %	Maturity Date	Amount Mil	Value Mil
US Treasury Note 1.625%	2.41	11-15-2022	1,325.00	1,299.92
US Treasury Note 2%	1.30	02-15-2023	700.00	697.74
⊖ FHLMC 3%	1.22	05-01-2046	657.00	658.70
⊖ FHLMC 3%	1.13	11-01-2045	605.22	606.76
⊕ US Treasury Note	0.98	04-15-2020	524.21	526.15
% Assets in Top 5 Holdings	7.04			

⊕ Increase ⊖ Decrease ✲ New to Portfolio

Bond Statistics

Bond Statistics	Value
Average Effective Duration	3.84
Average Effective Maturity (Years)	5.36
Average Credit Quality	BB
Average Weighted Coupon	3.54
Average Weighted Price	97.53

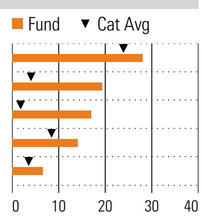
Asset Allocation



Asset Class	% Net
Cash	6.33
US Stock	0.00
Non US Stock	0.00
Bond	93.19
Other	0.48

Top Sectors 10-31-2017

	Fund	BMark	Cat Avg
Agency MBS Pass-Through	28.01	—	23.06
Agency MBS CMO	19.38	—	3.20
Non-Agency Residential MBS	16.94	—	0.96
Asset-Backed	14.08	—	7.62
Commercial MBS	6.58	—	2.70



Management

	Start Date
Jeffrey E. Gundlach	04-06-2010
Philip A. Barach	04-06-2010

Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Captial Gain	Return of Capital	Dividend Income	Distribution Total
10-31-2017	10.67	0.0000	0.0000	0.0000	0.0321	0.0321
09-29-2017	10.70	0.0000	0.0000	0.0000	0.0316	0.0316
08-31-2017	10.77	0.0000	0.0000	0.0000	0.0316	0.0316
07-31-2017	10.70	0.0000	0.0000	0.0000	0.0316	0.0316
06-30-2017	10.68	0.0000	0.0000	0.0000	0.0327	0.0327

DoubleLine Total Return Bond Fund Class I DBLTX

Analysis

This fund's Morningstar Analyst Rating of Neutral reflects what we do and don't know.
By Sarah Bush 7/7/2017

DoubleLine Total Return Bond's Morningstar Analyst Rating of Neutral reflects what we do and don't know. Manager Jeffrey Gundlach is one of the industry's most skilled practitioners, with an impressive record that spans more than two decades. However, DoubleLine has denied repeated requests for access to the firm's personnel and information on its strategy, and we therefore lack crucial details regarding the fund's process and stewardship that the firm's public filings and communications do not sufficiently address.

Shortly after the fund's mid-2010 launch, Morningstar raised questions about what risks it had taken to achieve its extraordinary early gains. Since then, this mortgage-heavy fund's risk profile has moderated. The portfolio featured a stake in esoteric mortgage-backed securities including inverse floaters and inverse interest-only tranches that stood at close to 25% in 2010; these securities offer plump yields but can also be highly volatile and suffer from bouts of illiquidity. Since late 2012, this stake has run at a more modest 3% to 5%. The fund at one time threw off an 8.8% yield, a measure that stood at 3.7% as of June 2017. A moderating--although still strong--performance profile also suggests lower risk.

We are also encouraged by signs that the team backing Gundlach remains stable. According to the fund's website, the core of the mortgage-focused managers backing him remains in place; in general, the firm has seen very little portfolio manager turnover. That, together with Gundlach and comanager Philip Barach's demonstrated expertise, counts in the fund's favor.

That said, uncertainties remain. Even with modest outflows, the fund's assets stood at $54 billion as of May 2017, raising questions about capacity. Meanwhile, the nonagency residential mortgage market, which has been a meaningful component of the fund's strategy, is shrinking. Gundlach has found opportunities in other structured fare, but we lack important detail about risk and liquidity management, portfolio construction, and stewardship necessary to consider a Morningstar Medalist rating.

Process Pillar: Neutral

Manager Jeffrey Gundlach has historically taken a barbelled approach, which was designed to balance risks in this mortgage-heavy portfolio. At one end of the barbell was a stake in credit-sensitive nonagency residential mortgages. Gundlach has argued that these yield-rich securities are likely to do well in a rising interest-rate environment if economic growth boosts income and housing prices. Meanwhile, any increase in prepayments--a risk to premium mortgage prices when yields fall--would trigger even better nonagency performance as investors would receive par on securities that traded at wide discounts in the wake of the mortgage crisis.

The other end of the barbell was dominated by more rate-sensitive fare and included high-quality government-agency and some prime nonagency mortgages. Those positions have included plain-vanilla pass-throughs as well as other esoteric mortgage tranches.

We understand the broad strokes of Gundlach's strategy but continue to have questions about its implementation, especially as the fund's assets have ballooned. How has portfolio construction evolved given the shrinking of the nonagency mortgage market? What does he consider to be the fund's capacity, and has the process changed to accommodate its rapid growth? Reflecting what we know and don't know, the fund earns a Neutral Process Pillar rating.

Although the fund retains its long-standing focus on mortgages and other securitized debt, the portfolio has evolved and its risk profile has muted as it has grown. The most notable change has been in

Morningstar's Take

Morningstar Analyst Rating **Neutral**

Morningstar Pillars

Process	Neutral
Performance	Positive
People	Positive
Parent	Neutral
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Fund Performance

	Total Return %	+/- Category
YTD	3.77	0.12
2016	2.17	-1.06
2015	2.32	2.58
2014	6.73	1.55
2013	0.02	1.44

DoubleLine Total Return Bond Fund Class I DBLTX

Analysis

the fund's position in esoteric mortgage tranches of agency and nonagency fare, including inverse floater and inverse interest-only structures. While the dollar size of the position has stayed relatively stable since mid-2011, the stake has declined significantly as a percentage of assets, running at roughly 3% to 5% since late 2012. Meanwhile, its position in nonagency residential mortgages accounted for 23% of assets as of May 2017, up slightly from a year earlier but down from 44% of the portfolio in September 2010. Agency-backed mortgages have hovered between roughly 40% and 50% of assets. The fund has also dedicated a slice of assets to commercial mortgage-backed securities (7%) and collateralized loan obligations (4%). A cash stake that has ranged widely from less than 2% to 21% rounds out the portfolio.

Gundlach has run this fund with a reported duration that has run as low as 1.2 years and is typically short of its Bloomberg Barclays U.S. Aggregate Bond Index benchmark. Coming into the fourth quarter of 2016, the fund's 2.6-year duration landed near the short end of its range in recent years, which helped it avoid the worst of the post-election spike in rates; as of May 2017, it stood at 3.7 years.

Performance Pillar: Positive

This fund got off to an exceptionally strong start. In its first 18 months, it gained 27%, topping the Bloomberg Barclays U.S. Aggregate Bond Index by 15 percentage points. While we don't have detailed attribution for this time period, this strong performance coincided with a portfolio holding significant allocations to nonagency mortgages and a mix of more-complicated mortgage structures, including inverse floaters and inverse interest-only tranches.

The fund's performance has moderated as some of the more aggressive positions in the portfolio have declined as a percentage of net assets, but it has still performed well. A relatively short duration and strong performance in its nonagency stake helped the fund eke out a 2-basis-point gain as rising bond yields dealt losses to many intermediate-term bond funds in 2013. The fund also posted strong showings in 2014 and 2015, driven in part by the strength of its nonagency stake for most of the period. The fund suffered a rare bout of underperformance in 2016 as corporate bonds, which are not part of its mandate, surged during the first three quarters of the year; the fund regained some ground in the fourth quarter as bond yields spiked. Overall, since the beginning of 2013, the fund's 3.0% annualized gain through June 2017 topped roughly 90% of its distinct peers.

This all adds up to an impressive record and a Positive Performance Pillar rating.

People Pillar: Positive

Jeffrey Gundlach has had a long and impressive career. During his more than 15-year tenure at the mortgage-focused TCW Total Return Bond, that fund's 7.2% annualized gain topped the vast majority of its intermediate-bond competitors'. For most of the 2000s, Gundlach's bread and butter was analyzing cash flows and prepayment assumptions for a variety of government-backed and high-quality nonagency mortgages. Then during 2007 and 2008, he swooped into the decimated nonagency mortgage sector, a move that has paid off handsomely for both his prior charge and this fund. Gundlach was named the Morningstar Fixed-Income Fund Manager of the Year in 2006.

Detailed analysis of mortgage payment streams and risks is an analyst-intensive effort. So, it was good news that the bulk of Gundlach's TCW mortgage team appeared to have joined him when he founded DoubleLine. Philip Barach, who was Gundlach's longtime comanager at TCW Total Return, plays the same role here. Several other mortgage portfolio managers from TCW followed Gundlach to DoubleLine and, according to the company's website, continue as contributors to the fund.

Although Morningstar lacks detail about the full size of the team, the management team's experience and sizable investment in the fund support a Positive People Pillar rating.

Parent Pillar: Neutral

Many of DoubleLine's strengths and weaknesses are clear. On the plus side, the firm and its managers have a demonstrated expertise in managing core and mortgage-backed fixed-income strategies, and manager turnover has been low. That said, the firm has launched funds with varying levels of success. DoubleLine Shiller Enhanced CAPE DSEEX has enjoyed strong performance and solid inflows through mid-2017, but the firm's fundamental equity funds struggled to gather assets, and three have been liquidated. As a result, the firm continues to be heavily dependent on the success of DoubleLine Total Return Bond DBLTX and a handful of other strategies.

Meanwhile, questions remain regarding risk controls, firm culture, and details around succession planning. The firm appears to have begun to address succession and key-person risk by promoting Jeffrey Sherman to deputy CIO in 2016, but it is still unclear how the many responsibilities of founder Jeffrey Gundlach would be handled should he step down from the firm, an admittedly unlikely event. Given DoubleLine Total Return Bond's rapid growth since its 2010 launch, we seek to understand what investments the firm has made to support its expansion as well as how decisions to launch new products are made. Taking into account both what we know and don't know, this firm earns a Neutral Parent Pillar rating.

Price Pillar: Positive

At 47 basis points, expenses on this fund's Institutional shares (83% of assets) are modestly cheaper than the median of 50 basis points for similarly distributed shares, supporting the fund's Positive Price Pillar rating. For retail investors not investing through an IRA, however, that share class' $100,000 minimum investment might be out of reach. Expenses on the fund's Retail shares (17% of assets) are a bit pricey relative to similarly dis-

DoubleLine Total Return Bond Fund Class I DBLTX

Analysis

tributed share classes.

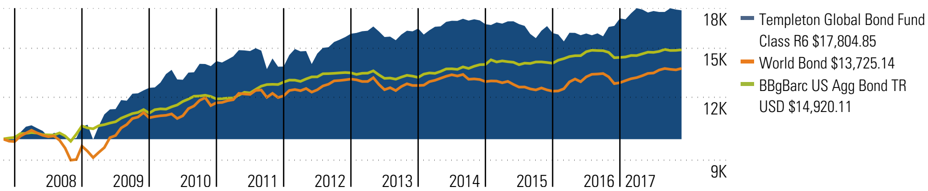
The fund has grown rapidly since its 2010 launch and ranks as the fourth-largest offering in the category. This growth has not yet translated into a meaningful decline in expenses, and the absence of fee breakpoints means that DoubleLine is not sharing economies of scale with shareholders.

Templeton Global Bond Fund Class R6 FBNRX

Morningstar Analyst Rating
Gold

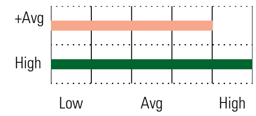
NAV $	NAV Day Change %	Yield TTM %	Total Assets $ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
12.05	↓-0.05 | -0.41	3.06	38.8	Open	$1 mil	None	0.52%	★★★	World Bond	

Growth of 10,000 11-23-2007 - 11-23-2017



3 Year Average Morningstar Risk Measures

Risk vs. Category (280)
Return vs. Category (280)



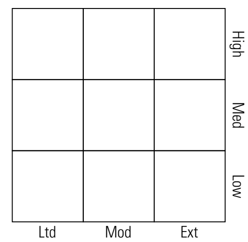
Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Neutral
Price	Positive
Rating	Gold

Investment Strategy

The investment seeks current income with capital appreciation and growth of income. Under normal market conditions, the fund invests at least 80% of its net assets in "bonds." Bonds include debt obligations of any maturity, such as bonds, notes, bills and debentures. It invests predominantly in bonds issued by governments, government-related entities and government agencies located around the world. The fund may invest up to 25% of its total assets in bonds that are rated below investment grade or, if unrated determined by the investment manager to be of comparable quality. It is non-diversified.

Style Map 09-30-2017



Performance 11-22-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,370	9,942	10,844	10,400	11,320	17,805
Fund	3.70	-0.58	8.44	1.32	2.51	5.94
+/- BBgBarc US Agg Bond TR USD	0.23	-1.02	4.93	-1.12	0.40	1.86
+/- Category	-2.85	-1.09	1.72	-0.37	1.33	2.62
% Rank in Cat	76	97	23	57	—	—
# of Funds in Cat	317	342	312	281	250	129

* Currency is displayed in BASE

Bond Statistics

Bond Statistics	Value
Average Effective Duration	-0.34
Average Effective Maturity (Years)	3.36
Average Credit Quality	BB
Average Weighted Coupon	9.04
Average Weighted Price	—

Top Holdings 09-30-2017

	Weight %	Maturity Date	Amount Mil	Value Mil
United Mexican States 8.5%	7.17	12-13-2018	509.96	2,849.99
Secretaria Tesouro Nacl 10%	3.81	01-01-2023	4.65	1,514.64
Brazil Federative Rep 10%	3.42	01-01-2021	4.15	1,359.53
India (Rep Of) 8.83%	2.21	11-25-2023	52,330.90	879.74
Brazil Federative Rep	2.09	07-01-2020	3.28	830.71
% Assets in Top 5 Holdings	18.71			

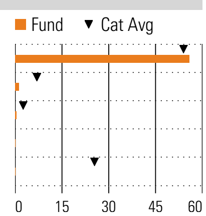
⊕ Increase ⊖ Decrease ✲ New to Portfolio

Asset Allocation

	% Net	% Short	% Long	Bench mark	Cat Avg
Cash	42.40	0.00	42.40	0.00	33.26
US Stock	0.00	0.00	0.00	0.00	0.06
Non US Stock	-0.37	0.37	0.00	0.00	-0.03
Bond	58.00	0.00	58.00	100.00	65.20
Other	-0.03	0.03	0.00	0.00	1.51

Top Sectors 09-30-2017

	Fund	BMark	Cat Avg
Government	55.82	—	52.68
Agency/Quasi-Agency	1.21	—	5.67
Supranational	0.35	—	1.27
Other Government Related	0.00	—	-29.79
Corporate Bond	0.00	—	24.15



Management

	Start Date
Michael J. Hasenstab	12-31-2001
Sonal Desai	01-01-2011

Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Captial Gain	Return of Capital	Dividend Income	Distribution Total
11-15-2017	11.93	0.0000	0.0000	0.0000	0.0295	0.0295
10-16-2017	12.09	0.0000	0.0000	0.0000	0.0295	0.0295
09-15-2017	12.20	0.0000	0.0000	0.0000	0.0309	0.0309
08-15-2017	12.12	0.0000	0.0000	0.0000	0.0316	0.0316
07-17-2017	12.31	0.0000	0.0000	0.0000	0.0372	0.0372

Templeton Global Bond Fund Class R6 FBNRX

Analysis

A unique combination of daring and caution.
By Karin Anderson 10/19/2017

Templeton Global Bond benefits from a skilled lead manager and analyst bench, consistent approach, and reasonable fees, supporting a Morningstar Analyst Rating of Gold.

For years, lead manager Michael Hasenstab has mostly avoided low-yielding debt of the United States, eurozone, and Japan, which dominate most peer funds' portfolios. Instead, he has preferred emerging-markets bonds and currencies given what he views as those countries' better fiscal prospects. That includes longtime portfolio anchors Indonesia (12% as of July 2017) and South Korea (9%), as well as more recent additions of Mexico (16%) and Brazil (16%). As Mexican and Brazilian debt sold off in 2015's third quarter, Hasenstab significantly built out those positions. Over time, he's shown ample willingness to buy what the rest of the market shuns. He loaded up on Irish bonds in the depths of the 2011 eurozone crisis. And he stuck with a low-single-digit stake in conflict-torn Ukraine in 2014 and into 2015 as the country restructured its debt.

The fund also stands out from the crowd thanks to its significant, and longtime, bets against the yen (36% as of July 2017) and euro (41%) that are meant to serve as a hedge against rises in U.S. interest rates (a negative factor for emerging-markets bonds). Though the fund courts ample currency and credit risk, it shuns interest-rate risk given Hasenstab's concerns about global inflation which he believes could lead to permanent loss of capital. As a result, the fund's duration ran around one year in 2013 and 2014, already a very low level within the category, but it's run close to zero since late 2015.

The fund's cautious tack on interest rates and currency hedges have held the fund back at various times in recent years, and its emerging-markets-heavy profile has caused it to move in sync with riskier assets and sport one of the highest correlations to equities in the group. Still, patient investors remain in good hands given the manager's knack for finding long-term winners. The fund's absolute returns are topnotch during Hasenstab's decade-plus tenure.

Process Pillar: Positive

Michael Hasenstab and his team aim to identify value among currencies, sovereign credit, and interest rates in countries with healthy or improving fundamentals that they think the market underappreciates. The portfolio is benchmark-agnostic and built on the team's meticulous fundamental research, with feedback from local market participants. The contrarian-minded group attempts to find those opportunities early on and then watch as their theses unfold over several years. The fund has held a double-digit stake in South Korea's government bonds since 2004, for example. Hasenstab doesn't require fiscal perfection, just improving trends. In the depths of 2011's eurozone crisis, he built a position in Ireland's government debt, arguing that Irish authorities had made strides toward fiscal sustainability that were not priced in. Such controversial positions are common here: Hasenstab also stuck with a low-single-digit stake in conflict-torn Ukraine in 2014 and into 2015 as the country restructured its debt. The fund's significant and patient currency bets distinguish it, as well. Since late 2009, Hasenstab has maintained sizable shorts on the Japanese yen and the euro (up to 40%-50% each) as a hedge against a strengthening U.S. dollar that would hurt emerging-markets local-currency bonds. Overall, the fund's patient approach and the manager's eye for value earn a Positive Process rating.

Over the past several years, the team has generally avoided low-yielding developed-markets sovereign bonds and favored emerging-markets countries with good long-term prospects. Because the team is more cautious lately about China's growth potential, it recently sold longtime Malaysia holdings and rotated into Indonesia and India, which it views as less dependent on China. Those stakes, along with longtime exposure to South Korea, accounted for 30% of assets as of July 2017. The team also does a fair amount of bargain-hunting. Notably, it built midteens stakes in Brazil and

Morningstar's Take

Morningstar Analyst Rating Gold

Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Neutral
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Fund Performance

	Total Return %	+/- Category
YTD	3.70	-2.85
2016	6.78	3.15
2015	-3.91	0.09
2014	1.97	0.25
2013	—	—

Templeton Global Bond Fund Class R6 FBNRX

Analysis

Mexico in 2015's third quarter sell-off. The team is sticking with larger stakes (16% apiece) in part because it believes that Mexico's conservative central bank is keeping an eye on inflation and that much-needed reforms are under way in Brazil whether or not the current president remains in place.

Another defining trait of the fund in recent years has been Michael Hasenstab's focus on short-dated bonds. Arguing that the loose monetary policy maintained by the developed world's central banks should ultimately unleash inflationary pressures globally, he's maintained the fund's duration close to zero in the past three years. He's also maintained a short Japanese yen position (36% as of July 2017) and short euro position (41%), reflecting the team's view that their central banks would need to maintain quantitative easing for longer than the U.S.

Performance Pillar: Positive

Michael Hasenstab's often-contrarian approach, patience, and knack for finding value in emerging-markets bonds and currencies have paid off over the longer term. Since taking over as lead manager in late 2006 through September 2017, the fund's 7.1% annualized return ranked first out of 41 distinct peers, supporting a Positive Performance rating.

That said, the fund courts ample emerging-markets rate and currency risk, which has smacked it during risk-averse markets. Its 8% loss during 2011's third quarter and 11% slide from July 2015 through early February 2016 were among the worst in the world-bond peer group. Conversely, the fund tends to rise to the top of the heap when emerging-markets bonds fare well, as was the case in 2012 when it climbed by 16%. Such seesawing within the category has kept the fund's volatility (as measured by standard deviation) higher than two thirds of its peers since 2006.

While the manager has been successful over the long term, it's important to note that the fund's key themes have worked against it at times and can weigh on results in the medium term. Its short duration (close to zero for the past few years) has weighed on the fund in periods of stable rates, and its significant shorts on the yen and euro have hurt when those currencies strengthen relative to the U.S. dollar, as was the case in the first nine months of 2017.

People Pillar: Positive

In the spring of 2015, manager Michael Hasenstab became Franklin Templeton's Global Macro CIO, a move that distinguishes Hasenstab's team and funds from the firm's taxable bond group. He began his career at the firm in 1995 as an emerging-markets sovereign credit analyst, then left to get a doctorate in economics from Australian National University, before rejoining the firm in 2001 and starting as a comanager on this fund. He became the sole manager on this fund in 2006. Sonal Desai, who conducted macroeconomic research at London hedge fund Thames River Capital, joined the group as its research director in late 2009 and became comanager in 2011, though Hasenstab makes all final portfolio decisions.

The firm manages roughly $160 billion in global fixed-income, the majority of which is managed by Hasenstab's team. The core team of portfolio managers and six country analysts are based in San Mateo, California. Five of these analysts have been on the team for more than five years, while one was replaced with an experienced hire in early 2016. This team hits the pavement when conducting its country research, meeting with local policymakers, business leaders, journalists, and others. The team's ample experience, trading and risk resources, and the managers' significant investments in the funds they manage, support a Positive People rating.

Parent Pillar: Neutral

Publicly traded but family controlled and managed, Franklin Resources BEN is the parent company of Franklin Templeton Investments. A global asset manager with $738 billion in assets as of early 2017, the firm has grown through multiple acquisitions over the years.

Franklin's recent struggles highlight, albeit to an extreme, the challenges facing active management. Between mid-2014 and early 2016, the firm's AUM fell by more than one fifth as investors increasingly opted for passive strategies and flagships like Franklin Income FKINX performed poorly. Franklin responded by cutting 300 personnel worldwide and launching seven exchange-traded funds in the United States, four of which passively track customized benchmarks built using a proprietary multifactor model for each.

The step toward passive investing illustrates the firm's tendency to add to its investment capabilities rather than foster excellence across its lineup. The firm's U.S. strategies are the most wide-ranging, and of the 36 U.S. open- and closed-end funds with a Morningstar Analyst Rating, half are Neutral. On the fixed-income side, although Templeton Global Bond TPINX remains a standout, the firm's other taxable- and municipal-bond strategies have had missteps, including ill-timed bets on energy and Puerto Rico debt. We have downgraded the firm's Parent Pillar rating to Neutral from Positive.

Price Pillar: Positive

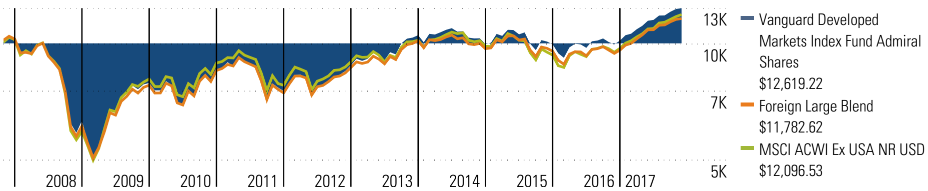
Investors in the Advisor shares pay 0.68% annually; that fee has come up by a handful of basis points in the past five years and is on par with the median fee in the institutional sales channel. However, it looks especially favorable compared with the 0.83% median fee in the no-load sales channel. (Investors with access to the Advisor shares through an advisory fee-based account can get in with no minimum initial investment.) Compared with other world-bond fund front-load share classes, this fund's 0.93% annual expense ratio still comes in below the 1.02% median in that distribution channel. Therefore, the fund receives a Positive Price rating.

Vanguard Developed Markets Index Fund Admiral Shares VTMGX

Morningstar Analyst Rating
Silver

NAV $	NAV Day Change %	Yield TTM %	Total Assets $ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
14.27	↑0.05 | 0.35	2.52	102.4	Open	$10,000	None	0.07%	★★★★	Foreign Large Blend	Large Blend

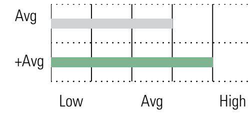
Growth of 10,000 11-23-2007 - 11-23-2017



3 Year Average Morningstar Risk Measures

Risk vs. Category (593) Avg

Return vs. Category (593) +Avg



Investment Strategy

The investment seeks to track the performance of the FTSE Developed All Cap ex US Index. The fund employs an indexing investment approach designed to track the performance of the FTSE Developed All Cap ex US Index, a market-capitalization-weighted index that is made up of approximately 3,700 common stocks of large-, mid-, and small-cap companies located in Canada and the major markets of Europe and the Pacific region. The adviser attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

Pillars

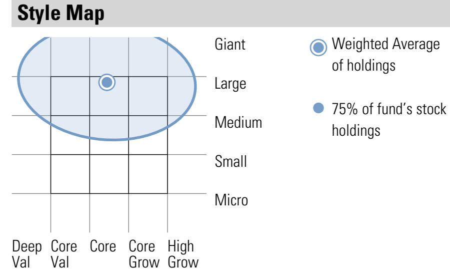
Process	Positive
Performance	Neutral
People	Positive
Parent	Positive
Price	Positive
Rating	Silver

Performance 11-22-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	12,396	10,113	12,705	12,243	15,630	12,619
Fund	23.96	1.13	27.05	6.98	9.34	2.35
+/- MSCI ACWI Ex USA NR USD	-1.13	-0.47	-2.31	1.03	1.93	0.51
+/- Category	1.00	0.19	1.14	1.07	1.06	0.45
% Rank in Cat	38	37	37	24	23	31
# of Funds in Cat	758	812	746	594	530	340

* Currency is displayed in BASE

Style Map

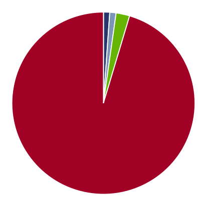


Top Holdings 10-31-2017

	Weight %	Last Price	Day Chg %	52 Week Range
⊕ Nestle SA	1.31	85.20 BASE	0.41 ↑	71.45 - 86.00
⊕ Samsung Electronics Co Ltd	1.07	— BASE	0.29 ↑	1,633,000.00 - 2,876,000.00
⊕ HSBC Holdings PLC	0.99	735.70 BASE	0.53 ↑	518.17 - 772.00
⊕ Novartis AG	0.98	83.40 BASE	-0.24 ↓	67.80 - 85.40
⊕ Toyota Motor Corp	0.82	— BASE	-0.79 ↓	5,670.00 - 7,312.00
% Assets in Top 5 Holdings	5.16			

⊕ Increase ⊖ Decrease ✲ New to Portfolio

Asset Allocation



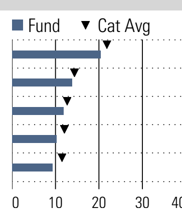
Asset Class	% Net
Cash	2.40
US Stock	1.08
Non US Stock	95.38
Bond	0.03
Other	1.12

Management

	Start Date
Christine D. Franquin	02-22-2013
Michelle Louie	04-08-2016

Top Sectors 10-31-2017

	Fund	3 Yr High	3 Yr Low	Cat Avg
Financial Services	20.31	20.95	20.31	20.91
Industrials	13.80	13.80	12.32	13.45
Consumer Cyclical	11.84	12.87	11.84	11.76
Consumer Defensive	10.20	11.85	10.20	11.13
Technology	9.27	9.27	7.15	10.58



Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Captial Gain	Return of Capital	Dividend Income	Distribution Total
09-19-2017	13.93	0.0000	0.0000	0.0000	0.0580	0.0580
06-20-2017	13.20	0.0000	0.0000	0.0000	0.1550	0.1550
03-23-2017	12.54	0.0000	0.0000	0.0000	0.0480	0.0480
12-21-2016	11.71	0.0000	0.0000	0.0000	0.0970	0.0970
09-12-2016	11.97	0.0000	0.0000	0.0000	0.0560	0.0560

Vanguard Developed Markets Index Fund Admiral Shares VTMGX

Analysis

This is one of the lowest-cost and most broadly diversified funds of its kind.
By Daniel Sotiroff 10/18/2017

Vanguard Developed Markets Index Fund is a compelling choice for broad exposure to foreign developed markets. Its market-cap-weighted portfolio promotes low turnover, effectively diversifies company-specific risk, and accurately represents its target market. These characteristics, combined with a rock-bottom expense ratio, support a Morningstar Analyst Rating of Silver.

The fund owns more than 3,600 stocks across foreign developed markets and weights them by market capitalization. This approach promotes low turnover and skews the portfolio toward large multinational firms with global operations, such as Nestle, Toyota, and Novartis. Since the fund's inception in 2007, its turnover ratio has averaged 8%, which helps keep transaction costs low. In contrast, the foreign large-blend Morningstar Category average turnover was greater than 50% in the most recent year.

This fund's country exposure exhibits some notable differences compared with category peers. Stocks listed in Canada and South Korea account for less than 5% of the average portfolio in the category. In contrast, these two countries account for more than 10% of this fund's assets, and names such as Samsung Electronics and Royal Bank of Canada are among the fund's top 20 holdings. Additionally, Japanese stocks currently account for almost 22% of this fund's assets, slightly more than the 18% category average.

A well-diversified portfolio and sizable cost advantage should give this fund an edge over the long term. This advantage helped the fund outperform the category average by 31 basis points annualized from its inception in July 2007 through September 2017. The fund's performance was particularly strong from May 2012 through May 2014, outpacing the category average by 2.40%, partially because of more-favorable stock exposure in the financial-services sector.

Process Pillar: Positive

This fund has made several changes to its target index over the past several years, but its current bogy is a heavily diversified index that covers 23 developed markets across large-, mid-, and small-cap stocks. Its broad reach does an excellent job of representing the investable market outside of the U.S. Holdings in this portfolio are weighted by market capitalization, which captures the market's consensus opinion regarding the value of each stock while promoting low turnover, and supports a Positive Process Pillar rating.

This fund tracks the FTSE Developed All Cap Ex U.S. Index. The methodology sorts stocks by their free-float-adjusted market capitalization, and holds those that rank in the top 98% by market capitalization. The index uses buffering rules around this cutoff point to help mitigate turnover. Holdings are weighted by market capitalization, which emphasizes large multinational firms while keeping turnover and the associated transaction costs in check. Qualifying stocks are subject to additional liquidity screens to help ensure that the index is investable. The index is reconstituted semi-annually in March and September, and the managers use near full replication to fulfill their index-tracking objective.

The portfolio holds about 3,600 stocks with 9% of assets in its top 10 holdings. This makes it one of the best diversified funds in the foreign large-blend category. The inclusion of small caps causes the average market capitalization of this fund to be modestly smaller than he category norm. However, market-cap weighting skews the portfolio toward the largest stocks, which include major multinational firms such as Nestle and Samsung.

The fund's sector allocations are similar to the category average. Stocks from the financial services sector represent are the most heavily weighted, accounting for 20% of the portfolio. This fund's focus on developed markets causes its country and regional allocations to be notably different from its peers. A typical fund in this category has roughly a 7% allocation to stocks from emerging markets. This fund makes up for this difference with higher

Morningstar's Take

Morningstar Analyst Rating — Silver

Morningstar Pillars

Process	Positive
Performance	Neutral
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Fund Performance

	Total Return %	+/- Category
YTD	23.96	1.00
2016	2.45	1.66
2015	-0.18	1.41
2014	-5.66	-0.68
2013	22.06	2.63

Vanguard Developed Markets Index Fund Admiral Shares VTMGX

Analysis

allocations to stocks from Canada, South Korea, and Japan.

Investment in foreign stocks carries an additional layer of risk due to fluctuations in foreign-exchange rates. Like most of its peers this fund does not hedge its currency risk, which can make it more volatile than most broad U.S. market funds.

Performance Pillar: Neutral

This fund’s historic performance hasn’t differentiated it from many of its peers in the foreign large-blend Morningstar category. Absolute and risk-adjusted returns over the trailing three and five years through September 2017 have been better than the average, but not by a substantial amount. This middling performance warrants a Neutral Performance Pillar rating.

This fund’s price/book ratio has been lower than many of its category peers. This has contributed to its lackluster category relative performance because value strategies in foreign markets haven’t performed well over the past decade. Performance was particularly strong from May 2012 through May 2014. During that time, the fund outpaced the category average by 2.4 percentage points annually because of its financial-service holdings and smaller cash drag. Like most of its peers, this fund does not hedge its currency risk, which can hurt performance when the U.S. dollar strengthens relative to foreign currency and tends to increase volatility.

Tracking error is difficult to assess on this fund since Vanguard has changed the target index twice over the past several years. Despite this fact, up- and down-capture ratios have been near 100% throughout its history. This fund’s broad reach includes small-cap stocks, which should give it a small performance advantage in exchange for a modest amount of additional risk.

People Pillar: Positive

The portfolio managers on this fund are part of Vanguard’s Equity Index Group and benefit from Vanguard’s global footprint and strong portfolio management technology. This strong team warrants a Positive People Pillar rating.

The fund is comanaged by Christine Franquin and Michelle Louie. Vanguard’s portfolio management team typically consists of two comanagers on each fund, and these managers rotate to different funds every few years to promote breadth and depth of expertise. They have access to Vanguard’s trading desks around the world that enable them to make the most efficient transactions in various global markets. Franquin is a principal in the Vanguard Equity Index Group and has been managing portfolios since she joined the firm in 2000. Louie was promoted to portfolio manager from equity trader in 2016 and shortly thereafter was named as a manager on this fund. She has been with Vanguard since 2010. Neither of the named managers own shares in this fund, but that is not a cause for concern.

Vanguard’s compensation structure aligns managers’ interests with investors’. The managers are compensated with a bonus that factors in the gross, pre-tax performance of the fund relative to its objectives. This includes the manager’s record of tracking a benchmark index over the prior 12 months.

Parent Pillar: Positive

Vanguard has one of the mutual fund industry’s strongest corporate cultures and earns a Positive Parent rating. Its consistent messages to investors to keep costs low, diversify, and stay the course are reflected in the firm’s own behavior. Vanguard’s U.S. fundholders own the firm through small investments by each mutual fund, mitigating potential conflicts of interest that can exist at other firms that are serving two masters. Fund performance is strong overall: Over the past three-, five-, and 10-year periods, its Morningstar Success Ratios are greater than 70%--high among large, diversified fund families.

Over the past year, the firm has collected more than USD 200 billion in net inflows, thanks in large part to investors’ interest in passive investing. The firm's indexing and ETF prowess, low costs, and success in penetrating the financial-advisor sales channel all have fueled growth. Total assets under management now exceed USD 3.3 trillion, giving Vanguard a significant more-than-20% market share across U.S. mutual funds.

Vanguard has been a global player for years but has only more recently turned its focus to growing internationally. The firm is a large player in Australia, where it has the most history, but doesn't yet have the brand recognition and trust it enjoys in the United States in other parts of the world. While non-U.S. funds don't participate in the ownership of Vanguard, the firm's investorcentric culture extends globally.

Price Pillar: Positive

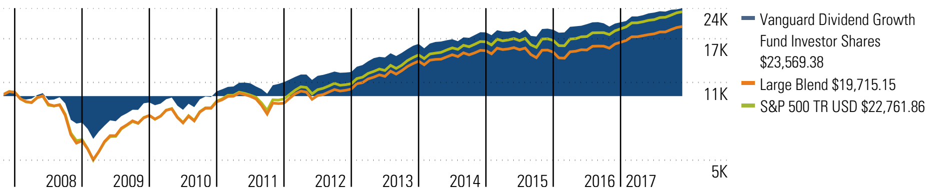
Vanguard offers this fund in three different share classes. Investor shares are available at an expense ratio of 0.17% while Admiral shares and the ETF both charge 0.07%. These fees were reduced in April 2017 from 0.20% and 0.09%, respectively. They are among the lowest expense ratios in the foreign large-blend category, and support a Positive Price Pillar rating. Investment minimums are $3,000 for Investor shares and $10,000 for Admiral shares. Holdings are weighted by market capitalization, which keeps turnover and transaction costs in check. The last reported turnover ratio landed in the bottom decile of the category. This fund also engages in securities lending, which helps offset its expenses.

Vanguard Dividend Growth Fund Investor Shares VDIGX

Morningstar Analyst Rating
Gold

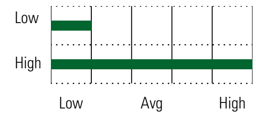
NAV $	NAV Day Change %	Yield TTM %	Total Assets $ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
26.48	↓-0.06 | -0.23	1.94	32.2	Limited	$3,000	None	0.30%	★★★★	Large Blend	Large Blend

Growth of 10,000 11-23-2007 - 11-23-2017



3 Year Average Morningstar Risk Measures

Risk vs. Category
(1214)
Return vs. Category
(1214)



Investment Strategy

The investment seeks to provide, primarily, a growing stream of income over time and, secondarily, long-term capital appreciation and current income. The fund invests primarily in stocks that tend to offer current dividends. It focuses on high-quality companies that have prospects for long-term total returns as a result of their ability to grow earnings and their willingness to increase dividends over time. These stocks typically-but not always-will be large-cap, will be undervalued relative to the market, and will show potential for increasing dividends. The fund seeks to be diversified across industry sectors.

Pillars

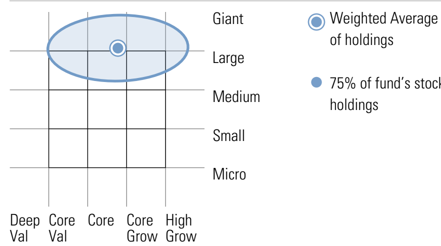
Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive
Rating	Gold

Performance 11-22-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	11,475	10,042	11,620	12,675	19,096	23,569
Fund	14.75	0.42	16.20	8.22	13.81	8.95
+/- S&P 500 TR USD	-3.36	-0.63	-4.09	-2.04	-1.90	0.38
+/- Category	-1.91	-0.49	-2.32	-0.29	-0.36	1.32
% Rank in Cat	75	78	79	65	68	10
# of Funds in Cat	1,419	1,526	1,393	1,215	1,083	792

* Currency is displayed in BASE

Style Map

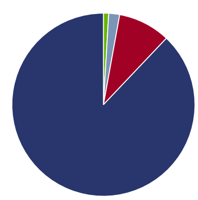


Top Holdings 09-30-2017

	Weight %	Last Price	Day Chg %	52 Week Range
⊕ Nike Inc B	3.60	59.26 BASE	0.26 ↑	50.06 - 60.53
⊖ Microsoft Corp	3.46	83.28 BASE	0.22 ↑	58.80 - 86.20
⊕ United Parcel Service Inc Class B	2.81	113.12 BASE	-0.56 ↓	102.12 - 121.75
⊖ Accenture PLC A	2.75	147.45 BASE	0.20 ↑	112.31 - 148.47
⊕ Chubb Ltd	2.74	148.64 BASE	0.28 ↑	125.70 - 156.00
% Assets in Top 5 Holdings	15.35			

⊕ Increase ⊖ Decrease ☼ New to Portfolio

Asset Allocation



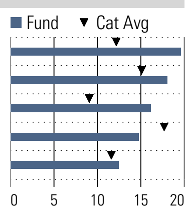
Asset Class	% Net
Cash	0.93
US Stock	87.93
Non US Stock	9.22
Bond	0.00
Other	1.93

Management

	Start Date
Donald J. Kilbride	02-01-2006

Top Sectors 09-30-2017

	Fund	3 Yr High	3 Yr Low	Cat Avg
Industrials	19.58	20.40	19.58	11.71
Healthcare	18.05	19.22	18.05	14.62
Consumer Defensive	16.13	16.61	14.43	8.60
Financial Services	14.77	14.77	13.36	17.22
Consumer Cyclical	12.45	13.53	11.25	11.14



Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Captial Gain	Return of Capital	Dividend Income	Distribution Total
06-22-2017	25.23	0.0000	0.0000	0.0000	0.2480	0.2480
03-28-2017	24.74	0.0769	0.0416	0.0000	0.0163	0.1348
12-23-2016	23.62	0.1194	0.0442	0.0000	0.2480	0.4116
06-16-2016	23.02	0.0000	0.0000	0.0000	0.1790	0.1790
03-16-2016	22.58	0.0570	0.0000	0.0000	0.0230	0.0800

MORNINGSTAR®

Vanguard Dividend Growth Fund Investor Shares VDIGX

Analysis

Reliable.
By Alec Lucas, Ph.D. 4/4/2017

Closed to new investors since July 28, 2016, Vanguard Dividend Growth receives a Morningstar Analyst Rating of Gold for staying true to its name.

Longtime manager Donald Kilbride keeps the fund's portfolio of 45-55 stocks invested in cash-rich firms with good prospects for continued dividend increases. As long as his investment thesis remains intact, Kilbride takes advantage of share price declines to buy more. In 2016, he added to current top-holding Nike NKE each quarter because he thinks its Flyknit manufacturing technology will allow it to expand profit margins as will selling direct to customers. Since Kilbride first bought Nike in early 2006, the firm has raised its quarterly dividend more than fourfold.

Kilbride is now in a better position to keep tabs on the foreign-domiciled companies that compete with multinationals like Nike and to look for dividend growth opportunities overseas. In August 2016, the fund's backup manager Peter Fisher moved to London. Fisher's relocation hasn't led to a higher weighting in non-U.S. stocks, though. Since peaking at 14.5% in June 2014, the fund's overseas stake has fallen to 5.5% as of February 2017. But that still ranked in the large-blend Morningstar Category's top quartile.

The fund is at its relative best when equities are at their worst. The fund held up well in 2015's sharp equity market correction in August and finished that year just shy of the category's top decile. The reverse is also true. The fund proved resilient in early 2016 but fell behind in the subsequent rally. A poorly timed purchase of McKesson MCK hurt, too. Kilbride bought the pharmaceuticals distributor right before fears about price competition punished its shares. The fund's 7.5% bottom-quintile gain in 2016 lagged the Nasdaq U.S. Dividend Achievers Select Index by 4.4 percentage points.

Kilbride isn't immune to poor timing or bad picks, but he's consistently added value during his tenure. Through March 2017, the fund has beaten the index in 69 out of 72 rolling five-year periods since May 2006, shortly after the index's inception. The fund is a reliable long-term option.

Process Pillar: Positive

A disciplined, but not rigid, focus on dividend growth earns the fund a Positive Process Pillar rating. Manager Donald Kilbride looks for stocks that have proved willing and able to increase their dividends over time but that are trading at reasonable prices. Ideally, he wants firms that can grow their dividends at the rate of inflation plus 3%. Often, he finds companies with five-year dividend-growth rates of at least 10%. The fund's holdings tend to be large blue-chip stocks that have big competitive advantages.

This is not a high-yield fund. Kilbride wants stocks that have the best prospects for steadily increasing their payouts rather than those that offer the highest current yield. Because Kilbride likes to buy when dividend payers are out of favor, many of the fund's holdings may have respectable yields relative to the price at which they were bought, but the portfolio usually will not offer trailing 12-month or SEC yields as high as many other equity-income funds.

While he eliminates stocks that are likely to cut their dividends, he has on occasion added a stock after such a cut. Kilbride bought Pfizer PFE in 2009 after it chopped its dividend because he believed its merger with Wyeth would allow it to reignite dividend growth from a low base. He does, however, aim to keep portfolio turnover in check. The fund's 27% turnover in fiscal 2017 was below the 43% median of actively managed peers.

Manager Donald Kilbride builds a compact portfolio of 45-55 stocks, dominated by larger-cap names. At year-end 2016, the fund's $83 billion average market cap ranked in the large-blend category's highest quintile. These stocks on the whole boast above-average returns on equity in part because they tend to have durable competitive advantages. Nearly all of them have a Morningstar Economic Moat Rating (either wide or nar-

Morningstar's Take

Morningstar Analyst Rating: Gold

Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Fund Performance

	Total Return %	+/- Category
YTD	14.75	-1.91
2016	7.53	-2.84
2015	2.62	3.69
2014	11.85	0.89
2013	31.53	0.03

Vanguard Dividend Growth Fund Investor Shares VDIGX

Analysis

row) that ranks in the category's top decile. This larger-cap/competitively advantaged combination has contributed to muted Morningstar Risk ratings for the fund.

Sector exposure results from Kilbride's bottom-up focus on sustainable dividend growth. Thus, the fund typically has little to no utilities or telecom exposure as firms in these sectors tend not to have robust dividend growth. On the other hand, the fund has long had heavy healthcare exposure. As of February 2017, its 16.9% stake in that sector was 4.6 percentage points above the Nasdaq U.S. Dividend Achievers Select Index's.

Kilbride is cautious about owning stocks in profit-challenged sectors, like energy. Since early 2016, he has had reduced expectations for oil and gas firms' long-term earnings because of the industry's geographical and geological challenges. Schlumberger SLB is an exception as it benefits from these challenges and Exxon's XOM petrochemical business distinguishes it.

Performance Pillar: ⊕ Positive

The fund's Positive Performance Pillar rating reflects its stellar showing through a full market cycle. Its value-tilted focus on dividend growth tends to thrive when markets tremble. The fund's 42% cumulative loss from peak to trough in the 2007-09 credit crisis, while dreadful, beat its primary prospectus Nasdaq U.S. Dividend Achievers Select Index benchmark by 4.3 percentage points and landed in the large-blend category's top decile. Performance in 2011's turbulent conditions was even better. The fund's 9.4% gain ranked as the category's very best that year.

The corollary of superior bear-market showings is that the fund's well-capitalized dividend payers often lag when more-speculative fare surges. That was a factor in the fund's bottom-quintile showings in 2012 and 2016. Poor stock picks played a role, too. In 2012, a position in Western Union WU hurt the fund, and Kilbride sold the stock in early 2013 when he became concerned about its dividend. In 2016, he bought McKesson MCK right before fears about price competition punished its shares.

While Kilbride is not immune to errant stock picks, he's consistently added value during his tenure. The fund's 8.8% annualized gain through March 2017 beat the Nasdaq Index by 93 basis points since that bogy's late April 2006 inception. It also surpassed the broader Russell 1000 Index by 88 basis points and ranked in the category's top decile.

People Pillar: ⊕ Positive

Led by a skilled, well-supported manager who aligns his incentives with shareholders', the fund earns a Positive People rating. Wellington Management has always run this fund in its various guises, first as a utilities sector fund from its inception through late 2002, and since then as a dividend-focused fund. Manager Donald Kilbride, the second person to apply the fund's dividend strategy, has been in charge since February 2006. He and backup portfolio manager Peter Fisher, who relocated to London in August 2016, have generalist analyst responsibilities and work alongside Wellington's talented six-person "quality value" team. The team includes Edward Bousa, who serves as the lead equity manager for Gold-rated Vanguard Wellington VWELX. Three other portfolio managers and two analysts serve on the quality value team. Most have sector coverage duties and serve as resources for Kilbride and Fisher. Kilbride and Fisher also draw on Wellington's deep benches of global industry analysts, equity research analysts, fixed-income credit analysts, and macroeconomic specialists.

Kilbride has decades of experience. Before joining Wellington in 2002, he worked for six years as the director of research at The Boston Company and prior to that at Greenberg-Summit Partners, where he covered energy and materials, among other sectors.

Kilbride invests more than $1 million in the fund.

Parent Pillar: ⊕ Positive

Vanguard has one of the mutual fund industry's strongest corporate cultures and earns a Positive Parent rating. Its consistent messages to investors to keep costs low, diversify, and stay the course are reflected in the firm's own behavior. Vanguard's U.S. fundholders own the firm through small investments by each mutual fund, mitigating potential conflicts of interest that can exist at other firms that are serving two masters. Fund performance is strong overall: Over the past three-, five-, and 10-year periods, its Morningstar Success Ratios are greater than 70%--high among large, diversified fund families.

Over the past year, the firm has collected more than USD 200 billion in net inflows, thanks in large part to investors' interest in passive investing. The firm's indexing and ETF prowess, low costs, and success in penetrating the financial-advisor sales channel all have fueled growth. Total assets under management now exceed USD 3.3 trillion, giving Vanguard a significant more-than-20% market share across U.S. mutual funds.

Vanguard has been a global player for years but has only more recently turned its focus to growing internationally. The firm is a large player in Australia, where it has the most history, but doesn't yet have the brand recognition and trust it enjoys in the United States in other parts of the world. While non-U.S. funds don't participate in the ownership of Vanguard, the firm's investorcentric culture extends globally.

Price Pillar: ⊕ Positive

Rock-bottom fees earn the fund a Positive Price Pillar rating. The Investor shares' current 0.33% expense ratio, which applies to all of the fund's assets, is 57 basis points below the large-cap no-load peer median and lower than 93% of those peers. Modest trading costs are another plus. Brokerage fees as a percentage of average net assets routinely fall below the category median.

The fund's price tag will shift some, however. Vanguard pays subadvisor Wellington Management an asset-based fee with breakpoints, which cause fees to fall as assets grow. The expense ratio also includes a performance adjustment, calculated and paid quarterly, which is based on the fund's three-year showing versus the Nasdaq U.S. Dividend

Vanguard Dividend Growth Fund Investor Shares VDIGX

Analysis

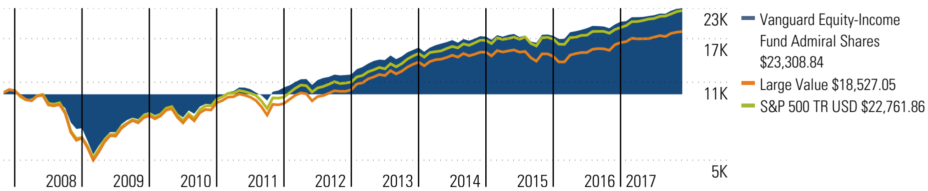
Achievers Select Index.

Vanguard Equity-Income Fund Admiral Shares VEIRX

Morningstar Analyst Rating
Silver

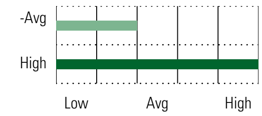
NAV $	NAV Day Change %	Yield TTM %	Total Assets $ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
76.59	↓-0.09 | -0.12	2.58	30.0	Open	$50,000	None	0.17%	★★★★★	Large Value	Large Value

Growth of 10,000 11-23-2007 - 11-23-2017



3 Year Average Morningstar Risk Measures

Risk vs. Category (1102)
Return vs. Category (1102)



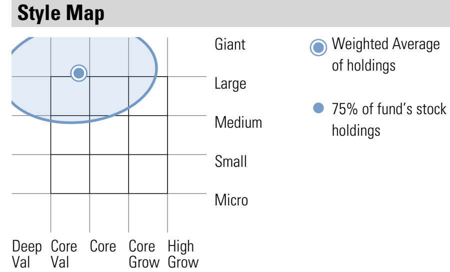
Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive
Rating	Silver

Investment Strategy

The investment seeks to provide an above-average level of current income and reasonable long-term capital appreciation. The fund invests mainly in common stocks of mid-size and large companies whose stocks typically pay above-average levels of dividend income and are, in the opinion of the purchasing advisor, undervalued relative to other such stocks. In addition, the advisors generally look for companies that they believe are committed to paying dividends consistently. Under normal circumstances, it will invest at least 80% of its assets in equity securities. The fund uses multiple investment advisors.

Style Map



Performance 11-22-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	11,425	10,025	11,729	13,163	19,628	23,309
Fund	14.25	0.25	17.29	9.59	14.44	8.83
+/- S&P 500 TR USD	-3.86	-0.80	-3.01	-0.67	-1.27	0.26
+/- Category	2.87	0.37	3.28	2.41	1.28	2.04
% Rank in Cat	20	32	17	7	23	6
# of Funds in Cat	1,278	1,361	1,263	1,105	963	682

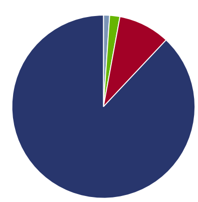
* Currency is displayed in BASE

Top Holdings 09-30-2017

	Weight %	Last Price	Day Chg %	52 Week Range
Microsoft Corp	4.99	83.28 BASE	0.22 ↑	58.80 - 86.20
⊕ JPMorgan Chase & Co	3.72	98.49 BASE	-0.12 ↓	78.02 - 102.42
⊕ Philip Morris International Inc	3.05	103.04 BASE	-0.47 ↓	86.78 - 123.55
⊖ Johnson & Johnson	2.65	137.78 BASE	0.37 ↑	109.32 - 144.35
⊖ Wells Fargo & Co	2.58	54.17 BASE	0.18 ↑	49.27 - 59.99
% Assets in Top 5 Holdings	16.99			

⊕ Increase ⊖ Decrease ☼ New to Portfolio

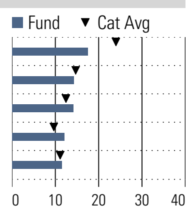
Asset Allocation



Asset Class	% Net
Cash	1.81
US Stock	88.00
Non US Stock	9.11
Bond	0.02
Other	1.07

Top Sectors 09-30-2017

	Fund	3 Yr High	3 Yr Low	Cat Avg
Financial Services	17.47	18.17	17.17	23.07
Healthcare	14.25	14.25	12.23	13.77
Technology	14.16	14.17	13.64	11.52
Consumer Defensive	12.03	12.04	11.83	8.73
Industrials	11.50	13.45	11.50	10.19



Management

	Start Date
James P. Stetler	12-31-2003
W. Michael Reckmeyer	08-15-2007
Binbin Guo	01-27-2016

Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
09-21-2017	74.24	0.0000	0.0000	0.0000	0.4960	0.4960
06-22-2017	72.11	0.0000	0.0000	0.0000	0.4490	0.4490
03-28-2017	71.05	0.0000	0.0000	0.0000	0.4890	0.4890
12-23-2016	68.99	0.7078	0.0000	0.0000	0.5430	1.2508
09-16-2016	65.52	0.0000	0.0000	0.0000	0.4800	0.4800

Vanguard Equity-Income Fund Admiral Shares VEIRX

Analysis

An effective pair.
By Alec Lucas, Ph.D. 6/5/2017

Aided by a low fee hurdle, Vanguard Equity-Income's subadvisor duo combines to produce a resilient portfolio of dividend-paying stocks. The fund earns a Morningstar Analyst Rating of Silver.

The fund pairs experienced teams from Wellington Management and Vanguard's in-house quantitative equity group. Industry veteran Michael Reckmeyer has led Wellington's two thirds of the portfolio since year-end 2007. James Stetler has overseen the rest of the fund's assets for Vanguard's team since 2003.

The teams use complementary strategies. Reckmeyer runs a roughly 60-70 stock portfolio of stout dividend payers that he tries to buy when they're out of favor. In late 2016, for example, he added to the fund's position in now top-25 holding Unilever UN because of its geographically diverse product mix and above-average organic growth rate. The Vanguard team rounds out the portfolio by taking small stakes in 100-plus stocks based on factors such as valuation and earnings sustainability.

The fund's sector weightings hew closely to those of FTSE High Dividend Yield Index, rarely diverging by more than 5 percentage points. Versus its large-value Morningstar Category peer group, however, the fund tends to tread heavily in income-oriented sectors such as utilities, telecom, and consumer staples. As of March 2017, the fund's 22.8% combined stake in these sectors ranked near the category's top decile.

The fund has the wind at its back whenever investors seek safety in yield-rich sectors. The fund held up better than 90% of its large-value Morningstar Category peers in 2011's equity market plunge from May to early October and more recently in the 2015-16 correction. The fund, though, is prone to lag when interest rates spike, as in 2016's second half.

Over the long haul, Reckmeyer's stock-picking skill and the Vanguard quant team's model have produced strong risk-adjusted results. From Reckmeyer's late 2007 start date through May 2017, the fund's top-decile 7.9% annualized gain edged its benchmark with less volatility.

The fund is a worthy option.

Process Pillar: Positive

Two subadvisors here take distinct but effective approaches to finding value in the market's short-term dislocations, earning the fund a Positive Process Pillar rating. Manager Michael Reckmeyer, who runs about two thirds of the fund's assets, is a stickler for dividends, valuations, and healthy balance sheets. He buys stocks with above-average dividends and low valuations but unappreciated growth prospects. Typically, these stocks offer a yield above the S&P 500's upon purchase. Unlike the strategy he runs for Vanguard Wellesley Income VWINX, however, his portfolio here can hold a stock if its yield falls below the S&P 500's. Reckmeyer can be contrarian, adding to solid but out-of-favor stocks whose challenges are more than reflected in their share prices. While he generally holds stocks for about four to five years, Reckmeyer is quick to sell if stocks' fundamentals deteriorate or hit their target price. He can also swap a name for a similar stock trading at a better valuation.

Vanguard's James Stetler and his quant team manage about one third of the fund's assets. They rely on computer models that pick stocks from the FTSE High Dividend Yield Index based on valuation, growth, management decisions (stock buybacks, dividend increases, and so on), momentum, and earnings sustainability. They turn their portfolio over more than Reckmeyer, but the fund's overall turnover still tends to be below most peers'.

The fund has a diverse portfolio of about 150-200 dividend-paying stocks. They consistently produce an above-average yield versus the large-value category norm, although they are typically well-capitalized firms. Currently, the fund derives its top-decile 2.6% trailing 12-month yield from stocks that, on average, have a return on assets that

Morningstar's Take

Morningstar Analyst Rating: Silver

Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating
Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Fund Performance

	Total Return %	+/- Category
YTD	14.25	2.87
2016	14.82	0.01
2015	0.86	4.90
2014	11.38	1.16
2013	30.19	-1.02

Vanguard Equity-Income Fund Admiral Shares VEIRX

Analysis

ranks in the category's top quintile. The fund largely steers clear of higher-yielding stocks, which can signal a distressed dividend or limited growth prospects.

While Vanguard's portion of the portfolio doesn't stray too far from the U.S.-focused FTSE High Dividend Yield Index, Wellington's Michael Reckmeyer has recently found a number of attractively valued dividend payers overseas. Since early 2013, the fund's foreign stake has hovered around 10%. Most of these holdings are multinationals that pay stout dividends, like British American Tobacco BATS, which has a wide Morningstar Research Services Economic Moat Rating.

Sector weightings tend to stay fairly close to the fund's benchmark but can diverge dramatically from the Russell 1000 Value Index. Financials claimed 17.3% of the fund's assets as of April 2017. That was more than any other sector but still below the Russell index's 26.4% stake. While exposure to dividend havens like telecom and utilities (a combined 10.8% presently) can be significant, the fund is more diversified than most income-oriented peers.

Performance Pillar: Positive

The fund's Positive Performance Pillar rating reflects its strong record under the current subadvisor lineup. Since Wellington Management and Vanguard's in-house quantitative equity group became solely responsible for this fund's asset base in late 2005, its 8.8% annualized gain through May 2017 beat the Russell 1000 Value Index by 1.6 percentage points and landed in the large-value category's top decile, with below-average volatility.

Wellington's management team underwent a change at year-end 2007, when Michael Reckmeyer took over the lead role from John Ryan. That transition went smoothly because Reckmeyer had been a longtime member of the firm's value equity-income team and he uses the same approach as his predecessor. The fund has continued to fare well. From January 2008 through May 2017, it topped the Russell index in 44 of 54 five-year rolling periods. The fund has had less success against the FTSE High Dividend Yield Index, its primary prospectus benchmark since mid-2007, but maintains a slight cumulative edge versus that bogy during the same period.

Vanguard does not disclose individual subadvisors' results, but Reckmeyer's use of a nearly identical strategy on Hartford Equity Income HQIAX gives a sense of how the two teams have done. Although the Hartford fund has better long-term gross returns, there are years when the quant group adds value, like 2011.

People Pillar: Positive

Consistent and capable subadvisor leadership earns the fund a Positive People Pillar rating. Since late 2005, the fund's assets have been split between anchor Wellington Management and Vanguard's in-house quantitative equity group. Wellington, a subadvisor here since 2000, boasts ample resources in overseeing about two thirds of assets. Michael Reckmeyer took over as lead manager of Wellington's slice in late 2007 and has been a member of the firm's seasoned seven-person value equity-income team since 1994. While the team parted ways with its energy, chemicals, and paper analyst in late 2016, it has access to the firm's 50-plus global industry analysts as it looks for a replacement. Two members of the otherwise Pennsylvania-based team live in London.

The quantitative equity group runs the rest of the portfolio. James Stetler has been investing at Vanguard since 1996 and has been running a slice of this fund since 2003. Binbin Guo came aboard in early 2016, replacing James Troyer, who had joined the fund in early 2012. Michael Roach, who joined the fund around the same time as Troyer, left in May 2017 to head up Vanguard's quantitative equity group in Australia. The entire global team includes nearly 30 strategists, analysts, and managers combined, who have on average more than a decade of industry experience.

Reckmeyer invests more than $1 million in the fund.

Parent Pillar: Positive

Vanguard has one of the mutual fund industry's strongest corporate cultures and earns a Positive Parent rating. Its consistent messages to investors to keep costs low, diversify, and stay the course are reflected in the firm's own behavior. Vanguard's U.S. fundholders own the firm through small investments by each mutual fund, mitigating potential conflicts of interest that can exist at other firms that are serving two masters. Fund performance is strong overall: Over the past three-, five-, and 10-year periods, its Morningstar Success Ratios are greater than 70%--high among large, diversified fund families.

Over the past year, the firm has collected more than USD 200 billion in net inflows, thanks in large part to investors' interest in passive investing. The firm's indexing and ETF prowess, low costs, and success in penetrating the financial-advisor sales channel all have fueled growth. Total assets under management now exceed USD 3.3 trillion, giving Vanguard a significant more-than-20% market share across U.S. mutual funds.

Vanguard has been a global player for years but has only more recently turned its focus to growing internationally. The firm is a large player in Australia, where it has the most history, but doesn't yet have the brand recognition and trust it enjoys in the United States in other parts of the world. While non-U.S. funds don't participate in the ownership of Vanguard, the firm's investorcentric culture extends globally.

Price Pillar: Positive

Rock-bottom fees earn the fund a Positive Price Pillar rating. The Investor shares' 0.26% expense ratio, which applies to about one fifth of the fund's assets, is 64 basis points below the large-cap no-load peer median and lower than 94% of those peers. The Admiral shares contain the rest of the fund's assets and are even cheaper at 0.17%, which beats 95% of their rivals' fees. Modest trading costs are another plus. In fiscal 2016, brokerage fees of 0.01% of average net assets fell below the category's 0.04% median.

The fund's price tag will shift, however. Vanguard pays subadvisor Wellington an asset-based fee,

Vanguard Equity-Income Fund Admiral Shares VEIRX

Analysis

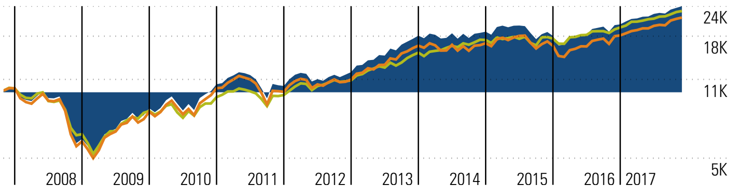
with breakpoints, and the expense ratio also includes a performance adjustment based on the fund's three-year rolling return versus the FTSE High Dividend Yield Index.

Vanguard Explorer Fund Admiral Shares VEXRX

Morningstar Analyst Rating
Bronze

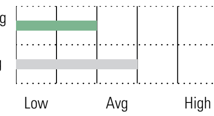
NAV $	NAV Day Change %	Yield TTM %	Total Assets $ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
96.63	↑0.04 | 0.04	0.41	13.0	Open	$50,000	None	0.34%	★★★	Small Growth	Small Growth

Growth of 10,000 11-23-2007 - 11-23-2017



3 Year Average Morningstar Risk Measures

Risk vs. Category (598) -Avg
Return vs. Category (598) Avg



Investment Strategy

The investment seeks to provide long-term capital appreciation. The fund invests mainly in the stocks of small and mid-size companies. These companies tend to be unseasoned but are considered by the fund's advisors to have superior growth potential. Also, these companies often provide little or no dividend income. It uses multiple investment advisors.

Pillars

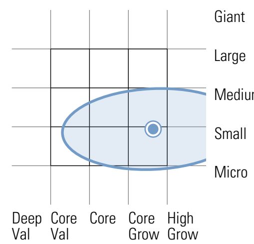
Process	Neutral
Performance	Neutral
People	Positive
Parent	Positive
Price	Positive
Rating	Bronze

Performance 11-22-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	12,019	10,186	11,997	13,111	20,473	23,904
Fund	20.19	1.86	19.97	9.45	15.41	9.11
+/- S&P 500 TR USD	2.07	0.81	-0.33	-0.81	-0.31	0.53
+/- Category	0.67	0.39	0.46	-0.87	0.73	0.45
% Rank in Cat	42	37	45	65	36	42
# of Funds in Cat	684	723	680	600	536	397

* Currency is displayed in BASE

Style Map

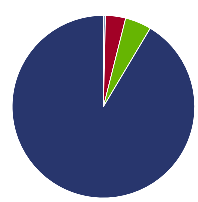


Top Holdings 09-30-2017

	Weight %	Last Price	Day Chg %	52 Week Range
Cadence Design Systems Inc	1.06	45.55 BASE	1.20 ↑	24.15 - 45.54
⊖ Icon PLC	0.97	117.15 BASE	-1.05 ↓	73.76 - 124.48
⊖ Insulet Corp	0.90	70.40 BASE	0.56 ↑	32.12 - 72.99
⊕ Trinet Group Inc	0.82	44.38 BASE	0.82 ↑	23.91 - 44.99
athenahealth Inc	0.81	129.29 BASE	-0.71 ↓	90.11 - 158.66
% Assets in Top 5 Holdings	4.55			

⊕ Increase ⊖ Decrease ☼ New to Portfolio

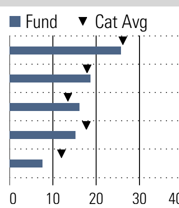
Asset Allocation



Asset Class	% Net
Cash	4.65
US Stock	91.43
Non US Stock	3.57
Bond	0.04
Other	0.31

Top Sectors 09-30-2017

	Fund	3 Yr High	3 Yr Low	Cat Avg
Technology	25.69	25.69	20.84	25.24
Industrials	18.62	20.59	18.62	16.98
Consumer Cyclical	16.14	18.98	16.14	12.55
Healthcare	15.22	18.39	15.22	16.82
Financial Services	7.54	8.83	7.54	11.07



Management

	Start Date
Kenneth L. Abrams	02-01-1994
James P. Stetler	02-17-2012
Ryan Edward Crane	08-12-2013
Daniel J. Fitzpatrick	02-24-2014
Chad Meade	06-16-2014
Brian A. Schaub	06-16-2014
Binbin Guo	02-25-2016
Brian M. Angerame	03-20-2017
Derek J. Deutsch	03-20-2017
Aram E. Green	03-20-2017
Jeffrey J. Russell	03-20-2017

Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-23-2016	81.15	3.3174	0.0000	0.0000	0.4030	3.7204
12-24-2015	75.66	7.2000	0.4037	0.0000	0.5343	8.1380
12-17-2014	84.40	11.3720	1.6030	0.0000	0.3240	13.2990
12-17-2013	92.22	8.4610	1.6010	0.0000	0.2160	10.2780
12-26-2012	73.02	2.1420	0.0000	0.0000	0.3920	2.5340

MORNINGSTAR®

Vanguard Explorer Fund Admiral Shares VEXRX

Analysis

This fund's Morningstar Analyst Rating has been upgraded to Bronze.
By Andrew Daniels, CFA, CMA 3/30/2017

Vanguard Explorer's recent subadvisor changes have improved its future prospects. We've upgraded the fund's Morningstar Analyst Rating to Bronze from Neutral.

On March 20, 2017, Vanguard announced it dismissed Granahan Investment Management and Kalmar Investment Partners as subadvisors on this fund. ClearBridge Investments, a quality-driven fundamental equity shop based in New York City, also joined as a subadvisor and now manages 15% of fund assets. These changes come after Vanguard dismissed Century Capital and Chartwell Investment Partners in 2016. The 2016-17 changes addressed two concerns--the number and the quality of subadvisors--which materially improves this fund's prospects going forward.

As this fund's asset base grew from $900 million in 1994 to $11.9 billion as of February 2017, Vanguard added more subadvisors to manage small-cap liquidity concerns. There were eight subadvisors as of December 2015, which diluted the impact of each manager's best picks. The number of subadvisors now stands at five; this smaller lineup should make the portfolio more distinct. And the new ClearBridge comanagers are promising. Jeffrey Russell, Aram Green, Derek Deutsch, and Brian Angerame have been with ClearBridge or its predecessor firms for an average of nearly 20 years. Team members comanage Silver-rated ClearBridge Small Cap Growth SASMX and Bronze-rated ClearBridge Mid Cap SBMAX. ClearBridge joins a solid group of fellow fundamental subadvisors, including Kenneth Abrams and DJ Fitzpatrick of Wellington Management, Chad Meade and Brian Schaub of Arrowpoint Asset Management, and Ryan Crane of Stephens Investment Management. Combined, the fundamental subadvisors manage 78% of assets; Vanguard's Quantitative Equity Group manages 18%, and the rest is in cash.

There is always the risk that Vanguard will continue to tinker with the subadvisor lineup here, but this fund provides access to a solid lineup of managers for the lowest fee among actively managed small-growth funds. That's worth considering.

Process Pillar: Neutral

While this fund's recent subadvisor changes are encouraging, its history indicates that there's no guarantee Vanguard will not change the lineup again in the future. The fund earns a Neutral Process rating.

As this fund's asset base grew from $900 million in 1994 to $11.9 billion as of February 2017, Vanguard added more subadvisors to manage small-cap liquidity concerns. Vanguard's portfolio review group conducts external manager selection for the firm. The team selects subadvisors it believes will deliver strong long-term performance, competitive fee arrangements, and consistent leadership. Vanguard argues that having multiple subadvisors provides diversification and adds alpha, but the fund's tracking error declined as the asset base grew. PRG's decisions can dramatically alter the strategic profile of the fund. As of December 2015, the fund had eight subadvisors, which limited the ability of its managers to add value with their best picks. Partially because of outflows and poor performance, Vanguard has since dismissed four subadvisors and added one in ClearBridge Investments. Also, since October 2006, the fund has gone from having 50% of its assets with quantitative managers to just 18% in 2017.

All told, the recent changes should result in a more distinct portfolio, if Vanguard doesn't add more subadvisors in the future to manage flows.

The multimanager fund's portfolio had nearly 700 holdings as of December 2016. While that should come down to approximately 600 when ClearBridge Investments takes the place of two dismissed subadvisors, the fund will still be much more diffuse than the typical small-growth Morningstar Category peer. As of December 2016, the fund's top 10 holdings made up about 7.5% of as-

Morningstar's Take

Morningstar Analyst Rating	Bronze

Morningstar Pillars

Process	Neutral
Performance	Neutral
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating
Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Fund Performance

	Total Return %	+/- Category
YTD	20.19	0.67
2016	12.47	1.27
2015	-4.22	-1.81
2014	4.08	1.64
2013	44.59	3.68

Vanguard Explorer Fund Admiral Shares VEXRX

Analysis

sets, versus 25% for the typical small-growth peer. Nearly all of the fund's holdings make up less than 0.80% of assets, limiting the subadvisors' abilities to add value with their highest-conviction picks.

The fund doesn't veer far from the benchmark's sector weightings even though subadvisor sleeves may diverge substantially. As of December 2016, the fund had a 4-percentage-point overweighting in technology stocks relative to the Russell 2500 Growth Index benchmark, led by semiconductor players Cavium CAVM and Intersil ISIL. On the flip side, the fund had a 3-percentage-point underweighting in consumer cyclical stocks, though it did own several retailers such as DSW DSW, Ulta Beauty ULTA, and Chico's FAS CHS.

The fund did have a quality tilt as of December 2016. Its debt/capital ratio of 0.40 was lower than the benchmark's 0.46. Similarly, the fund's return on invested capital of 5.3% was higher than the benchmark's 3.7%.

Performance Pillar: Neutral

This fund's recent subadvisor changes make its track record less relevant. It earns a Neutral Performance rating.

Performance has been strong since longest-tenured manager Kenneth Abrams arrived in February 1994. From then through February 2017, the fund's annualized gain of 9.3% outperformed the Russell 2500 Growth Index benchmark's gain of 8.7%, with lower volatility. The fund's Sharpe ratio--a measure of risk-adjusted returns--of 0.43 during the same period also beats the benchmark's 0.38. However, this record should be taken with a grain of salt since the fund's size and strategy have changed drastically through the years.

In recent years, the fund's rock-bottom fees have helped it outperform its small-growth peers, but it has struggled versus the benchmark. During the trailing five-year period ended February 2017, the fund's annualized gain of 11.8% trailed the benchmark's gain of 12.4%, but outperformed 64% of its peers. The fund's struggles versus the benchmark likely drove Vanguard to make major changes to the subadvisor lineup, as the four subadvisors dismissed in 2016-17 had posted poor risk-adjusted results.

The fund had a solid 2016, outperforming its benchmark by 2.6 percentage points, getting a boost from merger and acquisition activity: Biotech firm Medivation and medical diagnostic firm Cepheid were acquired.

People Pillar: Positive

This fund's recent subadvisor changes have improved its prospects. Its loaded lineup of solid comanagers supports a Positive People rating.

On March 20, 2017, Vanguard announced that it dismissed Granahan Investment Management and Kalmar Investment Partners as subadvisors on this fund. ClearBridge Investments, a New York-based quality-driven fundamental equity shop, joined as a subadvisor and now manages 15% of fund assets. ClearBridge's Jeffrey Russell, Aram Green, Derek Deutsch, and Brian Angerame will serve as comanagers. On average they have been with ClearBridge or predecessor firms for nearly 20 years. Team members comanage Silver-rated ClearBridge Small Cap Growth SASMX and Bronze-rated ClearBridge Mid Cap SBMAX. The recent subadvisor changes come after Vanguard dismissed Century Capital and Chartwell Investment Partners in 2016. In all, the number of subadvisors here has been reduced to five from eight since of the end of 2015, and the other subadvisors are talented and experienced.

Kenneth Abrams and DJ Fitzpatrick of Wellington Management continue to manage 34% of fund assets. Chad Meade and Brian Schaub of Arrowpoint Asset Management--who run Bronze-rated Meridian Growth MERDX--manage 15% of fund assets, while Ryan Crane of Stephens Investment Management runs 14%; Vanguard's quantitative equity group manages 18%.

Parent Pillar: Positive

Vanguard has one of the mutual fund industry's strongest corporate cultures and earns a Positive Parent rating. Its consistent messages to investors to keep costs low, diversify, and stay the course are reflected in the firm's own behavior. Vanguard's U.S. fundholders own the firm through small investments by each mutual fund, mitigating potential conflicts of interest that can exist at other firms that are serving two masters. Fund performance is strong overall: Over the past three-, five-, and 10-year periods, its Morningstar Success Ratios are greater than 70%--high among large, diversified fund families.

Over the past year, the firm has collected more than USD 200 billion in net inflows, thanks in large part to investors' interest in passive investing. The firm's indexing and ETF prowess, low costs, and success in penetrating the financial-advisor sales channel all have fueled growth. Total assets under management now exceed USD 3.3 trillion, giving Vanguard a significant more-than-20% market share across U.S. mutual funds.

Vanguard has been a global player for years but has only more recently turned its focus to growing internationally. The firm is a large player in Australia, where it has the most history, but doesn't yet have the brand recognition and trust it enjoys in the United States in other parts of the world. While non-U.S. funds don't participate in the ownership of Vanguard, the firm's investorcentric culture extends globally.

Price Pillar: Positive

This fund is one of the cheapest actively managed options in the small-growth category, giving it a built-in advantage over nearly all peers. Thus, it earns a Positive Price rating.

The fund's Investor shares hold 30% of assets, charge 0.45%, and earn a Morningstar Fee Level of Low. For a $50,000 minimum investment, investors can purchase the fund's Admiral shares, which hold 70% of assets, charge 0.33%, and also earn a Low fee level. Overall, the weighted average net expense ratio for this fund is 0.37%, which is 69% cheaper than the small-cap, no-load fee group median of 1.19%.

Brokerage commissions for the fund are 0.10%, well below the 0.16% of the typical small-growth

Vanguard Explorer Fund Admiral Shares VEXRX

Analysis

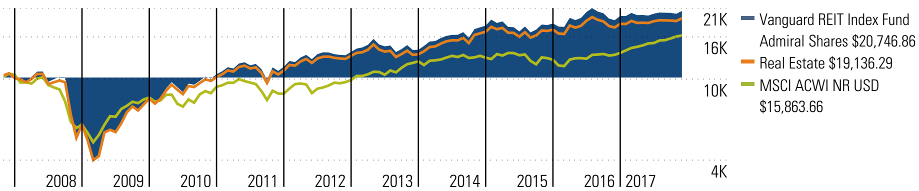
peer.

Vanguard REIT Index Fund Admiral Shares VGSLX

Morningstar Analyst Rating
Silver

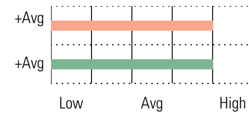
NAV $	NAV Day Change %	Yield TTM %	Total Assets $ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
120.19	↓-0.29 | -0.24	3.94	63.0	Open	$10,000	None	0.12%	★★★★	Real Estate	Mid Blend

Growth of 10,000 11-23-2007 - 11-23-2017



3 Year Average Morningstar Risk Measures

Risk vs. Category (232)
Return vs. Category (232)



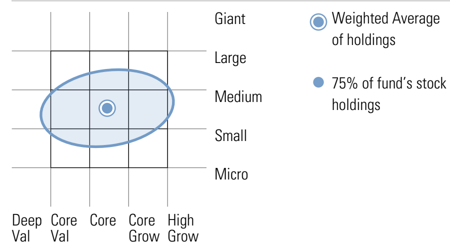
Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive
Rating	Silver

Investment Strategy

The investment seeks to provide a high level of income and moderate long-term capital appreciation by tracking the performance of a benchmark index that measures the performance of publicly traded equity REITs. The fund employs an indexing investment approach designed to track the performance of the MSCI US REIT Index. The index is composed of stocks of publicly traded equity real estate investment trusts. The adviser attempts to replicate the index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index. The fund is non-diversified.

Style Map



Performance 11-22-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,566	10,137	11,110	12,169	16,420	20,747
Fund	5.66	1.37	11.10	6.76	10.43	7.57
+/- MSCI ACWI NR USD	-15.46	-0.17	-12.94	-1.04	-0.55	2.97
+/- Category	-1.09	-0.20	-0.19	0.39	0.66	0.89
% Rank in Cat	54	78	48	36	27	26
# of Funds in Cat	258	272	257	233	204	142

* Currency is displayed in BASE

Asset Allocation

	% Net	% Short	% Long	Bench mark	Cat Avg
Cash	0.46	0.01	0.47	0.00	1.11
US Stock	99.53	0.00	99.53	99.96	93.22
Non US Stock	0.00	0.00	0.00	0.04	0.48
Bond	0.00	0.00	0.00	0.00	2.91
Other	0.01	0.00	0.01	0.00	2.28

Top Holdings 10-31-2017

	Weight %	Last Price	Day Chg %	52 Week Range
Vanguard REIT II Index	9.88	20.41 BASE	-0.24 ↓	19.72 - 20.53
⊕ Simon Property Group Inc	5.19	158.25 BASE	-0.04 ↓	150.15 - 188.10
⊕ Equinix Inc	3.86	475.50 BASE	0.66 ↑	327.37 - 495.35
⊕ Prologis Inc	3.66	67.06 BASE	0.21 ↑	48.33 - 67.53
⊕ Public Storage	3.47	212.87 BASE	0.72 ↑	192.15 - 232.21
% Assets in Top 5 Holdings	26.06			

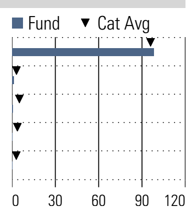
⊕ Increase ⊖ Decrease ☼ New to Portfolio

Management

	Start Date
Gerard C. O'Reilly	05-13-1996
Walter Nejman	05-25-2016

Top Sectors 10-31-2017

	Fund	3 Yr High	3 Yr Low	Cat Avg
Real Estate	98.29	99.26	98.29	93.18
Industrials	1.20	1.20	0.74	0.32
Consumer Cyclical	0.52	0.52	0.00	2.35
Basic Materials	0.00	0.00	0.00	0.95
Financial Services	0.00	0.00	0.00	0.19



Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Captial Gain	Return of Capital	Dividend Income	Distribution Total
09-21-2017	117.68	0.0000	0.0000	0.0000	1.2100	1.2100
06-22-2017	118.78	0.0000	0.0000	0.0000	1.1350	1.1350
03-21-2017	115.37	0.0000	0.0000	0.0000	0.8420	0.8420
12-21-2016	114.43	0.1680	0.1721	0.6400	1.4210	2.4010
09-12-2016	122.62	0.0592	0.0607	0.2258	0.5013	0.8470

Vanguard REIT Index Fund Admiral Shares VGSLX

Analysis

Solid tracking and consistent performance make this fund a top choice for real estate exposure.
By David Kathman, CFA 2/10/2017

Vanguard REIT Index is by far the largest real estate fund, with more than $60 billion in assets, including $34 billion in the exchange-traded version, Vanguard REIT ETF VNQ. It's also one of the cheapest REIT funds, with an expense ratio of 0.12% for the Admiral shares and 0.26% for the Investor shares. It features experienced management and an excellent record of tracking its index. It remains a fine option in its niche, but we're downgrading its Morningstar Analyst Rating to Silver from Gold, to better align its rating with those of similar funds and to reflect the risks of single-sector funds.

The fund tracks the MSCI US REIT Index, which holds domestic-equity REITs, or firms that manage properties and collect rent. That index doesn't include mortgage REITs, which invest in mortgages and mortgage-backed securities rather than actual properties, nor does it include non-real-estate specialty REITs such as timber or cell-tower REITs. Thus, this fund provides exposure to a more traditional, core real estate portfolio than REIT funds that do hold such noncore stocks, a group that includes many actively managed real estate mutual funds as well as the second-largest real estate ETF, iShares U.S. Real Estate IYR. Most other REIT funds, however, track indexes that also exclude noncore REITs, and thus provide similar coverage to this fund.

Gerard O'Reilly has managed this fund since its 1996 inception, and he also runs the $500 billion Vanguard Total Stock Market Index VTSMX as well as numerous other big passive funds and their exchange-traded fund versions. That experience has helped O'Reilly do an excellent job of tracking the fund's benchmark and has helped the fund outpace most other real estate mutual funds and ETFs over time. Its 10-year returns rank in the top 20% of real estate mutual funds.

The low expense ratio helps. This fund is not quite as cheap as Fidelity Real Estate Index, whose Investor and Premium shares cost 0.23% and 0.09%, but its Institutional shares are cheaper than DFA Real Estate Securities DFREX, and all its share classes are in the cheapest 2% of their peer groups. All in all, there's plenty to like here.

Process Pillar: Positive

The fund's goal is to provide broad exposure to U.S. REITs. It seeks to replicate the performance of its benchmark, the MSCI US REIT Index, as closely as possible. A mutual fund's costs include its expense ratio and transaction fees, so the challenge for passive funds is to keep costs down while matching the performance of the index as closely as possible. This fund also holds mid- and small-cap REITs, which are more difficult to closely track than large-cap equities. Another important consideration for this fund's managers is the sheer size of the fund's assets: This fund's size (across all mutual fund share classes) accounts for 27% of all assets in real estate mutual funds. Vanguard specializes in tracking indexes and uses proprietary software to trade efficiently and keep transaction costs low. All this earns the fund a Positive Process rating.

The MSCI US REIT Index includes all domestic REITs from the MSCI US Investable Market 2500 Index, excluding mortgage REITs (such as Annaly Capital Management NLY) and certain non-real-estate specialty REITs, including timber REITs (such as Weyerhaeuser WY). Constituents are weighted by their free-float-adjusted market cap. The index is reviewed semiannually and rebalanced quarterly. Prior to May 2009, the fund tracked a slightly different version of this index that included a 2% cash position. Today, the fund is fully invested.

The fund's holdings are diversified across REIT sectors: retail (22% of assets as of Dec. 31, 2016), residential (16%), specialized (16%), office (14%), healthcare (12%), diversified (7%), hotels and resorts (6%), and industrial (7%). The fund excludes mortgage REITs and other kinds of REITs--such as timber REITs--that do not derive the majority of their revenue from real estate and thus whose re-

Morningstar's Take

Morningstar Analyst Rating: Silver

Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Fund Performance

	Total Return %	+/- Category
YTD	5.66	-1.09
2016	8.50	1.61
2015	2.39	-0.02
2014	30.32	2.28
2013	2.42	0.87

Vanguard REIT Index Fund Admiral Shares VGSLX

Analysis

turns are not correlated with real estate returns. Mortgage REITs, for example, in practice are financial firms using leverage to buy mortgages and are primarily a play on the yield curve.

The average REIT fund has about 50 holdings, but this fund is much more diversified at 156. This fund's large number of holdings is unusual but not unheard of among passively managed REIT funds and ETFs, which usually track indexes with minimum market caps to exclude smaller REITs. This fund's index, by contrast, has no minimum market cap. The MSCI US Investable Market 2500 Index, which is the benchmark's base index, contains many small- and mid-cap REITs that are not held in other passive real estate funds. These 30 or so smaller firms make up 15% to 20% of this fund's assets.

Despite these additional holdings, the portfolio is relatively top-heavy because it weights by market cap. The top-10 holdings constitute 34% of fund assets and are near-identical to other cap-weighted REIT funds' top holdings.

Performance Pillar: Positive

A well-run passive fund's annual performance should trail that of its benchmark's by approximately its expense ratio. This fund's annualized return has trailed its benchmark's by almost exactly its expense ratio over the past three and five years, which speaks well to the way it has been managed.

This fund has been a top performer in the real estate Morningstar Category, beating the category in seven of the past 10 calendar years through 2016, earning it a Positive Performance rating. This may seem counterintuitive to those who associate REITs with active management, because REITs once were seen as a less-efficient asset class. However, very few actively managed REIT mutual funds have topped this fund's return since its 1996 inception. The percentage of actively managed REIT funds besting this fund's index over trailing five-year time periods from 1996 to 2002 was relatively high (about 60%) but has fallen since then to about 17% as of February 2017. For an asset class often considered a good candidate for active management, actively managed REIT funds have underperformed passively managed peers during the past decade.

On a risk-adjusted basis, this fund's return also has been strong. In the past three-, five-, and 10-year periods, its standard deviation was higher than the category average's, but its Morningstar Risk-Adjusted Return was also above the category average for all of those time frames.

People Pillar: Positive

Gerard O'Reilly has managed this fund since 1996. He has been with Vanguard since 1992 and became this fund's lead manager in 2006, when George "Gus" Sauter, Vanguard's former chief investment officer, stepped down to lead Vanguard's retail investor group. Walter Nejman was named O'Reilly's comanager on May 25, 2016. He has been with Vanguard since 2005 and was named comanager of 17 other Vanguard index funds in 2015 and 2016. Their experience earns the fund a Positive People rating.

O'Reilly and Nejman are part of Vanguard's Equity Index Group. O'Reilly is a named manager on 12 other funds, including Silver-rated Vanguard Growth Index VIGAX, Gold-rated Vanguard Total Stock Market Index, Silver-rated Vanguard Value Index VVIAX, and Vanguard Mega Cap Value Index VMVLX. Nejman is a named manager on 19 other funds plus the firm's target-date series. They are assisted by Vanguard's equity-index group, headed by Joseph Brennan, which specializes in efficient trading and construction techniques to minimize tracking error and oversees all passively managed equity funds.

Although neither manager invests in the fund, Vanguard aligns their interests with fund investors' by linking their compensation to operating efficiency, which helps keep costs low. Because minimizing costs and tracking error are the managers' primary objectives, ownership of the fund is less important than for active managers.

Parent Pillar: Positive

Vanguard has one of the mutual fund industry's strongest corporate cultures and earns a Positive Parent rating. Its consistent messages to investors to keep costs low, diversify, and stay the course are reflected in the firm's own behavior. Vanguard's U.S. fundholders own the firm through small investments by each mutual fund, mitigating potential conflicts of interest that can exist at other firms that are serving two masters. Fund performance is strong overall: Over the past three-, five-, and 10-year periods, its Morningstar Success Ratios are greater than 70%--high among large, diversified fund families.

Over the past year, the firm has collected more than USD 200 billion in net inflows, thanks in large part to investors' interest in passive investing. The firm's indexing and ETF prowess, low costs, and success in penetrating the financial-advisor sales channel all have fueled growth. Total assets under management now exceed USD 3.3 trillion, giving Vanguard a significant more-than-20% market share across U.S. mutual funds.

Vanguard has been a global player for years but has only more recently turned its focus to growing internationally. The firm is a large player in Australia, where it has the most history, but doesn't yet have the brand recognition and trust it enjoys in the United States in other parts of the world. While non-U.S. funds don't participate in the ownership of Vanguard, the firm's investorcentric culture extends globally.

Price Pillar: Positive

This fund's Admiral share class (which requires a $10,000 minimum investment) charges a 0.12% expense ratio and is its category's cheapest retail offering apart from the Premium shares of Fidelity Real Estate Index FSRVX, which cost 0.09%. This fund's Investor share class costs 0.26% and requires a $3,000 minimum investment. (The Institutional share class VGSNX charges 0.10%.) The fund earns a Price rating of Positive.

Vanguard also offers an ETF share class, Vanguard REIT ETF, which costs 0.12% but has no investment minimum beyond the cost of one share. The ETF is the fund's most popular share class.

Vanguard REIT Index Fund Admiral Shares VGSLX

Analysis

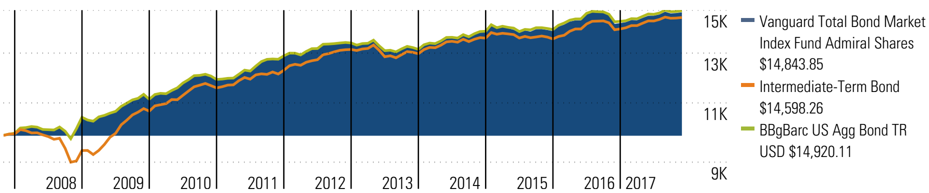
The only cheaper ETF options in this category are Schwab U.S. REIT SCHH, iShares Core U.S. REIT USRT, and Fidelity MSCI Real Estate FREL.

Vanguard Total Bond Market Index Fund Admiral Shares VBTLX

Morningstar Analyst Rating
Silver

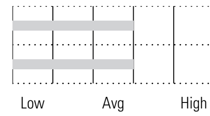
NAV $	NAV Day Change %	Yield TTM %	Total Assets $ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
10.78	↑0.02 | 0.20	2.50	191.7	Open	$10,000	None	0.05%	★★★	Intermediate-Term Bond	

Growth of 10,000 11-23-2007 - 11-23-2017



3 Year Average Morningstar Risk Measures

Risk vs. Category (854) Avg
Return vs. Category (854) Avg



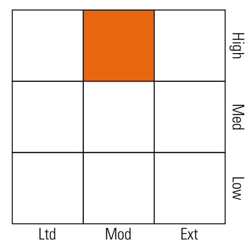
Pillars

Process	Positive
Performance	Neutral
People	Positive
Parent	Positive
Price	Positive
Rating	Silver

Investment Strategy

The investment seeks the performance of Bloomberg Barclays U.S. Aggregate Float Adjusted Index. Bloomberg Barclays U.S. Aggregate Float Adjusted Index represents a wide spectrum of public, investment-grade, taxable, fixed income securities in the United States-including government, corporate, and international dollar-denominated bonds, as well as mortgage-backed and asset-backed securities-all with maturities of more than 1 year. All of its investments will be selected through the sampling process, and at least 80% of its assets will be invested in bonds held in the index.

Style Map 10-31-2017



Performance 11-22-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,353	10,041	10,355	10,730	11,054	14,844
Fund	3.53	0.41	3.55	2.38	2.02	4.03
+/- BBgBarc US Agg Bond TR USD	0.06	-0.03	0.04	-0.06	-0.09	-0.05
+/- Category	-0.12	0.11	-0.22	0.06	-0.11	-0.08
% Rank in Cat	55	29	54	47	57	61
# of Funds in Cat	1,003	1,046	991	854	779	546

* Currency is displayed in BASE

Bond Statistics

Bond Statistics	Value
Average Effective Duration	6.08
Average Effective Maturity (Years)	8.30
Average Credit Quality	AA
Average Weighted Coupon	3.09
Average Weighted Price	103.72

Top Holdings 10-31-2017

	Weight %	Maturity Date	Amount Mil	Value Mil
US Treasury Note 2.125%	0.50	05-15-2025	976.90	966.98
⊕ US Treasury Note 2.25%	0.49	08-15-2027	969.66	958.90
US Treasury Note 2.625%	0.45	11-15-2020	853.68	875.56
⊕ US Treasury Note 1.5%	0.45	08-15-2020	876.13	870.93
US Treasury Note 1.375%	0.44	02-15-2020	858.02	852.66
% Assets in Top 5 Holdings	2.32			

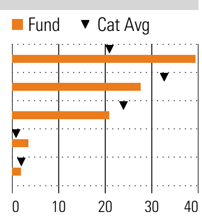
⊕ Increase ⊖ Decrease ☼ New to Portfolio

Asset Allocation

	% Net	% Short	% Long	Bench mark	Cat Avg
Cash	2.40	0.00	2.40	—	3.83
US Stock	0.00	0.00	0.00	—	0.00
Non US Stock	0.00	0.00	0.00	—	0.00
Bond	97.54	0.00	97.54	—	94.86
Other	0.06	0.00	0.06	—	1.31

Top Sectors 10-31-2017

	Fund	BMark	Cat Avg
U.S. Treasury	39.40	—	20.06
Corporate Bond	27.55	—	31.81
Agency MBS Pass-Through	20.83	—	23.06
Other Government Related	3.50	—	-0.02
U.S. Agency	1.85	—	1.12



Management

	Start Date
Joshua C. Barrickman	02-22-2013

Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Captial Gain	Return of Capital	Dividend Income	Distribution Total
10-31-2017	10.77	0.0000	0.0000	0.0000	0.0230	0.0230
09-29-2017	10.78	0.0000	0.0000	0.0000	0.0224	0.0224
08-31-2017	10.86	0.0000	0.0000	0.0000	0.0230	0.0230
07-31-2017	10.79	0.0000	0.0000	0.0000	0.0227	0.0227
06-30-2017	10.77	0.0000	0.0000	0.0000	0.0224	0.0224

Vanguard Total Bond Market Index Fund Admiral Shares VBTLX

Analysis

A low-cost, low-credit-risk option.
By Phillip Yoo 11/20/2017

Vanguard Total Bond Market's Treasury-heavy portfolio may keep it from posting returns at the top of the intermediate-term bond Morningstar Category, but its low price tag and high credit-quality portfolio should set it up for attractive risk-adjusted performance over a full market cycle. It warrants a Morningstar Analyst Rating of Silver.

The fund tracks the market-cap-weighted Bloomberg Barclays U.S. Aggregate Bond Index, which includes investment-grade, U.S.-dollar-denominated bonds with at least one year until maturity. The portfolio currently consists of roughly 40% Treasury bonds, 20% government-guaranteed mortgage-backed securities, and 40% investment-grade corporate bonds. Accordingly, it carries low credit risk, which can limit its return potential. However, its cost advantage partially offsets this drawback.

Market-cap weighting tilts the portfolio toward highly rated bonds. AAA rated securities take up about 70% of the fund. The majority of the AAA rated portion of the portfolio is composed of low-yielding, yet secure U.S. Treasuries and agency mortgage-backed securities. The fund's exposure to Treasuries has increased over the past decade and is now 20 percentage points higher than the category average. However, this fund delivers a higher SEC yield than the category average because it has a slightly more aggressive interest-rate risk profile.

The portfolio's bias toward highly rated securities provides a safety net against market downturns, but it also limits its return potential. The fund's annual return of 4.1% over the trailing 10 years through October 2017 was behind the average return of its surviving peers by 20 basis points. Its risk-adjusted return, as measured by the Sharpe ratio, was slightly behind the category average as well.

The managers have kept the fund's performance close to its index. Over the trailing five years through October 2017, the fund trailed the Bloomberg Barclays U.S. Aggregate Bond Index by 0.07% annually. This gap is in line with the expense ratio of 0.05%.

Process Pillar: Positive

The fund employs representative sampling to track the Bloomberg Barclays U.S. Aggregate Float Adjusted Index, a broad proxy for the investment-grade U.S. bond market. The index's composition largely differs from its actively managed peers, which focus more on corporate bonds and securitized debt and less on government bonds. However, this broad portfolio effectively diversifies risk, tilts toward the most liquid securities, and promotes low turnover, supporting the Positive Process Pillar rating.

The fund's index includes investment-grade corporate, government, and agency and mortgage-backed securities denominated in U.S. dollars. However, it excludes agency and mortgage-backed securities held by the Federal Reserve from its weighting calculations. The securities in the index must have at least one year remaining to maturity and must have $300 million or more of outstanding face value. The index weights its holdings by float-adjusted market cap and is rebalanced monthly. The fund does not hold every security in the benchmark but instead carefully replicates the index's key characteristics, such as duration and credit quality.

The fund offers a slightly higher yield than its typical peer, owing to its longer duration. As of this writing, the fund had a duration of 6.0 years, compared with the category average of 5.3 years. And it has had a longer duration than its typical category peer since 2012, partially because of its heavy exposure to Treasuries. In 2009, the Department of the Treasury started issuing longer-term Treasury bonds to address long-term Medicare- and Social Security-related expenses, while tak-

Morningstar's Take

Morningstar Analyst Rating: Silver

Morningstar Pillars

Process	Positive
Performance	Neutral
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Fund Performance

	Total Return %	+/- Category
YTD	3.53	-0.12
2016	2.60	-0.64
2015	0.40	0.66
2014	5.89	0.71
2013	-2.15	-0.72

Vanguard Total Bond Market Index Fund Admiral Shares VBTLX

Analysis

ing advantage of low interest rates. The fund's duration can change over time because it does not impose a maximum maturity limit and weights its holdings by market capitalization.

The portfolio's interest-rate risk is partially offset by its low credit risk. Unlike some of its category peers, which invest in both investment-grade and sub-investment-grade bonds, this fund is limited to investment-grade bonds. And nearly 40% of its portfolio is allocated to Treasuries. This position is much greater than the category average of 20%. Treasuries accounted less than a fourth of the fund before the financial crisis in 2007-08. After the crisis, however, a record number of long-term Treasuries were issued, and now they make up a significant portion of the U.S. investment-grade bond market.

Performance Pillar: Neutral

This low credit-risk portfolio has tended to trail its peers with greater exposure to corporate and securitized debt. The fund's annual returns of 1.9% and 4.1% over the trailing five and 10 years through October 2017 were 30 basis points and 20 basis points behind the category average, respectively. Its peers were rewarded for taking greater credit risk after the financial crisis.

Given its conservative holdings, however, this fund performed well during market downturns. For example, the fund outperformed the majority of its category peers during the financial crisis between 2007 and 2008. The fund's solid performance during that period helped to offset its underperformance in the ensuing credit rally in 2009, when the fund lagged 80% of its surviving competitors. Furthermore, its 10-year downside deviation, a measure of downside risk, ranked in the category's best decile.

The managers have done a good job of keeping the fund close to its index. Over the trailing five years through October 2017, the fund lagged its benchmark by 7 basis points annually.

People Pillar: Positive

An experienced, well-equipped team manages all of Vanguard's fixed-income index strategies, underpinning the Positive People Pillar rating.

Joshua Barrickman was named as manager in 2013. He has worked in investment management at Vanguard since 1999 and managed investment portfolios there since 2005. In 2013, he was promoted to head Vanguard's Bond Index Group. While Barrickman does not have an investment in the fund, Vanguard aligns managers' incentives with investors' by tying compensation to operational efficiency. Barrickman is further supported by Vanguard Fixed Income Group's more than 150 staff members. Key-person risk is low for the team.

It isn't practical for bond index funds to own all the securities in their benchmarks, so the managers must use statistical sampling techniques to construct a subset that reflects the key attributes of the index. As a result, manager skill and experience can play an important role in a fund's ability to effectively track its benchmark. Vanguard, a pioneer in index investing, has one of the most-seasoned index teams in the industry and has compiled a strong long-term record of keeping pace with the respective benchmarks of its index funds.

Parent Pillar: Positive

Vanguard has one of the mutual fund industry's strongest corporate cultures and earns a Positive Parent rating. Its consistent messages to investors to keep costs low, diversify, and stay the course are reflected in the firm's own behavior. Vanguard's U.S. fundholders own the firm through small investments by each mutual fund, mitigating potential conflicts of interest that can exist at other firms that are serving two masters. Fund performance is strong overall: Over the past three-, five-, and 10-year periods, its Morningstar Success Ratios are greater than 70%--high among large, diversified fund families.

Over the past year, the firm has collected more than USD 200 billion in net inflows, thanks in large part to investors' interest in passive investing. The firm's indexing and ETF prowess, low costs, and success in penetrating the financial-advisor sales channel all have fueled growth. Total assets under management now exceed USD 3.3 trillion, giving Vanguard a significant more-than-20% market share across U.S. mutual funds.

Vanguard has been a global player for years but has only more recently turned its focus to growing internationally. The firm is a large player in Australia, where it has the most history, but doesn't yet have the brand recognition and trust it enjoys in the United States in other parts of the world. While non-U.S. funds don't participate in the ownership of Vanguard, the firm's investorcentric culture extends globally.

Price Pillar: Positive

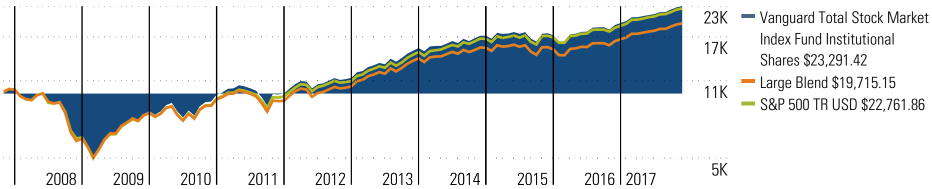
The fund's Admiral share class (minimum investment: $10,000) has an expense ratio of 0.05%, which is hard to beat, supporting the Positive Price Pillar rating. In fact, this fund is cheaper than 97% of its intermediate-term bond Morningstar Category peers and is substantially lower than the 0.56% category average fee. This fund's Investor share class (minimum investment: $3,000) is offered at 0.15%. The exchange-traded fund version charges 0.05% and does not have a minimum investment requirement.

Vanguard Total Stock Market Index Fund Institutional Shares VITSX

Morningstar Analyst Rating
Gold

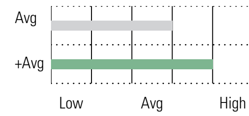
NAV $	NAV Day Change %	Yield TTM %	Total Assets $ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
65.13	-0.04 | -0.06	1.82	635.0	Open	$5 mil	None	0.04%	★★★★	Large Blend	Large Blend

Growth of 10,000 11-23-2007 - 11-23-2017



3 Year Average Morningstar Risk Measures

Risk vs. Category
(1214)
Return vs. Category
(1214)



Investment Strategy

The investment seeks to track the performance of a benchmark index that measures the investment return of the overall stock market. The fund employs an indexing investment approach designed to track the performance of the CRSP US Total Market Index, which represents approximately 100% of the investable U.S. stock market and includes large-, mid-, small-, and micro-cap stocks regularly traded on the New York Stock Exchange and Nasdaq. It invests by sampling the index, meaning that it holds a broadly diversified collection of securities that, in the aggregate, approximates the full index in terms of key characteristics.

Pillars

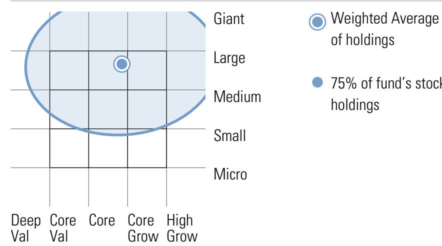
Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive
Rating	Gold

Performance 11-22-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	11,769	10,106	11,977	13,344	20,666	23,291
Fund	17.69	1.06	19.77	10.09	15.63	8.82
+/- S&P 500 TR USD	-0.42	0.01	-0.53	-0.17	-0.09	0.25
+/- Category	1.02	0.14	1.25	1.58	1.45	1.19
% Rank in Cat	40	43	40	19	17	13
# of Funds in Cat	1,419	1,526	1,393	1,215	1,083	792

* Currency is displayed in BASE

Style Map

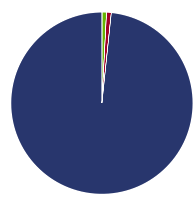


Top Holdings 10-31-2017

	Weight %	Last Price	Day Chg %	52 Week Range
Apple Inc	2.94	175.13 BASE	0.13 ↑	108.25 - 176.24
Microsoft Corp	2.40	83.28 BASE	0.22 ↑	58.80 - 86.20
Amazon.com Inc	1.69	— BASE	2.02 ↑	736.70 - 1,180.63
Facebook Inc A	1.60	183.03 BASE	1.21 ↑	114.00 - 183.00
Johnson & Johnson	1.40	137.82 BASE	0.40 ↑	109.32 - 144.35
% Assets in Top 5 Holdings	10.02			

⊕ Increase ⊖ Decrease ☼ New to Portfolio

Asset Allocation



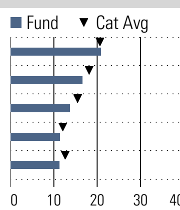
Asset Class	% Net
Cash	0.79
US Stock	98.35
Non US Stock	0.84
Bond	0.03
Other	0.00

Management

	Start Date
Gerard C. O'Reilly	12-31-1994
Walter Nejman	04-27-2016

Top Sectors 10-31-2017

	Fund	3 Yr High	3 Yr Low	Cat Avg
Technology	20.88	20.88	17.72	19.72
Financial Services	16.57	16.57	15.01	17.22
Healthcare	13.67	15.20	13.09	14.57
Consumer Cyclical	11.32	12.03	11.32	11.15
Industrials	11.24	11.47	11.24	11.70



Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
09-21-2017	62.44	0.0000	0.0000	0.0000	0.2700	0.2700
06-20-2017	60.78	0.0000	0.0000	0.0000	0.2810	0.2810
03-23-2017	58.51	0.0000	0.0000	0.0000	0.2650	0.2650
12-19-2016	56.64	0.0000	0.0000	0.0000	0.3550	0.3550
09-12-2016	53.87	0.0000	0.0000	0.0000	0.2630	0.2630

MORNINGSTAR®

Vanguard Total Stock Market Index Fund Institutional Shares VITSX

Analysis

This broadly diversified fund holds just about every U.S. stock.
By Adam McCullough 7/31/2017

Vanguard Total Stock Market Index offers diversified exposure to U.S. stocks of all sizes. A low fee and reasonably representative benchmark leave this fund well positioned to continue its long streak of producing superior risk-adjusted returns over the long haul. It earns a Morningstar Analyst Rating of Gold.

The fund tracks the CRSP U.S. Total Market Index, which holds nearly every investable U.S. stock. Its market-cap-weighting approach reduces turnover because changes in the market value of each holding in the portfolio mirror changes to their weightings in the market. Broad diversification is an intrinsic advantage of funds tracking market-capitalization-weighted total stock market indexes. However, market-cap weighting has its pluses and minuses. It can be a beneficial approach in momentum-driven bull markets, but it can also lead to significant sector and single-security concentration, as witnessed at the height of the technology bubble. So, market-cap-weighted indexes' greatest strength is arguably also their weakness. A total market fund such as this is a better approach for a passive equity allocation than combining separate-size segment funds because it covers the full market-cap range and isn't forced to trade stocks as they move across market-cap segments.

Because this fund tracks the entire U.S. equity market, its performance should be similar to that of the average investor, before fees. But its low fee gives the fund a large and sustainable edge. The fund's 0.04% expense ratio is nearly the lowest in the category and gives it a large cost advantage over the average large-blend Morningstar Category fund, helping its relative performance. The fund does carry meaningful risk. It fell 55% during the bear market from October 2007 through March 2009. As an index strategy, the fund stays fully invested all the time, so it won't miss a rally, but it exposes investors to the full brunt of market downturns. Over the past 10 years through June 2017, the fund returned 7.4% annually, outpacing the category average return by 1.7%, and landing just shy of the category's top decile based on risk-adjusted returns.

Process Pillar: Positive
The fund represents the entire investable U.S. equity market and effectively diversifies risk. It earns a Positive Process Pillar rating.

This fund tracks the CRSP U.S. Total Market Index, which holds almost every liquid U.S. stock. It includes all stocks with a primary listing on a major U.S. stock exchange with a market cap of at least $10 million. The fund employs full replication for the largest 1,200 or so stocks in its portfolio--owning each in their corresponding index weightings--and then samples from the remaining smaller-cap stocks. However, the fund's large asset base allows it to replicate the index more completely than most other total market funds. The resulting portfolio consists of approximately 3,600 holdings, the same as the index. While the fund holds nearly all common equities and REITs, it excludes business-development companies, master limited partnerships, ADRs, and royalty trusts. The fund uses securities lending revenue to reduce costs.

The fund has changed its benchmark index twice since its May 2001 inception. Up until April of 2005, It tracked the Dow Jones U.S. Total Stock Market Index (formerly the Dow Jones Wilshire 5000 Index). From April 2005 until June 2013 it followed the MSCI U.S. Broad Market Index. These changes were largely immaterial. Vanguard's desire to reduce index licensing fees drove the most recent index change.

This portfolio reflects the composition of the U.S. stock market. The fund is broadly diversified across sectors, industries, and individual stocks. Most funds in the large-blend category benchmark against the S&P 500, which covers large- and mid-cap stocks. There are two primary differences between the index that this fund follows, the CRSP U.S. Total Market Index, and the more popular S&P 500. First, this fund includes many more stocks, including some micro-caps. In fact, 9% of

Morningstar's Take

Morningstar Analyst Rating: Gold

Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating
Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold | Silver | Bronze | Neutral | Negative

Fund Performance

	Total Return %	+/- Category
YTD	17.69	1.02
2016	12.67	2.30
2015	0.42	1.48
2014	12.56	1.60
2013	33.49	1.99

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Analysis

its assets are in small- and micro-cap stocks compared with just 2.7% for the typical large-blend fund and 0% for the S&P 500. This slightly increases the fund's, but long-term investors should be rewarded. This results in an average market cap for stocks in the index that is less than half the typical fund in the large-blend category. Second, CRSP uses a more mechanical index construction approach than the S&P 500, which is controlled by a committee. That said, because they both use market-cap weighting, their performance is highly correlated.

Turnover here has averaged just 4% per year during the past 10 years, well below the average of 58% for the large-blend category. Market-cap weighting helps reduce turnover because stocks naturally become a bigger part of the fund as their prices rise.

Performance Pillar: Positive

The fund has produced superior long-term performance relative to its large-cap blend category peers, supporting its Positive Performance Pillar rating.

Over the past decade through June 2017, this fund returned 7.4% annually, outpacing the large-blend category average by 1.7 percentage points each year. Its risk-adjusted returns land near the category's top decile over the same time frame. A low-cost market-cap-weighted index fund that represents the market opportunity set well (like this fund) should outdistance most active rivals over the long-run.

This fund has three advantages over the average large-blend fund that give it a long-term edge. It has a much lower fee, smaller cash drag, and it includes more small caps. A good portion of this fund's relative outperformance has been driven by this combination. Because the fund is always invested, it suffered a larger drawdown than the category average during the financial crisis. But its smaller cash drag pays off during bull markets. Its performance during the market recovery more than made up for its larger drawdown. This fund is also tax-efficient. It has not distributed a capital gain since its inception in May 2001.

People Pillar: Positive

A well-equipped group manages all of Vanguard's equity index funds. The team's extensive experience, deep bench of talent, and strong trading infrastructure underpin the fund's Positive People rating.

Gerard O'Reilly has managed equity index funds for Vanguard since 1994, the year that he started on this fund. Walter Nejman was added as a comanager here in April 2016. Nejman joined Vanguard in 2005 and has been working in investment management since 2008. The duo is backed by a team of experienced managers in Vanguard's equity index group. That group includes over 60 investment professionals, of which more than 20 are portfolio managers or traders. The depth of talent and Vanguard's practice of rotating managers serves to minimize key-manager risk. Joe Brennan leads the team. Vanguard's chief investment officer, Greg Davis, took the reins from Tim Buckley in July 2017. Prior to his chief investment officer role, Davis led Vanguard Fixed Income Group.

In addition to this fund, O'Reilly and Nejman are also the listed portfolio managers for a number of Vanguard's U.S. stock index funds. According to regulatory filings, neither manager is invested in this fund. Vanguard links their compensation to operating efficiency, which helps keep costs low and aligns their interests with investors'.

Parent Pillar: Positive

Vanguard has one of the mutual fund industry's strongest corporate cultures and earns a Positive Parent rating. Its consistent messages to investors to keep costs low, diversify, and stay the course are reflected in the firm's own behavior. Vanguard's U.S. fundholders own the firm through small investments by each mutual fund, mitigating potential conflicts of interest that can exist at other firms that are serving two masters. Fund performance is strong overall: Over the past three-, five-, and 10-year periods, its Morningstar Success Ratios are greater than 70%--high among large, diversified fund families.

Over the past year, the firm has collected more than USD 200 billion in net inflows, thanks in large part to investors' interest in passive investing. The firm's indexing and ETF prowess, low costs, and success in penetrating the financial-advisor sales channel all have fueled growth. Total assets under management now exceed USD 3.3 trillion, giving Vanguard a significant more-than-20% market share across U.S. mutual funds.

Vanguard has been a global player for years but has only more recently turned its focus to growing internationally. The firm is a large player in Australia, where it has the most history, but doesn't yet have the brand recognition and trust it enjoys in the United States in other parts of the world. While non-U.S. funds don't participate in the ownership of Vanguard, the firm's investorcentric culture extends globally.

Price Pillar: Positive

This is one of the cheapest funds available in the category, supporting the Positive Price Pillar rating.

The fund's Investor share class levies a 0.15% fee per year and requires a $3,000 initial investment. The Admiral share class carries a $10,000 minimum and levies a 0.04% fee. The ETF share class's expense ratio matches the Admiral share class at 0.04%, but it doesn't have a minimum investment beyond the price of one share.

There are several institutional share classes available from that charge 1 to 3 basis points per year but have high minimum purchase requirements. These options may be available through select 401(k) platforms.