

Van Oriental Food, Inc.  
*401K Annual Fund Review: 2016*  
March 2017



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PROBITY ADVISORS, INC<sup>®</sup>

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PROBITY ADVISORS, INC.<sup>2</sup>

March 2017

Theresa Motter  
Van Oriental Food, Inc.  
4828 Reading St.  
Dallas, TX 75247

Dear Theresa,

As you may be aware, in recent years the Department of Labor has been increasingly expanding their initiatives related to retirement plan cost transparency. As a fully disclosed, open platform provider, Probity Advisors, Inc. has long been an advocate for transparency and for disclosure of plan expenses and fees, yet despite the efforts of the Department of Labor, comparing plan services and offerings and related costs are in many respects as challenging today as ever. We understand these difficulties, and as a service to help you in your assessment of your plan and its offerings, we are providing the enclosed benchmarking report.

Benchmarking is a fundamental component in demonstrating your compliance in monitoring your plan's service providers. Probity Advisors is your 3(38) investment advisor. As such, we are a fiduciary to your plan as it relates to the plan's investment options and the monitoring of the underlying investment alternatives. In addition to investment advisors, a plan will typically have a record-keeper, an administrator, a custodian, a corporate trustee, and an education specialist. Periodically, you may also engage an attorney or other specialized consultant depending on the circumstance. You, the sponsor, are required to periodically review the plan's cost, to identify the services provided, and to determine whether or not the value of benefit received is reasonable relative to its cost. Complicating this analysis, however, is the fact that often times services may be bundled together, making specific services and their costs more difficult to compare relative to one another.

The goal of benchmarking is not perfection. It is rare for one plan to be exactly comparable to another. Two companies with the same number of employees may have significantly different costs depending on everything from average participant balance to the specific weighting of participant elections among the plan's underlying investment options. In some instances, having the lowest cost plan is the sponsor's objective, and in other instances, having the highest participation or satisfaction may be the objective. The features and associated costs may vary in accordance. Despite these differences, there is value in assessing your particular costs relative to an average plan, controlling for as many of the variables as one reasonably can.

The attached benchmark report draws from data compiled by Pension Data Source Inc., an independent data provider and publisher of the 401K Averages Book. Published since 1995, the 401K Averages Book is the oldest and arguably most recognized source for non-biased, comparative 401K average cost information. In addition, Probity Advisors has collected or augmented specific plan information from your plan's record-keeper and/or extracted such cost information from any available contracts, agreements, prospectus, and/or Morningstar databases. For the reasons noted above, some interpretation and subjectivity is inherent in analyses of this nature. There may be instances, for example, where a plan's total expenses may differ when viewed from an accrual versus cash basis. In those cases, Probity Advisors has done its best to represent costs in the appropriate calendar year, with a disclosure made with respect to any material assumption or adjustment. It should be noted that this analysis is provided on a best efforts basis. Our analysis relies on a combination of publicly available information and data provided by the plan's other service providers. While we generally believe the information to be accurate, we have not, nor do we have the ability to, independently validate the accuracy or completeness of the information received. Furthermore, given the interpretation and assumptions required, others could evaluate the same data differently.

We hope the analysis will serve an important role in your annual review. Your investment advisor will be reaching out to you in the next several weeks to discuss any questions you may have. In the meantime, we'd like to thank you once again for placing your confidence in us and allowing us to serve as your valued partner.

Sincerely,



Christopher T. Sorrow, CFA®, MBA  
Probity Advisors, Inc.

## Probity Advisors, Inc. 401K Plan Services: What You Can Expect

**Comprehensive Options:** Our platform provides a range of investment advice and options for participants, including 1. Do-it-for-me/Professionally managed, 2. Lifecycle/Target Date Fund, and 3. Core Funds. Features may include automatic enrollment, automatic contribution increase, qualified default investment alternative, reporting, record keeping, and more.

**Proper Monitoring and Plan Benchmarking Assistance:** Our ongoing monitoring ensures the investment choices remain appropriate. Our benchmarking report presents up-to-date data on comparable plans with objective analyses on a range of key metrics provided by independent, third parties.

**Liability Protection:** Probity may act as a 3(38) or 3(21) fiduciary, greatly satisfying plan sponsor's liability. Both 3(38) and 3(21) advisors accept fiduciary responsibility and adhere to ERISA §404(a)'s duty to serve solely in the interest of plan participants and both are required to meet the "prudent man" standard of care.

# **Van Oriental Food, Inc.**

## **401K Annual Fund Review: 2016**

Period Ending 12/31/2016

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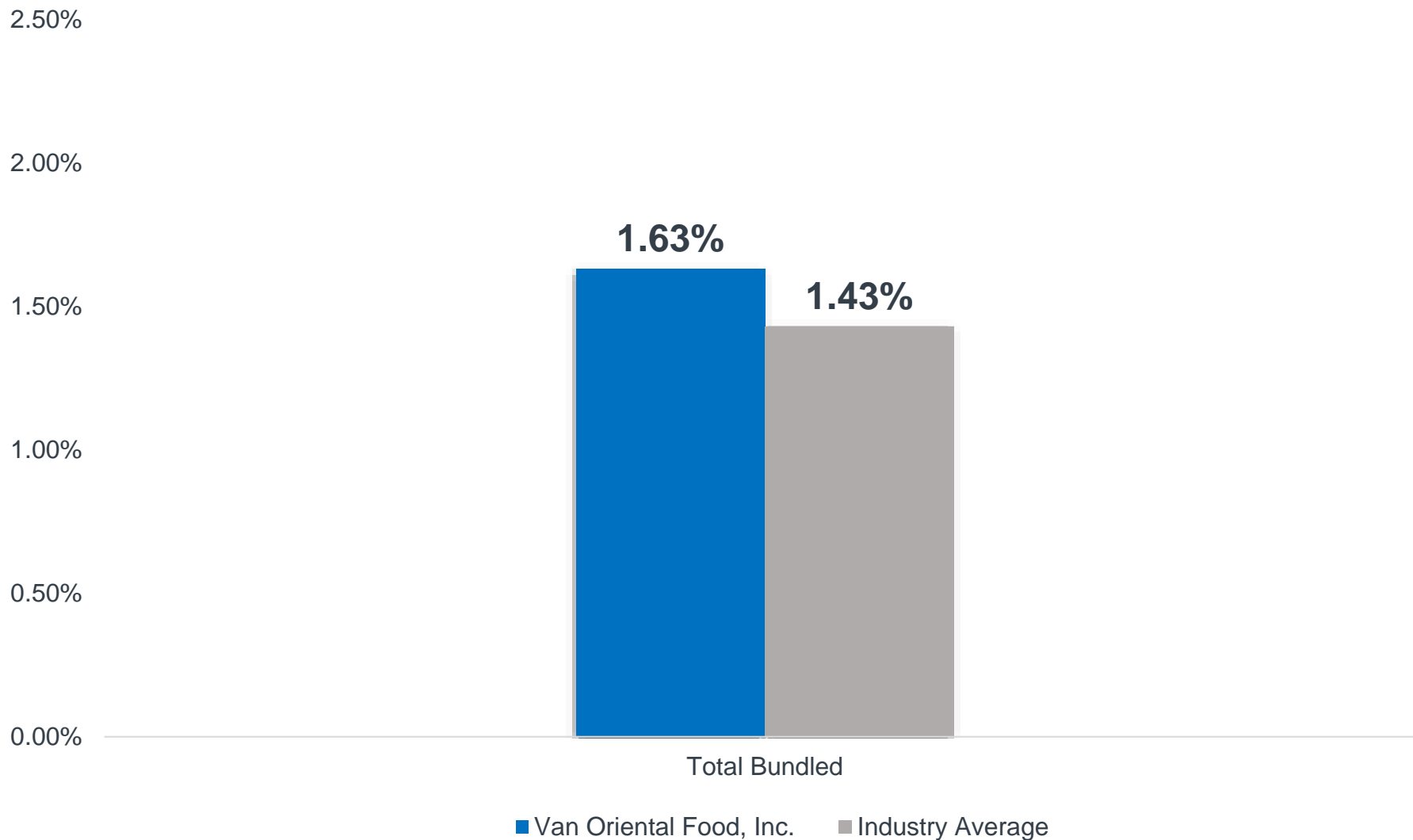
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# Section 1: 401K Plan Industry Benchmarking

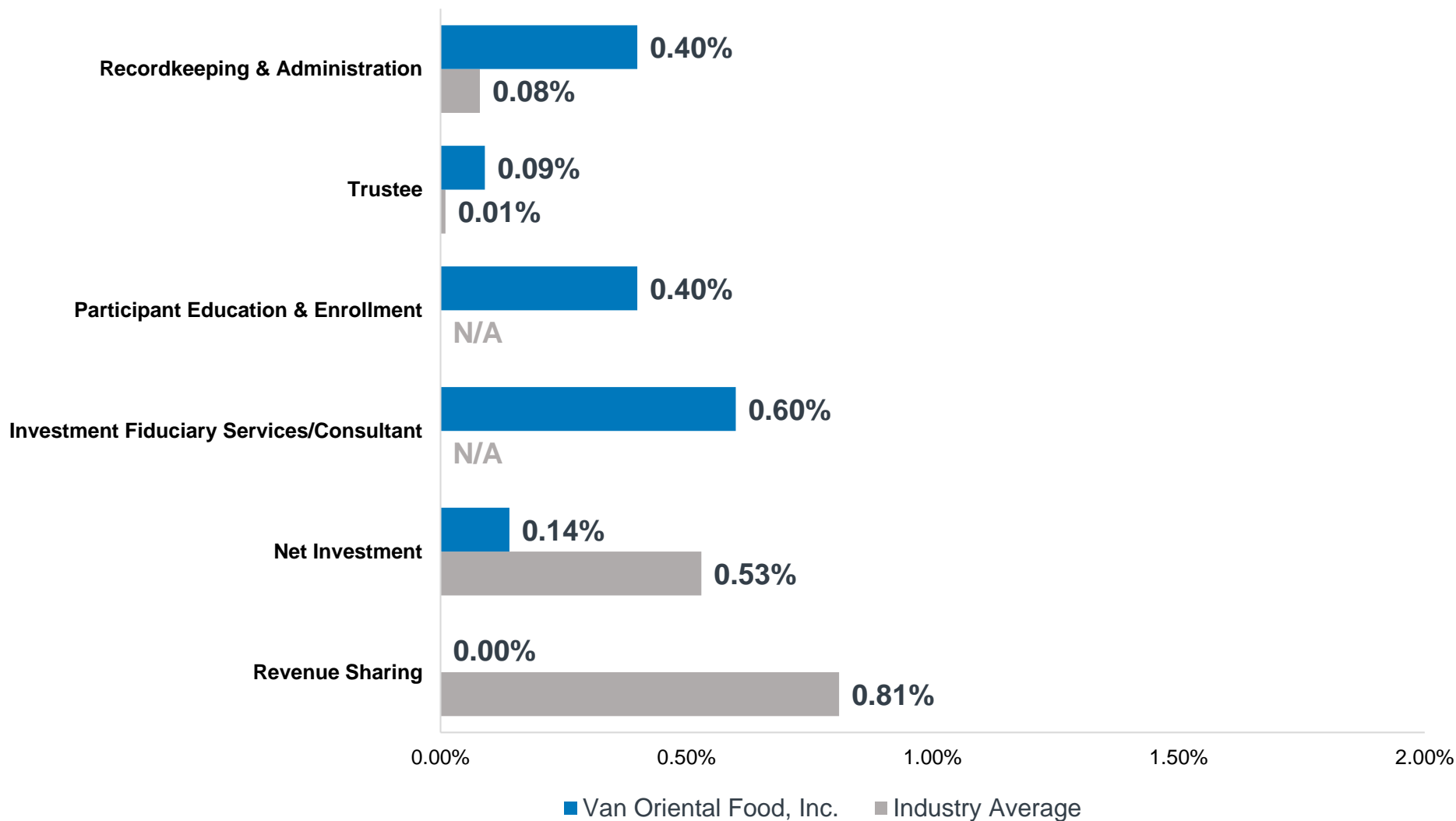
This report has been compiled by Probitry Advisors, Inc. This report is for informational and research purposes only. It is not intended to be construed as individually tailored advice to participants, as each individual has different investment goals, criteria and risk tolerances. Probitry Advisors relies on industry accepted, third-party data feeds and research services to generate the attached materials. As such, Probitry Advisors cannot guarantee the accuracy, timeliness or completeness of the information provided. Data is based on information collected from Morningstar, Fidelity Investments, Schwab Financial Center and other industry accepted providers of financial information. It is updated as of the date shown in the section's title, and will vary over time. Although Probitry Advisors may compile certain data and provide different classes of or options for investments based on general risk tolerances, objectives and goals, you should consider your own investment objectives, risks, charges and expenses of the Fund or investment model carefully before investing (as the information contained herein is not intended to be construed as individually tailored advice). This and other information is contained in the Fund's Prospectus, which can be obtained by contacting the respective mutual fund or the Plan's custodian. You should read the Prospectus carefully before choosing a Fund. The performance information contained herein represents past performance. Past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that your investment, when redeemed, may be worth more or less than the performance data quoted. Current performance may be higher or lower than the performance shown here. The most recent month-end performance information for the Fund may be obtained by contacting the mutual fund company. The total return information does not reflect the deduction of the Sales Load that may apply if the Fund shares were purchased outside of the Plan and, if the Sales Load were reflected, performance would be lower. Performance does not include any plan level expenses such as any recordkeeping, third-party administration, advisory, education or other fees or expenses contracted for by the Plan Sponsor, which may be deducted from Plan assets and may reduce a participant's balance.

## Plan Costs Comparison: % Of Plan Assets



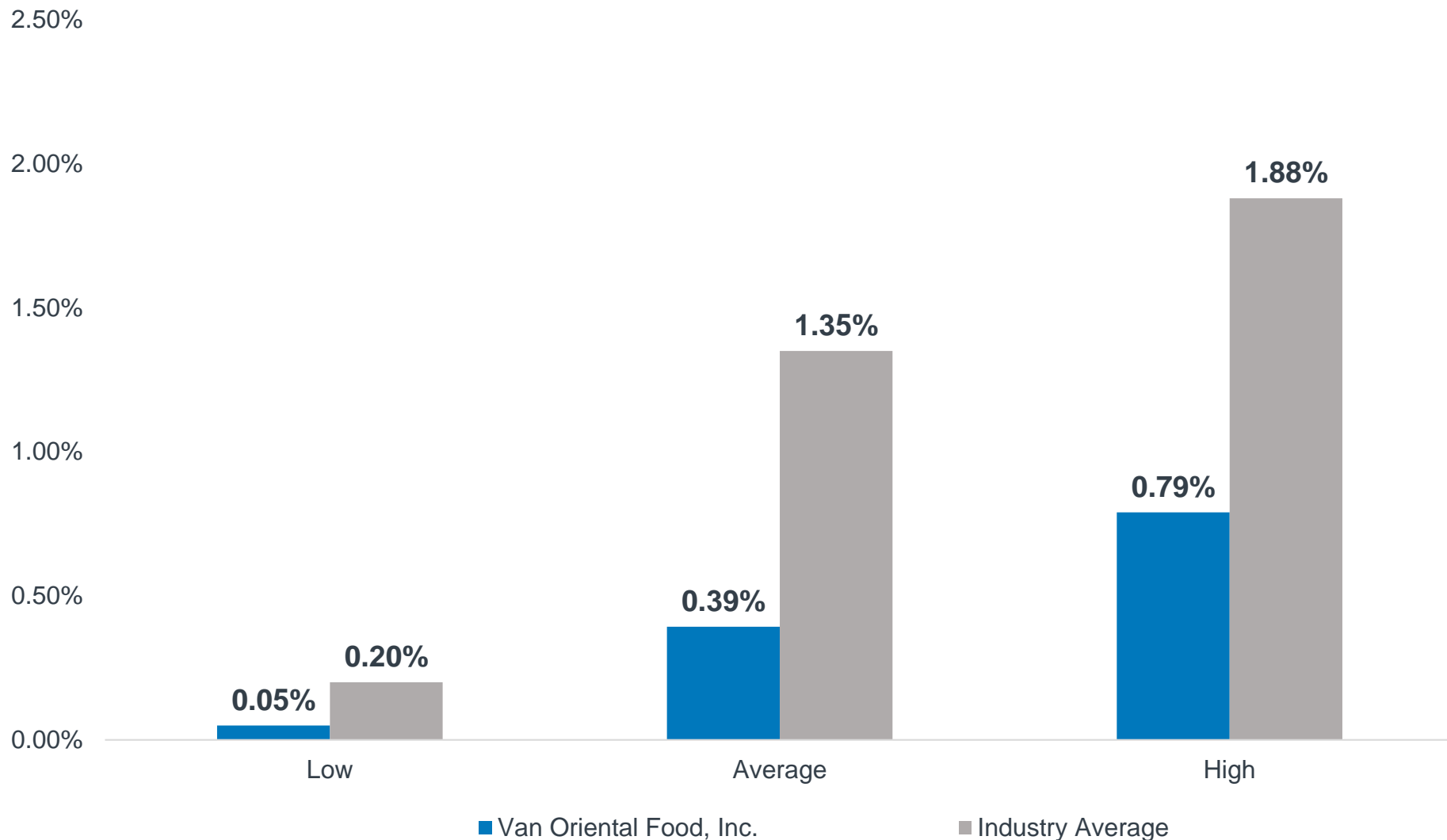
Source: Industry Average data from 401K Averages Book. Data is based on plan assets of \$2,500,00 and 50 participants.

## Plan Costs Comparison: Components of Plan Costs



Source: Industry Average data from 401K Averages Book. Data is based on plan assets of \$2,500,00 and 50 participants.

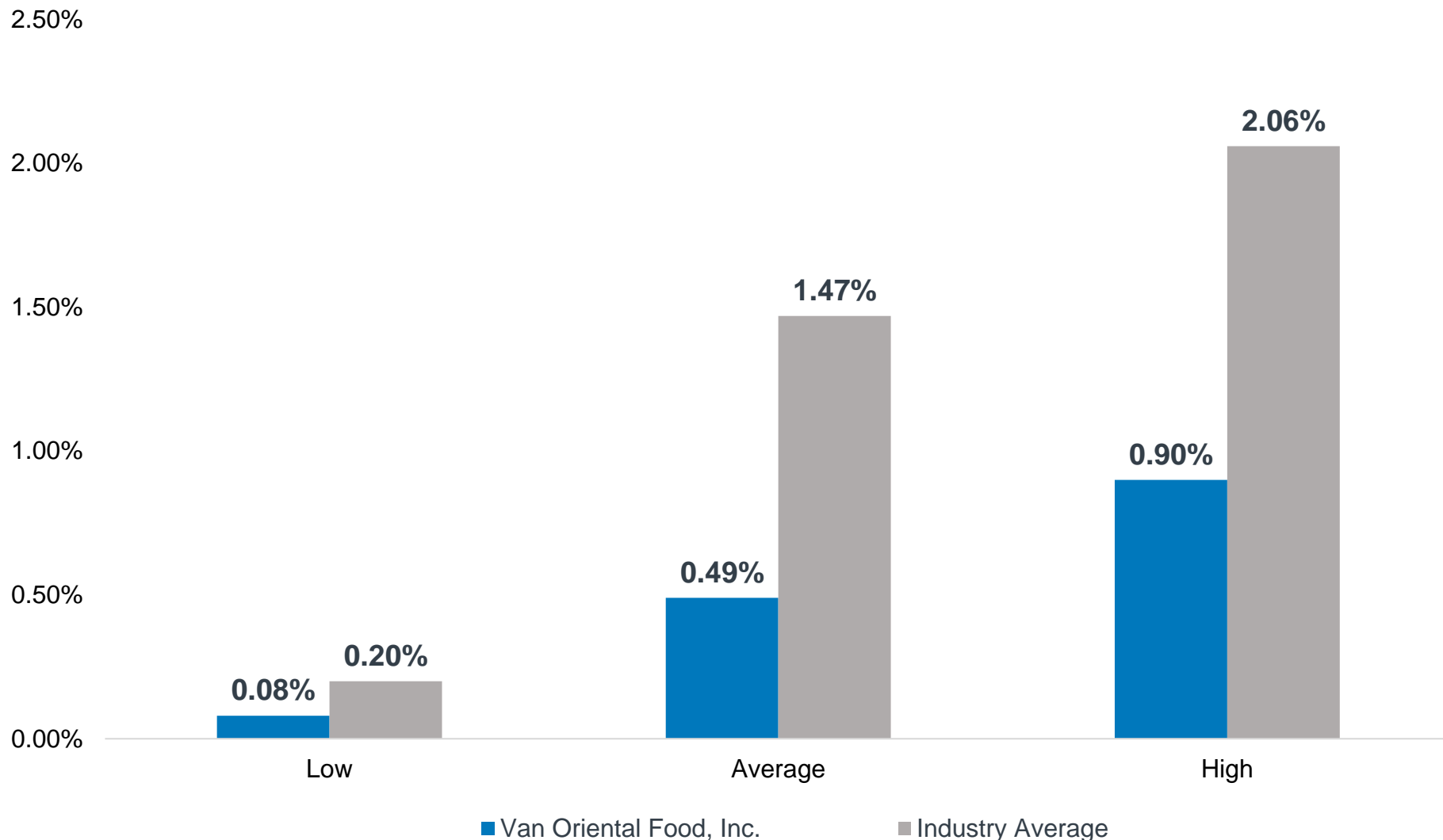
## Range of Investment Costs: Large-Cap U.S. Equity



Source: Industry Average data from 401K Averages Book. Data is based on plan assets of \$2,500,00 and 50 participants.

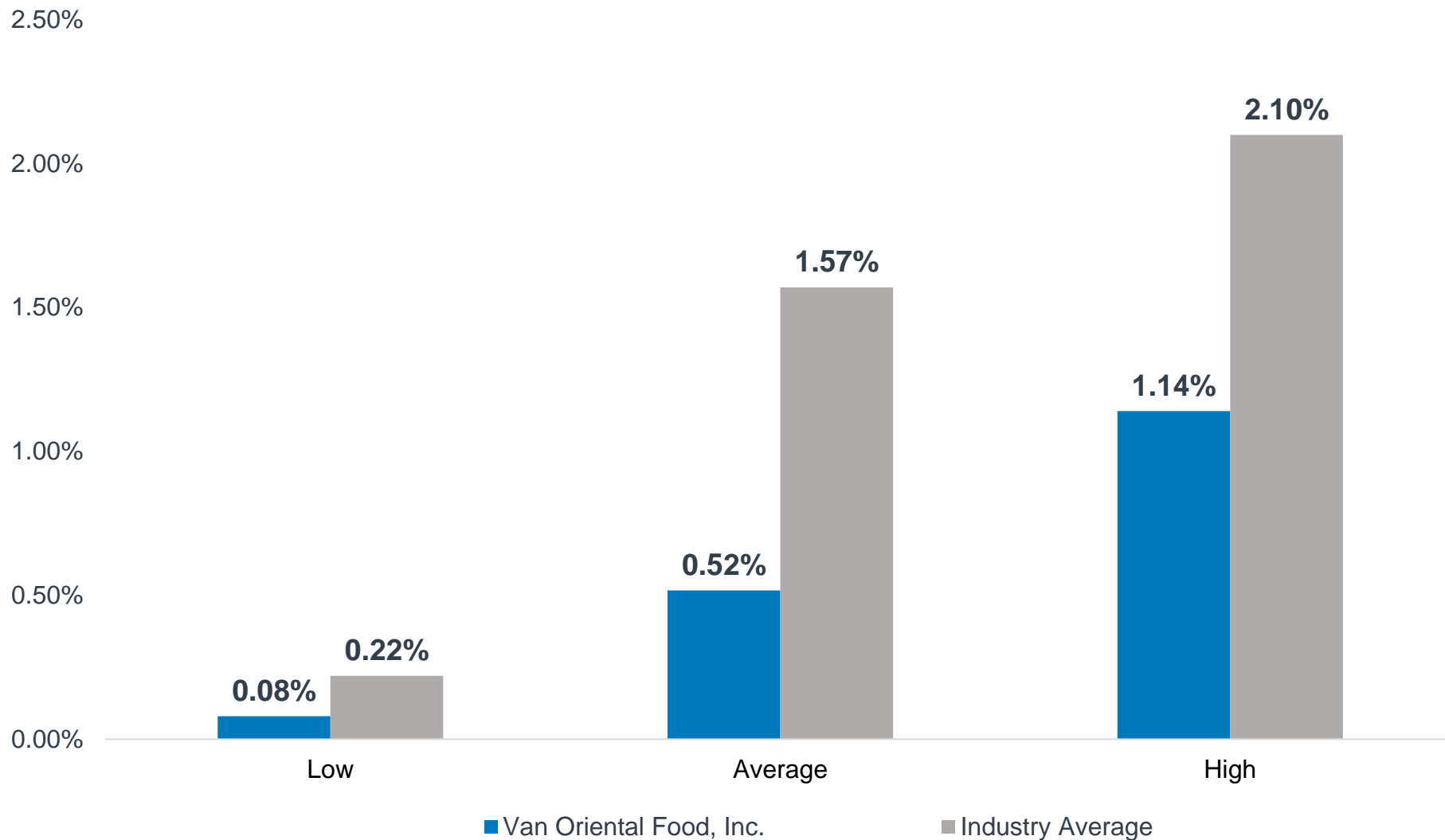


## Range of Investment Costs: Mid-Cap U.S. Equity



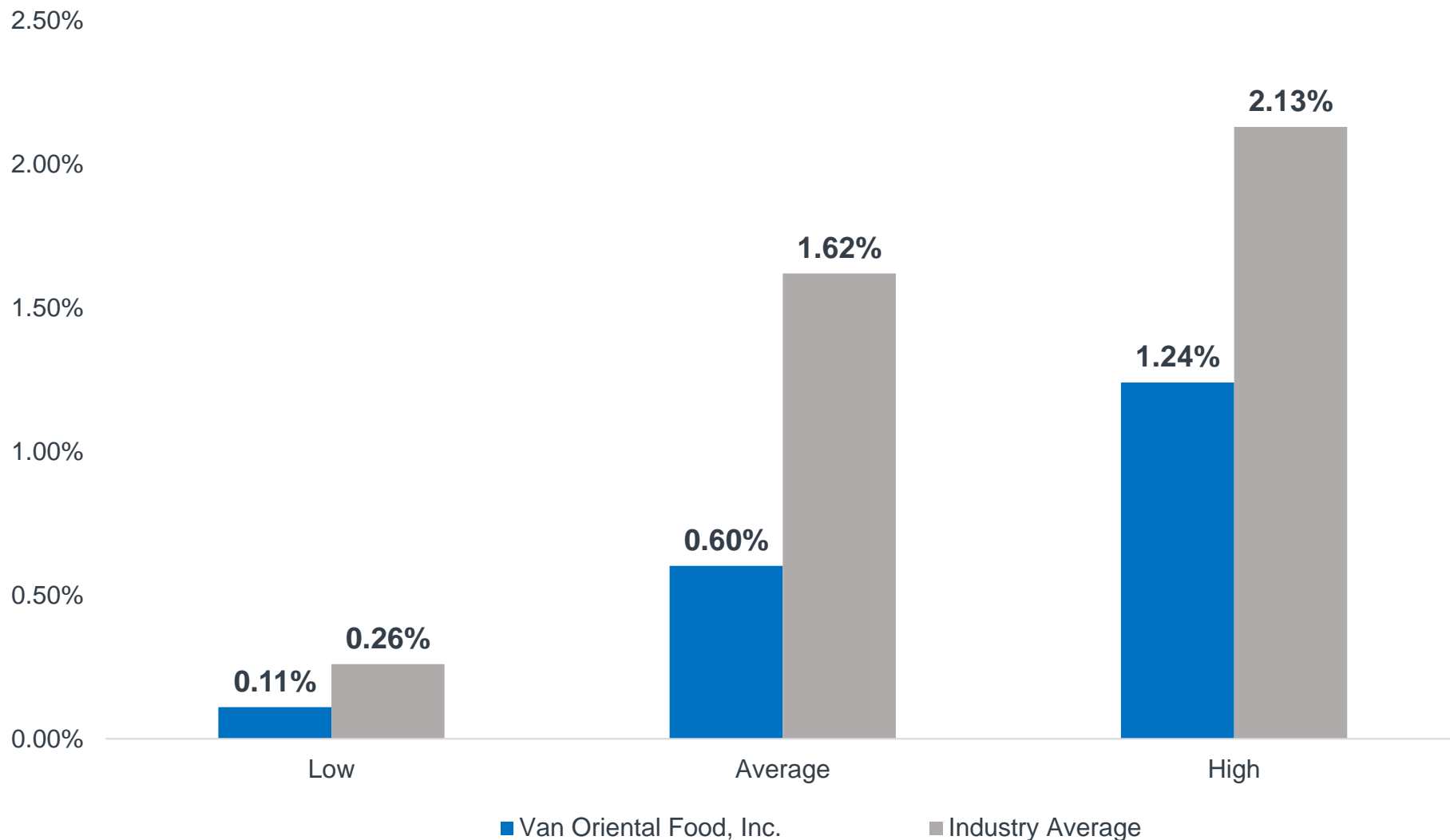
Source: Industry Average data from 401K Averages Book. Data is based on plan assets of \$2,500,00 and 50 participants.

## Range of Investment Costs: Small-Cap U.S. Equity



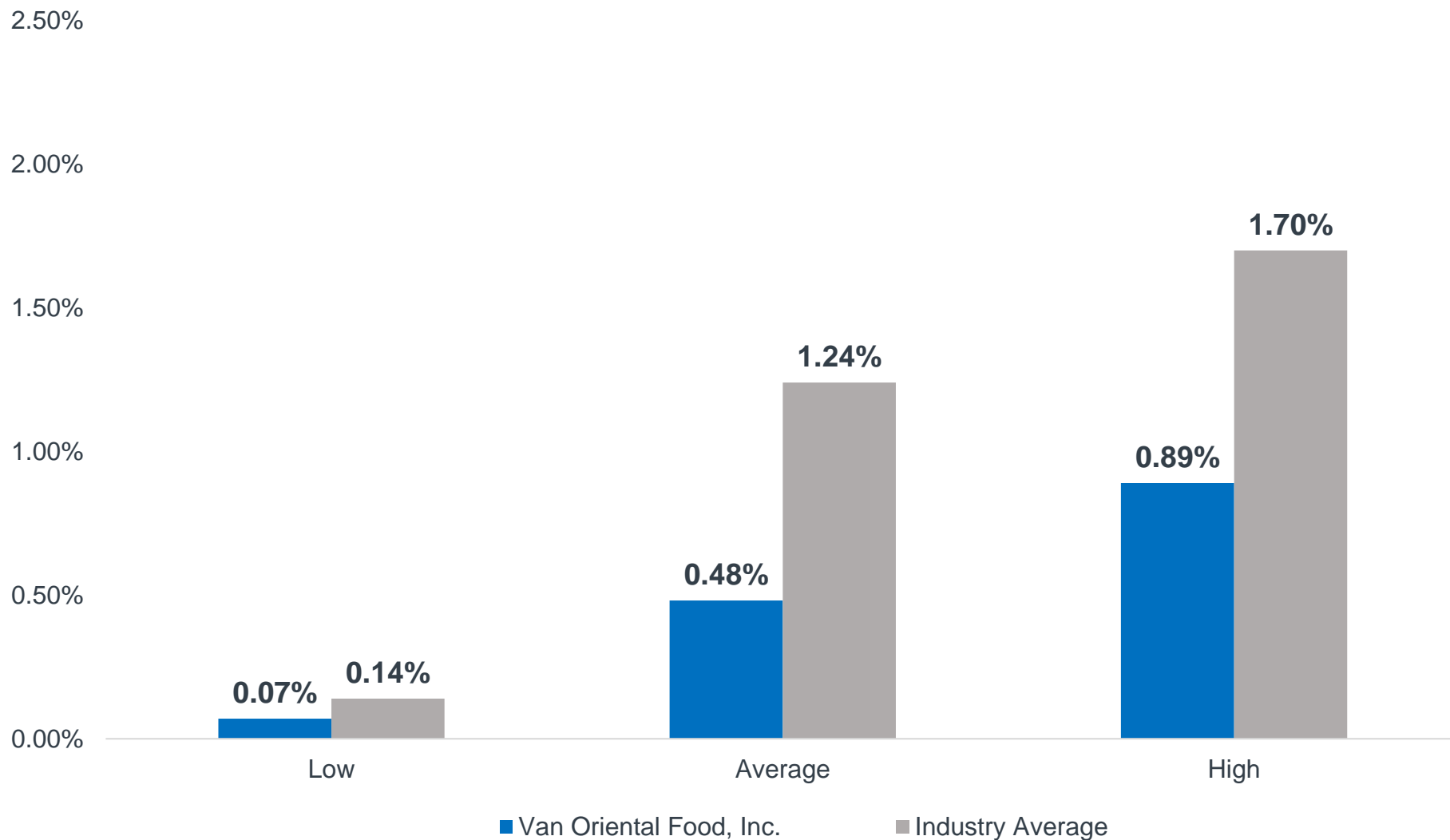
Source: Industry Average data from 401K Averages Book. Data is based on plan assets of \$2,500,00 and 50 participants.

## Range of Investment Costs: International Equity



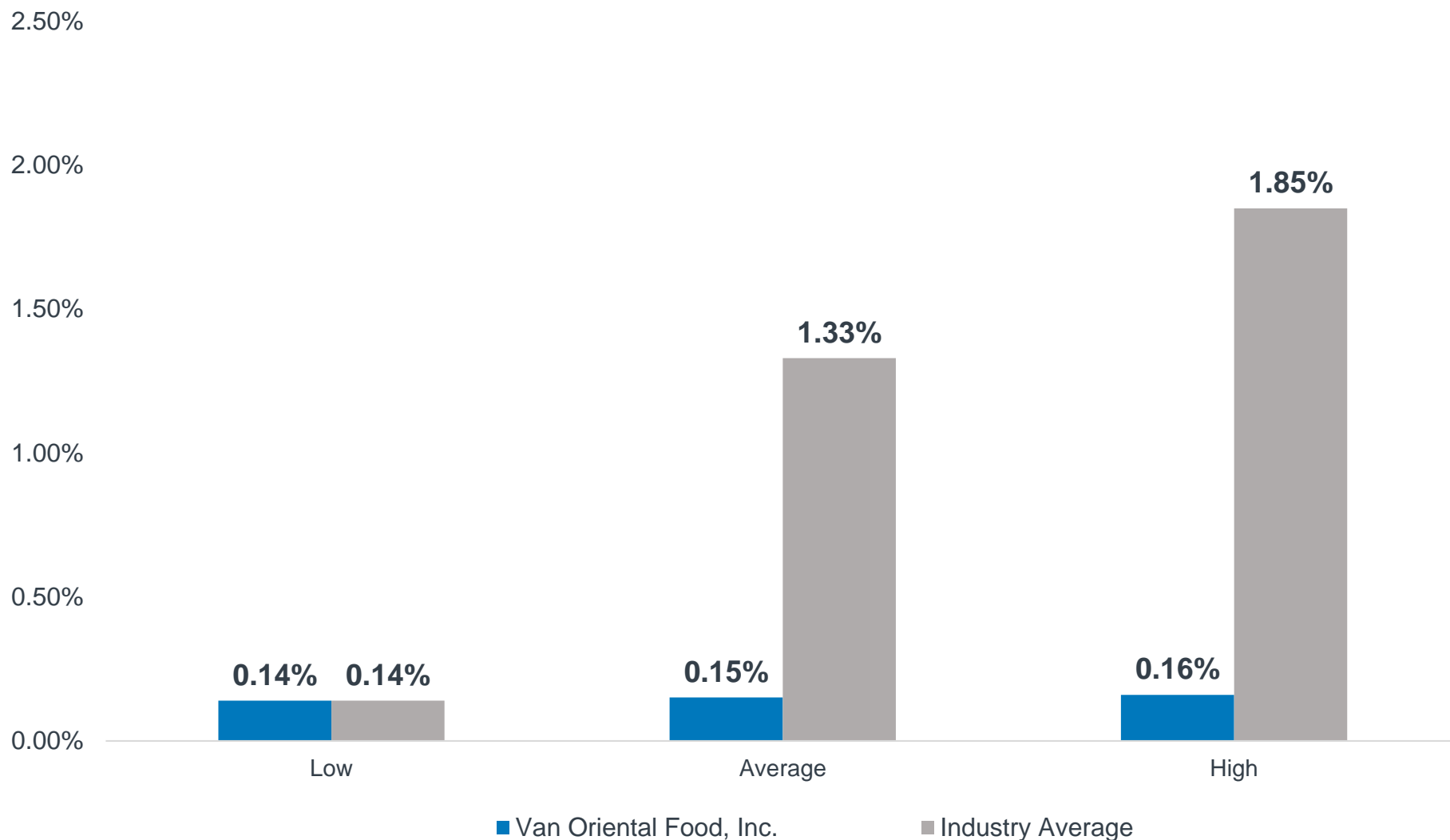
Source: Industry Average data from 401K Averages Book. Data is based on plan assets of \$2,500,00 and 50 participants.

## Range of Investment Costs: Fixed Income



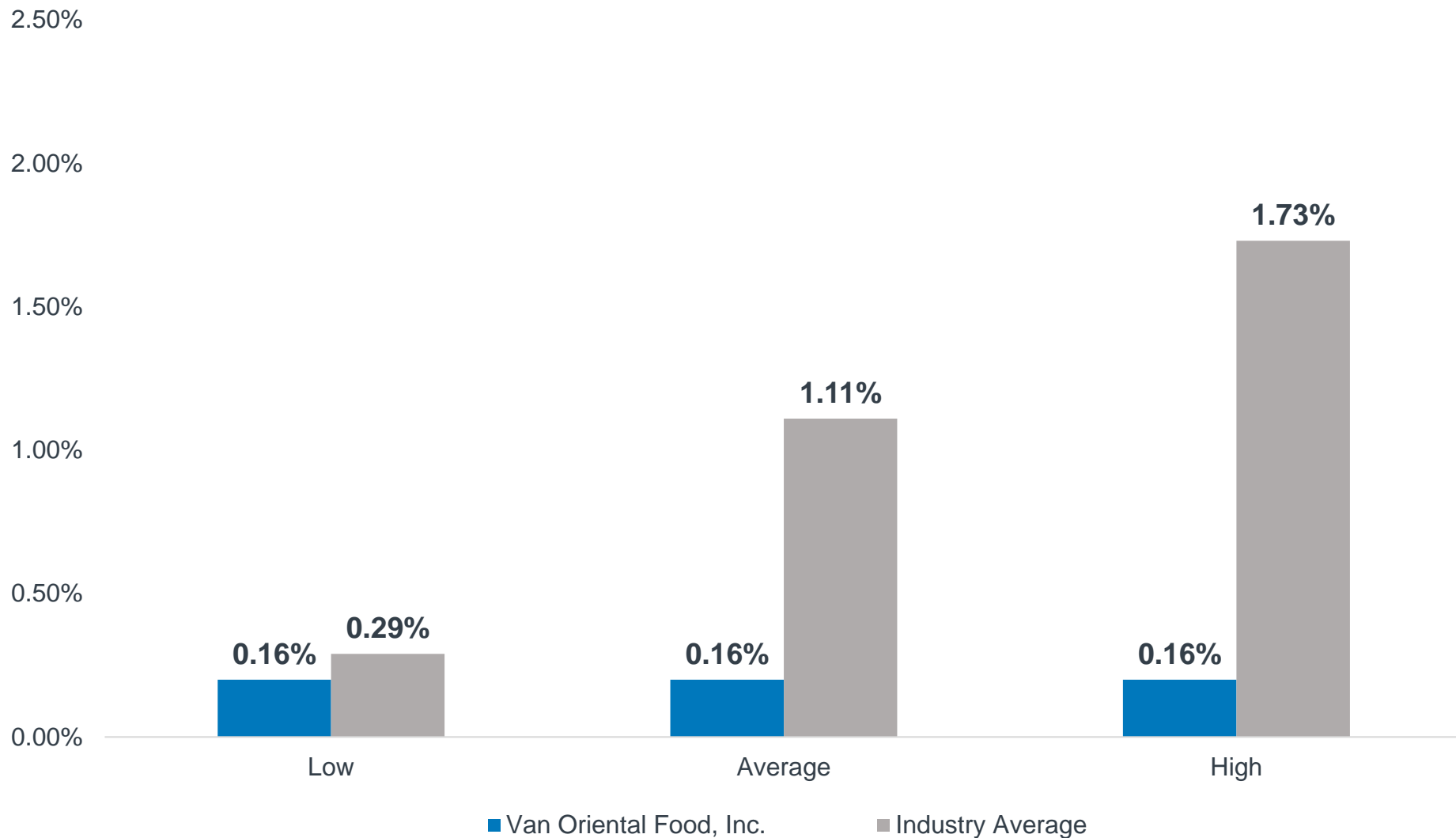
Source: Industry Average data from 401K Averages Book. Data is based on plan assets of \$2,500,00 and 50 participants.

## Range of Investment Costs: Target Date



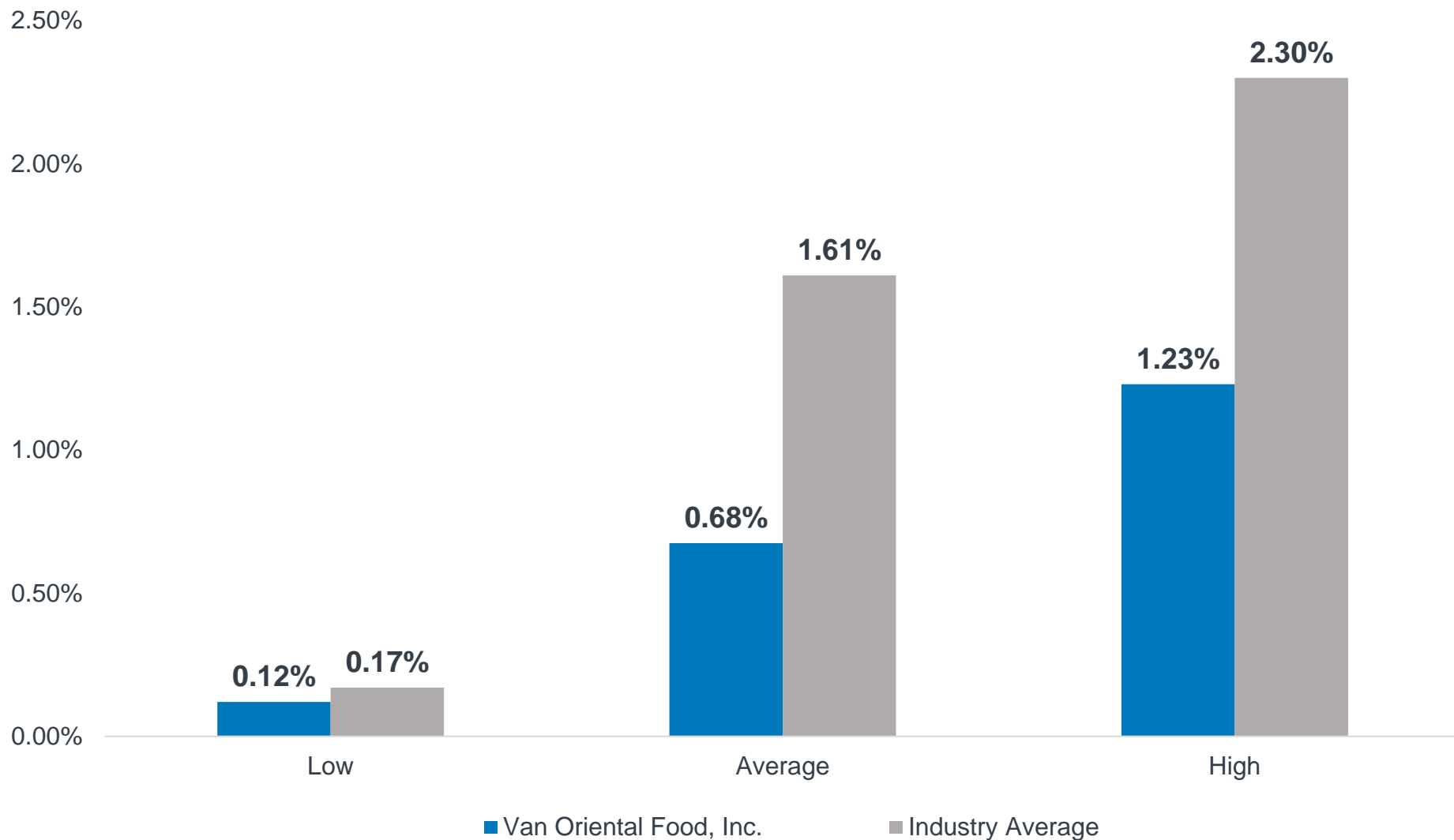
Source: Industry Average data from 401K Averages Book. Data is based on plan assets of \$2,500,00 and 50 participants.

## Range of Investment Costs: Stable Asset/Money Market



Source: Industry Average data from 401K Averages Book. Data is based on plan assets of \$2,500,00 and 50 participants.

## Range of Investment Costs: Specialty Funds



Source: Industry Average data from 401K Averages Book. Data is based on plan assets of \$2,500,00 and 50 participants.

## Section 2: Capital Markets Review

This report has been compiled by Probitry Advisors, Inc. This report is for informational and research purposes only. It is not intended to be construed as individually tailored advice to participants, as each individual has different investment goals, criteria and risk tolerances. Probitry Advisors relies on industry accepted, third-party data feeds and research services to generate the attached materials. As such, Probitry Advisors cannot guarantee the accuracy, timeliness or completeness of the information provided. Data is based on information collected from Morningstar, Fidelity Investments, Schwab Financial Center and other industry accepted providers of financial information. It is updated as of the date shown in the section's title, and will vary over time. Although Probitry Advisors may compile certain data and provide different classes of or options for investments based on general risk tolerances, objectives and goals, you should consider your own investment objectives, risks, charges and expenses of the Fund or investment model carefully before investing (as the information contained herein is not intended to be construed as individually tailored advice). This and other information is contained in the Fund's Prospectus, which can be obtained by contacting the respective mutual fund or the Plan's custodian. You should read the Prospectus carefully before choosing a Fund. The performance information contained herein represents past performance. Past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that your investment, when redeemed, may be worth more or less than the performance data quoted. Current performance may be higher or lower than the performance shown here. The most recent month-end performance information for the Fund may be obtained by contacting the mutual fund company. The total return information does not reflect the deduction of the Sales Load that may apply if the Fund shares were purchased outside of the Plan and, if the Sales Load were reflected, performance would be lower. Performance does not include any plan level expenses such as any recordkeeping, third-party administration, advisory, education or other fees or expenses contracted for by the Plan Sponsor, which may be deducted from Plan assets and may reduce a participant's balance.



# 2016 Equity and Fixed Income Performance

Benchmark Index	Asset Class	Q4 2016	1-Year	3-Year*	5-Year*
S&P 500 TR	Large Blend	3.82%	11.96%	8.87%	14.66%
Russell Mid Cap TR	Mid Blend	3.21%	13.80%	7.92%	14.72%
Russell 2000 TR	Small Blend	8.83%	21.31%	6.74%	14.46%
MSCI EAFE NR	Foreign Developed Stocks	-0.71%	1.00%	-1.60%	6.53%
MSCI EM NR	Emerging Market Stocks	-4.16%	11.19%	-2.55%	1.28%
Barclays U.S. Agg Bond TR	U.S. Fixed Income	-2.98%	2.65%	3.03%	2.23%

## U.S. Equity Size & Style Returns

### Q4 2016 Total Return

	Value	Blend	Growth
Large	6.68%	3.82%	1.01%
Mid	5.52%	3.21%	0.46%
Small	14.07%	8.83%	3.57%

## U.S. Fixed Income Maturity & Quality Returns

### Q4 2016 Total Return

	Short	Intermediate	Long
Govt.	-1.14%	-2.18%	-11.50%
Corporate	-1.05%	-2.98%	-5.02%

\*Total returns greater than 1 year are annualized. Data thru 12/31/2016. Source: Morningstar

# Probity Advisors 401K Fund Performance

Fund Name and Classification				Performance (Total Return %)				Risk Measures (%)			Expense (%)
Fund Name	Asset Class	Ticker	Fund Type	Q4 2016	1-Year	3-Year*	5-Year*	Sharpe Ratio 3-Year	Alpha 3-Year	Std. Dev. 3-Year	Expense Ratio
Domestic Equity											
Clearbridge Large Cap Growth I	Large Growth	SBLYX	Active	0.88	7.19	10.05	17.32	0.91	1.31	11.07	0.78
Vanguard Growth Index Adm	Large Growth	VIGAX	Index	-0.42	6.12	7.60	14.05	0.66	-1.64	11.85	0.08
Vanguard 500 Index Adm	Large Blend	VFIAX	Index	3.82	11.93	8.84	14.62	0.83	-0.03	10.74	0.05
Principal Capital Appreciation Inst	Large Blend	PWCIX	Active	2.95	9.25	8.03	13.84	0.76	-0.67	10.73	0.47
Vanguard Value Index Adm	Large Value	VVIAX	Index	7.51	16.86	9.45	14.98	0.90	0.97	10.50	0.08
Putnam Equity Income R6	Large Value	PEQSX	Active	5.59	14.02	7.76	14.57	0.75	-0.68	10.55	0.55
Delaware Value Inst	Large Value	DDVIX	Active	3.60	14.78	9.15	14.72	0.88	1.05	10.43	0.73
JPMorgan Intrepid Mid Cap Select	Mid-Cap Blend	WOOPX	Active	2.92	12.12	6.85	14.74	0.61	-2.07	11.73	0.90
Vanguard Mid Cap Index Adm	Mid-Cap Blend	VIMAX	Index	2.14	11.22	7.67	14.37	0.67	-1.30	11.79	0.08
Aberdeen Small Cap Inst	Small Growth	GSCIX	Active	10.83	23.68	12.90	18.62	1.01	4.75	12.68	1.14
Vanguard Small Cap Growth Index Adm	Small Growth	VSGAX	Index	1.42	10.73	3.94	12.80	0.33	-5.07	14.22	0.08
Northern Small Cap Core	Small Blend	NSGRX	Active	8.98	20.72	7.17	14.88	0.53	-2.07	14.88	0.75
Vanguard Small Cap Index Adm	Small Blend	VSMAX	Index	6.10	18.30	7.01	14.83	0.55	-2.34	13.85	0.08
Delaware Small Cap Value Instl	Small Value	DEVIX	Active	13.66	31.35	9.18	14.35	0.65	-0.52	14.97	0.97
Vanguard Small Cap Value Index Adm	Small Value	VSIAX	Index	9.98	24.78	9.56	16.36	0.71	-0.06	14.01	0.08

# Probity Advisors 401K Fund Performance

Fund Name and Classification				Performance (Total Return %)				Risk Measures (%)			Expense (%)
Fund Name	Asset Class	Ticker	Fund Type	Q4 2016	1-Year	3-Year*	5-Year*	Sharpe Ratio 3-Year	Alpha 3-Year	Std. Dev. 3-Year	Expense Ratio
International Equity											
Vanguard Total Intl Stock Index Adm	Foreign Large Blend	VTIAX	index	-1.93	4.67	-1.34	5.50	-0.06	0.31	12.11	0.11
American Funds EuroPacific Gr R6	Foreign Large Growth	RERGX	Active	-4.15	1.01	-0.60	7.22	-0.01	0.83	11.20	0.50
Lazard International Equity Instl	Foreign Large Blend	LZIEX	Active	-4.67	-4.18	-2.32	6.68	-0.16	-0.90	11.42	0.86
Northern Emerging Markets Equity Index	Emerging Markets	NOEMX	Index	-5.14	10.63	-3.19	0.89	-0.13	-0.88	16.08	0.30
Morgan Stanley Inst Emerging Mkts I	Emerging Markets	MGEMX	Active	-7.89	6.73	-2.94	1.74	-0.15	-1.02	14.28	1.24
Domestic Bonds											
PIMCO Long Duration Total Return Instl	Long-Term Bond	PLRIX	Active	-7.98	7.18	7.20	4.43	0.82	-0.87	8.80	0.50
Vanguard Long-Term Bond Index Inv	Long-Term Bond	VBLTX	Index	-8.30	6.41	7.13	3.92	0.78	-1.20	9.15	0.16
Commerce Bond	Intermediate-Term Bond	CFBNX	Active	-2.01	3.97	3.29	3.28	1.16	0.64	2.70	0.67
JPMorgan Core Plus Bond R6	Intermediate-Term Bond	JCPUX	Active	-2.41	4.25	3.63	3.70	1.22	0.86	2.84	0.40
Vanguard Short-Term Bond Index Adm	Short-Term Bond	VBIRX	Index	-1.12	1.49	1.22	1.18	0.77	-0.16	1.41	0.09
Vanguard Short-Term Govt. Bond Idx Adm	Short-Term Govt. Bond	VSBSX	Index	-0.45	0.78	0.60	0.49	0.57	-0.17	0.80	0.07
Eaton Vance High Income Opportunities I	High-Yield Bond	EIHIX	Active	1.41	12.84	5.08	7.87	1.02	3.85	4.85	0.61
Federated Instl High Yield Bond Instl	High-Yield Bond	FIHBX	Active	1.13	15.09	5.05	7.45	0.90	3.47	5.52	0.49
American Century Infl-Adj Bond Inv	Inflation-Protected Bond	ACITX	Active	-2.53	4.72	1.71	0.40	0.38	-1.73	4.28	0.47

# Probity Advisors 401K Fund Performance

## Fund Name and Classification

## Performance (Total Return %)

## Risk Measures (%)

## Expense (%)

Fund Name	Asset Class	Ticker	Fund Type	Q4 2016	1-Year	3-Year*	5-Year*	Sharpe Ratio 3-Year	Alpha 3-Year	Std. Dev. 3-Year	Expense Ratio
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### World Bonds

Goldman Sachs Global Income Instl	World Bond	GSG LX	Active	-2.02	3.44	3.62	3.88	1.43	1.43	2.40	0.69
Payden Emerging Markets Bond	Emerging Markets Bond	PYEMX	Active	-3.63	11.45	5.19	5.22	0.81	2.32	6.31	0.75
Goldman Sachs Emerging Mkt Debt Instl	Emerging Markets Bond	GSDIX	Active	-4.25	10.33	5.87	5.96	0.92	2.86	6.26	0.89

### Real Estate

Cohen & Steers Real Estate Securities A	Real Estate	CSEIX	Active	-3.09	7.75	15.19	13.31	1.05	12.95	14.35	1.23
Vanguard REIT Index Adm	Real Estate	VGSLX	Index	-2.97	8.50	13.13	11.78	0.88	11.40	15.17	0.12

### Money Market

Fidelity Treasury Only Money Market	Money Market	FDLXX	Active	0.01	0.01	0.01	0.01	-2.93			0.16
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### Target Date Series

Vanguard Target Retirement Income Inv	Target Date Retirement	VTINX	Active	-0.99	5.25	3.50	4.91	0.91	1.42	3.70	0.14
Vanguard Target Retirement 2010 Inv	Target Date 2000-2010	VTENX	Active	-1.02	5.22	3.61	5.97	0.84	1.23	4.17	0.14
Vanguard Target Retirement 2015 Inv	Target Date 2011-2015	VTXVX	Active	-0.55	6.16	4.04	7.22	0.72	0.88	5.49	0.14
Vanguard Target Retirement 2020 Inv	Target Date 2016-2020	VTW NX	Active	-0.18	6.95	4.39	8.17	0.67	0.68	6.53	0.14
Vanguard Target Retirement 2025 Inv	Target Date 2021-2025	VTTVX	Active	0.11	7.48	4.53	8.86	0.62	0.40	7.33	0.15
Vanguard Target Retirement 2030 Inv	Target Date 2026-2030	VTHRX	Active	0.42	7.85	4.58	9.50	0.58	0.08	8.11	0.15

# Probity Advisors 401K Fund Performance

## Fund Name and Classification

## Performance (Total Return %)

## Risk Measures (%)

## Expense (%)

Fund Name	Asset Class	Ticker	Fund Type	Q4 2016	1-Year	3-Year*	5-Year*	Sharpe Ratio 3-Year	Alpha 3-Year	Std. Dev. 3-Year	Expense Ratio
<b>Target Date Series</b>											
Vanguard Target Retirement 2035 Inv	Target Date 2031-2035	VTTHX	Active	0.78	8.26	4.66	10.15	0.54	-0.25	8.96	0.15
Vanguard Target Retirement 2040 Inv	Target Date 2036-2040	VFORX	Active	1.13	8.73	4.66	10.51	0.50	-0.60	9.72	0.16
Vanguard Target Retirement 2045 Inv	Target Date 2041-2045	VTIVX	Active	1.24	8.87	4.72	10.54	0.51	-0.57	9.78	0.16
Vanguard Target Retirement 2050 Inv	Target Date 2046-2050	VFIFX	Active	1.25	8.85	4.72	10.54	0.51	-0.57	9.77	0.16
Vanguard Target Retirement 2055 Inv	Target Date 2051+	VFFVX	Active	1.26	8.88	4.68	10.51	0.50	-0.61	9.77	0.16
Vanguard Target Retirement 2060 Inv	Target Date 2051+	VTTSX	Active	1.25	8.84	4.67		0.50	-0.62	9.78	0.16

*\*Total returns greater than 1 year are annualized.*

*Performance and Risk Measures thru 12/31/2016*

*Source: Morningstar*

# Probity Advisors Funds Matrix

Mutual Fund	Asset Class	Morningstar Rating	Fund Historical Performance	Fund Performance vs. Peers	Risk-Adjusted Performance	Value Added	Fund Volatility	Fund Trading Activity	Correlation to Benchmark	Market Sensitivity	Demonstrated Track Record	Fund Fees	Fund Size	Manager Tenure
Clearbridge Large Cap Growth I	Large Growth	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Vanguard Growth Index Adm	Large Growth	Pass	Acceptable	Pass	Pass	Acceptable	Pass	Pass	Pass	Monitor	Pass	Pass	Pass	Pass
Principal Capital Appreciation Inst	Large Blend	Pass	Acceptable	Pass	Pass	Acceptable	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Vanguard 500 Index Admiral	Large Blend	Pass	Acceptable	Pass	Pass	Acceptable	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail
Delaware Value Inst	Large Value	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Acceptable	Pass	Pass	Pass	Pass	Pass
Vanguard Value Index Adm	Large Value	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Putnam Equity Income R6	Large Value	Pass	Acceptable	Pass	Pass	Acceptable	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
JPMorgan Intrepid Mid Cap Select	Mid-Cap Blend	Pass	Acceptable	Acceptable	Pass	Monitor	Pass	Acceptable	Pass	Acceptable	Pass	Pass	Pass	Pass
Vanguard Mid Cap Index Adm	Mid-Cap Blend	Pass	Acceptable	Pass	Pass	Acceptable	Pass	Pass	Pass	Monitor	Pass	Pass	Pass	Pass
Aberdeen Small Cap Inst	Small Growth	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Acceptable	Pass	Pass	Pass	Pass	Pass
Vanguard Small Cap Growth Index Adm	Small Growth	Pass	Acceptable	Acceptable	Pass	Monitor	Pass	Pass	Pass	Acceptable	Pass	Pass	Pass	Pass
Northern Small Cap Core	Small Blend	Pass	Pass	Acceptable	Pass	Acceptable	Pass	Pass	Pass	Monitor	Pass	Pass	Pass	Pass
Vanguard Small Cap Index Adm	Small Blend	Pass	Pass	Acceptable	Pass	Monitor	Pass	Pass	Pass	Monitor	Pass	Pass	Pass	Fail
Delaware Small Cap Value Instl	Small Value	Pass	Pass	Pass	Pass	Acceptable	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass
Vanguard Small Cap Value Index Adm	Small Value	Pass	Pass	Pass	Pass	Acceptable	Pass	Pass	Pass	Monitor	Pass	Pass	Pass	Fail
American Funds EuroPacific Gr R6	Foreign Large Growth	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Lazard International Equity Instl	Foreign Large Blend	Pass	Acceptable	Acceptable	Acceptable	Monitor	Pass	Pass	Monitor	Pass	Pass	Pass	Pass	Pass
Vanguard Total Intl Stock Index Admiral	Foreign Large Blend	Pass	Pass	Pass	Pass	Pass	Acceptable	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Morgan Stanley Inst Emerging Mkts I	Emerging Markets	Pass	Acceptable	Acceptable	Pass	Acceptable	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Northern Emerging Markets Equity Index	Emerging Markets	Pass	Acceptable	Monitor	Pass	Acceptable	Monitor	Pass	Pass	Acceptable	Pass	Pass	Pass	Pass
Vanguard Long-Term Bond Index Inv	Long-Term Bond	Pass	Pass	Acceptable	Fail	Fail	Fail	Pass	Pass	Fail	Pass	Pass	Pass	Pass
PIMCO Long Duration Total Return Instl	Long-Term Bond	Pass	Pass	Acceptable	Acceptable	Monitor	Monitor	Acceptable	Pass	Fail	Pass	Acceptable	Pass	Pass
Commerce Bond	Intermediate-Term Bond	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
JPMorgan Core Plus Bond R6	Intermediate-Term Bond	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Vanguard Short-Term Bond Index Adm	Short-Term Bond	Pass	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Vanguard Short-Term Govt Bd Idx Adm	Short Government Bond	Pass	Monitor	Acceptable	Pass	Acceptable	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Federated Instl High Yield Bond Instl	High-Yield Bond	Pass	Pass	Pass	Pass	Pass	Acceptable	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Eaton Vance High Income Opportunities I	High-Yield Bond	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
American Century Infl-Adj Bond Inv	Inflation-Protected Bond	Pass	Acceptable	Pass	Pass	Monitor	Monitor	Pass	Pass	Acceptable	Pass	Pass	Pass	Pass
Goldman Sachs Global Income Instl	World Bond	Pass	Pass	Pass	Pass	Pass	Pass	Monitor	Pass	Pass	Pass	Pass	Pass	Pass
Payden Emerging Markets Bond	Emerging Markets Bond	Pass	Acceptable	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Goldman Sachs Emerging Mkt Debt Instl	Emerging Markets Bond	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Acceptable	Pass	Pass	Pass	Pass
Cohen & Steers Real Estate Securities A	Real Estate	Pass	Pass	Pass	Pass	Pass	Acceptable	Monitor	Acceptable	Pass	Pass	Pass	Pass	Pass
Vanguard REIT Index Adm	Real Estate	Pass	Acceptable	Pass	Pass	Pass	Fail	Pass	Fail	Pass	Pass	Pass	Pass	Pass

## Section 3: Fund List Review & Recommendations

This report has been compiled by Probitry Advisors, Inc. This report is for informational and research purposes only. It is not intended to be construed as individually tailored advice to participants, as each individual has different investment goals, criteria and risk tolerances. Probitry Advisors relies on industry accepted, third-party data feeds and research services to generate the attached materials. As such, Probitry Advisors cannot guarantee the accuracy, timeliness or completeness of the information provided. Data is based on information collected from Morningstar, Fidelity Investments, Schwab Financial Center and other industry accepted providers of financial information. It is updated as of the date shown in the section's title, and will vary over time. Although Probitry Advisors may compile certain data and provide different classes of or options for investments based on general risk tolerances, objectives and goals, you should consider your own investment objectives, risks, charges and expenses of the Fund or investment model carefully before investing (as the information contained herein is not intended to be construed as individually tailored advice). This and other information is contained in the Fund's Prospectus, which can be obtained by contacting the respective mutual fund or the Plan's custodian. You should read the Prospectus carefully before choosing a Fund. The performance information contained herein represents past performance. Past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that your investment, when redeemed, may be worth more or less than the performance data quoted. Current performance may be higher or lower than the performance shown here. The most recent month-end performance information for the Fund may be obtained by contacting the mutual fund company. The total return information does not reflect the deduction of the Sales Load that may apply if the Fund shares were purchased outside of the Plan and, if the Sales Load were reflected, performance would be lower. Performance does not include any plan level expenses such as any recordkeeping, third-party administration, advisory, education or other fees or expenses contracted for by the Plan Sponsor, which may be deducted from Plan assets and may reduce a participant's balance.

## Core Fund List & Diversification:

The Investment Policy Statement requires that suitable and diverse investment options are made available to Participants.

The following tables illustrate the Q1 2017 Core Fund List with respect to their various equity, fixed income and specialty asset classes.

Domestic and International Equity Asset Classes			
Stocks	Value	Blend	Growth
<b>U.S. Large Cap</b>	Delaware Value Inst Putnam Equity Income R6 Vanguard Value Index Admiral	Principal Capital Appreciation Inst Vanguard 500 Index Adm	Clearbridge Large Cap Growth I Vanguard Growth Index Adm
<b>U.S. Mid Cap</b>		JPMorgan Intrepid Mid Cap Select Vanguard Mid Cap Index Adm	
<b>U.S. Small Cap</b>	Delaware Small Cap Value Instl Vanguard Small Cap Value Index Adm	Northern Small Cap Core Vanguard Small Cap Index Adm	Aberdeen Small Cap Inst Vanguard Small Cap Growth Index Adm
<b>Foreign Developed</b>		Lazard International Equity Instl Vanguard Total Intl Stock Index Adm	American Funds EuroPacific Gr R6
<b>Emerging Markets</b>		Morgan Stanley Inst Emerging Mkts I Northern Emerging Markets Equity Index	
Domestic and International Fixed Income Asset Classes			

Bonds	Short-Term	Intermediate	Long-Term
<b>Government</b>	Vanguard Short-Term Govt Bd Idx Adm		
<b>Investment Grade</b>	Vanguard Short-Term Bond Index Adm	Commerce Bond JPMorgan Core Plus Bond R6	PIMCO Long Duration Total Return Instl Vanguard Long-Term Bond Index Inv
<b>High Yield</b>		Eaton Vance High Income Opportunities I Federated Instl High Yield Bond Instl	
<b>International Bonds</b>		Goldman Sachs Global Income Instl Payden Emerging Markets Bond Goldman Sachs Emerging Mkt Debt Instl	



## Specialty Funds

Specialty funds are alternative assets that provide investors access to money market, inflation-protection, and target date retirement fund options.

Specialty Asset Classes	Fund
<b>Inflation Protected Bonds</b>	American Century Inflation-Adjusted Bond Inv
<b>Money Market</b>	Fidelity Treasury Only Money Market Fund
<b>Real Estate</b>	Cohen & Steers Real Estate Securities A Vanguard REIT Index Adm
<b>Target Date Funds</b>	Vanguard Target Date Series

## Core Fund List Review & Scorecard: Actively Managed Funds

This section highlights both the quantitative and qualitative factors we use to analyze the active mutual funds included as part of your plan's core fund list. Actively managed mutual fund review criterion vary significantly from passive or index fund reviews, and for that reason we bifurcate these fund reviews along these lines.

When reviewing actively managed funds, our initial screen is applied by our researchers against the universe of mutual funds available from Morningstar Office's mutual fund database. Funds that pass the initial screen are then subjected to a nine factor scoring system detailed below.

Test	Criteria
Morningstar Rating	The fund must be ranked 3 or above by Morningstar.
Total Ret % Category Rank 3 Yr.	The fund must be ranked in the top third of its category.
Sharpe 3 Yr.	The fund's 3-year sharpe ratio must be greater than or equal to the category average.
Alpha 3 Yr.	The fund's 3-year alpha must be greater than or equal to zero.
Std. Dev 3 Yr.	The fund's 3-year standard deviation must be less than or equal to the category average.
R-Squared 3 Yr.	The fund's 3-year R-squared must be greater than or equal to the category average.
Turnover Ratio	The fund's turnover ratio must be less than or equal to the category average.
Expense Ratio	The fund's annual expense ratio must be less than or equal to the category average.
Total Assets	The fund must have at least \$100 million in assets.

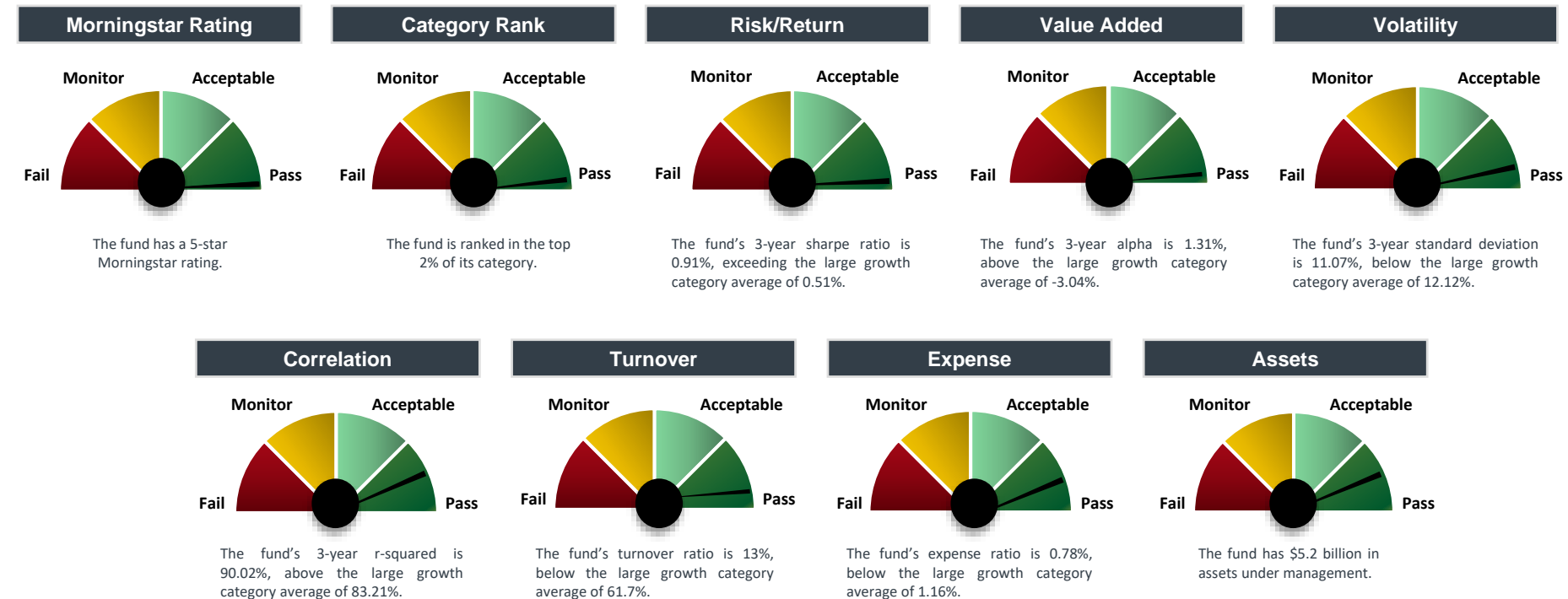
Lastly, the funds receiving the top results are then analyzed using a variety of qualitative metrics in order to select the best in class fund for each category.

**Fund Name:** ClearBridge Large Cap Growth I (Ticker: SBLYX)  
**Asset Class:** Large Growth  
**Morningstar Rating:** ★★★★★

**Manager:** Legg Mason  
**Fund Type:** Active  
**Status:** Current Fund Option

### Fund Description

Invests primarily in high quality large-cap companies that are dominant in their industries. The fund utilizes a fundamental, bottom-up research process to identify securities with the potential to grow market share and earnings in the U.S. and overseas. The emphasis is on building long-term capital growth in a portfolio that is diversified to help manage risk.



### Diagnostics Report

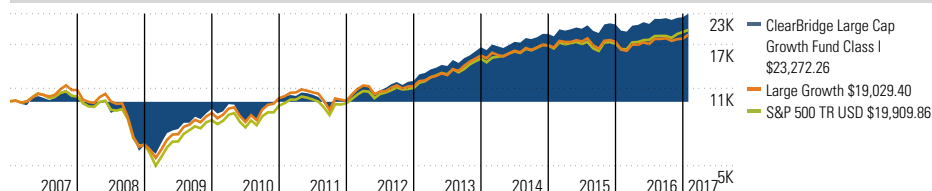
ClearBridge Large Cap Growth I passes 9 of 9 of our investable fund criteria. For calendar year 2016, ClearBridge Large Cap Growth ranked in the top quartile of its peer group. On a 3-year and 5-year basis, the fund ranked in the top 5% of its category average. As of the end of the fourth quarter, the fund managers' top three sectors included information technology, healthcare, and consumer discretionary.

# ClearBridge Large Cap Growth Fund Class I SBLYX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
38.71	↓-0.17   -0.44	0.31	6	Open	\$1	None	0.78%	★★★★★	Large Growth	Large Growth

## Growth of 10,000 01-30-2007 - 01-30-2017



## Investment Strategy

The investment seeks long-term capital growth. Under normal circumstances, the fund invests at least 80% of its net assets, plus borrowings for investment purposes, if any, in equity securities or other instruments with similar economic characteristics of U.S. companies with large market capitalizations.

## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,348	10,348	11,765	14,048	21,742	23,133
Fund	3.48	3.48	17.65	12.00	16.80	8.75
+/- S&P 500 TR USD	1.49	1.49	-2.50	1.36	2.71	1.68
+/- Category	-0.37	-0.37	2.44	4.27	4.35	1.60
% Rank in Cat	56	56	25	2	1	12
# of Funds in Cat	1,492	1,492	1,437	1,290	1,136	795

\* Currency is displayed in USD

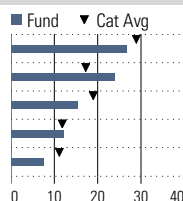
## Top Holdings 12-31-2016

	Weight %	Last Price	Day Chg %	52 Week Range
⊕ Amazon.com Inc	4.54	824.30 USD	-0.69 ↓	474.00 - 847.21
⊕ Microsoft Corp	3.44	64.63 USD	-0.75 ↓	48.03 - 65.91
⊕ Alphabet Inc C	3.00	796.83 USD	-0.65 ↓	663.06 - 841.95
⊕ Schlumberger Ltd	2.93	83.64 USD	0.06 ↑	66.10 - 87.84
⊕ UnitedHealth Group Inc	2.91	160.65 USD	-0.85 ↓	108.83 - 164.00
% Assets in Top 5 Holdings	16.82			

⊕ Increase ⊖ Decrease ☆ New to Portfolio

## Top Sectors 12-31-2016

	Fund	3 Yr High	3 Yr Low	Cat Avg
Technology	26.63	27.70	24.53	27.99
Healthcare	23.92	23.92	22.72	16.33
Consumer Cyclical	15.32	15.32	14.86	18.06
Financial Services	12.17	13.21	10.70	10.91
Industrials	7.57	9.89	7.57	10.23



## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-08-2016	37.63	0.6000	0.0800	0.0000	0.1200	0.8000
12-10-2015	35.62	0.6700	0.2800	0.0000	0.1000	1.0500
12-11-2014	33.13	1.7200	0.2800	0.0000	0.0000	2.0000
12-12-2013	29.73	2.3600	0.1000	0.0000	0.0000	2.4600
12-13-2012	24.44	1.5600	0.0700	0.0000	0.0000	1.6300

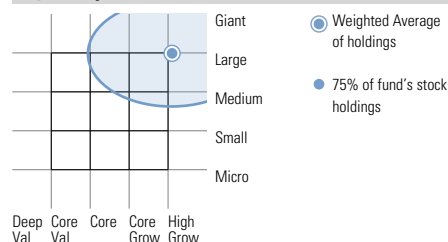
## 3 Year Average Morningstar Risk Measures



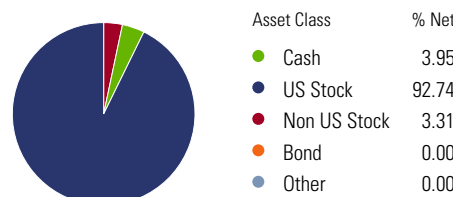
## Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

## Style Map



## Asset Allocation



## Management

	Start Date
Peter Bourbeau	07-15-2009
Margaret B. Vitrano	10-11-2012

**Fund Name:** Principal Capital Appreciation Inst (Ticker: PWCIX)

**Asset Class:** Large Blend

**Morningstar Rating:** ★★☆☆

**Manager:** Principal Funds

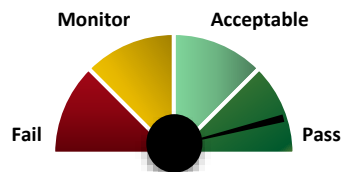
**Fund Type:** Active

**Status:** Current Fund Option

### Fund Description

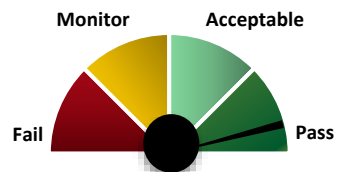
Seeks to provide long-term growth of capital by investing in equity securities of companies with any market capitalization. Managers tend to have greater exposure to large market capitalization companies than small or medium market capitalization companies. The fund invests in equity securities with value and/or growth characteristics.

#### Morningstar Rating



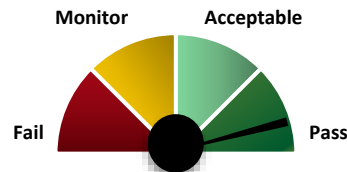
The fund has a 4-star Morningstar rating.

#### Category Rank



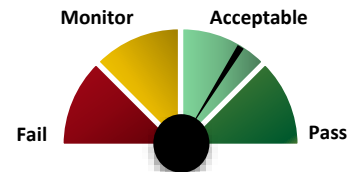
The fund is ranked in the top 28% of its category.

#### Risk/Return



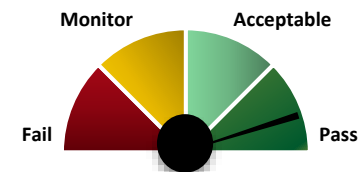
The fund's 3-year Sharpe ratio is 0.76%, exceeding the large blend category average of 0.64%.

#### Value Added



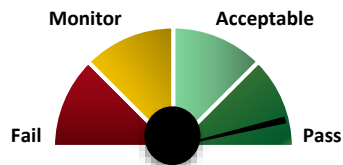
The fund's 3-year alpha is -0.67%, above the large blend category average of -1.88%.

#### Volatility



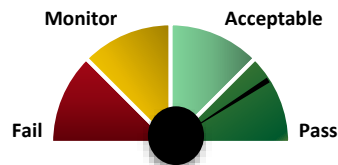
The fund's 3-year standard deviation is 10.7%, below the large blend category average of 11.1%.

#### Correlation



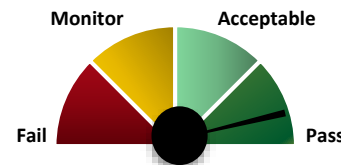
The fund's 3-year r-squared is 97.8%, above the large blend category average of 93.2%.

#### Turnover



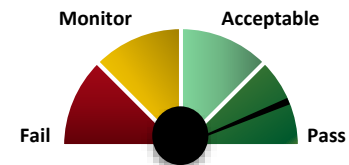
The fund's turnover ratio is 34.5%, below the large blend category average of 62.4%.

#### Expense



The fund's expense ratio is 0.47%, below the large blend category average of 1.01%.

#### Assets



The fund has \$2.5 billion in assets under management.

### Diagnostics Report

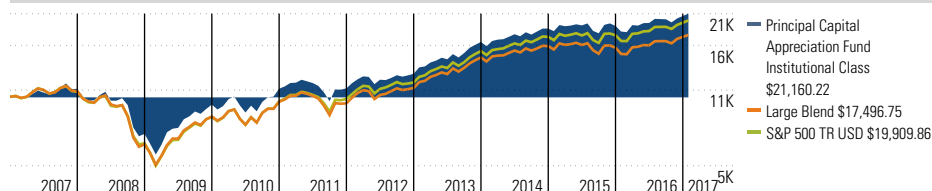
Principal Capital Appreciation Inst passes 8 of 9 of our investable fund criteria. The fund scores within an acceptable range for value added. As of 12/31/2016, top sector holdings included information technology (18.5%), financial services (15.5%), and healthcare (13.2%).

# Principal Capital Appreciation Fund Institutional Class PWCIX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
57.02	↓-0.33   -0.58	1.29	2.5	Open	—	None	0.47%	★★★★	Large Blend	Large Blend

## Growth of 10,000 01-30-2007 - 01-30-2017



## Investment Strategy

The investment seeks to provide long-term growth of capital. The fund invests primarily in equity securities of companies with any market capitalization, but has a greater exposure to large market capitalization companies than small or medium market capitalization companies. It invests in equity securities with value and/or growth characteristics and constructs an investment portfolio that has a "blend" of equity securities with these characteristics. Investing in value equity securities is an investment strategy that emphasizes buying equity securities that appear to be undervalued.

## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,215	10,215	11,738	13,276	18,622	21,046
Fund	2.15	2.15	17.38	9.90	13.24	7.72
+/- S&P 500 TR USD	0.16	0.16	-2.77	-0.74	-0.86	0.66
+/- Category	0.29	0.29	-1.49	1.37	0.73	1.56
% Rank in Cat	28	28	68	25	42	7
# of Funds in Cat	1,492	1,492	1,385	1,233	1,086	808

\* Currency is displayed in USD

## Top Holdings 12-31-2016

	Weight %	Last Price	Day Chg %	52 Week Range
Apple Inc	3.40	121.12 USD	-0.36 ↓	89.47 - 122.44
Microsoft Corp	2.60	64.45 USD	-1.01 ↓	48.03 - 65.91
Verizon Communications Inc	2.20	49.31 USD	-0.08 ↓	46.01 - 56.95
Wells Fargo & Co	2.13	56.06 USD	0.00 ↓	43.55 - 58.02
⊕ The Kroger Co	1.85	33.90 USD	0.92 ↑	28.71 - 40.91
% Assets in Top 5 Holdings	12.18			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

## Top Sectors 12-31-2016

	Fund	3 Yr High	3 Yr Low	Cat Avg
Technology	18.52	20.62	18.52	18.14
Financial Services	15.47	15.47	13.77	16.52
Healthcare	13.18	16.72	13.18	14.11
Consumer Cyclical	11.53	13.85	11.53	11.63
Industrials	10.79	10.79	10.06	11.52

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-22-2016	56.18	0.0000	0.0000	0.0000	0.7900	0.7900
12-20-2016	57.20	5.0900	0.0000	0.0000	0.0000	5.0900
12-21-2015	55.81	0.0000	0.0000	0.0000	0.8700	0.8700
12-17-2015	57.24	2.3500	0.0000	0.0000	0.0000	2.3500
12-19-2014	58.30	0.0000	0.0000	0.0000	0.7200	0.7200

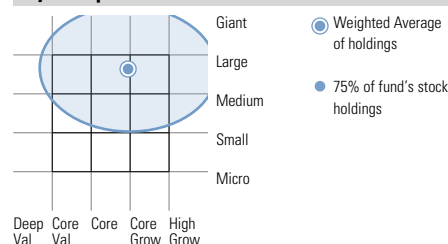
## 3 Year Average Morningstar Risk Measures

Risk vs. Category (1255)	Avg
Return vs. Category (1255)	High
	Low Avg High

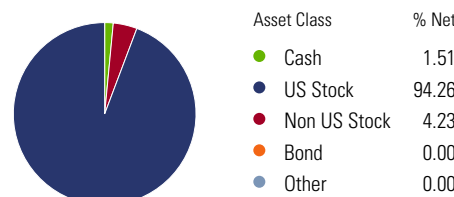
## Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

## Style Map



## Asset Allocation



## Management

	Start Date
Daniel R. Coleman	05-19-2010
Theodore Jayne	09-30-2015

**Fund Name:** Putnam Equity Income Fund Class R6 (Ticker: PEQSX)

**Asset Class:** Large Value

**Morningstar Rating:** ★★☆☆

**Manager:** Putnam

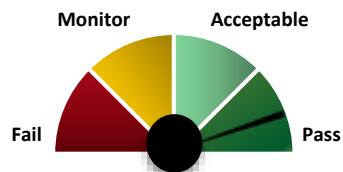
**Fund Type:** Active

**Status:** Current Fund Option

### Fund Description

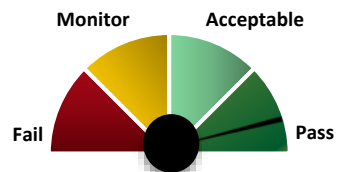
The fund managers invest in large dividend-paying stocks whose stocks are priced below their long-term potential, and where there may be a catalyst for positive change. Managers utilize a quantitative research strategy with fundamental investment research to find opportunities and manage risk.

#### Morningstar Rating



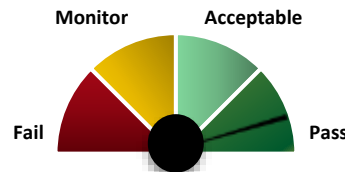
The fund has a 4-star Morningstar rating.

#### Category Rank



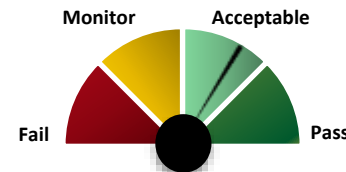
The fund is ranked in the top 29% of its category.

#### Risk/Return



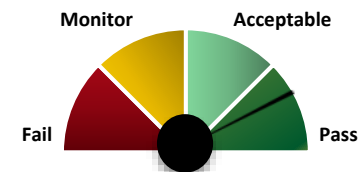
The fund's 3-year Sharpe ratio is 0.75%, exceeding the large value category average of 0.64%.

#### Value Added



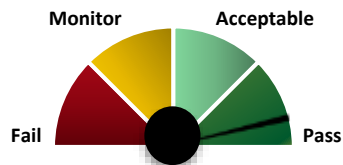
The fund's 3-year alpha is -0.68%, above the large value category average of -1.71%.

#### Volatility



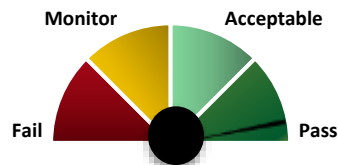
The fund's 3-year standard deviation is 10.55%, below the large value category average of 11.34%.

#### Correlation



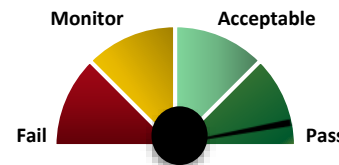
The fund's 3-year r-squared is 95.28%, above the large value category average of 87.91%.

#### Turnover



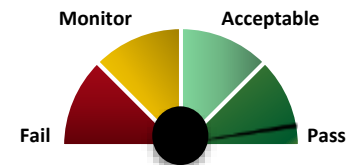
The fund's turnover ratio is 15%, below the large value category average of 60.23%.

#### Expense



The fund's expense ratio is 0.56%, below the large value category average of 1.08%.

#### Assets



The fund has \$6.4 billion in assets under management.

### Diagnostics Report

Principal Capital Appreciation Inst passes 8 of 9 of our investable fund criteria. The fund scores within an acceptable range for value added. As of 12/31/2016, top sector holdings included information technology (18.5%), financial services (15.5%), and healthcare (13.2%). Entering the new calendar year, the fund managers are focusing on adding defensive names which according to their research are more attractively valued relative to their more cyclical counterparts.

# Putnam Equity Income R6

**Benchmark 1:** Russell 1000 Value TR USD  
**Benchmark 2:** S&P 500 TR USD

**Morningstar Analyst Rating** 09-27-16



## Morningstar Pillars

Process	⊕ Positive
Performance	⊕ Positive
People	⊙ Neutral
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

## Pillar Spectrum

⊕ Positive ⊖ Negative ⊙ Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	—	—	—	3.84	—
2013	11.90	3.30	4.49	9.52	32.28
2014	2.81	5.31	-0.49	4.76	12.86
2015	1.40	0.15	-8.05	4.13	-2.77
2016	0.39	3.28	4.13	5.60	14.02

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	5.60	-1.08	1.78	66	10,560
6 Mo	9.97	-0.42	2.14	57	10,997
1 Yr	14.02	-3.32	2.06	54	11,402
3 Yr Avg	7.76	-0.83	-1.12	29	12,512
5 Yr Avg	—	—	—	—	—
10 Yr Avg	—	—	—	—	—
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	5.93	30	1.69	57
5 Yr (estimated)	—	—	—	—
10 Yr (estimated)	—	—	—	—

Potential Capital Gain Exposure: 15% of assets

## Morningstar's Take by Alec Lucas 09-27-16

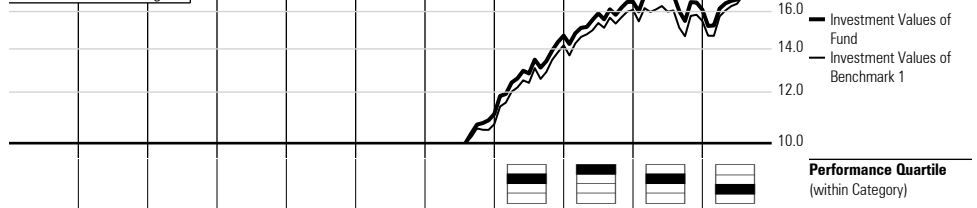
Putnam Equity Income pursues a dividend-focused strategy through a mix of quant screens and fundamental analysis. The process was effective for 12 years under former manager Bart Geer and continues to work well under current lead manager Darren Jaroch. The fund earns a Morningstar Analyst Rating of Bronze.

Jaroch had a history with the fund prior to taking over in 2012. As an analyst, he helped build the fund's quant model in the early 2000s. He deserves partial credit for the fund's success under Geer, and he's proved a worthy successor. The fund's 13.4% annualized gain from his start date through August 2016 is in line with the Russell 1000 Value Index and ranks in the large-value Morningstar Category's top quintile.

Jaroch has achieved this record amid significant change in Putnam's analyst lineup. Between early 2014 and mid-2016, there were nine changes to the 44-person analyst team, including three in the technology sector and two in energy. Analysts are important to the process because they do bottom-up research on firms scoring in the top quintile of the fund's quant model. Jaroch, though, ultimately picks the stocks. He prefers cash-generative

## Historical Profile

**Return** Average  
**Risk** Below Avg  
**Rating** ★★★★★  
 Above Avg



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	12-16	History
—	—	—	—	—	—	16.99	20.48	21.04	19.25	21.35	NAV
—	—	—	—	—	—	—	32.28	12.86	-2.77	14.02	Total Return %
—	—	—	—	—	—	—	-0.24	-0.59	1.05	-3.32	+/- Bmark 1
—	—	—	—	—	—	—	-0.10	-0.83	-4.16	2.06	+/- Bmark 2
—	—	—	—	—	—	—	3.02	2.03	1.77	2.03	Income Return %
—	—	—	—	—	—	—	29.27	10.84	-4.55	12.00	Capital Return %
—	—	—	—	—	—	—	39	15	35	54	Total Rtn % Rank Cat
—	—	—	—	—	—	—	0.25	0.51	0.41	0.37	Income \$
—	—	—	—	—	—	—	0.50	1.44	1.67	0.85	Capital Gains \$
—	—	—	—	—	—	—	0.24	0.56	0.55	0.55	Expense Ratio %
—	—	—	—	—	—	—	1.09	2.03	1.80	1.92	Income Ratio %
—	—	—	—	—	—	—	57	34	29	22	Turnover Rate %
—	—	—	—	—	—	—	0	164	391	378	Net Assets \$mil

## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	14.02	—	—	—
3 Yr	7.76	Avg	-Avg	★★★★
5 Yr	—	—	—	—
10 Yr	—	—	—	—
Incept	14.70	—	—	—

## Other Measures

	Standard Index	Best Fit Index
Alpha	-0.7	-0.4
Beta	0.96	0.95
R-Squared	95	97
Standard Deviation	10.55	—
Mean	7.76	—
Sharpe Ratio	0.75	—

## Portfolio Analysis 09-30-16

### Total Stocks: 107

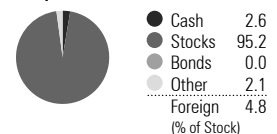
Share change since 06-30-16	Sector	YTD Ret %	% Assets
⊕ Microsoft Corp	Technology	14.65	2.76
⊖ Northrop Grumman Corp	Industri	25.04	2.75
⊕ Eli Lilly and Co	Hlth Care	-10.29	2.57
⊕ Johnson & Johnson	Hlth Care	15.23	2.26
⊕ Exxon Mobil Corp	Energy	19.62	2.24
⊕ JPMorgan Chase & Co	Finan Svcs	33.47	2.24
⊕ AT&T Inc	Comm Svcs	29.18	2.16
⊕ Citigroup Inc	Finan Svcs	15.65	2.12
⊕ Comcast Corp Class A	Comm Svcs	24.76	2.03
⊕ Wells Fargo & Co	Finan Svcs	4.17	1.77
⊕ Bank of America Corporati	Finan Svcs	32.80	1.72
⊕ Marathon Oil Corp	Energy	39.08	1.54
⊕ Alphabet Inc C	Technology	—	1.48
⊕ Philip Morris International	Cnsmr Def	8.76	1.43
⊕ L-3 Communications Holdin	Industri	29.62	1.40
⊕ Apple Inc	Technology	12.15	1.31
⊕ CVS Health Corp	Hlth Care	-17.55	1.29
⊕ American International Gr	Finan Svcs	7.46	1.23
⊕ Honeywell International I	Industri	14.74	1.20
⊕ Intel Corp	Technology	8.30	1.20

## Current Investment Style

Value Blend Growth	Market Cap	%	Sector Weightings	% of Stocks	Rel Bmark 1
Large Mid Small	Giant	44.8	⚡ Cyclical	33.36	0.87
	Large	32.4	⚡ BasicMat	2.53	0.88
	Mid	20.0	⚡ CnsmrCyc	7.66	1.67
	Small	2.7	⚡ FinanSvcs	19.72	0.75
	Micro	0.0	⚡ Real Est	3.45	0.74
Avg \$mil: 55,320			⚡ Sensitive	40.25	1.08

Value Measures	Rel Category	%	Composition - Net	
Price/Earnings	17.37	1.03	⚡ CommSvcs	8.80
Price/Book	1.86	0.92	⚡ Energy	8.52
Price/Sales	1.75	1.17	⚡ Industri	10.53
Price/Cash Flow	8.24	1.00	⚡ Technlgy	12.40
Dividend Yield %	2.62	0.90	→ Defensive	26.38
Growth Measures	% Rel Category		⚡ CnsmrDef	7.95
Long-Term Erngs	8.24	1.06	⚡ Hlthcare	13.40
Book Value	1.44	1.10	⚡ Utilities	5.03
Sales	-4.23	2.84		
Cash Flow	-5.00	2.12		
Historical Erngs	4.63	1.21		

Profitability	%
Return on Equity	14.33
Return on Assets	4.36
Net Margin	9.86



Address:	Putnam Equity Income Fund Boston MA 02109 800-225-1581	Minimum Purchase:	\$0	Add: —	IRA: —
Web Address:	www.putnam.com	Min Auto Inv Plan:	—	Add: —	
Inception:	07-02-12	Sales Fees:	No-load		
Advisor:	Putnam Investment Management, LLC	Management Fee:	0.63% mx/0.40% mn.		
Subadvisor:	None	Actual Fees:	Mgt:0.47% Dist:—		
		Expense Projections:	3Yr:\$176 5Yr:\$307 10Yr:\$689		
		Income Distribution:	Quarterly		

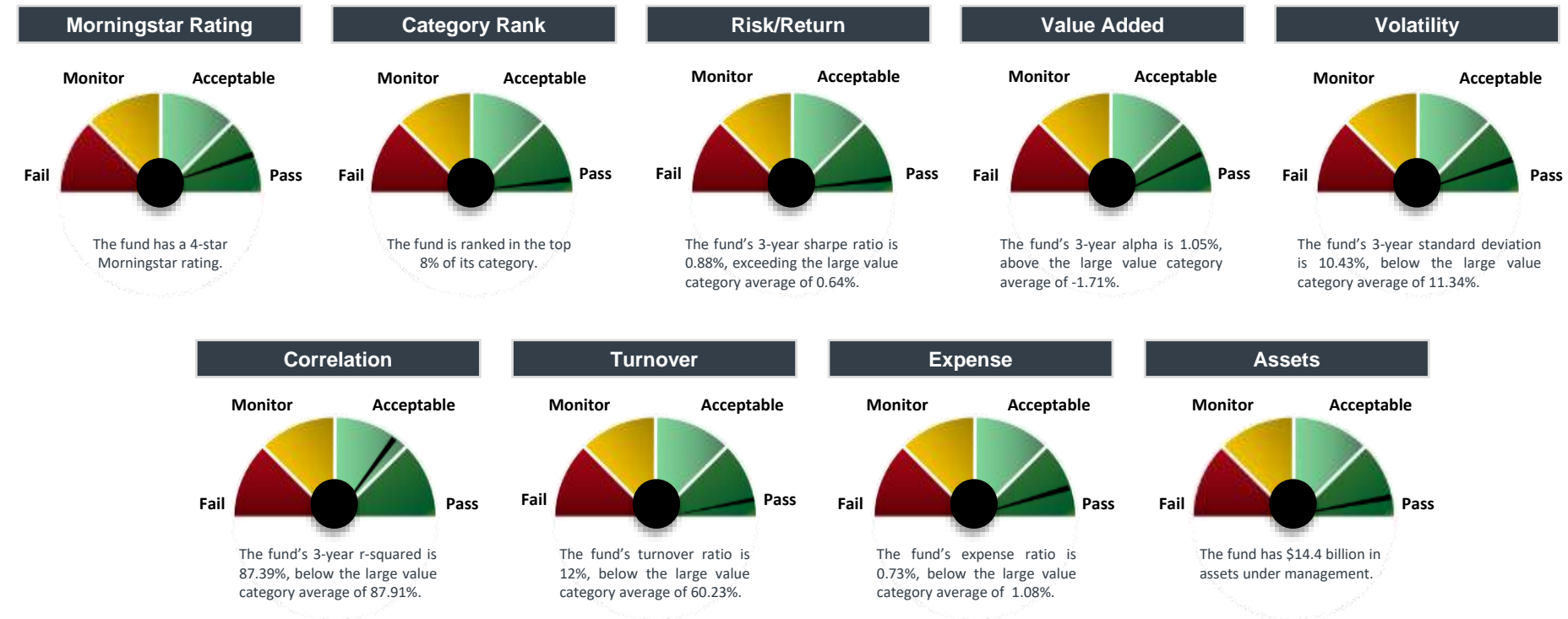


**Fund Name:** Delaware Value Instl (Ticker: DDVIX)  
**Asset Class:** Large Value  
**Morningstar Rating:** ★★☆☆

**Manager:** Delaware Investments  
**Fund Type:** Active  
**Status:** Current Fund Option

### Fund Description

Delaware Value Fund seeks long-term capital appreciation. The fund invests in large-capitalization companies, seeking consistent long-term performance. The fund follows a traditional value-oriented investment philosophy using a research-intensive approach.



### Diagnostics Report

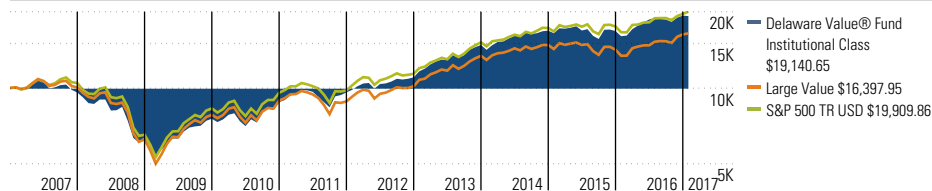
Delaware Value Instl passes 8 of 9 of our investable fund criteria. The fund managers generally hold a concentrated portfolio with approximately 32 holdings as of 12/31/2016. Despite the concentrated nature of the portfolio, the fund managers maintain exposure to all eleven S&P sectors. Top sector holdings by weight as of the end of the fourth quarter included healthcare (21%), energy (14.1%), and financials (12.3%). The fund ranks in the top quartile of its peer group on a 3-year and 5-year basis.

# Delaware Value® Fund Institutional Class DDVIX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
19.60	↓-0.13   -0.66	1.69	14	Limited	—	None	0.73%	★★★★	Large Value	Large Value

## Growth of 10,000 01-30-2007 - 01-30-2017



## Investment Strategy

The investment seeks long-term capital appreciation. Under normal circumstances, the fund will invest at least 80% of its net assets, plus the amount of any borrowings for investment purposes, in securities of large-capitalization companies (the 80% policy). It invests primarily in securities of large-capitalization companies that the Manager believes have long-term capital appreciation potential. The fund's advisor currently defines large-capitalization stocks as those with market capitalizations of \$5 billion or greater at the time of purchase.

## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	9,959	9,959	11,969	13,446	19,330	19,014
Fund	-0.41	-0.41	19.69	10.37	14.09	6.64
+/- S&P 500 TR USD	-2.39	-2.39	-0.45	-0.27	-0.01	-0.43
+/- Category	-1.35	-1.35	-2.57	2.13	1.85	1.24
% Rank in Cat	96	96	70	9	11	19
# of Funds in Cat	1,298	1,298	1,242	1,066	913	668

\* Currency is displayed in USD

## Top Holdings 11-30-2016

	Weight %	Last Price	Day Chg %	52 Week Range
⊖ Halliburton Co	3.58	56.39 USD	-0.16 ↓	27.96 - 58.78
ConocoPhillips	3.55	48.23 USD	1.67 ↑	31.05 - 53.17
⊖ BB&T Corp	3.29	46.27 USD	-0.47 ↓	29.95 - 47.85
Chevron Corp	3.28	111.40 USD	-0.38 ↓	79.85 - 119.00
⊖ Bank of New York Mellon Corp	3.23	44.59 USD	-0.16 ↓	32.20 - 49.54
% Assets in Top 5 Holdings	16.95			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

## Top Sectors 11-30-2016

	Fund	3 Yr High	3 Yr Low	Cat Avg	
⊕ Healthcare	24.62	25.22	22.15	12.77	■ Fund ▼ Cat Avg
⊕ Energy	15.87	15.87	13.03	10.93	
⊕ Financial Services	13.14	13.14	12.09	20.96	
⊕ Technology	11.56	12.59	11.56	12.55	
⊕ Industrials	9.98	9.98	9.55	10.79	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-22-2016	19.80	0.0700	0.0900	0.0000	0.0900	0.2400
09-22-2016	19.20	0.0000	0.0000	0.0000	0.0800	0.0800
06-22-2016	19.06	0.0000	0.0000	0.0000	0.0900	0.0900
03-22-2016	17.78	0.0000	0.0000	0.0000	0.0800	0.0800
12-22-2015	17.57	0.2400	0.0000	0.0000	0.0900	0.3300

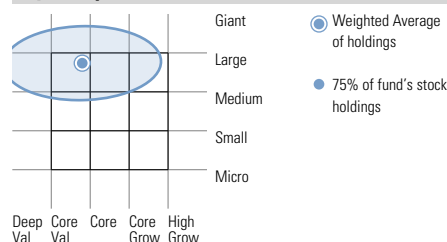
## 3 Year Average Morningstar Risk Measures



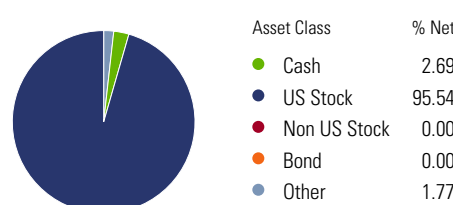
## Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

## Style Map



## Asset Allocation



## Management

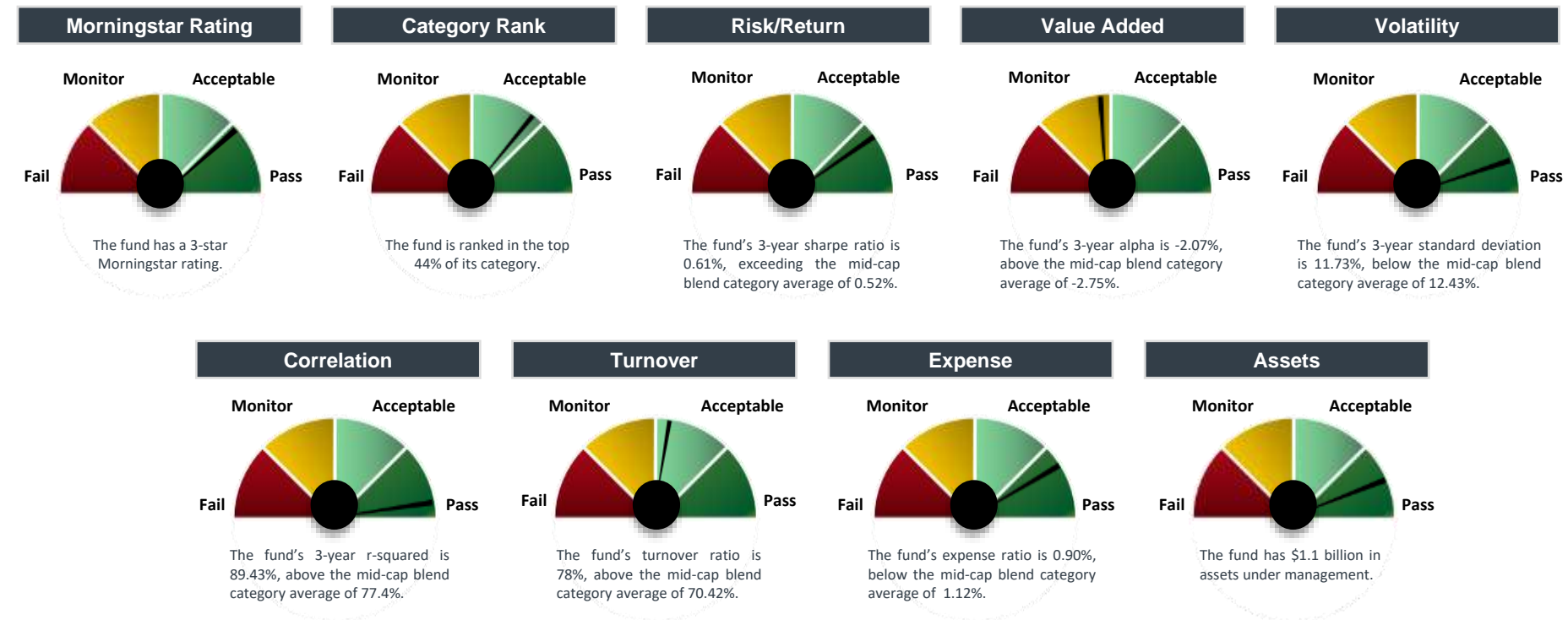
	Start Date
D. Tysen Nutt	07-30-2004
Robert A. Vogel	07-30-2004
Nikhil G. Lavani	10-02-2006
Kristen E. Bartholdson	12-31-2008

**Fund Name:** JPMorgan Intrepid Mid Cap Select (Ticker: WOOPX)  
**Asset Class:** Mid-Cap Blend  
**Morningstar Rating:** ★★ ★

**Manager:** JPMorgan  
**Fund Type:** Active  
**Status:** Current Fund Option

### Fund Description

The fund seeks long-term capital growth by investing primarily in equity securities of companies with an intermediate capitalization which are a part of the Russell Midcap Index. Security selection is based upon a behavioral finance-based investment process that seeks to capitalize on market inefficiencies.



### Diagnostics Report

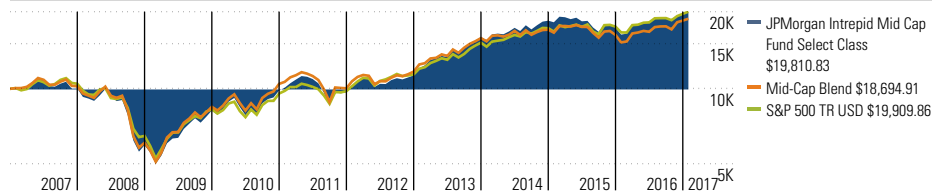
JPMorgan Intrepid Mid Cap Select passes 6 of 9 of our investable fund criteria. The fund scores within an acceptable range for category rank and trading activity. We continue to monitor the fund's value added. As of the end of the fourth quarter, the fund's top sectors were: information technology (16.7%), industrials (14.1%), and financials (11.3%).

# JPMorgan Intrepid Mid Cap Fund Select Class WOOPX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
22.37	↓ -0.17   -0.75	0.71	1	Open	\$1	None	0.90%	★★★	Mid-Cap Blend	Mid Blend

## Growth of 10,000 01-30-2007 - 01-30-2017



## Investment Strategy

The investment seeks long-term capital growth by investing primarily in equity securities of companies with intermediate capitalizations. Under normal circumstances, at least 80% of the fund's assets will be invested in common and preferred stocks, rights, warrants, convertible securities and other equity securities of mid cap companies. "Assets" means net assets, plus the amount of borrowings for investment purposes. Mid cap companies are companies with market capitalizations similar to those within the universe of the Russell Midcap® Index at the time of purchase.

## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,215	10,215	12,190	12,781	19,203	19,722
Fund	2.15	2.15	21.90	8.52	13.94	7.03
+/- S&P 500 TR USD	0.16	0.16	1.75	-2.12	-0.16	-0.04
+/- Category	0.53	0.53	-2.03	1.33	1.60	0.35
% Rank in Cat	23	23	70	38	18	47
# of Funds in Cat	469	469	415	359	322	215

\* Currency is displayed in USD

## Top Holdings 12-31-2016

	Weight %	Last Price	Day Chg %	52 Week Range
Equinix Inc	2.09	385.81 USD	-0.14 ↓	255.45 - 391.07
NCR Corp	2.02	42.59 USD	0.34 ↑	18.02 - 44.41
Huntington Ingalls Industries Inc	1.92	192.76 USD	0.27 ↑	122.91 - 197.28
Marvell Technology Group Ltd	1.89	14.79 USD	-0.77 ↓	8.32 - 15.45
Xerox Corp	1.80	6.84 USD	-1.44 ↓	5.62 - 7.50
% Assets in Top 5 Holdings	9.73			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

## Top Sectors 11-30-2016

	Fund	3 Yr High	3 Yr Low	Cat Avg	
Technology	16.39	16.39	13.78	14.61	■ Fund ▼ Cat Avg
Consumer Cyclical	15.86	15.38	12.99	15.87	
Industrials	14.14	15.77	15.10	16.17	
Financial Services	11.23	11.87	11.03	15.12	
Healthcare	9.15	11.16	8.70	9.18	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-20-2016	22.28	0.0000	0.0000	0.0000	0.0500	0.0500
12-14-2016	22.11	0.0000	0.0000	0.0000	0.0000	0.0000
09-28-2016	21.42	0.0000	0.0000	0.0000	0.0500	0.0500
06-28-2016	19.70	0.0000	0.0000	0.0000	0.0600	0.0600
12-21-2015	19.41	0.0000	0.0000	0.0000	0.0800	0.0800

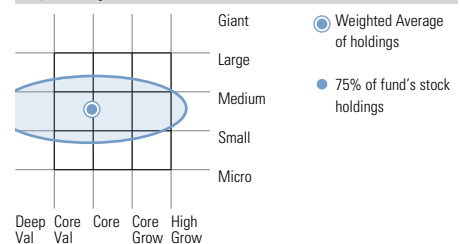
## 3 Year Average Morningstar Risk Measures

Risk vs. Category (371)	-Avg				
Return vs. Category (371)	Avg				
	Low	Avg	High		

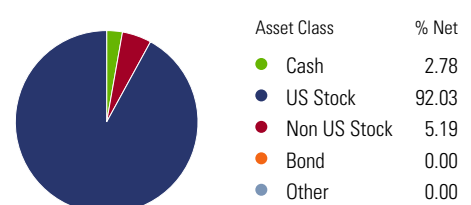
## Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

## Style Map



## Asset Allocation



## Management

	Start Date
Dennis S. Ruhl	12-19-2008
Phillip D. Hart	11-01-2011

**Fund Name:** Aberdeen Small Cap Inst (Ticker: GSCIX)

**Asset Class:** Small Growth

**Morningstar Rating:** ★★☆☆

**Manager:** Aberdeen

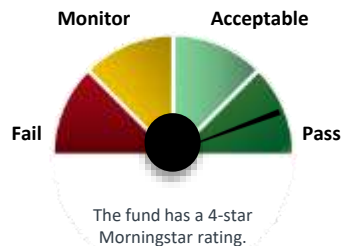
**Fund Type:** Active

**Status:** Current Fund Option

### Fund Description

The fund seeks long-term capital appreciation by investing in small capitalization companies. The investment team employs a fundamental, bottom-up equity investment style, with an emphasis on first-hand research and disciplined company evaluation.

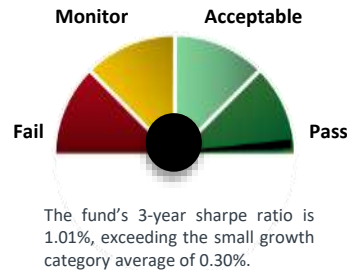
#### Morningstar Rating



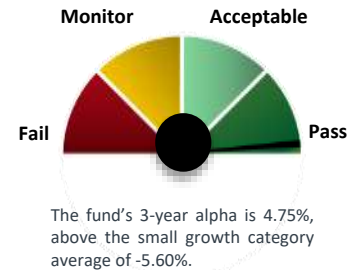
#### Category Rank



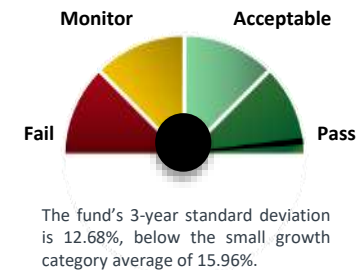
#### Risk/Return



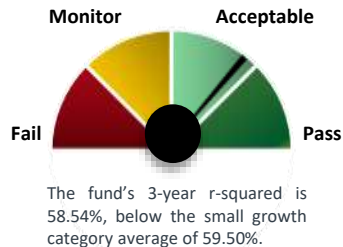
#### Value Added



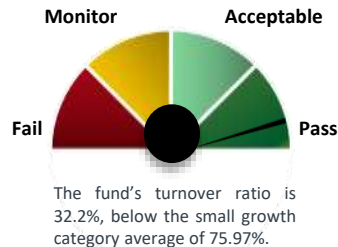
#### Volatility



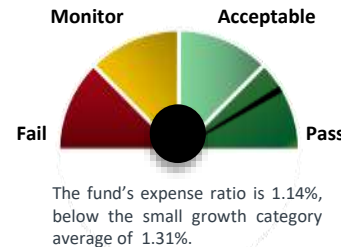
#### Correlation



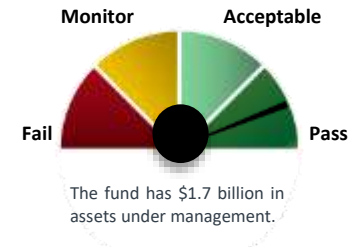
#### Turnover



#### Expense



#### Assets



### Diagnostics Report

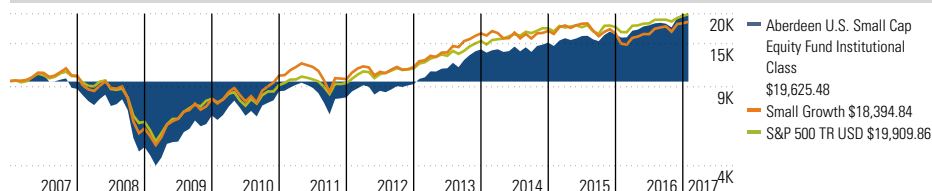
Aberdeen Small Cap Inst passes 8 of 9 of our investable fund criteria. The fund falls within acceptable range for correlation to benchmark. Aberdeen Small Cap Inst has an enviable track record, ranking in the top 10% of its peer group on a 1-year, 3-year, and 5-year basis with stock selection as the long-term driver of the fund's outperformance versus the benchmark. Top sectors include industrials (21.3%), financials (15.2%), and consumer discretionary (14.3%).

# Aberdeen U.S. Small Cap Equity Fund Institutional Class GSCIX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
34.04	↓-0.27   -0.79	0.00	1.8	Open	\$1 mil	None	1.14%	★★★★	Small Growth	Small Growth

## Growth of 10,000 01-30-2007 - 01-30-2017



## Investment Strategy

The investment seeks long-term capital appreciation. The fund normally invests at least 80% of the value of its net assets, plus any borrowings for investment purposes, in equity securities issued by U.S. small-cap companies. The advisor considers small-cap companies to be companies that have market capitalizations similar to those of companies included in the Russell 2000® Index at the time of investment. It also may invest in foreign securities and securities of larger companies.

## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	9,815	9,815	12,529	14,522	21,737	19,503
Fund	-1.85	-1.85	25.29	13.24	16.80	6.91
+/- S&P 500 TR USD	-3.83	-3.83	5.14	2.60	2.70	-0.16
+/- Category	-3.28	-3.28	0.42	8.60	5.58	-0.16
% Rank in Cat	98	98	49	1	1	58
# of Funds in Cat	690	690	660	591	525	386

\* Currency is displayed in USD

## Top Holdings 12-31-2016

	Weight %	Last Price	Day Chg %	52 Week Range
⊕ Beacon Roofing Supply Inc	3.44	43.71 USD	-2.91 ↓	32.24 - 49.32
⊕ Cal-Maine Foods Inc	2.94	41.65 USD	0.24 ↑	35.65 - 55.43
⊕ Core-Mark Holding Co Inc	2.68	35.29 USD	-1.45 ↓	31.54 - 50.00
⊕ Littelfuse Inc	2.67	156.34 USD	-0.66 ↓	100.04 - 158.70
⊕ WSFS Financial Corp	2.67	45.00 USD	0.45 ↑	26.40 - 47.65
% Assets in Top 5 Holdings	14.39			

⊕ Increase ⊖ Decrease ☆ New to Portfolio

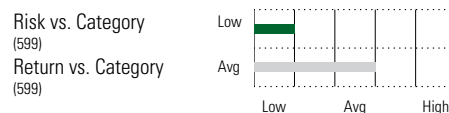
## Top Sectors 12-31-2016

	Fund	3 Yr High	3 Yr Low	Cat Avg	
⚙️ Industrials	18.84	18.84	17.13	17.38	■ Fund ▼ Cat Avg
🏢 Financial Services	15.46	15.46	15.19	10.09	
🏭 Basic Materials	15.03	18.67	14.99	5.20	
🚗 Consumer Cyclical	13.35	13.35	7.49	14.18	
🏥 Healthcare	11.02	11.79	9.18	16.44	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
03-18-2011	15.97	0.0000	0.0000	0.0000	0.0500	0.0500

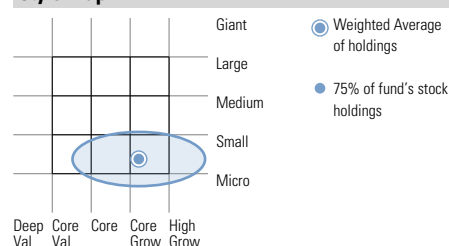
## 3 Year Average Morningstar Risk Measures



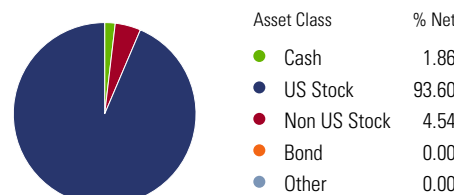
## Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

## Style Map



## Asset Allocation



## Management

	Start Date
Ralph Bassett	10-28-2008
Jason Kotik	10-28-2008
Douglas Burntack	12-31-2008
Joseph McFadden	12-31-2010

**Fund Name:** Northern Small Cap Core (Ticker: NSGRX)

**Asset Class:** Small Blend

**Morningstar Rating:** ★★☆☆

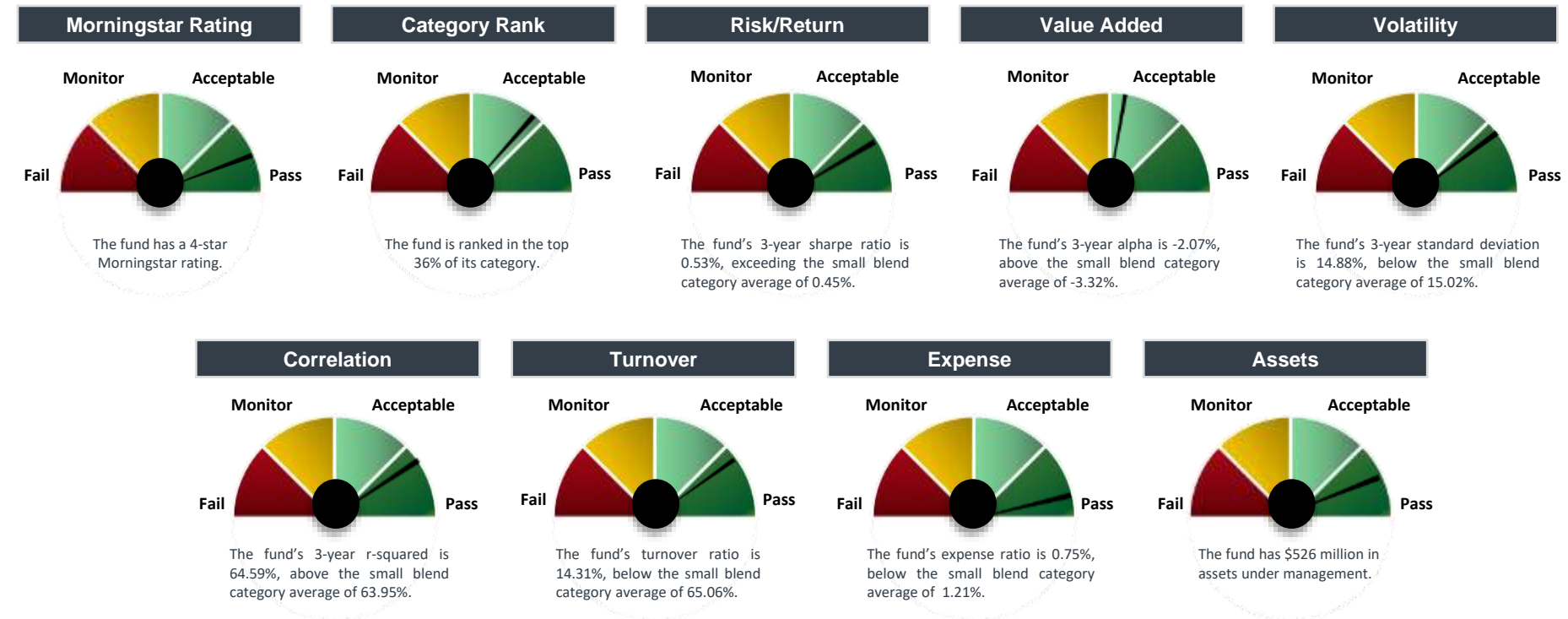
**Manager:** Northern Funds

**Fund Type:** Active

**Status:** Current Fund Option

### Fund Description

The fund seeks long-term capital appreciation by investing in a highly diversified portfolio of small-cap companies. Fund managers employ a quantitative-managed, core style investment strategy to select stocks based on a statistical analysis of historical relationships among small-cap characteristics, stock prices and market capitalization ranges.



### Diagnostics Report

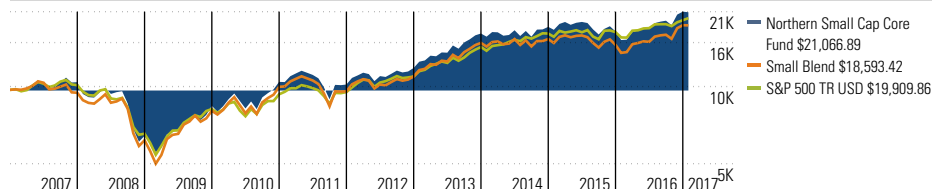
Northern Small Cap Core passes 7 of 9 of our investable fund criteria. The fund falls within an acceptable range for category ranking and value added. Top sectors include financials (19.3%), information technology (17.3%), and industrials (15.4%).

# Northern Small Cap Core Fund NSGRX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
23.47	↓-0.31   -1.30	0.58	517	Open	\$2,500	None	0.75%	★★★★	Small Blend	Small Blend

## Growth of 10,000 01-30-2007 - 01-30-2017



## Investment Strategy

The investment seeks to provide long-term capital appreciation; any income received is incidental to this objective. The fund will invest at least 80% of its net assets in equity securities of small capitalization companies. Small capitalization companies generally are considered to be those whose market capitalization is, at the time the fund makes an investment, within the range of the market capitalization of companies in the Russell 2000® Index. Many of the companies in which the fund invests retain their earnings to finance current and future growth. These companies generally pay little or no dividends.

## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	9,945	9,945	13,025	12,536	18,687	21,020
Fund	-0.55	-0.55	30.25	7.83	13.32	7.71
+/- S&P 500 TR USD	-2.54	-2.54	10.10	-2.82	-0.78	0.64
+/- Category	-0.38	-0.38	0.33	1.04	1.36	1.10
% Rank in Cat	65	65	46	39	34	25
# of Funds in Cat	798	798	735	608	515	354

\* Currency is displayed in USD

## Top Holdings 12-31-2016

	Weight %	Last Price	Day Chg %	52 Week Range
Jack In The Box Inc	0.33	106.81 USD	-0.29 ↓	61.78 - 113.30
Microsemi Corp	0.29	52.91 USD	-2.70 ↓	29.00 - 57.97
Investors Bancorp Inc	0.27	14.33 USD	0.14 ↑	10.67 - 14.93
CNO Financial Group Inc	0.27	18.80 USD	-2.39 ↓	14.30 - 20.55
Cognex Corp	0.27	66.75 USD	-0.40 ↓	29.45 - 67.96
% Assets in Top 5 Holdings	1.44			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

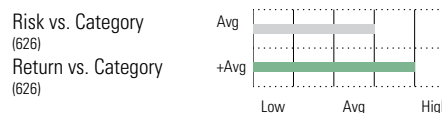
## Top Sectors 12-31-2016

	Fund	3 Yr High	3 Yr Low	Cat Avg	
Financial Services	18.24	18.24	14.88	19.11	■ Fund ▼ Cat Avg
Technology	16.27	17.56	16.27	15.07	
Industrials	15.82	15.82	13.87	17.73	
Consumer Cyclical	12.64	13.47	12.64	13.85	
Healthcare	11.42	14.97	11.42	9.25	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-15-2016	23.73	0.0100	0.0100	0.0000	0.1400	0.1600
12-17-2015	19.64	0.5400	0.0000	0.0000	0.1200	0.6600
12-18-2014	21.03	0.8400	0.1000	0.0000	0.1100	1.0600
12-19-2013	20.31	1.5400	0.1100	0.0000	0.0700	1.7100
12-19-2012	16.33	0.0300	0.0000	0.0000	0.2100	0.2400

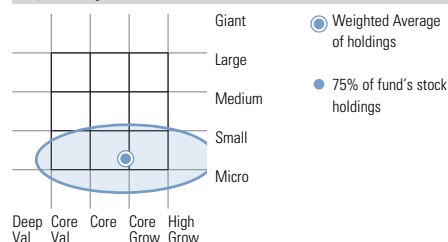
## 3 Year Average Morningstar Risk Measures



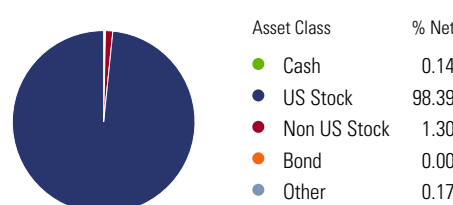
## Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

## Style Map



## Asset Allocation



## Management

Robert H. Bergson  
Start Date 02-28-2010

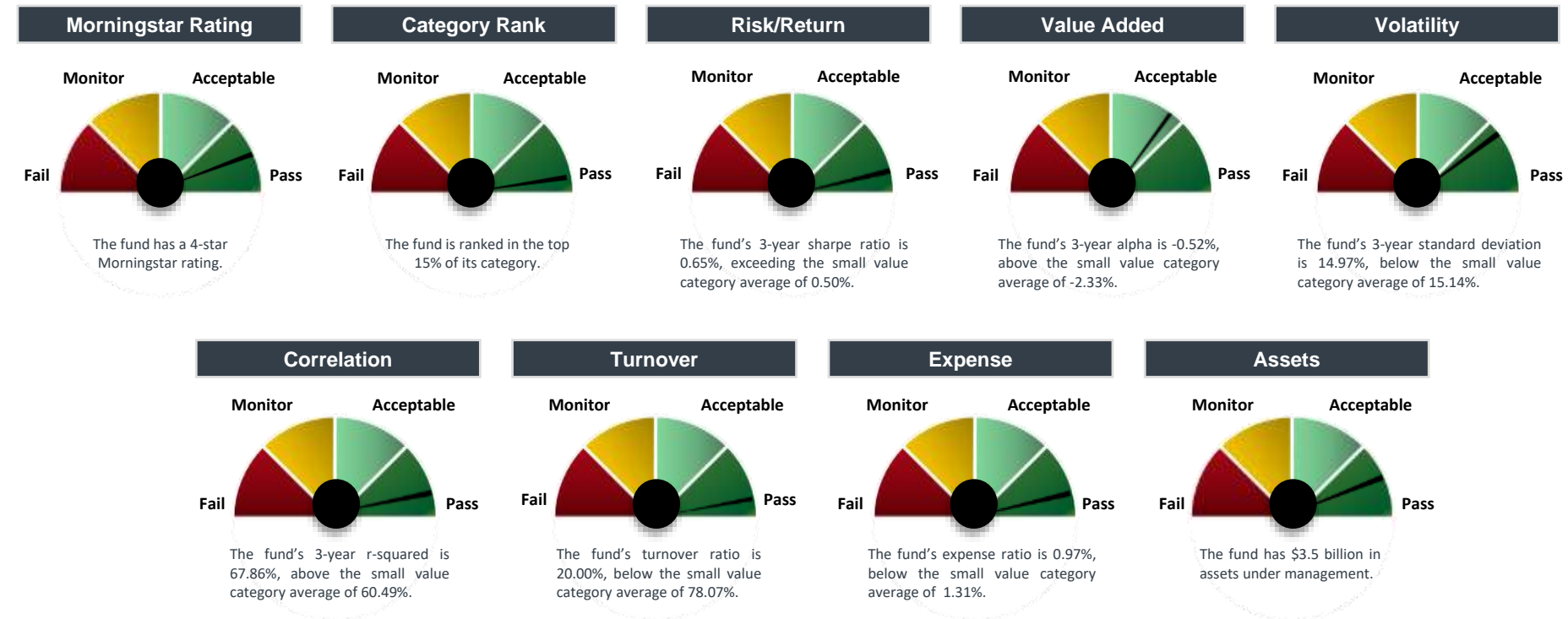


**Fund Name:** Delaware Small Cap Value Instl (Ticker: DEVIX)  
**Asset Class:** Small Value  
**Morningstar Rating:** ★★☆☆

**Manager:** Delaware Investments  
**Fund Type:** Active  
**Status:** Current Fund Option

### Fund Description

The fund seeks capital appreciation by investing in small-cap value stocks. The investment team primarily invests in small companies whose stock prices appear low relative to their underlying value or potential.



### Diagnostics Report

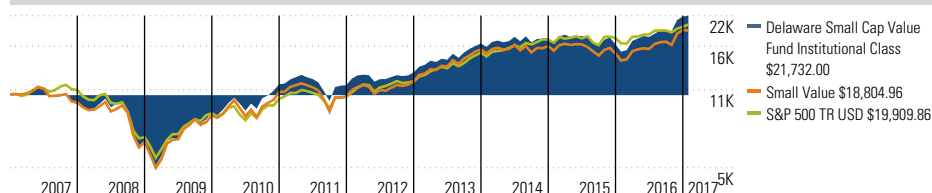
Delaware Small Cap Value Instl passes 8 of 9 of our investable fund criteria. The fund falls within an acceptable range for value added. Delaware Small Cap Value Instl has a strong track record, ranking in the top quartile of its peer group on a 1-year, 3-year, and 5-year basis. Top sectors include financial services (28.9%), information technology (13%), and basic industry (9.4%).

# Delaware Small Cap Value Fund Institutional Class DEVIX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
63.52	↓-0.69   -1.08	0.69	4	Open	—	None	0.97%	★★★★	Small Value	Small Blend

## Growth of 10,000 01-30-2007 - 01-30-2017



## Investment Strategy

The investment seeks capital appreciation. Under normal circumstances, at least 80% of the fund's net assets, plus the amount of any borrowings for investment purposes, will be in investments of small-capitalization companies. It invests primarily in investments of small companies whose stock prices, in the portfolio managers' opinion, appear low relative to their underlying value or future potential.

## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,087	10,087	14,228	13,458	18,461	21,570
Fund	0.87	0.87	42.28	10.41	13.04	7.99
+/- S&P 500 TR USD	-1.11	-1.11	22.13	-0.23	-1.05	0.92
+/- Category	1.35	1.35	7.93	2.84	0.77	1.47
% Rank in Cat	10	10	7	12	42	17
# of Funds in Cat	433	433	406	344	305	195

\* Currency is displayed in USD

## Top Holdings 11-30-2016

	Weight %	Last Price	Day Chg %	52 Week Range
East West Bancorp Inc	3.10	51.44 USD	-0.77 ↓	27.25 - 54.04
Berry Plastics Group Inc	2.23	50.38 USD	-0.63 ↓	27.79 - 52.97
⊖ MasTec Inc	2.19	37.40 USD	-2.48 ↓	12.44 - 41.90
Webster Financial Corp	2.17	52.47 USD	-0.63 ↓	30.64 - 55.80
Selective Insurance Group Inc	1.76	41.60 USD	0.00 ↓	30.47 - 44.00
% Assets in Top 5 Holdings	11.44			

⊕ Increase ⊖ Decrease ☆ New to Portfolio

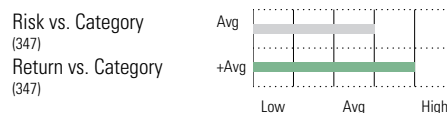
## Top Sectors 11-30-2016

	Fund	3 Yr High	3 Yr Low	Cat Avg	
Financial Services	29.25	29.25	24.02	24.65	■ Fund ▼ Cat Avg
Technology	13.55	14.07	13.18	12.15	
Industrials	13.17	15.49	13.09	18.04	
Consumer Cyclical	12.66	14.16	12.66	12.57	
Real Estate	7.80	8.15	7.38	7.36	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-22-2016	63.37	0.0000	0.0000	0.0000	0.4300	0.4300
12-22-2015	48.05	2.7200	0.1700	0.0000	0.4500	3.3500
12-22-2014	54.75	2.2200	0.4000	0.0000	0.3100	2.9300
12-20-2013	54.00	0.8500	0.2500	0.0000	0.1700	1.2700
12-21-2012	42.27	0.2500	0.0000	0.0000	0.1900	0.4400

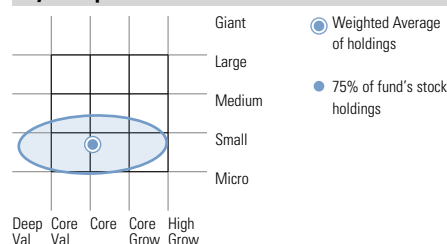
## 3 Year Average Morningstar Risk Measures



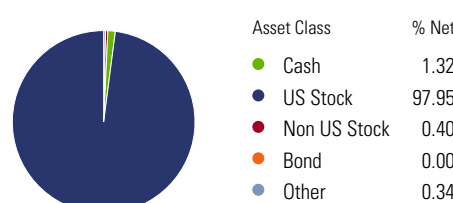
## Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

## Style Map



## Asset Allocation



## Management

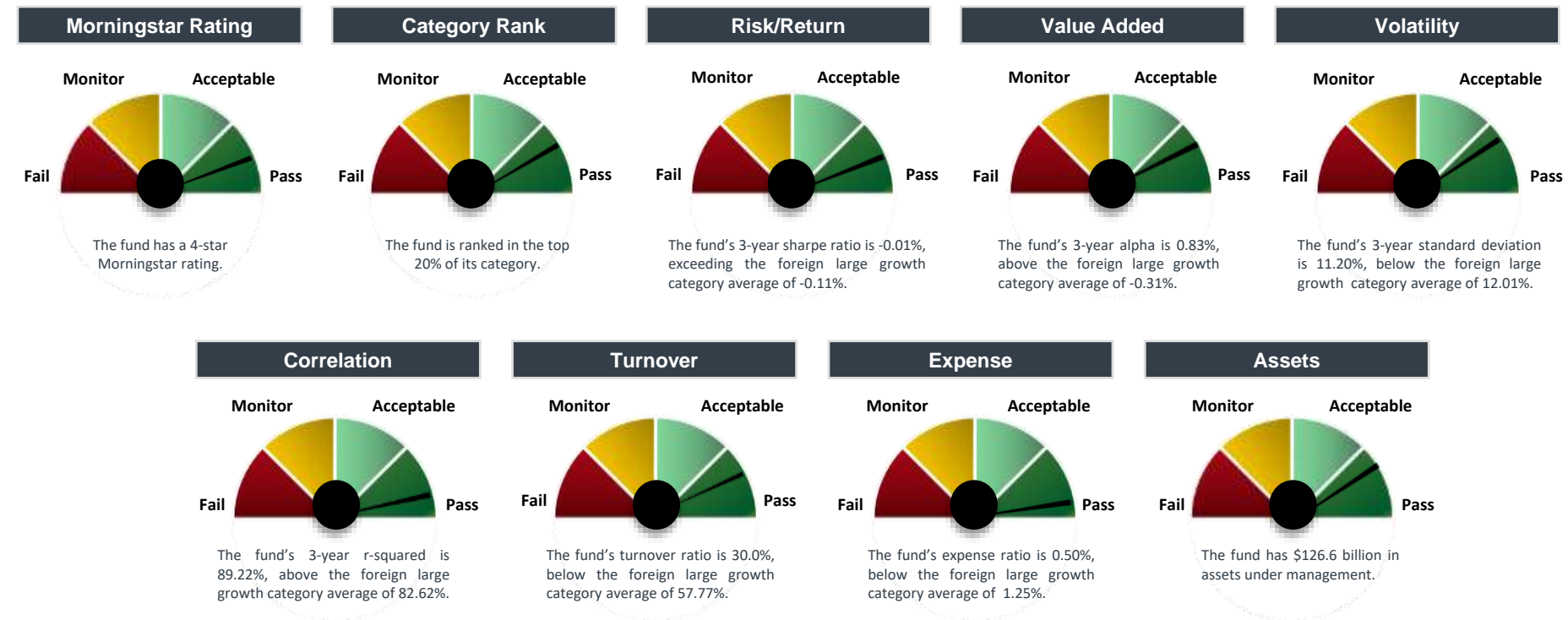
	Start Date
Christopher S. Beck	05-01-1997
Steven G. Catricks	07-01-2012
Kent P. Madden	07-01-2012
Kelley A. McKee	07-01-2012

**Fund Name:** American Funds EuroPacific Growth R6 (Ticker: RERGX)  
**Asset Class:** Foreign Large Growth  
**Morningstar Rating:** ★★★★★

**Manager:** American Funds  
**Fund Type:** Active  
**Status:** Current Fund Option

### Fund Description

The fund provides long-term growth of capital by investing in companies based outside the United States. The investment team invests with a long-term focus based on thorough research and attention to risk.



### Diagnostics Report

American Funds EuroPacific Growth R6 passes 9 of 9 of our investable fund criteria. Geographically, the fund is invested in Europe (45.87%), Asia & Pacific Basin (45.68%), and the Americas (8.44%).

# American Funds Europacific Growth R6

**Benchmark 1:** MSCI ACWI Ex USA Growth NR USD

**Benchmark 2:** MSCI ACWI Ex USA NR USD

**Morningstar Analyst Rating** 10-03-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	12.38	-6.13	7.34	5.65	19.64
2013	2.94	-0.73	9.55	7.71	20.58
2014	0.71	2.96	-4.21	-1.63	-2.29
2015	5.97	1.12	-9.81	2.97	-0.48
2016	-2.32	-0.32	8.23	-4.15	1.01

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	-4.15	1.57	-2.89	25	9,585
6 Mo	3.74	3.74	-1.83	10	10,374
1 Yr	1.01	0.89	-3.48	20	10,101
3 Yr Avg	-0.60	0.67	1.18	20	9,822
5 Yr Avg	7.22	1.88	2.22	25	14,169
10 Yr Avg	—	—	—	—	—
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	-1.33	21	0.74	72
5 Yr (estimated)	6.47	25	0.70	76
10 Yr (estimated)	—	—	—	—

Potential Capital Gain Exposure: 18% of assets

## Morningstar's Take by Alec Lucas 10-03-16

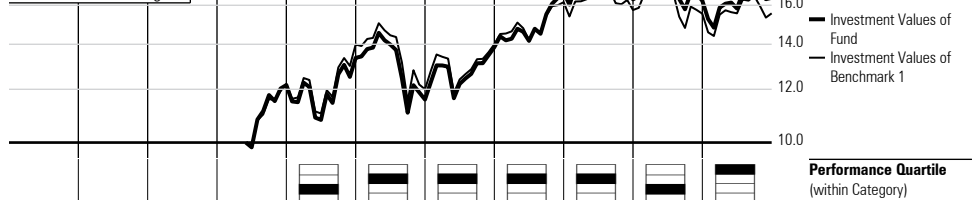
American Funds Europacific Growth has a Morningstar Analyst Rating of Gold because it is adept at taking advantage of the market's opportunities. In the early 2000s, the fund's fundamentals-driven approach kept it in the foreign large-blend Morningstar Category, where it had a strong run as international value stocks consistently beat their growth counterparts. In recent years, wading heavily into pharma and tech has helped the fund stay competitive as growth stocks have outperformed. During the past three years through August 2016, the fund's 4.9% annualized gain beat the MSCI All-Country World Ex-U.S. Growth Index by a percentage point and placed in the top quartile in foreign large-growth, the fund's category since late 2014.

The portfolio's malleability owes to American's multimanagement system. Managers each run separate sleeves of the portfolio in line with their own styles. Their combination provides a smoother ride and allows the fund to take on different tilts and thus perform well in varied conditions.

Management changes have also contributed to the portfolio's growth bent. In 2013, value-leaning manager

## Historical Profile

**Return** Above Avg  
**Risk** Below Avg  
**Rating** ★★★★★ Above Avg



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	12-16	History
—	—	—	38.34	41.37	35.13	41.18	49.03	47.09	45.32	45.04	NAV
—	—	—	—	9.76	-13.31	19.64	20.58	-2.29	-0.48	1.01	Total Return %
—	—	—	—	-4.69	0.90	2.97	5.09	0.36	0.77	0.89	+/- Bmark 1
—	—	—	—	-1.39	0.40	2.81	5.29	1.57	5.18	-3.48	+/- Bmark 2
—	—	—	—	1.84	1.78	2.40	1.49	1.68	2.05	1.63	Income Return %
—	—	—	—	7.92	-15.08	17.24	19.08	-3.97	-2.53	-0.61	Capital Return %
—	—	—	—	54	40	26	40	27	66	20	Total Rtn % Rank Cat
—	—	—	—	0.71	0.71	0.84	0.61	0.82	0.97	0.74	Income \$
—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.59	0.00	Capital Gains \$
—	—	—	—	0.52	0.50	0.50	0.50	0.49	0.49	0.50	Expense Ratio %
—	—	—	—	1.26	1.61	1.88	1.76	1.85	1.20	1.65	Income Ratio %
—	—	—	—	26	31	24	28	28	28	30	Turnover Rate %
—	—	—	5,450	12,168	14,518	21,221	30,294	35,207	40,460	45,320	Net Assets \$mil

## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	1.01	—	—	—
3 Yr	-0.60	+Avg	-Avg	★★★★
5 Yr	7.22	+Avg	-Avg	★★★★
10 Yr	—	—	—	—
Incept	8.26	—	—	—

## Other Measures

	Standard Index	Best Fit Index
Alpha	0.8	0.5
Beta	0.83	0.88
R-Squared	89	93
Standard Deviation	11.20	—
Mean	-0.60	—
Sharpe Ratio	-0.01	—

Stephen Bepler retired after decades of service and Lawrence Kymisis, a more growth-oriented investor who traffics in mid-caps, joined the current nine-person team. Still, four of its members were already in place here by mid-2002, including longest-tenured manager Mark Denning, who likes stocks with capital appreciation potential that trade at low price multiples.

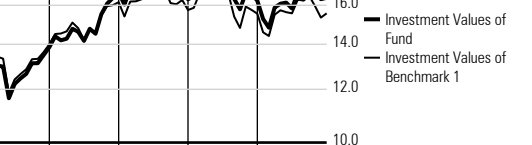
The current team is inclined toward growth but hasn't lost its contrarian edge. As emerging-markets stocks fell into a bear market between April 2015 and early 2016, the managers bought Chinese Internet stocks like top-five holding Alibaba BABA and held fast to Indian banks like HDFC Bank HDB, also a top-five holding. By mid-2016, the fund had a top-decile 24% emerging-markets stake (including South Korea and Taiwan). Management's willingness to court volatility can hurt in the short term, as it did with the fund's bottom-third 0.8% loss in 2015. Over the long haul, though, management has shown the fund can come out ahead.

**Ticker** RERGX **Yield** 1.6% **Total Assets** \$120,688 mil **Mstar Category** Foreign Large Growth

## Investment Style

Equity

## Growth of \$10,000



## Performance Quartile (within Category)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	12-16	History
—	—	—	38.34	41.37	35.13	41.18	49.03	47.09	45.32	45.04	NAV
—	—	—	—	9.76	-13.31	19.64	20.58	-2.29	-0.48	1.01	Total Return %
—	—	—	—	-4.69	0.90	2.97	5.09	0.36	0.77	0.89	+/- Bmark 1
—	—	—	—	-1.39	0.40	2.81	5.29	1.57	5.18	-3.48	+/- Bmark 2
—	—	—	—	1.84	1.78	2.40	1.49	1.68	2.05	1.63	Income Return %
—	—	—	—	7.92	-15.08	17.24	19.08	-3.97	-2.53	-0.61	Capital Return %
—	—	—	—	54	40	26	40	27	66	20	Total Rtn % Rank Cat
—	—	—	—	0.71	0.71	0.84	0.61	0.82	0.97	0.74	Income \$
—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.59	0.00	Capital Gains \$
—	—	—	—	0.52	0.50	0.50	0.50	0.49	0.49	0.50	Expense Ratio %
—	—	—	—	1.26	1.61	1.88	1.76	1.85	1.20	1.65	Income Ratio %
—	—	—	—	26	31	24	28	28	28	30	Turnover Rate %
—	—	—	5,450	12,168	14,518	21,221	30,294	35,207	40,460	45,320	Net Assets \$mil

## Portfolio Analysis 09-30-16

### Total Stocks: 243

Share change since 06-30-16	Sector	Country	% Assets
⊖ Novo Nordisk A/S B	Hlth Care	Denmark	3.08
⊖ Nintendo Co Ltd	Technology	Japan	2.34
Tencent Holdings Ltd	Technology	China	2.27
⊖ Alibaba Group Holding Ltd	Cnsmr Cyc	China	2.26
⊕ AIA Group Ltd	Finan Svcs	Hong Kong	2.07
⊖ Novartis AG	Hlth Care	Switzerland	2.05
HDFC Bank Ltd	Finan Svcs	India	1.85
⊖ SoftBank Group Corp	Comm Svcs	Japan	1.76
Taiwan Semiconductor Manu	Technology	Taiwan	1.75
British American Tobacco	Cnsmr Def	United Kingdom	1.73
⊕ Prudential PLC	Finan Svcs	United Kingdom	1.66
⊕ Sony Corp	Technology	Japan	1.64
⊕ Associated British Foods	Cnsmr Def	United Kingdom	1.31
⊕ Airbus Group SE	Industrl	Netherlands	1.24
⊕ Barclays PLC	Finan Svcs	United Kingdom	1.23
⊖ ASML Holding NV	Technology	Netherlands	1.20
⊕ Murata Manufacturing Co L	Technology	Japan	1.07
Naspers Ltd Class N	Technology	South Africa	1.07
⊕ Infineon Technologies AG	Technology	Germany	1.00
⊕ Sysmex Corp	Hlth Care	Japan	0.98

## Current Investment Style

Value Blend Growth	Market Cap	%	Sector Weightings	% of Stocks	Rel Bmark 1
Large Mid Small	Giant	68.4	⚡ Cyclical	38.66	1.24
	Large	25.6	⚡ BasicMat	6.41	0.70
	Mid	5.9	⚡ CnsmrCyc	11.89	0.92
	Small	0.1	⚡ FinanSvcs	18.11	2.87
	Micro	0.0	⚡ Real Est	2.25	0.82
Avg \$mil: 36,691			⚡ Sensitive	39.39	1.11
			⚡ CommSvcs	5.74	1.51
			⚡ Energy	5.50	1.60
			⚡ Industrl	10.16	0.82
			⚡ Technlgy	17.99	1.15
			→ Defensive	21.95	0.66
			⚡ CnsmrDef	9.03	0.48
			⚡ Hlthcare	10.53	0.81
			⚡ Utilities	2.39	1.63

Value Measures	Rel Category	%	Regional Exposure	% Stock
Price/Earnings	17.69	0.90	UK/W. Europe	42
Price/Book	1.73	0.66	N. America	6
Price/Sales	1.27	0.71	Japan	17
Price/Cash Flow	7.40	0.77	Latn America	2
Dividend Yield %	2.24	0.98	Asia X Japan	31
Growth Measures	% Rel Category		Other	3
Long-Term Erngs	12.46	1.12		
Book Value	-14.74	-2.80		
Sales	-2.05	-1.67		
Cash Flow	4.69	0.55		
Historical Erngs	3.83	0.52		

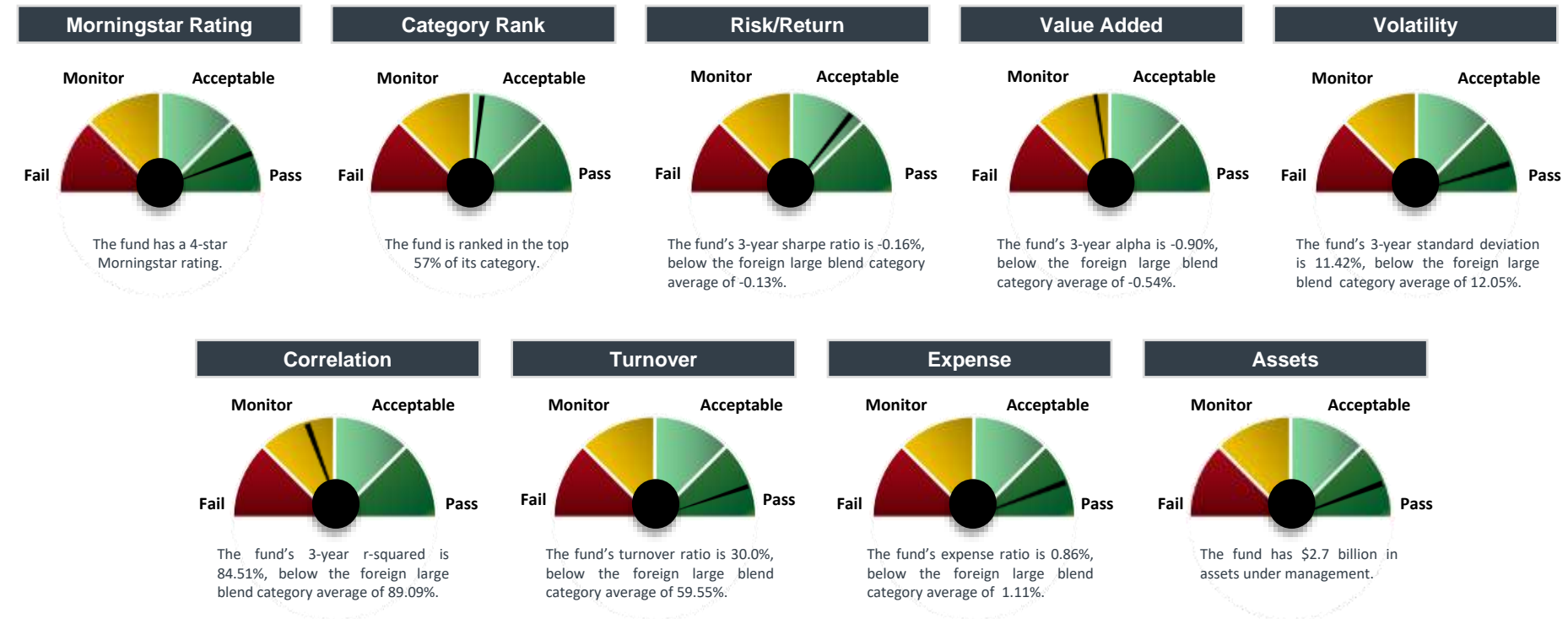
Composition - Net	% Stock	Country Exposure	% Stock
Cash 1.5	Bonds 1.8	Japan	17
Stocks 93.0	Other 3.7	India	8
Foreign (% of Stock)	98.4	UK	13
		Hong Kong	6
		China	9

**Fund Name:** Lazard International Equity Instl (Ticker: LZIEX)  
**Asset Class:** Foreign Large Blend  
**Morningstar Rating:** ★★☆☆

**Manager:** Lazard  
**Fund Type:** Active  
**Status:** Current Fund Option

### Fund Description

Lazard International Equity seeks to generate strong relative returns over a long-term time horizon by investing in companies with strong financial productivity at attractive valuations. Securities are selected from those that comprise the MSCI EAFE Index. The investment team employs a bottom-up approach to stock selection, utilizing both fundamental and quantitative research methodologies.



### Diagnostics Report

Lazard International Equity passes 5 of 9 of our investable fund criteria. The fund scores within an acceptable range for category rank and risk-adjusted performance. We continue to monitor the fund's correlation to its benchmark and value added. Geographic holdings by region include Greater Europe (59.91%), Greater Asia (23.84%), and Americas (16.25%).

# Lazard International Equity Instl

Benchmark 1: MSCI ACWI Ex USA NR USD  
Benchmark 2: MSCI ACWI Ex USA NR USD

Morningstar Analyst Rating 07-06-16

**Bronze**

## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	12.89	-5.11	7.96	6.09	22.70
2013	4.19	-1.30	9.27	7.53	20.84
2014	0.45	4.24	-5.95	-2.81	-4.29
2015	5.67	2.18	-8.42	2.77	1.62
2016	-0.88	-1.48	2.93	-4.67	-4.18

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
Return%	1	2	Cat		
3 Mo	-4.67	-3.42	-3.42	87	9,533
6 Mo	-1.88	-7.45	-7.45	97	9,812
1 Yr	-4.18	-8.68	-8.67	92	9,582
3 Yr Avg	-2.32	-0.54	-0.55	57	9,320
5 Yr Avg	6.68	1.68	1.68	26	13,818
10 Yr Avg	1.83	0.87	0.87	18	11,985
15 Yr Avg	5.41	-0.46	-0.46	36	22,046

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	-2.59	35	0.28	8
5 Yr (estimated)	6.23	13	0.42	17
10 Yr (estimated)	1.23	13	0.59	19

Potential Capital Gain Exposure: -5% of assets

## Morningstar's Take by Gregg Wolper 07-06-16

Lazard International Equity offers experienced management and a sensible process that has demonstrated its worth. It earns a Morningstar Analyst Rating of Bronze.

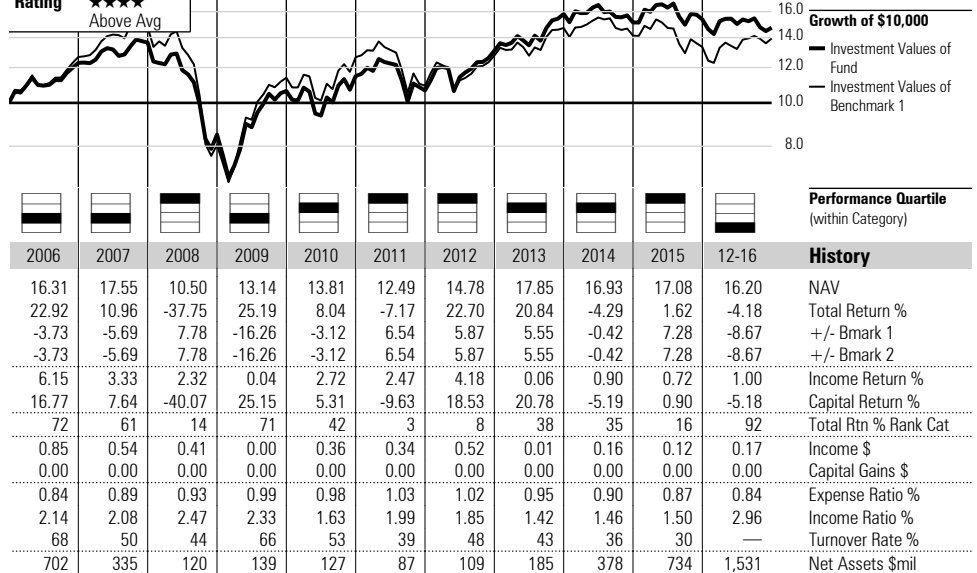
The fund lands in the top quartile of the foreign large-blend Morningstar Category over the trailing five- and 10-year periods through June 30, 2016. One reason: It tends to lose less than its peers and relevant indexes when foreign markets and currencies fall, yet it doesn't inevitably trail in rallies as some defensively minded funds do. For example, it lost 6.8 percentage points less than the category average in rocky 2011, yet when markets soared the following two years, it outperformed then as well (by smaller margins).

London-based lead manager Michael Fry, who's been at the helm since he joined Lazard in late 2005, works with four Lazard veterans on the management team, plus a seasoned analyst group that numbers around 20. They look for companies that demonstrate "financial productivity," or what others might call profitability, as measured by return on equity or other appropriate metrics.

Address: Lazard Funds Inc  
New York, NY 10112  
800-986-3455  
www.lazardnet.com  
Web Address:  
Inception: 10-29-91  
Advisor: Lazard Asset Management LLC  
Subadvisor: None

## Historical Profile

Return Above Avg  
Risk Below Avg  
Rating ★★★★★ Above Avg



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	-4.18			
3 Yr	-2.32	Avg	-Avg	★★★
5 Yr	6.68	+Avg	Avg	★★★★
10 Yr	1.83	+Avg	Low	★★★★
Incept	5.61			

Other Measures	Standard Index	Best Fit Index
Alpha	-0.9	-1.3
Beta	0.83	0.89
R-Squared	85	93
Standard Deviation	11.42	
Mean	-2.32	
Sharpe Ratio	-0.16	

The fund's strategy has a value tilt. But the managers don't want troubled firms no matter how cheaply they're selling or how great the potential gains from a turnaround. As a result, the portfolio typically ends up in the blend portion of the Morningstar Style Box, not in the value area. Its overall market capitalization is lower than the category average. However, this fund is not as growth-leaning, nor as all-cap oriented, as similar sibling Lazard International Strategic Equity LISIX.

As with its sibling, though, this portfolio's makeup can shift markedly depending on market conditions. For example, its percentage of mid-caps, which now sits at around 14% of assets (as classified by Morningstar), has declined from roughly 24% of assets three years ago. Michael Bennett, one of the managers, says the shift owes to the fact that prices of so many mid-cap stocks rose beyond a reasonable level, with bargains easier to find among bigger stocks. Such flexibility can be an advantage. It might deter investors looking for a more targeted approach, but others will find this fund worth checking out.

## Portfolio Analysis 09-30-16

### Total Stocks: 58

Share change since 06-30-16	Sector	Country	% Assets
⊕ Novartis AG	Hlth Care	Switzerland	3.93
⊕ Anheuser-Busch Inbev SA	Cnsmr Def	Belgium	3.27
⊕ British American Tobacco	Cnsmr Def	United Kingdom	3.02
⊕ Shire PLC	Hlth Care	United States	2.88
⊕ Prudential PLC	Finan Svcs	United Kingdom	2.75
⊕ Daiwa House Industry Co L	Real Est	Japan	2.73
⊕ KDDI Corp	Comm Svcs	Japan	2.59
⊕ Royal Dutch Shell PLC Cla	Energy	United Kingdom	2.40
⊕ Taiwan Semiconductor Manu	Technology	Taiwan	2.28
⊕ Teva Pharmaceutical Indus	Hlth Care	Israel	2.21
⊕ Don Quijote Holdings Co L	Cnsmr Def	Japan	2.16
★ SAP SE	Technology	Germany	2.14
⊕ Capgemini SA	Technology	France	2.13
⊕ BHP Billiton PLC	Basic Mat	United Kingdom	2.06
⊕ Sampo Oyj A	Finan Svcs	Finland	2.06
⊕ Wolters Kluwer NV	Cnsmr Cyc	Netherlands	2.02
⊕ Assa Abloy AB	Industrl	Sweden	2.01
⊕ Vinci SA	Industrl	France	1.99
⊕ Wolseley PLC	Industrl	United States	1.97
⊕ Aon PLC	Finan Svcs	United States	1.94

## Current Investment Style

Value Blend Growth	Market Cap	%	Sector Weightings	% of Stocks	Rel Bmark 1
Large Mid Small	Giant	45.8	⚙️ Cyclical	40.36	0.87
	Large	42.2	🏠 BasicMat	5.02	0.59
	Mid	11.5	🏢 CnsmrCyc	13.79	1.22
	Small	0.6	🏦 FinanSvcs	18.63	0.81
	Micro	0.0	🏡 Real Est	2.92	0.83
Avg \$mil: 28,909			📊 Sensitive	33.36	1.02
Value Measures	Rel Category		🏢 CommSvcs	5.29	1.08
Price/Earnings	16.53	1.05	⚡ Energy	7.22	1.00
Price/Book	2.13	1.30	⚙️ Industrl	10.93	1.02
Price/Sales	1.33	1.13	🔧 Technlgy	9.92	1.01
Price/Cash Flow	5.65	0.96	➡️ Defensive	26.27	1.25
Dividend Yield %	3.20	0.98	🏢 CnsmrDef	16.61	1.68
Growth Measures	% Rel Category		🏥 Hlthcare	9.66	1.22
Long-Term Erngs	9.58	1.07	🏠 Utilities	0.00	0.00
Book Value	7.23	2.12			
Sales	-0.26	0.15			
Cash Flow	5.95	1.72			
Historical Erngs	-0.19	0.05			

## Composition - Net

Cash	Bonds	Other	Country Exposure	% Stock
4.4	0.0	2.2	Japan	20
93.4	0.0	2.2	France	9
Foreign (% of Stock)	90.5		UK	20
			Belgium	5
			United States	9

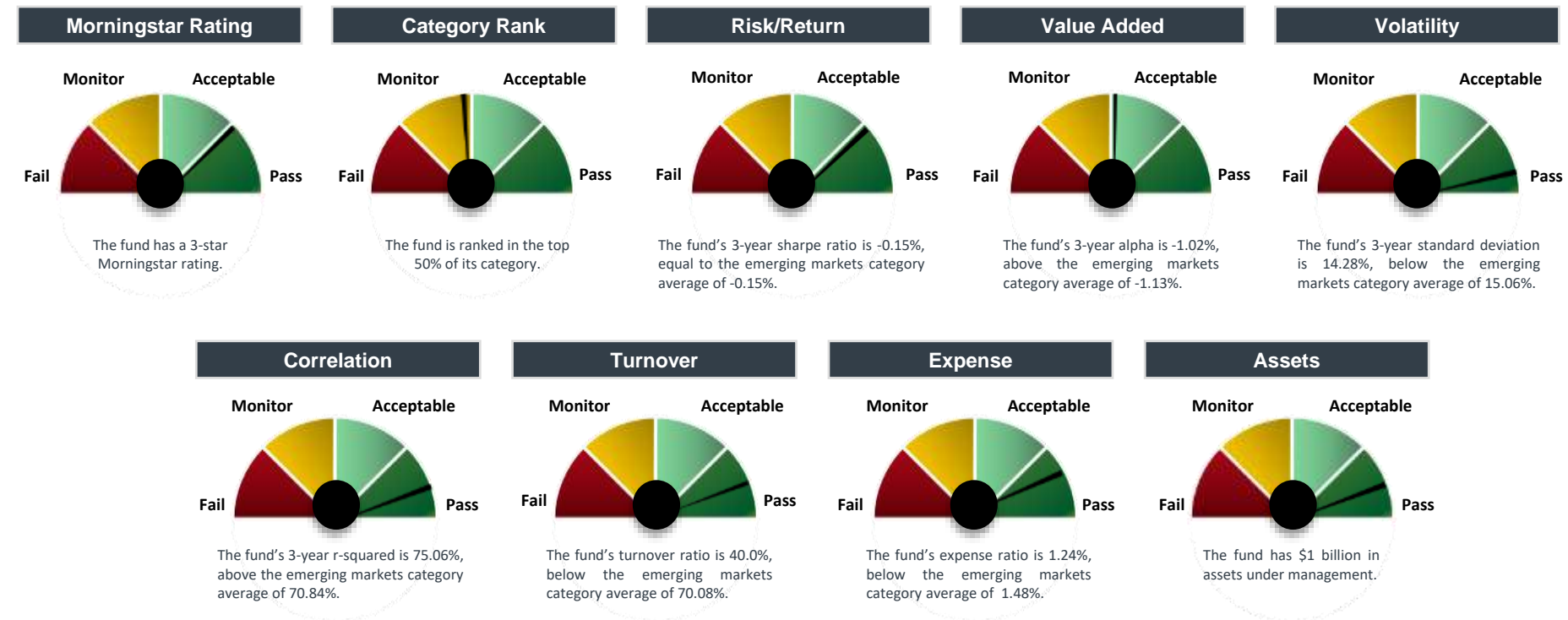


**Fund Name:** Morgan Stanley Inst Emerging Mkts I (Ticker: MGEMX)  
**Asset Class:** Emerging Markets  
**Morningstar Rating:** ★★ ★

**Manager:** Morgan Stanley  
**Fund Type:** Active  
**Status:** Current Fund Option

### Fund Description

Seeks long-term capital appreciation by investing in emerging market countries where economies are developing strongly. The fund managers seek to holding securities with exposure to countries where growth could beat expectations over three to five years. Both macro-thematic research and fundamental bottom-up analysis is used to generate a growth-oriented portfolio.



### Diagnostics Report

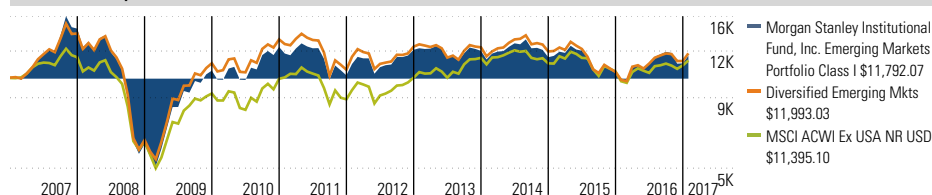
Morgan Stanley Inst Emerging Mkts I passes 7 of 9 of our investable fund criteria. The fund falls within an acceptable range for value added. We continue to monitor the fund's performance relative to its peers. The fund's top country holdings are concentrated in : China (17.56%), South Korea (11.17%), and Brazil (8.86%).

# Morgan Stanley Institutional Fund, Inc. Emerging Markets Portfolio Class I MGEMX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
22.00	↓-0.13   -0.59	0.82	1	Open	\$5	None	1.24%	★★★	Diversified Emerging Mkts	Large Growth Mkts

## Growth of 10,000 01-30-2007 - 01-30-2017



## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,562	10,562	11,985	10,242	10,722	11,715
Fund	5.62	5.62	19.85	0.80	1.40	1.60
+/- MSCI ACWI Ex USA NR USD	2.07	2.07	3.75	0.00	-3.08	0.33
+/- Category	-0.04	-0.04	-1.49	0.08	0.41	-0.34
% Rank in Cat	53	53	59	57	37	58
# of Funds in Cat	879	879	808	599	424	173

\* Currency is displayed in USD

## Top Holdings 09-30-2016

	Weight %	Last Price	Day Chg %	52 Week Range
⊕ Tencent Holdings Ltd	4.74	204.40 USD	-0.29 ↓	132.10 - 220.80
⊕ Taiwan Semiconductor Manufacturing Co Ltd	2.82	185.50 USD	0.27 ↑	137.00 - 193.00
⊕ Samsung Electronics Co Ltd	2.53	— USD	-1.10 ↓	1,118,000.00 - 2,000,000.00
⊕ China Mobile Ltd	2.25	87.85 USD	-0.40 ↓	80.30 - 99.30
⊕ Naspers Ltd Class N	2.00	— USD	-0.88 ↓	168,594.00 - 255,359.00
% Assets in Top 5 Holdings	14.34			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

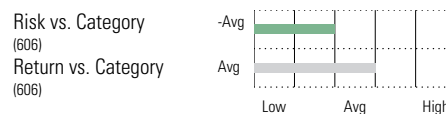
## Top Sectors 09-30-2016

	Fund	3 Yr High	3 Yr Low	Cat Avg	
Technology	22.99	23.12	19.64	22.19	■ Fund ▼ Cat Avg
Financial Services	22.86	29.85	22.86	22.71	
Consumer Cyclical	17.11	17.11	11.46	13.20	
Consumer Defensive	11.79	11.79	9.57	11.51	
Industrials	8.31	8.31	5.16	5.48	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-16-2016	20.51	0.0000	0.0000	0.0000	0.1700	0.1700
07-05-2016	20.78	0.0000	0.0000	0.0000	0.0000	0.0000
12-16-2015	19.77	0.0000	0.0000	0.0000	0.1300	0.1300
07-02-2015	23.27	0.0000	0.0000	0.0000	0.0400	0.0400
12-16-2014	21.26	1.0300	0.0000	0.0000	0.1700	1.2000

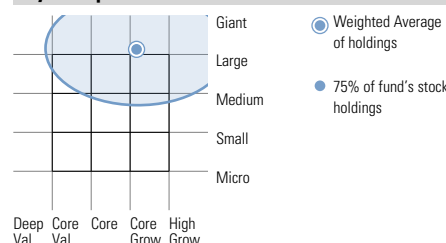
## 3 Year Average Morningstar Risk Measures



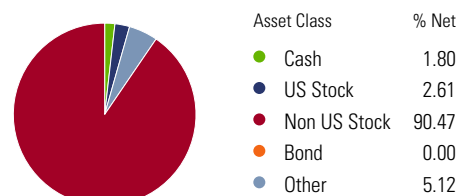
## Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

## Style Map



## Asset Allocation



## Management

	Start Date
Paul C. Psaila	02-28-1994
Eric Carlson	09-30-1997
Ruchir Sharma	04-30-2002
Munib Madni	05-17-2012
Samuel Rhee	05-17-2012
Gaite Ali	04-30-2013

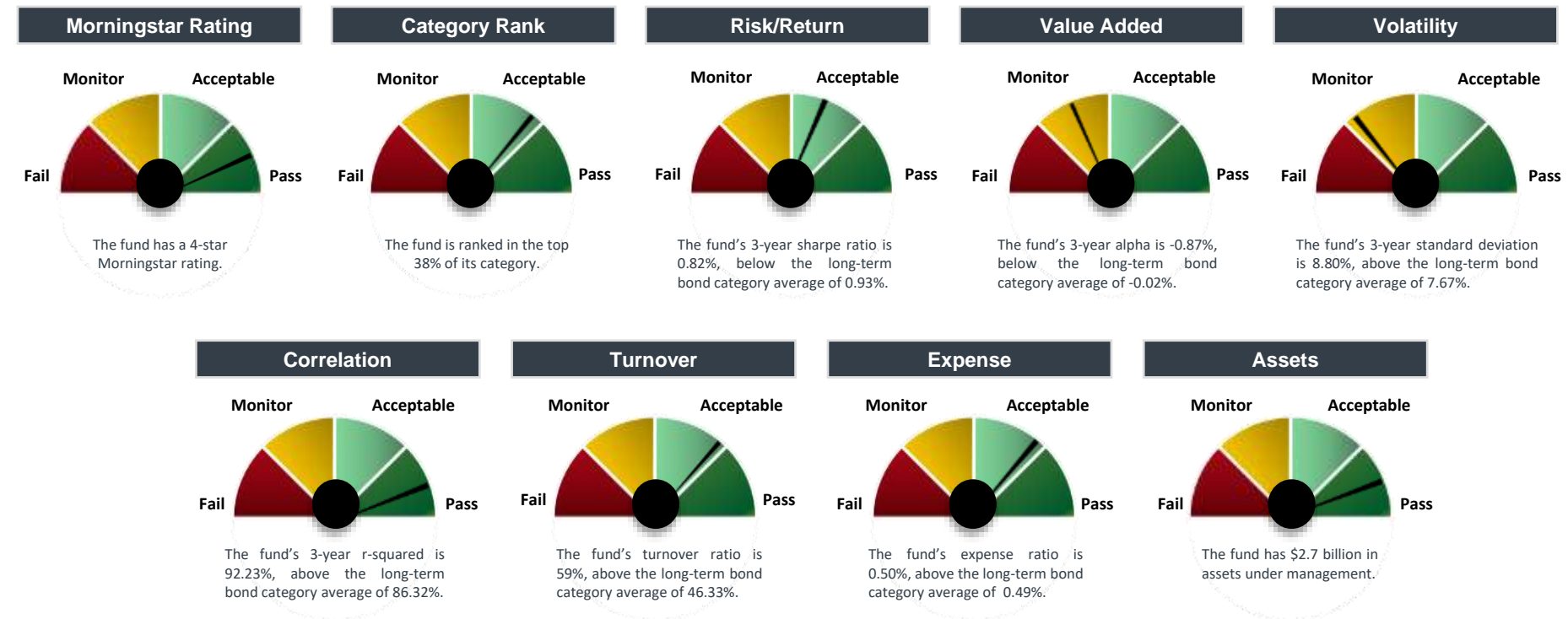


**Fund Name:** PIMCO Long Duration Total Return Instl (Ticker: PLRIX)  
**Asset Class:** Long-Term Bond  
**Morningstar Rating:** ★★☆☆

**Manager:** PIMCO  
**Fund Type:** Active  
**Status:** Current Fund Option

### Fund Description

PIMCO Long Duration Total Return Instl provides broad market exposure to high-quality, longer duration fixed income securities. The fund utilizes a variety of strategies to enhance return potential and manage overall portfolio risk. PIMCO seeks to invest in a diversified portfolio of longer duration bonds, with an average duration that normally varies within two years (plus or minus) of the Barclays Capital Long-Term Government/Credit Index.



### Diagnostics Report

PIMCO Long Duration Total Return Instl passes 3 of 9 investable fund criteria. We continue to monitor the fund's volatility and value added. The fund falls within an acceptable range for category rank, risk/return, turnover, and expense. PIMCO Long Duration Total Return Instl ended 2016 on a high note as the fund returned 7.18% after fees, outperforming the benchmark by 0.51%. Exposure to high yield corporate financials and industrials as well as security selection within agency debentures were among the primary contributors to outperformance. Heading into 217, the fund maintains a more moderated overall duration profile as political and policy uncertainty has risen with global influences likely to continue to weigh on U.S. interest rates in the near-term.

# PIMCO Long Duration Total Return Instl

**Ticker** PLRIX **Yield** 4.4% **SEC Yield** 4.32% **Total Assets** \$2,623 mil **Mstar Category** Long-Term Bond

**Benchmark 1:** BBgBarc US Govt/Credit Long TR USD  
**Benchmark 2:** BBgBarc US Agg Bond TR USD

**Morningstar Analyst Rating** 07-27-16

**Bronze**

## Morningstar Pillars

Process	⊕ Positive
Performance	⊕ Positive
People	⊕ Positive
Parent	⊙ Neutral
Price	⊙ Neutral

## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ⊙ Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	-1.18	7.59	3.27	0.44	10.28
2013	-1.11	-6.74	-0.65	-0.21	-8.56
2014	6.58	5.02	1.22	5.06	19.02
2015	3.44	-7.07	1.64	-1.17	-3.44
2016	6.71	6.82	2.18	-7.98	7.18

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of
Period	Return%	1	2	Cat	\$10,000
3 Mo	-7.98	-0.14	-5.00	62	9,202
6 Mo	-5.97	0.73	-3.44	50	9,403
1 Yr	7.18	0.51	4.54	27	10,718
3 Yr Avg	7.20	0.04	4.17	38	12,318
5 Yr Avg	4.43	0.36	2.20	53	12,420
10 Yr Avg	7.72	0.87	3.38	1	21,043
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	4.36	56	2.65	69
5 Yr (estimated)	1.93	80	2.40	73
10 Yr (estimated)	5.15	17	2.39	67

Potential Capital Gain Exposure: 1% of assets

## Morningstar's Take by Eric Jacobson 07-27-16

There have been several changes at PIMCO and at this fund in the past few years. Though it has considerable strengths, including massive PIMCO resources supporting its strategy, there's enough uncertainty to keep the fund's Morningstar Analyst Rating at Bronze.

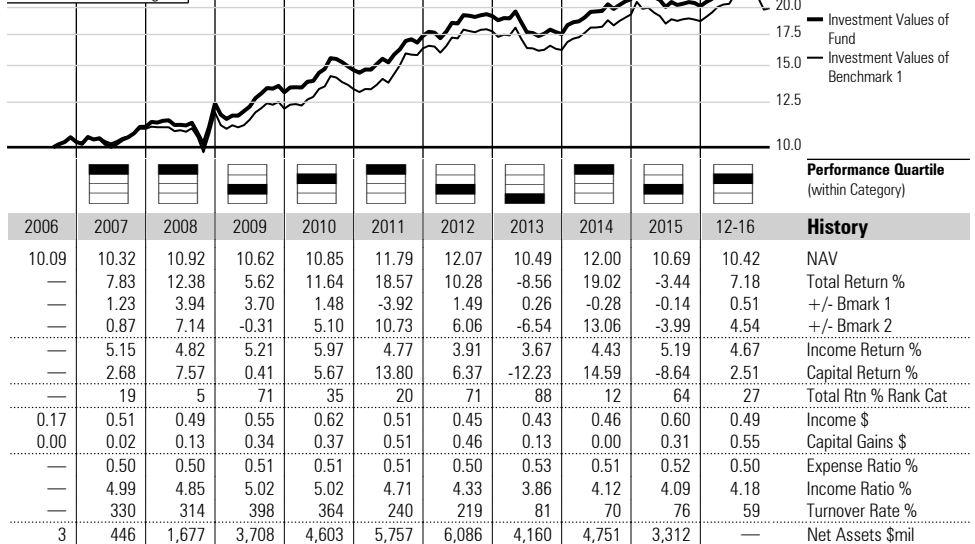
After co-CIO Mohamed El-Erian left in January 2014, PIMCO added to its macro-specialist-heavy investment committee, installing others with notable bottom-up success. Then, following co-founder Bill Gross' September 2014 exit, the firm hired even more macro specialists. Manager Steve Rodosky then took a leave of absence from this fund at the end of February 2016.

The leave wasn't expected to last, but PIMCO prudently added Mike Cudzil and Mohit Mittal as managers. Mittal was already a co-leader of the firm's liability-driven investment team, specializing in long-duration portfolios. Cudzil is a mortgage specialist but now co-heads this group with Mittal and spends 70% of his time on LDI strategies.

Rodosky's leave lasted until July 2016. But while he remains a member of the LDI team and comanager here, he took on a different mix of roles after his return, including

## Historical Profile

**Return** Above Avg  
**Risk** Above Avg  
**Rating** ★★★★★ Above Avg



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	7.18			
3 Yr	7.20	+Avg	+Avg	★★★★
5 Yr	4.43	Avg	+Avg	★★★★
10 Yr	7.72	High	Avg	★★★★★
Incept	7.73			

## Other Measures

	Standard Index	Best Fit Index
Alpha	-0.9	0.0
Beta	2.79	1.00
R-Squared	92	98
Standard Deviation	8.80	
Mean	7.20	
Sharpe Ratio	0.82	

## Portfolio Analysis 09-30-16

Total Fixed Income: 637	Date of Maturity	Amount 000	Value \$000	% Assets
Irs Usd 1.75000 12/21/1	12-21-26	286,880	-294,029	10.54
Cdx Ig27 5y Ice	12-20-21	228,600	-231,438	8.29
Fin Fut Us 2yr Cbt 12/3	12-31-16	149,200	-162,978	5.84
Fin Fut Us Ultra 30yr C	12-31-16	74,900	137,722	4.94
Resolution Fdg Fed Bk P	01-15-30	173,600	125,587	4.50
Resolution Fdg Fed Bk P	04-15-30	156,902	112,714	4.04
US Treasury Bond 2.875%	08-15-45	100,500	111,963	4.01
US Treasury Note	07-15-23	97,980	101,618	3.64
US Treasury Bond 2.75%	11-15-42	85,250	92,838	3.33
US Treasury Bond 3%	11-15-44	76,600	87,360	3.13
US Treasury Bond 3.75%	11-15-43	58,300	75,898	2.72
US Treasury Note 1.75%	01-31-23	63,200	64,703	2.32
US Treasury Bond 2.75%	08-15-42	57,850	63,062	2.26
Irs Usd 1.55500 06/30/1	06-30-26	59,800	-60,231	2.16
Irs Usd 1.75000 12/21/1	12-21-26	58,800	-60,104	2.15
Irs Usd 1.51500 06/30/1	06-30-26	56,500	-56,697	2.03
US Treasury Bond 2.5%	02-15-45	54,100	55,922	2.00
US Treasury Note 1.375%	01-31-21	52,400	52,981	1.90
US Treasury Bond 3.625%	08-15-43	41,400	52,722	1.89
US Treasury Bond 3.125%	02-15-43	44,886	52,314	1.87

## Current Investment Style

Duration	Mod	Ext	Quality
Ltd	Mod	Ext	High
			Med
			Low
1 figure provided by fund			
Avg Eff Duration <sup>1</sup>	14.4 Yrs		
Avg Eff Maturity	23.1 Yrs		
Avg Credit Quality	—		
Avg Wtd Coupon	4.45%		
Avg Wtd Price	108.74% of par		

## Coupon Range

% of Bonds	
0% PIK	11.1
0% to 4%	38.6
4% to 6%	30.9
6% to 8%	16.4
8% to 10%	2.4
More than 10%	0.5

## Credit Analysis

% bonds	
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
Not Rated	—

## Sector Breakdown

% Assets	
Government	25
Government Related	11
Corporate	34
Agency MBS	2
Non-Agency Residential MBS	2
Commercial MBS	6
Covered Bond	0
Asset Backed	0
Municipal	1
Cash & Equivalents	19
Other	0

## Composition - Net

	Bonds	Other
Cash	-6.1	104.0
Stocks	0.2	2.0

## Special Securities

Restricted/Illiquid Secs	21
Emerging-Markets Secs	4
Options/Futures/Warrants	0

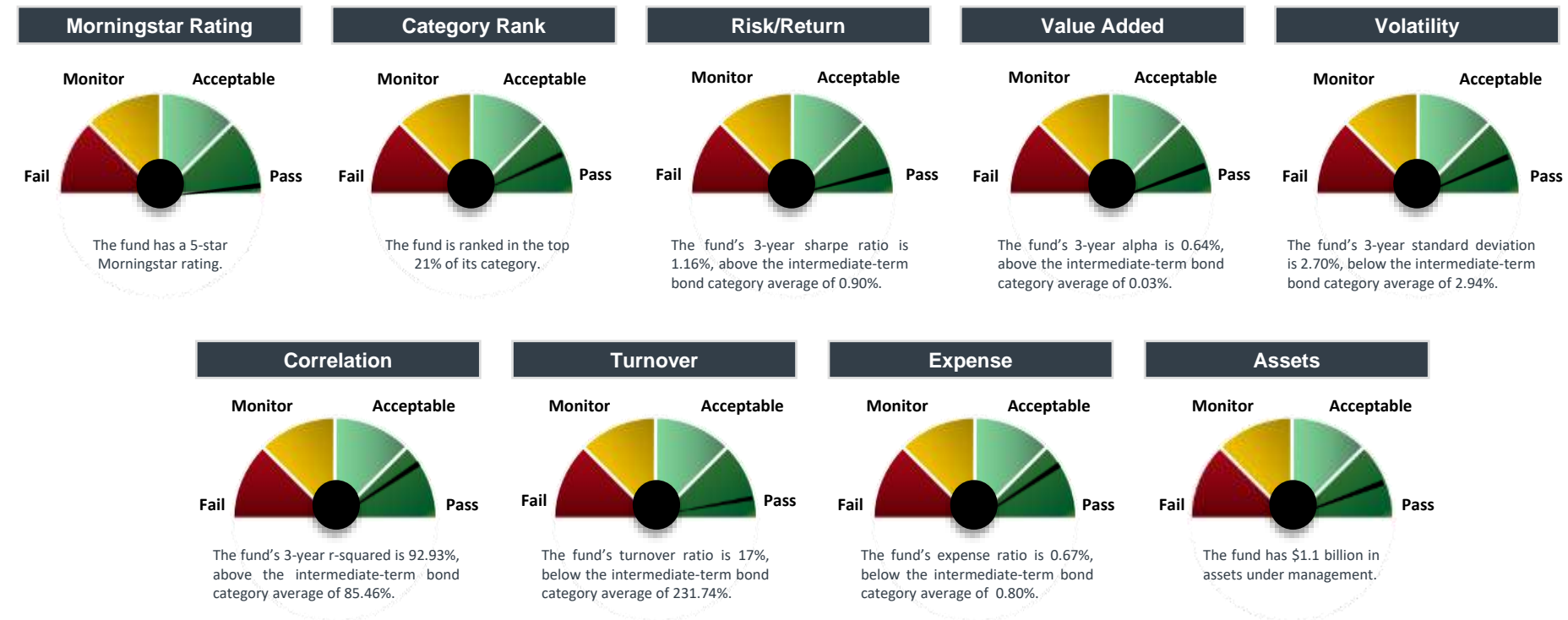
Address:	PIMCO Investments LLC distributor New York NY 10019 888-877-4626	Minimum Purchase:	\$100,000	Add: —	IRA: —
Web Address:	www.pimco.com	Min Auto Inv Plan:	—	Add: —	
Inception:	08-31-06	Sales Fees:	No-load		
Advisor:	Pacific Investment Management Co LLC	Management Fee:	0.25%, 0.25%A		
Subadvisor:	None	Actual Fees:	Mgt:0.50% Dist:—		
		Expense Projections:	3Yr:\$176 5Yr:\$307 10Yr:\$689		
		Income Distribution:	Monthly		

**Fund Name:** Commerce Bond (Ticker: CFBNX)  
**Asset Class:** Intermediate-Term Bond  
**Morningstar Rating:** ★★★★★

**Manager:** Commerce  
**Fund Type:** Active  
**Status:** Current Fund Option

### Fund Description

The fund seeks total return through current income and capital appreciation. The investment team invests primarily in a broad range of government and investment-grade corporate bonds and other fixed-income securities.



### Diagnostics Report

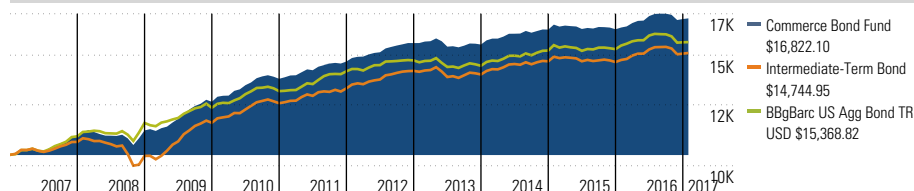
Commerce Bond passes 9 of 9 of our investable fund criteria. The fund has a strong long-term track record, ranking in the top third of its peer group on a 1-year, 3-year, and 5-year basis.

# Commerce Bond Fund CFBNX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
19.77	↓0.00   0.03	3.40	1	Open	\$1,000	None	0.67%	★★★★★	Intermediate-Term Bond	

## Growth of 10,000 01-30-2007 - 01-30-2017



## Investment Strategy

The investment seeks total return through current income and, secondarily, capital appreciation. The fund invests at least 80% of its net assets plus any borrowings for investment purposes in bonds. It may invest up to 80% of its total assets in mortgage-backed and asset-backed securities. The fund may invest up to 10% of its total assets in high yield securities known as junk bonds and up to 35% of its total assets in obligations rated BBB or Baa by one of the major credit rating agencies.

## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,026	10,026	10,355	10,879	11,641	16,811
Fund	0.26	0.26	3.55	2.85	3.09	5.33
+/- BBG US Agg Bond TR USD	0.20	0.20	2.23	0.26	0.99	0.95
+/- Category	0.03	0.03	0.89	0.45	0.64	1.13
% Rank in Cat	39	39	27	24	21	9
# of Funds in Cat	1,025	1,025	962	848	738	531

\* Currency is displayed in USD

## Top Holdings 11-30-2016

	Weight %	Maturity Date	Amount Mil	Value Mil
Winwater Mtg Ln Tr 2015-5 CMO	1.14	08-20-2045	12.16	12.23
US Treasury Note 0.75%	0.93	12-31-2017	10.00	9.98
US Treasury Bond 2.75%	0.89	11-15-2042	10.00	9.53
US Treasury Note 2.125%	0.76	08-31-2020	8.00	8.14
Ms Bofa MI Tr 2015-C21 CMO 3.14333%	0.75	03-17-2048	7.83	8.02

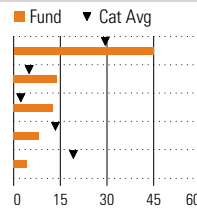
% Assets in Top 5 Holdings

4.48

⊕ Increase ⊖ Decrease ☆ New to Portfolio

## Top Sectors 11-30-2016

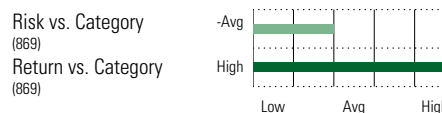
	Fund	BMark	Cat Avg
Corporate Bond	44.91	—	28.16
Asset-Backed	13.97	—	3.68
Non-Agency Residential MBS	12.74	—	1.01
Commercial MBS	8.14	—	12.13
U.S. Treasury	4.26	—	17.90



## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-30-2016	19.77	0.0000	0.0000	0.0000	0.0600	0.0600
12-02-2016	19.75	0.0100	0.0000	0.0000	0.0000	0.0100
11-30-2016	19.77	0.0000	0.0000	0.0000	0.0600	0.0600
10-31-2016	20.22	0.0000	0.0000	0.0000	0.0500	0.0500
09-30-2016	20.36	0.0000	0.0000	0.0000	0.0600	0.0600

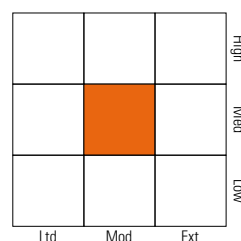
## 3 Year Average Morningstar Risk Measures



## Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

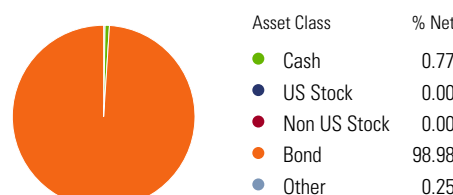
## Style Map 12-31-2016



## Bond Statistics

	Value
Average Effective Duration (Years)	5.43
Average Effective Maturity (Years)	7.53
Average Credit Quality	BBB
Average Weighted Coupon	3.86
Average Weighted Price	103.18

## Asset Allocation



## Management

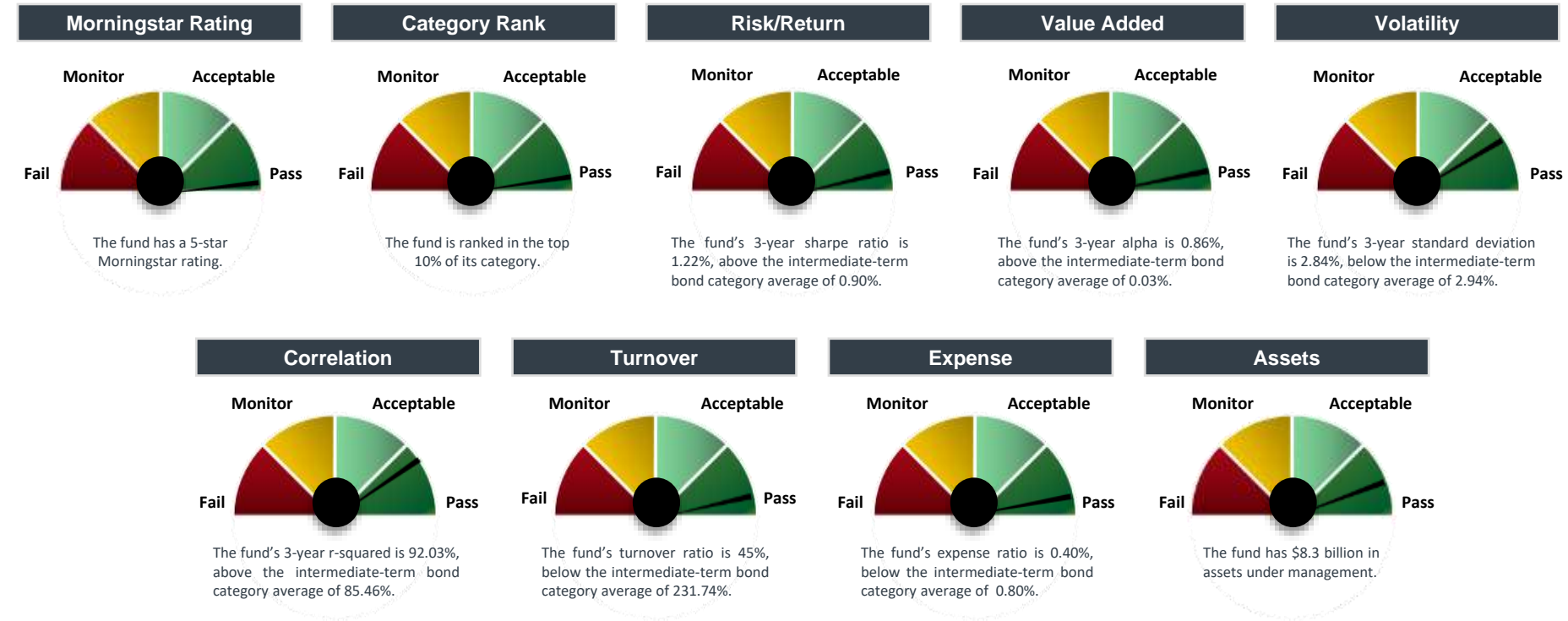
	Start Date
Scott M. Colbert	12-12-1994
Brent L. Schowe	03-01-2012

**Fund Name:** JPMorgan Core Plus Bond R6 (Ticker: JCPUX)  
**Asset Class:** Intermediate-Term Bond  
**Morningstar Rating:** ★★★★★

**Manager:** JPMorgan  
**Fund Type:** Active  
**Status:** New Fund Option

### Fund Description

JPMorgan Core Plus Bond R6 seeks income and capital appreciation by integrating high quality core bonds with dynamic sector allocation and a macro overlay. The fund managers combine bottom-up security selection with top down analysis to improve potential for attractive risk-adjusted returns and increased income.



### Diagnostics Report

JPMorgan Core Plus Bond R6 passes 9 of 9 of our investable fund criteria. The fund has a strong track record, ranking in the top third of its peer group on a 1-year, 3-year, and 5-year basis. As of the end of the fourth quarter, the fund has found value in longer-duration agency commercial mortgage-backed securities as well as in shorter-duration consumer credit services. The investment team has also been investing opportunistically in high-yield and emerging markets debt.

# JPMorgan Core Plus Bond R6

Benchmark 1: BBgBarc US Agg Bond TR USD  
Benchmark 2: BBgBarc US Agg Bond TR USD

Morningstar Analyst Rating 10-31-16

Neutral

## Morningstar Pillars

Process	● Neutral
Performance	⊕ Positive
People	● Neutral
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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	1.96	1.83	2.29	1.05	7.32
2013	0.69	-1.91	0.88	0.79	0.42
2014	2.42	2.13	0.21	1.50	6.39
2015	1.89	-1.34	0.59	-0.75	0.35
2016	2.74	2.81	1.13	-2.41	4.25

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	-2.41	0.57	0.56	38	9,759
6 Mo	-1.30	1.23	1.23	35	9,870
1 Yr	4.25	1.60	1.60	21	10,425
3 Yr Avg	3.63	0.60	0.60	10	11,130
5 Yr Avg	3.70	1.47	1.47	11	11,994
10 Yr Avg	5.38	1.04	1.04	7	16,889
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	2.11	13	1.47	83
5 Yr (estimated)	2.11	13	1.53	87
10 Yr (estimated)	3.58	9	1.71	88

Potential Capital Gain Exposure: 0% of assets

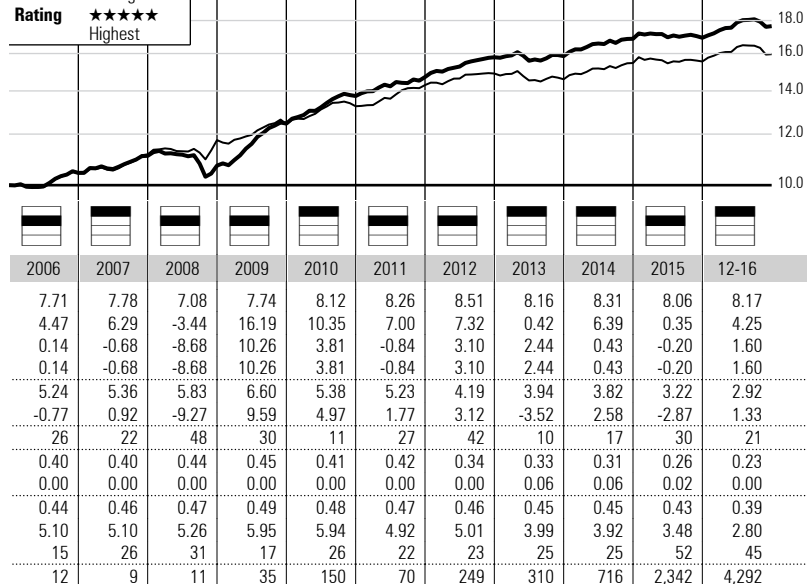
## Morningstar's Take by Cara Esser, CFA 10-31-16

Lead managers Steven Lear and Andrew Norelli are off to a good start at JPMorgan Core Plus Bond: The fund has outpaced more than 80% of peers under their care and has done so with less volatility. The fund's fees also rank among the lowest in its peer group. A bout of turnover on the historically stable Columbus, OH-based Value Driven fixed-income team, however, warrants caution. The fund earns a Morningstar Analyst Rating of Neutral for now.

This fund's management team includes sleeve managers who pick individual holdings for the fund, while Lear and Norelli make decisions about allocation, duration, and curve positioning. The current roster includes sleeve managers Rick Figuly (based in Columbus, Ohio, and portfolio manager of J.P. Morgan's flagship Core Bond WOBX) and Frederick Sabetta (based in Cincinnati, OH, and portfolio manager of the firm's high-yield funds). Both were named to this fund in 2006. Lear and Norelli officially took the reins in late 2013 and early 2014, respectively, after the previous lead managers retired. Norelli worked with the previous management team beginning in late 2012. In the spring of 2016, the fund's longest tenured manager, Mark Jackson,

## Historical Profile

Return High  
Risk Average  
Rating ★★★★★  
Highest



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	4.25			
3 Yr	3.63	High	Avg	★★★★★
5 Yr	3.70	+ Avg	-Avg	★★★★★
10 Yr	5.38	High	Avg	★★★★★
Incept	5.14			

Other Measures	Standard Index	Best Fit Index
Alpha	0.9	0.9
Beta	0.90	0.90
R-Squared	92	92
Standard Deviation	2.84	
Mean	3.63	
Sharpe Ratio	1.22	

unexpectedly left the firm for a competitor. Most recently, a senior member of the investment-grade credit team also departed. J.P. Morgan's Columbus team has historically been very stable and the recent spate of turnover (on this and other funds) is concerning.

This fund falls into the Intermediate Term Bond category, though it packs a little more punch than its average peer and its Bloomberg Barclays U.S. Aggregate Bond Index benchmark. The fund holds between 5% and 20% in junk-rated corporates (the index and many peers hold none), up to 10% in emerging-markets debt, and 35%-50% in securitized fare. The fund's managers have done a good job of keeping a lid on volatility despite the added credit risk.

This fund has a number of positive traits, though more stability among the investment staff would help its overall case.

Ticker JCPUX  
Yield 2.8%  
SEC Yield 2.67%  
Total Assets \$7,969 mil

Mstar Category  
Intermediate-Term Bond

Investment Style  
Fixed Income

## Growth of \$10,000

Investment Values of Fund  
Investment Values of Benchmark 1

Performance Quartile (within Category)

## History

NAV	7.71
Total Return %	4.47
+/- Bmark 1	0.14
+/- Bmark 2	0.14
Income Return %	5.24
Capital Return %	-0.77
Total Rtn % Rank Cat	26
Income \$	0.40
Capital Gains \$	0.00
Expense Ratio %	0.44
Income Ratio %	5.10
Turnover Rate %	15
Net Assets \$mil	12

## Portfolio Analysis 11-30-16

Total Fixed Income: 3036	Date of Maturity	Amount 000	Value \$000	% Assets
US Treasury Note 2.625%	11-15-20	209,142	216,495	2.87
US Treasury Note 1.5%	05-31-20	164,545	164,050	2.18
US Treasury Note 1%	12-15-17	149,100	149,234	1.98
US Treasury Note 1%	03-15-18	119,000	119,028	1.58
US Treasury Note 1.375%	06-30-18	85,296	85,732	1.14
US Treasury Note 1%	05-31-18	64,000	63,972	0.85
US Treasury Bond 3%	11-15-44	64,035	63,517	0.84
Fed Natl Mort Assc 3.5%	12-15-46	60,000	61,556	0.82
US Treasury Bond 3.75%	11-15-43	44,972	51,238	0.68
US Treasury Bond 2.875%	08-15-45	50,000	48,273	0.64
U S Treas Sec Stripped	05-15-29	67,000	47,744	0.63
US Treasury Bond 4.375%	05-15-41	37,318	46,389	0.62
US Treasury Bond 3%	11-15-45	42,852	42,403	0.56
US Treasury Bond 3%	05-15-45	42,260	41,849	0.56
FNMA 3.5%	01-01-44	40,016	41,304	0.55
U S Treas Sec Stripped	08-15-28	48,829	35,614	0.47
US Treasury Bond 2.5%	02-15-45	39,408	35,226	0.47
US Treasury Note 1.5%	12-31-18	30,644	30,867	0.41
FNMA 3.07%	02-01-25	29,120	29,890	0.40
FHLMC 5%	02-01-34	26,819	29,688	0.39

## Current Investment Style

Duration	Mod	Ext
Low	High	Low

1 figure provided by fund

Avg Eff Duration<sup>1</sup> 5.7 Yrs  
Avg Eff Maturity 7.4 Yrs  
Avg Credit Quality BBB  
Avg Wtd Coupon 3.80%  
Avg Wtd Price 100.75% of par

Coupon Range	% of Bonds
0% PIK	4.8
0% to 4%	60.4
4% to 6%	24.1
6% to 8%	7.9
8% to 10%	2.5
More than 10%	0.3

Credit Analysis	% bonds 09-30-16
AAA	58
AA	3
A	10
BBB	11
Below B	1
Not Rated	6

## Sector Breakdown % Assets

Government	24
Government Related	1
Corporate	27
Agency MBS	23
Non-Agency Residential MBS	4
Commercial MBS	4
Covered Bond	0
Asset Backed	12
Municipal	0
Cash & Equivalents	6
Other	0

Composition - Net	Bonds	Other
Cash	5.9	93.5
Stocks	0.2	0.4

Special Securities	
Restricted/Illiquid Secs	22
Emerging-Markets Secs	1
Options/Futures/Warrants	0

Address:	Jpmorgan Trust II New York, NY 10167 800-480-4111	Minimum Purchase:	\$15000000	Add: —	IRA: —
Web Address:	www.jpmorganfunds.com	Min Auto Inv Plan:	—	Add: —	
Inception:	02-22-05	Sales Fees:	No-load		
Advisor:	J.P. Morgan Investment Management Inc	Management Fee:	0.30%, 0.15%A		
Subadvisor:	None	Actual Fees:	Mgt:0.30% Dist:—		
		Expense Projections:	3Yr:\$133 5Yr:\$236 10Yr:\$537		
		Income Distribution:	Monthly		



**Fund Name:** Federated Instl High Yield Bond Instl (Ticker: FIHBX)

**Asset Class:** High-Yield Bond

**Morningstar Rating:** ★★★★★

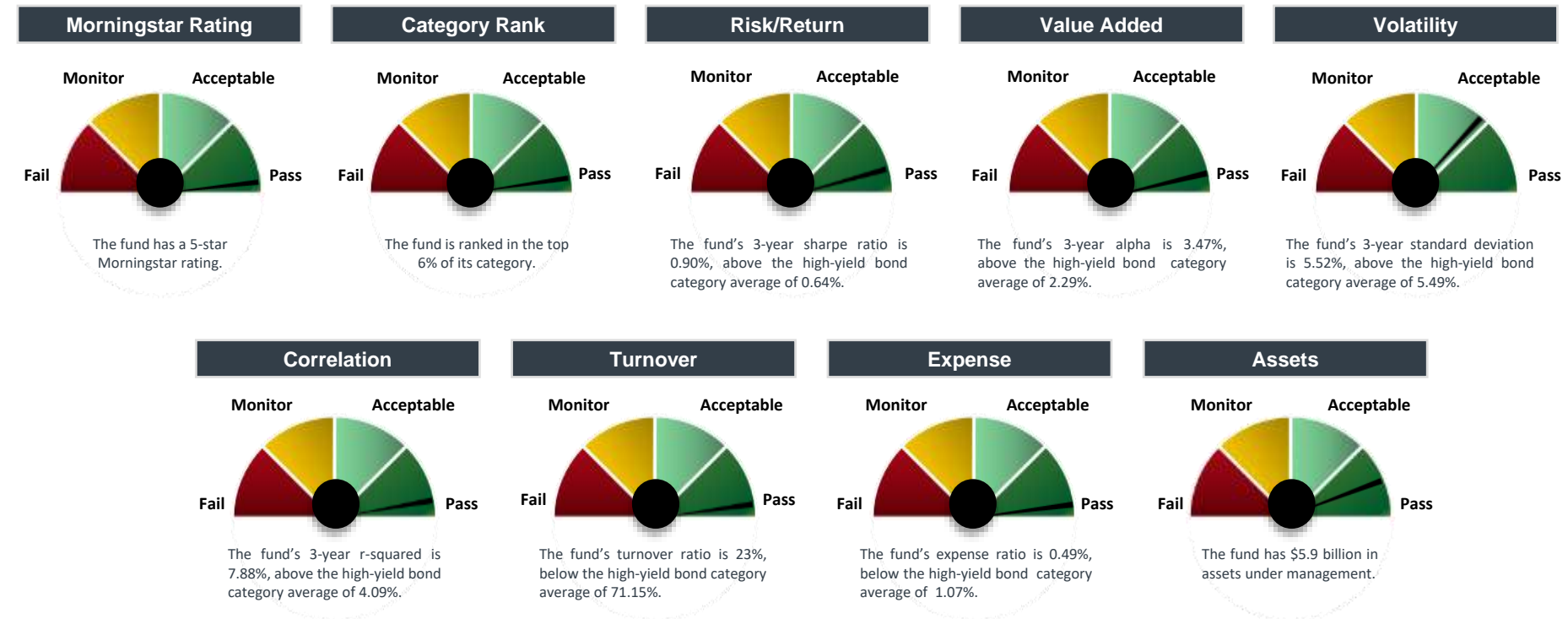
**Manager:** Federated

**Fund Type:** Active

**Status:** Current Fund Option

### Fund Description

The fund seeks a high level of current income by investing in below investment-grade securities, providing exposure to the higher-yielding, lower-rated, corporate bond market. Investors have the potential for attractive relative total returns in economic recoveries through ratings upgrades or improved performance of issuing companies.



### Diagnostics Report

Federated Institutional High Yield Bond Instl passes 8 of 9 of our investable fund criteria. The fund falls within an acceptable range for volatility. Federated Institutional High Yield Bond Instl has a formidable track record, ranking in the top third of its peer group on a 1-year, 3-year, and 5-year basis.

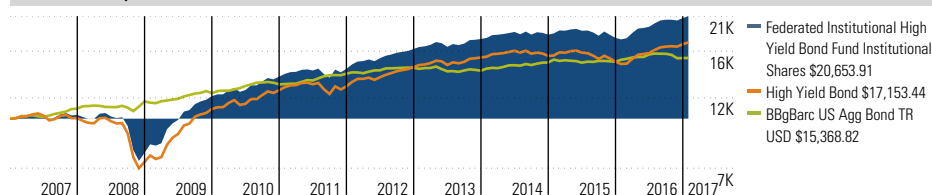
# Federated Institutional High Yield Bond Fund Institutional Shares

## FIHBX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
9.95	↓0.00   0.02	5.75	6	Open	\$1	None	0.49%	★★★★★	High Yield Bond	Small Value

### Growth of 10,000 01-30-2007 - 01-30-2017



### Investment Strategy

The investment seeks high current income. The fund pursues its investment objective by investing primarily in a diversified portfolio of high yield corporate bonds (also known as "junk bonds"), which include debt securities issued by U.S. or foreign businesses (including emerging market debt securities). The Adviser does not limit the fund's investments to securities of a particular maturity range. It may invest in derivative contracts (for example, futures contracts, option contracts and swap contracts) to implement its investment strategies.

### Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,132	10,132	11,780	11,666	14,104	20,666
Fund	1.32	1.32	17.80	5.27	7.12	7.53
+/- BBgBarc US Agg Bond TR USD	1.26	1.26	16.49	2.68	5.02	3.15
+/- Category	0.08	0.08	1.31	1.79	1.32	1.60
% Rank in Cat	41	41	40	6	10	4
# of Funds in Cat	733	733	699	594	472	315

\* Currency is displayed in USD

### Top Holdings 09-30-2016

	Weight %	Maturity Date	Amount Mil	Value Mil
High Yield Bond Portfolio	5.31	—	45.25	286.46
⊕ First Data Corp New 144A 5.75%	0.86	01-15-2024	44.98	46.38
⊕ Crimson Merger Sub / Ortho-C 144A 6.625%	0.75	05-15-2022	45.63	40.38
⊕ Jaguar Hldg Co Li / Jaguar M 144A 6.375%	0.73	08-01-2023	37.78	39.38
⊕ Chs / Cmnty Health Sys 6.875%	0.65	02-01-2022	40.75	35.25
% Assets in Top 5 Holdings	8.30			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

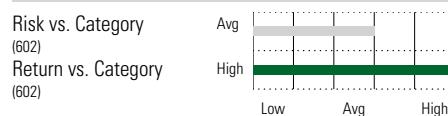
### Top Sectors 09-30-2016

	Fund	BMark	Cat Avg	
Corporate Bond	96.56	—	84.82	■ Fund ▼ Cat Avg
Convertible	1.11	—	0.44	
Bank Loan	0.00	—	3.27	
Preferred	0.00	—	0.12	
Agency Mortgage-Backed	0.00	—	0.38	

### Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-30-2016	9.86	0.0000	0.0000	0.0000	0.0500	0.0500
11-30-2016	9.74	0.0000	0.0000	0.0000	0.0500	0.0500
10-31-2016	9.84	0.0000	0.0000	0.0000	0.0500	0.0500
09-30-2016	9.89	0.0000	0.0000	0.0000	0.0500	0.0500
08-31-2016	9.88	0.0000	0.0000	0.0000	0.0500	0.0500

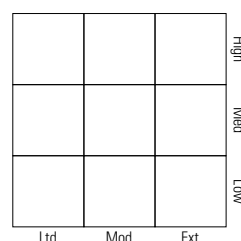
### 3 Year Average Morningstar Risk Measures



### Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

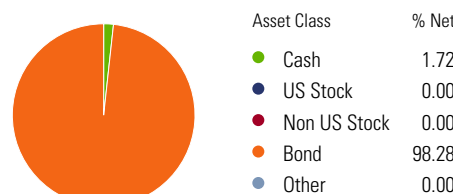
### Style Map 09-30-2016



### Bond Statistics

	Value
Average Effective Duration (Years)	—
Average Effective Maturity (Years)	4.70
Average Credit Quality	B
Average Weighted Coupon	6.31
Average Weighted Price	101.75

### Asset Allocation



### Management

	Start Date
Mark E. Durbiano	11-01-2002



**Fund Name:** Eaton Vance High Income Opportunities Fund I (Ticker: EIHIX)

**Asset Class:** High-Yield Bond

**Morningstar Rating:** ★★★★★

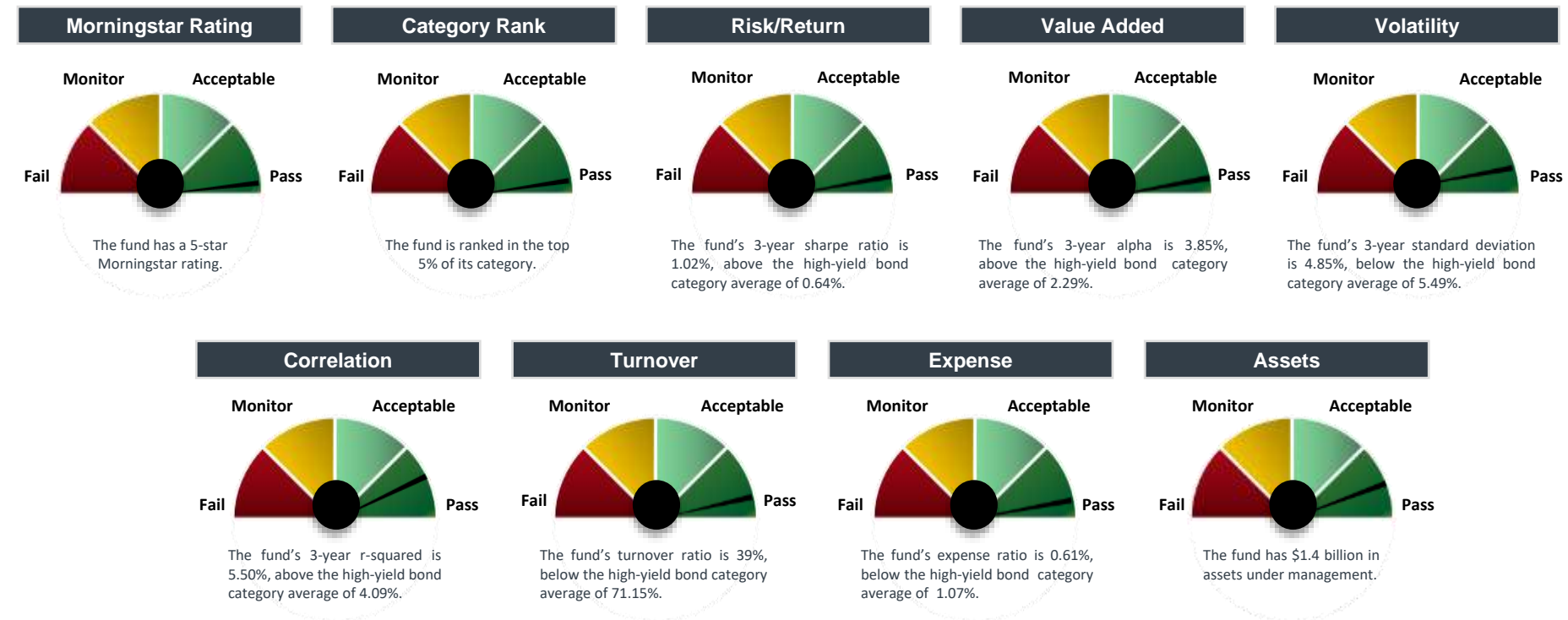
**Manager:** Eaton Vance

**Fund Type:** Active

**Status:** Current Fund Option

### Fund Description

The fund seeks to maximize total return by investing in a diversified portfolio of high-yield, high-risk corporate bonds. The investment team utilizes fundamental bottom-up credit research with an emphasis on risk management and relative-value investing to achieve competitive risk-adjusted returns.



### Diagnostics Report

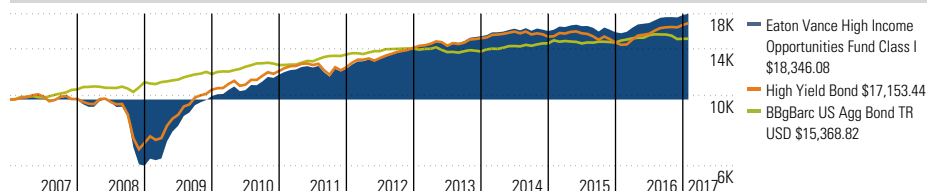
Eaton Vance High Income Opportunities passes 9 of 9 of our investable fund criteria. The fund remains cautiously optimistic as it enters 2017 as it believes high-yield bond valuations appear to be fairly priced. With that in mind, the portfolio managers maintain a conservative bond positioning, including a shorter duration relative to the BofA Merrill Lynch U.S. High Yield Index.

# Eaton Vance High Income Opportunities Fund Class I EIHIX

Morningstar Analyst Rating  
Silver

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
4.52	↓-0.01   -0.21	5.75	1	Open	\$250,000	None	0.61%	★★★★★	High Yield Bond	Mid Growth

## Growth of 10,000 01-30-2007 - 01-30-2017



## Investment Strategy

The investment seeks to provide a high level of current income; growth of capital is a secondary investment objective. The fund invests at least 80% of its net assets (plus any borrowings for investment purposes) in fixed-income securities, including preferred stocks and other hybrid securities (many of which have fixed maturities), senior and subordinated floating rate loans ("bank loans") and convertible securities. The fund invests primarily in high yield, high risk corporate bonds. The fund invests a substantial portion of its assets in bonds issued in connection with mergers, acquisitions and other highly-leveraged transactions.

## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,109	10,109	11,483	11,645	14,376	18,345
Fund	1.09	1.09	14.83	5.21	7.53	6.26
+/- BBgBarc US Agg Bond TR USD	1.03	1.03	13.51	2.62	5.43	1.87
+/- Category	-0.15	-0.15	-1.66	1.73	1.73	0.32
% Rank in Cat	67	67	70	7	7	—
# of Funds in Cat	733	733	699	594	472	315

\* Currency is displayed in USD

## Top Holdings 11-30-2016

	Weight %	Maturity Date	Amount Mil	Value Mil
⊕ Mph Acquisition Hldgs 144A 7.125%	1.10	06-01-2024	18.18	19.15
Peninsula Gaming Llc 01jul16 Call	0.98	12-31-2049	0.03	17.07
Sprint 7.875%	0.95	09-15-2023	15.99	16.54
T Mobile Usa 6.5%	0.83	01-15-2026	13.34	14.44
Laureate Educ 144A 9.25%	0.74	09-01-2019	13.21	12.76
% Assets in Top 5 Holdings	4.61			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

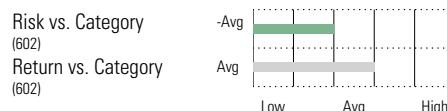
## Top Sectors 11-30-2016

	Fund	BMark	Cat Avg	
Corporate Bond	89.39	—	84.82	■ Fund ▼ Cat Avg
Bank Loan	5.25	—	3.27	
Convertible	1.62	—	0.44	
Non-Agency Residential MBS	0.41	—	0.32	
Asset-Backed	0.20	—	0.44	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-30-2016	4.49	0.0000	0.0000	0.0000	0.0200	0.0200
11-30-2016	4.44	0.0000	0.0000	0.0000	0.0200	0.0200
10-31-2016	4.47	0.0000	0.0000	0.0000	0.0200	0.0200
09-30-2016	4.49	0.0000	0.0000	0.0000	0.0200	0.0200
08-31-2016	4.49	0.0000	0.0000	0.0000	0.0200	0.0200

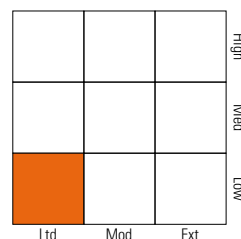
## 3 Year Average Morningstar Risk Measures



## Pillars

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

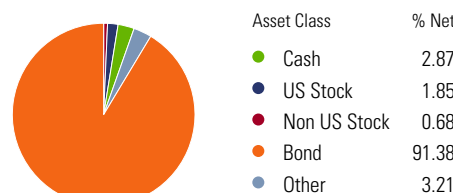
## Style Map 09-30-2016



## Bond Statistics

	Value
Average Effective Duration (Years)	3.32
Average Effective Maturity (Years)	4.37
Average Credit Quality	B
Average Weighted Coupon	6.71
Average Weighted Price	102.19

## Asset Allocation



## Management

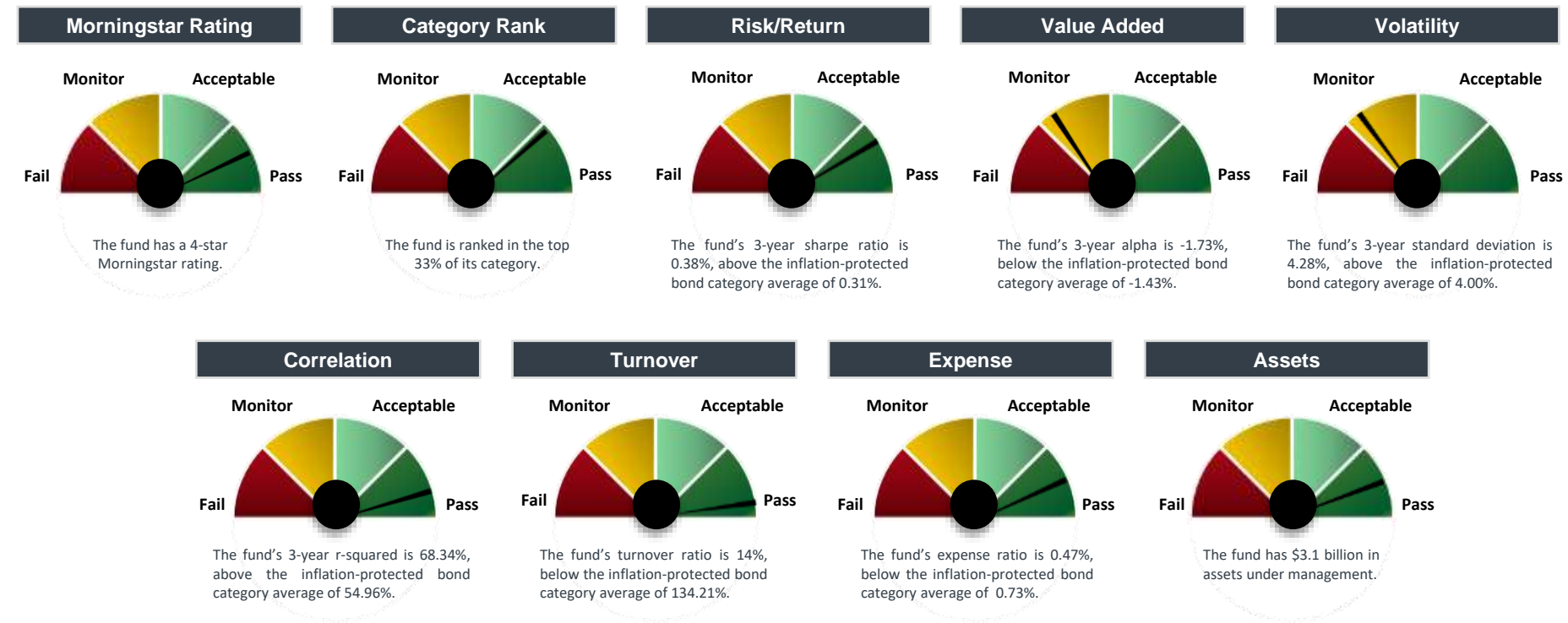
	Start Date
Michael W. Weilheimer	01-01-1996
Kelley Baccei	11-03-2014
Stephen C. Concannon	11-03-2014

**Fund Name:** American Century Infl-Adj Bond Inv (Ticker: ACITX)  
**Asset Class:** Inflation-Protected Bond  
**Morningstar Rating:** ★★☆☆

**Manager:** American Century Investments  
**Fund Type:** Active  
**Status:** Current Fund Option

### Fund Description

The fund invests in investment-grade, inflation-indexed bonds. The investment team employs comprehensive risk management designed to maximize real return per level of risk.



### Diagnostics Report

American Century Infl-Adj Bond Inv passes 7 of 9 of our investable fund criteria. We continue to monitor the fund's volatility as well as value added. As of quarter-end, approximately 84% of the portfolio was invested in TIPS. The remainder was invested in securitized bonds, non-U.S. dollar securities, and investment-grade corporate bonds. The team has a neutral stance on inflation as it believes that headline U.S. inflation is poised to gradually move higher.

# American Century Infl-Adj Bond Inv

Benchmark 1: BBgBarc US Treasury US TIPS TR USD  
Benchmark 2: BBgBarc US Agg Bond TR USD

Morningstar Analyst Rating 04-08-16

Neutral

## Morningstar Pillars

Process	● Neutral
Performance	● Neutral
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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	0.86	3.08	2.06	0.54	6.68
2013	-0.38	-7.51	0.74	-2.09	-9.12
2014	1.73	3.60	-2.25	-0.34	2.67
2015	1.20	-1.50	-1.13	-0.72	-2.15
2016	4.44	1.59	1.27	-2.53	4.72

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	-2.53	-0.12	0.44	70	9,747
6 Mo	-1.30	0.17	1.23	57	9,870
1 Yr	4.72	0.04	2.08	36	10,472
3 Yr Avg	1.71	-0.55	-1.32	33	10,521
5 Yr Avg	0.40	-0.49	-1.84	54	10,200
10 Yr Avg	3.97	-0.39	-0.37	29	14,767
15 Yr Avg	4.80	-0.50	0.21	50	20,192

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	1.02	31	0.67	69
5 Yr (estimated)	-0.44	52	0.83	69
10 Yr (estimated)	2.90	19	1.04	58

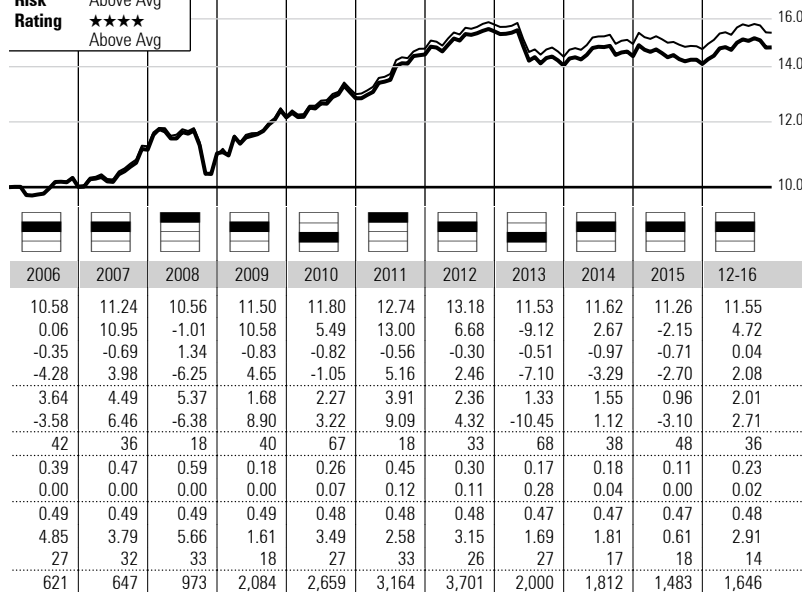
Potential Capital Gain Exposure: 2% of assets

## Morningstar's Take by Gretchen Rupp 04-08-16

American Century Inflation-Adjusted Bond has one of the longest records in the inflation-protected bond Morningstar Category, dating back to 1997. The strategy has remained straightforward since inception and during lead manager Bob Gahagan's tenure, which began in late 2001. His team uses mostly U.S. Treasury Inflation-Protected Securities, making subtle plays along the yield curve and adjustments to the fund's overall exposure to inflation based on the firm's macro outlook. This approach has led to steady returns that beat nearly 70% of peers during the 10 years ended February 2016. But the fund has lagged its benchmark and cheaper passive alternatives by about 50 and 25 basis points, respectively, in the same time period. The fund earns a Morningstar Analyst Rating of Neutral.

However, starting in 2015, the team increased its exposure to nondollar, inflation-adjusted corporates, though they haven't targeted a specific allocation. Notably, the team has kept its weighting at sibling American Century Diversified Bond ACBPX to about 10% (with modest success in its non-U.S. dollar security selection). In 2015, it selected positions in European

**Historical Profile**  
Return Above Avg  
Risk Above Avg  
Rating ★★★★★ Above Avg



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	4.72			
3 Yr	1.71	Avg	+ Avg	★★★
5 Yr	0.40	Avg	+ Avg	★★★★
10 Yr	3.97	+ Avg	Avg	★★★★★
Incept	4.90			

Other Measures	Standard Index	Best Fit Index
Alpha	-1.7	-0.6
Beta	1.17	1.02
R-Squared	68	98
Standard Deviation	4.28	
Mean	1.71	
Sharpe Ratio	0.38	

## Portfolio Analysis 09-30-16

Total Fixed Income: 158	Date of Maturity	Amount 000	Value \$000	% Assets
US Treasury Note	01-15-22	173,250	188,226	5.81
US Treasury TIP 1.25%	07-15-20	154,250	182,025	5.62
US Treasury Bond	01-15-26	109,450	156,199	4.82
US Treasury Bond	01-15-25	96,086	146,453	4.52
US Treasury TIP	01-15-23	121,800	129,190	3.99
US Treasury Note	04-15-19	104,250	108,932	3.36
US Treasury Note	07-15-21	95,270	106,927	3.30
US Treasury Note	04-15-20	100,700	105,560	3.26
US Treasury Bond	02-15-44	84,670	104,371	3.22
US Treasury Note	04-15-18	97,000	102,118	3.15
US Treasury Note	01-15-24	93,500	101,345	3.13
US Treasury Note	07-15-22	92,800	99,565	3.08
US Treasury Bond	01-15-27	66,325	97,279	3.00
US 2yr Note (Cbt) Dec16	12-30-16	84,600	92,412	2.85
US Treasury Note	01-15-25	82,250	85,271	2.63
US Treasury Bond	02-15-42	72,000	79,535	2.46
US 10yr Note (Cbt)dec16	12-20-16	58,400	76,577	2.37
US Treasury Note	07-15-25	70,500	74,026	2.29
US Treasury TIP 1.75%	01-15-28	54,541	73,527	2.27
US Treasury Note	07-15-24	65,800	67,791	2.09

## Current Investment Style

Duration	Mod	Ext	Quality
Ltd			High
			Med
			Low
Avg Eff Duration <sup>1</sup>	6.4 Yrs		
Avg Eff Maturity	9.0 Yrs		
Avg Credit Quality	AAA		
Avg Wtd Coupon	1.46%		
Avg Wtd Price	120.92% of par		

Coupon Range	% of Bonds
0% PIK	0.0
0% to 4%	95.3
4% to 6%	2.7
6% to 8%	2.1
8% to 10%	0.0
More than 10%	0.0

Credit Analysis	% bonds 09-30-16
AAA	94
AA	2
A	2
BBB	2
Below B	0
Not Rated	-1

## Sector Breakdown

Government	81
Government Related	6
Corporate	2
Agency MBS	1
Non-Agency Residential MBS	1
Commercial MBS	7
Covered Bond	0
Asset Backed	0
Municipal	0
Cash & Equivalents	1
Other	0

## Composition - Net

Bonds	98.7
Cash	1.3
Stocks	0.0
Other	0.0

## Special Securities

Restricted/Illiquid Secs	4
Emerging-Markets Secs	0
Options/Futures/Warrants	0

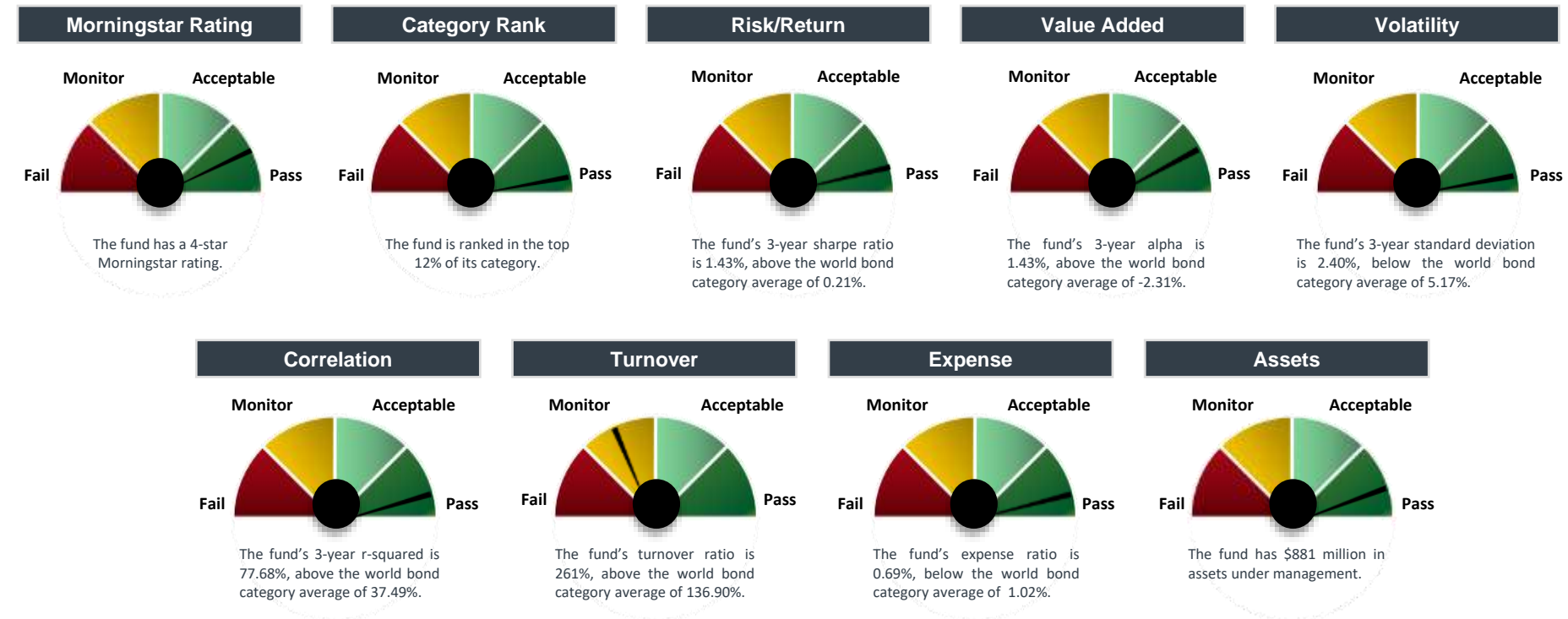
Address:	AMERICAN CENTURY GOVERNMENT INCOME TRUST Kansas City MO 64111 800-345-2021	Minimum Purchase:	\$2500	Add: \$50	IRA: —
Web Address:	www.americancentury.com	Min Auto Inv Plan:	—	Add: \$50	
Inception:	02-10-97	Sales Fees:	No-load		
Advisor:	American Century Investment Management Inc	Management Fee:	0.28% mx./0.16% mn.		
Subadvisor:	None	Actual Fees:	Mgt:0.46% Dist:—		
		Expense Projections:	3Yr:\$151 5Yr:\$264 10Yr:\$592		
		Income Distribution:	Monthly		

**Fund Name:** Goldman Sachs Global Income Instl (Ticker: GSGLX)  
**Asset Class:** World Bond  
**Morningstar Rating:** ★★☆☆

**Manager:** Goldman Sachs  
**Fund Type:** Active  
**Status:** Current Fund Option

### Fund Description

The fund seeks high total return, current income and capital appreciation by investing in fixed income securities and currencies across developed and emerging market economies. The team hedges the portfolio to the U.S. dollar, with the ability to express limited currency and country views across world markets.



### Diagnostics Report

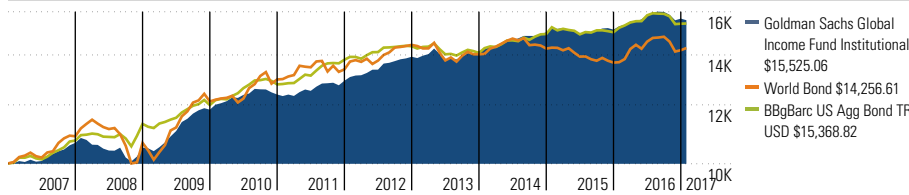
Goldman Sachs Global Income Instl passes 8 of 9 of our investable fund criteria. We continue to monitor the fund's turnover as it's above the category average. The fund managers currently believe relative value strategies are more attractive than directional risk in the current environment and expect higher volatility to create opportunities. Goldman Sachs Global Income Instl is currently underweighting the U.S. on a relative value basis in favor of Norway and Canada over the U.S. Currency exposure is biased towards strengthening in the U.S. dollar versus other G10 currencies, due to monetary policy divergence and differences in growth and inflation outlooks.

# Goldman Sachs Global Income Fund Institutional GSGLX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
12.09	↓0.00   0.00	1.30	910	Open	\$1	None	0.69%	★★★★	World Bond	

## Growth of 10,000 01-30-2007 - 01-30-2017



## Investment Strategy

The investment seeks a high total return, emphasizing current income, and, to a lesser extent, providing opportunities for capital appreciation. The fund normally invests at least 80% of its net assets plus any borrowings for investment purposes (measured at the time of purchase) ("Net Assets") in a portfolio of fixed income securities of U.S. and foreign issuers. Foreign securities include securities of issuers located outside the U.S. or securities quoted or denominated in a currency other than the U.S. dollar. It also enters into transactions in foreign currencies, typically through the use of forward contracts and swap contracts. It is non-diversified.

## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	9,951	9,951	10,188	10,936	11,919	15,519
Fund	-0.49	-0.49	1.88	3.03	3.57	4.49
+/- BBGBarc US Agg Bond TR USD	-0.55	-0.55	0.56	0.44	1.48	0.11
+/- Category	-1.16	-1.16	-2.40	2.51	2.55	0.67
% Rank in Cat	93	93	76	16	13	31
# of Funds in Cat	358	358	334	314	239	130

\* Currency is displayed in USD

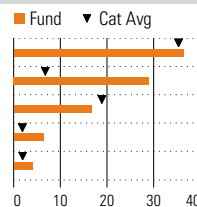
## Top Holdings 09-30-2016

	Weight %	Maturity Date	Amount Mil	Value Mil
✱ Fed Natl Mort Assc 3%	8.24	09-15-2046	68.00	70.74
✱ Fed Natl Mort Assc 3%	-8.24	09-15-2046	68.00	-70.74
✱ Fed Natl Mort Assc 3.5%	-6.89	09-15-2046	56.00	-59.14
✱ Fed Natl Mort Assc 3.5%	6.89	09-15-2046	56.00	59.14
✱ GNMA	-6.25	09-01-2046	50.00	-53.66
% Assets in Top 5 Holdings	-6.25			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

## Top Sectors 09-30-2016

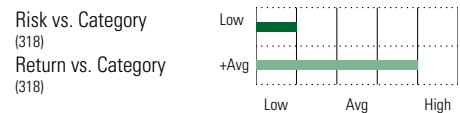
	Fund	BMark	Cat Avg	
Government	36.39	—	34.48	
Commercial MBS	28.94	—	5.93	
Corporate Bond	16.69	—	18.04	
Asset-Backed	6.37	—	1.01	
Agency Mortgage-Backed	4.03	—	1.07	



## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-30-2016	12.16	0.0000	0.0000	0.0000	0.0100	0.0100
12-14-2016	12.08	0.0000	0.0500	0.0000	0.0000	0.0500
11-30-2016	12.16	0.0000	0.0000	0.0000	0.0100	0.0100
10-31-2016	12.38	0.0000	0.0000	0.0000	0.0100	0.0100
09-30-2016	12.50	0.0000	0.0000	0.0000	0.0100	0.0100

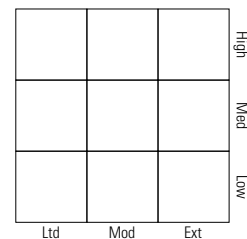
## 3 Year Average Morningstar Risk Measures



## Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

## Style Map 12-31-2010



## Bond Statistics

	Value
Average Effective Duration (Years)	6.48
Average Effective Maturity (Years)	—
Average Credit Quality	Not Rated
Average Weighted Coupon	3.06
Average Weighted Price	—

## Asset Allocation

	% Net	% Short	% Long	Bench mark	Cat Avg
Cash	0.10	8.51	8.61	0.00	11.56
US Stock	0.00	0.00	0.00	0.00	-0.16
Non US Stock	0.00	0.00	0.00	0.00	0.13
Bond	99.29	28.14	127.42	100.00	101.83
Other	0.61	0.46	1.07	0.00	-13.36

## Management

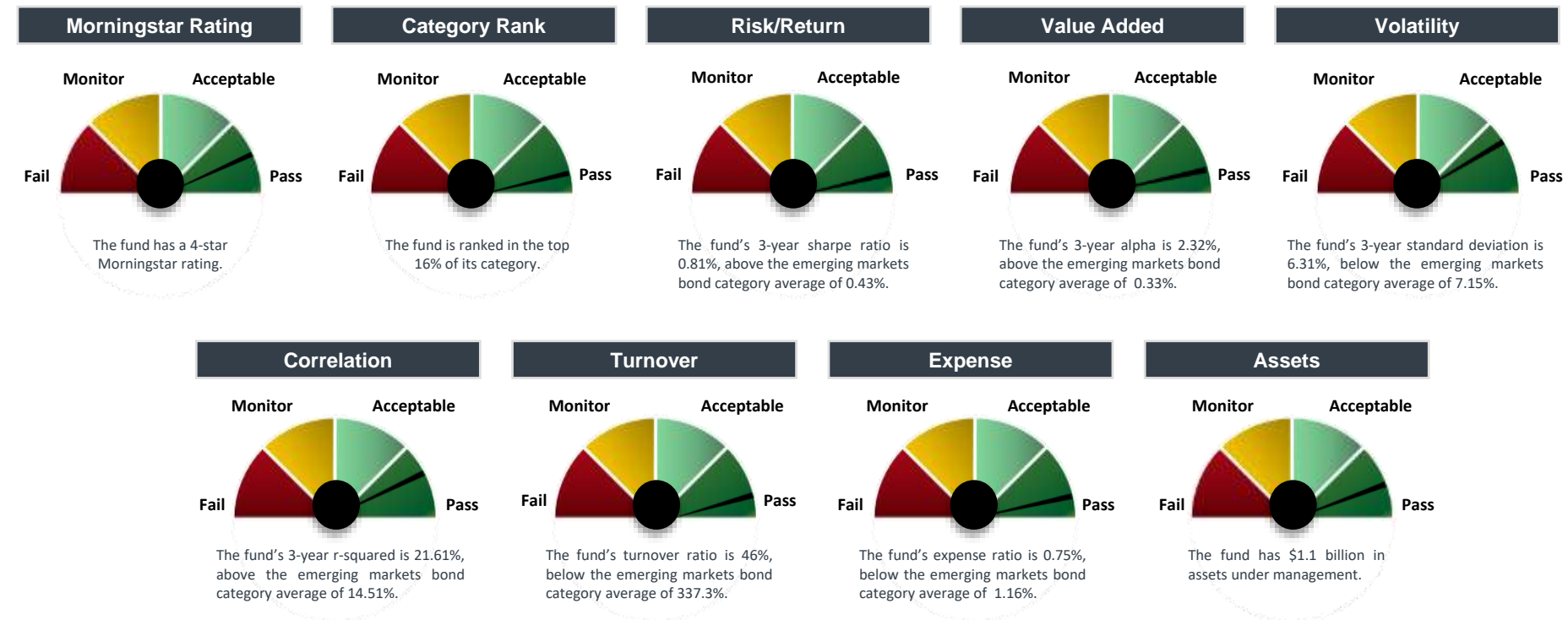
	Start Date
Andrew F. Wilson	12-31-1995
Iain Lindsay	12-31-2001

**Fund Name:** Payden Emerging Markets Bond (Ticker: PYEMX)  
**Asset Class:** Emerging Markets Bond  
**Morningstar Rating:** ★★☆☆

**Manager:** Payden & Rygel  
**Fund Type:** Active  
**Status:** New Fund Option

### Fund Description

Payden Emerging Markets Bond Fund invests in a diversified portfolio of emerging-market sovereign and corporate bonds. The fund managers analyze macroeconomic variables, sovereign credit ratios, political stability, and the quality of the country's business environment in security selection. Although most of the fund's investments are U.S. dollar-denominated, fund managers will also invest in select local markets to take advantage of attractive opportunities.



### Diagnostics Report

Payden Emerging Markets Bond passes 9 of 9 of our investable fund criteria. The fund managers believe even with tighter U.S. monetary policy ahead in 2017, emerging market debt remains resilient. Improving emerging market fundamentals, solid foreign exchange reserve buffers, sustainable debt levels, and contained inflation pressure should help support emerging market bond prices.

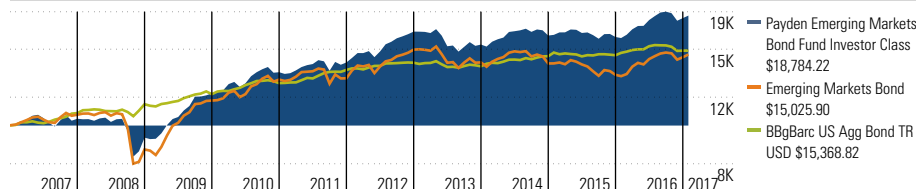


# Payden Emerging Markets Bond Fund Investor Class PYEMX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
13.57	↓-0.06   -0.02	5.60	1.1	Open	\$100,000	None	0.75%	★★★★	Emerging Markets Bond	

## Growth of 10,000 01-30-2007 - 01-30-2017



## Investment Strategy

The investment seeks a high level of total return. Under normal market conditions, the fund invests at least 80% of its total assets in debt securities and similar debt instruments issued by governments, agencies and instrumentalities of emerging market countries (or economically linked with such securities), and other issuers organized, headquartered or principally located in emerging market countries. The fund is non-diversified.

## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,147	10,147	11,374	11,899	12,794	18,742
Fund	1.47	1.47	13.74	5.97	5.05	6.48
+/- BBGBarc US Agg Bond TR USD	1.41	1.41	12.42	3.38	2.95	2.10
+/- Category	-0.10	-0.10	0.44	2.30	1.44	0.55
% Rank in Cat	59	59	46	16	24	38
# of Funds in Cat	308	308	275	217	114	48

\* Currency is displayed in USD

## Top Holdings 11-30-2016

	Weight %	Maturity Date	Amount Mil	Value Mil
✱ Us 10yr Note (Cbt)mar17	-7.79	03-22-2017	0.00	-84.93
Azerbaijan Rep 4.75%	1.49	03-18-2024	16.40	16.24
Argentine Republic 8.28%	1.42	12-31-2033	15.31	15.46
Honduras Rep 8.75%	1.40	12-16-2020	14.09	15.31
Kenya Rep 5.875%	1.31	06-24-2019	13.95	14.22

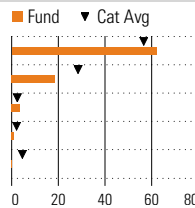
% Assets in Top 5 Holdings

-2.17

⊕ Increase ⊖ Decrease ✱ New to Portfolio

## Top Sectors 11-30-2016

	Fund	BMark	Cat Avg
Government	62.10	—	54.89
Corporate Bond	18.61	—	26.73
Agency/Quasi-Agency	3.70	—	0.69
Supranational	0.93	—	0.39
Other Government Related	0.00	—	2.87



## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
01-30-2017	13.57	0.0000	0.0000	0.0000	0.0600	0.0600
12-29-2016	13.42	0.0000	0.0000	0.0000	0.0800	0.0800
11-29-2016	13.31	0.0000	0.0000	0.0000	0.0500	0.0500
10-28-2016	13.94	0.0000	0.0000	0.0000	0.0700	0.0700
09-29-2016	14.15	0.0000	0.0000	0.0000	0.0800	0.0800

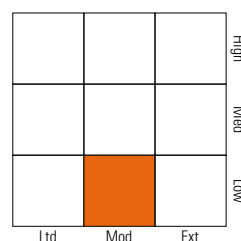
## 3 Year Average Morningstar Risk Measures

Risk vs. Category (220)	Avg			
Return vs. Category (220)	Avg			
		Low	Avg	High

## Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

## Style Map 12-31-2016



## Bond Statistics

	Value
Average Effective Duration (Years)	5.94
Average Effective Maturity (Years)	9.26
Average Credit Quality	BB
Average Weighted Coupon	6.29
Average Weighted Price	—

## Asset Allocation

	% Net	% Short	% Long	Bench mark	Cat Avg
Cash	9.17	6.52	15.68	—	4.13
US Stock	0.00	0.00	0.00	—	-0.03
Non US Stock	0.00	0.00	0.00	—	0.16
Bond	88.41	7.79	96.20	—	95.59
Other	2.43	0.00	2.43	—	0.14

## Management

	Start Date
Kristin Ceva	12-17-1998
Arthur Hovsepian	02-28-2013
Vladimir Milev	02-28-2013

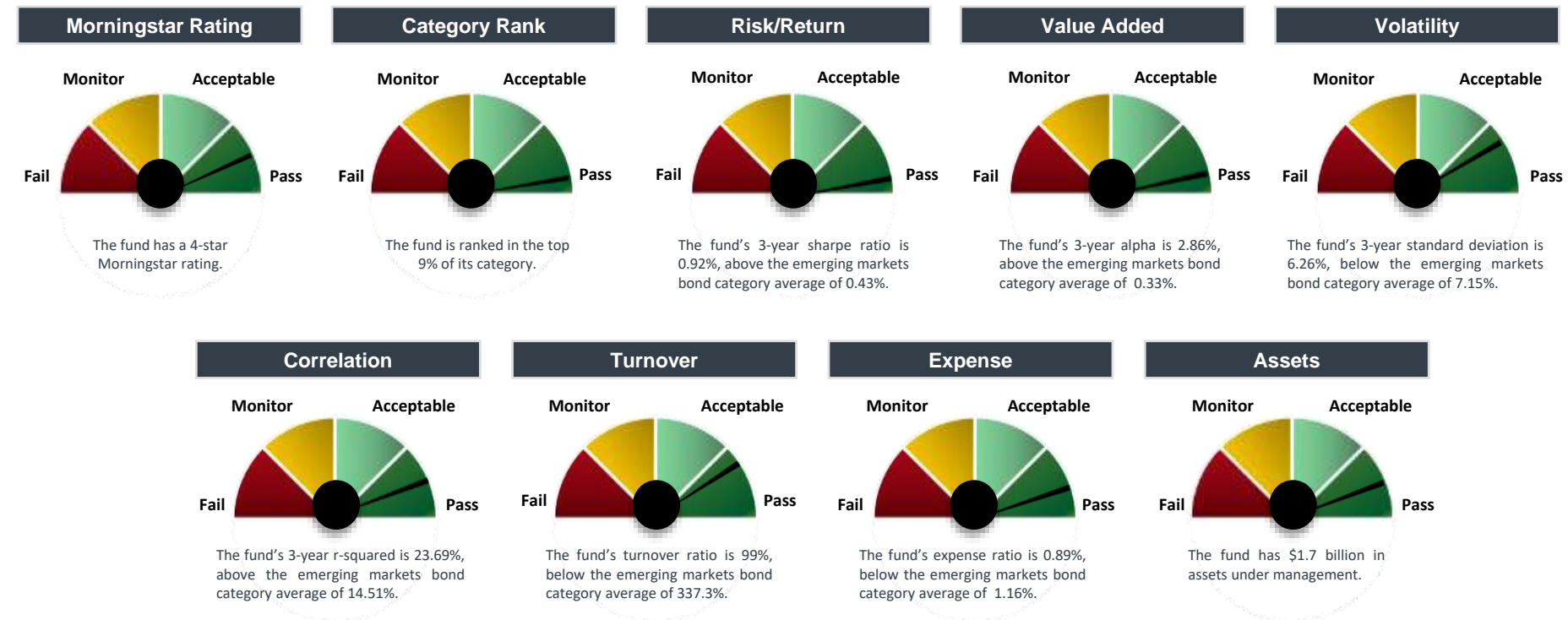


**Fund Name:** Goldman Sachs Emerging Mkt Debt Instl (Ticker: GSDIX)  
**Asset Class:** Emerging Markets Bond  
**Morningstar Rating:** ★★☆☆

**Manager:** Goldman Sachs  
**Fund Type:** Active  
**Status:** New Fund Option

### Fund Description

Goldman Sachs Emerging Mkt Debt Instl invests in a diversified basket of developed and emerging market bonds. The fund seeks total return with income and capital appreciation.



### Diagnostics Report

Goldman Sachs Emerging Mkt Debt Instl passes 9 of 9 of our investable fund criteria. The fund managers continue to favor countries with prudent fiscal management and where valuations offer an attractive balance between risk and reward.

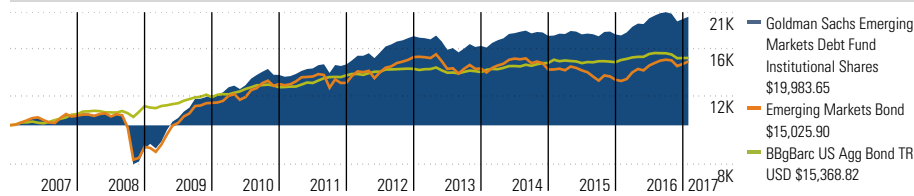
# Goldman Sachs Emerging Markets Debt Fund Institutional Shares

## GSDIX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
12.54	↓-0.01   -0.07	5.25	2	Open	\$1	None	0.89%	★★★★	Emerging Markets Bond	

### Growth of 10,000 01-30-2007 - 01-30-2017



### Investment Strategy

The investment seeks a high level of total return consisting of income and capital appreciation. The fund normally invests at least 80% of its net assets plus any borrowings for investment purposes in sovereign and corporate debt securities and other instruments of issuers in emerging market countries. The advisor intends to use structured securities or derivatives, including but not limited to credit linked notes, financial future contracts, forward contracts and swap contracts to gain exposure to certain countries or currencies. It may invest in all types of foreign and emerging country fixed income securities. The fund is non-diversified.

### Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,147	10,147	11,266	12,134	13,240	19,947
Fund	1.47	1.47	12.66	6.66	5.77	7.15
+/- BBG US Agg Bond TR USD	1.41	1.41	11.34	4.07	3.68	2.77
+/- Category	-0.10	-0.10	-0.64	2.99	2.17	1.22
% Rank in Cat	59	59	54	10	11	17
# of Funds in Cat	308	308	275	217	114	48

\* Currency is displayed in USD

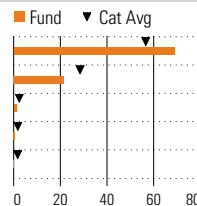
### Top Holdings 09-30-2016

	Weight %	Maturity Date	Amount Mil	Value Mil
✱ Russian Govt 4.75% 27 May 2026 Regs	2.38	05-27-2026	37.20	40.71
⊕ Hungary Rep 6.25%	1.91	01-29-2020	28.77	32.64
⊕ Indonesia Rep 5.875%	1.67	01-15-2024	24.05	28.65
✱ Petroleos Mexicanos Mtn Reg S 6.875%	1.40	08-04-2026	21.04	23.95
✱ United Mexican Sts Mtn Be 4%	1.32	10-02-2023	20.68	22.53
% Assets in Top 5 Holdings	8.67			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

### Top Sectors 09-30-2016

	Fund	BMark	Cat Avg
Government	68.87	—	54.89
Corporate Bond	21.64	—	26.73
Agency/Quasi-Agency	1.27	—	0.69
Asset-Backed	0.55	—	0.06
Preferred	0.20	—	0.00



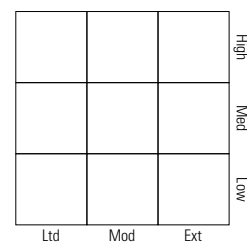
### 3 Year Average Morningstar Risk Measures



### Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

### Style Map 12-31-2011



Bond Statistics	Value
Average Effective Duration (Years)	6.60
Average Effective Maturity (Years)	—
Average Credit Quality	Not Rated
Average Weighted Coupon	5.93
Average Weighted Price	—

### Asset Allocation

	% Net	% Short	% Long	Bench mark	Cat Avg
● Cash	3.67	1.44	5.11	—	4.13
● US Stock	0.00	0.00	0.00	—	-0.03
● Non US Stock	0.00	0.00	0.00	—	0.16
● Bond	95.00	0.47	95.48	—	95.59
● Other	1.33	0.12	1.45	—	0.14

### Management

	Start Date
Samuel Finkelstein	12-31-2003
Ricardo Penfold	12-31-2003

**Fund Name:** Cohen & Steers Real Estate Securities A (Ticker: CSEIX)

**Asset Class:** Real Estate

**Morningstar Rating:** ★★★★★

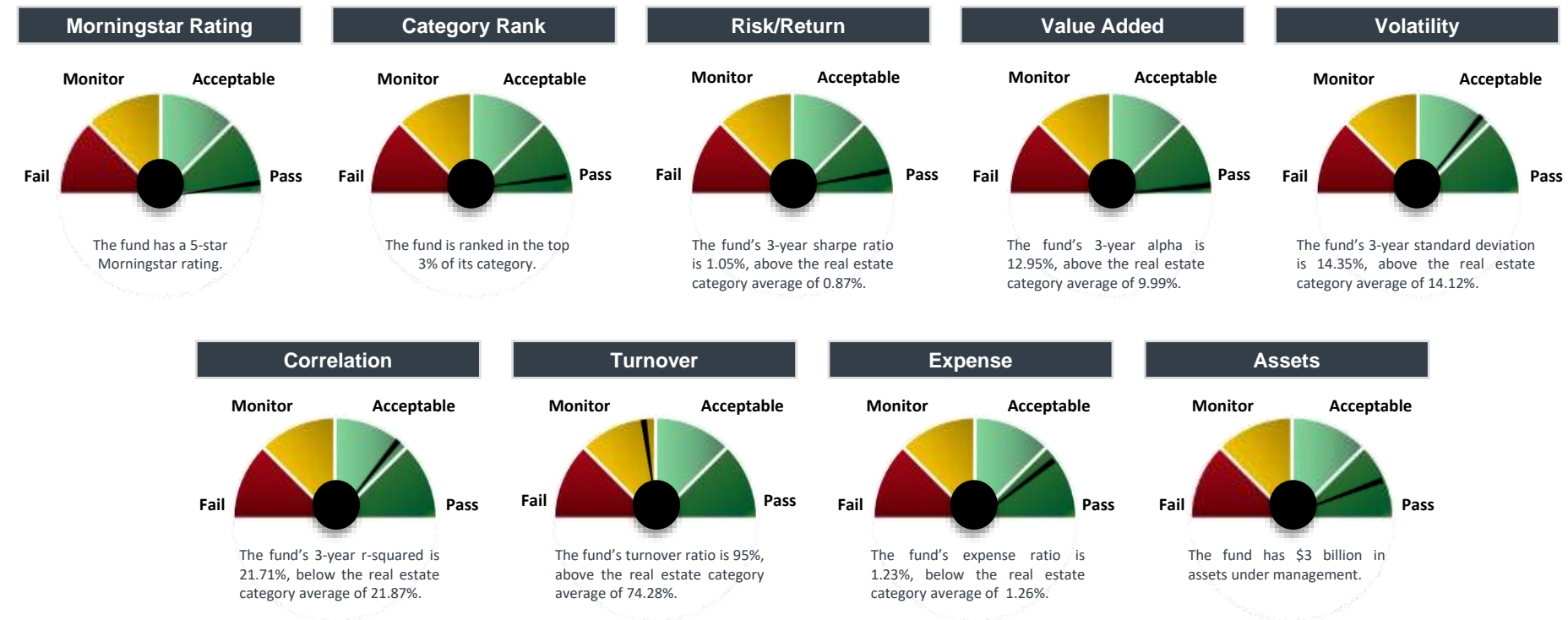
**Manager:** Cohen & Steers

**Fund Type:** Active

**Status:** Current Fund Option

### Fund Description

The fund seeks to achieve total return through investment in real estate securities. Real estate securities include common stocks, preferred stocks and other equity securities of any market capitalization as well as debt securities issued by real estate companies, including real estate investment trusts (REITs) and similar REIT-like entities.



### Diagnostics Report

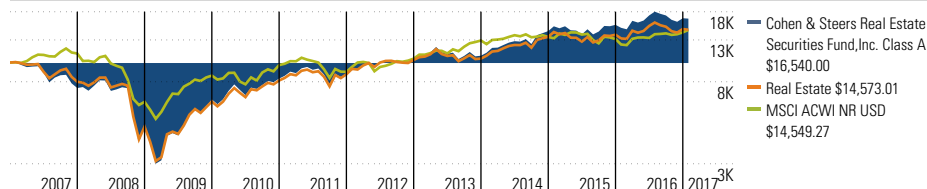
Cohen & Steers Real Estate Securities passes 6 of 9 of our investable fund criteria. The fund falls within an acceptable range for volatility and correlation to its benchmark. We continue to monitor the fund's turnover. The fund has a formidable track record, ranking in the top quartile of its peer group on a 1-year, 3-year, and 5-year basis.

# Cohen & Steers Real Estate Securities Fund, Inc. Class A CSEIX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
14.03	↓-0.09   -0.64	2.63	3	Open	—	4.50	1.23%	★★★★★	Real Estate	Mid Growth

## Growth of 10,000 01-30-2007 - 01-30-2017



## Investment Strategy

The investment seeks total return through investment in real estate securities. The fund invests at least 80% of its total assets in income-producing common stocks and other equity securities issued by real estate companies, such as real estate investment trusts ("REITs"). It may invest up to 20% of its total assets in securities of foreign issuers (including emerging market issuers) which meet the same criteria for investment as domestic companies, including investments in such companies in the form of American Depositary Receipts ("ADRs"), Global Depositary Receipts ("GDRs") and European Depositary Receipts ("EDRs"). The fund is non-diversified.

## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	9,957	9,957	11,098	14,793	17,624	16,466
Fund	-0.43	-0.43	10.98	13.94	12.00	5.11
+/- MSCI ACWI NR USD	-3.19	-3.19	-6.98	8.62	3.21	1.35
+/- Category	0.44	0.44	0.48	3.50	2.60	1.68
% Rank in Cat	20	20	28	1	3	7
# of Funds in Cat	274	274	267	237	207	137

\* Currency is displayed in USD

## Top Holdings 12-31-2016

	Weight %	Last Price	Day Chg %	52 Week Range
⊖ Simon Property Group Inc	8.10	183.02 USD	3.09 ↑	173.11 - 229.10
⊖ Prologis Inc	5.58	49.01 USD	0.55 ↑	35.25 - 54.87
⊕ UDR Inc	5.07	35.30 USD	1.96 ↑	32.79 - 38.61
⊕ AvalonBay Communities Inc	4.40	173.97 USD	1.08 ↑	158.32 - 192.29
⊕ SL Green Realty Corp	3.56	109.68 USD	0.58 ↑	80.12 - 120.63
% Assets in Top 5 Holdings	26.72			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

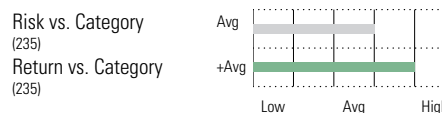
## Top Sectors 12-31-2016

	Fund	3 Yr High	3 Yr Low	Cat Avg	
🏠 Real Estate	92.57	97.32	92.57	95.18	■ Fund ▼ Cat Avg
🚗 Consumer Cyclical	4.94	4.94	2.11	1.56	
📞 Communication Services	1.80	1.80	0.00	1.70	
🏥 Healthcare	0.69	0.69	0.00	0.11	
🏭 Basic Materials	0.00	0.00	0.00	0.94	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-08-2016	13.91	0.1100	0.1300	0.0000	0.1500	0.3800
09-30-2016	14.94	0.0000	0.0000	0.0000	0.0800	0.0800
06-30-2016	15.02	0.2100	0.0000	0.0000	0.0800	0.2900
03-31-2016	14.41	0.0000	0.0000	0.0000	0.0800	0.0800
12-10-2015	13.35	0.2200	0.1000	0.0000	0.1100	0.4300

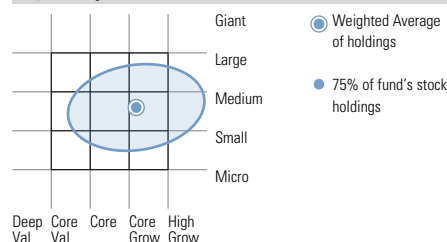
## 3 Year Average Morningstar Risk Measures



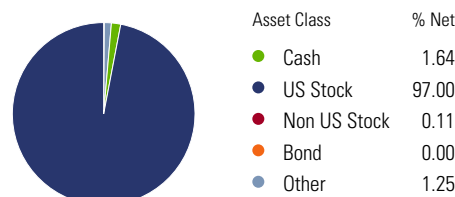
## Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

## Style Map



## Asset Allocation



## Management

	Start Date
Thomas N. Bohjalian	03-28-2006
Jason Yablon	05-01-2013

## Core Fund List Review & Scorecard: Passively Managed Funds

In order to provide participants with lower cost investment alternatives, we include a variety of passively managed or indexed mutual funds as part of the core fund list. Index funds are selected based upon their consistency tracking a specific asset class, cost structure, fund size, and investment fee minimums. Although we do not apply the same selection criteria to passively managed index funds as we do to actively managed funds, we provide a fund scorecard for comparison purposes. Index and passively managed funds are chosen and included due to their efficiency in tracking particular asset classes. Index & passive funds will therefore tend to post metrics that are closer to the category averages, resulting in more inconsistent pass/fail scores.

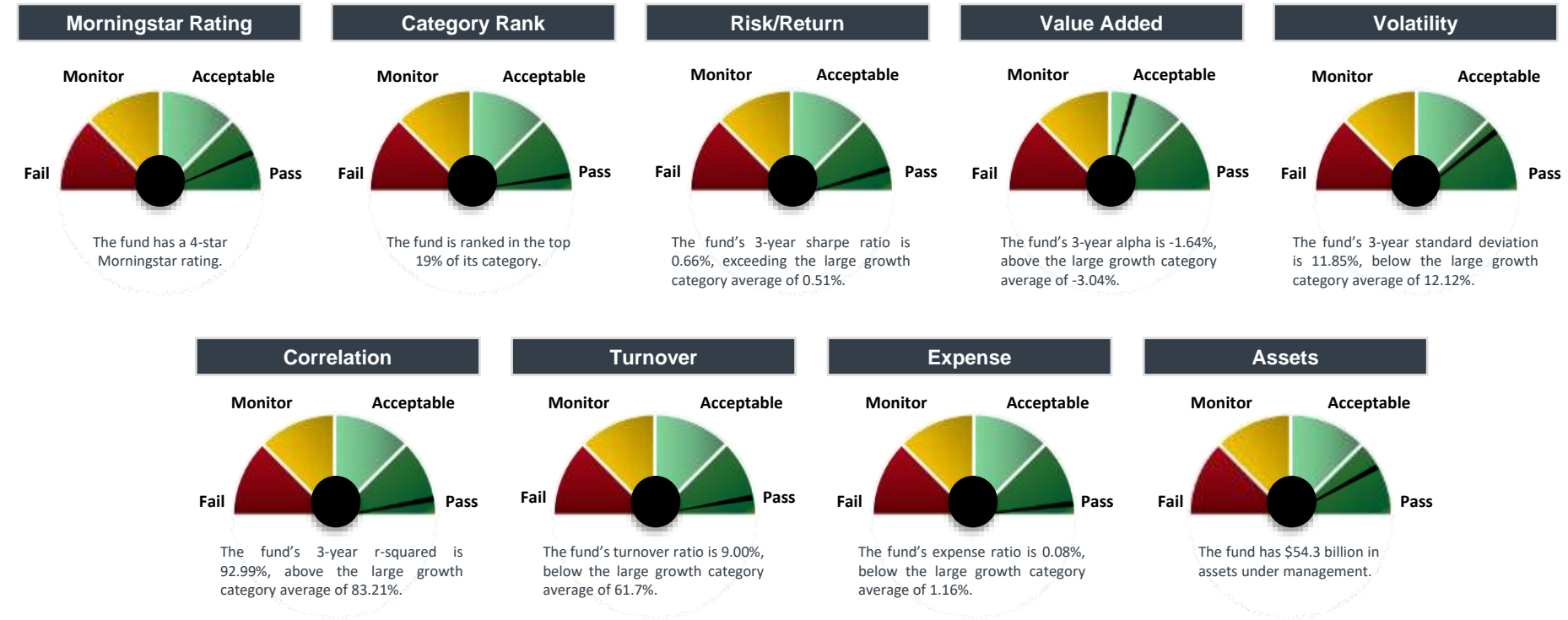
Lastly, please note that we include Morningstar summaries for the various target date mutual funds included on the platform, but we do not provide a corresponding scorecard. The reason for this is, unlike asset class specific mutual funds, is that target date funds are made up of various underlying mutual funds. The asset allocation methodology used in target date funds varies widely from fund family to fund family, and as such, making comparisons between fund families target date series is a subjective exercise. The target date fund recommendations we make are based on a qualitative review of many of the same criteria used for our active and passive reviews, but it also is influenced by our researchers opinions on the fund family's expenses, investment perspective, and glidepath methodology.

**Fund Name:** Vanguard Growth Index Adm (Ticker: VIGAX)  
**Asset Class:** Large Growth  
**Morningstar Rating:** ★★★★★

**Manager:** Vanguard  
**Fund Type:** Passive  
**Status:** Current Fund Option

### Fund Description

The fund offers investors low-cost index exposure to stocks of large U.S. companies in the CRSP U.S. Large Cap Growth Index. The fund follows a buy-and-hold approach, investing in substantially all of the stocks represented in its benchmark.



### Diagnostics Report

Vanguard Growth Index Admiral passes 8 of 9 of our investable fund criteria. The fund falls within an acceptable range for value added.

Morningstar Analyst Rating 08-18-16



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

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.

 Gold
  Silver
  Bronze
 Neutral
 Negative

⊕ Positive      ⊖ Negative      ⊙ Neutral

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	15.26	-3.89	6.81	-1.11	17.01
2013	9.30	1.21	8.44	10.36	32.40
2014	0.78	6.16	1.05	5.10	13.63
2015	3.44	-0.24	-6.02	6.51	3.30
2016	0.34	1.02	5.14	-0.42	6.12

Trailing	Total Return%	+/- Bmark 1	+/- Bmark 2	%Rank Cat	Growth of \$10,000
3 Mo	-0.42	1.43	-4.24	53	9,958
6 Mo	4.70	-0.94	-3.12	56	10,470
1 Yr	6.12	-0.96	-5.84	28	10,612
3 Yr Avg	7.60	-0.95	-1.28	19	12,456
5 Yr Avg	14.05	-0.45	-0.61	28	19,298
10 Yr Avg	8.14	-0.19	1.19	18	21,871
15 Yr Avg	6.56	0.14	-0.13	27	25,937

<b>Tax Analysis</b>	<b>Tax Adj Rtn%</b>	<b>%Rank Cat</b>	<b>Tax-Cost Rat</b>	<b>%Rank Cat</b>
3 Yr (estimated)	7.11	8	0.46	11
5 Yr (estimated)	13.59	12	0.41	11
10 Yr (estimated)	7.82	9	0.29	10

**Morningstar's Take** by Alex Bryan 08-18-16

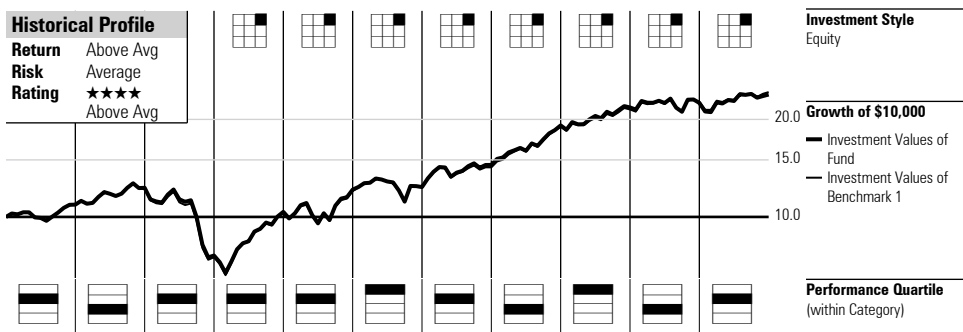
Vanguard Growth Index offers cheap exposure to large- and mid-cap growth stocks. Its sizable cost advantage, low turnover, and diversified portfolio support the Morningstar Analyst Rating of Silver.

The fund targets stocks representing the faster-growing half of the U.S. large-cap market and weights them by market capitalization. This weighting approach promotes low turnover and skews the portfolio toward established firms, such as Alphabet GOOGL, Starbucks SBUX, and Gilead Sciences GILD. These giants tend to grow more slowly than their smaller counterparts, but they are also less risky. The fund's largest holdings tend to be established firms with durable competitive advantages and strong profitability, and most have attractive business prospects. However, there is always a risk that they won't live up to the high expectations embedded in their valuations. Like most of its peers, the fund tilts toward faster-growing sectors, like technology and healthcare.

Because it casts a wide net, this portfolio includes some stocks with only modest growth traits. These holdings help reduce volatility and limit the fund's

Address:	Vanguard Index Funds Valley Forge, PA 19482 800-662-7447	Minimum Purchase:	\$10000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	11-13-00	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.07%		
Subadvisor:	None	Actual Fees:	Mgt:0.07%	Dist:—	
		Expense Projections:	3Yr:\$26	5Yr:\$45	10Yr:\$103
		Income Distribution:	Quarterly		

<b>Return</b>	Above Avg
<b>Risk</b>	Average
<b>Rating</b>	★★★★ Above Avg



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	12-16	History
29.77	33.23	20.30	27.32	31.60	31.79	36.64	47.87	53.71	54.77	57.31	NAV
9.13	12.70	-38.22	36.42	17.12	1.87	17.01	32.40	13.63	3.30	6.12	Total Return %
0.06	0.88	0.22	-0.79	0.41	-0.77	1.76	-1.09	0.58	-2.37	-0.95	+/- Bmark 1
-6.66	7.20	-1.22	9.95	2.06	-0.24	1.01	0.01	-0.06	1.91	-5.84	+/- Bmark 2
0.98	1.04	0.89	1.56	1.32	1.25	1.75	1.57	1.36	1.34	1.46	Income Return %
8.15	11.66	-39.11	34.86	15.80	0.62	15.27	30.83	12.27	1.96	4.66	Capital Return %
30	52	32	39	33	15	30	63	14	53	28	Total Rtn % Rank Cat
0.27	0.31	0.30	0.32	0.36	0.39	0.55	0.57	0.65	0.72	0.80	Income \$
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Capital Gains \$
0.11	0.10	0.11	0.14	0.12	0.10	0.10	0.09	0.09	0.08	0.07	Expense Ratio %
0.97	0.95	1.05	1.34	1.27	1.24	1.59	1.37	1.31	1.34	1.40	Income Ratio %
28	23	27	29	26	23	21	32	9	9	—	Turnover Rate %
2.505	2.203	1.296	1.641	4.712	4.819	5.774	7.903	14.907	16.777	18.617	Net Assets \$mil















Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	6.12			
3 Yr	7.60	+ Avg	Avg	★★★★
5 Yr	14.05	+ Avg	Avg	★★★★
10 Yr	8.14	+ Avg	-Avg	★★★★

Other Measures	Standard Index	Best Fit Index
Alpha	-1.6	-1.2
Beta	1.06	1.04
R-Squared	93	99
Standard Deviation	11.85	
Mean	7.60	
Sharpe Ratio	0.66	

## Total Stocks: 322

Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊕ Apple Inc	Technology	12.15	6.16
⊕ Amazon.com Inc	Cnsmr Cyc	10.95	3.29
⊕ Facebook Inc A	Technology	9.93	3.00
⊕ Alphabet Inc A	Technology	1.86	2.49
⊕ Alphabet Inc C	Technology	—	2.41
⊕ Comcast Corp Class A	Comm Svcs	24.76	1.82
⊕ The Home Depot Inc	Cnsmr Cyc	3.47	1.74
⊕ Coca-Cola Co	Cnsmr Def	-0.23	1.71
⊕ Visa Inc Class A	Finan Svcs	1.36	1.59
⊕ Walt Disney Co	Cnsmr Cyc	0.60	1.56
⊕ Philip Morris Internation	Cnsmr Def	8.76	1.49
⊕ Oracle Corp	Technology	6.90	1.35
⊕ Amgen Inc	Hlth Care	-7.47	1.17
⊕ 3M Co	Industri	21.49	1.13
⊕ McDonald's Corp	Cnsmr Cyc	6.09	1.11
⊕ Medtronic PLC	Hlth Care	-5.23	1.11
⊕ Qualcomm Inc	Technology	34.58	1.09
⊕ AbbVie Inc	Hlth Care	9.55	1.08
⊕ Mastercard Inc A	Finan Svcs	6.83	1.08
⊕ Gilead Sciences Inc	Hlth Care	-27.41	1.06

### Current Investment Style

Value Blend Growth	Market Cap	%	Weightings	Stocks	Bmark 1
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	Giant	45.6	 Cyclical	31.61	1.07
	Large	36.2	 BasicMat	2.48	0.78
	Mid	18.1	 CnsmrCyc	18.58	0.98
	Small	0.1	 FinanSvcs	6.22	1.15
	Micro	0.0	 Real Est	4.33	2.13
	Avg \$mil:		 Sensitive	44.76	1.01
	67,003		 CommnSrvs	3.91	0.97
Value Measures	Rel Category		 Energy	3.64	5.78
Price/Earnings	22.40	0.96	 Industrl	10.04	0.77
Price/Book	4.29	1.06	 Technlgy	27.17	1.02
Price/Sales	2.98	1.18	 Defensive	23.62	0.91
Price/Cash Flow	13.49	1.02	 CnsmrDef	9.50	1.01
Dividend Yield %	1.58	1.20	 Hlthcare	14.12	0.86
Growth Measures	% Rel Category		 Utilities	0.00	0.00

Asset Class	Percentage
Cash	0.6%
Stocks	99.4%
Bonds	0.0%
Other	0.0%
Foreign	0.0% (of Stock)



**Fund Name: Vanguard 500 Index Adm (Ticker: VFIAX)**

**Asset Class: Large Blend**

**Morningstar Rating: ★★☆☆**

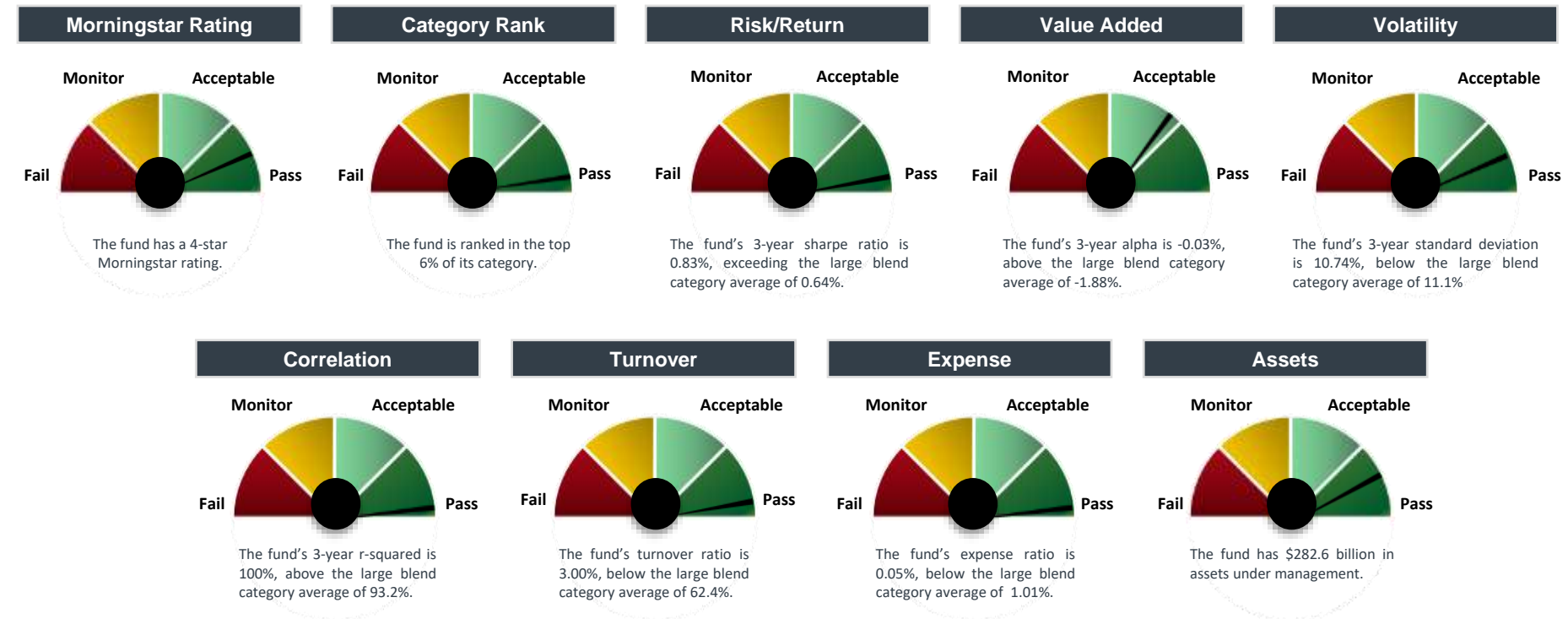
**Manager: Vanguard**

**Fund Type: Passive**

**Status: Current Fund Option**

### Fund Description

The fund offers investors low-cost index exposure to stocks of large U.S. companies in the S&P 500 Index. The fund follows a buy-and-hold approach, investing in substantially all of the stocks represented in its benchmark.



### Diagnostics Report

Vanguard 500 Index Admiral passes 8 of 9 of our investable fund criteria. The fund falls within an acceptable range for value added.



# Vanguard 500 Index Admiral

Benchmark 1: Russell 1000 TR USD  
Benchmark 2: S&P 500 TR USD

Morningstar Analyst Rating 11-23-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	12.57	-2.75	6.34	-0.39	15.96
2013	10.60	2.90	5.23	10.50	32.33
2014	1.79	5.22	1.12	4.92	13.64
2015	0.94	0.28	-6.45	7.04	1.36
2016	1.34	2.45	3.84	3.82	11.93

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	3.82	-0.01	0.00	44	10,382
6 Mo	7.81	-0.20	-0.01	46	10,781
1 Yr	11.93	-0.12	-0.03	27	11,193
3 Yr Avg	8.84	0.25	-0.03	6	12,893
5 Yr Avg	14.62	-0.07	-0.04	15	19,785
10 Yr Avg	6.94	-0.14	-0.01	21	19,561
15 Yr Avg	6.68	-0.32	-0.02	26	26,360

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	8.10	3	0.68	22
5 Yr (estimated)	13.92	9	0.61	22
10 Yr (estimated)	6.44	10	0.47	16

Potential Capital Gain Exposure: 39% of assets

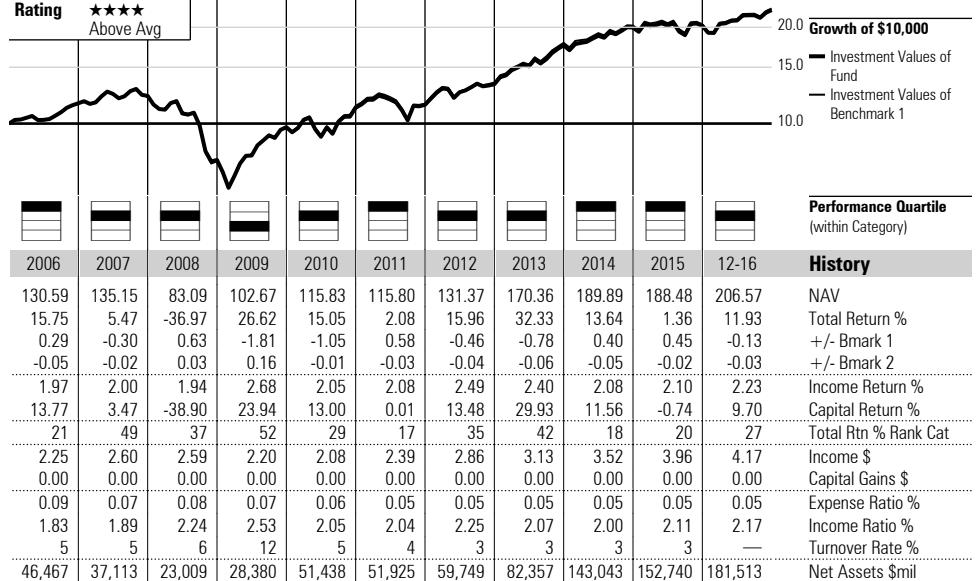
## Morningstar's Take by Adam McCullough 11-23-16

Vanguard 500 Index offers investors diversified exposure to U.S. large-cap stocks. A low fee and a soundly constructed and reasonably representative portfolio leave the fund well-positioned to continue its long streak of producing superior risk-adjusted returns relative to its peers over the long haul and underpin its Morningstar Analyst Rating of Gold.

Broad diversification is an intrinsic advantage of fund's replication of the market-cap-weighted S&P 500, which covers approximately 80% of the investable market capitalization of the U.S. equity market. While most indexes follow mechanical, rules-based approaches, the S&P 500 is managed by committee. Yet, this index has performed similarly to other popular large-cap indexes, such as the Russell 1000. Its market-cap-weighting approach can be beneficial in bull markets that are characterized by large-cap leadership, such as the post-financial-crisis charge in U.S. stocks. That said, 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 Achilles' heel.

## Historical Profile

Return Above Avg  
Risk Average  
Rating ★★★★★ Above Avg



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	11.93			
3 Yr	8.84	High	Avg	★★★★★
5 Yr	14.62	+Avg	-Avg	★★★★★
10 Yr	6.94	+Avg	Avg	★★★★★
Incept	5.22			

Other Measures	Standard Index	Best Fit Index
Alpha	0.0	0.0
Beta	1.00	1.00
R-Squared	100	100
Standard Deviation	10.74	
Mean	8.84	
Sharpe Ratio	0.83	

## Portfolio Analysis 11-30-16

### Total Stocks: 510

Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊕ Apple Inc	Technology	12.15	3.12
⊕ Microsoft Corp	Technology	14.65	2.46
⊕ Exxon Mobil Corp	Energy	19.62	1.90
⊕ Johnson & Johnson	Hlth Care	15.23	1.59
⊕ Amazon.com Inc	Cnsmr Cyc	10.95	1.55
⊕ JPMorgan Chase & Co	Finan Svcs	33.47	1.52
⊕ Berkshire Hathaway Inc B	Finan Svcs	23.43	1.48
⊕ Facebook Inc A	Technology	9.93	1.44
⊕ General Electric Co	Industrl	4.43	1.44
⊕ Wells Fargo & Co	Finan Svcs	4.17	1.26
⊕ AT&T Inc	Comm Svcs	29.18	1.24
⊕ Alphabet Inc A	Technology	1.86	1.20
⊕ Alphabet Inc C	Technology	—	1.17
⊕ Procter & Gamble Co	Cnsmr Def	9.24	1.17
⊕ Bank of America Corporati	Finan Svcs	32.80	1.13
⊕ Chevron Corp	Energy	35.60	1.10
⊕ Verizon Communications In	Comm Svcs	20.41	1.07
⊕ Pfizer Inc	Hlth Care	4.34	1.02
⊕ Merck & Co Inc	Hlth Care	14.96	0.89
⊕ Comcast Corp Class A	Comm Svcs	24.76	0.87

## Current Investment Style

Value Blend Growth	Market Cap	%	Sector Weightings	% of Stocks	Rel Bmark 1
Large Mid Small	Giant	50.0	⚡ Cyclical	32.25	0.95
	Large	36.4	⚡ BasicMat	2.79	0.92
	Mid	13.5	⚡ CnsmrCyc	11.21	0.96
	Small	0.1	⚡ FinanSvcs	16.04	1.00
	Micro	0.0	⚡ Real Est	2.21	0.66
Avg \$mil: 78,279			⚡ Sensitive	41.40	1.01
Value Measures	Rel Category		⚡ CommSvcs	4.08	1.00
Price/Earnings	19.37	1.04	⚡ Energy	7.52	1.03
Price/Book	2.71	1.04	⚡ Industrl	11.17	0.97
Price/Sales	1.89	1.09	⚡ Technlgy	18.63	1.04
Price/Cash Flow	10.48	1.07	⚡ Defensive	26.35	1.05
Dividend Yield %	2.28	1.01	⚡ CnsmrDef	9.44	1.06
Growth Measures	% Rel Category		⚡ Hlthcare	13.84	1.05
Long-Term Erngs	8.60	0.97	⚡ Utilities	3.07	1.00
Book Value	0.50	0.34			
Sales	1.38	0.76			
Cash Flow	1.28	0.42			
Historical Erngs	5.52	0.89			

Composition - Net	
● Cash	0.6
● Stocks	99.4
● Bonds	0.0
● Other	0.0
Foreign (% of Stock)	0.4

Address:	Vanguard Index Funds Valley Forge, PA 19482 800-662-7447	Minimum Purchase:	\$10000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	11-13-00	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.04%		
Subadvisor:	None	Actual Fees:	Mgt:0.04% Dist:—		
		Expense Projections:	3Yr:\$16 5Yr:\$28 10Yr:\$64		
		Income Distribution:	Quarterly		

**Fund Name:** Vanguard Value Index Adm (Ticker: VVIAX)

**Asset Class:** Large Value

**Morningstar Rating:** ★★☆☆

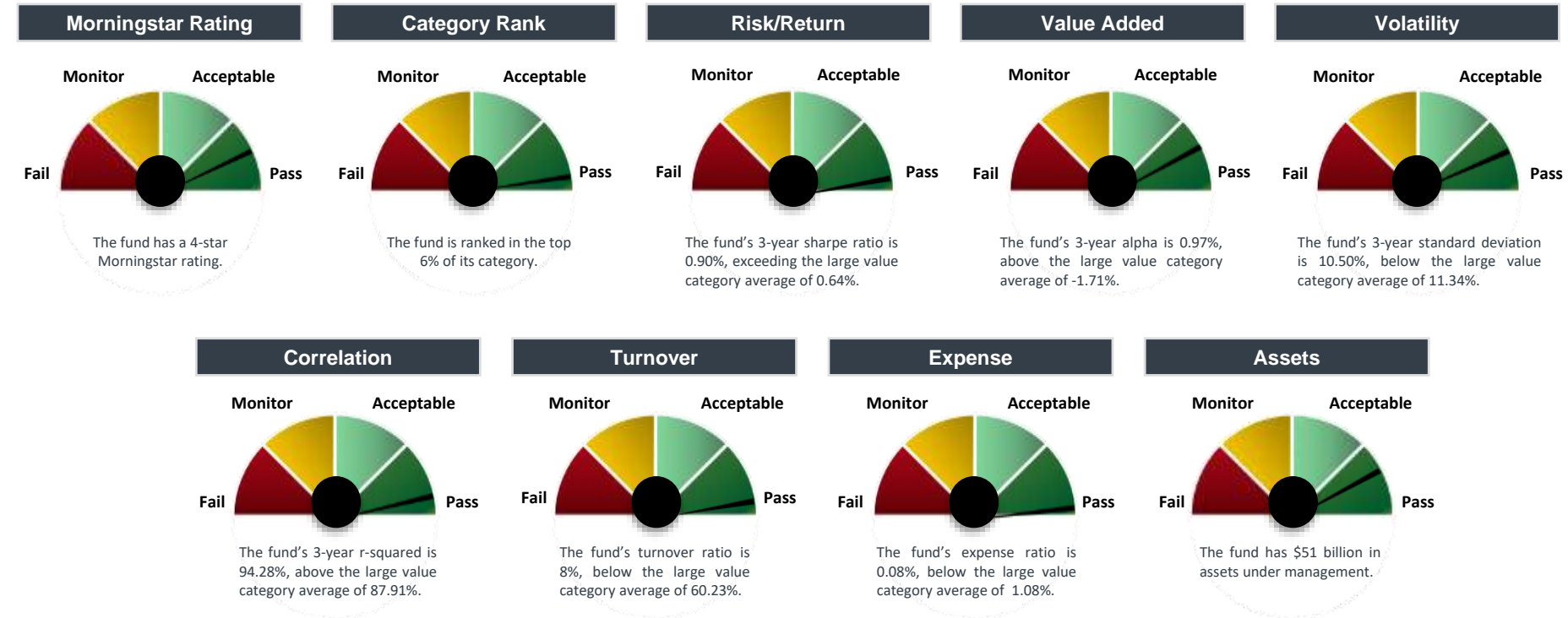
**Manager:** Vanguard

**Fund Type:** Passive

**Status:** Current Fund Option

### Fund Description

The fund offers investors low-cost index exposure to stocks of large U.S. companies in the CRSP U.S. Large Cap Value Index. The fund follows a buy-and-hold approach, investing in substantially all of the stocks represented in its benchmark.



### Diagnostics Report

Vanguard Value Index Adm passes 9 of 9 of our investable fund criteria.

# Vanguard Value Index Adm

**Benchmark 1:** Russell 1000 Value TR USD  
**Benchmark 2:** S&P 500 TR USD

**Morningstar Analyst Rating** 08-18-16

**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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	10.57	-2.42	5.83	0.87	15.18
2013	12.22	3.88	3.60	10.16	33.05
2014	2.82	4.29	0.81	4.71	13.18
2015	-0.57	0.51	-7.28	6.99	-0.86
2016	1.63	3.80	3.04	7.51	16.86

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	7.51	0.83	3.68	28	10,751
6 Mo	10.77	0.38	2.95	46	11,077
1 Yr	16.86	-0.48	4.90	27	11,686
3 Yr Avg	9.45	0.86	0.58	6	13,113
5 Yr Avg	14.98	0.18	0.32	9	20,094
10 Yr Avg	5.98	0.26	-0.96	35	17,881
15 Yr Avg	7.19	-0.22	0.50	27	28,335

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	8.55	4	0.83	21
5 Yr (estimated)	14.12	6	0.74	20
10 Yr (estimated)	5.36	17	0.59	11

Potential Capital Gain Exposure: 21% of assets

## Morningstar's Take by Alex Bryan 08-18-16

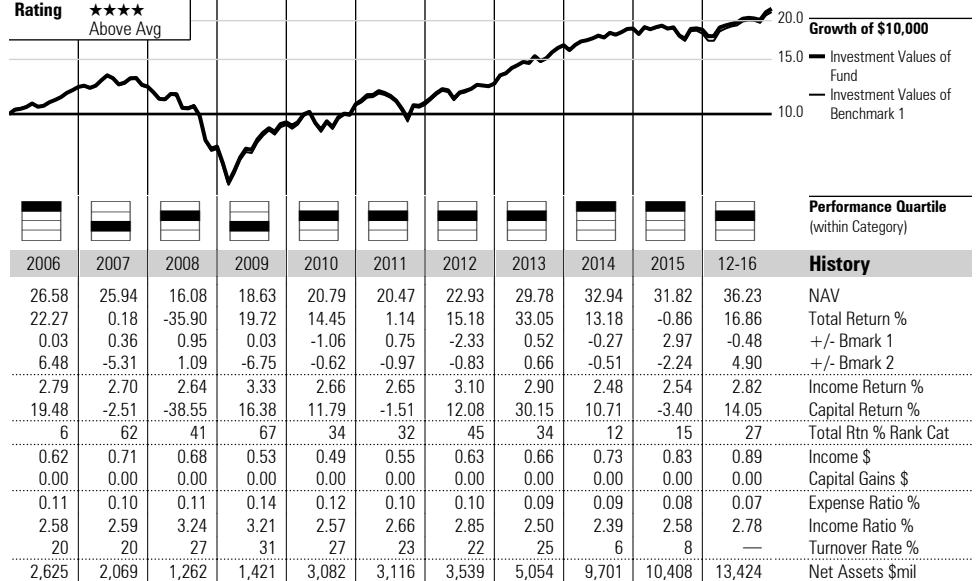
Vanguard Value Index offers low-cost exposure to large-cap value stocks. Its sizable cost advantage, low turnover, and well-diversified portfolio support its Morningstar Analyst Rating of Silver.

The fund targets stocks representing the cheaper and slower-growing half of the U.S. large-cap market and weights them by market capitalization. This weighting approach promotes low turnover and skews the portfolio toward the largest value stocks, giving the fund a larger market-cap orientation than most of its peers. But the biggest stocks are not necessarily the cheapest. Market-cap-weighting can actually reduce the portfolio's exposure to stocks as they become cheaper, as this typically accompanies a decline in market capitalization. The portfolio's largest holdings include household names such as Exxon Mobil XOM, Microsoft MSFT, and Johnson & Johnson JNJ. These large-cap stocks may offer lower return potential than smaller stocks, but they also tend to be less risky.

The fund's holdings tend to have less attractive business prospects than their growth counterparts, so they are not necessarily bargains. But they could become

## Historical Profile

**Return** Above Avg  
**Risk** Average  
**Rating** ★★★★★ Above Avg



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	16.86			
3 Yr	9.45	High	-Avg	★★★★★
5 Yr	14.98	+ Avg	-Avg	★★★★★
10 Yr	5.98	Avg	Avg	★★★
Incept	6.04			

Other Measures	Standard Index	Best Fit Index
Alpha	1.0	1.2
Beta	0.95	0.95
R-Squared	94	98
Standard Deviation	10.50	
Mean	9.45	
Sharpe Ratio	0.90	

## Portfolio Analysis 11-30-16

Total Stocks: 322

Share change since 10-31-16

	Sector	YTD Ret %	% Assets
⊕ Microsoft Corp	Technology	14.65	4.24
⊕ Exxon Mobil Corp	Energy	19.62	3.44
⊕ Johnson & Johnson	Hlth Care	15.23	2.89
⊕ Berkshire Hathaway Inc B	Finan Svcs	23.43	2.88
⊕ JPMorgan Chase & Co	Finan Svcs	33.47	2.75
⊕ General Electric Co	Industri	4.43	2.62
⊕ Wells Fargo & Co	Finan Svcs	4.17	2.28
⊕ AT&T Inc	Comm Svcs	29.18	2.26
⊕ Bank of America Corporati	Finan Svcs	32.80	2.05
⊕ Procter & Gamble Co	Cnsmr Def	9.24	2.01
⊕ Chevron Corp	Energy	35.60	2.00
⊕ Verizon Communications In	Comm Svcs	20.41	1.93
⊕ Pfizer Inc	Hlth Care	4.34	1.85
⊕ Merck & Co Inc	Hlth Care	14.96	1.61
⊕ Intel Corp	Technology	8.30	1.56
⊕ Citigroup Inc	Finan Svcs	15.65	1.48
⊕ Cisco Systems Inc	Technology	14.93	1.43
⊕ UnitedHealth Group Inc	Hlth Care	38.06	1.43
⊕ PepsiCo Inc	Cnsmr Def	7.68	1.37
⊕ International Business Ma	Technology	24.61	1.33

## Current Investment Style

Value Blend Growth	Market Cap	%
Large Mid Small	Giant	50.0
	Large	35.2
	Mid	14.8
	Small	0.1
	Micro	0.0

Avg \$mil: 77,352

Value Measures

Price/Earnings	17.58	1.04
Price/Book	2.07	1.02
Price/Sales	1.43	0.96
Price/Cash Flow	8.61	1.04
Dividend Yield %	2.80	0.96

Growth Measures

Long-Term Erngs	7.12	0.92
Book Value	1.89	1.44
Sales	-0.90	0.60
Cash Flow	-3.63	1.54
Historical Erngs	2.02	0.53

Profitability

Return on Equity	17.29
Return on Assets	4.09
Net Margin	10.60

## Sector Weightings

% of Stocks	Bmark 1
⚙️ Cyclical	33.65 0.88
🏠 BasicMat	3.28 1.14
🏢 CnsmrCyc	5.25 1.15
🏦 FinanSvcs	24.37 0.93
🏡 Real Est	0.75 0.16
🔍 Sensitive	38.25 1.03
🏢 CommSvcs	4.46 1.09
⚡ Energy	10.49 0.77
🏭 Industri	12.13 1.22
💻 Technly	11.17 1.17
➔ Defensive	28.10 1.16
🛒 CnsmrDef	9.01 1.07
🏥 Hlthcare	13.47 1.36
⚡ Utilities	5.62 0.94

## Composition - Net

● Cash	0.1
● Stocks	99.9
● Bonds	0.0
● Other	0.0
Foreign	0.7
(% of Stock)	

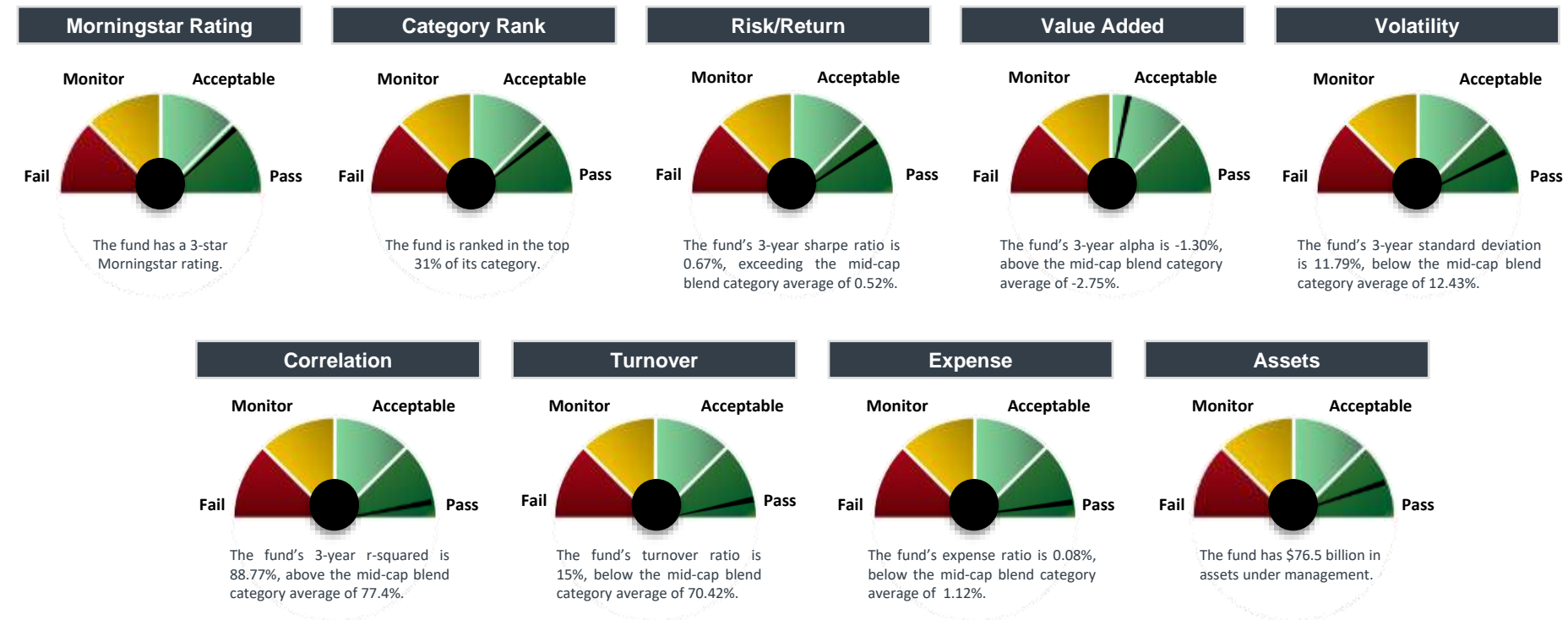
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Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	11-13-00	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.07%		
Subadvisor:	None	Actual Fees:	Mgt:0.07% Dist:—		
		Expense Projections:	3Yr:\$26 5Yr:\$45 10Yr:\$103		
		Income Distribution:	Quarterly		

**Fund Name:** Vanguard Mid Cap Index Adm (Ticker: VIMAX)  
**Asset Class:** Mid-Cap Blend  
**Morningstar Rating:** ★★ ★

**Manager:** Vanguard  
**Fund Type:** Passive  
**Status:** Current Fund Option

### Fund Description

The fund offers investors low-cost index exposure to stocks of mid-size U.S. companies in the CRSP U.S. Mid Cap Index. The fund follows a buy-and-hold approach, investing in substantially all of the stocks represented in its benchmark.



### Diagnostics Report

Vanguard Mid Cap Index Adm passes 8 of 9 of our investable fund criteria. The fund falls within an acceptable range for value added.

# Vanguard Mid Cap Index Adm

**Benchmark 1:** Russell Mid Cap TR USD  
**Benchmark 2:** S&P 500 TR USD

**Morningstar Analyst Rating** 11-23-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	13.41	-5.46	5.21	2.83	15.99
2013	12.88	2.37	7.67	8.62	35.15
2014	3.28	4.50	-1.16	6.64	13.76
2015	4.28	-1.18	-7.45	3.44	-1.34
2016	1.17	2.33	5.18	2.14	11.22

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	2.14	-1.07	-1.68	90	10,214
6 Mo	7.44	-0.43	-0.39	79	10,744
1 Yr	11.22	-2.58	-0.74	73	11,122
3 Yr Avg	7.68	-0.25	-1.20	31	12,484
5 Yr Avg	14.37	-0.35	-0.29	38	19,570
10 Yr Avg	7.66	-0.20	0.72	37	20,922
15 Yr Avg	9.21	-0.30	2.51	29	37,471

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	7.15	11	0.49	17
5 Yr (estimated)	13.86	17	0.44	15
10 Yr (estimated)	7.29	15	0.34	8

Potential Capital Gain Exposure: 23% of assets

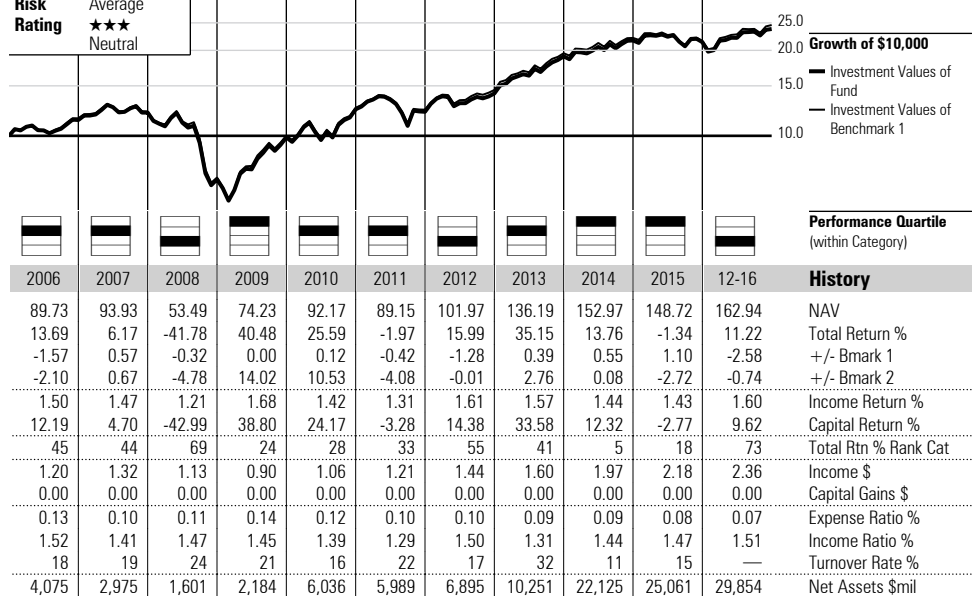
## Morningstar's Take by Adam McCullough 11-23-16

Vanguard Mid-Cap Index offers diversified exposure to U.S. mid-cap stocks. A low fee and a soundly constructed, reasonably representative portfolio leave this fund well positioned to continue its long streak of producing superior risk-adjusted returns relative to peers, and underpin its Morningstar Analyst Rating of Gold.

This well-diversified market-cap-weighted fund fully replicates the CRSP U.S. Mid-cap Index which targets representing the largest 70th to 85th percentile of the U.S. Market. The fund switched to this index from the MSCI U.S. Mid-cap 450 Index to reduce costs in early 2013. After the index change, the fund's holding count dropped to about 350 companies from 450, but it still effectively diversifies firm-specific risk. Its top-10 holdings only represent about 7.5% of the portfolio, half of the corresponding figure for the Morningstar Category average. The index swap also decreased the fund's small- and micro-cap stock holdings and boosted its average market capitalization, which is now 35% greater than the category average. And because larger stocks tend to be more profitable than their smaller counterparts, it isn't surprising that the fund's holdings tend to generate higher

## Historical Profile

**Return** Average  
**Risk** Average  
**Rating** ★★★  
 Neutral



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	11.22			
3 Yr	7.68	Avg	-Avg	★★★
5 Yr	14.37	Avg	-Avg	★★★
10 Yr	7.66	Avg	Avg	★★★
Incept	9.68			

Other Measures	Standard Index	Best Fit Index
Alpha	-1.3	-0.4
Beta	1.03	0.99
R-Squared	89	99
Standard Deviation	11.79	
Mean	7.68	
Sharpe Ratio	0.67	

## Portfolio Analysis 11-30-16

### Total Stocks: 344

Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊕ Ross Stores Inc	Cnsmr Cyc	22.91	0.82
⊕ Equinix Inc	Real Est	20.51	0.73
⊕ NVIDIA Corp	Technology	225.32	0.71
⊕ Fiserv Inc	Industri	16.20	0.70
⊕ Electronic Arts Inc	Technology	14.61	0.69
⊕ Newell Brands Inc	Cnsmr Def	3.02	0.69
⊕ Amphenol Corp Class A	Technology	29.77	0.64
⊕ M&T Bank Corp	Finan Svcs	31.40	0.62
⊕ Concho Resources Inc	Energy	42.80	0.61
⊕ Dollar Tree Inc	Cnsmr Def	-0.05	0.60
⊕ KeyCorp	Finan Svcs	41.02	0.57
⊕ Freeport-McMoRan Inc	Basic Mat	94.83	0.56
⊕ Roper Technologies Inc	Industri	-2.90	0.56
⊕ The Hartford Financial Se	Finan Svcs	11.62	0.55
⊕ WEC Energy Group Inc	Utilities	18.16	0.54
⊕ Western Digital Corp	Technology	16.49	0.54
⊕ Citizens Financial Group	Finan Svcs	37.80	0.53
⊕ Edwards Lifesciences Corp	Hlth Care	18.64	0.53
⊕ Lam Research Corp	Technology	34.83	0.52
⊕ Molson Coors Brewing Co B	Cnsmr Def	5.36	0.52

## Current Investment Style

Value Blend Growth	Market Cap	%	Sector Weightings	% of Stocks	Rel Bmark 1
Large Mid Small	Giant	0.4	⚙️ Cyclical	43.01	0.98
	Large	11.9	⚙️ BasicMat	5.59	1.14
	Mid	87.4	⚙️ CnsmrCyc	17.92	1.10
	Small	0.3	⚙️ FinanSvcs	12.80	0.99
	Micro	0.0	⚙️ Real Est	6.70	0.67
Avg \$mil: 11,906			⚙️ Sensitive	37.35	1.06
			⚙️ CommSvcs	1.36	1.24
			⚙️ Energy	5.40	0.82
			⚙️ Industri	14.21	0.95
			⚙️ Technlgy	16.38	1.29
			➡️ Defensive	19.64	0.95
			⚙️ CnsmrDef	6.80	1.10
			⚙️ Hlthcare	8.11	0.95
			⚙️ Utilities	4.73	0.80

Value Measures	Rel Category
Price/Earnings	21.29 1.11
Price/Book	2.46 1.11
Price/Sales	1.57 1.21
Price/Cash Flow	8.83 1.05
Dividend Yield %	1.75 0.99
Growth Measures	% Rel Category
Long-Term Erngs	9.79 0.97
Book Value	2.35 0.76
Sales	2.61 1.40
Cash Flow	3.32 0.54
Historical Erngs	3.70 0.44
Profitability	%
Return on Equity	15.70
Return on Assets	4.90
Net Margin	8.20

## Composition - Net

● Cash	0.5
● Stocks	99.6
● Bonds	0.0
● Other	0.0
Foreign	0.5
(% of Stock)	

Address:	Vanguard Index Funds Valley Forge, PA 19482 800-662-7447	Minimum Purchase:	\$10000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	11-12-01	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.07%		
Subadvisor:	None	Actual Fees:	Mgt:0.07% Dist:—		
		Expense Projections:	3Yr:\$26 5Yr:\$45 10Yr:\$103		
		Income Distribution:	Quarterly		



**Fund Name:** Vanguard Small Cap Growth Index Adm (Ticker: VSGAX)

**Asset Class:** Small Growth

**Morningstar Rating:** ★★ ★

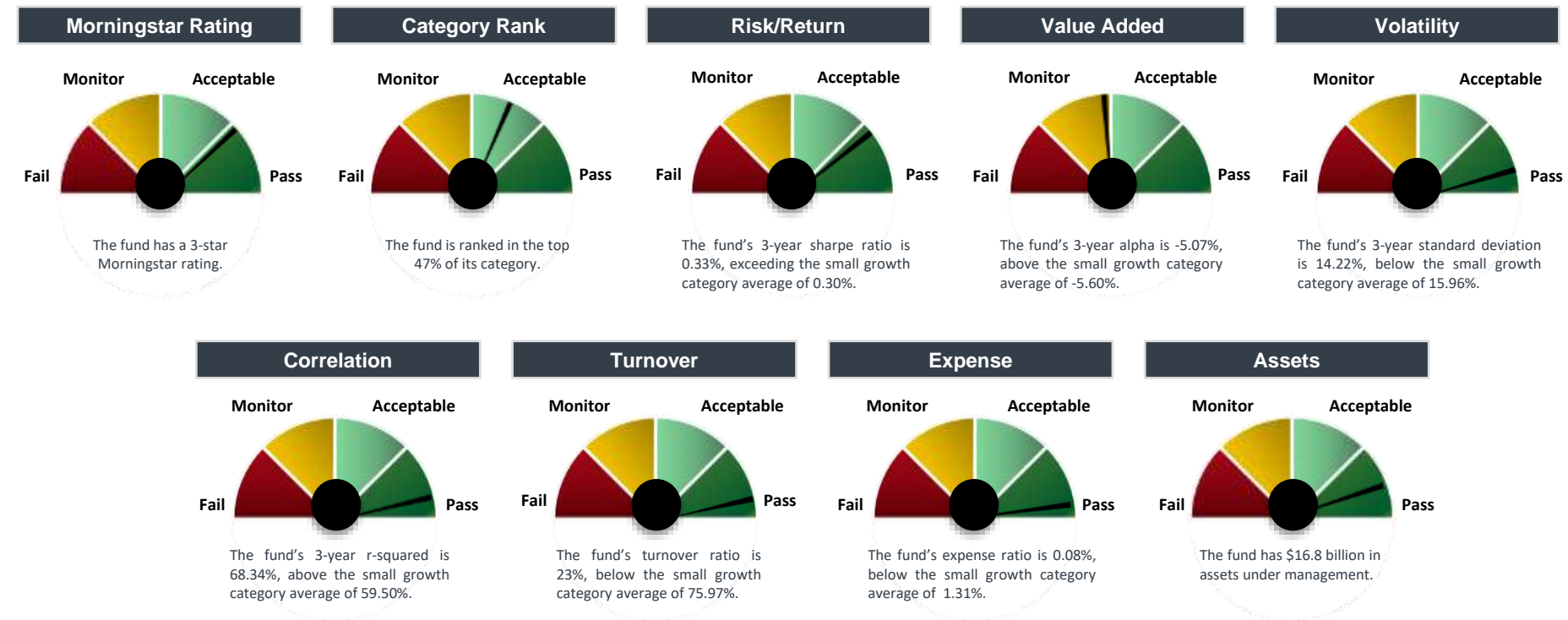
**Manager:** Vanguard

**Fund Type:** Passive

**Status:** Current Fund Option

### Fund Description

The fund offers investors low-cost index exposure to stocks of small U.S. companies in the CRSP U.S. Small Cap Growth Index. The fund follows a buy-and-hold approach, investing in substantially all of the stocks represented in its benchmark.



### Diagnostics Report

Vanguard Small Cap Growth Index Adm passes 7 of 9 of our investable fund criteria. The fund falls within an acceptable range for category rank. We continue to monitor the fund's value added.

# Vanguard Small Cap Growth Index Admiral

Benchmark 1: Russell 2000 Growth TR USD  
Benchmark 2: S&P 500 TR USD

Morningstar Analyst Rating 06-17-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	13.81	-3.79	5.44	1.91	17.66
2013	12.38	2.99	11.07	7.53	38.22
2014	1.59	2.57	-5.54	5.68	4.02
2015	6.30	0.30	-11.69	3.53	-2.52
2016	-1.93	4.39	6.66	1.42	10.73

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of
Return%	1	2	Cat	\$10,000	
3 Mo	1.42	-2.15	-2.41	70	10,142
6 Mo	8.17	-4.95	0.34	83	10,817
1 Yr	10.73	-0.59	-1.23	48	11,073
3 Yr Avg	3.94	-1.11	-4.94	47	11,228
5 Yr Avg	12.80	-0.94	-1.86	39	18,261
10 Yr Avg	—	—	—	—	—
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	3.52	28	0.40	12
5 Yr (estimated)	12.42	20	0.33	11
10 Yr (estimated)	—	—	—	—

Potential Capital Gain Exposure: 14% of assets

## Morningstar's Take by Alex Bryan 06-17-16

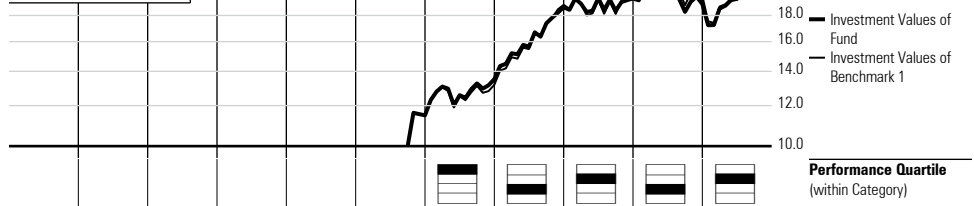
Vanguard Small Cap Growth Index is one of the cheapest funds of its kind. Its cost advantage, low turnover, and broad market-cap-weighted portfolio support its Morningstar Analyst Rating of Silver.

The fund invests in the faster-growing and more expensive half of the U.S. small-cap market and weights its holdings by market capitalization. While these companies tend to grow more quickly than their large-cap counterparts, they also carry greater risk. Most of the fund's holdings lack meaningful competitive advantages and may not hold up as well as large caps during market downturns. Therefore, this fund is best suited as a satellite holding for investors with a high risk tolerance. Growth is attractive, but it must exceed the market's expectations to translate into superior returns. There is always a risk that investors' expectations for the fund's holdings may be overly optimistic.

Because this fund covers approximately half the small-cap market, it includes some stocks with only modest growth characteristics. These holdings help limit the fund's exposure to more expensive, and potentially riskier, stocks. The fund has less overlap with its value

## Historical Profile

Return Average  
Risk Below Avg  
Rating ★★★  
Neutral



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	12-16	History
—	—	—	—	—	26.88	31.30	42.98	44.26	42.73	46.79	NAV
—	—	—	—	—	—	17.66	38.22	4.02	-2.52	10.73	Total Return %
—	—	—	—	—	—	3.07	-5.08	-1.59	-1.13	-0.59	+/- Bmark 1
—	—	—	—	—	—	1.66	5.83	-9.67	-3.90	-1.23	+/- Bmark 2
—	—	—	—	—	—	1.21	0.89	1.04	0.94	1.19	Income Return %
—	—	—	—	—	—	16.45	37.33	2.98	-3.46	9.55	Capital Return %
—	—	—	—	—	—	11	65	36	52	48	Total Rtn % Rank Cat
—	—	—	—	—	0.11	0.33	0.28	0.45	0.42	0.51	Income \$
—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	Capital Gains \$
—	—	—	—	—	0.10	0.10	0.09	0.09	0.08	0.08	Expense Ratio %
—	—	—	—	—	0.51	1.11	0.78	1.01	0.94	1.09	Income Ratio %
—	—	—	—	—	40	37	50	26	23	—	Turnover Rate %
—	—	—	—	—	1,781	2,539	4,881	5,434	5,933	6,648	Net Assets \$mil

## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	10.73	—	—	—
3 Yr	3.94	Avg	-Avg	★★★
5 Yr	12.80	Avg	-Avg	★★★
10 Yr	—	—	—	—
Incept	13.77	—	—	—

## Other Measures

	Standard Index	Best Fit Index
Alpha	-5.1	0.4
Beta	1.09	0.88
R-Squared	68	98
Standard Deviation	14.22	—
Mean	3.94	—
Sharpe Ratio	0.33	—

## Portfolio Analysis 11-30-16

### Total Stocks: 684

Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊕ CMT Market Liquidity Rate	—	—	1.91
⊕ Diamondback Energy Inc	Energy	51.06	0.62
⊕ SVB Financial Group	Finan Svcs	44.37	0.61
⊕ Domino's Pizza Inc	Cnsmr Cyc	44.50	0.60
⊕ HD Supply Holdings Inc	Industri	41.56	0.58
⊕ The Middleby Corp	Industri	19.41	0.58
⊕ Cadence Design Systems Inc	Technology	21.19	0.57
⊕ Signature Bank	Finan Svcs	-2.07	0.56
⊕ A.O. Smith Corp	Industri	24.87	0.53
⊕ Regency Centers Corp	Real Est	4.15	0.52
⊕ Align Technology Inc	Hlth Care	45.98	0.50
⊕ Jack Henry & Associates Inc	Industri	15.17	0.50
⊕ Kilroy Realty Corp	Real Est	21.04	0.49
⊕ Seattle Genetics Inc	Hlth Care	17.58	0.47
⊕ Burlington Stores Inc	Cnsmr Def	—	0.46
⊕ CoStar Group Inc	Real Est	-8.81	0.46
⊕ American Campus Communities	Real Est	24.41	0.45
⊕ Lennox International Inc	Industri	23.96	0.45
⊕ Mednax Inc	Hlth Care	-6.98	0.45
⊕ Old Dominion Freight Line	Industri	45.23	0.45

## Current Investment Style

Value Blend Growth	Market Cap	%	Sector Weightings	% of Stocks	Rel Bmark 1
Large Mid Small	Giant	0.0	⚙️ Cyclical	40.91	1.20
	Large	0.3	⚙️ BasicMat	4.07	0.53
	Mid	44.4	⚙️ CnsmrCyc	14.97	1.00
	Small	46.2	⚙️ FinanSvcs	6.60	1.12
	Micro	9.1	⚙️ Real Est	15.27	2.85
Avg \$mil: 3,279			⚙️ Sensitive	41.26	0.99
Value Measures	Rel Category		⚙️ CommSvcs	0.61	0.39
Price/Earnings	27.27	1.02	⚙️ Energy	4.49	4.58
Price/Book	2.79	0.90	⚙️ Industri	14.69	0.90
Price/Sales	2.25	1.24	⚙️ Technlgy	21.47	0.94
Price/Cash Flow	10.76	0.92	⚙️ Defensive	17.84	0.73
Dividend Yield %	1.20	1.45	⚙️ CnsmrDef	3.67	0.87
Growth Measures	% Rel Category		⚙️ Hlthcare	13.66	0.71
Long-Term Erngs	12.95	0.90	⚙️ Utilities	0.51	0.61
Book Value	6.86	0.99			
Sales	8.53	1.49			
Cash Flow	9.92	0.80			
Historical Erngs	15.08	1.28			

## Composition - Net

	%
Cash	1.9
Stocks	98.1
Bonds	0.0
Other	0.0
Foreign	0.4
(% of Stock)	

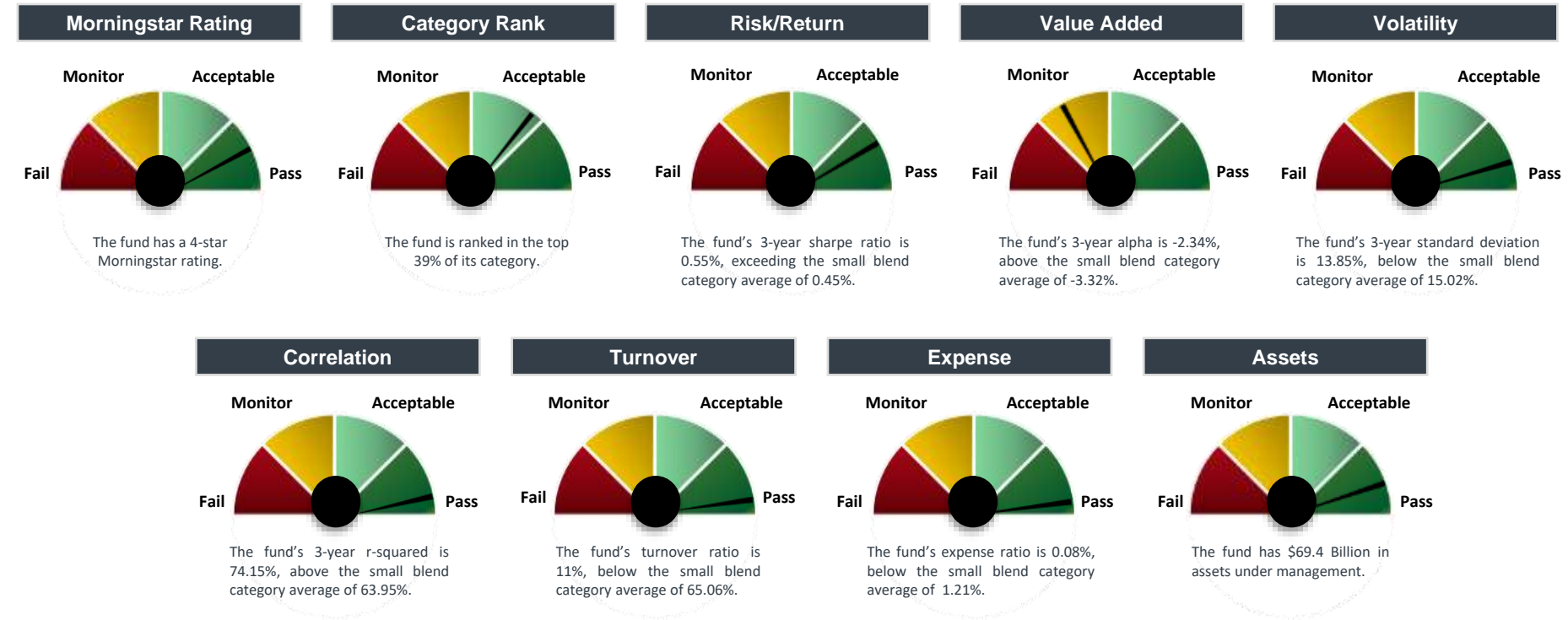
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Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	09-27-11	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.06%		
Subadvisor:	None	Actual Fees:	Mgt:0.06% Dist:—		
		Expense Projections:	3Yr:\$26 5Yr:\$45 10Yr:\$103		
		Income Distribution:	Quarterly		

**Fund Name:** Vanguard Small Cap Index Adm (Ticker: VSMAX)  
**Asset Class:** Small Blend  
**Morningstar Rating:** ★★☆☆

**Manager:** Vanguard  
**Fund Type:** Passive  
**Status:** Current Fund Option

### Fund Description

The fund offers investors low-cost index exposure to stocks of small U.S. companies in the CRSP U.S. Small Cap Index. The fund follows a buy-and-hold approach, investing in substantially all of the stocks represented in its benchmark.



### Diagnostics Report

Vanguard Small Cap Index Adm passes 7 of 9 of our investable fund criteria. The fund falls within an acceptable range for category rank. We continue to monitor the fund's value added.



# Vanguard Small Cap Index Adm

Benchmark 1: Russell 2000 TR USD  
Benchmark 2: S&P 500 TR USD

Morningstar Analyst Rating 11-28-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	12.96	-3.45	5.47	2.79	18.24
2013	12.84	2.77	9.19	8.84	37.81
2014	2.59	3.77	-5.49	6.84	7.50
2015	4.81	-0.56	-10.33	3.11	-3.64
2016	1.00	3.98	6.17	6.10	18.30

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
Return%	1	2	Cat		
3 Mo	6.10	-2.73	2.28	93	10,610
6 Mo	12.65	-6.03	4.83	90	11,265
1 Yr	18.30	-3.01	6.34	71	11,830
3 Yr Avg	7.01	0.27	-1.86	39	12,255
5 Yr Avg	14.83	0.37	0.17	33	19,969
10 Yr Avg	8.18	1.11	1.23	19	21,951
15 Yr Avg	9.36	0.87	2.66	28	38,259

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	6.42	21	0.55	18
5 Yr (estimated)	14.24	17	0.52	16
10 Yr (estimated)	7.74	7	0.41	14

Potential Capital Gain Exposure: 21% of assets

## Morningstar's Take by Adam McCullough 11-28-16

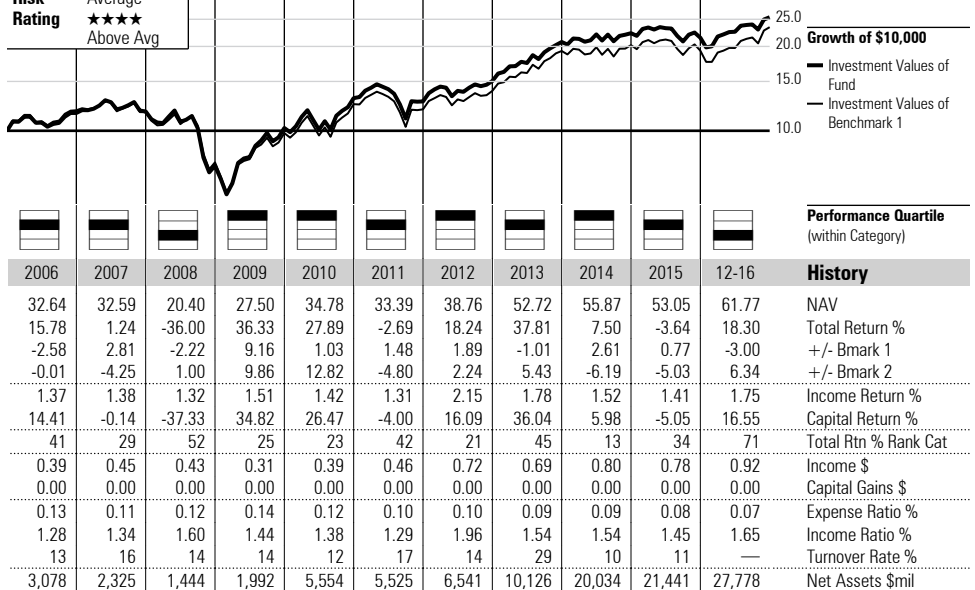
Vanguard Small Cap Index is a compelling market-cap-weighted fund that balances accurately representing the U.S. small-cap stock market with keeping turnover low. Its well-diversified portfolio, efficient index construction, and low expense ratio should provide an edge over its peers. It earns a Morningstar Analyst Rating of Gold.

The fund tracks the CRSP U.S. Small Cap Index and offers well-diversified exposure to small-cap U.S. stocks. The index targets U.S. stocks smaller than the largest 85% by market capitalization and larger than the smallest 2%. This brings in more than 1,000 holdings, most of which have not yet established durable competitive advantages and tend to be riskier than larger stocks. But the fund effectively diversifies firm-specific risk. Its top 10 holdings represent about 3% of assets, compared with the small-blend Morningstar Category average of 22%.

The fund has two primary advantages that reduce its transaction costs. It invests in larger stocks than most of its category peers, which tend to be more liquid and less expensive to trade than their smaller counterparts. And its index employs buffer rules that wait to move a stock until it is squarely in an adjacent size segment and then

## Historical Profile

Return Above Avg  
Risk Average  
Rating ★★★★★ Above Avg



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	18.30			
3 Yr	7.01	Avg	-Avg	★★★★
5 Yr	14.83	Avg	-Avg	★★★★
10 Yr	8.18	+Avg	Avg	★★★★
Incept	9.00			

Other Measures	Standard Index	Best Fit Index
Alpha	-2.3	0.5
Beta	1.11	0.93
R-Squared	74	99
Standard Deviation	13.85	
Mean	7.01	
Sharpe Ratio	0.55	

## Portfolio Analysis 11-30-16

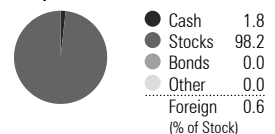
### Total Stocks: 1438

Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊕ Arthur J. Gallagher & Co	Finan Svcs	30.63	0.29
⊕ Newfield Exploration Co	Energy	24.39	0.29
⊕ CDW Corp	Technology	25.05	0.27
⊕ Diamondback Energy Inc	Energy	51.06	0.27
⊕ Huntington Ingalls Indust	Industri	46.86	0.27
⊕ Steel Dynamics Inc	Basic Mat	102.24	0.27
⊕ SVB Financial Group	Finan Svcs	44.37	0.27
⊕ Targa Resources Corp	Energy	120.66	0.27
⊕ Domino's Pizza Inc	Cnsmr Cyc	44.50	0.26
⊕ HD Supply Holdings Inc	Industri	41.56	0.26
⊕ Packaging Corp of America	Cnsmr Cyc	38.27	0.26
⊕ The Middleby Corp	Industri	19.41	0.26
⊕ Westar Energy Inc	Utilities	36.45	0.26
⊕ Broadridge Financial Solu	Industri	25.74	0.25
⊕ Cadence Design Systems In	Technology	21.19	0.25
⊕ Signature Bank	Finan Svcs	-2.07	0.25
⊕ UGI Corp	Utilities	39.28	0.25
⊕ Atmos Energy Corp	Utilities	20.34	0.24
⊕ Carlisle Companies Inc	Cnsmr Cyc	25.82	0.24
⊕ Spirit AeroSystems Holdin	Industri	16.74	0.24

## Current Investment Style

Value Blend Growth	Market Cap	%	Sector Weightings	% of Stocks	Rel Bmark 1
	Giant	0.0	⚡ Cyclical	45.64	0.99
	Large	0.3	⚡ BasicMat	5.81	0.97
	Mid	42.0	⚡ CnsmrCyc	13.27	1.08
	Small	48.5	⚡ FinanSvcs	14.05	0.75
	Micro	9.3	⚡ Real Est	12.51	1.40
Avg \$mil: 3,232			⚡ Sensitive	37.91	1.07
			⚡ CommSvcs	0.64	0.55
			⚡ Energy	5.40	1.68
			⚡ Industri	16.62	1.14
			⚡ Technlgy	15.25	0.93
			⚡ Defensive	16.45	0.89
			⚡ CnsmrDef	3.78	1.02
			⚡ Hlthcare	9.21	0.82
			⚡ Utilities	3.46	0.98

## Composition - Net



Address:	Vanguard Index Funds Valley Forge, PA 19482 800-662-7447	Minimum Purchase:	\$10000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	11-13-00	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.06%		
Subadvisor:	None	Actual Fees:	Mgt:0.06% Dist:—		
		Expense Projections:	3Yr:\$26 5Yr:\$45 10Yr:\$103		
		Income Distribution:	Quarterly		

Profitability	%
Return on Equity	10.35
Return on Assets	2.31
Net Margin	7.49

**Fund Name:** Vanguard Small Cap Value Index Adm (Ticker: VSIAX)

**Asset Class:** Small Value

**Morningstar Rating:** ★★★★★

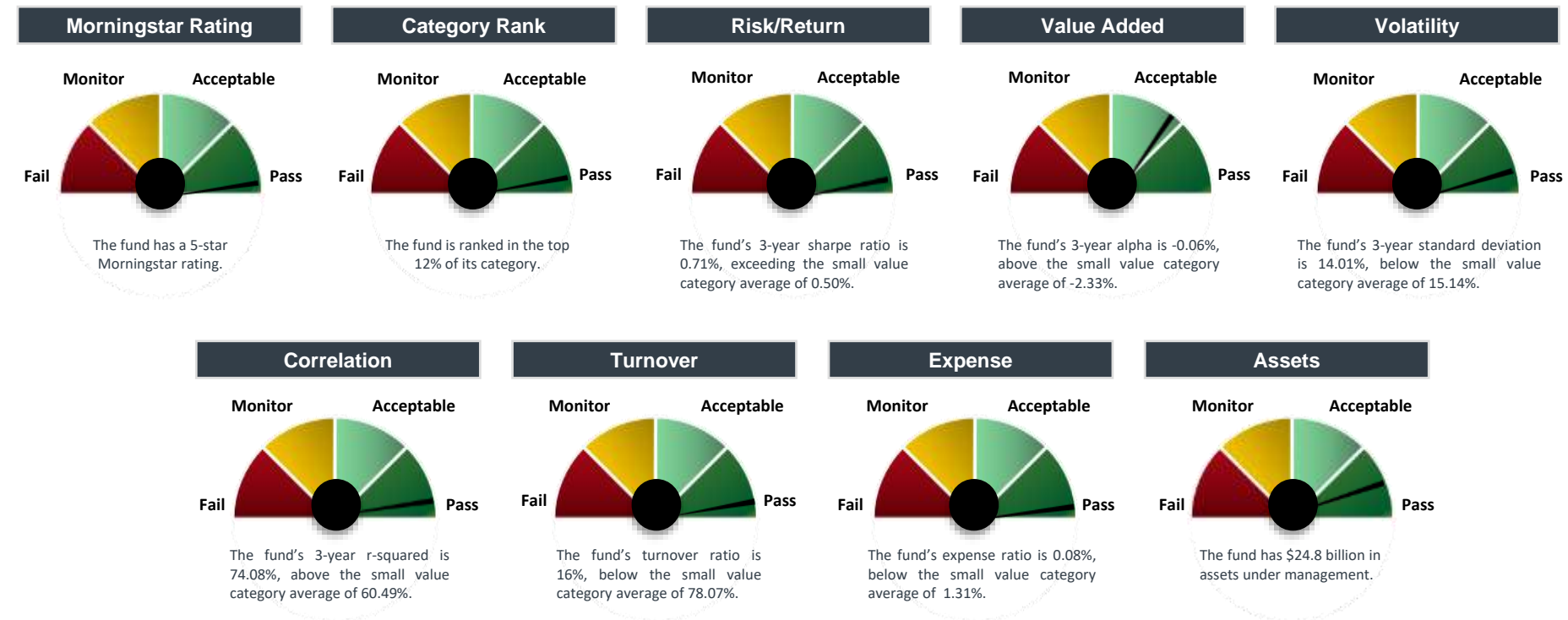
**Manager:** Vanguard

**Fund Type:** Passive

**Status:** Current Fund Option

### Fund Description

The fund offers investors low-cost index exposure to stocks of small U.S. companies in the CRSP U.S. Small Cap Value Index. The fund follows a buy-and-hold approach, investing in substantially all of the stocks represented in its benchmark.



### Diagnostics Report

Vanguard Small Cap Value Index passes 8 of 9 of our investable fund criteria. The fund falls within an acceptable range for value added.

# Vanguard Small Cap Value Index Admiral

**Benchmark 1:** Russell 2000 Value TR USD  
**Benchmark 2:** S&P 500 TR USD

**Morningstar Analyst Rating** 06-17-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	12.14	-3.14	5.53	3.61	18.77
2013	13.30	1.87	7.64	9.94	36.58
2014	3.45	4.76	-5.43	7.87	10.55
2015	3.51	-1.36	-9.12	2.76	-4.65
2016	3.49	3.65	5.76	9.98	24.78

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2		
3 Mo	9.98	-4.09	6.16	82	10,998
6 Mo	16.32	-7.87	8.50	87	11,632
1 Yr	24.78	-6.96	12.82	61	12,478
3 Yr Avg	9.56	1.25	0.69	12	13,152
5 Yr Avg	16.36	1.29	1.70	10	21,334
10 Yr Avg	—	—	—	—	—
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	8.81	5	0.68	17
5 Yr (estimated)	15.58	6	0.68	20
10 Yr (estimated)	—	—	—	—

Potential Capital Gain Exposure: 18% of assets

## Morningstar's Take by Alex Bryan 06-17-16

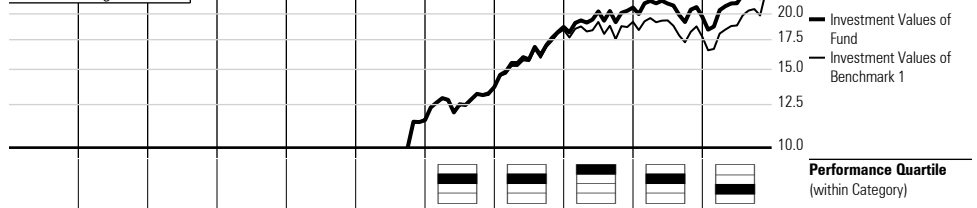
Low fees are Vanguard Small Cap Value Index's greatest strength. Its sizable cost advantage, low turnover, and broad market-cap-weighted portfolio support its Morningstar Analyst Rating of Silver.

The fund targets stocks representing half of the U.S. small-cap market with the lowest valuation ratios and growth rates. It weights these holdings by market capitalization, reflecting the composition of the market. Most of the 800-plus stocks that make the cut have limited analyst coverage and brand recognition. They also tend to be more volatile than their larger counterparts, but could compensate investors with higher returns over the long term. Many of the fund's sector weightings are similar to the small-value Morningstar Category average, but it has greater exposure to real estate and utilities stocks, and less exposure to the technology sector. The fund does not constrain its sector weightings.

Because it casts a wide net, this portfolio includes some stocks with only modest value characteristics. These holdings should help reduce the portfolio's exposure to distressed stocks and volatility. The fund has less overlap with its growth counterpart, Vanguard Small

## Historical Profile

**Return** Above Avg  
**Risk** Below Avg  
**Rating** ★★★★★  
 Highest



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	12-16	History
—	—	—	—	—	26.96	31.20	41.82	45.42	42.46	51.97	NAV
—	—	—	—	—	—	18.77	36.58	10.55	-4.65	24.78	Total Return %
—	—	—	—	—	—	0.72	2.06	6.33	2.82	-6.96	+/- Bmark 1
—	—	—	—	—	—	2.76	4.19	-3.14	-6.04	12.82	+/- Bmark 2
—	—	—	—	—	—	3.04	2.51	1.92	1.87	2.18	Income Return %
—	—	—	—	—	—	15.73	34.07	8.63	-6.52	22.60	Capital Return %
—	—	—	—	—	—	26	44	2	36	61	Total Rtn % Rank Cat
—	—	—	—	—	0.56	0.82	0.78	0.80	0.84	0.92	Income \$
—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	Capital Gains \$
—	—	—	—	—	0.10	0.10	0.09	0.09	0.08	0.08	Expense Ratio %
—	—	—	—	—	2.04	2.80	2.18	1.98	1.90	2.04	Income Ratio %
—	—	—	—	—	30	25	47	12	16	—	Turnover Rate %
—	—	—	—	—	1,941	2,563	4,371	5,774	6,467	9,469	Net Assets \$mil

## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	24.78	—	—	—
3 Yr	9.56	+Avg	-Avg	★★★★
5 Yr	16.36	+Avg	-Avg	★★★★★
10 Yr	—	—	—	—
Incept	17.61	—	—	—

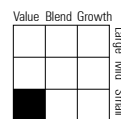
Other Measures	Standard Index	Best Fit Index
Alpha	-0.1	1.4
Beta	1.12	0.91
R-Squared	74	98
Standard Deviation	14.00	—
Mean	9.56	—
Sharpe Ratio	0.71	—

## Portfolio Analysis 11-30-16

### Total Stocks: 856

Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊖ CMT Market Liquidity Rate	—	—	1.00
⊕ Arthur J. Gallagher & Co	Finan Svcs	30.63	0.52
⊕ CDW Corp	Technology	25.05	0.49
⊕ Huntington Ingalls Indust	Industrl	46.86	0.49
⊕ Targa Resources Corp	Energy	120.66	0.49
⊕ Steel Dynamics Inc	Basic Mat	102.24	0.48
⊕ Westar Energy Inc	Utilities	36.45	0.47
⊕ Broadridge Financial Solu	Industrl	25.74	0.45
⊕ UGI Corp	Utilities	39.28	0.45
⊕ Spirit AeroSystems Holdin	Industrl	16.74	0.44
⊕ Atmos Energy Corp	Utilities	20.34	0.43
⊕ Carlisle Companies Inc	Cnsmr Cyc	25.82	0.42
⊕ The Valspar Corp	Basic Mat	26.55	0.42
⊕ IDEX Corp	Industrl	19.31	0.41
⊕ RPM International Inc	Basic Mat	24.73	0.41
⊕ CommScope Holding Co Inc	Technology	—	0.40
⊕ East West Bancorp Inc	Finan Svcs	24.23	0.40
⊕ Leidos Holdings Inc	Technology	17.42	0.40
⊕ Apartment Investment & Ma	Real Est	16.84	0.38
⊕ JetBlue Airways Corp	Industrl	-1.02	0.38

## Current Investment Style



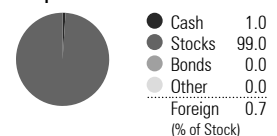
Avg \$mil: 3,203

Value Measures	Rel Category	% Rel Category
Price/Earnings	18.64	1.06
Price/Book	1.72	1.11
Price/Sales	0.93	1.01
Price/Cash Flow	6.63	1.08
Dividend Yield %	2.37	1.14
Growth Measures	% Rel Category	
Long-Term Erngs	9.02	0.86
Book Value	0.11	0.05
Sales	-0.87	7.22
Cash Flow	0.15	0.04
Historical Erngs	-1.25	-0.40

Value Blend Growth	Market Cap	%
Large	Giant	0.0
Mid	Large	0.3
Small	Mid	40.2
Micro	Small	50.1
	Micro	9.4

Sector Weightings	% of Stocks	Rel Bmark 1
⊖ Cyclical	49.47	0.87
⊖ BasicMat	7.13	1.59
⊖ CnsmrCyc	11.90	1.22
⊖ FinanSvcs	19.85	0.65
⊖ Real Est	10.59	0.87
⊖ Sensitive	35.21	1.19
⊖ CommSvcs	0.66	0.84
⊖ Energy	6.09	1.16
⊖ Industrl	18.09	1.39
⊖ Technlgy	10.37	0.98
⊖ Defensive	15.34	1.15
⊖ CnsmrDef	3.86	1.20
⊖ Hlthcare	5.73	1.37
⊖ Utilities	5.75	0.96

## Composition - Net



Profitability	%
Return on Equity	10.41
Return on Assets	2.01
Net Margin	8.43

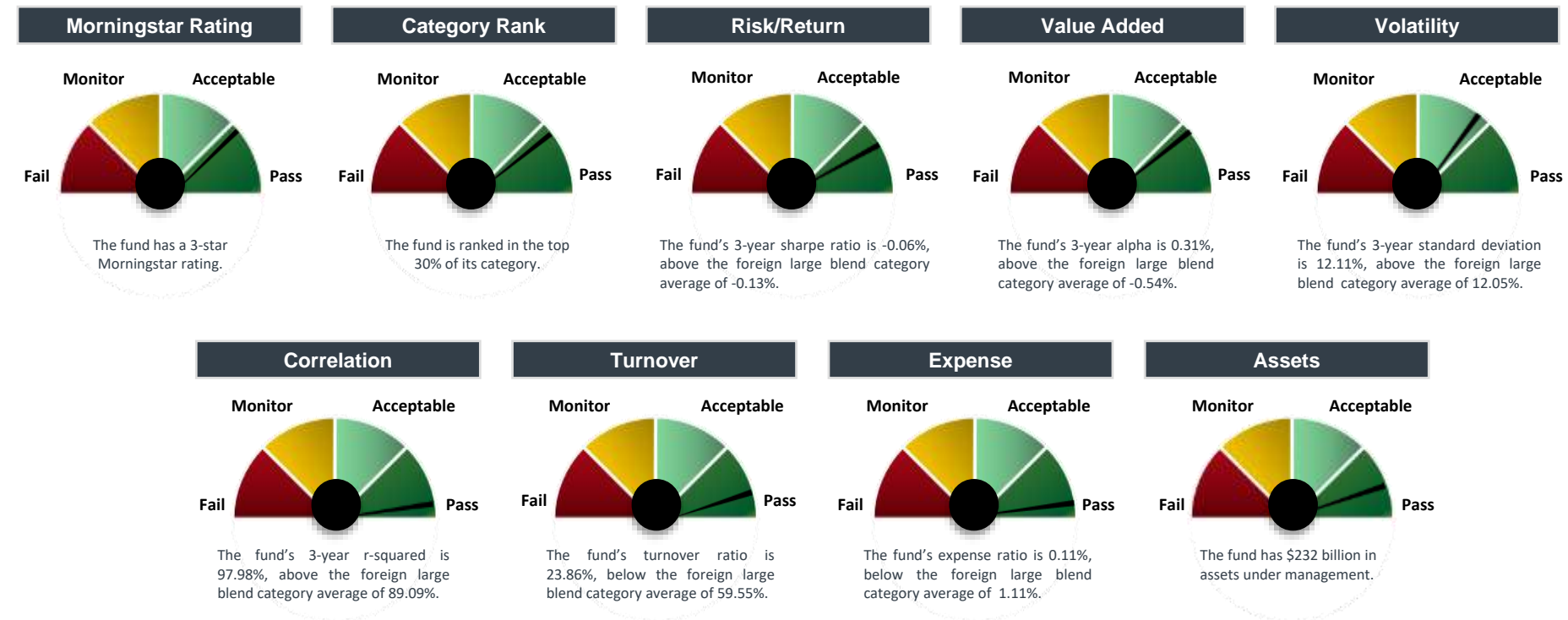
Address:	Vanguard Index Funds Valley Forge, PA 19482 800-662-7447	Minimum Purchase:	\$10000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	09-27-11	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.06%		
Subadvisor:	None	Actual Fees:	Mgt:0.06% Dist:—		
		Expense Projections:	3Yr:\$26 5Yr:\$45 10Yr:\$103		
		Income Distribution:	Quarterly		

**Fund Name:** Vanguard Total Intl Stock Index Adm (Ticker: VTIAX)  
**Asset Class:** Foreign Large Blend  
**Morningstar Rating:** ★★ ★

**Manager:** Vanguard  
**Fund Type:** Passive  
**Status:** Current Fund Option

### Fund Description

The fund offers investors a low-cost way to gain equity exposure to both developed and emerging international economies by investing in stocks in the FTSE Global All Cap ex-U.S. Index. The fund invests substantially all of its assets in the common stocks included in its target index.



### Diagnostics Report

Vanguard Total Intl Stock Index Adm passes 8 of 9 of our investable fund criteria. The fund falls within an acceptable range for volatility.

# Vanguard Total Intl Stock Index Admiral

Benchmark 1: MSCI ACWI Ex USA NR USD  
Benchmark 2: MSCI ACWI Ex USA NR USD

Morningstar Analyst Rating 09-07-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	12.00	-7.48	6.93	6.69	18.21
2013	2.90	-3.24	10.27	4.87	15.14
2014	0.80	5.05	-5.55	-4.19	-4.17
2015	4.09	1.28	-11.61	2.74	-4.26
2016	-0.17	0.26	6.65	-1.93	4.67

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	-1.93	-0.68	-0.68	44	9,807
6 Mo	4.59	-0.98	-0.98	37	10,459
1 Yr	4.67	0.17	0.18	12	10,467
3 Yr Avg	-1.34	0.44	0.44	30	9,603
5 Yr Avg	5.50	0.50	0.50	59	13,071
10 Yr Avg	—	—	—	—	—
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	-2.42	32	1.09	74
5 Yr (estimated)	4.37	59	1.07	74
10 Yr (estimated)	—	—	—	—

Potential Capital Gain Exposure: -3% of assets

## Morningstar's Take by Matthew Diamond 09-07-16

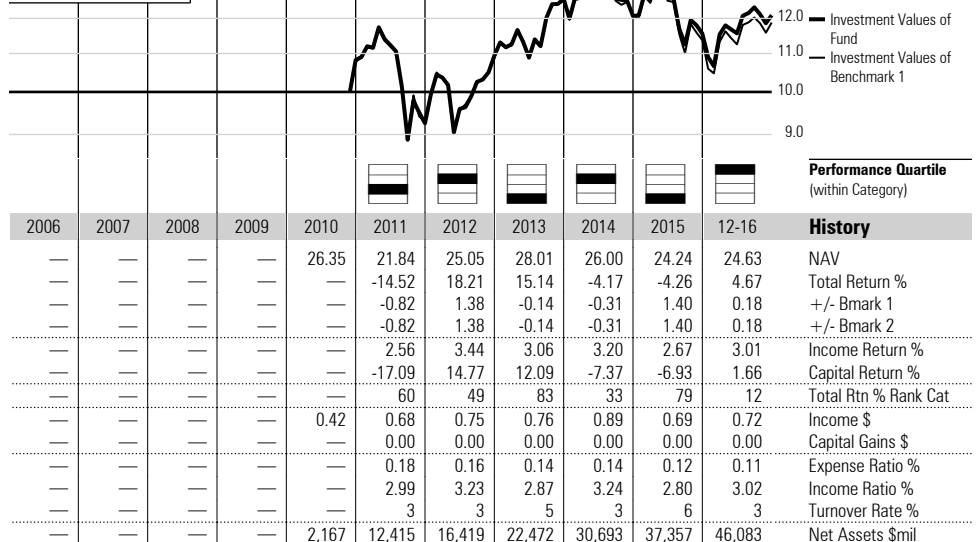
Vanguard Total International Stock Index is a well-run, one-stop shop for broad exposure to stocks listed in foreign developed and emerging markets. Its diversified, market-cap-weighted portfolio and a sizable cost advantage from one of the industry's top stewards support its Morningstar Analyst Rating of Gold.

The fund owns approximately 6,000 stocks across all developed (excluding the United States) and emerging markets, representing 98% of the investable market. It employs a market-cap-weighting approach that promotes low turnover and skews the portfolio toward large multinationals with global operations, such as Nestle NSRGY, Toyota TM, and pharmaceuticals Roche RHHBY and Novartis NVS. These companies tend to be more profitable and less volatile than their smaller counterparts.

Sector weightings are consistent with the average fund in the foreign large-blend Morningstar Category, but the fund has above-average exposure to emerging-markets companies. Emerging-markets stocks currently account for 15% of the portfolio, compared with the 7% category average. As a result, the fund has an

## Historical Profile

Return Average  
Risk Average  
Rating ★★★  
Neutral



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	4.67	—	—	—
3 Yr	-1.34	+Avg	Avg	★★★
5 Yr	5.50	Avg	Avg	★★★
10 Yr	—	—	—	—
Incept	2.99	—	—	—

## Other Measures

	Standard Index	Best Fit Index
Alpha	0.3	0.3
Beta	0.94	0.94
R-Squared	98	98
Standard Deviation	12.11	—
Mean	-1.34	—
Sharpe Ratio	-0.06	—

## Portfolio Analysis 11-30-16

### Total Stocks: 5961

Share change since 10-31-16	Sector	Country	% Assets
⊕ Nestle SA	Cnsmr Def	Switzerland	1.04
⊕ Novartis AG	Hlth Care	Switzerland	0.82
⊕ Toyota Motor Corp	Cnsmr Cyc	Japan	0.82
⊕ Roche Holding AG Dividend	Hlth Care	Switzerland	0.80
⊕ HSBC Holdings PLC	Finan Svcs	United Kingdom	0.79
⊕ Samsung Electronics Co Lt	Technology	South Korea	0.76
⊕ Tencent Holdings Ltd	Technology	China	0.67
⊕ Taiwan Semiconductor Manu	Technology	Taiwan	0.65
⊕ BP PLC	Energy	United Kingdom	0.55
⊕ Royal Dutch Shell PLC Cla	Energy	United Kingdom	0.55
⊕ Total SA	Energy	France	0.52
⊕ British American Tobacco	Cnsmr Def	United Kingdom	0.51
⊕ Commonwealth Bank of Aust	Finan Svcs	Australia	0.50
⊕ Royal Dutch Shell PLC B	Energy	United Kingdom	0.50
⊕ Royal Bank of Canada	Finan Svcs	Canada	0.48
⊕ GlaxoSmithKline PLC	Hlth Care	United Kingdom	0.46
⊕ Sanofi SA	Hlth Care	France	0.45
⊕ The Toronto-Dominion Bank	Finan Svcs	Canada	0.44
⊕ Siemens AG	Industri	Germany	0.43
⊕ Anheuser-Busch InBev SA/N	Cnsmr Def	Belgium	0.42

## Current Investment Style

Value Blend Growth	Market Cap	%	Sector Weightings	% of Stocks	Rel Bmark 1
Large Mid Small	Giant	49.2	⚡ Cyclical	46.13	1.00
	Large	30.1	⚡ BasicMat	9.28	1.09
	Mid	16.6	⚡ CnsmrCyc	11.58	1.02
	Small	3.9	⚡ FinanSvcs	21.21	0.92
	Micro	0.2	⚡ Real Est	4.06	1.16
Avg \$mil: 18,456			⚡ Sensitive	32.93	1.01
			⚡ CommSvcs	4.33	0.88
Value Measures	Rel Category		⚡ Energy	6.74	0.93
Price/Earnings	15.07	0.96	⚡ Industri	12.33	1.15
Price/Book	1.44	0.88	⚡ Technlgy	9.53	0.97
Price/Sales	1.03	0.88	⚡ Defensive	20.93	1.00
Price/Cash Flow	4.87	0.83	⚡ CnsmrDef	9.71	0.98
Dividend Yield %	3.47	1.07	⚡ Hlthcare	8.02	1.01
Growth Measures	% Rel Category		⚡ Utilities	3.20	1.01
Long-Term Erngs	8.85	0.99			
Book Value	-6.21	-1.82			
Sales	-17.38	10.15			
Cash Flow	-6.39	-1.85			
Historical Erngs	-59.71	16.13			

## Composition - Net

	Cash	Bonds	Other	Stocks	Foreign (% of Stock)
	2.7	0.0	0.4	99.9	99.1

## Regional Exposure

	% Stock		% Stock
UK/W. Europe	42	N. America	8
Japan	19	Latn America	3
Asia X Japan	24	Other	4

## Country Exposure

	% Stock		% Stock
Japan	19	France	6
UK	13	Germany	6
Canada	7		

Address: Vanguard Star Funds  
Valley Forge PA 19482  
800-662-7447  
www.vanguard.com  
Web Address:  
Inception: 11-29-10  
Advisor: Vanguard Group Inc  
Subadvisor: None

Minimum Purchase: \$10000  
Add: \$1  
IRA: —  
Min Auto Inv Plan: —  
Add: —  
Sales Fees: No-load  
Management Fee: 0.08%  
Actual Fees: Mgt:0.08% Dist:—  
Expense Projections: 3Yr:\$39 5Yr:\$68 10Yr:\$154  
Income Distribution: Quarterly



**Fund Name:** Northern Emerging Markets Equity Index (Ticker: NOEMX)

**Asset Class:** Emerging Markets

**Morningstar Rating:** ★★ ★

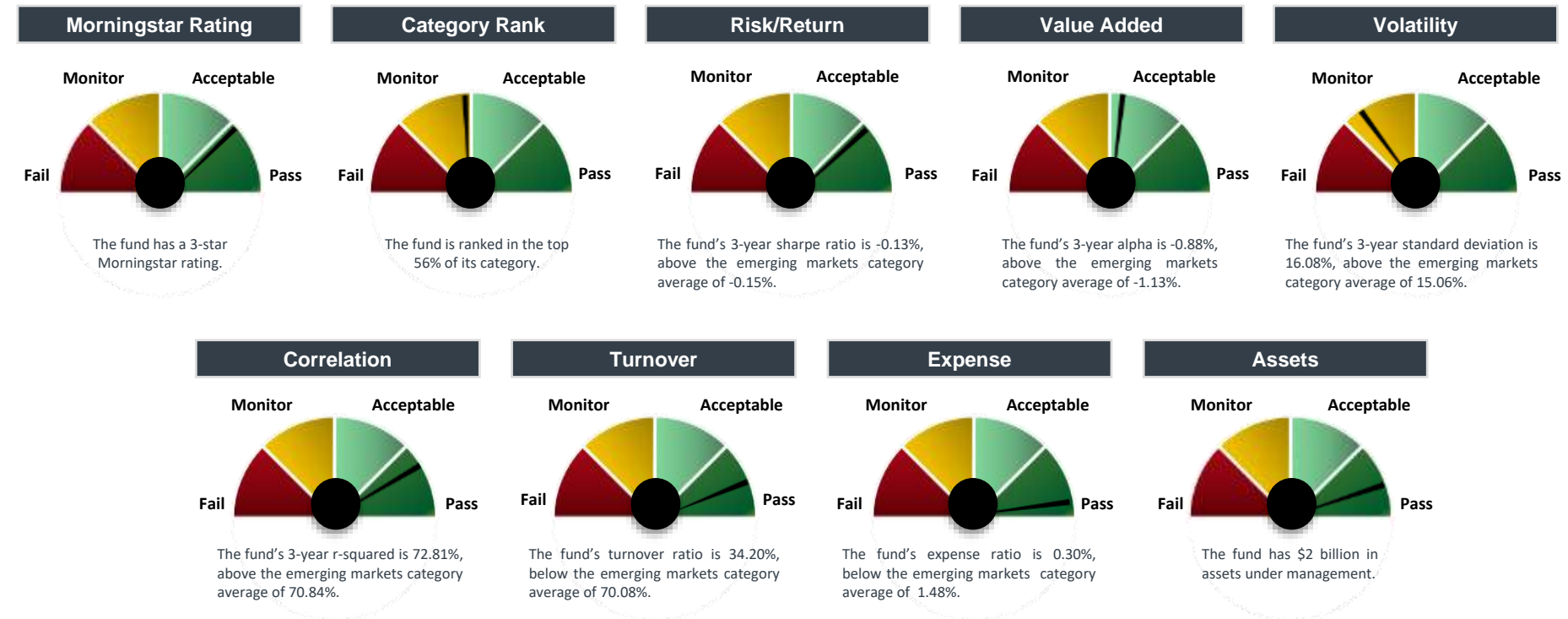
**Manager:** Northern Funds

**Fund Type:** Passive

**Status:** Current Fund Option

### Fund Description

The fund invests in emerging market stocks in the MSCI Emerging Markets Index. Using quantitative analysis, the team seeks to create a portfolio that will approximate the performance of its target index.



### Diagnostics Report

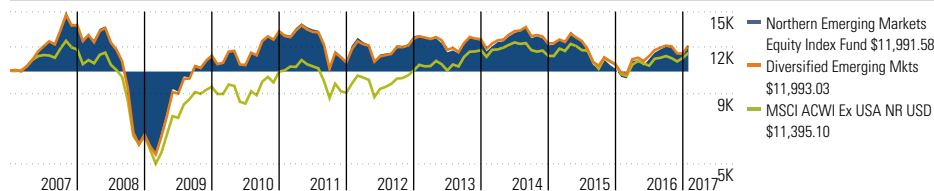
Northern Emerging Markets Equity Index passes 6 of 9 of our investable fund criteria. The fund falls within an acceptable range for value added. We continue to monitor the fund's performance relative to its peers as well as volatility.

# Northern Emerging Markets Equity Index Fund NOEMX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
10.14	↓-0.06   -0.59	1.92	2	Open	\$2,500	None	0.30%	★★★	Diversified Emerging Mkts	Large Blend

## Growth of 10,000 01-30-2007 - 01-30-2017



## Investment Strategy

The investment seeks to provide investment results approximating the overall performance of the MSCI Emerging Markets® Index. The fund will invest substantially all (and at least 80%) of its net assets in equity securities, in weightings that approximate the relative composition of the securities included in the MSCI Emerging Markets Index, in American Depository Receipts, European Depository Receipts, and Global Depository Receipts representing such securities, and in MSCI Emerging Markets Index futures approved by the Commodity Futures Trading Commission.

## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,640	10,640	12,452	10,391	10,085	11,925
Fund	6.40	6.40	24.52	1.29	0.17	1.78
+/- MSCI ACWI Ex USA NR USD	2.85	2.85	8.42	0.49	-4.31	0.51
+/- Category	0.74	0.74	3.18	0.56	-0.82	-0.16
% Rank in Cat	30	30	29	46	63	52
# of Funds in Cat	879	879	808	599	424	173

\* Currency is displayed in USD

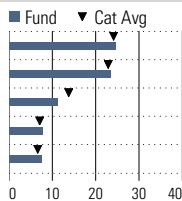
## Top Holdings 12-31-2016

	Weight %	Last Price	Day Chg %	52 Week Range
⊖ Samsung Electronics Co Ltd	3.71	— USD	-1.10 ↓	1,118,000.00 - 2,000,000.00
⊖ Taiwan Semiconductor Manufacturing Co Ltd	3.49	185.50 USD	0.27 ↑	137.00 - 193.00
⊖ Tencent Holdings Ltd	3.49	204.40 USD	-0.29 ↓	132.10 - 220.80
⊖ Alibaba Group Holding Ltd ADR	2.50	101.14 USD	0.14 ↑	59.25 - 109.87
⊖ China Construction Bank Corp H	1.63	5.80 USD	-0.69 ↓	4.31 - 6.14
% Assets in Top 5 Holdings	14.81			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

## Top Sectors 12-31-2016

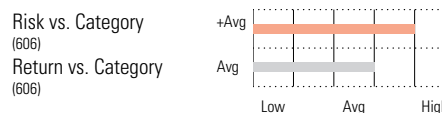
	Fund	3 Yr High	3 Yr Low	Cat Avg
Financial Services	24.47	26.64	24.47	23.22
Technology	23.33	23.33	19.67	21.97
Consumer Cyclical	11.28	11.28	8.23	12.86
Basic Materials	7.84	8.06	7.06	6.17
Energy	7.58	7.58	6.62	5.72



## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-15-2016	9.53	0.0000	0.0000	0.0000	0.1800	0.1800
12-17-2015	8.81	0.0000	0.0000	0.0000	0.2200	0.2200
12-18-2014	10.48	0.0000	0.0000	0.0000	0.2900	0.2900
12-19-2013	11.07	0.0000	0.0000	0.0000	0.2300	0.2300
12-19-2012	11.75	0.0000	0.0000	0.0000	0.2700	0.2700

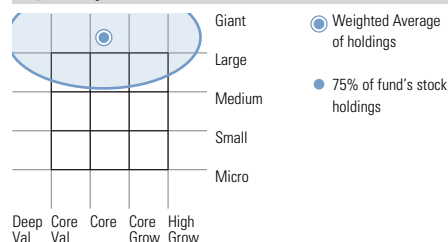
## 3 Year Average Morningstar Risk Measures



## Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

## Style Map



## Asset Allocation

	% Net	% Short	% Long	Bench mark	Cat Avg
● Cash	-0.03	0.05	0.02	-0.03	2.85
● US Stock	0.07	0.00	0.07	0.07	1.32
● Non US Stock	98.89	0.00	98.89	99.67	95.88
● Bond	0.00	0.00	0.00	0.00	-0.43
● Other	1.07	0.00	1.07	0.29	0.38

## Management

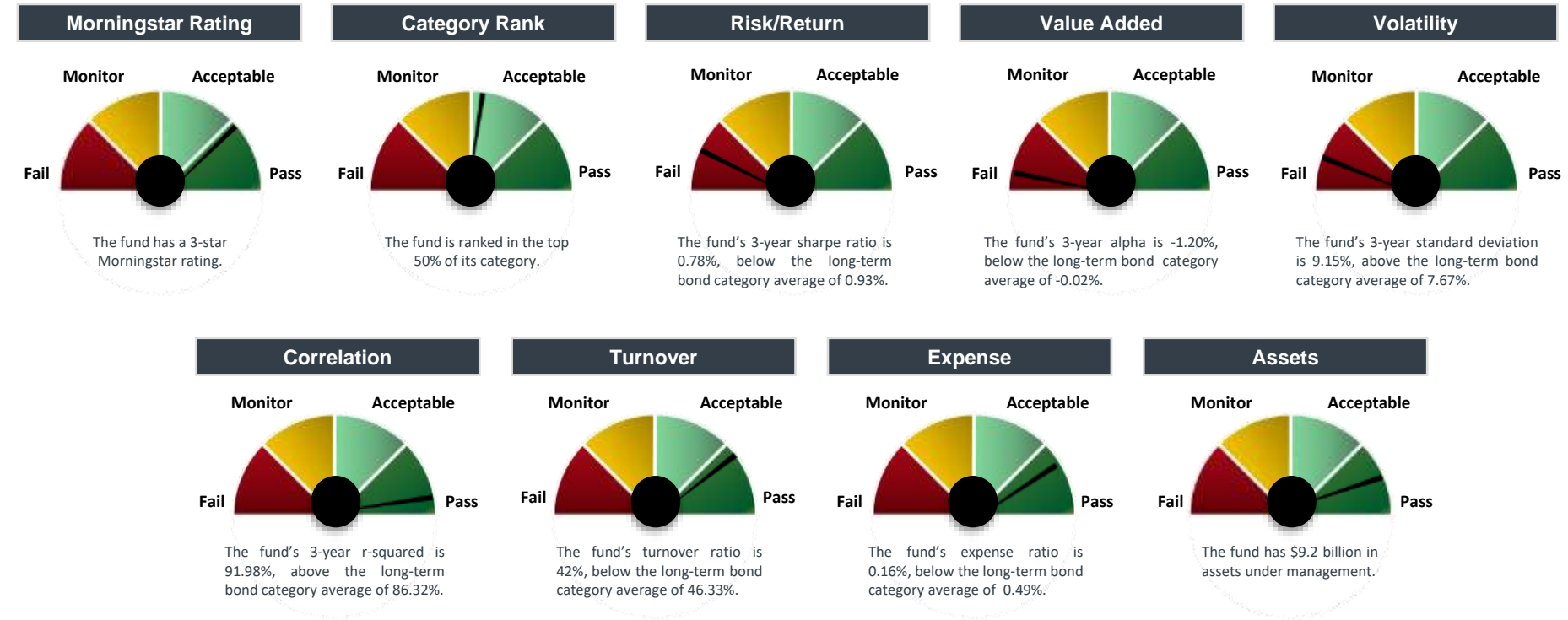
Steven J. Santiccioli Start Date 07-31-2007

**Fund Name:** Vanguard Long-Term Bond Index Inv (Ticker: VBLTX)  
**Asset Class:** Long-Term Bond  
**Morningstar Rating:** ★★ ★

**Manager:** Vanguard  
**Fund Type:** Passive  
**Status:** Current Fund Option

### Fund Description

Vanguard Long-Term Bond Index Inv offers investors a low-cost, diversified approach to bond investing by providing broad exposure to U.S. investment-grade bonds with maturities of more than ten years. The fund's passive investment style uses a sample technique to closely match key benchmark characteristics such as sector weight, coupon, maturity, effective duration, and credit quality of the Bloomberg Barclays U.S. Long Government/Credit Float Adjusted Index.



### Diagnostics Report

Vanguard Long-Term Bond Index Inv passes 5 of 9 of our investable fund criteria. The fund falls within an acceptable range for performance relative to its peers. We continue to monitor the fund's risk/return, value added, and volatility as the fund's metrics trail the peer group.

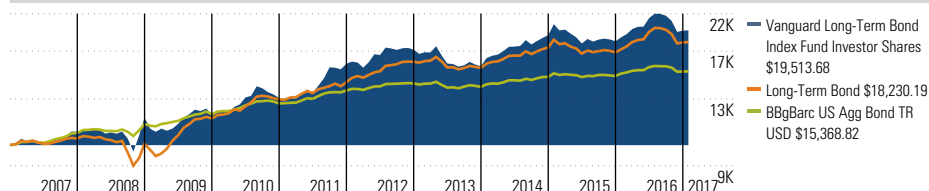


# Vanguard Long-Term Bond Index Fund Investor Shares VBLTX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
13.49	↓-0.04   -0.28	3.91	9	Open	\$3,000	None	0.16%	★★★	Long-Term Bond	

## Growth of 10,000 01-30-2007 - 01-30-2017



## Investment Strategy

The investment seeks to track the performance of a market-weighted bond index with a long-term dollar-weighted average maturity. The fund employs an indexing investment approach designed to track the performance of the Bloomberg Barclays U.S. Long Government/Credit Float Adjusted Index. This index includes all medium and larger issues of U.S. government, investment-grade corporate, and investment-grade international dollar-denominated bonds that have maturities of greater than 10 years and are publicly issued. All of its investments will be selected through the sampling process, and at least 80% of the fund's assets will be invested in bonds held in the index.

## Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,015	10,015	10,416	11,816	12,102	19,494
Fund	0.15	0.15	4.16	5.72	3.89	6.90
+/- BBgBarc US Agg Bond TR USD	0.09	0.09	2.84	3.13	1.79	2.52
+/- Category	-0.11	-0.11	0.01	-0.03	-0.69	0.12
% Rank in Cat	47	47	50	60	92	67
# of Funds in Cat	31	31	29	16	15	7

\* Currency is displayed in USD

## Top Holdings 12-31-2016

	Weight %	Maturity Date	Amount Mil	Value Mil
US Treasury Bond 3.625%	1.72	02-15-2044	142.44	157.62
⊖ US Treasury Bond 2.875%	1.66	05-15-2043	157.46	151.82
US Treasury Bond 3%	1.61	11-15-2044	149.56	147.45
⊕ US Treasury Bond 3.75%	1.53	11-15-2043	123.87	140.22
⊖ US Treasury Bond 2.5%	1.50	02-15-2045	154.57	137.42
% Assets in Top 5 Holdings	8.03			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

## Top Sectors 12-31-2016

	Fund	BMark	Cat Avg	
Corporate Bond	50.71	—	49.44	■ Fund ▼ Cat Avg
U.S. Treasury	38.95	—	20.80	
Non-U.S. Government	3.01	—	1.86	
U.S. Agency	1.41	—	2.86	
Commercial MBS	1.26	—	2.63	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-30-2016	13.51	0.0000	0.0000	0.0000	0.0400	0.0400
12-21-2016	13.38	0.0000	0.0200	0.0000	0.0000	0.0200
11-30-2016	13.48	0.0000	0.0000	0.0000	0.0400	0.0400
10-31-2016	14.42	0.0000	0.0000	0.0000	0.0400	0.0400
09-30-2016	14.90	0.0000	0.0000	0.0000	0.0400	0.0400

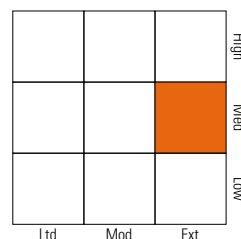
## 3 Year Average Morningstar Risk Measures

Risk vs. Category (17)	High
Return vs. Category (17)	Avg
	Low Avg High

## Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

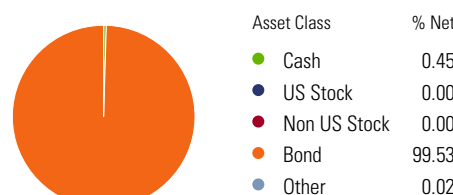
## Style Map 12-31-2016



## Bond Statistics

	Value
Average Effective Duration (Years)	14.98
Average Effective Maturity (Years)	24.10
Average Credit Quality	A
Average Weighted Coupon	4.72
Average Weighted Price	110.15

## Asset Allocation



## Management

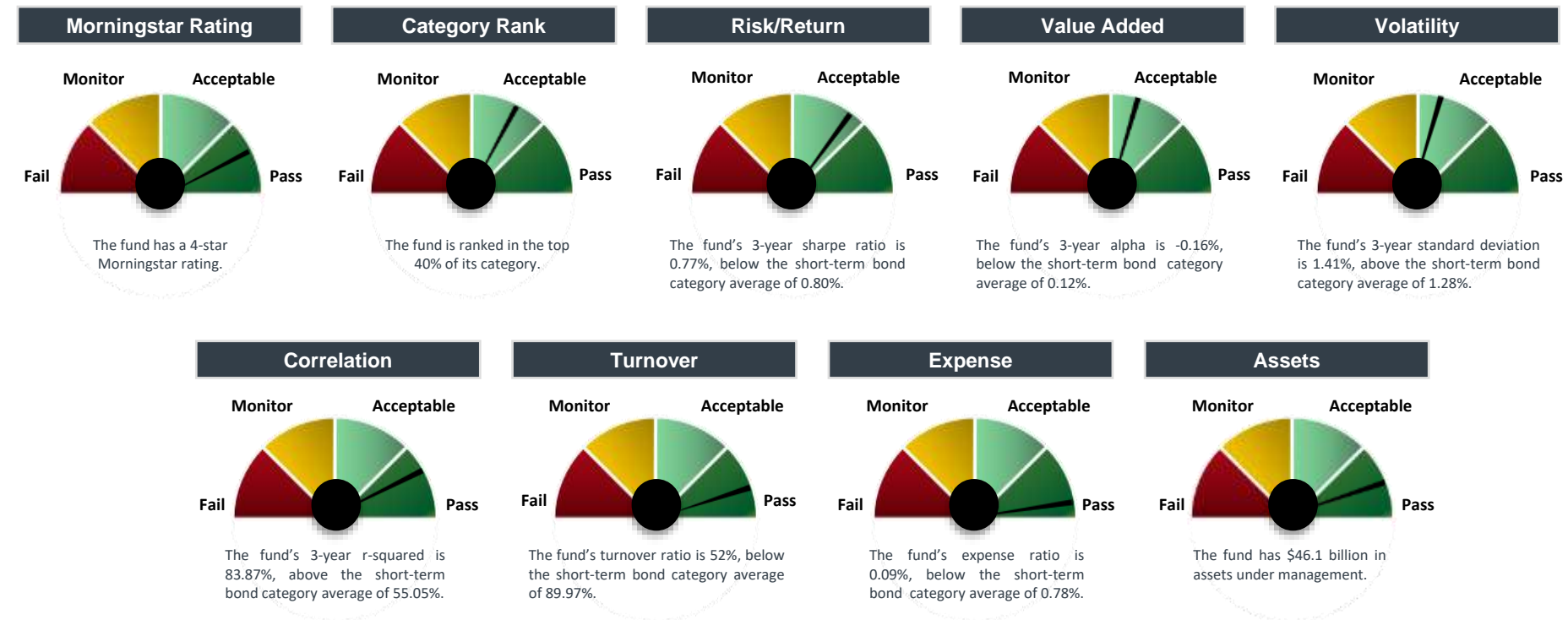
	Start Date
Joshua C. Barrickman	02-22-2013
Christopher E. Wrazen	07-07-2015

**Fund Name:** Vanguard Short-Term Bond Index Adm (Ticker: VBIRX)  
**Asset Class:** Short-Term Bond  
**Morningstar Rating:** ★★☆☆

**Manager:** Vanguard  
**Fund Type:** Passive  
**Status:** Current Fund Option

### Fund Description

The fund offers low-cost index fund exposure to U.S. investment-grade bonds with maturities from one to five years. The fund's passive investment style uses a sampling technique to closely match key benchmark characteristics such as sector weight, coupon, effective duration, and credit quality of the Bloomberg Barclays U.S. 1-5 Year Government/Credit Float Adjusted Index.



### Diagnostics Report

Vanguard Short-Term Bond Index Adm passes 5 of 9 of our investable fund criteria. The fund falls within an acceptable range for performance relative to its peers, risk/return, value added, and volatility.

# Vanguard Short-Term Bond Index Adm

Benchmark 1: BBgBarc US Govt/Credit 1-5 Yr TR USD  
Benchmark 2: BBgBarc US Agg Bond TR USD

Morningstar Analyst Rating 09-06-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	0.45	0.59	0.85	0.15	2.05
2013	0.21	-0.74	0.57	0.13	0.17
2014	0.40	0.58	-0.07	0.34	1.26
2015	1.01	-0.06	0.62	-0.65	0.92
2016	1.60	0.93	0.09	-1.12	1.49

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	-1.12	-0.07	1.86	86	9,888
6 Mo	-1.03	-0.02	1.50	88	9,897
1 Yr	1.49	-0.07	-1.16	64	10,149
3 Yr Avg	1.22	-0.10	-1.81	40	10,372
5 Yr Avg	1.18	-0.11	-1.06	64	10,602
10 Yr Avg	3.00	-0.05	-1.35	28	13,435
15 Yr Avg	3.12	-0.17	-1.46	34	15,852

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	0.62	27	0.59	43
5 Yr (estimated)	0.58	56	0.59	39
10 Yr (estimated)	2.11	20	0.86	40

Potential Capital Gain Exposure: 0% of assets

## Morningstar's Take by Emory Zink 09-06-16

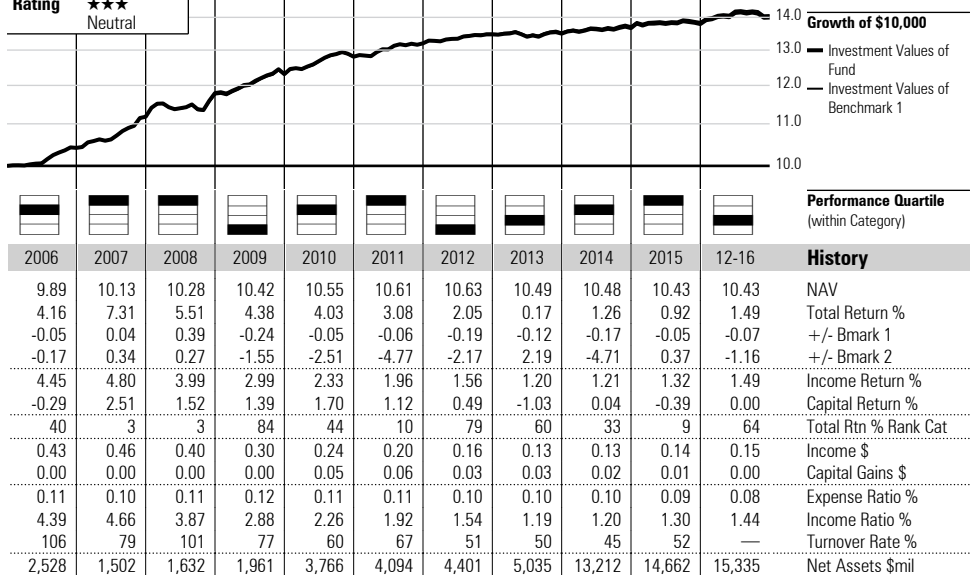
Vanguard Short-Term Bond Index is a compelling option for its low fees, strong performance, and low tracking error. The fund earns a Morningstar Analyst Rating of Silver.

This fund targets short-term, investment-grade government, corporate, and securitized bonds denominated in U.S. dollars and weights its holdings by free-float-adjusted market capitalization. As a result, the portfolio skews heavily toward Treasury bonds, which typically account for as much as two thirds of the portfolio, a much larger allocation than the average peer. This gives the fund a higher-quality portfolio than many of its peers', which may help the fund hold up better during tough economic climates, but also results in lower expected returns. The fund's duration of 2.7 years was slightly longer than the short-term bond Morningstar Category average (2.2 years) at the end of July 2016, which could hurt the fund's relative performance in a period of rising interest rates.

However, low fees give this fund a sustainable edge. The fund charges a rock-bottom 0.09% expense ratio. In contrast, the average fund in the short-term category

## Historical Profile

Return Average  
Risk Average  
Rating ★★★  
Neutral



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	1.49			
3 Yr	1.22	Avg	+ Avg	★★★
5 Yr	1.18	-Avg	Avg	★★
10 Yr	3.00	+Avg	Avg	★★★★
Incept	3.02			

Other Measures	Standard Index	Best Fit Index
Alpha	-0.2	-0.2
Beta	0.43	1.34
R-Squared	84	97
Standard Deviation	1.41	
Mean	1.22	
Sharpe Ratio	0.76	

## Portfolio Analysis 11-30-16

Total Fixed Income: 2437	Date of Maturity	Amount 000	Value \$000	% Assets
US Treasury Note 1.25%	11-30-18	749,264	751,017	1.62
US Treasury Note 1.25%	10-31-21	746,971	725,025	1.56
US Treasury Note 1.5%	11-30-19	709,865	711,420	1.53
US Treasury Note 1.25%	03-31-21	689,875	674,353	1.45
US Treasury Note 1.375%	08-31-20	667,485	660,603	1.42
US Treasury Note 1.625%	11-30-20	656,725	654,262	1.41
US Treasury Note 1.125%	08-31-21	651,438	630,064	1.36
US Treasury Note 1.375%	05-31-21	612,595	601,207	1.30
US Treasury Note 1.375%	03-31-20	601,908	598,995	1.29
US Treasury Note 1.125%	09-30-21	592,683	572,307	1.23
US Treasury Note 1%	08-15-18	548,419	547,646	1.18
US Treasury Note 1.625%	07-31-20	543,474	543,218	1.17
US Treasury Note 1.375%	02-29-20	536,907	534,555	1.15
US Treasury Note 1.75%	11-30-21	530,145	527,659	1.14
US Treasury Note 1.375%	10-31-20	530,380	523,915	1.13
US Treasury Note 1.125%	06-30-21	524,218	507,836	1.09
US Treasury Note 1.625%	08-31-19	491,569	495,177	1.07
US Treasury Note 1%	05-31-18	484,660	484,510	1.04
US Treasury Note 1.625%	06-30-19	465,386	469,239	1.01
US Treasury Note 1.625%	03-31-19	444,295	448,462	0.97

## Current Investment Style

Duration	Mod	Ext	Quality
Low	Med	High	Low
1 figure provided by fund			
Avg Eff Duration <sup>1</sup>	2.8 Yrs		
Avg Eff Maturity	2.9 Yrs		
Avg Credit Quality	AA		
Avg Wtd Coupon	1.95%		
Avg Wtd Price	100.50% of par		

Coupon Range	% of Bonds
0% PIK	0.1
0% to 4%	90.1
4% to 6%	6.8
6% to 8%	2.4
8% to 10%	0.5
More than 10%	0.0

Credit Analysis	% bonds 11-30-16
AAA	70
AA	6
A	12
BBB	12
Below B	0
Not Rated	0

Sector Breakdown	% Assets
Government	60
Government Related	6
Corporate	30
Agency MBS	0
Non-Agency Residential MBS	0
Commercial MBS	3
Covered Bond	0
Asset Backed	0
Municipal	0
Cash & Equivalents	1
Other	0

Composition - Net	Bonds	Other
Cash	0.7	99.3
Stocks	0.0	0.0

Special Securities	
Restricted/Illiquid Secs	1
Emerging-Markets Secs	1
Options/Futures/Warrants	0

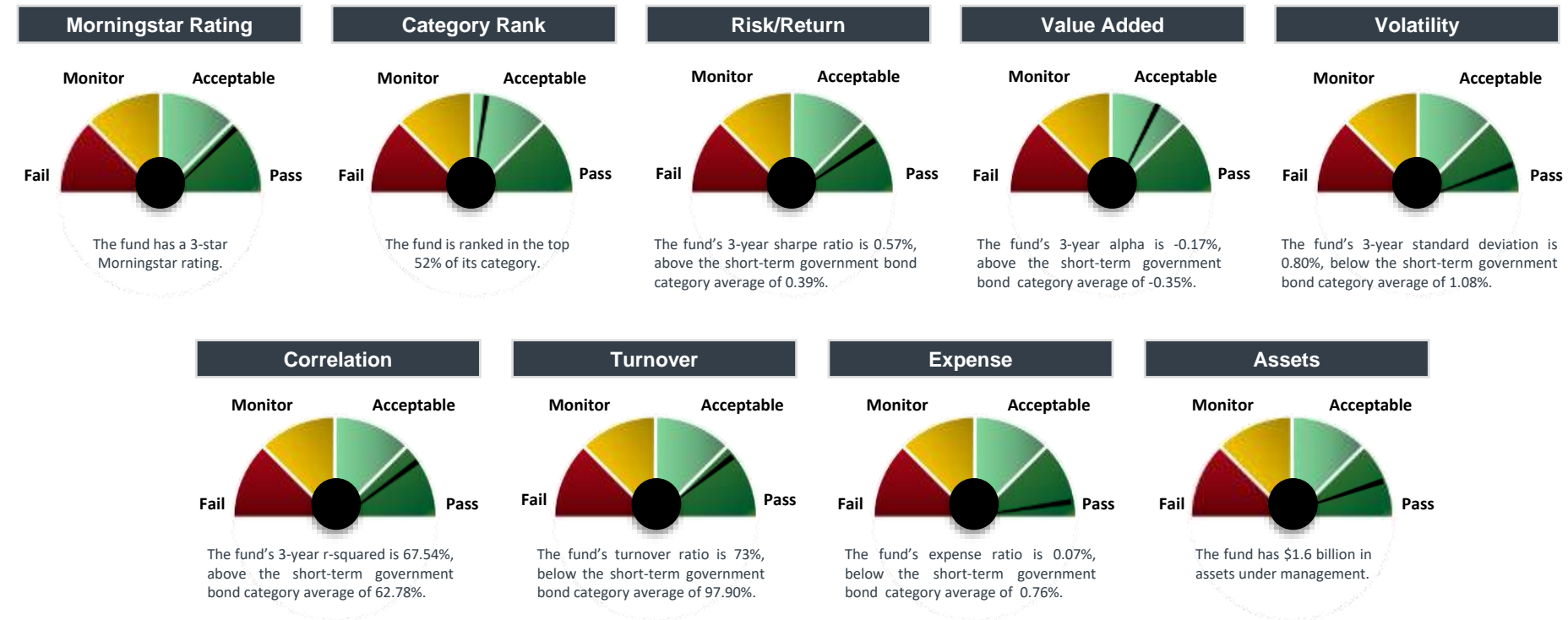
Address:	Vanguard Bond Index Funds Valley Forge PA 19482 800-662-7447	Minimum Purchase:	\$10000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	11-12-01	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.07%		
Subadvisor:	None	Actual Fees:	Mgt:0.07% Dist:—		
		Expense Projections:	3Yr:\$29 5Yr:\$51 10Yr:\$115		
		Income Distribution:	Monthly		

**Fund Name:** Vanguard Short-Term Govt Bond Index Adm (Ticker: VBSBX)  
**Asset Class:** Short-Term Govt Bond  
**Morningstar Rating:** ★★ ★

**Manager:** Vanguard  
**Fund Type:** Passive  
**Status:** Current Fund Option

### Fund Description

The low-cost index fund invests in debt issued by the U.S. Treasury and U.S. government agencies, as well as corporate or dollar-denominated foreign debt guaranteed by the U.S. government, all with maturities between 1 and 3 years. The fund invests by sampling its benchmark, the Bloomberg Barclays U.S. 1-3 Yr. Govt Flt Adj Idx.



### Diagnostics Report

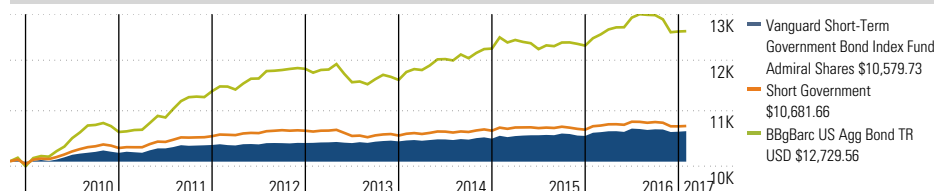
Vanguard Short-Term Govt Bond Index Adm passes 7 of 9 of our investable fund criteria. The fund falls within an acceptable range for performance relative to its peers and value added.

# Vanguard Short-Term Government Bond Index Fund Admiral Shares

## VSBSX

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
20.27	↓0.00   0.00	0.82	1.6	Open	\$10,000	None	0.07%	★★★	Short Government	

### Growth of 10,000 11-19-2009 - 01-30-2017



### Investment Strategy

The investment seeks to track the performance of a market-weighted government bond index with a short-term dollar-weighted average maturity. The fund employs an indexing investment approach designed to track the performance of the Bloomberg Barclays U.S. 1-3 Year Government Float Adjusted Index. This index includes fixed income securities issued by the U.S. Treasury and U.S. government agencies and instrumentalities, as well as corporate or dollar-denominated foreign debt guaranteed by the U.S. government, all with maturities between 1 and 3 years. At least 80% of the fund's assets will be invested in bonds included in the index.

### Performance 01-30-2017

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,010	10,010	10,029	10,180	10,244	—
Fund	0.10	0.10	0.29	0.60	0.48	—
+/- BBgBarc US Agg Bond TR USD	0.04	0.04	-1.02	-1.99	-1.61	—
+/- Category	0.04	0.04	0.30	0.09	0.13	—
% Rank in Cat	29	29	28	45	43	—
# of Funds in Cat	105	105	104	97	90	72

\* Currency is displayed in USD

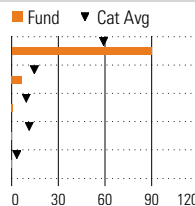
### Top Holdings 12-31-2016

	Weight %	Maturity Date	Amount Mil	Value Mil
US Treasury Note 1.375%	2.82	09-30-2018	43.60	43.76
⊕ US Treasury Note 0.75%	2.54	08-15-2019	40.03	39.41
⊗ US Treasury Note 1.375%	2.31	12-15-2019	36.00	35.91
⊕ US Treasury Note 1%	2.09	09-15-2018	32.44	32.37
US Treasury Note 0.75%	1.86	10-31-2018	29.00	28.79
% Assets in Top 5 Holdings	11.61			

⊕ Increase ⊖ Decrease ⊗ New to Portfolio

### Top Sectors 12-31-2016

	Fund	BMark	Cat Avg	
U.S. Treasury	89.84	—	56.52	
Commercial MBS	6.51	—	12.02	
U.S. Agency	0.90	—	6.80	
Agency MBS Pass-Through	0.09	—	8.69	
Non-U.S. Government	0.03	—	0.75	



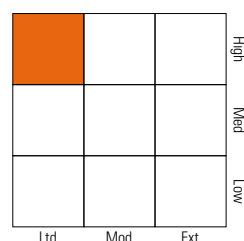
### 3 Year Average Morningstar Risk Measures

Risk vs. Category (101)	Avg			
Return vs. Category (101)	None			
	Low	Avg	High	

### Pillars

Process	—	—
Performance	—	—
People	—	—
Parent	—	—
Price	—	—
Rating	—	—

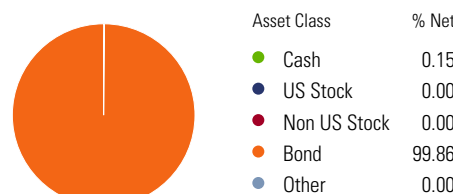
### Style Map 12-31-2016



### Bond Statistics

	Value
Average Effective Duration (Years)	1.95
Average Effective Maturity (Years)	2.00
Average Credit Quality	AAA
Average Weighted Coupon	1.30
Average Weighted Price	100.15

### Asset Allocation



### Management

	Start Date
Joshua C. Barrickman	02-22-2013

**Fund Name:** Vanguard REIT Index Adm (Ticker: VGSLX)

**Asset Class:** Real Estate

**Morningstar Rating:** ★★ ★

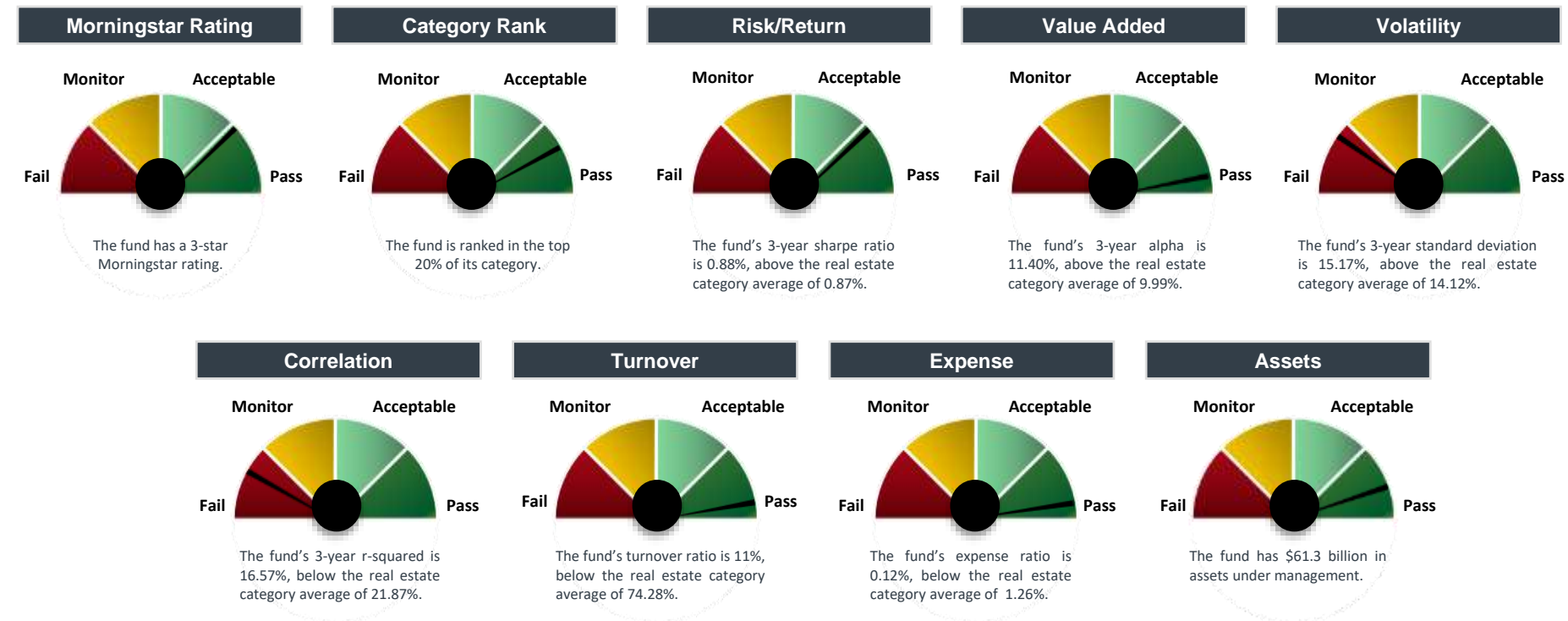
**Manager:** Vanguard

**Fund Type:** Passive

**Status:** Current Fund Option

### Fund Description

Vanguard REIT Index Adm invests in real estate investment trusts—companies that purchase office buildings, hotels and other real estate property. The fund seeks to provide a high level of income and moderate long-term capital appreciation by using a full-replication process to track the performance of the MSCI US REIT index.



### Diagnostics Report

Vanguard REIT Index Adm passes 7 of 9 of our investable fund criteria. The fund fails on volatility and correlation to benchmark.



# Vanguard REIT Index Adm

**Benchmark 1:** S&P United States REIT TR USD  
**Benchmark 2:** MSCI ACWI NR USD

**Morningstar Analyst Rating** 02-12-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	10.72	3.73	-0.02	2.49	17.69
2013	8.07	-1.61	-3.00	-0.71	2.42
2014	9.98	7.02	-3.13	14.30	30.32
2015	4.72	-10.46	2.01	7.04	2.39
2016	6.27	6.80	-1.47	-2.97	8.50

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	-2.97	-0.01	-4.16	53	9,703
6 Mo	-4.40	-0.17	-10.96	59	9,560
1 Yr	8.50	0.01	0.64	18	10,850
3 Yr Avg	13.13	-0.03	9.99	20	14,477
5 Yr Avg	11.78	-0.07	2.42	16	17,449
10 Yr Avg	5.23	0.34	1.67	17	16,649
15 Yr Avg	10.78	0.05	4.86	35	46,434

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	11.44	14	1.49	26
5 Yr (estimated)	10.30	12	1.32	29
10 Yr (estimated)	3.89	7	1.28	31

Potential Capital Gain Exposure: 15% of assets

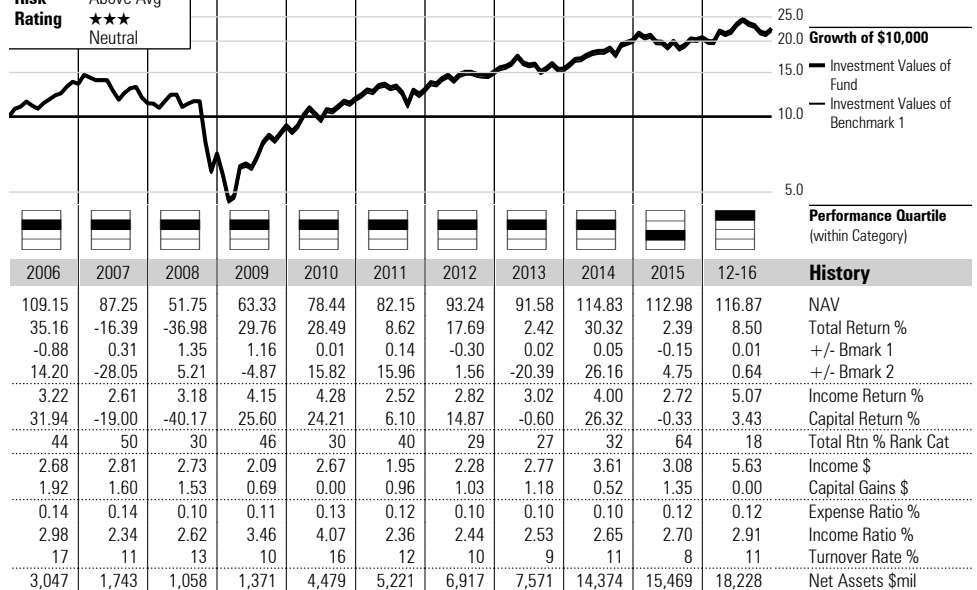
## Morningstar's Take by Robert Goldsborough 02-12-16

Vanguard REIT Index is one of the cheapest ways for investors to gain broad market-capitalization-weighted exposure to REITs. Vanguard's managers and traders hew as closely as possible to the benchmark, so this fund's return has never lagged its index by more than its low 0.12% expense ratio. Real estate is traditionally considered an asset class that benefits from active management, but this fund has a long track record as a strong performer relative to actively managed funds in the real estate Morningstar Category. Because of its low cost, close tracking, and above-average category performance, it earns a Morningstar Analyst Rating of Gold.

REITs manage commercial properties, rent them out under long-term leases, collect rent, and, by law, must distribute the majority of their accounting earnings, typically resulting in strong payouts. Traditionally viewed as a liquid way to buy commercial real estate and improve a portfolio's diversification, the sector's investor base has expanded in recent years. Thanks to REITs' relatively higher yields, the asset class now attracts income-oriented investors.

## Historical Profile

**Return** Above Avg  
**Risk** Above Avg  
**Rating** ★★★  
 Neutral



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	8.50			
3 Yr	13.13	+Avg	+Avg	★★★
5 Yr	11.78	+Avg	+Avg	★★★★
10 Yr	5.23	+Avg	+Avg	★★★
Incept	11.11			

## Other Measures

	Standard Index	Best Fit Index
Alpha	11.4	0.0
Beta	0.55	1.00
R-Squared	17	100
Standard Deviation	15.17	
Mean	13.13	
Sharpe Ratio	0.88	

## Portfolio Analysis 11-30-16

### Total Stocks: 157

Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊖ Simon Property Group Inc	Real Est	-5.28	7.27
⊖ Public Storage	Real Est	-6.82	3.97
⊖ Prologis Inc	Real Est	26.91	3.45
⊕ Equinix Inc	Real Est	20.51	3.10
⊖ AvalonBay Communities Inc	Real Est	-0.86	2.91
⊖ Welltower Inc	Real Est	3.44	2.89
⊖ Equity Residential	Real Est	-5.78	2.82
⊕ Ventas Inc	Real Est	16.05	2.73
⊖ Boston Properties Inc	Real Est	0.74	2.45
⊖ Vornado Realty Trust	Real Est	6.93	2.14
⊖ Digital Realty Trust Inc	Real Est	34.59	1.89
⊖ General Growth Properties	Real Est	-4.30	1.88
⊖ Realty Income Corp	Real Est	15.98	1.85
⊖ Essex Property Trust Inc	Real Est	-0.21	1.82
⊖ HCP Inc	Real Est	-6.92	1.78
⊖ Host Hotels & Resorts Inc	Real Est	28.36	1.71
⊖ Kimco Realty Corp	Real Est	-1.00	1.38
⊖ SL Green Realty Corp	Real Est	-2.21	1.36
⊖ Federal Realty Investment	Real Est	-0.10	1.29
⊖ UDR Inc	Real Est	0.19	1.17

## Current Investment Style

Value Blend Growth	Market Cap	%
	Giant	0.0
	Large	33.5
	Mid	44.1
	Small	19.3
	Micro	3.0
	Avg \$mil:	9,396

Value Measures	Rel Category
Price/Earnings	26.83 0.93
Price/Book	2.29 0.96
Price/Sales	6.25 0.98
Price/Cash Flow	13.58 0.91
Dividend Yield %	4.76 1.06

Growth Measures	% Rel Category
Long-Term Erngs	5.90 0.95
Book Value	2.31 0.80
Sales	1.67 0.95
Cash Flow	13.96 1.22
Historical Erngs	19.48 0.84

Profitability	%
Return on Equity	11.90
Return on Assets	4.02
Net Margin	24.97

Sector Weightings	% of Stocks	Rel Bmark 1
⊖ Cyclical	98.94	-0.05
⊖ BasicMat	0.00	—
⊖ CnsmrCyc	0.14	0.88
⊖ FinanSvcs	0.00	—
⊖ Real Est	98.80	1.00
⊖ Sensitive	1.06	0.00
⊖ CommSvcs	0.00	—
⊖ Energy	0.00	—
⊖ Industrl	1.06	1.04
⊖ Technlgy	0.00	—
⊖ Defensive	0.00	—
⊖ CnsmrDef	0.00	—
⊖ Hlthcare	0.00	—
⊖ Utilities	0.00	—

## Composition - Net

● Cash	0.1
● Stocks	99.9
● Bonds	0.0
● Other	0.0
Foreign (% of Stock)	0.0

Address:	Vanguard Specialized Funds Valley Forge PA 19482 800-662-7447	Minimum Purchase:	\$10000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	11-12-01	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.11%		
Subadvisor:	None	Actual Fees:	Mgt:0.11% Dist:—		
		Expense Projections:	3Yr:\$39 5Yr:\$68 10Yr:\$154		
		Income Distribution:	Quarterly		

# Vanguard Target Retirement Income Inv

**Benchmark 1:** Morningstar Lifetime Mod Incm TR USD  
**Benchmark 2:** Morningstar Mod Tgt Risk TR USD

**Morningstar Analyst Rating** 05-19-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	3.93	0.32	3.06	0.72	8.23
2013	2.54	-1.80	2.67	2.41	5.87
2014	1.59	2.74	-0.39	1.52	5.54
2015	1.75	-0.93	-2.11	1.16	-0.17
2016	2.35	1.90	1.93	-0.99	5.25

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	-0.99	-0.33	-1.37	65	9,901
6 Mo	0.92	-0.14	-2.87	62	10,092
1 Yr	5.25	-0.73	-3.32	41	10,525
3 Yr Avg	3.51	0.63	-0.29	8	11,089
5 Yr Avg	4.91	0.16	-2.55	29	12,706
10 Yr Avg	4.88	0.08	-0.35	9	16,107
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	2.53	4	0.94	30
5 Yr (estimated)	3.95	18	0.91	27
10 Yr (estimated)	3.87	6	0.96	34

Potential Capital Gain Exposure: 12% of assets

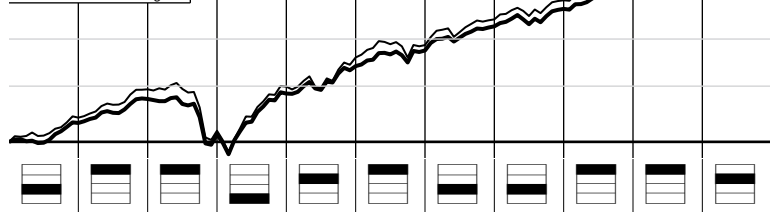
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The Vanguard Target Retirement series has made incremental adjustments over time, but the overarching strategy is unchanged. The series aims to provide investors with a diversified asset mix that will help them meet their long-term retirement goals. Vanguard's approach is founded on a wealth of industry research, and it's boosted by the firm's success as a low-cost index fund provider. This straightforward series continues to be a top pick and earns a Morningstar Analyst Rating of Gold.

The series' overall stock and bond split has been in place since mid-2006. The glide path starts with a 90% equity exposure until the investor hits 25 years to retirement. From there, equity exposure gradually decreases until seven years after retirement, when the glide path plateaus to a 30% stake in equities. The equity/bond breakdown hews closely to the industry average, but subasset allocation is more nuanced. Over the course of 2015, Vanguard increased the series' international-equity exposure to 40% from 30% and its international-bond exposure to 30% from 20%. The typical competitor allocates about 30% of equities to non-U.S. stocks and 15% of fixed income to non-U.S. bonds. The firm's

## Historical Profile

**Return** Above Avg  
**Risk** Average  
**Rating** ★★★★★  
 Above Avg



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	12-16
NAV	10.70	11.13	9.52	10.59	11.28	11.53	12.19	12.50	12.91	12.45	12.81
Total Return %	6.38	8.17	-10.93	14.28	9.39	5.25	8.23	5.87	5.54	-0.17	5.25
+/- Bmark 1	-1.86	-1.55	1.74	-1.23	-0.63	1.12	-0.56	-0.58	1.45	1.12	-0.73
+/- Bmark 2	-6.57	-0.47	11.27	-7.50	-2.94	4.66	-3.82	-8.44	0.65	1.62	-3.32
Income Return %	3.79	4.08	3.84	2.92	2.58	2.83	2.30	1.68	1.91	1.79	2.01
Capital Return %	2.59	4.09	-14.77	11.36	6.81	2.42	5.93	4.19	3.63	-1.96	3.24
Total Rtn % Rank Cat	56	1	6	80	42	9	67	56	19	7	41
Income \$	0.39	0.43	0.42	0.28	0.27	0.32	0.26	0.20	0.24	0.23	0.25
Capital Gains \$	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.20	0.04	0.21	0.04
Expense Ratio %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Income Ratio %	4.21	4.03	4.11	2.78	2.70	2.65	2.31	1.99	1.74	1.83	1.78
Turnover Rate %	22	3	14	29	12	14	7	40	6	14	11
Net Assets \$mil	897	1,555	1,864	2,745	3,960	5,402	9,711	10,499	11,379	10,296	10,516

## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	5.25			
3 Yr	3.51	+Avg	Avg	★★★★
5 Yr	4.91	+Avg	Avg	★★★★
10 Yr	4.88	+Avg	-Avg	★★★★
Incept	5.15			

## Other Measures

	Standard Index	Best Fit Index
Alpha	1.4	1.0
Beta	0.51	0.73
R-Squared	85	93
Standard Deviation	3.70	
Mean	3.51	
Sharpe Ratio	0.91	

## Portfolio Analysis 11-30-16









### Total Stocks: 0

Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊕ Vanguard Total Bond Marke	—	—	36.74
⊖ Vanguard Total Stock Mkt	—	—	18.57
⊖ Vanguard Shrt-Term Infl-P	—	—	16.83
⊕ Vanguard Total Intl Bd Id	—	—	15.84
⊕ Vanguard Total Intl Stock	—	—	12.03
⊖ CMT Market Liquidity Rate	—	—	0.00

### Total Fixed Income: 0

Style:	Blend	Fixed-Income Style
Size:	Large-Cap	Quality: High

Value Measures		Rel Category	Avg Eff Duration <sup>1</sup>	5.4 Yrs
Price/Earnings	17.20	0.97	Avg Eff Maturity	7.1 Yrs
Price/Book	1.93	0.91	Avg Credit Quality	AA
Price/Sales	1.35	0.90	Avg Wtd Coupon	2.36%
Price/Cash Flow	7.01	0.88	<sup>1</sup> figure provided by fund as of 11-30-16	

Dividend Yield %	2.73	1.03				
Growth Measures	% Rel Category		<b>Sector Weightings</b>	% of Stocks	Rel Bmark 1	
Long-Term Erngs	8.96	1.00		Cyclical	37.96	0.90
Book Value	-2.90	-1.83		BasicMat	5.44	1.11
Sales	-6.45	4.14		CnsmrCyc	11.53	1.06
Cash Flow	-4.56	-6.01		FinanSvcs	16.95	1.00
Historical Erngs	-55.22	2.80		Real Est	4.04	0.42
Market Cap %				Sensitive	37.75	1.05
Giant	43.8	Small		CommSrvs	4.16	1.02
Large	30.6	Micro		Energy	6.61	0.99
Mid	18.3	Avg \$mil:				
		31,597				

## Composition - Net

● Cash	2.6
● Stocks	30.1
● Bonds	66.9
● Other	0.4
Foreign	38.4
(% of Stock)	

Address: Vanguard Chester Funds  
 Valley Forge, PA 19482  
 800-662-7447  
 Web Address: www.vanguard.com  
 Inception: 10-27-03  
 Advisor: Vanguard Group Inc  
 Subadvisor: None

Minimum Purchase: \$1000  
 Add: \$1  
 IRA: —  
 Min Auto Inv Plan: —  
 Add: —  
 Sales Fees: No-load  
 Management Fee: 0.00%  
 Actual Fees: Mgt:0.00% Dist:—  
 Expense Projections: 3Yr:\$45 5Yr:\$79 10Yr:\$179  
 Income Distribution: Quarterly



# Vanguard Target Retirement 2010 Inv

**Benchmark 1:** Morningstar Lifetime Mod 2010 TR USD  
**Benchmark 2:** Morningstar Mod Tgt Risk TR USD

**Morningstar Analyst Rating** 05-19-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	5.75	-0.63	3.73	1.02	10.12
2013	3.52	-1.24	3.36	3.23	9.10
2014	1.68	3.00	-0.52	1.68	5.93
2015	1.86	-0.82	-2.59	1.42	-0.20
2016	2.21	1.93	2.04	-1.02	5.22

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2		
3 Mo	-1.02	-0.20	-1.40	93	9,898
6 Mo	1.00	-0.21	-2.79	92	10,100
1 Yr	5.22	-1.42	-3.35	78	10,522
3 Yr Avg	3.61	0.27	-0.19	17	11,124
5 Yr Avg	5.97	0.14	-1.48	53	13,364
10 Yr Avg	4.61	-0.49	-0.63	6	15,693
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	2.34	20	1.23	51
5 Yr (estimated)	4.85	37	1.06	37
10 Yr (estimated)	3.67	1	0.90	13

Potential Capital Gain Exposure: 13% of assets

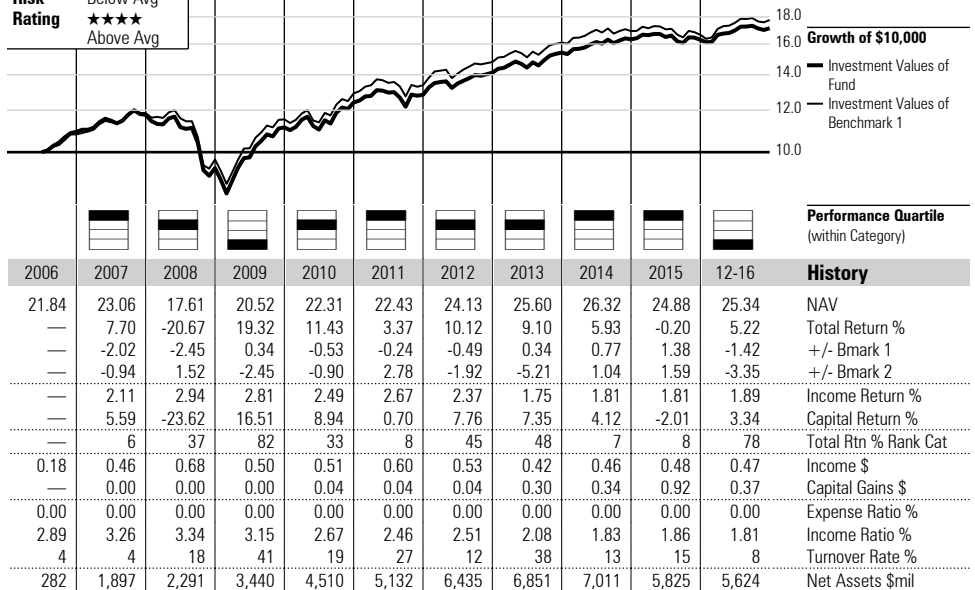
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The series' overall stock and bond split has been in place since mid-2006. The glide path starts with a 90% equity exposure until the investor hits 25 years to retirement. From there, equity exposure gradually decreases until seven years after retirement, when the glide path plateaus to a 30% stake in equities. The equity/bond breakdown hews closely to the industry average, but subasset allocation is more nuanced. Over the course of 2015, Vanguard increased the series' international-equity exposure to 40% from 30% and its international-bond exposure to 30% from 20%. The typical competitor allocates about 30% of equities to non-U.S. stocks and 15% of fixed income to non-U.S. bonds. The firm's

## Historical Profile

**Return** Above Avg  
**Risk** Below Avg  
**Rating** ★★★★★ Above Avg



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	5.22	—	—	—
3 Yr	3.61	+Avg	Low	★★★★
5 Yr	5.97	Avg	-Avg	★★★★
10 Yr	4.61	+Avg	-Avg	★★★★★
Incept	5.31	—	—	—

## Other Measures

	Standard Index	Best Fit Index
Alpha	1.2	0.9
Beta	0.60	0.75
R-Squared	90	96
Standard Deviation	4.16	—
Mean	3.61	—
Sharpe Ratio	0.84	—

## Portfolio Analysis 11-30-16

### Total Stocks: 0

Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊕ Vanguard Total Bond Marke	—	—	36.23
⊖ Vanguard Total Stock Mkt	—	—	19.29
⊖ Vanguard Shrt-Term Infl-P	—	—	16.22
⊕ Vanguard Total Intl Bd Id	—	—	15.68
⊕ Vanguard Total Intl Stock	—	—	12.56
⊕ CMT Market Liquidity Rate	—	—	0.03

### Total Fixed Income: 0

Date of Maturity	Amount 000	Value \$000	% Assets
Style: Blend	—	—	—
Size: Large-Cap	—	—	—

Value Measures	Rel Category	Avg Eff Duration <sup>1</sup>	5.4 Yrs
Price/Earnings	17.20	0.96	7.1 Yrs
Price/Book	1.93	0.91	AA
Price/Sales	1.35	0.90	2.37%
Price/Cash Flow	7.00	0.88	—
Dividend Yield %	2.73	1.04	—

<sup>1</sup> figure provided by fund as of 11-30-16

Growth Measures	% Rel Category	Sector Weightings	% of Stocks	Rel Bmark 1
Long-Term Erngs	8.96	0.99	37.97	0.89
Book Value	-2.91	-2.54	5.45	1.08
Sales	-6.46	2.19	11.53	1.05
Cash Flow	-4.56	20.98	16.95	0.99
Historical Erngs	-55.24	3.22	4.04	0.44
Market Cap %	—	—	37.74	1.05
Giant	43.8	Small	5.6	1.03
Large	30.6	Micro	1.7	0.99
Mid	18.3	Avg \$mil:	31,568	1.01

## Composition - Net

● Cash	2.7
● Stocks	31.3
● Bonds	65.7
● Other	0.4
Foreign	38.5
(% of Stock)	—

Address: Vanguard Chester Funds  
 Valley Forge, PA 19482  
 800-662-7447  
 Web Address: www.vanguard.com  
 Inception: 06-07-06  
 Advisor: Vanguard Group Inc  
 Subadvisor: None

Minimum Purchase: \$1000  
 Add: \$1  
 IRA: —  
 Min Auto Inv Plan: —  
 Add: —  
 Sales Fees: No-load  
 Management Fee: 0.00%  
 Actual Fees: Mgt:0.00% Dist:—  
 Expense Projections: 3Yr:\$45 5Yr:\$79 10Yr:\$179  
 Income Distribution: Annually

# Vanguard Target Retirement 2015 Inv

Ticker VTXVX Yield 2.0% Total Assets \$16,972 mil Mstar Category Target-Date 2015

Benchmark 1: Morningstar Lifetime Mod 2015 TR USD  
Benchmark 2: Morningstar Mod Tgt Risk TR USD

Morningstar Analyst Rating 05-19-16



## Morningstar Pillars

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

## Morningstar Analyst Rating

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## Analyst Rating Spectrum

⊕ Gold ⊖ Silver ⊖ Bronze Neutral Negative

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	7.15	-1.52	4.31	1.17	11.37
2013	4.63	-0.71	4.24	4.34	13.00
2014	1.76	3.46	-0.71	1.94	6.56
2015	2.03	-0.64	-3.87	2.14	-0.46
2016	1.90	1.93	2.77	-0.55	6.16

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
Return%	1	2			
3 Mo	-0.55	0.21	-0.93	76	9,945
6 Mo	2.21	0.69	-1.58	61	10,221
1 Yr	6.16	-0.94	-2.41	56	10,616
3 Yr Avg	4.04	0.47	0.24	13	11,260
5 Yr Avg	7.22	0.74	-0.23	31	14,170
10 Yr Avg	4.85	-0.31	-0.39	5	16,059
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	2.60	17	1.38	47
5 Yr (estimated)	6.01	15	1.13	26
10 Yr (estimated)	3.88	5	0.93	9

Potential Capital Gain Exposure: 17% of assets

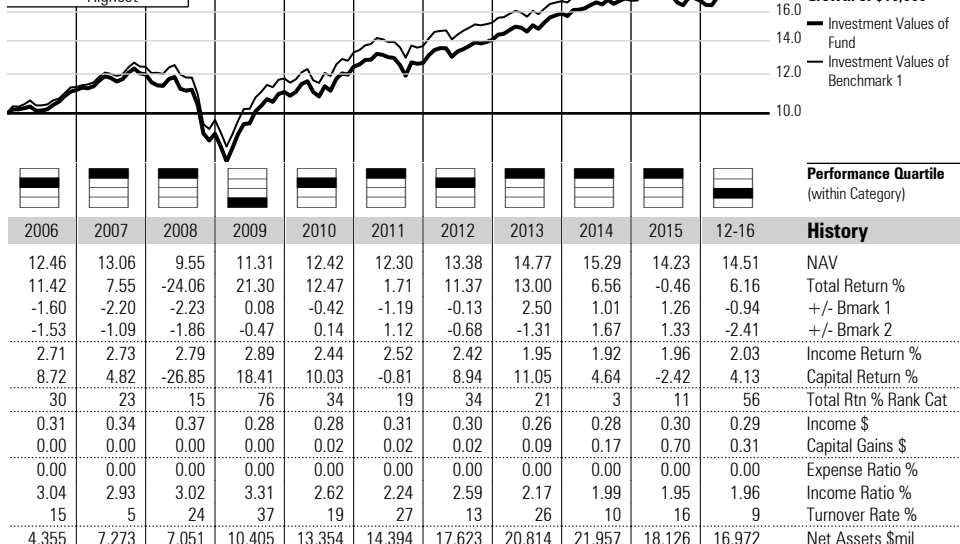
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## Historical Profile

Return Above Avg  
Risk Below Avg  
Rating ★★★★★ Highest



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	6.16			
3 Yr	4.04	+Avg	-Avg	★★★★★
5 Yr	7.22	+Avg	Avg	★★★★★
10 Yr	4.85	+Avg	Low	★★★★★
Incept	5.97			

## Other Measures

	Standard Index	Best Fit Index
Alpha	0.9	0.9
Beta	0.81	0.76
R-Squared	96	97
Standard Deviation	5.49	
Mean	4.04	
Sharpe Ratio	0.72	

## Portfolio Analysis 11-30-16

Total Stocks: 0	Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊕ Vanguard Total Bond Marke	—	—	—	30.65
⊖ Vanguard Total Stock Mkt	—	—	—	27.90
⊕ Vanguard Total Intl Stock	—	—	—	18.35
⊖ Vanguard Total Intl Bd Id	—	—	—	13.28
⊖ Vanguard Shrt-Term Infl-P	—	—	—	9.82
⊖ CMT Market Liquidity Rate	—	—	—	0.00

## Total Fixed Income: 0

	Date of Maturity	Amount 000	Value \$000	% Assets
Equity Style				
Style: Blend				
Size: Large-Cap				

Value Measures	Rel Category	Avg Eff Duration <sup>1</sup>	5.6 Yrs
Price/Earnings	17.18	0.95	7.4 Yrs
Price/Book	1.92	0.90	
Price/Sales	1.34	0.89	AA
Price/Cash Flow	6.99	0.88	2.49%
Dividend Yield %	2.73	1.04	

<sup>1</sup> figure provided by fund as of 11-30-16

Growth Measures	% Rel Category	Sector Weightings	% of Stocks	Rel Bmark 1
Long-Term Erngs	8.96	0.99		
Book Value	-2.93	-2.18		
Sales	-6.47	1.77		
Cash Flow	-4.58	5.87		
Historical Erngs	-55.27	3.07		
Market Cap %				
Giant	43.8	Small	5.6	
Large	30.6	Micro	1.7	
Mid	18.3	Avg \$mil:	31,499	

## Composition - Net

	Cash	Stocks	Bonds	Other	Foreign
	2.4	45.5	51.8	0.3	38.8
					(% of Stock)

Address: Vanguard Chester Funds  
Valley Forge, PA 19482  
800-662-7447  
Web Address: www.vanguard.com  
Inception: 10-27-03  
Advisor: Vanguard Group Inc  
Subadvisor: None

Minimum Purchase: \$1000 Add: \$1 IRA: —  
Min Auto Inv Plan: — Add: —  
Sales Fees: No-load  
Management Fee: 0.00%  
Actual Fees: Mgt: 0.00% Dist: —  
Expense Projections: 3Yr: \$45 5Yr: \$79 10Yr: \$179  
Income Distribution: Annually

# Vanguard Target Retirement 2020 Inv

**Benchmark 1:** Morningstar Lifetime Mod 2020 TR USD  
**Benchmark 2:** Morningstar Mod Tgt Risk TR USD

**Morningstar Analyst Rating** 05-19-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	8.16	-2.13	4.70	1.37	12.35
2013	5.33	-0.24	4.87	5.13	15.85
2014	1.81	3.73	-0.80	2.25	7.11
2015	2.18	-0.58	-4.81	2.71	-0.68
2016	1.73	1.99	3.27	-0.18	6.95

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	-0.18	0.38	-0.56	50	9,982
6 Mo	3.08	1.02	-0.72	31	10,308
1 Yr	6.95	-0.71	-1.62	29	10,695
3 Yr Avg	4.39	0.59	0.60	3	11,377
5 Yr Avg	8.17	0.88	0.72	10	14,808
10 Yr Avg	4.99	-0.19	-0.25	2	16,274
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	3.33	4	1.02	22
5 Yr (estimated)	7.23	5	0.87	15
10 Yr (estimated)	4.23	1	0.73	5

Potential Capital Gain Exposure: 17% of assets

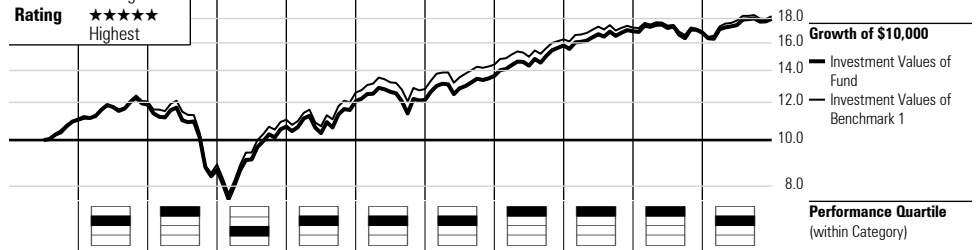
## Morningstar's Take by Susan Wasserman 05-19-16

The Vanguard Target Retirement series has made incremental adjustments over time, but the overarching strategy is unchanged. The series aims to provide investors with a diversified asset mix that will help them meet their long-term retirement goals. Vanguard's approach is founded on a wealth of industry research, and it's boosted by the firm's success as a low-cost index fund provider. This straightforward series continues to be a top pick and earns a Morningstar Analyst Rating of Gold.

The series' overall stock and bond split has been in place since mid-2006. The glide path starts with a 90% equity exposure until the investor hits 25 years to retirement. From there, equity exposure gradually decreases until seven years after retirement, when the glide path plateaus to a 30% stake in equities. The equity/bond breakdown hews closely to the industry average, but subasset allocation is more nuanced. Over the course of 2015, Vanguard increased the series' international-equity exposure to 40% from 30% and its international-bond exposure to 30% from 20%. The typical competitor allocates about 30% of equities to non-U.S. stocks and 15% of fixed income to non-U.S. bonds. The firm's

## Historical Profile

**Return** High  
**Risk** Average  
**Rating** ★★★★★  
 Highest



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	History
22.21	23.47	16.57	19.96	22.10	21.69	23.83	27.11	28.46	27.15	28.26	NAV
—	7.52	-27.04	23.10	13.12	0.60	12.35	15.85	7.11	-0.68	6.95	Total Return %
—	-2.22	-0.77	-1.03	-0.89	-1.14	-0.18	2.87	1.24	1.20	-0.71	+/- Bmark 1
—	-1.11	-4.84	1.32	0.79	0.01	0.31	1.54	2.22	1.11	-1.62	+/- Bmark 2
—	1.85	2.34	2.66	2.22	2.32	2.34	2.03	2.00	2.08	2.07	Income Return %
—	5.67	-29.38	20.44	10.90	-1.72	10.01	13.82	5.12	-2.76	4.88	Capital Return %
—	34	22	66	35	32	36	18	1	23	29	Total Rtn % Rank Cat
0.19	0.41	0.55	0.44	0.44	0.51	0.51	0.48	0.54	0.59	0.56	Income \$
—	0.00	0.00	0.00	0.04	0.03	0.03	0.01	0.04	0.54	0.21	Capital Gains \$
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Expense Ratio %
2.24	2.61	2.79	3.19	2.51	2.11	2.62	2.23	2.14	2.07	2.14	Income Ratio %
2	4	15	27	14	23	8	17	7	25	15	Turnover Rate %
407	2,530	3,598	6,577	10,070	12,288	17,324	23,878	28,525	26,147	27,772	Net Assets \$mil

## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	6.95			
3 Yr	4.39	High	Avg	★★★★★
5 Yr	8.17	+ Avg	Avg	★★★★★
10 Yr	4.99	High	Avg	★★★★★
Incept	5.84			

## Other Measures

	Standard Index	Best Fit Index
Alpha	0.7	0.7
Beta	0.97	0.91
R-Squared	97	98
Standard Deviation	6.53	
Mean	4.39	
Sharpe Ratio	0.67	

## Portfolio Analysis 11-30-16

### Total Stocks: 0

Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊖ Vanguard Total Stock Mkt	—	—	34.56
⊕ Vanguard Total Bond Marke	—	—	28.31
⊕ Vanguard Total Intl Stock	—	—	22.76
⊕ Vanguard Total Intl Bd Id	—	—	11.96
⊕ Vanguard Shrt-Term Infl-P	—	—	2.38
⊖ CMT Market Liquidity Rate	—	—	0.02

### Total Fixed Income: 0

Date of Maturity	Amount 000	Value \$000	% Assets

### Equity Style

Style: Blend  
 Size: Large-Cap

### Fixed-Income Style

Duration: Extensive  
 Quality: High

Value Measures		Rel Category	Avg Eff Duration <sup>1</sup>	6.2 Yrs
Price/Earnings	17.18	0.96	Avg Eff Maturity	8.1 Yrs
Price/Book	1.92	0.90	Avg Credit Quality	AA
Price/Sales	1.34	0.90	Avg Wtd Coupon	2.76%
Price/Cash Flow	6.99	0.88	<sup>1</sup> figure provided by fund as of 11-30-16	

<sup>1</sup> figure provided by fund as of 11-30-16

Growth Measures	% Rel Category	Sector Weightings	% of Stocks	Rel Bmark 1
Long-Term Erngs	8.96	0.99		
Book Value	-2.94	-3.88		
Sales	-6.47	3.29		
Cash Flow	-4.58	-8.18		
Historical Erngs	-55.27	2.51		
Market Cap %				
Giant	43.8	Small	5.6	
Large	30.6	Micro	1.7	
Mid	18.3	Avg \$mil:	31,492	

### Composition - Net

● Cash	2.2
● Stocks	56.4
● Bonds	41.1
● Other	0.3
Foreign	38.8
(% of Stock)	

Address: Vanguard Chester Funds  
 Valley Forge, PA 19482  
 800-662-7447  
 Web Address: www.vanguard.com  
 Inception: 06-07-06  
 Advisor: Vanguard Group Inc  
 Subadvisor: None

Minimum Purchase: \$1000  
 Add: \$1  
 IRA: —  
 Min Auto Inv Plan: —  
 Add: —  
 Sales Fees: No-load  
 Management Fee: 0.00%  
 Actual Fees: Mgt:0.00% Dist:—  
 Expense Projections: 3Yr:\$45 5Yr:\$79 10Yr:\$179  
 Income Distribution: Annually

# Vanguard Target Retirement 2025 Inv

**Benchmark 1:** Morningstar Lifetime Mod 2025 TR USD  
**Benchmark 2:** Morningstar Mod Tgt Risk TR USD

**Morningstar Analyst Rating** 05-19-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	9.13	-2.61	5.06	1.47	13.29
2013	6.03	-0.07	5.42	5.77	18.14
2014	1.78	3.99	-1.02	2.30	7.17
2015	2.24	-0.41	-5.53	3.08	-0.85
2016	1.54	1.95	3.71	0.11	7.48

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2		
3 Mo	0.11	0.23	-0.27	48	10,011
6 Mo	3.83	0.86	0.03	34	10,383
1 Yr	7.48	-0.91	-1.09	23	10,748
3 Yr Avg	4.53	0.50	0.73	3	11,421
5 Yr Avg	8.86	0.59	1.41	18	15,286
10 Yr Avg	5.00	-0.22	-0.24	7	16,285
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	3.40	4	1.08	31
5 Yr (estimated)	7.86	9	0.91	15
10 Yr (estimated)	4.22	4	0.74	4

Potential Capital Gain Exposure: 19% of assets

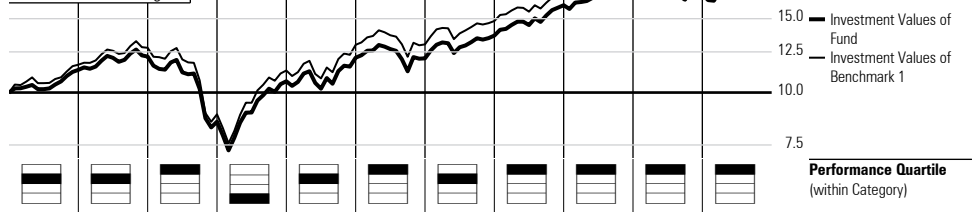
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The Vanguard Target Retirement series has made incremental adjustments over time, but the overarching strategy is unchanged. The series aims to provide investors with a diversified asset mix that will help them meet their long-term retirement goals. Vanguard's approach is founded on a wealth of industry research, and it's boosted by the firm's success as a low-cost index fund provider. This straightforward series continues to be a top pick and earns a Morningstar Analyst Rating of Gold.

The series' overall stock and bond split has been in place since mid-2006. The glide path starts with a 90% equity exposure until the investor hits 25 years to retirement. From there, equity exposure gradually decreases until seven years after retirement, when the glide path plateaus to a 30% stake in equities. The equity/bond breakdown hews closely to the industry average, but subasset allocation is more nuanced. Over the course of 2015, Vanguard increased the series' international-equity exposure to 40% from 30% and its international-bond exposure to 30% from 20%. The typical competitor allocates about 30% of equities to non-U.S. stocks and 15% of fixed income to non-U.S. bonds. The firm's

## Historical Profile

**Return** Above Avg  
**Risk** Average  
**Rating** ★★★★★  
 Above Avg



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	12-16	History
NAV	13.04	13.72	9.27	11.32	12.62	12.27	13.59	15.75	16.53	15.62	16.35	NAV
Total Return %	13.24	7.59	-30.05	24.81	13.84	-0.37	13.29	18.14	7.17	-0.85	7.48	Total Return %
+/- Bmark 1	-3.27	-2.12	0.53	-2.36	-1.32	-0.61	-0.37	1.87	1.13	-1.21	-0.91	+/- Bmark 1
+/- Bmark 2	0.29	-1.04	-7.86	3.04	1.50	-0.96	1.25	3.83	2.28	0.94	-1.09	+/- Bmark 2
Income Return %	2.46	2.38	2.35	2.72	2.21	2.31	2.41	2.11	2.04	2.07	2.09	Income Return %
Capital Return %	10.78	5.21	-32.41	22.10	11.63	-2.67	10.88	16.03	5.12	-2.92	5.39	Capital Return %
Total Rtn % Rank Cat	45	41	15	78	37	16	43	24	4	24	23	Total Rtn % Rank Cat
Income \$	0.29	0.31	0.32	0.25	0.25	0.29	0.30	0.29	0.32	0.34	0.33	Income \$
Capital Gains \$	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.02	0.03	0.44	0.11	Capital Gains \$
Expense Ratio %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Expense Ratio %
Income Ratio %	2.66	2.43	2.59	3.09	2.42	2.01	2.64	2.27	2.15	2.07	2.18	Income Ratio %
Turnover Rate %	22	4	17	21	11	23	9	16	7	24	15	Turnover Rate %
Net Assets \$mil	4,605	7,309	6,802	10,949	14,987	16,357	21,269	28,021	32,318	29,787	32,159	Net Assets \$mil

## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	7.48			
3 Yr	4.53	High	Avg	★★★★★
5 Yr	8.86	+Avg	Avg	★★★★★
10 Yr	5.00	+Avg	-Avg	★★★★★
Incept	6.39			

Other Measures	Standard Index	Best Fit Index
Alpha	0.4	0.8
Beta	1.09	0.88
R-Squared	98	98
Standard Deviation	7.33	
Mean	4.53	
Sharpe Ratio	0.62	

## Portfolio Analysis 11-30-16

<b>Total Stocks: 0</b>	Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊖ Vanguard Total Stock Mkt	—	—	—	39.51
⊕ Vanguard Total Intl Stock	—	—	—	25.86
⊕ Vanguard Total Bond Marke	—	—	—	24.31
⊕ Vanguard Total Intl Bd Id	—	—	—	10.32
⊖ CMT Market Liquidity Rate	—	—	—	0.01

Total Fixed Income: 0	Date of Maturity	Amount 000	Value \$000	% Assets
-----------------------	------------------	------------	-------------	----------

Equity Style	Fixed-Income Style
Style: Blend	Duration: Extensive
Size: Large-Cap	Quality: Medium

Value Measures	Rel Category	Avg Eff Duration <sup>1</sup>	6.4 Yrs
Price/Earnings	17.19	0.96	Avg Eff Maturity
Price/Book	1.92	0.91	Avg Credit Quality
Price/Sales	1.35	0.92	Avg Wtd Coupon
Price/Cash Flow	7.00	0.89	
Dividend Yield %	2.73	1.08	

Growth Measures	% Rel Category	Sector Weightings	% of Stocks	Rel Bmark 1
Long-Term Erngs	8.96	0.98	37.99	0.90
Book Value	-2.92	-3.45	5.46	1.02
Sales	-6.46	2.59	11.53	1.04
Cash Flow	-4.57	-12.62	16.96	0.96
Historical Erngs	-55.25	2.42	4.04	0.50

Market Cap %				1.04	0.99	
Giant	43.8	Small	5.6	Sensitive	37.73	1.04
Large	30.6	Micro	1.7	CommSrvs	4.16	1.06
Mid	18.3	Avg \$mil:	31,533	Energy	6.61	0.98

## Composition - Net

● Cash	2.0
● Stocks	64.3
● Bonds	33.4
● Other	0.3
● Foreign	38.6
(% of Stock)	

Address:	Vanguard Chester Funds Valley Forge, PA 19482 800-662-7447	Minimum Purchase:	\$1000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	10-27-03	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.00%		
Subadvisor:	None	Actual Fees:	Mgt: 0.00%	Dist: —	
		Expense Projections:	3Yr:\$48	5Yr:\$85	10Yr:\$192
		Income Distribution:	Annually		



# Vanguard Target Retirement 2030 Inv

**Benchmark 1:** Morningstar Lifetime Mod 2030 TR USD  
**Benchmark 2:** Morningstar Mod Tgt Risk TR USD

**Morningstar Analyst Rating** 05-19-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	10.04	-3.13	5.43	1.66	14.24
2013	6.63	0.24	5.88	6.46	20.49
2014	1.74	4.20	-1.19	2.32	7.17
2015	2.31	-0.24	-6.31	3.49	-1.03
2016	1.30	1.92	4.02	0.42	7.85

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	0.43	-0.10	0.05	50	10,043
6 Mo	4.46	0.27	0.67	37	10,446
1 Yr	7.85	-1.41	-0.72	32	10,785
3 Yr Avg	4.58	0.37	0.78	6	11,439
5 Yr Avg	9.50	0.30	2.05	17	15,745
10 Yr Avg	4.98	-0.33	-0.26	11	16,259
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	3.60	7	0.94	21
5 Yr (estimated)	8.60	9	0.82	12
10 Yr (estimated)	4.31	2	0.64	4

Potential Capital Gain Exposure: 19% of assets

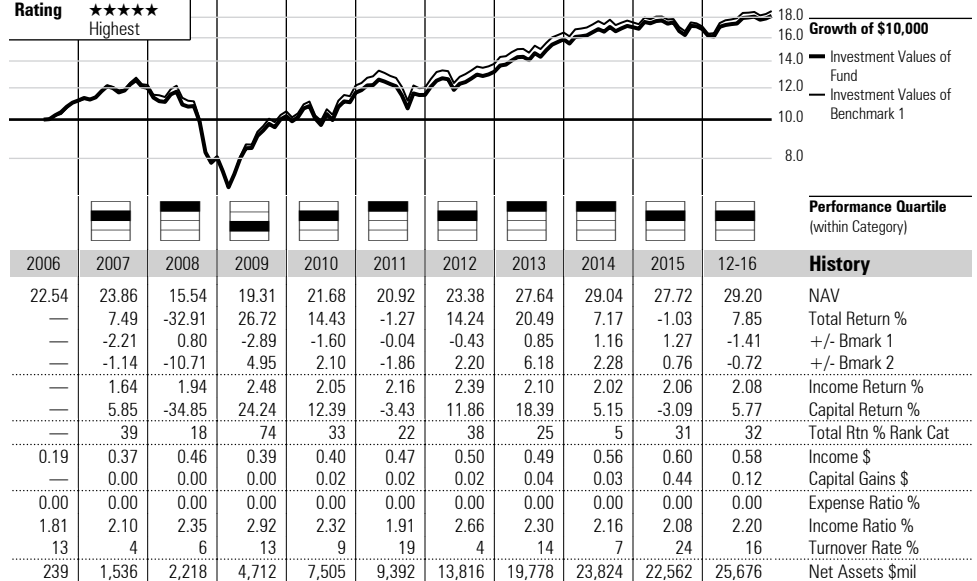
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## Historical Profile

**Return** Above Avg  
**Risk** Average  
**Rating** ★★★★★ Highest



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	7.85	—	—	★★★★★
3 Yr	4.58	+Avg	Avg	★★★★★
5 Yr	9.50	+Avg	Avg	★★★★★
10 Yr	4.98	+Avg	-Avg	★★★★★
Incept	5.98	—	—	—

Other Measures	Standard Index	Best Fit Index
Alpha	0.1	0.8
Beta	1.21	0.87
R-Squared	98	98
Standard Deviation	8.11	—
Mean	4.58	—
Sharpe Ratio	0.58	—

## Portfolio Analysis 11-30-16





<b>Total Stocks: 0</b>	Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊖ Vanguard Total Stock Mkt	—	—	—	44.11
⊕ Vanguard Total Intl Stock	—	—	—	28.62
⊕ Vanguard Total Bond Marke	—	—	—	19.13
⊕ Vanguard Total Intl Bd Id	—	—	—	8.15
⊖ CMT Market Liquidity Rate	—	—	—	0.00

<b>Total Fixed Income: 0</b>	Date of Maturity	Amount 000	Value \$000	% Assets
------------------------------	------------------	------------	-------------	----------

Equity Style	Fixed-Income Style
Style: Blend	Duration: Extensive
Size: Large-Cap	Quality: Medium

Value Measures	Rel Category	Avg Eff Duration <sup>1</sup>	6.4 Yrs
Price/Earnings	17.20	0.96	Avg Eff Maturity
Price/Book	1.93	0.91	Avg Credit Quality
Price/Sales	1.35	0.91	Avg Wtd Coupon
Price/Cash Flow	7.01	0.89	
Dividend Yield %	2.73	1.09	

Growth Measures	% Rel Category	Sector Weightings	% of Stocks	Rel Bmark 1
Long-Term Erngs	8.96	⚡ Cyclical	37.97	0.90
Book Value	-2.91	BasicMat	5.45	1.00
Sales	-6.45	CnsmrCyc	11.53	1.03
Cash Flow	-4.56	FinanSvcs	16.95	0.95
Historical Erngs	-55.23	Real Est	4.04	0.52

Market Cap %					Non-Ext	1.04	0.92
Giant	43.8	Small	5.6		Sensitive	37.75	1.04
Large	30.6	Micro	1.7		CommSvcs	4.16	1.07
Mid	18.3	Avg \$mil:	31,590		Energy	6.61	0.98

## Composition - Net

● Cash	1.9	→ Defensive	24.28	1.13
● Stocks	71.5	⚡ CnsmrDef	9.47	1.17
● Bonds	26.3	⚡ Hlthcare	11.46	1.16
● Other	0.3	⚡ Utilities	3.35	0.96
Foreign	38.4			
(% of Stock)				

Address:	Vanguard Chester Funds Valley Forge, PA 19482 800-662-7447	Minimum Purchase:	\$1000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	06-07-06	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.00%		
Subadvisor:	None	Actual Fees:	Mgt: 0.00%	Dist: —	
		Expense Projections:	3Yr:\$48	5Yr:\$85	10Yr:\$192
		Income Distribution:	Annually		

# Vanguard Target Retirement 2035 Inv

**Benchmark 1:** Morningstar Lifetime Mod 2035 TR USD  
**Benchmark 2:** Morningstar Mod Tgt Risk TR USD

**Morningstar Analyst Rating** 05-19-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	10.95	-3.60	5.75	1.82	15.16
2013	7.31	0.40	6.46	7.09	22.82
2014	1.71	4.46	-1.39	2.36	7.24
2015	2.35	-0.05	-7.12	3.93	-1.26
2016	1.07	1.82	4.39	0.78	8.26

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	0.78	-0.39	0.41	54	10,078
6 Mo	5.20	-0.20	1.41	47	10,520
1 Yr	8.26	-1.81	-0.31	32	10,826
3 Yr Avg	4.66	0.36	0.86	9	11,464
5 Yr Avg	10.15	0.33	2.70	16	16,216
10 Yr Avg	5.09	-0.32	-0.14	10	16,432
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	3.58	9	1.04	26
5 Yr (estimated)	9.19	12	0.87	13
10 Yr (estimated)	4.39	4	0.67	1

Potential Capital Gain Exposure: 22% of assets

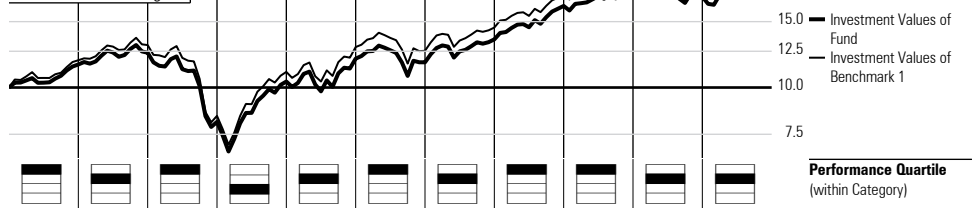
## Morningstar's Take by Susan Wasserman 05-19-16

The Vanguard Target Retirement series has made incremental adjustments over time, but the overarching strategy is unchanged. The series aims to provide investors with a diversified asset mix that will help them meet their long-term retirement goals. Vanguard's approach is founded on a wealth of industry research, and it's boosted by the firm's success as a low-cost index fund provider. This straightforward series continues to be a top pick and earns a Morningstar Analyst Rating of Gold.

The series' overall stock and bond split has been in place since mid-2006. The glide path starts with a 90% equity exposure until the investor hits 25 years to retirement. From there, equity exposure gradually decreases until seven years after retirement, when the glide path plateaus to a 30% stake in equities. The equity/bond breakdown hews closely to the industry average, but subasset allocation is more nuanced. Over the course of 2015, Vanguard increased the series' international-equity exposure to 40% from 30% and its international-bond exposure to 30% from 20%. The typical competitor allocates about 30% of equities to non-U.S. stocks and 15% of fixed income to non-U.S. bonds. The firm's

## Historical Profile

**Return** Above Avg  
**Risk** Average  
**Rating** ★★★★★ Above Avg



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	12-16	History
NAV	13.87	14.62	9.25	11.62	13.09	12.51	14.09	16.98	17.84	16.84	17.74	NAV
Total Return %	15.24	7.49	-34.66	28.17	15.14	-2.24	15.16	22.82	7.24	-1.26	8.26	Total Return %
+/- Bmark 1	-3.04	-2.29	0.66	-2.90	-1.39	0.04	-0.20	0.79	1.44	1.32	-1.80	+/- Bmark 1
+/- Bmark 2	2.29	-1.14	-12.47	6.40	2.81	-2.83	3.12	8.52	2.35	0.53	-0.31	+/- Bmark 2
Income Return %	2.12	2.09	2.05	2.57	2.03	2.15	2.45	2.30	2.17	2.08	2.11	Income Return %
Capital Return %	13.12	5.40	-36.70	25.60	13.11	-4.39	12.71	20.52	5.07	-3.34	6.15	Capital Return %
Total Rtn % Rank Cat	24	47	13	64	26	19	40	23	10	37	32	Total Rtn % Rank Cat
Income \$	0.26	0.29	0.30	0.24	0.24	0.28	0.31	0.32	0.37	0.37	0.36	Income \$
Capital Gains \$	0.00	0.00	0.00	0.00	0.05	0.01	0.01	0.00	0.01	0.42	0.14	Capital Gains \$
Expense Ratio %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Expense Ratio %
Income Ratio %	2.21	2.09	2.28	2.88	2.24	1.81	2.68	2.33	2.17	2.07	2.21	Income Ratio %
Turnover Rate %	14	1	10	9	6	18	6	12	6	23	14	Turnover Rate %
Net Assets \$mil	3,050	4,860	4,351	7,563	10,353	11,361	15,218	21,131	24,514	22,694	25,029	Net Assets \$mil

## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	8.26			
3 Yr	4.66	+Avg	Avg	★★★★
5 Yr	10.15	+Avg	Avg	★★★★
10 Yr	5.09	+Avg	-Avg	★★★★
Incept	6.90			

Other Measures	Standard Index	Best Fit Index
Alpha	-0.3	0.5
Beta	1.33	0.96
R-Squared	97	99
Standard Deviation	8.96	
Mean	4.66	
Sharpe Ratio	0.54	

## Portfolio Analysis 11-30-16

### Total Stocks: 0

Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊖ Vanguard Total Stock Mkt	—	—	48.57
⊕ Vanguard Total Intl Stock	—	—	31.61
⊕ Vanguard Total Bond Marke	—	—	13.90
⊕ Vanguard Total Intl Bd Id	—	—	5.90
⊖ CMT Market Liquidity Rate	—	—	0.01

Total Fixed Income: 0	Date of Maturity	Amount 000	Value \$000	% Assets
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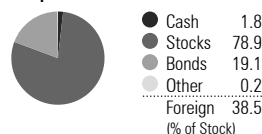
Equity Style	Fixed-Income Style
Style: Blend	Duration: Extensive
Size: Large-Cap	Quality: Medium

Value Measures	Rel Category	Avg Eff Duration <sup>1</sup>	6.4 Yrs
Price/Earnings	17.20	0.96	Avg Eff Maturity
Price/Book	1.93	0.92	Avg Credit Quality
Price/Sales	1.35	0.92	Avg Wtd Coupon
Price/Cash Flow	7.00	0.90	
Dividend Yield %	2.73	1.09	

Growth Measures	% Rel Category	Sector Weightings	% of Stocks	Rel Bmark 1
Long-Term Erngs	8.96	0.97		
Book Value	-2.91	-70.61		
Sales	-6.46	1.74		
Cash Flow	-4.56	-10.17		
Historical Erngs	-55.24	2.38		

Market Cap %	Small	5.6	Medium	1.7	Large	18.3
Giant	43.8					
Mid	30.6					
Micro	18.3					
Avg \$mil						

## Composition - Net



Address:	Vanguard Chester Funds Valley Forge, PA 19482 800-662-7447	Minimum Purchase:	\$1000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	10-27-03	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.00%		
Subadvisor:	None	Actual Fees:	Mgt: 0.00%	Dist: —	
		Expense Projections:	3Yr:\$48	5Yr:\$85	10Yr:\$192
		Income Distribution:	Annually		

# Vanguard Target Retirement 2040 Inv

**Benchmark 1:** Morningstar Lifetime Mod 2040 TR USD  
**Benchmark 2:** Morningstar Mod Tgt Risk TR USD

**Morningstar Analyst Rating** 05-19-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	11.32	-3.81	5.97	1.85	15.56
2013	7.64	0.60	6.77	7.57	24.37
2014	1.66	4.62	-1.53	2.31	7.15
2015	2.39	0.13	-7.93	4.26	-1.59
2016	0.84	1.81	4.72	1.13	8.73

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2		
3 Mo	1.13	-0.47	0.75	45	10,113
6 Mo	5.90	-0.31	2.11	40	10,590
1 Yr	8.73	-1.88	0.16	27	10,873
3 Yr Avg	4.66	0.38	0.86	16	11,466
5 Yr Avg	10.51	0.45	3.06	14	16,479
10 Yr Avg	5.26	-0.19	0.03	8	16,700
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	3.76	7	0.87	11
5 Yr (estimated)	9.67	7	0.76	8
10 Yr (estimated)	4.64	2	0.59	4

Potential Capital Gain Exposure: 21% of assets

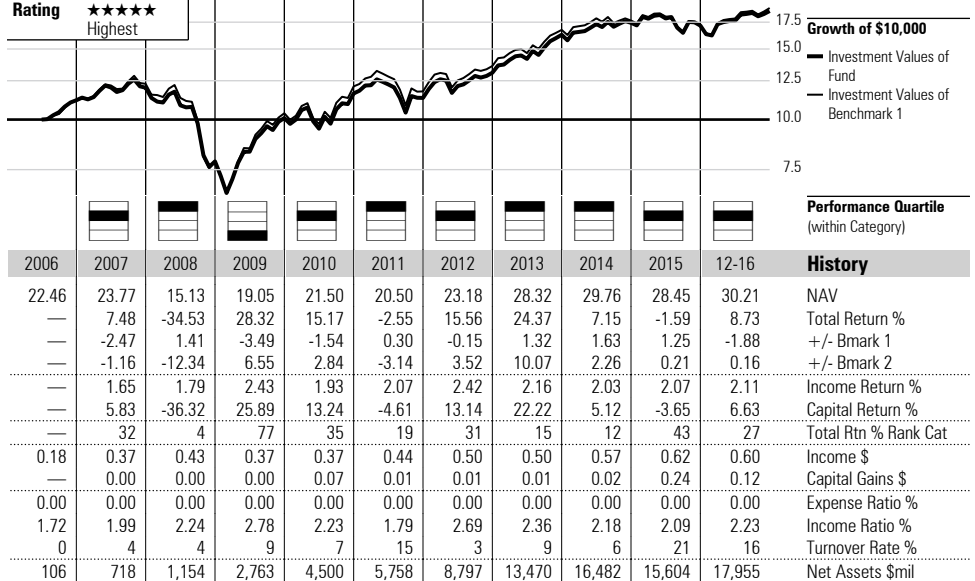
## Morningstar's Take by Susan Wasserman 05-19-16

The Vanguard Target Retirement series has made incremental adjustments over time, but the overarching strategy is unchanged. The series aims to provide investors with a diversified asset mix that will help them meet their long-term retirement goals. Vanguard's approach is founded on a wealth of industry research, and it's boosted by the firm's success as a low-cost index fund provider. This straightforward series continues to be a top pick and earns a Morningstar Analyst Rating of Gold.

The series' overall stock and bond split has been in place since mid-2006. The glide path starts with a 90% equity exposure until the investor hits 25 years to retirement. From there, equity exposure gradually decreases until seven years after retirement, when the glide path plateaus to a 30% stake in equities. The equity/bond breakdown hews closely to the industry average, but subasset allocation is more nuanced. Over the course of 2015, Vanguard increased the series' international-equity exposure to 40% from 30% and its international-bond exposure to 30% from 20%. The typical competitor allocates about 30% of equities to non-U.S. stocks and 15% of fixed income to non-U.S. bonds. The firm's

## Historical Profile

**Return** Above Avg  
**Risk** Below Avg  
**Rating** ★★★★★ Highest



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	8.73	—	—	—
3 Yr	4.66	+Avg	Avg	★★★★
5 Yr	10.51	+Avg	Avg	★★★★
10 Yr	5.26	+Avg	Low	★★★★★
Incept	6.21	—	—	—

Other Measures	Standard Index	Best Fit Index
Alpha	-0.6	0.5
Beta	1.44	0.92
R-Squared	97	99
Standard Deviation	9.72	—
Mean	4.66	—
Sharpe Ratio	0.50	—

## Portfolio Analysis 11-30-16

Total Stocks: 0	Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊖ Vanguard Total Stock Mkt	—	—	—	53.04
⊕ Vanguard Total Intl Stock	—	—	—	34.66
⊕ Vanguard Total Bond Marke	—	—	—	8.64
⊕ Vanguard Total Intl Bd Id	—	—	—	3.66
⊖ CMT Market Liquidity Rate	—	—	—	0.00

Total Fixed Income: 0	Date of Maturity	Amount 000	Value \$000	% Assets
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Equity Style	Fixed-Income Style
Style: Blend	Duration: Extensive
Size: Large-Cap	Quality: Medium

Value Measures	Rel Category	Avg Eff Duration <sup>1</sup>	6.4 Yrs
Price/Earnings	17.19	0.96	8.4 Yrs
Price/Book	1.93	0.91	A
Price/Sales	1.35	0.91	2.88%
Price/Cash Flow	7.00	0.89	
Dividend Yield %	2.73	1.10	

Growth Measures	% Rel Category	Sector Weightings	% of Stocks	Rel Bmark 1
Long-Term Erngs	8.96	⚡ Cyclical	37.99	0.90
Book Value	-2.92	📊 BasicMat	5.46	0.97
Sales	-6.46	📊 CnsmrCyc	11.53	1.03
Cash Flow	-4.57	📊 FinanSvcs	16.96	0.93
Historical Erngs	-55.25	📊 Real Est	4.04	0.55

Market Cap %	Small	Mid	Large	Micro	5.6	1.7	31.543
Giant	43.8	30.6	18.3	5.6	1.7	31.543	

## Composition - Net

Composition - Net	Value	Rel Category	Sector Weightings	% of Stocks	Rel Bmark 1
● Cash	1.7	—	🛡️ Defensive	24.28	1.14
● Stocks	86.3	—	🛡️ CnsmrDef	9.48	1.17
● Bonds	11.9	—	🏥 Hlthcare	11.45	1.17
● Other	0.2	—	🏠 Utilities	3.35	0.96
Foreign	38.6	(% of Stock)			

Address:	Vanguard Chester Funds Valley Forge, PA 19482 800-662-7447	Minimum Purchase:	\$1000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	06-07-06	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.00%		
Subadvisor:	None	Actual Fees:	Mgt: 0.00%	Dist: —	
		Expense Projections:	3Yr:\$52	5Yr:\$90	10Yr:\$205
		Income Distribution:	Annually		

# Vanguard Target Retirement 2045 Inv

**Benchmark 1:** Morningstar Lifetime Mod 2045 TR USD  
**Benchmark 2:** Morningstar Mod Tgt Risk TR USD

**Morningstar Analyst Rating** 05-19-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	11.34	-3.77	5.95	1.81	15.58
2013	7.63	0.64	6.73	7.59	24.37
2014	1.69	4.60	-1.48	2.26	7.16
2015	2.41	0.10	-7.95	4.30	-1.57
2016	0.79	1.79	4.82	1.24	8.87

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	1.24	-0.50	0.86	47	10,124
6 Mo	6.12	-0.42	2.33	45	10,612
1 Yr	8.87	-1.97	0.30	28	10,887
3 Yr Avg	4.72	0.52	0.92	13	11,483
5 Yr Avg	10.54	0.51	3.09	18	16,506
10 Yr Avg	5.27	-0.14	0.03	10	16,705
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	3.78	10	0.90	15
5 Yr (estimated)	9.67	11	0.79	9
10 Yr (estimated)	4.60	4	0.63	1

Potential Capital Gain Exposure: 22% of assets

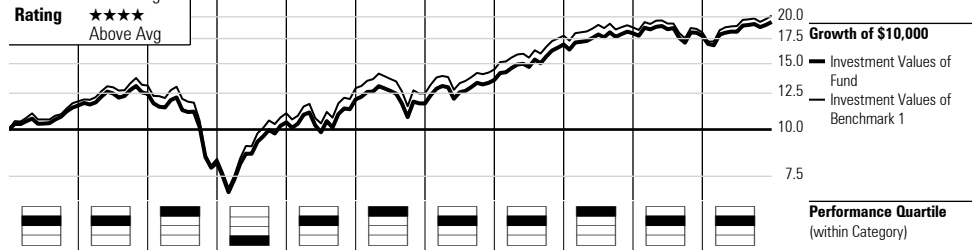
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The series' overall stock and bond split has been in place since mid-2006. The glide path starts with a 90% equity exposure until the investor hits 25 years to retirement. From there, equity exposure gradually decreases until seven years after retirement, when the glide path plateaus to a 30% stake in equities. The equity/bond breakdown hews closely to the industry average, but subasset allocation is more nuanced. Over the course of 2015, Vanguard increased the series' international-equity exposure to 40% from 30% and its international-bond exposure to 30% from 20%. The typical competitor allocates about 30% of equities to non-U.S. stocks and 15% of fixed income to non-U.S. bonds. The firm's

## Historical Profile

**Return** Above Avg  
**Risk** Below Avg  
**Rating** ★★★★★ Above Avg



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	History
14.32	15.09	9.57	12.02	13.50	12.87	14.55	17.76	18.65	17.78	18.89	NAV
15.98	7.47	-34.56	28.15	15.19	-2.51	15.58	24.37	7.16	-1.57	8.87	Total Return %
-3.01	-2.68	1.71	-4.17	-1.57	0.67	-0.26	1.30	1.91	1.45	-1.97	+/- Bmark 1
3.03	-1.17	-12.37	6.38	2.86	-3.11	3.54	10.06	2.27	0.22	0.30	+/- Bmark 2
1.99	2.09	1.99	2.57	2.01	2.12	2.46	2.30	2.16	2.07	2.11	Income Return %
13.99	5.37	-36.55	25.58	13.18	-4.63	13.12	22.07	5.00	-3.64	6.76	Capital Return %
46	41	11	83	40	14	43	26	12	42	28	Total Rtn % Rank Cat
0.25	0.30	0.30	0.25	0.24	0.29	0.32	0.33	0.38	0.39	0.38	Income \$
0.01	0.00	0.00	0.00	0.10	0.01	0.01	0.00	0.00	0.20	0.09	Capital Gains \$
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Expense Ratio %
2.03	2.08	2.28	2.86	2.24	1.79	2.70	2.36	2.17	2.10	2.43	Income Ratio %
3	1	9	10	6	16	7	10	7	20	13	Turnover Rate %
1,446	2,374	2,192	3,979	5,610	6,372	8,758	12,766	15,036	14,344	16,483	Net Assets \$mil

## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	8.87			
3 Yr	4.72	+Avg	-Avg	★★★★
5 Yr	10.54	+Avg	Avg	★★★★
10 Yr	5.27	+Avg	-Avg	★★★★
Incept	7.27			

Other Measures	Standard Index	Best Fit Index
Alpha	-0.6	0.5
Beta	1.45	0.92
R-Squared	97	99
Standard Deviation	9.78	
Mean	4.72	
Sharpe Ratio	0.50	

## Portfolio Analysis 11-30-16

Total Stocks: 0	Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊖ Vanguard Total Stock Mkt	—	—	—	54.37
⊕ Vanguard Total Intl Stock	—	—	—	35.58
⊕ Vanguard Total Bond Marke	—	—	—	7.07
⊕ Vanguard Total Intl Bd Id	—	—	—	2.97
⊖ CMT Market Liquidity Rate	—	—	—	0.02

Total Fixed Income: 0	Date of Maturity	Amount 000	Value \$000	% Assets
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Equity Style	Fixed-Income Style
Style: Blend	Duration: Extensive
Size: Large-Cap	Quality: Medium

Value Measures	Rel Category	Avg Eff Duration <sup>1</sup>	6.4 Yrs
Price/Earnings	17.19	0.97	Avg Eff Maturity
Price/Book	1.92	0.92	Avg Credit Quality
Price/Sales	1.35	0.93	Avg Wtd Coupon
Price/Cash Flow	7.00	0.91	
Dividend Yield %	2.73	1.09	

Growth Measures	% Rel Category	Sector Weightings	% of Stocks	Rel Bmark 1
Long-Term Erngs	8.96	⊖ Cyclical	37.99	0.89
Book Value	-2.92	⊕ BasicMat	5.46	0.96
Sales	-6.46	⊕ CnsmrCyc	11.53	1.03
Cash Flow	-4.57	⊕ FinanSvcs	16.96	0.93
Historical Erngs	-55.25	⊕ Real Est	4.04	0.54

Market Cap %	Small	Mid	Large	Micro	5.6	1.7	31.534
Giant	43.8	30.6	18.3	5.6	1.7	31.534	

## Composition - Net

● Cash	1.7
● Stocks	88.5
● Bonds	9.7
● Other	0.2
● Foreign	38.6
(% of Stock)	

Address:	Vanguard Chester Funds Valley Forge, PA 19482 800-662-7447	Minimum Purchase:	\$1000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	10-27-03	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.00%		
Subadvisor:	None	Actual Fees:	Mgt: 0.00%	Dist: —	
		Expense Projections:	3Yr:\$52	5Yr:\$90	10Yr:\$205
		Income Distribution:	Annually		



# Vanguard Target Retirement 2050 Inv

**Benchmark 1:** Morningstar Lifetime Mod 2050 TR USD  
**Benchmark 2:** Morningstar Mod Tgt Risk TR USD

**Morningstar Analyst Rating** 05-19-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	11.32	-3.79	5.95	1.86	15.58
2013	7.62	0.60	6.76	7.57	24.34
2014	1.67	4.61	-1.50	2.31	7.18
2015	2.36	0.13	-7.94	4.31	-1.58
2016	0.77	1.81	4.79	1.25	8.85

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	1.25	-0.46	0.87	46	10,125
6 Mo	6.10	-0.50	2.30	43	10,610
1 Yr	8.85	-2.04	0.28	29	10,885
3 Yr Avg	4.72	0.65	0.92	19	11,482
5 Yr Avg	10.54	0.61	3.09	17	16,503
10 Yr Avg	5.27	-0.08	0.03	10	16,709
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	3.89	6	0.79	9
5 Yr (estimated)	9.75	10	0.71	7
10 Yr (estimated)	4.66	5	0.58	1

Potential Capital Gain Exposure: 18% of assets

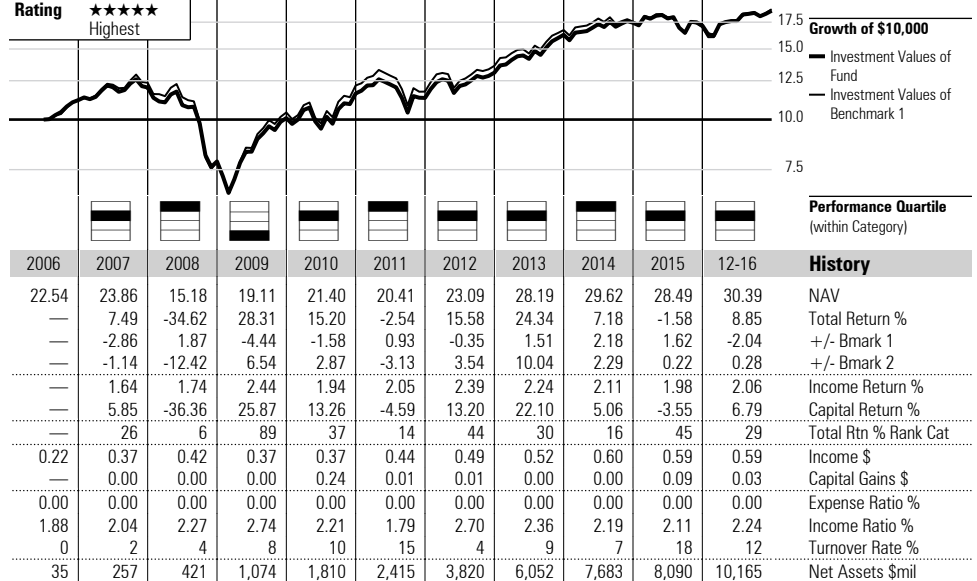
## Morningstar's Take by Susan Wasserman 05-19-16

The Vanguard Target Retirement series has made incremental adjustments over time, but the overarching strategy is unchanged. The series aims to provide investors with a diversified asset mix that will help them meet their long-term retirement goals. Vanguard's approach is founded on a wealth of industry research, and it's boosted by the firm's success as a low-cost index fund provider. This straightforward series continues to be a top pick and earns a Morningstar Analyst Rating of Gold.

The series' overall stock and bond split has been in place since mid-2006. The glide path starts with a 90% equity exposure until the investor hits 25 years to retirement. From there, equity exposure gradually decreases until seven years after retirement, when the glide path plateaus to a 30% stake in equities. The equity/bond breakdown hews closely to the industry average, but subasset allocation is more nuanced. Over the course of 2015, Vanguard increased the series' international-equity exposure to 40% from 30% and its international-bond exposure to 30% from 20%. The typical competitor allocates about 30% of equities to non-U.S. stocks and 15% of fixed income to non-U.S. bonds. The firm's

## Historical Profile

**Return** Above Avg  
**Risk** Below Avg  
**Rating** ★★★★★ Highest



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	8.85	—	—	★★★★
3 Yr	4.72	+Avg	Avg	★★★★
5 Yr	10.54	+Avg	-Avg	★★★★
10 Yr	5.27	+Avg	Low	★★★★★
Incept	6.27	—	—	—

Other Measures	Standard Index	Best Fit Index
Alpha	-0.6	0.5
Beta	1.45	0.92
R-Squared	97	99
Standard Deviation	9.77	—
Mean	4.72	—
Sharpe Ratio	0.50	—

## Portfolio Analysis 11-30-16

<b>Total Stocks: 0</b>	Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊖ Vanguard Total Stock Mkt	—	—	—	54.35
⊕ Vanguard Total Intl Stock	—	—	—	35.61
⊕ Vanguard Total Bond Marke	—	—	—	7.07
⊕ Vanguard Total Intl Bd Id	—	—	—	2.97
⊖ CMT Market Liquidity Rate	—	—	—	0.00

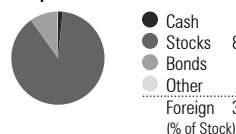
Total Fixed Income: 0	Date of Maturity	Amount 000	Value \$000	% Assets
-----------------------	------------------	------------	-------------	----------

Equity Style	Fixed-Income Style
Style: Blend	Duration: Extensive
Size: Large-Cap	Quality: Medium

Value Measures	Rel Category	Avg Eff Duration <sup>1</sup>	6.4 Yrs
Price/Earnings	17.19	0.96	8.4 Yrs
Price/Book	1.92	0.90	Avg Credit Quality
Price/Sales	1.34	0.90	Avg Wtd Coupon
Price/Cash Flow	7.00	0.88	2.88%
Dividend Yield %	2.73	1.10	

Growth Measures	% Rel Category	Sector Weightings	% of Stocks	Rel Bmark 1
Long-Term Erngs	8.96	⊖ Cyclical	37.99	0.89
Book Value	-2.93	⊖ BasicMat	5.46	0.94
Sales	-6.46	⊖ CnsmrCyc	11.53	1.03
Cash Flow	-4.57	⊖ FinanSvcs	16.96	0.93
Historical Erngs	-55.26	⊖ Real Est	4.04	0.54
Market Cap %	—	⊖ Sensitive	37.73	1.04
Giant 43.8	Small 5.6	⊖ CommSvcs	4.16	1.08
Large 30.6	Micro 1.7	⊖ Energy	6.61	0.98
Mid 18.3	Avg \$mil: 31,526	⊖ Industrl	11.70	0.99
		⊖ Technlgy	15.26	1.12
		⊖ Defensive	24.28	1.15
		⊖ CnsmrDef	9.48	1.18
		⊖ Hlthcare	11.45	1.20
		⊖ Utilities	3.35	0.96

## Composition - Net



Address:	Vanguard Chester Funds Valley Forge, PA 19482 800-662-7447	Minimum Purchase:	\$1000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	06-07-06	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.00%		
Subadvisor:	None	Actual Fees:	Mgt: 0.00%	Dist: —	
		Expense Projections:	3Yr:\$52	5Yr:\$90	10Yr:\$205
		Income Distribution:	Annually		

# Vanguard Target Retirement 2055 Inv

**Benchmark 1:** Morningstar Lifetime Mod 2055 TR USD  
**Benchmark 2:** Morningstar Mod Tgt Risk TR USD

**Morningstar Analyst Rating** 05-19-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	11.30	-3.78	5.98	1.84	15.58
2013	7.62	0.60	6.78	7.55	24.33
2014	1.71	4.60	-1.52	2.31	7.19
2015	2.38	0.06	-8.00	4.28	-1.72
2016	0.78	1.80	4.81	1.26	8.88

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	1.26	-0.39	0.88	46	10,126
6 Mo	6.12	-0.48	2.33	48	10,612
1 Yr	8.88	-2.02	0.31	27	10,888
3 Yr Avg	4.68	0.74	0.88	17	11,470
5 Yr Avg	10.51	0.72	3.06	26	16,483
10 Yr Avg	—	—	—	—	—
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	3.94	9	0.71	8
5 Yr (estimated)	9.81	12	0.63	5
10 Yr (estimated)	—	—	—	—

Potential Capital Gain Exposure: 8% of assets

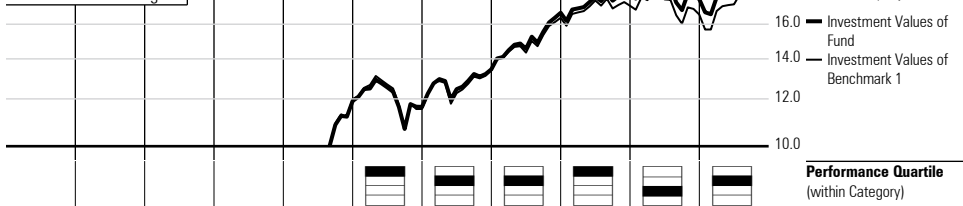
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The series' overall stock and bond split has been in place since mid-2006. The glide path starts with a 90% equity exposure until the investor hits 25 years to retirement. From there, equity exposure gradually decreases until seven years after retirement, when the glide path plateaus to a 30% stake in equities. The equity/bond breakdown hews closely to the industry average, but subasset allocation is more nuanced. Over the course of 2015, Vanguard increased the series' international-equity exposure to 40% from 30% and its international-bond exposure to 30% from 20%. The typical competitor allocates about 30% of equities to non-U.S. stocks and 15% of fixed income to non-U.S. bonds. The firm's

## Historical Profile

**Return** Above Avg  
**Risk** Below Avg  
**Rating** ★★★★★ Above Avg



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	12-16	History
—	—	—	—	22.78	21.86	24.80	30.35	31.98	30.83	32.91	NAV
—	—	—	—	—	-2.27	15.58	24.33	7.19	-1.72	8.88	Total Return %
—	—	—	—	—	1.48	-0.42	1.84	2.45	1.62	-2.03	+/- Bmark 1
—	—	—	—	—	-2.86	3.54	10.02	2.31	0.07	0.31	+/- Bmark 2
—	—	—	—	—	1.72	2.04	1.92	1.83	1.85	2.12	Income Return %
—	—	—	—	—	-3.98	13.54	22.41	5.37	-3.57	6.76	Capital Return %
—	—	—	—	—	9	48	36	16	53	27	Total Rtn % Rank Cat
—	—	—	—	0.18	0.39	0.45	0.48	0.55	0.59	0.65	Income \$
—	—	—	—	0.04	0.01	0.01	0.00	0.01	0.02	0.00	Capital Gains \$
—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Expense Ratio %
—	—	—	—	2.73	1.71	2.76	2.39	2.22	2.17	2.27	Income Ratio %
—	—	—	—	3	12	3	9	7	18	8	Turnover Rate %
—	—	—	—	20	167	479	1,127	1,875	2,445	3,752	Net Assets \$mil

## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	8.88	—	—	—
3 Yr	4.68	+Avg	-Avg	★★★★
5 Yr	10.51	+Avg	-Avg	★★★★
10 Yr	—	—	—	—
Incept	10.16	—	—	—

Other Measures	Standard Index	Best Fit Index
Alpha	-0.6	0.5
Beta	1.45	0.92
R-Squared	97	99
Standard Deviation	9.76	—
Mean	4.68	—
Sharpe Ratio	0.50	—

## Portfolio Analysis 11-30-16

<b>Total Stocks: 0</b>	Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊕ Vanguard Total Stock Mkt	—	—	—	54.14
⊕ Vanguard Total Intl Stock	—	—	—	35.77
⊕ Vanguard Total Bond Marke	—	—	—	7.05
⊕ Vanguard Total Intl Bd Id	—	—	—	2.97
⊖ CMT Market Liquidity Rate	—	—	—	0.07

Total Fixed Income: 0	Date of Maturity	Amount 000	Value \$000	% Assets
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Equity Style	Fixed-Income Style
Style: Blend	Duration: Extensive
Size: Large-Cap	Quality: Medium

Value Measures	Rel Category	Avg Eff Duration <sup>1</sup>	6.4 Yrs
Price/Earnings	17.18	0.97	8.4 Yrs
Price/Book	1.92	0.92	Avg Credit Quality
Price/Sales	1.34	0.92	Avg Wtd Coupon
Price/Cash Flow	6.99	0.90	2.88%
Dividend Yield %	2.73	1.09	

Growth Measures	% Rel Category	Sector Weightings	% of Stocks	Rel Bmark 1
Long-Term Erngs	8.96	0.96	Cyclical	38.01
Book Value	-2.94	-14.39	BasicMat	5.47
Sales	-6.47	1.83	CnsmrCyc	11.53
Cash Flow	-4.58	-5.39	FinanSvcs	16.97
Historical Erngs	-55.28	2.52	Real Est	4.04

Market Cap %	Small	Mid	Large
Giant	43.8	30.6	18.3
Small	5.6	1.7	0.7
Micro	1.7	0.2	0.2
Avg \$mil:	31,473	—	—

## Composition - Net

● Cash	1.7
● Stocks	88.4
● Bonds	9.7
● Other	0.2
Foreign	38.9
(% of Stock)	

Address:	Vanguard Chester Funds Valley Forge, PA 19482 800-662-7447	Minimum Purchase:	\$1000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	
Inception:	08-18-10	Sales Fees:	No-load		
Advisor:	Vanguard Group Inc	Management Fee:	0.00%		
Subadvisor:	None	Actual Fees:	Mgt: 0.00%	Dist: —	
		Expense Projections:	3Yr:\$52	5Yr:\$90	10Yr:\$205
		Income Distribution:	Annually		

# Vanguard Target Retirement 2060 Inv

**Benchmark 1:** Morningstar Lifetime Mod 2060 TR USD  
**Benchmark 2:** Morningstar Mod Tgt Risk TR USD

**Morningstar Analyst Rating** 05-20-16



## 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

## Pillar Spectrum

⊕ Positive ⊖ Negative ● Neutral

## Performance 12-31-16

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2012	—	-3.57	6.05	1.82	—
2013	7.61	0.60	6.78	7.58	24.35
2014	1.68	4.63	-1.51	2.27	7.16
2015	2.38	0.07	-8.00	4.31	-1.68
2016	0.77	1.79	4.80	1.25	8.84

Trailing	Total	+/- Bmark	+/- Bmark	%Rank	Growth of \$10,000
	Return%	1	2	Cat	
3 Mo	1.25	-0.32	0.87	58	10,125
6 Mo	6.11	-0.46	2.32	57	10,611
1 Yr	8.84	-2.04	0.27	21	10,884
3 Yr Avg	4.67	0.86	0.87	1	11,468
5 Yr Avg	—	—	—	—	—
10 Yr Avg	—	—	—	—	—
15 Yr Avg	—	—	—	—	—

Tax Analysis	Tax Adj Rtn%	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	4.04	1	0.60	1
5 Yr (estimated)	—	—	—	—
10 Yr (estimated)	—	—	—	—

Potential Capital Gain Exposure: 6% of assets

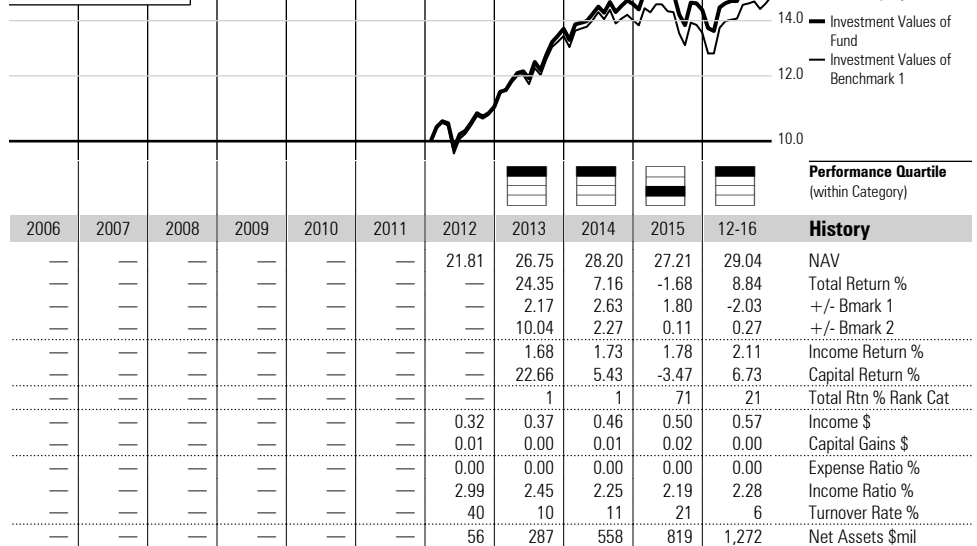
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The series' overall stock and bond split has been in place since mid-2006. The glide path starts with a 90% equity exposure until the investor hits 25 years to retirement. From there, equity exposure gradually decreases until seven years after retirement, when the glide path plateaus to a 30% stake in equities. The equity/bond breakdown hews closely to the industry average, but subasset allocation is more nuanced. Over the course of 2015, Vanguard increased the series' international-equity exposure to 40% from 30% and its international-bond exposure to 30% from 20%. The typical competitor allocates about 30% of equities to non-U.S. stocks and 15% of fixed income to non-U.S. bonds. The firm's

## Historical Profile

Return —  
 Risk —  
 Rating Not Rated



## Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	8.84	—	—	—
3 Yr	4.67	—	—	—
5 Yr	—	—	—	—
10 Yr	—	—	—	—
Incept	9.66	—	—	—

## Other Measures

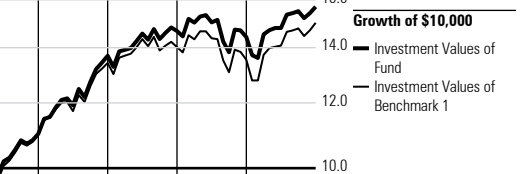
Other Measures	Standard Index	Best Fit Index
Alpha	-0.6	0.5
Beta	1.45	0.92
R-Squared	97	99
Standard Deviation	9.78	—
Mean	4.67	—
Sharpe Ratio	0.50	—

research shows that investing closer to the global market capitalization provides greater diversification and lower average volatility.

Management implements the strategy using a lean set of index funds. Just two funds cover the full market-cap and style spectrum of the U.S. and non-U.S. equity markets. Two funds cover domestic and international bonds across all funds in the series, and a short-term inflation-protected securities fund comes into play in the five years prior to retirement. International-stock exposure proved to be a drag on performance across the series in 2015 and in the first months of 2016. Still, all funds land in the top quartile of their respective peer groups over the three- and five-year periods through April 2016. While market movements largely drive results of this index-based series, its at-cost pricing provides an enduring edge against the competition, and it remains a sound choice for investors.

**Ticker** VTTX **Yield** 2.0% **Total Assets** \$1,272 mil **Mstar Category** Target-Date 2060+

**Investment Style** Equity



**Performance Quartile** (within Category)

History	NAV	Total Return %	+/- Bmark 1	+/- Bmark 2	Income Return %	Capital Return %	Total Rtn % Rank Cat	Income \$	Capital Gains \$	Expense Ratio %	Income Ratio %	Turnover Rate %	Net Assets \$mil
2006	21.81	26.75	28.20	27.21	29.04	—	—	—	—	—	—	—	—
2007	—	24.35	7.16	-1.68	8.84	—	—	—	—	—	—	—	—
2008	—	2.17	2.63	1.80	-2.03	—	—	—	—	—	—	—	—
2009	—	10.04	2.27	0.11	0.27	—	—	—	—	—	—	—	—
2010	—	1.68	1.73	1.78	2.11	—	—	—	—	—	—	—	—
2011	—	22.66	5.43	-3.47	6.73	—	—	—	—	—	—	—	—
2012	—	1	1	71	21	—	—	—	—	—	—	—	—
2013	—	0.32	0.37	0.46	0.50	—	—	—	—	—	—	—	—
2014	—	0.01	0.00	0.01	0.00	—	—	—	—	—	—	—	—
2015	—	0.00	0.00	0.00	0.00	—	—	—	—	—	—	—	—
2016	—	2.99	2.45	2.25	2.19	—	—	—	—	—	—	—	—
2017	—	40	10	11	21	—	—	—	—	—	—	—	—
2018	—	56	287	558	819	—	—	—	—	—	—	—	—

## Portfolio Analysis 11-30-16

Total Stocks: 0	Share change since 10-31-16	Sector	YTD Ret %	% Assets
⊕ Vanguard Total Stock Mkt	—	—	—	54.15
⊕ Vanguard Total Intl Stock	—	—	—	35.79
⊕ Vanguard Total Bond Marke	—	—	—	7.02
⊕ Vanguard Total Intl Bd Id	—	—	—	3.00

**Total Fixed Income: 0**

Equity Style	Style: Blend	Size: Large-Cap	Fixed-Income Style	Duration: Extensive	Quality: Medium
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Value Measures	Rel Category	Avg Eff Duration <sup>1</sup>	6.4 Yrs
Price/Earnings	17.18	0.95	8.5 Yrs
Price/Book	1.92	0.90	A
Price/Sales	1.34	0.91	2.88%
Price/Cash Flow	6.99	0.89	—
Dividend Yield %	2.73	1.12	—

<sup>1</sup> figure provided by fund as of 11-30-16

Growth Measures	% Rel Category	Sector Weightings	% of Stocks	Rel Bmark 1
Long-Term Erngs	8.96	0.95	38.01	0.88
Book Value	-2.94	1.32	5.47	0.92
Sales	-6.47	1.79	11.53	1.04
Cash Flow	-4.58	-1.98	16.97	0.92
Historical Erngs	-55.28	2.96	4.04	0.52
Market Cap %	—	—	37.72	1.05
Giant	43.8	Small	4.17	1.08
Large	30.6	Micro	6.61	0.99
Mid	18.3	Avg \$mil:	11.70	0.99
		31,470	15.24	1.12

## Composition - Net

Composition - Net	Cash	Stocks	Bonds	Other	Foreign
	1.7	88.5	9.7	0.2	38.9
	—	—	—	—	(% of Stock)

Address:	Vanguard Chester Funds Valley Forge, PA 19482 800-662-7447	Minimum Purchase:	\$1000	Add: \$1	IRA: —
Web Address:	www.vanguard.com	Min Auto Inv Plan:	—	Add: —	—
Inception:	01-19-12	Sales Fees:	No-load	—	—
Advisor:	Vanguard Group Inc	Management Fee:	0.00%	—	—
Subadvisor:	None	Actual Fees:	Mgt:0.00%	Dist:—	—
		Expense Projections:	3Yr:\$52	5Yr:\$90	10Yr:\$205
		Income Distribution:	Annually	—	—

# Fidelity® Treasury Only Money Market Fund (FDLXX)

**NTF** No Transaction Fee <sup>1</sup>

## Performance<sup>3,4,5</sup>

Monthly (AS OF 12/31/2016)	YTD (Monthly)	Average Annual Total Returns				
		1 Yr	3 Yrs	5 Yrs	10 Yrs	Life
Fidelity® Treasury Only Money Market Fund	0.01%	0.01%	0.01%	0.01%	0.59%	3.06%
CG 3-Month Treasury Bill	0.27%	0.27%	0.11%	0.09%	0.73%	3.24%
Money Market-Taxable	0.09%	0.09%	0.04%	0.03%	0.66%	--
Quarter-End (AS OF 12/31/2016)						
Fidelity® Treasury Only Money Market Fund		0.01%	0.01%	0.01%	0.59%	3.06%

The performance data featured represents past performance, which is no guarantee of future results. Investment return and principal value of an investment will fluctuate; therefore, you may have a gain or loss when you sell your shares. Current performance may be higher or lower than the performance data quoted.

## Fund Overview

### Objective

Seeks as high a level of current income as is consistent with the security of principal and liquidity.

### Strategy

The Adviser normally invests at least 99.5% of the fund's total assets in cash and U.S. Treasury securities. Potentially entering into reverse repurchase agreements. Normally investing in securities whose interest is exempt from state and local income taxes. Investing in compliance with industry standard regulatory requirements for money market funds for the quality, maturity, liquidity and diversification of investments. The Adviser stresses maintaining a stable \$1.00 share price, liquidity, and income. In addition, the Adviser normally invests at least 80% of the fund's assets in U.S. Treasury securities.

### Risk

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at \$1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Fidelity Investments and its affiliates, the fund's sponsor, have no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time. The fund will not impose a fee upon the sale of your shares, nor temporarily suspend your ability to sell shares if the fund's weekly liquid assets fall below 30% of its total assets because of market conditions or other factors. Interest rate increases can cause the price of a money market security to decrease. A decline in the credit quality of an issuer or a provider of credit support or a maturity-shortening structure for a security can cause the price of a money market security to decrease.

### Additional Disclosures

This description is only intended to provide a brief overview of the mutual fund. Read the fund's prospectus for more detailed information about the fund.

## Morningstar® Snapshot\*<sup>2</sup>

(AS OF 12/31/2016)

Morningstar Category Money Market-Taxable

Risk of this Category



\*Data provided by Morningstar

## Details

Product Type	Government
Fund Inception	1/5/1988
NAV on 12/31/2016	\$1.00
Exp Ratio (Gross) 6/29/2016	0.42%
Exp Ratio - Annual or Semi-Annual Report (Net) <sup>7</sup> 10/31/2016	0.34%
Minimum to Invest <sup>8</sup>	\$2,500.00
Portfolio Net Assets (\$M) 12/31/2016	\$3,985.56

## Fund Manager(s)

Primary Manager: Maura J Walsh (since 5/1/2015)

## Portfolio Data

7-Day Yield <sup>9</sup> 12/31/2016	0.08%
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## Section 4: Professionally Managed Models

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## Probity Advisors Managed Model Portfolios

### **Professionally Managed Models:**

Probity Advisors offers participants seven professionally managed investment portfolio options—Retirement Income, Ultra Conservative, Conservative, Moderate Conservative, Moderate, Moderate Aggressive and Aggressive. The models allocate assets between stocks and bonds consistent with the overriding investment objective for that allocation strategy, whether that be capital preservation, growth of capital, or moderation of volatility. Each Model Portfolio is based on Modern Portfolio Theory, combining various asset classes in combinations intended to efficiently maximize return given the risk level selected by the participant. Asset allocations and fund selections are tactically adjusted as Probity Advisors' portfolio managers' perspectives change over the various economic and business cycles.

# Probity Advisors Professionally Managed Models Performance

## Total Returns as of 12.31.2016

Fund/Benchmark Index	Model/Benchmark	Q4 2016	1-Year	3-Year*	5-Year*
Probity Advisors Aggressive Portfolio	Aggressive Allocation	2.54%	11.60%	5.28%	11.30%
Probity Advisors Moderate Aggressive Portfolio	Moderate Aggressive Allocation	2.90%	11.30%	5.72%	11.21%
Probity Advisors Moderate Portfolio	Moderate Allocation	2.52%	10.28%	5.44%	10.27%
Probity Advisors Moderate Conservative Portfolio	Moderate Conservative Allocation	2.68%	9.73%	5.38%	9.67%
Probity Advisors Conservative Portfolio	Conservative Allocation	2.69%	9.06%	4.98%	8.63%
Probity Advisors Ultra Conservative Portfolio**	Ultra Conservative Allocation	1.96%	7.73%	4.45%	
Probity Advisors Retirement Income Portfolio**	Retirement Income Allocation	1.04%	5.49%	3.55%	
<b>S&amp;P 500 TR</b>		3.82%	11.96%	8.87%	14.66%
<b>Barclays US Agg Bond TR</b>		-2.98%	2.65%	3.03%	2.23%

\*Returns Greater than 1 Year are Annualized.

\*\*Inception date is 4.13.2012

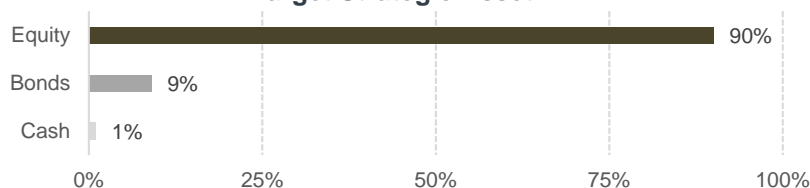


## Model Name: Probity Advisors Aggressive Portfolio

### Model Description

**Aggressive Growth:** For the investor who has both a high tolerance for risk and a long investment time horizon. The main objective is high growth of an investor's assets. Portfolios may have substantial fluctuations in value from year to year, making this category unsuitable for those who do not have an extended investment time horizon.

#### Target Strategic Asset Mix



#### Portfolio Facts as of 12.31.2016

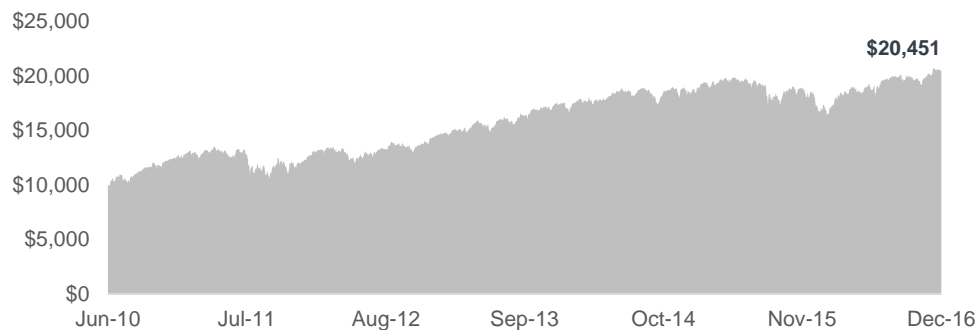
Weighted Expense Ratio	0.14%
Bond Duration	5.01
Average Credit Quality	B

#### Aggressive Portfolio Holdings

Fund Name	Ticker	Weight
Vanguard Growth Index Admiral	VIGAX	21.00%
Vanguard Value Index Admiral	VVIAX	21.00%
Vanguard Total Intl Stock Index Admiral	VTIAX	17.00%
Vanguard Small-Cap Value Index Admiral	VSIAX	14.00%
Vanguard Small-Cap Growth Index Admiral	VSGAX	12.00%
Northern Emerging Markets Equity Index	NOEMX	5.00%
Federated Instl High Yield Bond Instl	FIHBX	4.00%
Goldman Sachs Emerging Mkt Debt Instl	GSDIX	3.00%
Vanguard Short-Term Bond Index Admiral	VBIRX	2.00%
Fidelity Treasury Only Money Market Fund	FDLXX	1.00%

### Performance

#### Growth of a \$10,000 Investment (06/30/2010-12/31/2016)\*



#### Average Annualized Returns as of 12.31.2016

Model/Benchmark	Q4 2016	1-Year	3-Year**	5-Year**
Probity Advisors Aggressive Portfolio	2.54%	11.60%	5.28%	11.30%
Morningstar Aggressive Tgt Risk	2.15%	11.33%	4.47%	10.51%

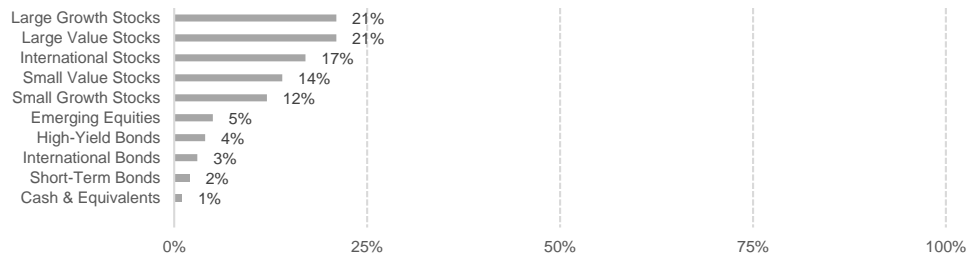
#### MPT/Risk & Return Statistics (3-Yr.)

#### Aggressive Portfolio

#### Benchmark

Alpha	0.88	-
Beta	0.97	-
Sharpe Ratio	0.54	0.45
Standard Deviation	10.31	10.51

#### Asset Allocation Distribution



\*Performance returns calculated by Morningstar Advisors Work Station. The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate, thus an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than return data quoted herein. Performance reflects the inclusion of all mutual fund expenses, but does not reflect any fees or expenses related to recordkeeping, advisory services or any other cost associated with the administration of the retirement plan. These expenses are disclosed separately. The information, data, analyses and opinions contained herein are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and are not warranted to be correct, complete or accurate. Except as otherwise required by law or contracted for through an advisory agreement with the plan sponsor, Probity Advisors, Inc. shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. This report is intended for the sole use by the plan sponsor and is not intended for broader distribution to plan participants. Please read these documents carefully.

\*\*Returns greater than 1-year are annualized.

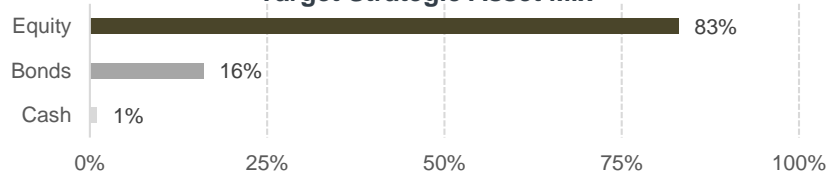


## Model Name: Probity Advisors Moderate Aggressive Portfolio

### Model Description

Moderate Aggressive Growth: For the moderately aggressive investor with a reasonably high tolerance for risk and/or longer time horizon. These investors have little need for current income and seek above-average growth from their investable assets in exchange for accepting more risk. The main objective is capital appreciation, and investors should be able to tolerate fluctuations in their portfolio values.

#### Target Strategic Asset Mix



### Portfolio Facts as of 12.31.2016

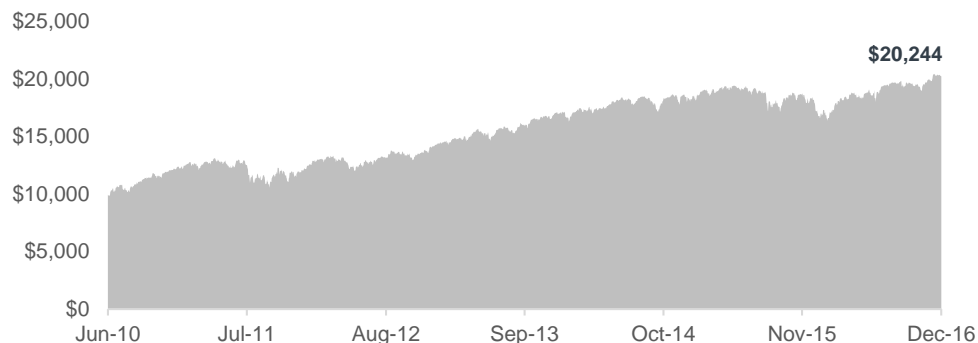
Weighted Expense Ratio	0.16%
Bond Duration	4.63
Average Credit Quality	BB

### Moderate Aggressive Portfolio Holdings

Fund Name	Ticker	Weight
Vanguard Value Index Admiral	VVIAX	24.00%
Vanguard Growth Index Admiral	VIGAX	24.00%
Vanguard Small Cap Value Index Admiral	VSIAX	14.00%
Vanguard Total Intl Stock Index Admiral	VTIAX	12.00%
Federated Instl High Yield Bond Instl	FIHBX	6.00%
Goldman Sachs Emerging Mkt Debt Instl	GSDIX	5.00%
Vanguard Small-Cap Growth Index Admiral	VSGAX	5.00%
Vanguard Short-Term Bond Index Admiral	VBIRX	5.00%
Northern Emerging Markets Equity Index	NOEMX	4.00%
Fidelity Treasury Only Money Market Fund	FDLXX	1.00%

### Performance

#### Growth of a \$10,000 Investment (06/30/2010-12/31/2016)\*



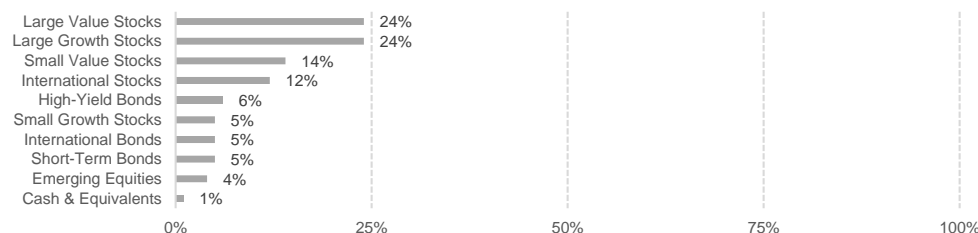
### Average Annualized Returns as of 12.31.2016

Model/Benchmark	Q4 2016	1-Year	3-Year**	5-Year**
Probity Advisors Moderate Aggressive	2.90%	11.30%	5.72%	11.21%
Morningstar Moderate Aggressive Tgt Risk	1.39%	10.21%	4.13%	9.18%

### MPT/Risk & Return Statistics (3-Yr.)

	Moderate Aggressive Portfolio	Benchmark
Alpha	1.25	-
Beta	1.08	-
Sharpe Ratio	0.61	0.49
Standard Deviation	9.60	8.78

### Asset Allocation Distribution



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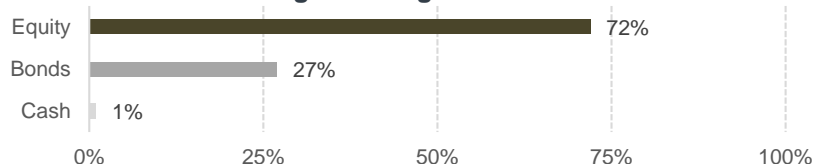
\*\*Returns greater than 1-year are annualized.

## Model Name: Probity Advisors Moderate Portfolio

### Model Description

**Stable Growth:** For the investor who desires a broadly diversified portfolio with an emphasis on long term growth and total return. This investor will have a higher tolerance for risk and/or a longer time horizon than more conservative investors. The main objective is to achieve steady portfolio growth while limiting fluctuations to less than those of the overall stock markets.

#### Target Strategic Asset Mix



#### Portfolio Facts as of 12.31.2016

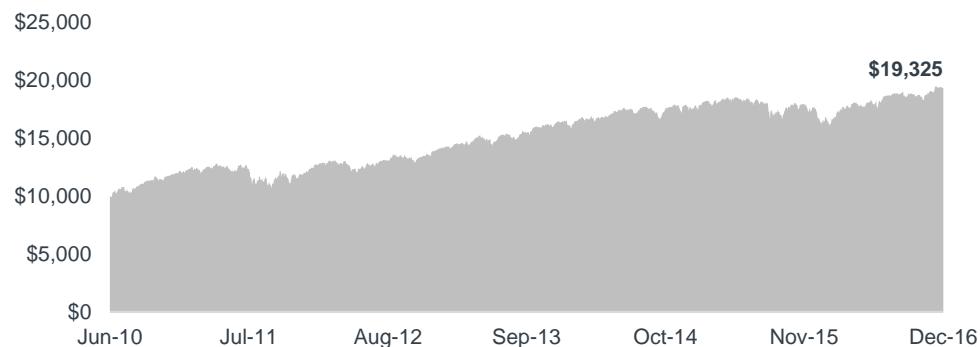
Weighted Expense Ratio	0.19%
Bond Duration	4.15
Average Credit Quality	BB

#### Moderate Portfolio Holdings

Fund Name	Ticker	Weight
Vanguard Value Index Admiral	VVIAX	24.00%
Vanguard Growth Index Admiral	VIGAX	20.00%
Vanguard Short-Term Bond Index Admiral	VBIRX	12.00%
Vanguard Small-Cap Value Index Admiral	VSIAX	11.00%
Vanguard Total Intl Stock Index Admiral	VTIAX	9.00%
Federated Instl High Yield Bond Instl	FIHBX	6.00%
Goldman Sachs Emerging Mkt Debt Instl	GSDIX	5.00%
Vanguard Small Cap Growth Index Admiral	VSGAX	4.00%
Northern Emerging Markets Equity Index	NOEMX	4.00%
Commerce Bond	CFBNX	4.00%
Fidelity Treasury Only Money Market Fund	FDLXX	1.00%

### Performance

#### Growth of a \$10,000 Investment (06/30/2010-12/31/2016)\*



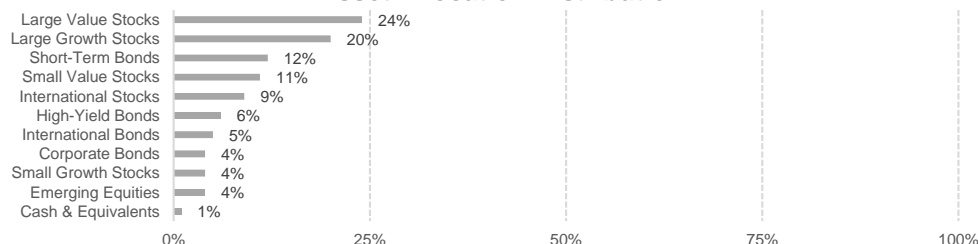
#### Average Annualized Returns as of 12.31.2016

Model/Benchmark	Q4 2016	1-Year	3-Year**	5-Year**
Probity Advisors Moderate Portfolio	2.52%	10.28%	5.44%	10.27%
Morningstar Moderate Tgt Risk	0.38%	8.57%	3.80%	7.45%

#### MPT/Risk & Return Statistics (3-Yr.)

	Moderate Portfolio	Benchmark
Alpha	0.86	-
Beta	1.22	-
Sharpe Ratio	0.66	0.57
Standard Deviation	8.28	6.64

#### Asset Allocation Distribution

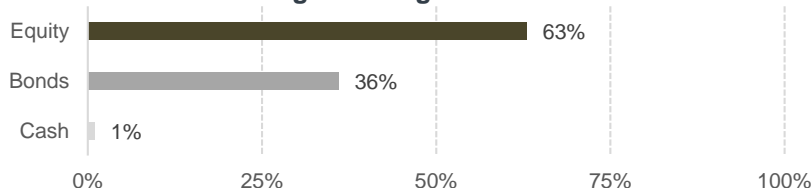


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\*\*Returns greater than 1-year are annualized.

**Model Name: Probity Advisors Moderate Conservative Portfolio****Model Description**

**Growth & Income:** For the investor who seeks greater capital appreciation than the more conservative investor while maintaining a significant portion of the portfolio in assets that are traditionally considered more stable. This investor will have a slightly higher risk tolerance and time horizon than the conservative investor, and is willing to accept fluctuations in their portfolio value.

**Target Strategic Asset Mix****Portfolio Facts as of 12.31.2016**

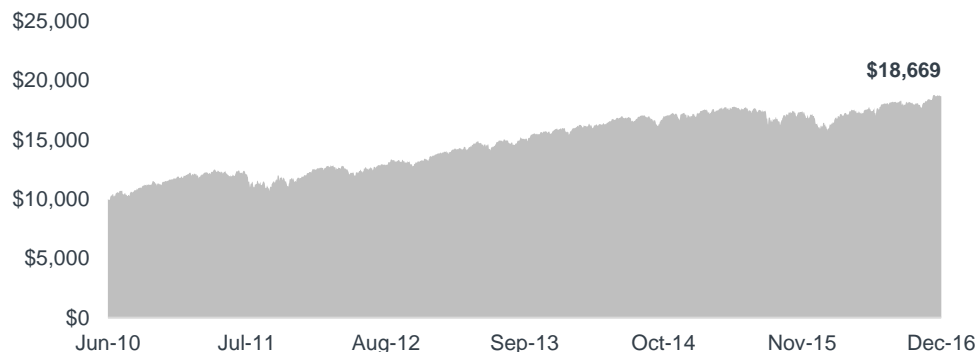
Weighted Expense Ratio	0.20%
Bond Duration	3.92
Average Credit Quality	BB

**Moderate Conservative Portfolio Holdings**

Fund Name	Ticker	Weight
Vanguard Value Index Admiral	VVIAX	24.00%
Vanguard Short-Term Bond Index Admiral	VBIRX	15.00%
Vanguard Growth Index Admiral	VIGAX	13.00%
Vanguard Small Cap Value Index Admiral	VSIAX	11.00%
Vanguard Total Intl Stock Index Admiral	VTIAX	9.00%
Commerce Bond	CFBNX	7.00%
Federated Instl High Yield Bond Instl	FIHBX	6.00%
Goldman Sachs Emerging Mkt Debt Instl	GSDIX	5.00%
Vanguard Small Cap Growth Index Admiral	VSGAX	4.00%
Vanguard Short-Term Govt Bd Idx Admiral	VSBSX	3.00%
Northern Emerging Markets Equity Index	NOEMX	2.00%
Fidelity Treasury Only Money Market Fund	FDLXX	1.00%

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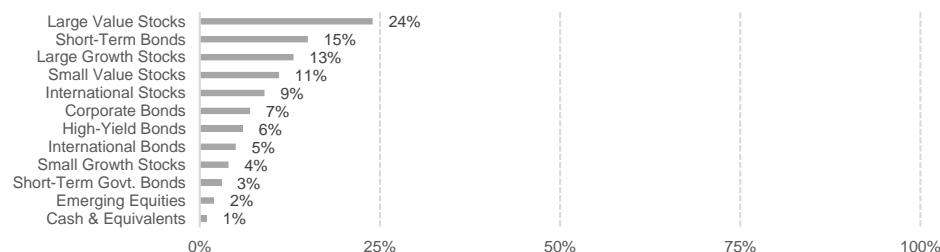
\*\*Returns greater than 1-year are annualized.

**Performance****Growth of a \$10,000 Investment (06/30/2010-12/31/2016)\*****Average Annualized Returns as of 12.31.2016**

Model/Benchmark	Q4 2016	1-Year	3-Year**	5-Year**
Probity Advisors Moderate Conservative	2.68%	9.73%	5.38%	9.67%
Morningstar Moderate Conservative Tgt Risk	-0.71%	6.66%	3.26%	5.61%

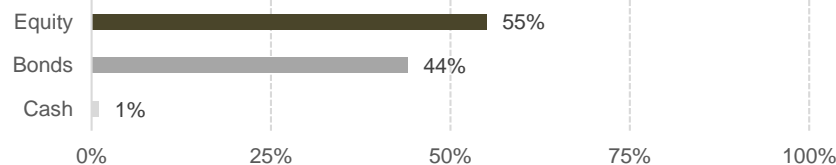
**MPT/Risk & Return Statistics (3-Yr.)****Moderate Conservative Portfolio****Benchmark**

Alpha	0.75	-
Beta	1.46	-
Sharpe Ratio	0.74	0.69
Standard Deviation	7.25	4.60

**Asset Allocation Distribution**

**Model Name: Probity Advisors Conservative Portfolio****Model Description**

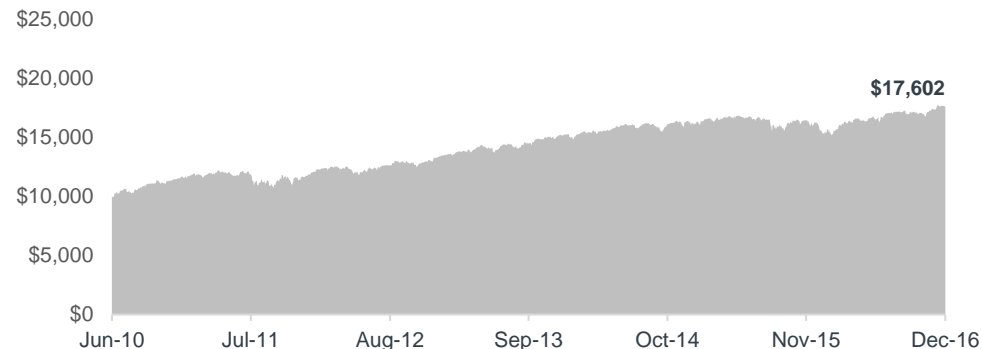
Balanced: For the investor who seeks a balance of both stability and capital appreciation from their portfolio. This investor will have either a moderate time horizon or a slightly higher risk tolerance than the Ultra Conservative investor. While this model is expected to dampen market volatility, fluctuations in the values of portfolios may occur from year to year.

**Target Strategic Asset Mix****Portfolio Facts as of 12.31.2016**

Weighted Expense Ratio	0.20%
Bond Duration	3.57
Average Credit Quality	BB

**Conservative Portfolio Holdings**

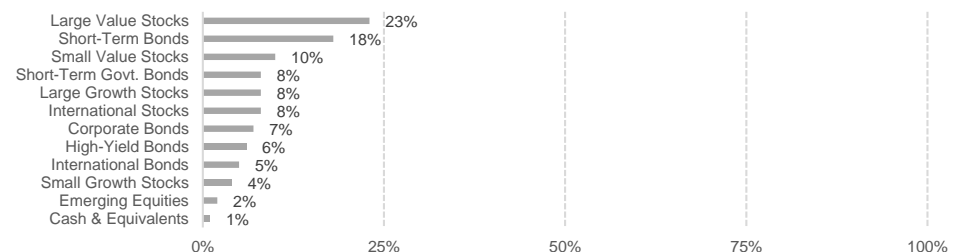
Fund Name	Ticker	Weight
Vanguard Value Index Admiral	VVIAX	23.00%
Vanguard Short-Term Bond Index Admiral	VBIRX	18.00%
Vanguard Small-Cap Value Index Admiral	VSIAX	10.00%
Vanguard Total Intl Stock Index Admiral	VTIAX	8.00%
Vanguard Short-Term Govt Bd Idx Admiral	VSBSX	8.00%
Vanguard Growth Index Admiral	VIGAX	8.00%
Commerce Bond	CFBNX	7.00%
Federated Instl High Yield Bond Instl	FIHBX	6.00%
Goldman Sachs Emerging Mkt Debt Instl	GSDIX	5.00%
Vanguard Small-Cap Growth Index Admiral	VSGAX	4.00%
Northern Emerging Markets Equity Index	NOEMX	2.00%
Fidelity Treasury Only Money Market Fund	FDLXX	1.00%

**Performance****Growth of a \$10,000 Investment (06/30/2010-12/31/2016)\*****Average Annualized Returns as of 12.31.2016**

Model/Benchmark	Q4 2016	1-Year	3-Year**	5-Year**
Probity Advisors Conservative Portfolio	2.69%	9.06%	4.98%	8.63%
Morningstar Conservative Tgt Risk	-1.84%	4.67%	2.35%	3.46%

**MPT/Risk & Return Statistics (3-Yr.)****Conservative Portfolio****Benchmark**

Alpha	1.68	-
Beta	1.46	-
Sharpe Ratio	0.77	0.73
Standard Deviation	6.43	3.04

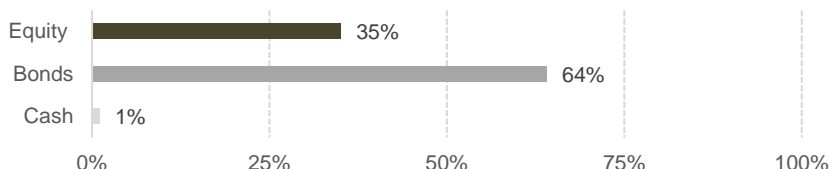
**Asset Allocation Distribution**

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\*\*Returns greater than 1-year are annualized.

**Model Name: Probity Advisors Ultra Conservative Portfolio****Model Description**

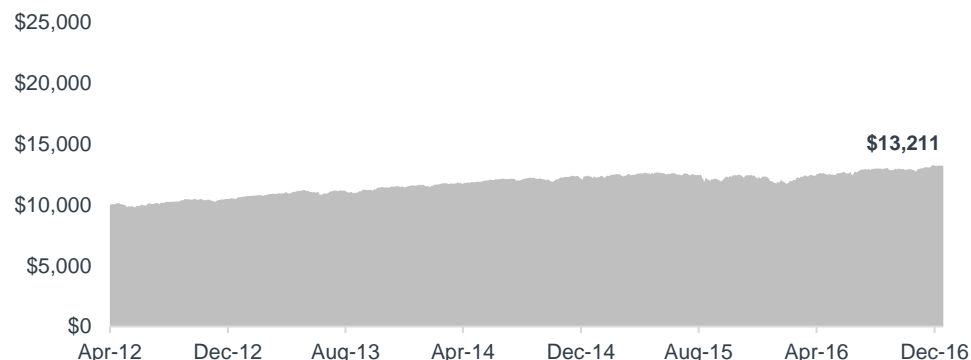
Capital Preservation, Income and Mild Growth: For the cautious investor with a low risk tolerance and/or a short time horizon. It is targeted toward the investor seeking investment stability and income while also providing for some longer term growth. While fluctuations in the values of portfolios are expected, the impact is muted relative to the more aggressive profiles.

**Target Strategic Asset Mix****Portfolio Facts as of 12.31.2016**

Weighted Expense Ratio	0.21%
Bond Duration	3.21
Average Credit Quality	BBB

**Ultra Conservative Portfolio Holdings**

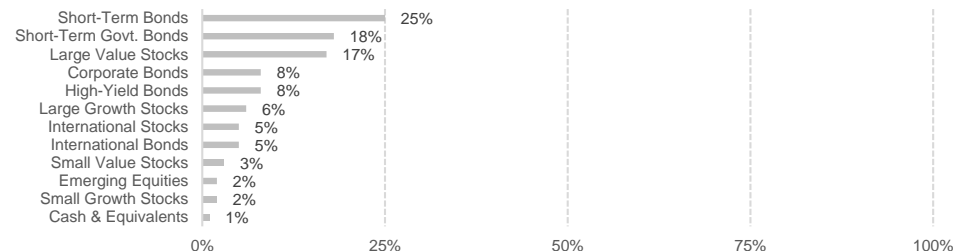
Fund Name	Ticker	Weight
Vanguard Short-Term Bond Index Admiral	VBIRX	25.00%
Vanguard Short-Term Govt Bd Idx Admiral	VSBSX	18.00%
Vanguard Value Index Admiral	VVIAX	17.00%
Commerce Bond	CFBNX	8.00%
Federated Instl High Yield Bond Instl	FIHBX	8.00%
Vanguard Growth Index Admiral	VIGAX	6.00%
Goldman Sachs Emerging Mkt Debt Instl	GSDIX	5.00%
Vanguard Total Intl Stock Index Admiral	VTIAX	5.00%
Vanguard Small-Cap Value Index Admiral	VSIAX	3.00%
Vanguard Small-Cap Growth Index Admiral	VSGAX	2.00%
Northern Emerging Markets Equity Index	NOEMX	2.00%
Fidelity Treasury Only Money Market Fund	FDLXX	1.00%

**Performance****Growth of a \$10,000 Investment (04/13/2012-12/31/2016)\*****Average Annualized Returns as of 12.31.2016**

Model/Benchmark	Q4 2016	1-Year	3-Year**	5-Year**
Probity Advisors Ultra Conservative	1.96%	7.73%	4.45%	
Ultra Conservative Index Benchmark	-1.23%	5.01%	2.57%	

**MPT/Risk & Return Statistics (3-Yr.)**

	Ultra Conservative Portfolio	Benchmark
Alpha	1.53	-
Beta	1.14	-
Sharpe Ratio	0.88	0.74
Standard Deviation	4.94	3.29

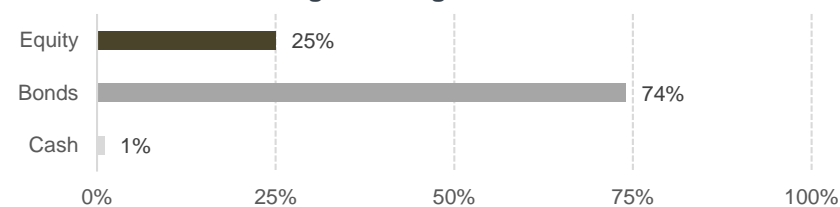
**Asset Allocation Distribution**

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\*\*Returns greater than 1-year are annualized.

**Model Name: Probity Advisors Retirement Income Portfolio****Model Description**

**Stable Income & Capital Preservation:** For the investor who seeks a stable stream of income over time with the potential for modest capital appreciation. The primary objective is to provide a diversified and stable source of income with lower volatility. While fluctuations in value may occur, such fluctuations should be minimal relative to more aggressive profiles.

**Target Strategic Asset Mix****Portfolio Facts as of 12.31.2016**

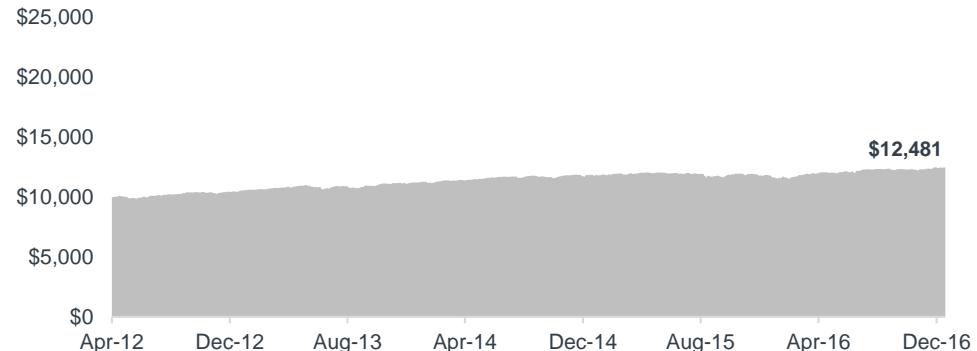
Weighted Expense Ratio	0.22%
Bond Duration	3.17
Average Credit Quality	BBB

**Retirement Income Portfolio Holdings**

Fund Name	Ticker	Weight
Vanguard Short-Term Bond Index Adm	VBIRX	29.00%
Vanguard Short-Term Govt Bd Idx Admiral	VSBSX	22.00%
Vanguard Value Index Admiral	VVIAX	13.00%
Commerce Bond	CFBNX	10.00%
Federated Instl High Yield Bond Instl	FIHBX	8.00%
Goldman Sachs Emerging Mkt Debt Instl	GSDIX	5.00%
Vanguard Growth Index Admiral	VIGAX	3.00%
Vanguard Small-Cap Value Index Admiral	VSIAX	3.00%
Vanguard Total Intl Stock Index Admiral	VTIAX	3.00%
Northern Emerging Markets Equity Index	NOEMX	2.00%
Vanguard Small-Cap Growth Index Admiral	VSGAX	1.00%
Fidelity Treasury Only Money Market Fund	FDLXX	1.00%

\*Performance returns calculated by Morningstar Advisors Work Station. The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate, thus an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than return data quoted herein. Performance reflects the inclusion of all mutual fund expenses, but does not reflect any fees or expenses related to recordkeeping, advisory services or any other cost associated with the administration of the retirement plan. These expenses are disclosed separately. The information, data, analyses and opinions contained herein are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and are not warranted to be correct, complete or accurate. Except as otherwise required by law or contracted for through an advisory agreement with the plan sponsor, Probity Advisors, Inc. shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, this information, data, analyses or opinions or their use. This report is intended for the sole use by the plan sponsor and is not intended for broader distribution to plan participants. Please read these documents carefully.

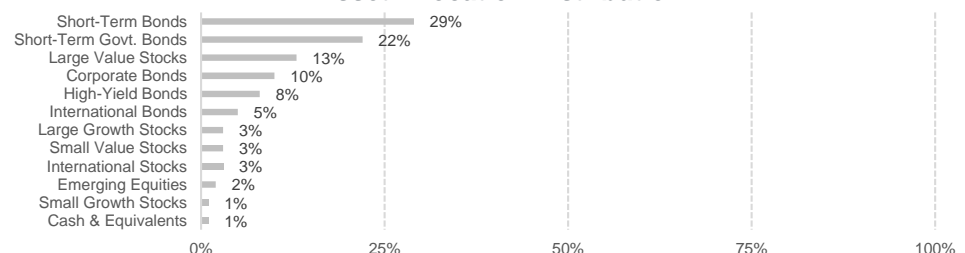
\*\*Returns greater than 1-year are annualized.

**Performance****Growth of a \$10,000 Investment (04/13/2012-12/31/2016)\*****Average Annualized Returns as of 12.31.2016**

Model/Benchmark	Q4 2016	1-Year	3-Year**	5-Year**
Probity Advisors Retirement Income	1.04%	5.49%	3.55%	
S&P Target Date Retirement Income Index	-0.76%	5.01%	3.20%	

**MPT/Risk & Return Statistics (3-Yr.)**

	Retirement Income Portfolio	Benchmark
Alpha	0.82	-
Beta	0.84	-
Sharpe Ratio	1.07	0.85
Standard Deviation	3.19	3.64

**Asset Allocation Distribution**

# Probity Advisors Q1 2017 Professionally Managed Models

Asset Class	Fund Name	Ticker	Retirement Income	Ultra Conservative	Conservative	Moderate Conservative	Moderate	Moderate Aggressive	Aggressive
Cash & Equivalents	Fidelity Treasury Only Money Market Fund	FDLXX	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Corporate Bonds	Commerce Bond	CFBNX	10.00%	8.00%	7.00%	7.00%	4.00%	0.00%	0.00%
Emerging Equities	Northern Emerging Markets Equity Index	NOEMX	2.00%	2.00%	2.00%	2.00%	4.00%	4.00%	5.00%
High Yield Bonds	Federated Instl High Yield Bond Instl	FIHBX	8.00%	8.00%	6.00%	6.00%	6.00%	6.00%	4.00%
International Bonds	Goldman Sachs Emerging Mkt Debt Instl	GSDIX	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	3.00%
International Stocks	Vanguard Total Intl Stock Index Admiral	VTIAX	3.00%	5.00%	8.00%	9.00%	9.00%	12.00%	17.00%
Short-Term Govt Bonds	Vanguard Short-Term Govt Bd Idx Admiral	VSBSX	22.00%	18.00%	8.00%	3.00%	0.00%	0.00%	0.00%
Large Growth Stocks	Vanguard Growth Index Adm	VIGAX	3.00%	6.00%	8.00%	13.00%	20.00%	24.00%	21.00%
Large Value Stocks	Vanguard Value Index Adm	VVIAX	13.00%	17.00%	23.00%	24.00%	24.00%	24.00%	21.00%
Small Growth Stocks	Vanguard Small-Cap Growth Index Adm	VSGAX	1.00%	2.00%	4.00%	4.00%	4.00%	5.00%	12.00%
Small Value Stocks	Vanguard Small-Cap Value Index Admiral	VSIAX	3.00%	3.00%	10.00%	11.00%	11.00%	14.00%	14.00%
Short-Term Bonds	Vanguard Short-Term Bond Index Adm	VBIRX	29.00%	25.00%	18.00%	15.00%	12.00%	5.00%	2.00%

## **Appendix A: Report of Independent Advisor**





## **Report of Independent Investment Advisor**

Probity Advisors, Inc. respectfully submits our Q4 2016 Quarterly Fund Review & Q1 2017 Investment Recommendations. In our capacity as Investment Advisor to the Investment Committee, we believe the recommended investment options sufficiently meet the investment objectives and guidelines as outlined in the Investment Policy Statement adopted by your Investment Committee. In conducting our review, we considered several factors, including, but not limited to:

1. Long-Term performance of the current Core Fund List offerings compared to their benchmarks and the relative performance of alternative offerings;
2. A comparison of the Core Fund List's management expenses relative to other suitable offerings;
3. The universe of funds available through your retirement plan custodian;
4. The comparative risk/return characteristics of the current Core Fund List offerings and alternatives;
5. The tenure of the current and alternative funds' management; and
6. Inclusion of both actively-managed and passively-indexed offerings on the Core Fund List.

Please note that as a precautionary measure, this quarter, the following funds from the Core Fund List remain on our Watch List:

Name	Asset Class	Comments
American Century Infl-Adj Bond Inv	Inflation-Protected Bond	American Century Infl-Adj Bond Inv has posted a strong track record, ranking in the top third of its peer group on a 3-year basis. We continue to monitor the fund's volatility and market sensitivity relative to its peer group.
PIMCO Long Duration Total Return	Long-Term Bond	PIMCO Long Duration Total Return Instl's performance has improved, with the fund now outperforming its benchmark on a three-year annualized basis while ranking in the top median of its peer group. We continue to monitor the fund's market sensitivity.

No funds were added to the Watch List this quarter. A fund’s inclusion on a Watch List is an indication that the fund has violated certain quantitative thresholds we establish for our review. It should be noted that these violations are often minor and they may fluctuate relative to their benchmark from quarter to quarter. While we believe the funds continue to be viable options for the Core Fund List, they have objectively violated various standards and, are therefore, receiving additional scrutiny. While a fund’s continued inclusion on the Watch List may ultimately result in a recommendation that we replace the fund with an alternative, a fund’s initial placement on the Watch List should not be interpreted in itself as a sell recommendation. Rather, the Watch List serves as an important communication device, intended to provide Plan Sponsors additional insight into our monitoring process.

During the quarter, the following funds were removed from your plan’s fund line-up:

Fund Name	Ticker	Asset Class
Templeton Global Bond Adv	TGBAX	World Bond
Janus Flexible Bond T	JAFIX	Intermediate-Term Bond
T. Rowe Price Short-Term Bond	PRWBX	Short-Term Bond

During the quarter, the following funds were added to your plan’s fund line-up:

Fund Name	Ticker	Asset Class
Goldman Sachs Emerging Mkt Debt Instl	GSDIX	Emerging Market Bond
Payden Emerging Markets Bond	PYEMX	Emerging Market Bond
JPMorgan Core Plus Bond R6	JCPUX	Intermediate-Term Bond

Funds were mapped according to the following table:

Probity Advisors Q4 2016 Funds			Map To	Probity Advisors Q1 2017 Funds		
Fund Name	Ticker	Asset Class		Fund Name	Ticker	Asset Class
Templeton Global Bond Adv	TGBAX	World Bond	➡	Goldman Sachs Emerging Mkt Debt Instl	GSDIX	Emerging Markets Bond
Janus Flexible Bond T	JAFIX	Intermediate-Term Bond	➡	Commerce Bond	CFBNX	Intermediate-Term Bond
T. Rowe Price Short-Term Bond	PRWBX	Short-Term Bond	➡	Vanguard Short-Term Bond Index Adm	VBIRX	Short-Term Bond

It is our opinion that the Core Fund List and Professionally Managed Models described in Sections 3 and 4 provide plan participants with substantial access to suitable investment categories and diversification. It is, therefore, our belief and recommendation that no additional changes are necessary to the investment alternatives in the plan at this time.

Probity Advisors

Fourth Quarter 2016

## **Appendix B: Corporate Resolution Adopting Probity Advisors, Inc. Investment Recommendations**

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Plan Name

Investment Committee Meeting Minutes: \_\_\_\_\_

Date

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Quarter, Year

The following members were present, constituting the entire Investment Committee:

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1. All the members of the Investment Committee being present, formal notice calling the meeting was dispensed with, and the meeting declared to be regularly called.
2. The following memorandum was then read and ordered to be inserted in these minutes:  
  
    "We, the members of the Investment Committee consent to this meeting being held at the above time and place and do waive notice and publication of this meeting, and consent to the transaction of such business, as may have come before it."
3. Minutes of the last regular meeting were read and, upon a motion duly made, seconded and carried, were adopted as read.
4. The following resolutions were offered, seconded and unanimously adopted:

IT WAS RESOLVED THAT:

The (Quarter, Year)\_\_\_\_\_ Investment Advisor retirement plan investment option recommendations as submitted to the Investment Committee are approved with no changes or amendments. A non-response to the Investment Advisor is satisfactory to implement the recommendations.

Minutes submitted by: (Name)\_\_\_\_\_, *duly elected and authorized to serve as Secretary of the Investment Committee*

Signature: \_\_\_\_\_  
*Dated*

This report has been compiled by Probity Advisors, Inc. This report is for informational and research purposes only. It is not intended to be construed as individually tailored advice to participants, as each individual has different investment goals, criteria, and risk tolerances. Probity Advisors relies on industry accepted, third-party data feeds and research services to generate the attached materials. As such, Probity Advisors cannot guarantee the accuracy, timeliness, or completeness of the information provided. Data is based on information collected from Morningstar, Fidelity Investments, Schwab Financial Center, and other industry accepted providers of financial information. It is updated as of the date shown in the section's title, and will vary over time. Although Probity Advisors may compile certain data and provide different classes of or options for investments based on general risk tolerances, objectives, and goals, you should consider your own investment objectives, risks, charges, and expenses of the Fund or investment model carefully before investing (as the information contained herein is not intended to be construed as individually tailored advice). This and other information is contained in the Fund's Prospectus, which can be obtained by contacting the respective mutual fund or the Plan's custodian. You should read the Prospectus carefully before choosing a Fund. The performance information contained herein represents past performance. Past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that your investment, when redeemed, may be worth more or less than the performance data quoted. Current performance may be higher or lower than the performance shown here. The most recent month-end performance information for the Fund may be obtained by contacting the mutual fund company. The total return information does not reflect the deduction of the Sales Load that may apply if the Fund shares were purchased outside of the Plan and if the Sales Load were reflected, performance would be lower. Performance does not include any plan level expenses such as any recordkeeping, third-party administration, advisory, education or other fees or expenses contracted for by the Plan Sponsor, which may be deducted from Plan assets and may reduce a participant's balance.



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PROBITY ADVISORS, INC.<sup>®</sup>

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