

# T. Rowe Price Retirement Target-Date Fund Series Report

## Morningstar Analyst Rating



### Key Features

Asset-Weighted Expense Ratio	0.69%
Active/Passive Exposure	88% Active
Open/Closed Architecture	100% Closed
Total Net Assets (\$M)	157,991

## Executive Summary

**Rating:**

### Process

**Positive**

Management's research suggests investors spend more money in retirement than they anticipate and risk outliving their savings. As a result, the funds' glide path has a higher equity allocation than many of its rivals', both before and during retirement. The majority of the underlying funds come recommended via their Morningstar Analyst Ratings.

### Price

**Neutral**

This series' funds aren't as cheap as peers that invest in passively managed options, but they are reasonably priced, especially compared with series that invest predominantly in active strategies.

### Performance

**Positive**

The series' three-, five-, and 10-year returns through December 2017 handily outpaced the majority of its peers'. But the funds' relatively heavy equity stake can lead to greater short-term volatility than many rivals. For example, the funds lost more than their average competitor during 2008's market slide and rebounded more sharply than most during 2009's rally.

### People

**Positive**

T. Rowe Price's asset-allocation committee makes the strategic decisions for the funds, while firm veteran Jerome Clark leads a group of associate managers who run the funds' day-to-day operations. Longtime team member Wyatt Lee joined the manager roster in August 2015. The underlying funds largely feature solid, proven managers.

### Parent

**Positive**

T. Rowe Price's corporate culture and regulatory history are impressive. The firm stresses long-term investing, high-quality securities, and sensible risk management. T. Rowe also does a good job describing its target-date funds and communicating with investors. Manager transitions are typically planned well in advance.

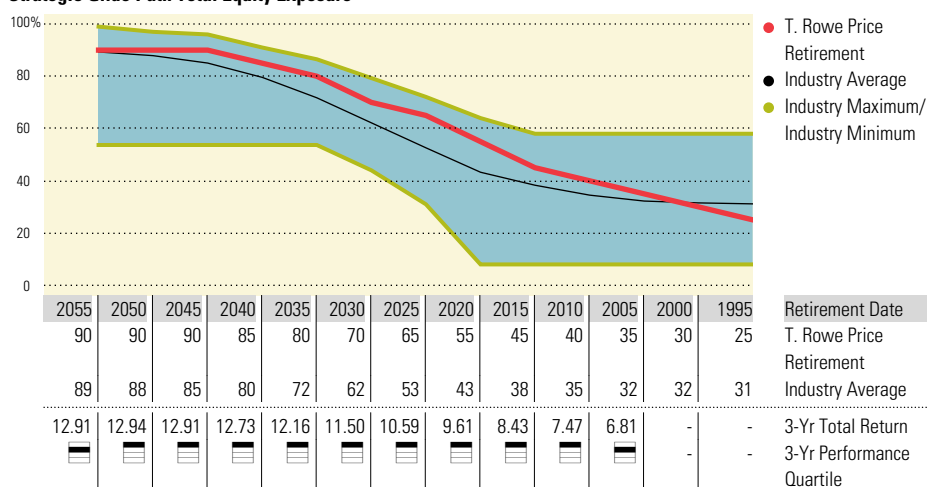
## Morningstar Analyst Rating

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

## Strategic Glide Path Total Equity Exposure



## Available Funds

2005 Fund	2020 Fund	2035 Fund	2050 Fund
2010 Fund	2025 Fund	2040 Fund	2055 Fund
2015 Fund	2030 Fund	2045 Fund	2060 Fund

## Morningstar Opinion

Strong underlying funds and a robust asset-allocation approach give the T. Rowe Price Retirement series a discernible edge, earning a Morningstar Analyst Rating of Silver.

Jerome Clark has served as the series' lead manager since its 2002 inception, and Wyatt Lee joined the roster in 2015. The firm has invested heavily in its target-date team, which now stands at 30 members. That's an impressive size, and the firm plans to continue growing the multi-asset group.

With the risk of outliving one's assets in mind, the group designed a glide path that looks more aggressive than the typical competitor's. Except for the early savings years and about 20 years after retirement, the series keeps a higher equity weighting than the industry norm throughout the glide path.

In late 2017, the series began making changes within the bond sleeve. It's reducing exposure to an intermediate-term fixed-income fund to 45% of the bond sleeve to make way for an unconstrained bond fund and a hedged international-bond fund, which will take 10% and 15% of bond assets, respectively. As lower-volatility strategies, those funds represent core bond allocations. The remaining 30% of the bond sleeve will strategically shift exposures to more-volatile sectors, including high-yield bonds, emerging-markets debt, bank loans, and long Treasuries as the investor ages. (Previously, this allocation held 10%

## Leo Acheson

02-02-2018

weightings in unhedged foreign bonds, emerging-markets debt, and high-yield bonds.) Once these changes are complete, about 35% to 60% of each target-date fund's bond sleeve will be altered, depending on the fund year. T. Rowe Price conducted in-depth analysis to support these changes and believes they will lower total portfolio risk without impacting returns.

Following the bond sleeve changes, the series will hold 21 unique underlying funds. Overall, it's a compelling lineup. We rate 15 of those, and 14 are Morningstar Medalists, meaning we expect them to outperform peers going forward.

The bond sleeve changes didn't stem from performance concerns. During the last 10 years, all of the series' funds outpaced at least 95% of peers. An equity-heavy glide path has helped. Attribution from T. Rowe Price indicates that it has also added significant value from security selection, and tactical allocation had a modestly positive effect.

Strong returns have attracted investors, and the team now manages more than \$225 billion in target-date assets. Four of the series' five small- and mid-cap funds are closed to new investors, so continued growth could create capacity constraints. The series has the option to invest in small- and mid-cap index funds, but access to top-tier active funds has been a key strength, so we will keep an eye on changes in this area.

# T. Rowe Price Retirement Target-Date Fund Series Report

## Process: Approach

Rating: Positive

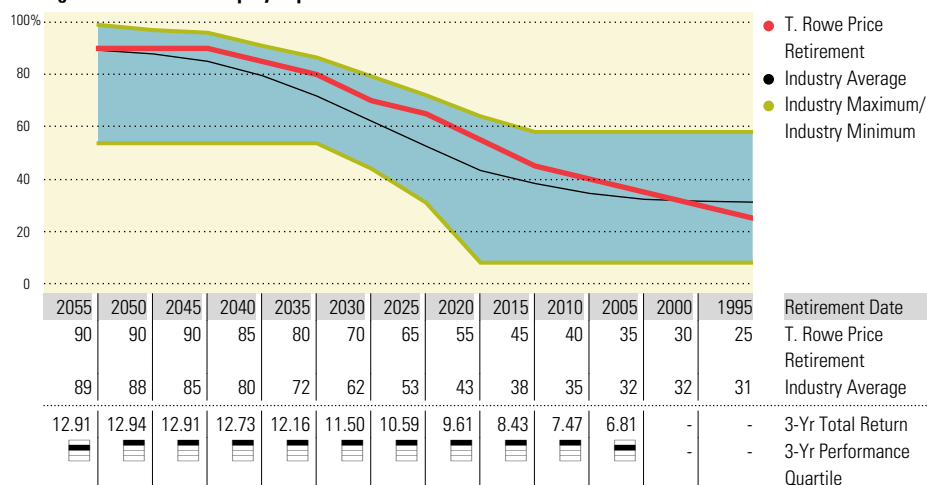
In conducting extensive in-house studies, T. Rowe Price found that 401(k) plan participants' average savings rate was less than half the recommended rate, while the average withdrawal rate was more than twice the recommended rate. The firm concluded that retirees' biggest risk is outliving their savings. As a result, it emphasizes sizable exposure to stocks to boost asset growth.

The series has a relatively aggressive asset-allocation glide path. It begins with a 90% equity/10% fixed-income portfolio when investors are the furthest from retirement. That split roughly matches the typical peer 40 years from retirement, but the series' funds maintain a higher equity stake than most rivals both leading up to and during retirement. The funds slowly transition from stocks to bonds at the end of each quarter until they reach the target allocation of 55% equity at retirement. The shifting doesn't stop at retirement, because T. Rowe Price doesn't view the retirement year as a distinct year in the course of an individual's retirement planning. Even after investors arrive at the 55% equity/45% fixed-income allocation at the target retirement date, the quarterly shifts continue for 30 more years until the equity stake plateaus at 20%.

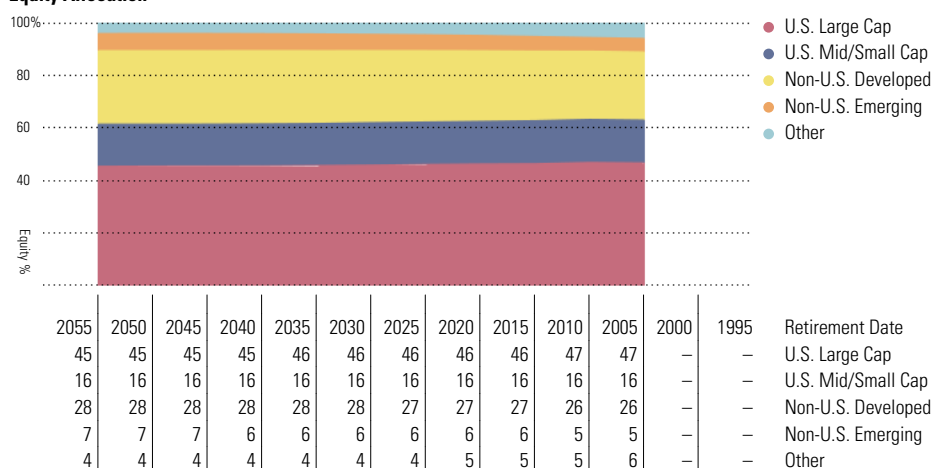
Management has modest leeway to adjust the funds' stock/bond split (up to 5 percentage points) and make sub-asset-class tilts, such as growth versus value stocks or developed-markets versus emerging-markets stocks. A committee of veteran T. Rowe Price managers uses primarily qualitative inputs to determine which asset classes appear to have the most favorable return prospects for the next six to 18 months. The group's tactical tilts have added value over the long haul.

The asset-allocation approach has remained consistent and is supported by sound reasoning, earning the series a Positive Process rating. However, the team could enhance its method for selecting and overseeing underlying managers. The group picked underlying funds based on their mandates and won't swap out strategies unless their approaches or styles change. In fact, the series has not fired a manager since its 2002 inception. Instead, it relies on various steering committees at the firm to provide oversight.

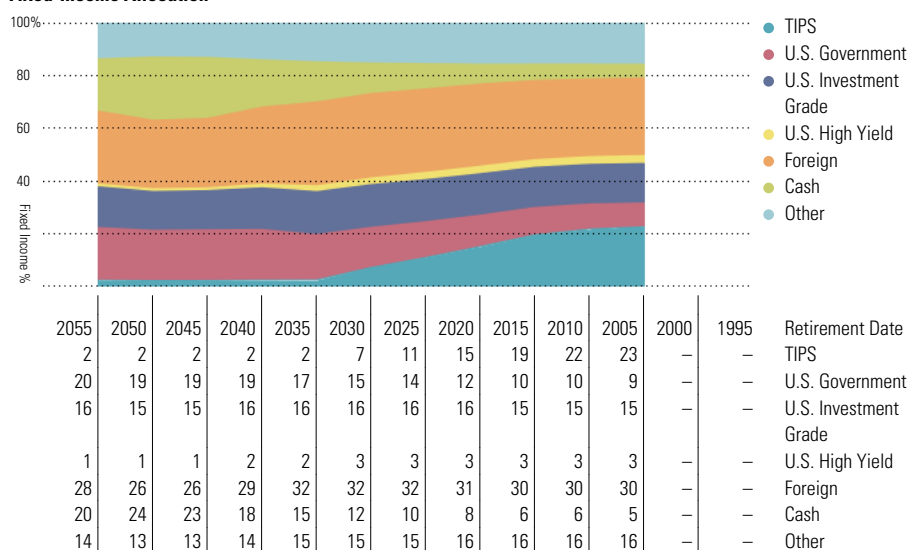
### Strategic Glide Path Total Equity Exposure



### Equity Allocation



### Fixed-Income Allocation



# T. Rowe Price Retirement Target-Date Fund Series Report

## Process: Portfolio

This series and its underlying funds benefit from T. Rowe Price's strong investment culture. Long manager tenures and an emphasis on high-quality securities are common. Following recent fund additions, the series' total number of underlying funds stands at 21, excluding a money market fund. We rate 15 of those funds, and 14 receive medals, including nine Bronze-rated funds, two Silver-rated funds, and three Gold-rated funds. We upgraded two of those funds during the past year, with T. Rowe Price International Stock increasing to Bronze and T. Rowe Price Emerging Markets Stock increasing to Silver. Overall, the lineup is strong.

T. Rowe Price revisited the series' bond exposure and began to make changes in late 2017. It added four relatively new fixed-income funds to the underlying mix. As part of the change, the team has reduced exposure to an intermediate-term bond fund to make way for a nontraditional bond fund and swapped an un-

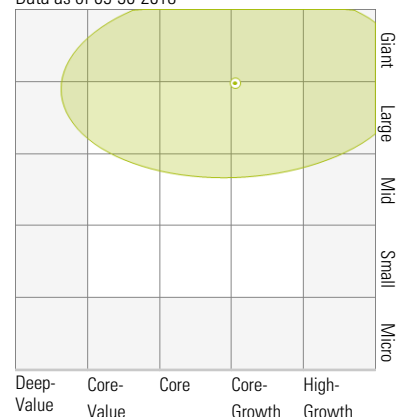
**Rating: Positive**

hedged international-bond fund for a one that hedges currency exposure. The former fund's inception was in January 2015, and the latter launched in late 2017. Ideally, these funds would have longer track records before joining the series. Meanwhile, the series' exposure to high-yield bonds, emerging-markets debt, bank loans, and long-term Treasuries will vary as the investor ages. (Bank-loan and long-term Treasury funds also represent new fund additions). T. Rowe Price expects these changes to lower volatility and have a neutral effect on returns over the long haul. Indeed, robust research backs these changes.

Over the coming year, the team will take a close look at the firm's equity fund offerings to see if there's anything worth adding to the series. While many of the firm's funds leverage research from a common analyst pool, there's a large number of unique funds to choose from.

### Series Holding-based Style Map - Equity

Data as of 09-30-2018



■ Zone represents 75% of series' largest domestic stock holdings  
● Fund centroid represents weighted average of series' domestic stock holdings

### Top Investments as of 09-30-2018

		% of Assets	3-Yr Return %	% Rank in Cat	3-Yr Std Dev	5-Yr Return %	% Rank in Cat	Analyst Rating	Star Rating
T. Rowe Price Equity Index 500	Large Blend	12.86	17.04	19	9.17	13.67	17	Bronze	★★★★
T. Rowe Price New Income	Intermediate-Term Bond	12.37	1.47	53	2.56	2.21	45	Neutral	★★★
T. Rowe Price Growth Stock	Large Growth	10.75	19.27	32	11.71	16.11	22	Bronze	★★★★
T. Rowe Price Value	Large Value	10.50	12.85	65	9.15	10.46	46	Bronze	★★★★
T. Rowe Price Overseas Stock	Foreign Large Blend	6.29	9.51	33	9.93	5.01	19	Silver	★★★★
T. Rowe Price International Value Eq	Foreign Large Value	6.12	5.69	90	9.87	2.53	71	Neutral	★★★
T. Rowe Price International Stock	Foreign Large Growth	5.53	10.19	44	10.39	5.72	43	Bronze	★★★
T. Rowe Price Ltd Dur Infl Focus Bd	Inflation-Protected Bond	4.19	0.93	95	1.43	0.28	89	—	★
T. Rowe Price Intl Bd (USD Hdgd)	World Bond	3.63	—	—	—	—	—	—	—
T. Rowe Price US Treasury Long-Term	Long Government	3.33	0.38	64	8.90	3.74	70	—	★★★
Total # Holdings									22
% Portfolio in Top 10 Holdings									75.56
Overall Average Morningstar Rating									3.58

## Price

**Rating: Neutral**

In 2015, T. Rowe Price rolled out a new set of funds, the T. Rowe Price Retirement I series, which mimic the legacy T. Rowe Price Retirement funds but at a lower cost. The I series' fees fell by 5 to 7 basis points during 2017. Its funds now cost between 0.42% and 0.60% and sport a median expense ratio of 0.57%. That's a fair deal compared with series that invest mostly in active underlying funds, though it's not especially compelling, considering that about 14% of series-wide assets reside in an S&P 500

fund. As a result, the series receives a Neutral Price rating.

The no-load share classes of the T. Rowe Price Retirement funds, which hold the bulk of investor assets, also carry reasonable price tags for primarily actively managed target-date funds, with fees ranging from 0.58% to 0.74%. Meanwhile, the Retirement and Advisor share classes look relatively unattractive versus similarly sold peers.

### Asset-Weighted Cost vs. Industry Average

T. Rowe Price Retirement	0.69%
Industry Average	0.66%

Avg Cost Per Share Class	Exp Ratio (%)	Net Assets (\$M)
No Load	0.66%	106,403
Inst	0.52%	27,541
Adv	0.91%	13,962
Retirement	1.16%	10,084
	—	—

# T. Rowe Price Retirement Target-Date Fund Series Report

## Performance

**Rating: Positive**

The series' above-average equity allocation shapes its performance. In the immediate years leading up to retirement, it keeps roughly 10 percentage points more in equities than the industry norm and remains above-average throughout most of retirement. Thus, the strength of the equity market can make a big difference in the series' performance pattern. For instance, during 2008's financial crisis, nearly all of the series' funds trailed their peer group averages.

The bold equity allocation has paid off as the market has risen since 2008: The series' funds averaged a top-quartile ranking in their peer groups in six of the past

nine calendar years. Even during 2011's tumultuous market, the majority of the funds in the series still surpassed their typical peer. That consistent record burnishes the series' long-term results: Among the funds with 10-year records through December 2017, every fund ranks at or near the top of its respective peer group.

The series' above-average equity allocation has resulted in above-average volatility, as measured by standard deviation. But the funds' gains have more than compensated for the bumpy ride. Most of the funds' risk-adjusted returns in the trailing five- and 10-year

periods rank in the top quartile of their categories, helping the series earn a Positive Performance rating.

A solid cast of underlying funds further aids the series' overall performance. The underlying funds show a similar level of consistency in their calendar-year rankings as the series' target-date funds, with the majority outperforming their typical peer each year. Eleven of the 19 underlying funds in the series with Morningstar Ratings earn 4 or 5 stars, reflecting their strong long-term, risk-adjusted results.

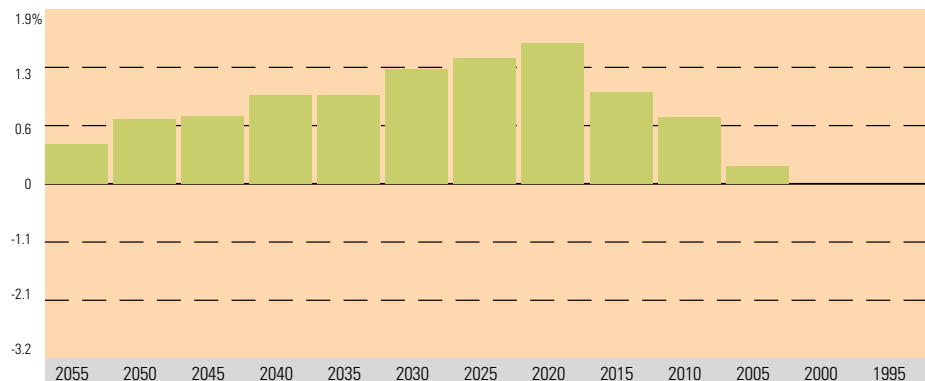
### Target-Date Fund Performance as of 09-30-2018

	YTD Return %	YTD % Rank in Cat	2017 Return %	2016 Return %	3-Yr Return %	3-Yr % Rank in Cat	3-Yr Std Dev	5-Yr Return %	5-Yr % Rank in Cat	Star Rating
T. Rowe Price Retirement 2005	1.4	33	10.7	6.7	6.8	30	4.1	5.2	29	★★★★
T. Rowe Price Retirement 2010	1.8	17	11.7	7.1	7.5	3	4.5	5.8	6	★★★★★
T. Rowe Price Retirement 2015	2.1	25	13.3	7.3	8.4	5	5.1	6.5	2	★★★★★
T. Rowe Price Retirement 2020	2.6	13	15.7	7.4	9.6	1	5.9	7.3	1	★★★★★
T. Rowe Price Retirement 2025	3.0	20	17.7	7.5	10.6	1	6.6	8.0	1	★★★★★
T. Rowe Price Retirement 2030	3.4	27	19.4	7.7	11.5	6	7.2	8.6	2	★★★★★
T. Rowe Price Retirement 2035	3.7	44	20.9	7.6	12.2	14	7.7	9.1	8	★★★★★
T. Rowe Price Retirement 2040	4.0	45	22.0	7.6	12.7	17	8.2	9.4	5	★★★★★
T. Rowe Price Retirement 2045	4.1	54	22.4	7.7	12.9	20	8.2	9.5	8	★★★★★
T. Rowe Price Retirement 2050	4.1	52	22.4	7.7	12.9	21	8.3	9.5	8	★★★★★
T. Rowe Price Retirement 2055	4.1	61	22.3	7.7	12.9	28	8.3	9.5	11	★★★★
T. Rowe Price Retirement 2060	4.1	66	22.3	7.6	12.9	37	8.3	—	—	★★★

For peer comparisons, 1 = highest return or lowest risk, 100 = lowest return or highest risk.

### Target Date Funds Risk-Adjusted Returns +/- Category Average

Data as of 09-30-2018

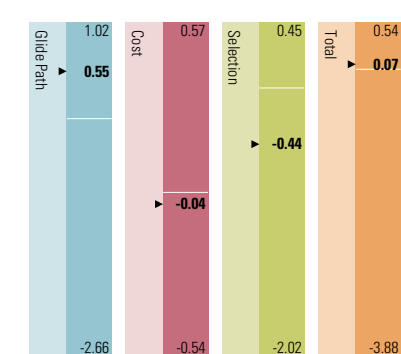


- Risk-adjusted return exceeding category average
- Risk-adjusted return trailing category average
- Category Average

Data is based on longest available performance history: three or five years. For series with more than 18 months of history, but less than three years of history, the risk-adjusted return of the appropriate Morningstar Lifetime Moderate Index is used to create a 3-year history.

### Attribution Analysis

Trailing 3-Year Returns as of 09-30-2018



T. Rowe Price Retirement

● Glide Path	0.55
● Cost	-0.04
● Selection	-0.44
● Total	0.07

# T. Rowe Price Retirement Target-Date Fund Series Report

## People

The experience and tenure of T. Rowe Price's asset-allocation group along with the strength of the underlying funds lead to a Positive People rating. Jerome Clark, a firm veteran, has managed the series since its 2002 inception. Wyatt Lee, a longtime associate to Clark, officially joined the manager roster in August 2015. Kim DeDominicis assists Clark and Lee.

The target-date group has grown significantly in recent years. It currently stands at more than 30 members, including 10 people who joined within the last three years. The broader asset-allocation team, which includes groups that focus on areas such as alternatives or customized solutions, has more than 50 investment professionals. That makes this team one of the larger asset-allocation groups. Its size reflects a strong commitment to the asset-allocation space.

T. Rowe Price's asset-allocation committee, which guides the series' tactical tilts, has seen changes but remains solid. Richard Whitney, who formerly headed up asset allocation at the firm, retired at the end of

**Rating:** Positive

2016. Charles Shriver and David Giroux replaced Whitney as co-chairs of the committee. In October 2017, the committee added three new members, rounding it out at 14 people. The group's membership includes leaders from the firm's equity and fixed-income funds. Sebastien Page, a PIMCO transplant, replaced Whitney as the sole head of asset-allocation strategies and broadly oversees the group.

The underlying fund managers used in the series are also a sound bunch. The 8.7-year average manager tenure of the series' underlying funds lands well ahead of the target-date and mutual fund industry average. T. Rowe Price has a history of handling manager changes for the underlying funds well, with a long transition period being the norm.

Clark and Lee each have more than \$1 million invested in T. Rowe Price's similarly managed target-date collective trusts, according to the firm's Statement of Additional Information.

### Series Management

Manager	Start Date
Jerome Clark	09-2002
Wyatt Lee	08-2015

Average Tenure	9.7 years
Longest Tenure	16.1 years
Target-Date Industry Average Tenure	4.8 years

### Underlying Funds' Management

Average Tenure	9.0 years
Longest Tenure	26.3 years
Mutual Fund Industry Average Tenure	7.5 years

## Parent

T. Rowe Price remains best-in-class, earning a Positive Parent rating. The firm's success is rooted in its fundamental approach to active management and deep analyst bench. Investors benefit from managers' generally long tenures at the firm, well-planned manager transitions, reasonable costs, and attention to capacity. Many top executives, including CEO Bill Stromberg, rose from the analyst ranks, which helps keep a focus on investors at the forefront, even as the firm expands its distribution footprint outside the United States and bolsters its technology resources. The investment side has received resources, too. The multi-asset team has grown in size, reflecting its importance to the firm's future beyond the esteemed target-date lineup. Despite headwinds facing active manag-

**Rating:** Positive

ers, T. Rowe remains a powerhouse within U.S. and international equities. Fixed income is an area to watch. Several long-tenured managers have recently retired or will do so soon. Sound succession planning has smoothed the transitions, but the firm needs to ensure the bench remains deep. While high-yield and municipal bonds remain bright spots, the fixed-income team has not yet shown sustainable success in inching beyond its conservative bottom-up approach at some core strategies. Plus, the firm's foray into alternatives is unproven. Overall, though, T. Rowe Price retains the sensible and investor-focused culture that has long driven its success.

### Fund Family Data

Average Overall Star Rating	★★★★
% of Assets w/Star Rating	93.7%

### Assets (listed in USD \$Mil)

Total Assets Under Mgt	882,004
------------------------	---------

Average Manager Tenure	8.5 years
5-year Manager Retention Rate (%)	93.1%
Manager Investment Over 1 Million USD (% Assets)	40.0%

Average Fee Level (%)	42.0%
-----------------------	-------

3-year Firm Success Ratio (%)	70.0%
-------------------------------	-------



# Morningstar Target-Date Fund Series Report Disclosure

The Morningstar Target-Date Fund Series Report ("Report") is for informational purposes, intended for financial professionals and/or qualified investors ("Users") and should not be the sole piece of information used by such Users or their clients in making an investment decision.

The analysis within this Report is prepared by the person(s) noted in their capacity as an analyst for Morningstar Research Services LLC, a subsidiary of Morningstar, Inc. The opinions expressed within the Report are given in good faith, are as of the date of the Report and are subject to change without notice. Neither the analyst nor Morningstar Research Services commits themselves in advance to whether and in which intervals updates to the Report are expected to be made. The written analysis and Morningstar Analyst Rating within this Report are statements of opinions; they are not statements of fact.

Morningstar Research Services believes its analysts make a reasonable effort to carefully research information contained in their analyses. The information on which the analysis is based has been obtained from sources that are believed to be reliable such as, for example, the fund's prospectus and shareholder reports (or their equivalents), target-date series company website, interviews with target-date series company personnel, and relevant and appropriate press sources as well as data, statistics and information within Morningstar's own database. Morningstar does not perform an audit or seek independent verification of any of the data, statistics, and information it receives.

Unless otherwise provided in a separate agreement, Users accessing this Report may only use it in the country in which the Morningstar distributor is based. Unless stated otherwise, the original distributor of the Report is Morningstar Inc., a U.S.A. domiciled financial institution.

This Report is for informational purposes only and has no regard to the specific investment objectives, financial situation or particular needs of any specific recipient. This publication is intended to provide information to assist institutional investors in making their own investment decisions, not to provide investment advice to any specific investor. Therefore, investments discussed and recommendations made herein may not be suitable for all investors; Users and User clients must exercise their own independent judgment as to the suitability of such investments and recommendations in the light of their own investment objectives, experience, taxation status and financial position.

The information, data, analyses and opinions presented herein are not warranted to be accurate, correct, complete or timely. Unless otherwise provided in a separate agreement, Morningstar makes no representation that the Report contents meet all of the presentation and/or disclosure standards applicable in the jurisdiction the recipient is located.

Except as otherwise required by law or provided for in a separate agreement, the analyst, Morningstar and its officers, directors and employees will not be responsible or liable for any trading decisions, damages or other losses resulting from, or related to, the information, data, analyses or opinions within the Report. Morningstar encourages Users and User clients to read all relevant issue documents (e.g., prospectus) pertaining to the security concerned, including without limitation, information relevant to its investment objectives, risks, and costs before making an investment decision and when deemed necessary, to seek the advice of a legal, tax, and/or accounting professional.

The Report and its contents are not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or that would subject Morningstar or its affiliates to any registration or licensing requirements in such jurisdiction.

Where this Report is made available in a language other than English and in the case of inconsistencies between the English and translated versions of the Report, the English version will control and supersede any ambiguities associated with any part or section of a Report that has been issued in a foreign language. Neither the analyst, Morningstar, or Morningstar affiliates guarantee the accuracy of the translations.

This Report may be distributed in certain localities, countries and/or jurisdictions ("Territories") by independent third parties or independent intermediaries ("Distributors"). Such Distributors are not acting as agents or representatives of the analyst or Morningstar. In Territories where a Distributor distributes our Report, the Distributor, and not the analyst or Morningstar, is solely responsible for complying with all applicable regulations, laws, rules, circulars, codes and guidelines established by local and/or regional regulatory bodies, including laws in connection with the distribution third-party research reports.

For a list of funds that Morningstar Research Services currently covers and provides written analysis on please contact your local Morningstar office. For information on the historical Morningstar Analyst Rating for this series or any series Morningstar Research Services covers, please contact your local Morningstar office.

Please note that investments in securities (including target-date series funds) are subject to market and other risks and there is no assurance or guarantee that the intended investment objectives will be achieved. Past performance of a security may or may not be sustained in the future and is no indication of future performance. A security investment return and an investor's principal value will fluctuate so that, when redeemed, an investor's shares may be worth more or less than their original cost. A security's current investment performance may be lower or higher than the investment performance noted within the Report. Morningstar's Risk, Return and Star Ratings serve as useful data points with respect to evaluating a target-date fund series' risk profile.

A current yield percentage is not a reflection of the actual return an investor will receive in all cases as market prices for securities are constantly changing due to such things as market factors. Where a security is denominated in a different currency than the currency of the User or User's clients, changes in rates of exchange may have an adverse effect on the value, price or income of or from that investment.

Indexes noted within the Report are unmanaged, their returns do not include payment of any sales charges or fees an investor would pay to purchase securities, and cannot be invested in directly.

In certain jurisdictions, the Report contents, except for the Morningstar Analyst Rating and key analysis/opinions, may be shared with the target-date series company prior to publication. In the unlikely event that Morningstar Research Services would change its analysis/opinions and/or the Morningstar Analyst Rating based on feedback as result of such review, the Report would disclose such a fact.

## Conflicts of Interest:

- Analysts may own (actual or beneficial) interests in the financial products that are the subject of the Report. No material interests are held by Morningstar, the analyst or the analyst's immediate family in the financial products that are the subject of the Report.\*

- Analysts' compensation is derived from Morningstar's overall earnings and consists of salary, bonus and in some cases restricted stock. Analysts' receive no compensation or material benefits from product issuers or third parties in connection with the Report.#

- Morningstar Research Services does not receive commissions for providing research and does not charge financial product issuers to be rated.

- Analysts may not pursue business and employment opportunities outside Morningstar Research Services within the investment industry (including but not limited to, working as a financial planner, an investment advisor or investment advisor representative, a broker-dealer or broker-dealer agent, a financial writer, reporter, or analyst).

- Morningstar may provide the product issuer or its related entities with services or products for a fee and on an arms' length basis including software products and licenses, research and consulting services, data services, licenses to republish our ratings and research in their promotional material, event sponsorship and website advertising.

- Morningstar affiliates (i.e., its investment management group) may have arrangements with a fund company's affiliate to provide investment consulting advice, some of which an analyst may issue an investment research reports on one or more of the fund company's target-date funds. However, analysts do not have authority over Morningstar's investment management group's business arrangements nor allow employees from the investment management group to participate or influence the analysis or opinion prepared by them.

- Morningstar, Inc. is a publically traded company (Ticker Symbol: MORN) and thus a fund which is the subject of this Report may own more than 5% of Morningstar, Inc.'s total outstanding shares. Please access Morningstar, Inc.'s proxy statement, "Security Ownership of Certain Beneficial Owners and Management" section <http://investorrelations.morningstar.com/sec.cfm?doctype=Proxy&year=&x=12> A target-date series' holding of Morningstar stock has no bearing on and is not a requirement for target-date funds Morningstar determines to cover.

Analysts do not have any other material conflicts of interest at the time of publication. Users wishing to obtain further information should contact their local Morningstar office or refer to <https://corporate.morningstar.com/us/asp/subject.aspx?xmlfile=540.xml>

## The Morningstar Analyst Rating™ for Target-Date Fund Series

The Morningstar Analyst Rating™ for Target-Date Fund Series is a forward-looking analysis of a target-date fund series. The Analyst Rating does not express a view on a given asset class or peer group; rather, it seeks to evaluate each target-date fund series within the context of its objective, an appropriate benchmark, and peer group.

The date shown next to the Morningstar Analyst Rating is the date on which the Morningstar Manager Research Analyst assigned or reaffirmed the current rating for the target-date fund series based on the analyst's latest review and research report for the target-date fund series.

## The Five (5) Pillars

Morningstar has identified five key areas that we believe are crucial to predicting the future success of funds: People, Parent, Process, Performance, and Price. Each pillar is evaluated when assessing a fund as well as the interaction between the pillars, which we believe is crucial to understanding a fund's overall merit.

## People

The overall quality of a target-date fund series' investment team is a significant key to its ability to deliver superior performance relative to its benchmark and/or peers. Evaluating a target-date fund series' investment team requires that analysts assess several relevant items including how key decisions are made.

## Parent

We believe the parent organization is of utmost importance in evaluating a target-date fund series. The target-date fund series' management set the tone for key elements of our evaluation, including capacity management, risk management, recruitment and retention of talent, and incentive pay. Beyond these operational areas, we prefer firms that have a culture of stewardship and put investors first to those that are too heavily weighted to salesmanship.

## Process

We look for target-date fund series with a performance objective and investment process (for both security selection and portfolio construction) that is sensible, clearly defined, and repeatable. In addition, the portfolio should be constructed in a manner that is consistent with the investment process and performance objective.

## Performance

We do not believe past performance is necessarily predictive of future results, and this factor accordingly receives a relatively small weighting in our evaluation process. In particular, we strive not to anchor on short-term performance. However, we do believe that the evaluation of long-term return and risk patterns is vital to determining if a target-date fund series is delivering to our expectations.

## Price

To reflect actual investor experience, price is evaluated within the context of the relevant market or cross-border region—for example, the United States, Australia, Canada, or Europe. In recognition of differences in scale and distribution costs in various markets, the level at which a target-date fund series is penalized for high fees or rewarded for low fees can vary with region. In Europe, for example, target-date fund series are penalized if they land in the most expensive quintile of their Morningstar category and are rewarded if they land in the cheapest quintile. The assessment is made using prospectus expense ratios, but in the case of target-date fund series with performance fees, expenses are evaluated excluding any performance fees and then the structure of the performance fee is evaluated separately.

## Morningstar Analyst Ratings

Morningstar Analyst Ratings are assigned on a five-tier scale running from Gold to Negative. The top three ratings, Gold, Silver, and Bronze, all indicate that our analysts think highly of a target-date fund series; the difference between them corresponds to differences in the level of analyst conviction in a target-date fund series' ability to outperform its benchmark and peers through time, within the context of the level of risk taken.

### Gold

Represents target-date fund series that our analyst has the highest-conviction in for that given investment mandate. By giving a target-date fund series a Gold rating, we are expressing an expectation that it will outperform its relevant performance benchmark and/or peer group within the context of the level of risk taken over the long term (defined as a full market cycle or at least five years). To earn a Gold rating, a target-date fund series must distinguish itself across the five pillars that are the basis for our analysis.

### Silver

Represents target-date fund series our analyst has high-conviction in, but not in all of the five pillars. With those fundamental strengths, we expect these target-date fund series will outperform their relevant performance benchmark and/or peer group within the context of the level of risk taken over the long term (defined as a full market cycle or at least five years).

### Bronze

Represents target-date fund series that have advantages that clearly outweigh any disadvantages across the pillars, giving analyst the conviction to award them a positive rating. We expect these target-date fund series to beat their relevant performance benchmark and/or peer group within the context of the level of risk taken over the long term (defined as a full market cycle or at least five years).

### Neutral

Represents target-date fund series in which our analysts don't have a strong positive or negative conviction. In our judgment, these target-date fund series are not likely to deliver standout returns, but they aren't likely to seriously underperform their relevant performance benchmark and/or peer group either.

### Negative

Represents target-date fund series that possess at least one flaw that our analysts believe is likely to significantly hamper future performance, such as high fees or an unstable management team. Because of these faults, we believe these target-date fund series are inferior to most competitors and will likely underperform their relevant performance benchmark and/or peer group, within the context of the level of risk taken, over a full market cycle.

Morningstar Research Services may also use two other designations in place of a rating:

### Under Review

This designation means that a change that occurred with the target-date fund series or at the target-date fund series company requires further review to determine the impact on the rating.

### Not Ratable

This designation is used only where we are providing a Report on a new strategy or on a strategy where there are no relevant comparators, but where investors require information as to suitability.

For more information about our Analyst Rating methodology please go to <http://corporate1.morningstar.com/ResearchLibrary/>

## Morningstar Star Rating

The Morningstar Star Rating is a proprietary data point that is quantitatively driven. Target-date fund series are rated from one to five stars based on how well the target-date fund series performed (after adjusting for risk and accounting for sales charges) in comparison to similar target-date fund series. Within each Morningstar Category, the top 10% of target-date fund series receive 5 stars and the bottom 10% receives 1 star. target-date fund series are rated for up to three time periods—three-, five-, and ten-years—and these ratings are combined to produce an overall star rating, which is noted within the Report. target-date fund series with less than three years of history are not rated. Star Ratings are based entirely on a mathematical evaluation of past performance. Star Ratings are in no way to be considered a buy or sell signal nor should be viewed as a statement of fact.

matial evaluation of past performance. Star Ratings are in no way to be considered a buy or sell signal nor should be viewed as a statement of fact.

## Equity-Related Data Points

The Report lists the top ten holdings in the target-date fund series as of the date noted. For each underlying holding, a series of data points is provided including, where applicable, that security's Economic Moat rating as of the date noted.

## Economic Moat

The concept of an economic moat plays a vital role in our equity analyst's qualitative assessment of a firm's long-term investment potential, but also in the actual calculation of its fair value estimate. An economic moat is a structural feature that allows a firm to sustain excess profits over a long period of time. We define economic profits as returns on invested capital (or ROIC) over and above our estimate of a firm's cost of capital, or weighted average cost of capital (or WACC). Without a moat, profits are more susceptible to competition. We have identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

Companies with a *narrow moat* are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. *Wide-moat* companies are those in which we have very high confidence that excess returns will remain for 10 years, with excess returns more likely than not to remain for at least 20 years. The longer a firm generates economic profits, the higher its intrinsic value. We believe low-quality, *no-moat* companies will see their normalized returns gravitate toward the firm's cost of capital more quickly than companies with moats.

For more information about methodology in analysing stocks, please go to <http://global.morningstar.com/equitydisclosures>.

**For Recipients in Australia:** This Report has been issued and distributed in Australia by Morningstar Australasia Pty Ltd (ABN: 95 090 665 544; ASFL: 240892). Morningstar Australasia Pty Ltd is the provider of the general advice ('the Service') and takes responsibility for the production of this Report. The Service is provided through the research of investment products. To the extent the Report contains general advice it has been prepared without reference to an investor's objectives, financial situation or needs. Investors should consider the advice in light of these matters and, if applicable, the relevant Product Disclosure Statement before making any decision to invest. Refer to our Financial Services Guide (FSG) for more information at [www.morningstar.com.au/fsg.pdf](http://www.morningstar.com.au/fsg.pdf).

**For Recipients in Hong Kong:** The Report is distributed by Morningstar Investment Management Asia Limited, which is regulated by the Hong Kong Securities and Futures Commission to provide services to professional investors only. Neither Morningstar Investment Management Asia Limited, nor its representatives, are acting or will be deemed to be acting as an investment advisor to any recipients of this information unless expressly agreed to by Morningstar Investment Management Asia Limited. For enquiries regarding this research, please contact a Morningstar Investment Management Asia Limited Licensed Representative at <http://global.morningstar.com/equitydisclosures>.

**For Recipients in India:** This Investment Research is issued by Morningstar Investment Adviser India Private Limited. Morningstar Investment Adviser India Private Limited is registered with the Securities and Exchange Board of India (Registration number INA000001357) and provides investment advice and research. Morningstar Investment Adviser India Private Limited has not been the subject of any disciplinary action by SEBI or any other legal/regulatory body. Morningstar Investment Adviser India Private Limited is a wholly owned subsidiary of Morningstar Investment Management LLC. In India, Morningstar Investment Adviser India Private Limited has one associate, Morningstar India Private Limited, which provides data related services, financial data analysis and software development.

The Analyst has not served as an officer, director or employee of the target-date fund series company within the last 12 months, nor has it or its associates engaged in market making activity for the target-date fund series company.

\*The Conflicts of Interest disclosure above also applies to relatives and associates of Manager Research Analysts in India

#The Conflicts of Interest disclosure above also applies to associates of Manager Research Analysts in India. The terms and conditions on which Morningstar Investment Adviser India Private Limited offers Investment Research to clients, varies from client to client, and are detailed in the respective client agreement.

**For recipients in Japan:** The Report is distributed by Ibbotson Associates Japan, Inc., which is regulated by Financial Services Agency. Neither Ibbotson Associates Japan, Inc., nor its representatives, are acting or will be deemed to be acting as an investment advisor to any recipients of this information.

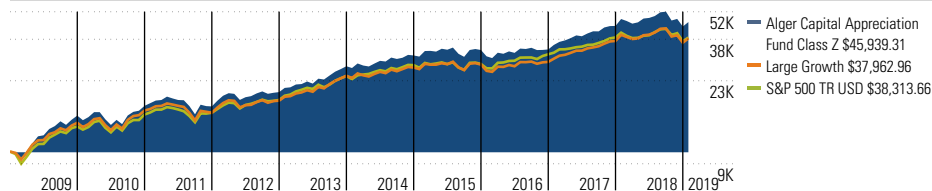
**For recipients in Singapore:** For Institutional Investor audiences only. Recipients of this Report should contact their financial advisor in Singapore in relation to this Report. Morningstar, Inc., and its affiliates, relies on certain exemptions (Financial Advisers Regulations, Section 32B and 32C) to provide its investment research to recipients in Singapore.

# Alger Capital Appreciation Fund Class Z ACAZX

Morningstar Analyst Rating  
**Bronze**

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
23.82	↑0.04   0.17	0.00	3	Open	\$500,000	None	0.88%	★★★★	Large Growth	Large Growth

## Growth of 10,000 01-16-2009 - 01-16-2019



## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,535	10,176	9,972	15,357	16,662	45,454
Fund	5.35	1.76	-0.28	15.37	10.75	16.35
+/- S&P 500 TR USD	0.91	0.99	3.63	1.43	1.29	2.06
+/- Category	0.07	-0.16	1.30	0.85	1.53	1.61
% Rank in Cat	47	52	34	37	27	—
# of Funds in Cat	1,424	1,423	1,381	1,223	1,084	785

\* Currency is displayed in USD

## Top Holdings 10-31-2018

	Weight %	Last Price	Day Chg %	52 Week Range
⊕ Microsoft Corp	9.14	105.49 USD	0.10 ↑	83.83 - 116.18
⊖ Amazon.com Inc	8.31	— USD	0.24 ↑	1,265.93 - 2,050.50
⊕ Alphabet Inc Class C	5.36	— USD	-0.19 ↓	970.11 - 1,273.89
⊖ Visa Inc Class A	5.31	137.07 USD	-0.20 ↓	111.02 - 151.56
⊖ Apple Inc	5.30	154.58 USD	-0.21 ↓	142.00 - 233.47

% Assets in Top 5 Holdings 33.42

⊕ Increase ⊖ Decrease ☆ New to Portfolio

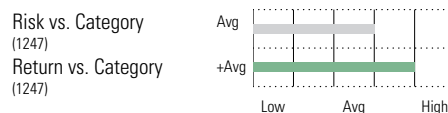
## Top Sectors 10-31-2018

	Fund	3 Yr High	3 Yr Low	Cat Avg
Technology	34.81	37.34	34.81	32.44
Healthcare	21.54	21.54	12.08	15.33
Consumer Cyclical	17.81	18.54	13.48	17.41
Financial Services	13.30	13.94	8.28	13.19
Industrials	6.50	8.25	6.50	9.81

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-18-2018	22.94	2.5393	0.0000	0.0000	0.0000	2.5393
12-15-2017	25.35	1.5908	0.0772	0.0000	0.0000	1.6680
12-14-2016	20.76	0.1684	0.0000	0.0000	0.0000	0.1684
12-16-2015	20.69	1.6694	0.0000	0.0000	0.0000	1.6694
12-18-2014	20.88	2.6839	0.5463	0.0000	0.0000	3.2302

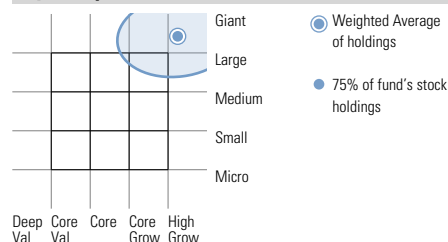
## 3 Year Average Morningstar Risk Measures



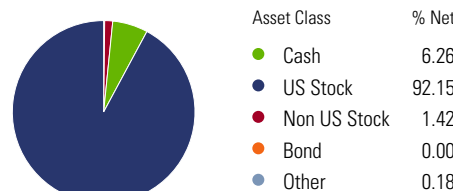
## Pillars

Process	⊕ Positive
Performance	⊕ Positive
People	⊕ Positive
Parent	⊕ Neutral
Price	⊖ Negative
Rating	Bronze

## Style Map



## Asset Allocation



## Management

Manager	Start Date
Patrick Kelly	09-30-2004
Ankur Crawford	06-01-2015



# Alger Capital Appreciation Fund Class Z ACAZX

## Analysis

### Large game hunter.

By Shannon Yan 12/5/2018

Alger Capital Appreciation's knack for profiting from rapid growers merits a Morningstar Analyst Rating of Bronze.

Lead manager Patrick Kelly looks for emerging companies with high unit volume growth and established firms with reaccelerating growth. He will load up on winners when those characteristics persist, such as Salesforce.com CRM. He established a tiny position in the software in early 2011 to take advantage of an expanding user base. Kelly subsequently traded around the stock to capitalize on short-term price movements, adding to the fund's historically high turnover. As Salesforce's cash flows remained robust over the years and its stock appreciated, Kelly built a top-10 position in Salesforce. That's significant because concentration in the top-10 holdings since late 2013 has roughly doubled to 50% of assets in late 2018, which then ranked as one of the highest among diversified, actively managed peers in the large-growth Morningstar Category.

Kelly's aggressive style has faced the challenge of size in recent years. He has managed more than \$15 billion across accounts since late 2014, versus less than one third of that at year-end 2009. The increase in assets here has coincided with a move up the market-cap spectrum. Indeed, the fund's combined small- and mid-cap stake dropped to 5% in late 2018, 8.5 percentage points less than the Russell 1000 Growth Index. In contrast, between late 2004 and late 2009, when the fund and its open-end clones together had less than \$2 billion in assets, the fund's combined small- and mid-cap stake was on average 16.5 percentage points more than the index.

The fund may not be able to replicate the agility of its early days, but it still stands out relative to the benchmark, thanks in part to sticking with highfliers such as Salesforce. Since 2010, the fund surpassed the bogy in five of eight calendar years, all the while overcoming a lofty fee hurdle. That solid

record comes with ample downside risk, as evidenced in the fund's struggle in the early-2016 market plunge. But long-term investors are in good hands.

#### Process Pillar: Positive

Lead manager Patrick Kelly's skilled use of Alger's aggressive-growth approach to investing merits a Positive Process rating. Like his colleagues, Kelly looks for companies that are poised for growth in one of two stages. Some have high unit volume growth leading to increased product demand and market share, like search-engine giant Alphabet GOOG. Others undergo positive life cycle changes, such as benefiting from new management or product advancements. Apple AAPL, with its series of innovative iPhone, iPad, and Apple Pay launches, is an example.

Kelly taps Alger's team of analysts to find growing firms within their respective sectors. The analysts come up with one-, three-, and five-year target prices for each firm, modeling earnings and cash flows across five years. Kelly ultimately picks the stocks he thinks have the most upside potential relative to their price targets and is willing to deviate meaningfully from the Russell 1000 Growth Index's sector weightings. He monitors risk/reward trade-offs and often trims positions after they come within 10% of their price targets, which is one reason for the portfolio's above-average, often triple-digit annual turnover. Kelly is willing to pay up for growth, but the portfolio's average price multiples tend to be in line with and sometimes below the benchmark's and typical rival's, suggesting that he's not insensitive to valuation.

The fund's exposure to stocks at the lower end of the market-cap spectrum is less pronounced than in the past. Between late 2004 and late 2009, when the fund and its open-end clones together had less than \$2 billion in assets, the fund's combined small- and mid-cap stake was on average 16.5 percentage points more than the Russell 1000 Growth Index's. The \$6.7 billion Alger Capital Appreciation open-end lineup has been consistently underweight since 2010, however. As of Septem-

### Morningstar's Take

Morningstar Analyst Rating



#### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Neutral
Price	 Negative

#### 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



### Fund Performance

	Total Return %	+/- Category
YTD	—	—
2018	—	—
2017	—	—
2016	—	—
2015	—	—

# Alger Capital Appreciation Fund Class Z ACAZX

## Analysis

ber 2018, this fund had a 5% small- and mid-cap stake versus the index's 13.5%.

The portfolio isn't tame, though. It has become more top-heavy since mid-2014, and its 50% stake in its top 10 holdings, as of September 2018, ranked the third highest among active, diversified large-growth peers. Eight of the top 10 holdings were tech titans, including Alphabet GOOG. Each position reflects Patrick Kelly's optimism about increasing Internet usage.

Kelly often favors Internet-related stocks, as the fund's double-digit tech overweighting early in his career and in mid-2017 attest. Nonetheless, that tilt isn't inevitable. In September 2018, for example, the fund's 41.5% stake in tech and communication services combined was 6.5 percentage points less than the index's. Instead, Kelly's bought a number of healthcare and consumer discretionary stocks in 2018, such as Abbott ABT, whose steady growth he thinks should add ballast for the portfolio.

### Performance Pillar: Positive

A topnotch, albeit volatile, record under lead manager Patrick Kelly earns the fund a Positive Performance rating. Since Kelly took the helm in late September 2004, the fund's 12.6% annualized return through November 2018 beat the Russell 1000 Growth Index by 2.5 percentage points and earned the large-growth category's 15th-best spot; its Morningstar Risk-Adjusted Return placed one notch higher.

Kelly's aggressive tactics can pay off handsomely in rallies but lead to sizable losses in downturns. The fund posted top-decile calendar-year returns among large-growth peers in 2005-07, as well as in 2009's rebound, but fared worse than roughly three fourths of rivals in 2008. That year, Kelly bought speculative fare like JA Solar JASO, which did not have positive cash flows, and was too slow to sell amid the burgeoning credit crisis.

Since year-end 2009, performance has moderated

but remained competitive overall. The fund edged the benchmark and its typical rival each calendar year from 2012-15, 2017, and again thus far in 2018. In 2016, however, its 0.5% gain trailed the index by 6.6 percentage points--its worst calendar-year showing versus the benchmark during Kelly's tenure. Stock-picking in 2016 was poor, especially in tech. Healthcare stocks also detracted, including top-20 positions in Allergan AGN and Vertex Pharmaceuticals VRTX, which hurt in the January to mid-February market downturn.

### People Pillar: Positive

The fund's Positive People rating reflects lead manager Patrick Kelly's talent and experience. Since taking the helm here and at Alger Spectra SPECX in late September 2004, his first shot at portfolio management, Kelly has executed the firm's aggressive approach with great success. This fund and its more-flexible sibling Alger Spectra have consistently been top performers in the large-growth category, as has Alger Focus Equity, which Kelly began managing in late 2012.

Kelly got help in June 2015 when the firm tapped Ankur Crawford to comanage all three funds. Upon joining Alger in 2004, Crawford completed the firm's in-house training program, the same one Kelly went through in the late 1990s, and like Kelly worked as a tech analyst. She first became a comanager on Alger Mid Cap Growth AMCGX and its clones in late 2010. In late 2017, she became the sole lead manager of Alger 25 ATPFX, a focused portfolio of large- and mid-cap growth stocks.

The analyst team Kelly and Crawford draw on here was almost cut in half between April 2017 and April 2018, though most departures occurred on the international side and the firm has a healthy pipeline of junior analysts in its sizable training program. Still, only four current team members have been with Alger a decade or more.

Kelly invests more than \$1 million across his strategies, and Crawford at least \$300,000.

### Parent Pillar: Neutral

Privately held Fred Alger Management has long been in the growth-investing realm. Established in 1964, the firm has stuck to its circle of competence, even after its World Trade Center headquarters were destroyed on 9/11 and several alumni returned to help rebuild the firm nearly from scratch. While its funds have over the years endured mixed results, as well as some manager turnover in the past five years, a few standouts have emerged. For example, flagship Alger Spectra SPECX has returned to prominence, as it has consistently been a top-performing large-growth fund since Patrick Kelly took the helm in 2004. Relatively new but proven manager Amy Zhang's Alger Small Cap Focus AOFIX has also excelled.

As factor investing has taken hold as an industry threat to style-specific firms, Alger has responded by focusing its portfolios in an effort to emphasize its stock-picking acumen. The firm has introduced eight focused strategies since 2012. Alger leverages firm veterans like Kelly to create best-ideas portfolios and has brought in outside talent to convert various funds to high-conviction offerings, each with about 50 stocks. These are promising, but one has already been liquidated and the rest presently take up just a small portion of the firm's assets. Plus, despite some cost-saving efforts, especially on the institutional front, fees tend to be above average. This firm receives a Neutral Parent rating.

### Price Pillar: Negative

Fees have come down the past few years but remain lofty compared with most rivals', earning the fund a Negative Price rating. More than 90% of the fund's asset reside in the A and Z shares, whose expense ratios rank in the second priciest decile of similarly distributed peers. The remaining assets are in the C share class, which is priced above average as well.

Investors also face ample trading costs thanks to the fund's typically triple-digit annual portfolio turnover. In fiscal 2017, brokerage fees of 0.06%

# Alger Capital Appreciation Fund Class Z ACAZX

---

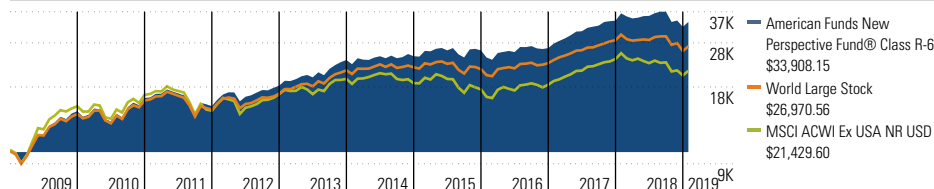
## Analysis

of average net assets were well above the 0.03% category median.

# American Funds New Perspective Fund® Class R-6 RNPGX

**Morningstar Analyst Rating**  
**Gold**

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
39.42	↑0.01   0.03	1.46	78	Open	\$250	None	0.45%	★★★★	World Large Stock	Large Growth

**Growth of 10,000 01-16-2009 - 01-16-2019**

**Investment Strategy**

The investment seeks long-term growth of capital; future income is a secondary objective. The fund seeks to take advantage of investment opportunities generated by changes in international trade patterns and economic and political relationships by investing in common stocks of companies located around the world. In pursuing its primary investment objective, it invests primarily in common stocks that the investment adviser believes have the potential for growth. In pursuing its secondary objective, the fund invests in common stocks of companies with the potential to pay dividends in the future.

**Performance 01-16-2019**

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,467	10,258	9,454	14,459	14,285	33,623
Fund	4.67	2.58	-5.46	13.08	7.39	12.89
+/- MSCI ACWI Ex USA NR USD	0.35	-0.09	8.94	3.61	5.74	5.20
+/- Category	0.17	0.75	3.68	2.50	2.69	2.43
% Rank in Cat	42	25	19	14	12	—
# of Funds in Cat	954	945	894	719	612	353

\* Currency is displayed in USD

**Top Holdings 12-31-2018**

	Weight %	Last Price	Day Chg %	52 Week Range
Amazon.com Inc	4.26	— USD	0.33 ↑	1,265.93 - 2,050.50
Taiwan Semiconductor Manufacturing Co Ltd	2.15	220.50 USD	1.38 ↑	206.50 - 268.00
Microsoft Corp	2.10	105.55 USD	0.16 ↑	83.83 - 116.18
Facebook Inc A	2.05	147.40 USD	-0.04 ↓	123.02 - 218.62
Broadcom Inc	1.91	252.40 USD	0.29 ↑	197.46 - 273.85
% Assets in Top 5 Holdings	12.47			

⊕ Increase ⊖ Decrease ☆ New to Portfolio

**Top Sectors 12-31-2018**

	Fund	3 Yr High	3 Yr Low	Cat Avg	
Technology	25.16	27.42	23.82	18.46	■ Fund ▼ Cat Avg
Consumer Cyclical	17.38	17.38	16.94	12.73	
Financial Services	15.33	15.33	12.61	18.15	
Healthcare	10.96	10.96	8.42	12.73	
Consumer Defensive	8.91	12.31	8.91	8.70	

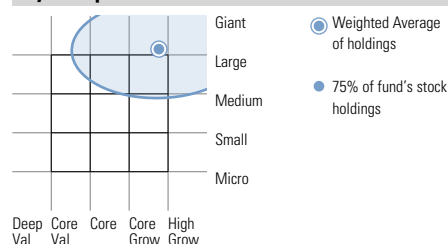
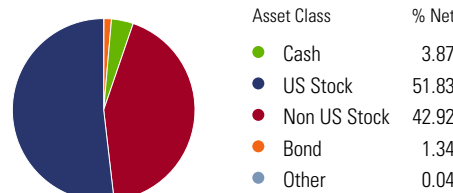
**Dividend and Capital Gains Distributions**

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-21-2018	36.28	2.4120	0.0000	0.0000	0.5837	2.9957
12-21-2017	43.06	2.1792	0.0000	0.0000	0.3246	2.5038
12-22-2016	35.44	1.0754	0.0000	0.0000	0.4096	1.4850
12-23-2015	36.23	1.9500	0.0000	0.0000	0.3775	2.3275
12-26-2014	36.66	2.2900	0.0000	0.0000	0.3539	2.6439

**3 Year Average Morningstar Risk Measures**

**Pillars**

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

**Style Map**

**Asset Allocation**

**Management**

	Start Date
Robert W. Lovelace	12-01-2000
Jonathan Knowles	12-01-2004
Brady L. Enright	12-01-2005
Jody F. Jonsson	12-01-2005
Steven T. Watson	12-01-2005
Noriko H. Chen	04-30-2012
Andraz Razen	07-02-2015

# American Funds New Perspective Fund® Class R-6 RNPGX

## Analysis

### Navigating global trade for profit.

By Alec Lucas, Ph.D. 10/9/2018

American Funds New Perspective's time-tested focus on firms benefiting from changing global trade patterns merits a Morningstar Analyst Rating of Gold.

Current worries over the impact of tariffs are not new to this fund. Born in the early 1970s, it has lived through multiple market cycles and encountered various protectionist measures, such as the proliferation of export restraints in the auto industry of the 1980s. Granted, longest-tenured manager Robert Lovelace did not start running diversified money here until 2000, but he began as analyst here in the 1980s and worked alongside five managers whose tenures began in the 1970s.

Regardless of market climate, American's multi-manager system sets up this fund for long-term success. Other than sticking to companies that receive at least 25% of their revenues from outside their home region and have at least a \$3 billion market-cap float at time of purchase, this fund's seven named managers are free to run their separate sleeves of the overall portfolio in line with their own styles. Here those styles coalesce in buying growth when it is mispriced or misunderstood but still include considerable variety. Jonathan Knowles, for example, focuses on firms with high returns on equity while Andraz Razen, whom Capital Group first publicly named in July 2018, is more willing to buy cyclical companies that have stumbled of late.

The portfolio stays grounded in multinational blue chips but isn't lacking in aggressive picks, as the presence of Tesla TSLA attests. Since entering the portfolio in early 2015 and becoming a top 20 holding by June 2018, Tesla's struggles to turn a profit have led it to be more than 3 times as volatile as the MSCI All-Country World Index.

Yet, thanks to its globally diversified portfolio, the fund has hardly missed a beat. Its trailing three-year 15% annualized return beat the index by 1.6

percentage points and placed in the world large-stock Morningstar Category's top quintile. That's in keeping with the fund's long-term results.

There's little reason to believe the fund can't build on its record.

#### Process Pillar: Positive

The fund's singular focus combined with its willingness to adapt merit a Positive Process Pillar rating. Since its March 1973 inception, the fund has sought to invest in firms poised to benefit from changing global trade patterns. While that mission has endured, the fund's methods have evolved with the market. In its early days, the investable universe consisted largely of the constituents of the MSCI World Index, the fund's longtime benchmark. As the global opportunity set broadened to include developing markets, the fund began investing there, too, and in October 2011 changed its benchmark to the MSCI All-Country World Index. The fund can now invest in firms located anywhere in the world if they receive at least 25% of their revenues from outside their home region and have at least a \$3 billion market-cap float at time of purchase. Although those requirements lend themselves to a continued emphasis on developed-markets blue chips, the fund's emerging-markets stake has increased in recent years. As of June 2018, it was 10.2% of assets, a bit higher than the fund's mid- to upper-single-digit historical norm.

American's multimanager approach lets the managers play to their strengths. With distinct styles, they can invest in their best ideas or hold cash and wait for compelling opportunities. The combination of separately managed sleeves mutes the overall fund's volatility. Only high portfolio turnover is frowned upon.

Sector and geographic allocations in the fund's roughly 250-stock portfolio are largely a byproduct of its managers' bottom-up analysis. The fund's balance of domestic and foreign stocks also shifts based on where the managers see the best opportunities. Its helping of U.S. stocks has ranged from more than half to less than a fourth of assets dur-

### Morningstar's Take

Morningstar Analyst Rating



### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Positive
Price	 Positive

### Morningstar Analyst Rating

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

Analyst Rating Spectrum

 Gold  Silver  Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	4.67	0.17
2018	-5.56	4.08
2017	29.30	5.68
2016	2.19	-3.35
2015	5.63	7.32



# American Funds New Perspective Fund® Class R-6 RNP GX

## Analysis

ing the past three decades and stood at 53.3% in August 2018, up from less than 30% near the U.S. market's 2007 peak.

The fund's managers seek growth across the globe but buy when it is mispriced or misunderstood, often hanging on through subsequent rough patches. For example, they first bought shares of current top-five holding Facebook FB in late 2015 because of swift adoption of its social-network platform and the firm's greater-than-anticipated growth potential in non-U.S. markets, especially India. As shares of Facebook subsequently plunged in price over concerns about privacy and misuse of data in 2018, the managers held on and even added more.

Since year-end 2012, the fund's tech weighting has more than doubled to about a fourth of the portfolio. The fund's high-single-digit semiconductor stake is now one of the world large-stock category's biggest. Top-10 positions Taiwan Semiconductor Manufacturing and ASML Holding ASML both stand to profit from increasing demand for chips and components used in Internet-connected devices.

### Performance Pillar: Positive

Consistent outperformance earns the fund a Positive Performance Pillar rating. Its trailing returns for the three- to 15-year periods through September 2018 all rank in the world-stock category's top quintile or better. Although the fund struggled in 2016, placing near the category's bottom quintile, it has finished in the top half of the peer group in every other calendar year in the past decade. Since its 1973 inception and during longest-tenured manager Robert Lovelace's 15-plus years, it has trounced its typical category rival, the MSCI All-Country World Index, and its former benchmark, the MSCI World Index.

The fund has amassed this record without incurring more volatility than its average peer or index. In fact, its Morningstar Risk rating for the trailing 10-year period through September 2018 is below average. It also has captured nearly 105% of the MSCI All-Country World Index's upside and 93% of its downside since Lovelace joined the fund in

December 2000.

The fund's focus on multinational blue chips has seldom hurt shareholders. In its 40-plus calendar years, the fund has lost money in only seven (1974, 1990, 2000-02, 2008, 2011). In each of those years, the fund lost significantly less than the benchmark, except for 2011. Even then, the fund held its own during 2011's peak-to-trough plunge but lagged in the subsequent rebound and lost 7.6% for the year, versus the index's 5.5% drop.

### People Pillar: Positive

American Funds' multimanager approach helps to handle this fund's \$85 billion asset base, the world-stock category's second largest. The fund's Positive People rating reflects its systemic strengths as well as the managers' experience, ability, and fund ownership.

Capital Group, the parent of American Funds, divides these assets between management teams from subsidiaries Capital International Investors and Capital World Investors. Longest-tenured manager Robert Lovelace, who started here in 2000, heads up the whole fund and CII's team, composed of Noriko Chen and Steven Watson. Joanna Jonsson oversees CWI's team of Jonathan Knowles, Brady Enright, and Andraz Razen, whom the firm publicly named in July 2018. Each of the managers, based in the United States, England, and Asia, oversees a separate sleeve of the portfolio, with Lovelace and Jonsson helping to ensure that their investing styles complement one another. For example, Knowles runs a top-heavy portfolio of about 30 stocks with high returns on equity, while Watson sticks largely to value names in a portfolio of 50-60 stocks. They're a veteran group. Each manager has been in the industry for at least 20 years. The CII and CWI teams are both supported by about 50 analysts, with each analyst group also responsible for its own slice of the portfolio.

Each manager has at least \$100,000 in the fund, with four investing more than \$1 million.

### Parent Pillar: Positive

As a standard-bearer in asset management, Capital Group earns a Positive Parent rating. Widely

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

Capital Group has improved its fixed-income approach through greater coordination, external hires, and enhanced risk management. The firm now has the tools to compete with best-in-class fixed-income shops, though its investment professionals could become more seasoned in their use.

Investors have shown renewed interest in American Funds amid the firm's efforts to expand in Europe, Australia, and Asia. The potential for these investors to pour money into the same strategies should incline Capital Group to clarify what would cause it to close a strategy to protect current shareholders, something the firm has said it would be willing to do.

### Price Pillar: Positive

Modest fees earn the fund a Positive Price Pillar rating. The A shares' 0.75% expense ratio, which applies to half of the fund's assets, is 49 basis points below the world-stock, front-load peer median and cheaper than 99% of those peers. It would also place in the cheapest quintile of the category's no-load options. Plus, 13 of the fund's 16 other share classes sport bottom-quintile expense ratios versus similarly distributed rivals. Trading costs are competitive, too. Brokerage fees of 0.03% of average net assets in fiscal 2017 fell below the 0.05% category median.

Capital gains distributions each year since 2013 have hurt investors in taxable accounts, however. These distributions peaked at 6.25% of net asset

# American Funds New Perspective Fund® Class R-6 RNPGX

---

## Analysis

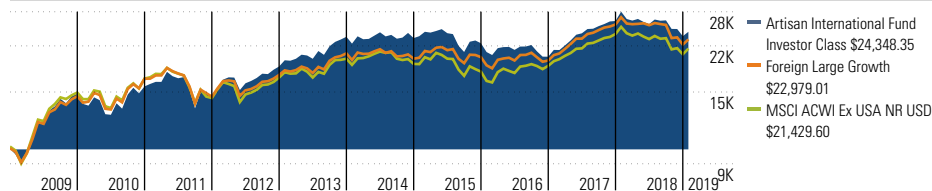
value in December 2014 and, most recently,  
clocked in at 5.06% in December 2017.

# Artisan International Fund Investor Class ARTIX

Morningstar Analyst Rating  
**Bronze**

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
28.06	↑0.15   0.54	1.26	10	Limited	\$1,000	None	1.18%	★★★	Foreign Large Growth	Large Growth

## Growth of 10,000 01-16-2009 - 01-16-2019



## Investment Strategy

The investment seeks maximum long-term capital growth. The fund invests primarily in developed markets but also may invest up to 35% of the fund's total assets at market value at the time of purchase in emerging and less developed markets. Under normal market conditions, it is substantially fully invested in common stocks and similar securities, and invests at least 65% of its net assets at market value at the time of purchase in securities of non-U.S. companies.

## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,339	10,200	8,721	12,046	10,478	24,225
Fund	3.39	2.00	-12.79	6.40	0.94	9.25
+/- MSCI ACWI Ex USA NR USD	-0.93	-0.68	1.61	-3.07	-0.72	1.56
+/- Category	-0.58	-0.30	1.44	-1.59	-1.29	0.79
% Rank in Cat	74	66	32	71	78	29
# of Funds in Cat	458	454	436	361	312	224

\* Currency is displayed in USD

## Top Holdings 09-30-2018

	Weight %	Last Price	Day Chg %	52 Week Range
⊖ Wirecard AG	6.07	143.00 USD	2.77 ↑	85.38 - 199.00
⊖ Deutsche Boerse AG	5.96	112.90 USD	0.94 ↑	97.16 - 121.15
⊖ Linde AG	5.72	193.90 USD	0.23 ↑	159.70 - 194.20
⊕ Airbus SE	4.21	91.76 USD	-0.84 ↓	77.50 - 111.16
⊕ Medtronic PLC	3.96	87.41 USD	0.51 ↑	76.41 - 100.15

% Assets in Top 5 Holdings 25.93

⊕ Increase ⊖ Decrease ☆ New to Portfolio

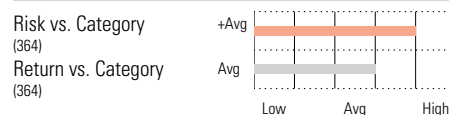
## Top Sectors 09-30-2018

	Fund	3 Yr High	3 Yr Low	Cat Avg	
Financial Services	29.50	29.50	26.33	16.92	■ Fund ▼ Cat Avg
Industrials	21.26	21.26	11.99	14.14	
Basic Materials	13.90	13.90	8.45	6.50	
Consumer Defensive	11.70	17.88	11.70	13.27	
Healthcare	10.20	10.20	5.38	10.77	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
11-20-2018	27.91	2.2728	0.0000	0.0000	0.3690	2.6418
11-21-2017	33.22	0.0000	0.0000	0.0000	0.2233	0.2233
11-17-2016	25.76	0.0000	0.0000	0.0000	0.3003	0.3003
11-19-2015	29.32	0.0000	0.0000	0.0000	0.1282	0.1282
11-19-2014	30.46	0.0000	0.0000	0.0000	0.2284	0.2284

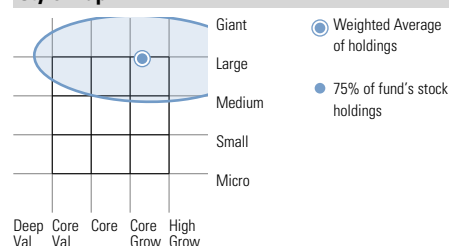
## 3 Year Average Morningstar Risk Measures



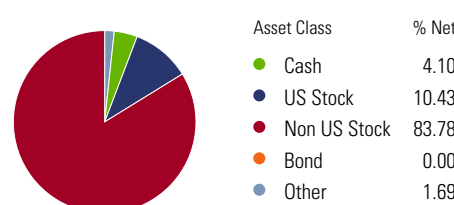
## Pillars

Process	⊕ Positive
Performance	⊕ Positive
People	⊕ Positive
Parent	⊕ Positive
Price	⊖ Negative
Rating	<b>Bronze</b>

## Style Map



## Asset Allocation



## Management

	Start Date
Mark L. Yockey	12-28-1995
Andrew J. Euretig	02-01-2012
Charles-Henri Hamker	02-01-2012

# Artisan International Fund Investor Class ARTIX

## Analysis

### A downgrade to Bronze.

By Andrew Daniels 5/21/2018

Artisan International remains a worthy option relative to actively managed peers. But team turnover in recent years and above-average fees merit a Morningstar Analyst Rating downgrade to Bronze from Silver.

Mark Yockey has managed this closed fund since its December 1995 inception. Yockey is an experienced manager with more than 35 years in the industry and has posted fine results overall throughout his career. He's joined by associate portfolio managers Charles-Henri Hamker and Andrew Euretig, who joined Artisan in 2000 and 2005, respectively. While the managers are supported by 12 analysts and seven associates, the team has seen a fair amount of turnover in recent years. Barry Dargan and Dave Geisler--both former comanagers on the team--left Artisan in 2013 and 2015, respectively. Moreover, three analysts have departed since early 2017.

Despite the team turnover, the managers continue to execute a bold approach. While the portfolio is built from the bottom up, each holding loosely fits one of six global growth themes, including technology, environment, demographics, and financial services, among others. For example, the fund had an 8% weighting to capital markets firms--including Deutsche Boerse and London Stock Exchange--as of March 2018 because management believes increased trading volumes and industry consolidation will drive sustainable growth.

The managers don't pay much attention to the benchmarks, leading to regional and sector weightings that stray significantly from the MSCI ACWI ex USA Growth Index and the typical foreign large-growth Morningstar Category peer. As a result, performance can be out of step at times. That's been the case during the trailing five-year period ended April 2018, in which the fund's 5.6% annualized gain underperformed the index's 6.4% return as well as 83% of peers.

While the strategy's \$26.5 billion asset base makes it less flexible than it was in its early days, Artisan has closed this fund to protect current investors. Still, given the fund's large asset base, its expenses should be lower.

#### Process Pillar: Positive

The fund's bold and distinguished approach earns it a Positive Process rating.

The managers are seeking quality firms with sustainable growth prospects that are trading at reasonable valuations. Ideally, they like to own firms with competitive advantages, significant free cash flow potential, and shareholder-oriented management teams.

Each holding loosely fits one of six global growth themes, including technology, environment, demographics, and financial services, among others. For example, the fund had an 8% weighting to capital markets firms--including Deutsche Boerse and London Stock Exchange--as of March 2018 because management believes increased trading volumes and industry consolidation will drive sustainable growth. This thematic approach often leads to regional and sector weightings that stray significantly from the MSCI ACWI ex USA Growth Index and the typical foreign large-growth peer.

The fund typically holds 60-100 stocks. The portfolio became more diffuse in the mid-2000s when strategy assets exceeded \$25 billion, but it remains relatively compact at about 70 stocks. In 2016, Artisan closed the fund to protect current investors. While the team is willing to hold on to winners for years, it will also trade around positions at times. Turnover has averaged 51% during the past five years, less than the typical peer's 58%.

Consistent with management's focus on identifying global investment themes, sector weightings tend to shift significantly over time. As of September 2016, the portfolio's 27% consumer defensive stake was well-above the MSCI ACWI ex USA Growth Index's 19% weighting, driven by sizable positions in packaged food firm Nestle and to-

### Morningstar's Take

Morningstar Analyst Rating



#### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Positive
Price	 Negative

#### Morningstar Analyst Rating

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

Analyst Rating Spectrum

 Gold  Silver  Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	3.39	-0.58
2018	-10.86	3.21
2017	31.02	0.14
2016	-9.66	-7.52
2015	-3.85	-4.81

# Artisan International Fund Investor Class ARTIX

## Analysis

tabacco player Japan Tobacco. But the fund has since reduced its defensive weighting to just 11% as of March 2018.

Meanwhile, the team has significantly increased its financial-services exposure. As of March 2018, the financial-services weighting was 33%, up from 9% as of December 2015. The team has recently purchased several capital markets firms and global banks.

Geographic exposure also tends to vary widely. Indeed, the portfolio's U.K. weighting was 19% as of March 2016 but--following the Brexit vote--fell to just 6% at the end of December 2016; it stood at 11% as of March 2018. Worth noting is the portfolio's persistent underweighting to Japanese stocks, which management attributes to the country's lack of quality-growth firms. Its 7% Japan weighting was far below the index's 17% as of March 2018.

One recent addition to the portfolio was European aircraft manufacturer Airbus. The team believes that Airbus will benefit from its duopoly with Boeing as well as secular demand for air travel in emerging markets.

### Performance Pillar: Positive

This fund's solid long-term results earn it a Positive Performance rating.

From the fund's December 1995 inception through April 2018, its 9.2% annualized gain trounced the MSCI EAFE Growth Index's 4.3% gain as well as 98% of its foreign large-growth peers. While the fund has been more volatile than its bogies during the same period, risk-adjusted results remain quite solid. Indeed, its Sharpe ratio of 0.44 beats the index's 0.20 and 94% of peers. What's more, the fund has been relatively consistent: In the 233 rolling three-year periods since inception, it has outperformed the index and category 65% and 73% of the time, respectively.

But the fund's showing in recent years has been disappointing. During the trailing five-years ended April 2018, its 5.6% annualized gain underper-

formed the MSCI ACWI ex USA Growth Index's 6.4% return and 83% of peers. The fund was dragged down by its underweighting to--and poor stock selection within--the solid-performing Japanese market. It was also hurt by an ill-timed bet on European automotive stocks, including Porsche Automobil and Volkswagen.

In 2017, the fund's 31.0% return trailed the MSCI ACWI ex USA Growth Index's 32.0% but still outpaced 54% of its peers. The fund was buoyed by German payment technology firm Wirecard and Chinese tech giant Alibaba. However, Japanese firms Japan Tobacco and NTT Docomo detracted from results.

### People Pillar: Positive

This fund is led by an experienced and proven team. It earns a Positive People rating.

Mark Yockey has managed this fund since its 1995 inception. He's also been a manager on Bronze-rated Artisan International Small Cap ARTJX and Artisan Global Equity ARTHX since their respective 2001 and 2010 inceptions. Overall, Yockey is an accomplished manager that has posted fine results throughout his career.

Since February 2012, Yockey has worked alongside associate portfolio managers Charles-Henri Hamker and Andrew Euretig. Hamker joined Artisan in 2000 as a consumer and business-services analyst. He is also a comanager on Artisan International Small Cap. Euretig joined the firm in 2005 as an industrials analyst and also serves as a comanager on Artisan Global Equity.

The managers are supported by 12 analysts and seven associates. On average, the analysts have worked on the team for five years and have 12 years of industry experience. It's worth noting that the team has been plagued by turnover in recent years. Barry Dargan and Dave Geisler--both former comanagers on the team--left Artisan in 2013 and 2015, respectively. Moreover, three analysts have departed since early 2017.

Manager investment is respectable but not distin-

guished. Yockey invests more than \$1 million alongside fundholders, while Euretig invests between \$100,001 and \$500,000; Hamker has less than \$50,000 invested.

### Parent Pillar: Positive

Artisan hires proven or promising managers and allows them to build and run their teams with a large degree of autonomy. Four of the five teams with long histories have performed strongly over longer-term periods. The emerging-markets team lags its benchmark since the strategy's June 2008 founding, though performance has rebounded lately. Three teams have joined since early 2014, and two of those reflect the firm's broadened lineup, which previously focused strictly on equities: One invests in high-yield debt, while another runs a thematically driven alternatives strategy. It's unlikely the firm will launch another equity strategy in the near future.

Beyond delivering largely solid performance, the firm tends to close funds to preserve their flexibility and increase the chances that they will continue to outperform. Indeed, five of the firm's 15 funds are currently closed to new investors. (Two others have been closed in the past.) The firm also has a clean regulatory history.

Artisan went public in March 2013. While this could pressure management (led by Eric Colson, who became CEO in 2010) into keeping popular funds open to boost revenue, it has thus far continued to close them. Its executives no longer control the stock's voting shares, but the firm's employees, founders Andy and Carlene Ziegler, and two private equity firms who have owned stakes since Artisan's 1994 founding own close to 40% of the firm combined.

### Price Pillar: Negative

This fund's uncompetitive fees earn it a Negative Price rating.

The Institutional shares hold approximately 45% of assets, charge 0.96%, and earn a Morningstar Fee Level of Above Average. For comparison, the median net expense ratio for the foreign large-cap institutional peer group is 0.87%.



# Artisan International Fund Investor Class ARTIX

---

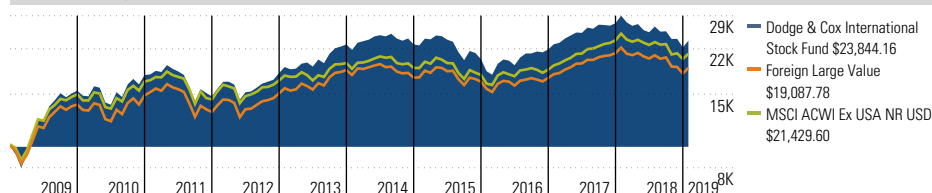
## Analysis

The Investor shares hold 38% of assets, charge 1.18%, and earn an Above Average fee level. The Advisor shares launched in 2015 and already hold 18% of assets as fee-only advisors have moved their clients into them from the pricier Investor shares. Still, the Advisor share class' 1.04% expense ratio is quite high relative to its similarly distributed peers.

# Dodge & Cox International Stock Fund DODFX

**Morningstar Analyst Rating**  
**Gold**

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
38.97	↑0.25   0.65	2.93	48	Limited	\$2,500	None	0.63%	★★★★	Foreign Large Value	Large Value

**Growth of 10,000 01-16-2009 - 01-16-2019**

**Investment Strategy**

The investment seeks long-term growth of principal and income. Under normal circumstances, the fund will invest at least 80% of its total assets in equity securities of non-U.S. companies, including common stocks, depository receipts evidencing ownership of common stocks, preferred stocks, securities convertible into common stocks, and securities that carry the right to buy common stocks. The fund typically invests in medium-to-large well-established companies based on standards of the applicable market.

**Performance 01-16-2019**

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,558	10,356	8,206	13,148	10,232	23,751
Fund	5.58	3.56	-17.94	9.55	0.46	9.04
+/- MSCI ACWI Ex USA NR USD	1.26	0.89	-3.54	0.08	-1.20	1.35
+/- Category	0.94	0.59	-2.72	2.02	0.45	2.23
% Rank in Cat	13	25	78	22	40	9
# of Funds in Cat	336	336	318	275	228	150

\* Currency is displayed in USD

**Top Holdings 12-31-2018**

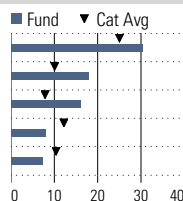
	Weight %	Last Price	Day Chg %	52 Week Range
⊖ Sanofi SA	3.73	—	—	—
⊖ Roche Holding AG Dividend Right Cert.	3.18	257.15 USD	0.04 ↑	206.35 - 260.00
⊖ ICICI Bank Ltd	3.15	374.60 USD	0.00 ↓	256.50 - 383.55
⊖ Itau Unibanco Holding SA Participating Preferred	2.98	37.20 USD	0.05 ↑	33.26 - 106.68
⊕ Naspers Ltd Class N	2.96	— USD	0.05 ↑	236,266.00 - 379,000.00

% Assets in Top 5 Holdings 15.99

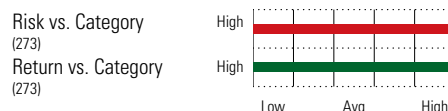
⊕ Increase ⊖ Decrease ✱ New to Portfolio

**Top Sectors 12-31-2018**

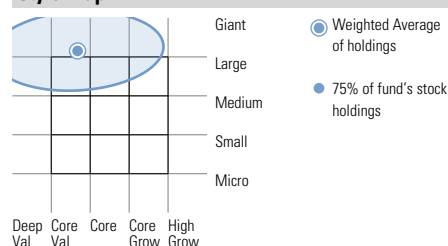
	Fund	3 Yr High	3 Yr Low	Cat Avg
Financial Services	30.25	30.25	24.52	24.11
Healthcare	17.81	17.81	13.88	9.15
Technology	15.98	24.84	15.98	6.94
Consumer Cyclical	8.04	8.04	6.29	11.28
Energy	7.16	8.56	7.16	9.48


**Dividend and Capital Gains Distributions**

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-19-2018	36.92	0.0000	0.0000	0.0000	1.0800	1.0800
12-19-2017	45.77	0.0000	0.0000	0.0000	0.8920	0.8920
12-20-2016	38.12	0.5434	0.0000	0.0000	0.8516	1.3950
12-21-2015	36.10	0.0000	0.0000	0.0000	0.8400	0.8400
12-19-2014	42.41	0.0000	0.0000	0.0000	0.9699	0.9699

**3 Year Average Morningstar Risk Measures**

**Pillars**

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

**Style Map**

**Asset Allocation**

	% Net	% Short	% Long	Bench mark	Cat Avg
Cash	0.65	0.09	0.73	0.02	0.22
US Stock	8.11	0.00	8.11	0.29	2.75
Non US Stock	90.50	0.03	90.54	99.49	95.45
Bond	0.00	0.00	0.00	0.00	1.45
Other	0.75	0.00	0.75	0.21	0.13

**Management**

	Start Date
C. Bryan Cameron	05-01-2001
Diana S. Strandberg	05-01-2001
Mario C. DiPrisco	01-01-2004
Roger G. Kuo	05-01-2006
Keiko Horkan	05-01-2007
Charles F. Pohl	05-01-2007
Richard T. Callister	03-30-2012
Englebert T. Bangayan	02-28-2015
Raymond J. Mertens	01-31-2018

# Dodge & Cox International Stock Fund DODFX

## Analysis

### Still excellent.

By Andrew Daniels 6/28/2018

Dodge & Cox International Stock benefits from a decisive value approach, talented investment team, and low fees. This closed fund retains its Morningstar Analyst Rating of Gold.

Dodge & Cox's nine-person international-equity investment committee, whose members average 23 years of firm tenure, manages the fund. Moreover, a deep and experienced analyst team, most of whom are Dodge & Cox lifers, supports the committee. The seasoned investment staff and its consensus-oriented team approach limit key-person risk.

The committee seeks non-U.S. stocks that look cheap on a range of valuation measures. It relies on bottom-up fundamental research and favors firms with good management, competitive advantages, and solid growth potential. It often takes advantage of bad news or a bad economic environment to buy fundamentally strong businesses. For instance, the team recently increased its exposure to healthcare stocks GlaxoSmithKline GSK and Roche Holding RO, citing attractive valuations amid industry pricing and regulatory concerns.

Once management initiates a position, it tends to hold on for the long term, so portfolio turnover is quite low. Indeed, on a weighted average basis, stocks in the portfolio have been held for approximately six years. While the managers don't align country or sector weightings with the indexes, they do limit individual holdings to about 4% of assets to reduce the risks inherent in such a contrarian strategy.

The fund's many strengths have made it a long-term winner. From its May 2001 inception through May 2018, its 7.5% annualized gain beat the MSCI ACWI ex USA Index's 5.8% gain as well as 93% of its foreign large-blend Morningstar Category peers. Moreover, the fund has been consistent, outperforming the index in 77% of the 145 rolling five-year periods since its inception. It's worth not-

ing that management's patient and contrarian nature makes it prone to lag at times, as it has since the start of 2017. As such, investors here must be patient and willing to tolerate short-term adversity. That said, this fund remains an excellent option.

#### Process Pillar: Positive

This fund's decisive value approach earns it a Positive Process rating.

The fund's investment committee seeks non-U.S. stocks that look cheap on a range of valuation measures. The managers rely on bottom-up fundamental research and favor firms with good management, competitive advantages, and solid growth potential. Oftentimes, they take advantage of bad news or a bad economic environment to buy fundamentally strong businesses.

The managers don't align country or sector weightings with the indexes, but they do limit individual holdings to about 4% of assets to reduce the risks inherent in such a contrarian strategy. Broader macro views or other high-level factors play lesser roles, though the team does consider issues such as potential legislation. Management is also long-term focused, so turnover has—and should remain—low. Indeed, annual turnover has averaged 15% during the past five calendar years, well below the foreign large-blend category average of 54%.

The managers sell when valuations get rich, fundamentals deteriorate, or better opportunities become available. When valuations decline, they often seize the opportunity to increase stakes in stocks in which they still have conviction. This leads the fund to appear out of step at times, so it requires patience. Management does tactically hedge currency exposure, but it typically hedges just part of the portfolio's total exposure.


Reflecting management's attention to valuations, price multiples such as price/earnings and price/book value have trended below or in line with the MSCI ACWI ex USA Index's and the typical foreign large-blend peer's. What's more, quality metrics such as returns on equity and net margins

### Morningstar's Take

Morningstar Analyst Rating



#### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Positive
Price	 Positive

#### Morningstar Analyst Rating

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

#### Analyst Rating Spectrum

 Gold  Silver  Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	5.58	0.94
2018	-17.98	-2.54
2017	23.94	1.87
2016	8.26	4.93
2015	-11.35	-8.25

# Dodge & Cox International Stock Fund DODFX

## Analysis

tend to be lower than its bogies.

The portfolio remains overweight technology stocks compared with the index, but heightened valuations have led the team to rein in the stake to 17% in March 2018 from 24% two years earlier. In particular, the team has been trimming its Chinese Internet-related stocks, including JD.com, Baidu BIDU, and Naspers NPN (which owns more than 30% of Tencent). Despite cutting its Chinese tech exposure, the portfolio continues to emphasize emerging-markets stocks at 20% of assets compared with the category's 7% weighting. Notably, the team has been finding opportunities in Brazil and Mexico.

Meanwhile, management has increased the portfolio's healthcare exposure, citing attractive valuations amid industry pricing and regulatory concerns. As of March 2018, the fund's 17% exposure to healthcare stocks was significantly more than the index's 7% weighting. The team recently initiated a position in U.K. pharmaceutical giant GlaxoSmithKline, believing that the firm will benefit from new management as well as new products and increased adoption in certain business segments.

### Performance Pillar: Positive

This fund has been a long-term winner, earning it a Positive Performance rating.

From the fund's May 2001 inception through May 2018, its 7.5% annualized gain beat the MSCI ACWI ex USA Index's 5.8% gain, as well as 93% of its foreign large-blend peers. Risk-adjusted results were also solid: Its Sharpe ratio of 0.40 during the same period beat the index's 0.34 as well as 91% of its peers. What's more, the fund has been consistent, outperforming the index in 77% of the 145 rolling five-year periods since its inception.

The team's contrarian nature and willingness to be patient have contributed to the fund's long-term success, but they have also led to elevated volatility and downside-capture levels. This was evident during the financial crisis when bets in financial

services hurt the fund. It also had a subpar 2015, when the fund's long-standing overweighting of emerging markets proved harmful as sentiment toward emerging markets soured. But the fund's subsequent strong showing in 2016 illustrates how it overcomes such setbacks.

Since January 2017 through May 2018, the fund's 17.2% total return lagged the index's 24.8% gain and 94% of its peers. Subpar stock selection in financial services and energy was the culprit. Individual detractors included banks Barclays BARC and Societe Generale GLE as well as oil-services players Schlumberger SLB and Saipem SPM.

### People Pillar: Positive

This fund's deep and experienced investment team earns it a Positive People rating.

Dodge & Cox's nine-member international equity investment committee manages the fund. The committee averages 23 years of firm tenure and includes director of international equity Diana Strandberg and vice president Roger Kuo. All but one of the committee members have more than \$1 million invested in the strategy, helping to align their interests with fundholders'. While the committee is quite stable overall, changes occasionally occur. Dodge & Cox has added Englebert Bangayan and Ray Mertens, who have been with the firm since 2002 and 2003, respectively, to the committee since January 2015. Meanwhile, long-time committee members John Gunn and Greg Serrurier retired in 2016. These changes support the firm's long-standing approach to succession planning and help mitigate key-person risk.

The analyst ranks are also broad and deep, with impressive levels of experience. As of May 2018, the firm had 33 industry analysts and managers on the equity side; all have been at the firm for more than five years. There are also 27 analysts and managers with similar levels of experience on the fixed-income side--who sometimes pitch in here--as well as approximately 25 research associates on two- to four-year contracts. Nearly all team members have spent their entire careers at Dodge & Cox. Indeed, they rarely leave for any reason be-

sides retirement.

### Parent Pillar: Positive

Dodge & Cox sets a high bar for the asset-management industry. Its many strengths earn it a Positive Parent rating. The San Francisco-based firm, founded in 1930, benefits from a strong investment culture. CEO Dana Emery and chairman Charles Pohl are also lead members of the investment team; they run the firm and its funds with a long time horizon.

But there are no stars here--an intentional and enduring characteristic of the firm. Each fund is run collaboratively by one of five investment policy committees, whose members average more than 20 years at the firm. The analyst ranks are broad and deep, with impressive levels of experience. In all, the firm has approximately 60 managers and analysts, most of whom are Dodge & Cox lifers. Team members rarely leave for any reason other than retirement. The team's financial incentives are appropriately aligned. Portfolio managers invest heavily in their strategies, helping align their interests with investors'. Dodge & Cox is 100% employee-owned, allowing staff to participate in the firm's economic success. Moreover, it has helped Dodge & Cox avoid short-term pressures that often face public firms on Wall Street.

The firm's approach to new strategies is admirable, having rolled out just six in its history. Management has also proved willing in the past to safeguard its strategies by closing funds. All around, Dodge & Cox is a model fund family.

### Price Pillar: Positive

This fund is one of the cheapest actively managed options available, giving it a built-in advantage over most foreign large-cap peers. The fund earns a Positive Price rating.

All assets are in the fund's no-load share class, which charges 0.63% and earns a Morningstar Fee Level of Low. By comparison, the median net expense ratio for the foreign large-cap no-load peer group is 1.00%. Moreover, management's low-turnover strategy has also helped to keep transaction costs low.

# Dodge & Cox International Stock Fund DODFX

---

## Analysis

It's worth noting that this fund has been closed to new investors since January 2015.

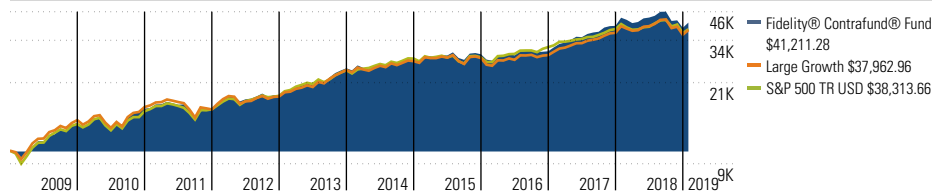


# Fidelity® Contrafund® Fund FCNTX

Morningstar Analyst Rating  
Silver

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
11.66	↑0.03   0.26	0.00	108	Open	—	None	0.74%	★★★★	Large Growth	Large Growth

## Growth of 10,000 01-16-2009 - 01-16-2019



## Investment Strategy

The investment seeks capital appreciation. The fund normally invests primarily in common stocks. It invests in securities of companies whose value the advisor believes is not fully recognized by the public. The fund invests in domestic and foreign issuers. It invests in either "growth" stocks or "value" stocks or both. The fund uses fundamental analysis of factors such as each issuer's financial condition and industry position, as well as market and economic conditions to select investments.

## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,590	10,291	9,849	15,491	16,475	41,067
Fund	5.90	2.91	-1.51	15.71	10.50	15.17
+/- S&P 500 TR USD	1.47	2.14	2.40	1.76	1.05	0.88
+/- Category	0.62	0.99	0.08	1.19	1.28	0.43
% Rank in Cat	30	19	48	32	33	42
# of Funds in Cat	1,424	1,423	1,381	1,223	1,084	785

\* Currency is displayed in USD

## Top Holdings 11-30-2018

	Weight %	Last Price	Day Chg %	52 Week Range
Amazon.com Inc	6.86	— USD	0.35 ↑	1,265.93 - 2,050.50
Berkshire Hathaway Inc A	5.58	— USD	0.23 ↑	279,410.00 - 335,900.00
Facebook Inc A	5.38	147.53 USD	0.05 ↑	123.02 - 218.62
Microsoft Corp	4.24	105.48 USD	0.10 ↑	83.83 - 116.18
UnitedHealth Group Inc	3.84	258.72 USD	-1.01 ↓	208.48 - 287.94
% Assets in Top 5 Holdings	25.90			

⊕ Increase ⊖ Decrease ☆ New to Portfolio

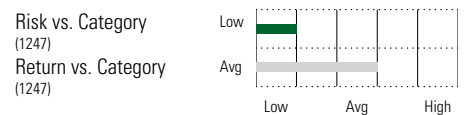
## Top Sectors 11-30-2018

	Fund	3 Yr High	3 Yr Low	Cat Avg
Technology	34.25	36.17	33.23	31.87
Financial Services	23.69	24.94	21.05	13.09
Consumer Cyclical	15.16	18.28	14.80	17.44
Healthcare	14.22	14.22	8.96	15.82
Industrials	4.42	6.12	4.42	9.80

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-07-2018	11.41	0.8210	0.0000	0.0000	0.0000	0.8210
02-09-2018	12.22	0.1858	0.0000	0.0000	0.0000	0.1858
12-08-2017	12.19	0.6773	0.0000	0.0000	0.0104	0.6877
02-10-2017	10.46	0.0660	0.0000	0.0000	0.0016	0.0676
12-09-2016	10.01	0.2838	0.0000	0.0000	0.0277	0.3115

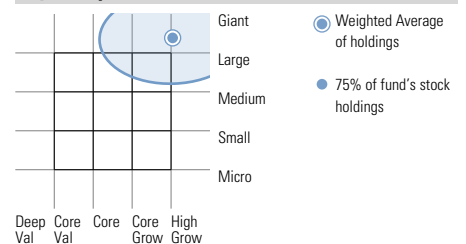
## 3 Year Average Morningstar Risk Measures



## Pillars

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

## Style Map



## Asset Allocation

	% Net	% Short	% Long	Bench mark	Cat Avg
Cash	4.45	0.01	4.46	0.00	2.00
US Stock	89.35	0.00	89.35	99.41	92.82
Non US Stock	4.74	0.00	4.74	0.59	4.59
Bond	0.17	0.00	0.17	0.00	0.00
Other	1.30	0.00	1.30	0.00	0.60

## Management

William Danoff  
Start Date 09-17-1990

# Fidelity® Contrafund® Fund FCNTX

## Analysis

### Still a standout.

By Katie Rushkewicz Reichart 2/26/2018

Longtime manager Will Danoff's solid execution still sets Fidelity Contrafund apart. It retains its Morningstar Analyst Rating of Silver.

Danoff has led the fund, one of the industry's largest actively managed equity offerings, since 1990. He combines his own insights with Fidelity's broad analytical research to find companies capable of multiyear earnings growth. Beyond looking for companies with sound competitive advantages, he places a heavy emphasis on the management teams in charge.

As one of the largest owners of many of the stocks the fund owns, Danoff has unparalleled access to such teams, which helps him construct the portfolio. For instance, Facebook FB--a top contributor in 2017--has grown into the fund's top position as of year-end 2017 in part because of Danoff's confidence in CEO Mark Zuckerberg. The fund has long owned Berkshire Hathaway BRK.A, a less-common holding among large-growth Morningstar Category peers, because of Danoff's belief in its best-of-breed management team; he's largely avoided selling shares since he started purchasing them in 2002, and it's the fund's second-biggest position.

Positions such as Berkshire have dampened the fund's risk profile relative to other large-growth peers. Indeed, it's lost less than the Russell 1000 Growth Index in down markets under Danoff.

The fund hasn't kept pace with that benchmark at every point in the market cycle but has still managed to distinguish itself; it outperformed by 2 percentage points in 2017, on the back of strong stock-picking in technology, an area of strength at the firm. Danoff has Fidelity's large global analyst team at his disposal, which helps him keep tabs on the sprawling portfolio of 300-plus names and feeds him ideas that can keep the fund competitive, including some investments in private companies. Changes on the analyst team in the past couple of years bear watching, and the fund's

large asset base arguably makes it less nimble than most peers. However, Danoff's experience helps keep the fund on the right path.

### Process Pillar: Positive

Will Danoff follows a typical growth strategy, looking for firms with improving earnings, but his execution sets the fund apart. He weaves together his own analytical insights, gleaned from 30 years at Fidelity, with research from more than 100 global analysts. As the biggest owner of many stocks, Danoff has unparalleled access to company management, helping him understand a business' growth drivers. Capacity has long been a risk, given that Danoff manages more than \$100 billion across accounts. (In 2013, Fidelity named John Roth as co-manager at Danoff's other charge, Fidelity Advisor New Insights FINSX, which in the past looked very similar to Fidelity Contrafund but has started deviating to a greater extent.) Even so, Contrafund is the second-biggest actively managed large-cap fund and is often a top owner of its holdings, so its size does limit its flexibility.

Danoff has made tweaks to the process through the years to accommodate its growing size, including trading less often, owning fewer mid- and small-cap names, and maintaining a portfolio of 270-500 stocks. (The name count has trended downward recently as he has focused on his best ideas.) These moves haven't affected long-term performance, which remains strong. The fund has been closed in the past, but it is currently open and has experienced outflows in recent years.

Danoff's consistent execution through the years earns the fund a Positive Process rating.

Despite the fund's large asset base and portfolio of hundreds of names, it has avoided looking too marketlike. It has held as much as 20% in non-U.S. equities in the past, though its 7% non-U.S. stake as of December 2017 was on the low end of its normal range during the past decade.


While the fund's size limits Will Danoff's ability to take meaningful positions throughout the portfolio, he doesn't shy away from making big bets where

### Morningstar's Take

Morningstar Analyst Rating



### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Positive
Price	 Positive

### Morningstar Analyst Rating

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

### Analyst Rating Spectrum

 Gold  Silver  Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	5.90	0.62
2018	-2.13	-0.03
2017	32.21	4.54
2016	3.36	0.14
2015	6.46	2.86

# Fidelity® Contrafund® Fund FCNTX

## Analysis

he can. Alphabet GOOG and Berkshire Hathaway BRK.A are long-standing bets in the portfolio, each at more than 5% of assets as of December. Facebook FB has grown into the top position based on Danoff's belief that it is a great franchise with excellent management. The fund's tech stake has ticked up in the past year, and it remains the biggest sector weighting, at 40% of assets. The fund's healthcare stake has come down to less than 10% of assets, and Danoff is treading carefully on concerns about drug pricing. The fund's 19% financials stake is above the large-growth norm (though closer to its S&P 500 prospectus benchmark's).

The fund has stakes in some private tech companies, including Uber, Pinterest, and Airbnb, though these totaled less than 2% of assets as of year-end. The fund, which held 4%-6% cash in early 2016, was close to fully invested as of December and has seen persistent outflows.

### Performance Pillar: + Positive

This fund earns a Positive Performance rating. It's been a top large-growth offering under Will Danoff, who has managed it since September 1990. During his tenure through January 2018, the fund has gained 13.7% annualized to the S&P 500's 10.6%, the Russell 1000 Growth Index's 10.3%, and the category's 9.5%. Danoff's record is all the more impressive considering the huge sum of money he oversees, totaling more than \$100 billion. Undoubtedly, this fund is less flexible than the \$7 billion Fidelity Series Opportunistic Insights used exclusively in Fidelity's target-date series, which he's led to even better results since its late-2012 inception.

This fund isn't too volatile for a growth fund. Danoff, who has run money long enough to witness a few major market blowups, has outperformed large-growth peers and the Russell 1000 Growth Index in down markets during his tenure, including both bear markets of the 2000s. The fund's Morningstar Risk score, which penalizes downside deviations in returns, is low. Danoff prefers proven growers showing tangible signs of improving earnings to more-speculative fare, which means the

fund can lag in certain market environments such as 2009's rally. However, strong stock selection, particularly in the technology and consumer sectors, led to a 32% gain that was 2 percentage points ahead of the benchmark and almost 80% of its peers.

### People Pillar: + Positive

Will Danoff has run this fund since September 1990, posting competitive results even as it has grown. Danoff's years of experience and stock-picking abilities have given the fund an edge and support its Positive People rating. He also relies on Fidelity's analyst team, which totals more than 100 globally. A fair amount of turnover occurred in 2016-17 within the consumer, energy/utilities, and cyclical teams, but Fidelity's tech and healthcare teams have historically been quite strong. The analysts' input is essential, as it would be difficult to effectively oversee a portfolio of 300-plus stocks himself. The analysts have incentives to relay their best ideas to him, as he commands more than \$100 billion in assets across all his charges. But Danoff is actively involved in stock-specific research and carries around a thick notebook listing the tickers of companies he's met with.

Given Danoff's heavy asset load, capacity has been a long-standing concern. In 2013, John Roth became comanager alongside Danoff at the \$30 billion Fidelity Advisor New Insights FINSX, but Danoff also runs the \$7 billion Fidelity Series Opportunistic Insights (used exclusively in the target-date series) and a fund sold in Canada. This fund courts significant key-person risk, but Danoff has announced no intention of retiring anytime soon. Danoff invests more than \$1 million in both this fund and Fidelity Advisor New Insights.

### Parent Pillar: + Positive

Fidelity isn't without challenges but remains well positioned enough to compete in a changing industry. It earns a Positive Parent rating. The firm's diversified asset mix has shielded it from steady outflows from its active U.S. equity funds, with its taxable bond, international equity, and low-priced index offerings attracting assets. Its revamped target-date offerings have improved, and in 2018 the firm plans to launch an additional series combin-

ing active and passive funds to better compete in an area where investor interest has grown.

Attracting and retaining talented investment professionals is more important than ever. The equity division came under fire in 2017 amid reports of sexual harassment and a hostile work environment, leading to portfolio manager dismissals and a change in leadership. While Fidelity addressed the personnel issues and is working to improve collaboration through weekly team meetings, more-open floor plans, and improved feedback systems, it remains to be seen how the division may incorporate team-based elements into the legacy star-manager system. Meanwhile, the fixed-income division remains in steady hands following the retirement of a longtime CIO. While the bond analyst and manager ranks have seen more change than usual lately, the team-oriented structure of its investment-grade and municipal offerings helps minimize the impact of departures.

### Price Pillar: + Positive

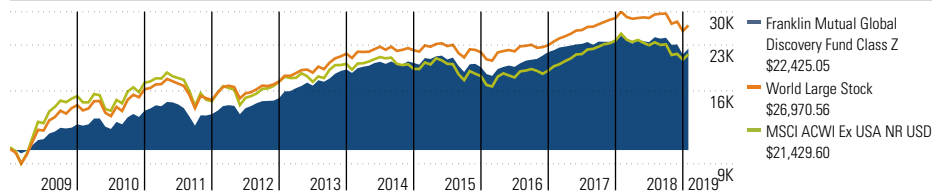
This fund has a performance fee, so its expense ratio can change based on how its three-year returns look relative to the S&P 500. (For every percentage point of out- or underperformance, the expense ratio is adjusted by 0.02% up to a maximum of 0.20%.) The performance-based fee is in the interest of investors, who don't have to pay as much when the fund underperforms. The fund's Price rating is determined without considering the performance adjustment. The no-load and K shares are priced below average relative to similarly sold peers, so the fund receives a Positive Price rating. Expenses have ranged from 0.64% to 1.01% in the past decade; the latter is hard to justify given the fund's huge asset base. The no-load shares cost 0.68%.

# Franklin Mutual Global Discovery Fund Class Z MDISX

Morningstar Analyst Rating  
**Bronze**

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
28.17	↑0.12   0.43	2.28	15	Open	\$100,000	None	0.96%	★★★	World Large Stock	Large Value

## Growth of 10,000 01-16-2009 - 01-16-2019



## Investment Strategy

The investment seeks capital appreciation. The fund invests primarily in equity securities (including securities convertible into, or that the investment manager expects to be exchanged for, common or preferred stock) of U.S. and foreign companies that the investment manager believes are available at market prices less than their value based on certain recognized or objective criteria (intrinsic value). The equity securities in which the fund invests are primarily common stock. The fund may invest substantially and potentially up to 100% of its assets in foreign securities.

## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,484	10,187	9,001	12,572	11,712	22,365
Fund	4.84	1.87	-9.99	7.93	3.21	8.38
+/- MSCI ACWI Ex USA NR USD	0.52	-0.80	4.41	-1.54	1.55	0.69
+/- Category	0.34	0.04	-0.85	-2.65	-1.49	-2.08
% Rank in Cat	36	50	62	86	76	83
# of Funds in Cat	954	945	894	719	612	353

\* Currency is displayed in USD

## Top Holdings 11-30-2018

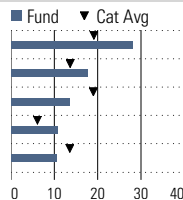
	Weight %	Last Price	Day Chg %	52 Week Range
Medtronic PLC	3.50	87.41 USD	0.51 ↑	76.41 - 100.15
Novartis AG ADR	3.29	88.39 USD	0.50 ↑	72.30 - 94.19
Walt Disney Co	2.60	110.62 USD	-0.24 ↓	97.68 - 120.20
⊖ Eli Lilly and Co	2.39	118.35 USD	1.32 ↑	73.69 - 119.84
GlaxoSmithKline PLC	2.37	— USD	-0.32 ↓	1,236.40 - 1,648.80

% Assets in Top 5 Holdings 14.15

⊕ Increase ⊖ Decrease ★ New to Portfolio

## Top Sectors 11-30-2018

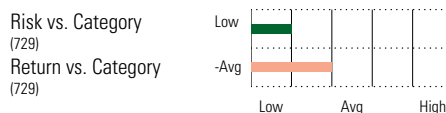
	Fund	3 Yr High	3 Yr Low	Cat Avg
Financial Services	28.09	28.09	26.46	18.21
Healthcare	17.61	17.61	15.10	12.73
Technology	13.57	13.57	11.93	18.08
Energy	10.75	10.75	7.83	5.17
Consumer Cyclical	10.59	11.25	10.59	12.65



## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-21-2018	26.29	1.0651	0.3064	0.0000	0.6130	1.9845
10-05-2018	32.95	0.0000	0.0000	0.0000	0.0296	0.0296
12-22-2017	32.45	0.4726	0.0000	0.0000	0.7632	1.2358
09-01-2017	32.57	0.3938	0.0964	0.0000	0.0314	0.5216
12-22-2016	31.24	0.7738	0.0396	0.0000	0.6748	1.4882

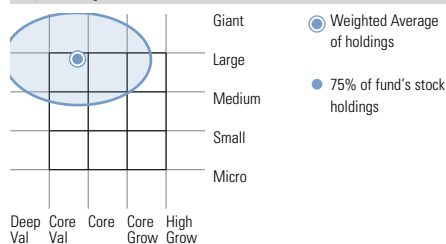
## 3 Year Average Morningstar Risk Measures



## Pillars

Process	⊕ Positive
Performance	⊕ Positive
People	⊕ Positive
Parent	⊖ Neutral
Price	⊖ Neutral
Rating	<b>Bronze</b>

## Style Map



## Asset Allocation

	% Net	% Short	% Long	Bench mark	Cat Avg
● Cash	4.41	0.26	4.67	0.00	1.68
● US Stock	52.54	0.00	52.54	54.17	52.75
● Non US Stock	39.19	0.87	40.06	45.79	44.03
● Bond	2.95	0.00	2.95	0.00	0.64
● Other	0.91	0.00	0.91	0.03	0.91

## Management

	Start Date
Peter A. Langerman	12-07-2009
Timothy Rankin	12-31-2010
Christian Correa	01-01-2018

# Franklin Mutual Global Discovery Fund Class Z MDISX

## Analysis

### Bargain-hunting can be a pain.

By Jonathan Wallace 4/5/2018

Franklin Mutual Global Discovery struggled in 2017 due to its value bias and a few poorly performing stock picks. Still, we expect the fund to perform well over the long haul, thanks to its robust process and experienced team. The fund earns a Morningstar Analyst Rating of Bronze.

The Franklin Mutual Series team is deep and tenured, which provides confidence that the fund's deep-value process will be consistently executed. The group of 27 investment professionals has an average of 21 years of industry experience, with more than 13 years on average with the Mutual Series team. The team also has dedicated merger/arbitrage and distressed-debt experts, an identifying feature and trademark of the Mutual Series style.

Management's bottom-up approach is primarily oriented toward cheap stocks but includes merger-arbitrage and distressed debt. Focusing on fundamentals helps them look past short-term drops to buy more when they think a security has become a bigger bargain. In mid-2015, the managers built a top-25 equity position in Volkswagen VOW3 because they thought its stock price didn't reflect the value of its Porsche and Audi businesses. When Volkswagen's shares then got crushed following its emissions scandal, management reassessed the company's value, including the impact of potential fines and lost sales, and increased the number of shares the fund held by roughly half. This focus on fundamentals also helped the managers add to names like Royal Dutch Shell RDSA and Symantec SYMC after share prices slid in 2015, and those stocks became primary drivers of the fund's rebound in 2016.

The fund struggled in 2017 due to several factors. Growth outperformed value, which acted as a headwind given the fund's deeper value tilt. The fund's policy of hedging most of its foreign currency risk, which has helped the fund for the better part of a decade, turned against it. There were

also struggles with a few stock picks, such as General Electric, Teva Pharmaceutical, and Rite Aid.

### Process Pillar: Positive

This fund's integrated value approach receives a Positive Process Pillar rating. As with other Mutual Series offerings, it's focused on cheap stocks, but also includes merger-arbitrage plays on announced acquisitions and distressed debt. While the managers pay attention to standard valuation metrics like price multiples, they concentrate on firms' enterprise values as a function of what each individual business line is worth. Their activity in merger-arbitrage helps keep tabs on what informed buyers are willing to pay. Once they find companies whose securities are trading at a material discount to their estimates of intrinsic value, they look across the capital structure and invest where they see the best risk/reward opportunities. Positions often migrate across that structure. An initial stake in a bankrupt firm's senior collateralized debt can lead to buying its junior unsecured debt as management becomes comfortable with its restructuring plan, or it may lead to an exchange for equity following the reorganization.

The managers court risk by investing in troubled firms, but their expertise, combined with an insistence on an appropriate margin of safety on price, provide some protection. They're also willing to wait years for theses to play out and readily go to cash if compelling alternatives are lacking. In addition, they're quick to sell once securities reach their estimates of fair value.


Management aims to layer downside protection into the structure of the portfolio. It holds a diverse mix of roughly 130 equity and fixed-income securities. Cheap stocks and merger-arbitrage equity positions typically take up 80%-90% of the fund's assets, while the remainder is split largely between distressed debt and cash, as opportunity dictates. As of December 2017, the fund's equity stake stood at 93%, with roughly 2% of assets in distressed debt. Since bankruptcy plays, whether liquidations or reorganizations, move according to the courts' timing, they can reward investors independent of market movements. Yet they also come

### Morningstar's Take

Morningstar Analyst Rating



### 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

### Fund Performance

	Total Return %	+/- Category
YTD	4.84	0.34
2018	-10.78	-1.14
2017	9.84	-13.77
2016	12.86	7.32
2015	-3.36	-1.67



# Franklin Mutual Global Discovery Fund Class Z MDISX

## Analysis

with their own brand of uncertainty.

The fund can invest all of its assets overseas and up to 25% in emerging markets. Foreign exposure peaked at 71% in 2007, 8% of which was in emerging markets (including South Korea and Taiwan). Since mid-2010, foreign exposure has generally trended downward, and most of the fund's stocks are multinationals like top-five holding Royal Dutch Shell RDS.A. While the managers don't hedge the foreign-currency exposure of holdings that do most of their business in U.S. dollars, like Shell, they do hedge the rest of their international currency exposure. Cash was near 30% when the current team took over in late 2009. It quickly came down and has since ranged from roughly 5% to 15%.

### Performance Pillar: Positive

By building a portfolio of cheap stocks, merger-arbitrage plays, and distressed debt, management aims to outperform the benchmark on a risk-adjusted basis. Since lead manager Peter Langerman began his second stint here at year-end 2009 through March 2018, this value portfolio's returns edged the MSCI World Value Index, but lagged both the world stock peer group average and the prospectus benchmark, the MSCI World Index. The fund has benefited from its policy of hedging most foreign currency risk as over that time period the hedged version of the MSCI World has outperformed the unhedged version. Offsetting the currency tailwind is the fact that value investing has been out of favor globally, demonstrated by the MSCI World Value Index lagging the MSCI World Index during the same period. The fund struggled in 2017 as value investing was again out of favor in comparison to growth and with stock picks like General Electric, Teva Pharmaceutical, and Rite Aid weighing on performance during the year.

The fund's results look better on a risk-adjusted basis, thanks to lower volatility than the benchmark. Since year-end 2009, the fund's Morningstar Risk-Adjusted Return beat the category average and the MSCI World Value Index, earning it a Positive Performance rating. However, the fund's risk-adjusted returns lag the manager's prospect-

us benchmark, the MSCI World Index.

### People Pillar: Positive

This fund's Positive People Pillar rating reflects management's expertise and shared experience. Lead manager Peter Langerman joined predecessor Heine Securities in the 1980s, while comanager Timothy Rankin joined the firm shortly after Franklin's 1996 acquisition. With comanager Philippe Brugere-Trelat's announced retirement, which will be effective in May 2018, Mutual Series named veteran Christian Correa to the manager roster in January 2018. Correa joined the firm in 2003 and serves as director of Research. Langerman and Rankin both left the firm for periods, Langerman between 2002 and 2005, and Rankin between 2004 and 2010. Langerman previously managed here from 1993 to 1998 and returned in late December 2009. Rankin was a comanager here from July 2001 to late 2004 and returned at year-end 2010.

The managers are part of Franklin's Mutual Series team. Tracing its lineage back to pioneering value investor Max Heine and his protege Michael Price, the team comprises 27 investment professionals who have been with the firm or its predecessor for 13-plus years on average. They divide coverage by global industry, region, and asset class. For example, Rankin covers chemicals, oil, gas, and coal while Correa specializes in merger arbitrage, software, and services. Langerman and Rankin each invest more than \$1 million in the fund, and Brugere-Trelat at least \$500,000.

### Parent Pillar: Neutral

Publicly traded but family managed, Franklin Resources is parent to Franklin Templeton Investments. A global asset manager with \$734 billion in assets (as of July 2018), the firm has grown through acquisitions, and it has not interfered with those investment cultures.

That said, Franklin's struggles with outflows in recent years have led to some changes. The firm

launched several customized "LibertyQ" exchange-traded funds starting in 2016. While many active managers have rolled out cheaper, more-passive options, Franklin also launched single-country equity ETFs, an odd fit in its fund lineup. The firm also made changes to investment team leadership, including the 2017 creation of the FT Investment Solutions Group headed by longtime Franklin Income portfolio manager Ed Perks and the appointments of Templeton's Stephen Dover to head of equities and risk team veteran Mat Gulley to head of alternatives. It combined some value-equity investment personnel under the Mutual Series boutique, and the firm has emphasized centralized risk management owing to the struggles of some of its flagship funds.

These changes are sensible, and the firm has some strong offerings globally, including its India- and U.K.-based equity funds. Given the magnitude of the changes and the longer-term struggles of much of its fund lineup, however, the firm's Parent rating remains Neutral.

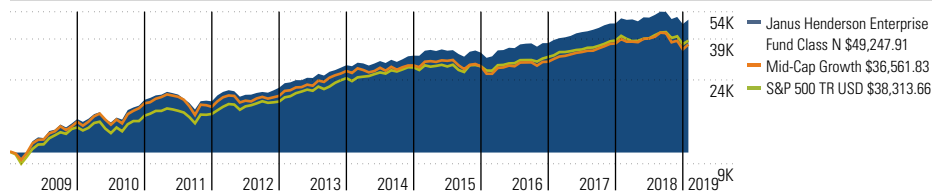
### Price Pillar: Neutral

The fund's assets-per-share weighted expense ratio of 1.21% is solidly in the average range relative to its world stock peers, earning it a Neutral Price rating, which is a downgrade from last year's Positive Price rating. Fees here haven't increased, but peers have cut expenses more aggressively than this fund. About 45% of the fund's assets are in the broker sold A-shares, which carry a 1.24% price tag, which is solidly in the middle of similarly sold peers. The legacy institutional shares, which hold roughly one third of the assets, come at a price tag 0.99%, which toes the line between the average and above-average ratings in the fee level group.

# Janus Henderson Enterprise Fund Class N JDMNX

**Morningstar Analyst Rating**  
**Bronze**

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
116.55	↑0.56   0.48	0.30	16	Limited	\$1	None	0.67%	★★★★★	Mid-Cap Growth	Mid Growth

**Growth of 10,000 01-16-2009 - 01-16-2019**

**Investment Strategy**

The investment seeks long-term growth of capital. The fund pursues its investment objective by investing primarily in common stocks selected for their growth potential, and normally invests at least 50% of its equity assets in medium-sized companies. Medium-sized companies are those whose market capitalization falls within the range of companies in the Russell Midcap® Growth Index. Market capitalization is a commonly used measure of the size and value of a company. It may also invest in foreign securities, which may include investments in emerging markets.

**Performance 01-16-2019**

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,549	10,347	10,080	16,258	16,964	48,721
Fund	5.49	3.47	0.80	17.59	11.15	17.16
+/- S&P 500 TR USD	1.06	2.69	4.70	3.64	1.69	2.87
+/- Category	-0.56	0.90	5.33	4.24	4.38	2.99
% Rank in Cat	63	25	16	9	3	—
# of Funds in Cat	619	618	598	535	482	338

\* Currency is displayed in USD

**Top Holdings 09-30-2018**

	Weight %	Last Price	Day Chg %	52 Week Range
Boston Scientific Corp	2.05	36.94 USD	0.93 ↑	25.04 - 39.44
⊕ TE Connectivity Ltd	2.03	78.92 USD	0.54 ↑	69.84 - 108.23
WEX Inc	1.99	157.74 USD	0.11 ↑	131.35 - 203.49
TD Ameritrade Holding Corp	1.99	54.46 USD	0.15 ↑	45.70 - 63.01
⊖ Atlassian Corporation PLC A	1.97	93.74 USD	-0.62 ↓	47.74 - 98.21
% Assets in Top 5 Holdings	10.02			

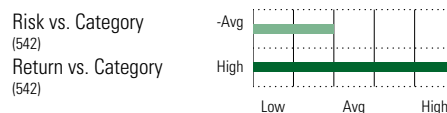
⊕ Increase ⊖ Decrease ✱ New to Portfolio

**Top Sectors 09-30-2018**

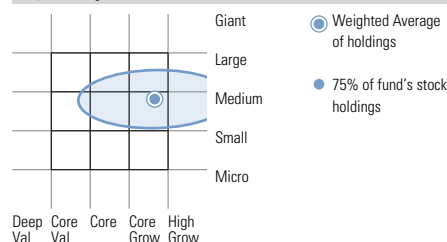
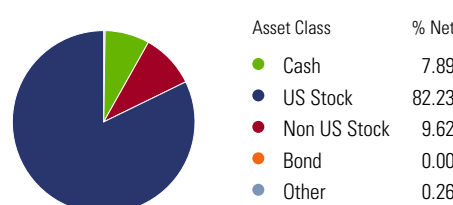
	Fund	3 Yr High	3 Yr Low	Cat Avg	
Technology	32.20	33.06	30.45	25.73	■ Fund ▼ Cat Avg
Industrials	20.55	22.53	19.92	17.45	
Healthcare	17.04	17.47	17.04	15.73	
Consumer Cyclical	13.22	13.84	12.12	16.35	
Financial Services	11.35	11.35	8.35	10.49	

**Dividend and Capital Gains Distributions**

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-18-2018	110.64	6.7344	0.0690	0.0000	0.3515	7.1549
12-19-2017	119.18	2.0926	0.0000	0.0000	0.2279	2.3205
12-19-2016	96.92	1.5579	0.0000	0.0000	0.2134	1.7713
12-17-2015	86.14	2.8187	0.3164	0.0000	0.4000	3.5351
12-17-2014	85.38	4.9724	0.0000	0.0000	0.0921	5.0645

**3 Year Average Morningstar Risk Measures**

**Pillars**

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

**Style Map**

**Asset Allocation**

**Management**

	Start Date
Brian Demain	11-01-2007
Philip Cody Wheaton	07-01-2016

# Janus Henderson Enterprise Fund Class N JDMNX

## Analysis

### A solid holding.

By Greg Carlson 8/23/2018

Janus Henderson Enterprise's proven leader, patient approach, and fee advantage earn a Morningstar Analyst Rating of Bronze.

There's a stable, experienced crew behind this closed fund. Brian Demain has managed it since November 2007, and he's backed by comanager Cody Wheaton, a 15-year veteran of the firm's small/mid-cap team that also includes five analysts with an average of 10 years' tenure. The analysts also support Janus Henderson Triton JATTX and Janus Henderson Venture JAVTX (which also earn Bronze ratings).

Demain's strategy is fundamentally appealing: The fund focuses on mid-cap firms with solid balance sheets and competitive advantages and holds them for far longer than its typical mid-growth Morningstar Category peer (seven years on average versus two). The result has been lower transaction costs and better tax efficiency, as well as relative buoyancy in downturns. And the fund's overall record is strong since Demain took the helm in November 2007; it surpassed more than 80% of peers and its Russell Midcap Growth benchmark on both total and risk-adjusted returns through July 2018. The fund has had trouble beating the index at times, falling short in 43% of rolling five-year periods during Demain's tenure. That owes in part to the fund's tilt toward steadier fare in a long bull market, as well as execution issues earlier in Demain's tenure.

Investors have taken notice of its success, and Demain now manages \$23.5 billion total in this strategy. Big stakes in a couple of the fund's top holdings mean it could take time to fully liquidate those positions, but Demain's low-turnover approach largely mitigates those concerns, and the fund's number of holdings and active share versus the benchmark have remained stable through this period of strong asset growth. Inflows have also slowed dramatically since the fund closed to new investors in January 2017, with the exception of

an early 2018 spike that Demain partly attributes to retirement-plan commitments made before the fund closed.

The fund's below-average fees also give it a long-term edge. It remains a fine holding.

### Process Pillar: Positive

This fund's patient, prudent approach earns a Positive rating for Process.

Lead manager Brian Demain prefers companies with recurring revenues, competitive advantages, and strong or improving returns on invested capital. The portfolio's average profitability measures typically land above the mid-growth category norm. He is willing to pay up for durable growth at times, thus valuations are typically at or above the category norm as well. The fund will also own, in far smaller quantities, companies with rapid, more-volatile growth, but the overall portfolio has consistently been less exposed to volatility than its Russell Midcap Growth benchmark according to Morningstar's risk model.

Demain doesn't reflexively abide by typical quality metrics. For example, he cares less about a company's absolute amount of debt than the structure of that debt. He also wants companies that can generate more than enough cash to pay off their debt.

The fund typically owns 70-85 stocks. Demain is a patient investor--portfolio turnover averaged 14% over the past five years, while the category median was 49%. That said, he keeps a close eye on discounted cash flow valuations for every holding and won't hesitate to sell when they hit full value. For example, fiber-optic-connector maker Amphenol APH was sold in 2018's first quarter after a strong run since its 2007 purchase.


Sector weightings are not strictly constrained at this fund. Its tech stake was significantly higher than the Russell Midcap Growth benchmark's for years, though the index has caught up as tech has rallied (both had a 32.2% stake in the sector at the end of June 2018). Brian Demain has found a

### Morningstar's Take

Morningstar Analyst Rating



### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Neutral
Price	 Positive

### Morningstar Analyst Rating

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

### Analyst Rating Spectrum

 Gold  Silver  Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	5.49	-0.56
2018	-0.81	5.84
2017	26.65	2.73
2016	12.18	6.15
2015	3.57	4.51

# Janus Henderson Enterprise Fund Class N JDMNX

## Analysis

wealth of tech firms he says have strong balance sheets and solid growth prospects. Top holdings in the sector include several that Morningstar believes possess wide economic moats, such as semiconductor maker Microchip Technology MCHP (the fund's largest holding) and Constellation Software CSU.

The fund has grown rapidly in recent years, from \$3.9 billion at the end of 2014 to \$18.6 billion at the end of July 2018. True, some of that growth was due to appreciation as stocks have rallied strongly during that period. But the fund also took in a net \$8 billion during that span, and Demain recently managed a total of \$23.5 billion in the strategy. The fund hasn't shown typical signs of asset bloat--the number of holdings and the fund's active share versus the index are within historical norms. But the fund owns substantial stakes in a couple of its smaller-cap picks, so it could be difficult to sell those quickly. That said, Demain has particular conviction in those holdings (printing firm Cimpres CMPR and test-equipment maker National Instruments NATI), and inflows have slowed since the fund closed in January 2017.

### Performance Pillar: Positive

This fund's attractive risk/reward profile earns a Positive rating for Performance.

Lead manager Brian Demain's modestly cautious approach has at times left the fund behind its Russell Midcap Growth benchmark in the bull market that began in early 2009, but he's generated strong returns since taking the helm in November 2007. Through July 2018, the fund gained an annualized 9.7%, besting the index by 0.9 percentage points and surpassing 89% of the fund's mid-growth category peers. The fund's risk-adjusted returns, as measured by Sharpe and Sortino ratios, have been similarly impressive.

The fund has typically gained an edge on both the benchmark and its typical peer when times are tough. When stocks have declined during Demain's tenure, the fund has lost 91% as much as the index and 88% as much as the average mid-growth fund. (The fund has lost less than the mid-

growth median in every significant downturn on his watch.) In rising markets, the fund has barely edged the category average and gained 97% as much as the index. The fund's modest upside captures, combined with the market's long rise, are reflected in its rolling results. In 70 five-year periods since Demain took the helm, the fund beat the mid-growth category median 94% of the time but surpassed the index just 57% of the time. Execution issues earlier in Demain's tenure were also a contributing factor.

### People Pillar: Positive

A veteran lead manager backed largely by a stable, proven team earns a Positive People rating.

Brian Demain has deep experience with this fund's investment universe. He's been the lead manager since November 2007 and previously served as an assistant manager for three years. He joined the firm as an analyst in 1999 and invests more than \$1 million in this fund.

Demain is backed by the firm's small/mid-cap team, which is composed primarily of veterans and covers most of this fund's holdings. Comanager Cody Wheaton was promoted in July 2016 after 13 years on the team. He still covers financial stocks and invests between \$100,001 and \$500,000 in the fund. Five full-time analysts, with an average of 10 years' tenure at the firm, work on the team as well. The managers also get input from Jonathan Coleman and Scott Stutzman, who comanage the other two funds this team supports (Janus Henderson Triton and Janus Henderson Venture, which both earn Bronze ratings).

The team has delivered strong results at all three funds, and it's been fairly stable--the last departure was analyst and Janus Henderson Venture comanager Maneesh Modi, who left in 2015.

The rest of the fund's holdings are covered by the firm's large-cap team. That team has seen a lot of turnover, but the three analysts Demain says he works most closely with (two tech analysts and a healthcare analyst) have remained at the firm.

### Parent Pillar: Neutral

In October 2016, Janus Capital Group and Henderson Global Investors announced that they intended to merge. The deal was completed at the end of May 2017, with the new group named Janus Henderson Investors.

The business aims and rationale for combining the two entities were clear. Both firms had been looking to diversify their product ranges and increase their scope of distribution, and this merger achieves those objectives. The combined entity also has greater scale--total assets under management were \$345 billion at the end of June 2017--but no long-term fee cuts, which would help the firm better compete in an industry where fees are declining, have been announced. The previous firms' CEOs are co-leaders of the new group, and Enrique Chang, Janus' head of investments, is the overall CIO. This provides some potential for change to the Henderson culture, but Chang had a positive impact on the Janus equity team, and some senior members from the Henderson investment team still have a voice.

There have been personnel departures, but the fact that investment team overlap was relatively limited has been a positive. There are, however, likely to be further changes as the group strategy takes shape, not least in terms of the CEO role, which the board is expected to review in three years. We continue to monitor this situation. Both firms previously earned Neutral Parent ratings, and the combined firm does as well.

### Price Pillar: Positive

This fund has done a fairly good job of sharing economies of scale with shareholders across its largest share classes. The fund's I shares hold 32% of the assets, charge 0.77%, and rank below-average compared with similarly distributed peers. The T shares hold 28% of the assets, charge 0.92%, and rank similarly. The N shares hold 20% of the assets, charge 0.67%, and are cheaper than 80% of peers. And the D shares hold 10% of the assets, charge 0.82%, and rank in the second-lowest quintile among peers. The fund's other four share classes hold just 9% of its assets combined.

# Janus Henderson Enterprise Fund Class N JDMNX

---

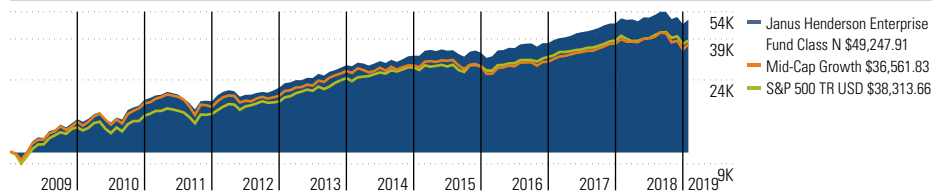
## Analysis

Low portfolio turnover has meant relatively low brokerage commission costs and better tax efficiency as well. The fund earns a Positive rating for Price.

# Janus Henderson Enterprise Fund Class N JDMNX

**Morningstar Analyst Rating**  
**Bronze**

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
116.55	↑0.56   0.48	0.30	16.5	Limited	\$1 mil	None	0.67%	★★★★★	Mid-Cap Growth	Mid Growth

**Growth of 10,000 01-16-2009 - 01-16-2019**

**Investment Strategy**

The investment seeks long-term growth of capital. The fund pursues its investment objective by investing primarily in common stocks selected for their growth potential, and normally invests at least 50% of its equity assets in medium-sized companies. Medium-sized companies are those whose market capitalization falls within the range of companies in the Russell Midcap® Growth Index. Market capitalization is a commonly used measure of the size and value of a company. It may also invest in foreign securities, which may include investments in emerging markets.

**Performance 01-16-2019**

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,549	10,347	10,080	16,258	16,964	48,721
Fund	5.49	3.47	0.80	17.59	11.15	17.16
+/- S&P 500 TR USD	1.06	2.69	4.70	3.64	1.69	2.87
+/- Category	-0.56	0.90	5.33	4.24	4.38	2.99
% Rank in Cat	63	25	16	9	3	—
# of Funds in Cat	619	618	598	535	482	338

\* Currency is displayed in BASE

**Top Holdings 09-30-2018**

	Weight %	Last Price	Day Chg %	52 Week Range
Boston Scientific Corp	2.05	36.81 BASE	0.52 ↑	25.04 - 39.44
⊕ TE Connectivity Ltd	2.03	79.73 BASE	1.58 ↑	69.84 - 108.23
WEX Inc	1.99	158.17 BASE	0.42 ↑	131.35 - 203.49
TD Ameritrade Holding Corp	1.99	54.36 BASE	-0.04 ↓	45.70 - 63.01
⊖ Atlassian Corporation PLC A	1.97	92.92 BASE	-1.48 ↓	47.74 - 98.21
% Assets in Top 5 Holdings	10.02			

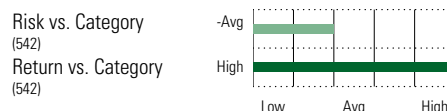
⊕ Increase ⊖ Decrease ✱ New to Portfolio

**Top Sectors 09-30-2018**

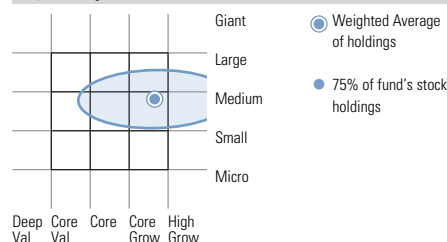
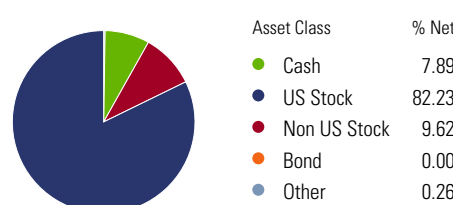
	Fund	3 Yr High	3 Yr Low	Cat Avg	
Technology	32.20	33.06	30.45	25.73	■ Fund ▼ Cat Avg
Industrials	20.55	22.53	19.92	17.45	
Healthcare	17.04	17.47	17.04	15.73	
Consumer Cyclical	13.22	13.84	12.12	16.35	
Financial Services	11.35	11.35	8.35	10.49	

**Dividend and Capital Gains Distributions**

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-18-2018	110.64	6.7344	0.0690	0.0000	0.3515	7.1549
12-19-2017	119.18	2.0926	0.0000	0.0000	0.2279	2.3205
12-19-2016	96.92	1.5579	0.0000	0.0000	0.2134	1.7713
12-17-2015	86.14	2.8187	0.3164	0.0000	0.4000	3.5351
12-17-2014	85.38	4.9724	0.0000	0.0000	0.0921	5.0645

**3 Year Average Morningstar Risk Measures**

**Pillars**

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

**Style Map**

**Asset Allocation**

**Management**

	Start Date
Brian Demain	11-01-2007
Philip Cody Wheaton	07-01-2016



# Janus Henderson Enterprise Fund Class N JDMNX

## Analysis

### A solid holding.

By Greg Carlson 8/23/2018

Janus Henderson Enterprise's proven leader, patient approach, and fee advantage earn a Morningstar Analyst Rating of Bronze.

There's a stable, experienced crew behind this closed fund. Brian Demain has managed it since November 2007, and he's backed by comanager Cody Wheaton, a 15-year veteran of the firm's small/mid-cap team that also includes five analysts with an average of 10 years' tenure. The analysts also support Janus Henderson Triton JATTX and Janus Henderson Venture JAVTX (which also earn Bronze ratings).

Demain's strategy is fundamentally appealing: The fund focuses on mid-cap firms with solid balance sheets and competitive advantages and holds them for far longer than its typical mid-growth Morningstar Category peer (seven years on average versus two). The result has been lower transaction costs and better tax efficiency, as well as relative buoyancy in downturns. And the fund's overall record is strong since Demain took the helm in November 2007; it surpassed more than 80% of peers and its Russell Midcap Growth benchmark on both total and risk-adjusted returns through July 2018. The fund has had trouble beating the index at times, falling short in 43% of rolling five-year periods during Demain's tenure. That owes in part to the fund's tilt toward steadier fare in a long bull market, as well as execution issues earlier in Demain's tenure.

Investors have taken notice of its success, and Demain now manages \$23.5 billion total in this strategy. Big stakes in a couple of the fund's top holdings mean it could take time to fully liquidate those positions, but Demain's low-turnover approach largely mitigates those concerns, and the fund's number of holdings and active share versus the benchmark have remained stable through this period of strong asset growth. Inflows have also slowed dramatically since the fund closed to new investors in January 2017, with the exception of

an early 2018 spike that Demain partly attributes to retirement-plan commitments made before the fund closed.

The fund's below-average fees also give it a long-term edge. It remains a fine holding.

#### Process Pillar: Positive

This fund's patient, prudent approach earns a Positive rating for Process.

Lead manager Brian Demain prefers companies with recurring revenues, competitive advantages, and strong or improving returns on invested capital. The portfolio's average profitability measures typically land above the mid-growth category norm. He is willing to pay up for durable growth at times, thus valuations are typically at or above the category norm as well. The fund will also own, in far smaller quantities, companies with rapid, more-volatile growth, but the overall portfolio has consistently been less exposed to volatility than its Russell Midcap Growth benchmark according to Morningstar's risk model.

Demain doesn't reflexively abide by typical quality metrics. For example, he cares less about a company's absolute amount of debt than the structure of that debt. He also wants companies that can generate more than enough cash to pay off their debt.

The fund typically owns 70-85 stocks. Demain is a patient investor--portfolio turnover averaged 14% over the past five years, while the category median was 49%. That said, he keeps a close eye on discounted cash flow valuations for every holding and won't hesitate to sell when they hit full value. For example, fiber-optic-connector maker Amphenol APH was sold in 2018's first quarter after a strong run since its 2007 purchase.

Sector weightings are not strictly constrained at this fund. Its tech stake was significantly higher than the Russell Midcap Growth benchmark's for years, though the index has caught up as tech has rallied (both had a 32.2% stake in the sector at the end of June 2018). Brian Demain has found a

### Morningstar's Take

Morningstar Analyst Rating



### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Neutral
Price	 Positive

### Morningstar Analyst Rating

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

### Analyst Rating Spectrum

 Gold  Silver  Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	5.49	-0.56
2018	-0.81	5.84
2017	26.65	2.73
2016	12.18	6.15
2015	3.57	4.51

# Janus Henderson Enterprise Fund Class N JDMNX

## Analysis

wealth of tech firms he says have strong balance sheets and solid growth prospects. Top holdings in the sector include several that Morningstar believes possess wide economic moats, such as semiconductor maker Microchip Technology MCHP (the fund's largest holding) and Constellation Software CSU.

The fund has grown rapidly in recent years, from \$3.9 billion at the end of 2014 to \$18.6 billion at the end of July 2018. True, some of that growth was due to appreciation as stocks have rallied strongly during that period. But the fund also took in a net \$8 billion during that span, and Demain recently managed a total of \$23.5 billion in the strategy. The fund hasn't shown typical signs of asset bloat--the number of holdings and the fund's active share versus the index are within historical norms. But the fund owns substantial stakes in a couple of its smaller-cap picks, so it could be difficult to sell those quickly. That said, Demain has particular conviction in those holdings (printing firm Cimpress CMPR and test-equipment maker National Instruments NATI), and inflows have slowed since the fund closed in January 2017.

### Performance Pillar: Positive

This fund's attractive risk/reward profile earns a Positive rating for Performance.

Lead manager Brian Demain's modestly cautious approach has at times left the fund behind its Russell Midcap Growth benchmark in the bull market that began in early 2009, but he's generated strong returns since taking the helm in November 2007. Through July 2018, the fund gained an annualized 9.7%, besting the index by 0.9 percentage points and surpassing 89% of the fund's mid-growth category peers. The fund's risk-adjusted returns, as measured by Sharpe and Sortino ratios, have been similarly impressive.

The fund has typically gained an edge on both the benchmark and its typical peer when times are tough. When stocks have declined during Demain's tenure, the fund has lost 91% as much as the index and 88% as much as the average mid-growth fund. (The fund has lost less than the mid-

growth median in every significant downturn on his watch.) In rising markets, the fund has barely edged the category average and gained 97% as much as the index. The fund's modest upside captures, combined with the market's long rise, are reflected in its rolling results. In 70 five-year periods since Demain took the helm, the fund beat the mid-growth category median 94% of the time but surpassed the index just 57% of the time. Execution issues earlier in Demain's tenure were also a contributing factor.

### People Pillar: Positive

A veteran lead manager backed largely by a stable, proven team earns a Positive People rating.

Brian Demain has deep experience with this fund's investment universe. He's been the lead manager since November 2007 and previously served as an assistant manager for three years. He joined the firm as an analyst in 1999 and invests more than \$1 million in this fund.

Demain is backed by the firm's small/mid-cap team, which is composed primarily of veterans and covers most of this fund's holdings. Comanager Cody Wheaton was promoted in July 2016 after 13 years on the team. He still covers financial stocks and invests between \$100,001 and \$500,000 in the fund. Five full-time analysts, with an average of 10 years' tenure at the firm, work on the team as well. The managers also get input from Jonathan Coleman and Scott Stutzman, who comanage the other two funds this team supports (Janus Henderson Triton and Janus Henderson Venture, which both earn Bronze ratings).

The team has delivered strong results at all three funds, and it's been fairly stable--the last departure was analyst and Janus Henderson Venture comanager Maneesh Modi, who left in 2015.

The rest of the fund's holdings are covered by the firm's large-cap team. That team has seen a lot of turnover, but the three analysts Demain says he works most closely with (two tech analysts and a healthcare analyst) have remained at the firm.

### Parent Pillar: Neutral

In October 2016, Janus Capital Group and Henderson Global Investors announced that they intended to merge. The deal was completed at the end of May 2017, with the new group named Janus Henderson Investors.

The business aims and rationale for combining the two entities were clear. Both firms had been looking to diversify their product ranges and increase their scope of distribution, and this merger achieves those objectives. The combined entity also has greater scale--total assets under management were \$345 billion at the end of June 2017--but no long-term fee cuts, which would help the firm better compete in an industry where fees are declining, have been announced. The previous firms' CEOs are co-leaders of the new group, and Enrique Chang, Janus' head of investments, is the overall CIO. This provides some potential for change to the Henderson culture, but Chang had a positive impact on the Janus equity team, and some senior members from the Henderson investment team still have a voice.

There have been personnel departures, but the fact that investment team overlap was relatively limited has been a positive. There are, however, likely to be further changes as the group strategy takes shape, not least in terms of the CEO role, which the board is expected to review in three years. We continue to monitor this situation. Both firms previously earned Neutral Parent ratings, and the combined firm does as well.

### Price Pillar: Positive

This fund has done a fairly good job of sharing economies of scale with shareholders across its largest share classes. The fund's I shares hold 32% of the assets, charge 0.77%, and rank below-average compared with similarly distributed peers. The T shares hold 28% of the assets, charge 0.92%, and rank similarly. The N shares hold 20% of the assets, charge 0.67%, and are cheaper than 80% of peers. And the D shares hold 10% of the assets, charge 0.82%, and rank in the second-lowest quintile among peers. The fund's other four share classes hold just 9% of its assets combined.

# Janus Henderson Enterprise Fund Class N JDMNX

---

## Analysis

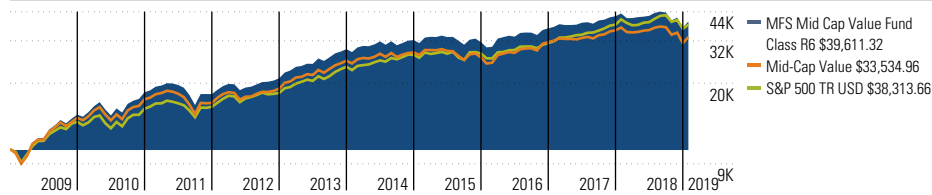
Low portfolio turnover has meant relatively low brokerage commission costs and better tax efficiency as well. The fund earns a Positive rating for Price.

# MFS Mid Cap Value Fund Class R6 MVCKX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
21.14	↑0.17   0.81	1.31	7	Open	—	None	0.71%	★★★★	Mid-Cap Value	Mid Value

## Growth of 10,000 01-16-2009 - 01-16-2019



## Investment Strategy

The investment seeks capital appreciation. The fund normally invests at least 80% of the fund's net assets in issuers with medium market capitalizations. The adviser generally defines medium market capitalization issuers as issuers with market capitalizations similar to those of issuers included in the Russell Midcap® Value Index over the last 13 months at the time of purchase. It normally invests the fund's assets primarily in equity securities.

## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,645	10,247	9,246	13,667	13,418	39,009
Fund	6.45	2.47	-7.54	10.98	6.06	14.58
+/- S&P 500 TR USD	2.01	1.70	-3.64	-2.97	-3.40	0.29
+/- Category	-0.07	0.12	2.16	-0.15	0.83	1.64
% Rank in Cat	53	46	27	58	30	—
# of Funds in Cat	418	418	410	356	299	214

\* Currency is displayed in USD

## Top Holdings 11-30-2018

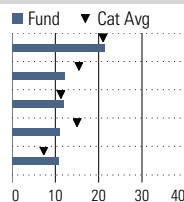
	Weight %	Last Price	Day Chg %	52 Week Range
Nasdaq Inc	1.35	82.83 USD	-0.22 ↓	72.98 - 96.84
The Hartford Financial Services Group Inc	1.25	45.75 USD	0.95 ↑	40.54 - 59.20
KeyCorp	1.24	16.40 USD	-2.12 ↓	13.65 - 22.40
Life Storage Inc	1.19	93.13 USD	0.42 ↑	76.42 - 102.91
Medical Properties Trust Inc	1.18	17.01 USD	0.41 ↑	11.82 - 17.52

% Assets in Top 5 Holdings 6.21

⊕ Increase ⊖ Decrease ★ New to Portfolio

## Top Sectors 11-30-2018

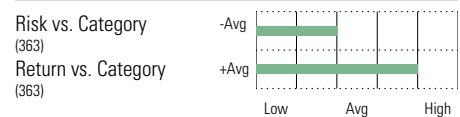
	Fund	3 Yr High	3 Yr Low	Cat Avg
Financial Services	21.35	24.62	21.35	20.10
Industrials	12.01	12.50	11.98	14.53
Technology	11.82	11.82	6.75	10.36
Consumer Cyclical	10.97	12.85	10.97	14.08
Utilities	10.69	10.69	7.74	6.42



## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-13-2018	20.87	0.7694	0.2763	0.0000	0.2747	1.3204
12-19-2017	23.63	0.5183	0.1653	0.0000	0.1919	0.8755
12-20-2016	21.97	0.0000	0.0138	0.0000	0.3141	0.3279
12-17-2015	18.85	0.4368	0.3575	0.0000	0.1317	0.9261
12-18-2014	20.22	0.9552	0.2681	0.0000	0.1563	1.3796

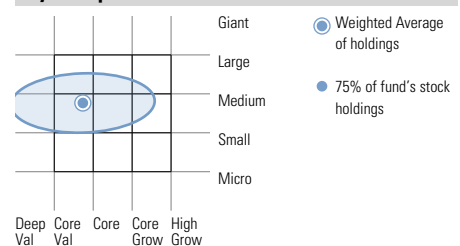
## 3 Year Average Morningstar Risk Measures



## Pillars

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

## Style Map



## Asset Allocation

	% Net	% Short	% Long	Bench mark	Cat Avg
Cash	2.01	0.09	2.10	0.00	2.76
US Stock	95.14	0.00	95.14	99.07	92.41
Non US Stock	2.85	0.00	2.85	0.93	4.62
Bond	0.00	0.00	0.00	0.00	0.08
Other	0.00	0.00	0.00	0.00	0.14

## Management

	Start Date
Kevin J. Schmitz	11-20-2008
Brooks A. Taylor	11-20-2008

# MFS Mid Cap Value Fund Class R6 MVCKX

## Analysis

### Morningstar's Take

Morningstar Analyst Rating —

### Morningstar Pillars

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

### Morningstar Analyst Rating

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

Analyst Rating Spectrum

 Gold
  Silver
  Bronze
 Neutral
 Negative

### Fund Performance

	Total Return %	+/- Category
YTD	6.45	-0.07
2018	-11.31	1.55
2017	13.84	0.62
2016	15.86	-2.20
2015	-2.14	3.27

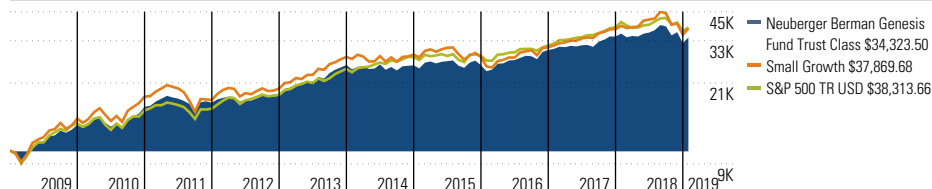
We do not currently publish an Analyst Report for this fund.

# Neuberger Berman Genesis Fund Trust Class NBGEX

Morningstar Analyst Rating  
**Bronze**

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
50.95	↑0.36   0.71	0.01	9	Open	—	None	1.10%	★★★	Small Growth	Mid Growth

## Growth of 10,000 01-16-2009 - 01-16-2019



## Investment Strategy

The investment seeks growth of capital. The fund invests mainly in common stocks of small-capitalization companies, which it defines as those with a total market capitalization within the market capitalization range of companies in the Russell 2000® Index at the time of initial purchase. It may continue to hold or add to a position in a company after its market capitalization has moved outside the range of the Russell 2000® Index. The fund seeks to reduce risk by diversifying among many companies and industries.

## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,617	10,261	9,593	14,886	13,594	34,126
Fund	6.17	2.61	-4.07	14.18	6.33	13.06
+/- S&P 500 TR USD	1.73	1.84	-0.16	0.23	-3.12	-1.23
+/- Category	-0.97	-0.66	-2.34	-1.22	0.06	-1.61
% Rank in Cat	83	71	65	66	52	82
# of Funds in Cat	694	692	667	578	510	387

\* Currency is displayed in USD

## Top Holdings 09-30-2018

	Weight %	Last Price	Day Chg %	52 Week Range
Aspen Technology Inc	2.49	89.00 USD	-0.84 ↓	68.12 - 118.86
Pool Corp	2.35	151.86 USD	2.40 ↑	123.88 - 175.87
West Pharmaceutical Services Inc	2.26	104.17 USD	-0.30 ↓	82.74 - 124.76
Bio-Techne Corp	2.00	162.61 USD	1.45 ↑	128.06 - 206.04
Tyler Technologies Inc	1.87	185.39 USD	0.21 ↑	173.26 - 252.47
% Assets in Top 5 Holdings	10.97			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

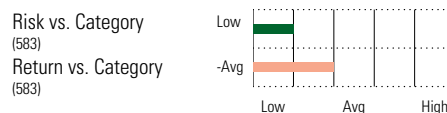
## Top Sectors 09-30-2018

	Fund	3 Yr High	3 Yr Low	Cat Avg	
Technology	20.45	20.62	18.09	25.69	■ Fund ▼ Cat Avg
Industrials	18.63	20.98	18.63	16.23	
Financial Services	15.39	17.64	15.39	9.92	
Healthcare	14.15	14.15	12.03	19.13	
Consumer Cyclical	13.73	14.81	13.73	13.01	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-17-2018	48.60	5.8446	0.0000	0.0000	0.0031	5.8477
12-15-2017	57.07	7.6989	0.1883	0.0000	0.0502	7.9374
12-16-2016	57.07	3.2949	0.0405	0.0000	0.0308	3.3663
12-17-2015	50.92	5.2632	0.0000	0.0000	0.0325	5.2957
12-15-2014	54.37	4.6587	0.0000	0.0000	0.0338	4.6925

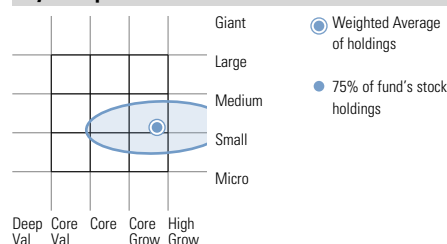
## 3 Year Average Morningstar Risk Measures



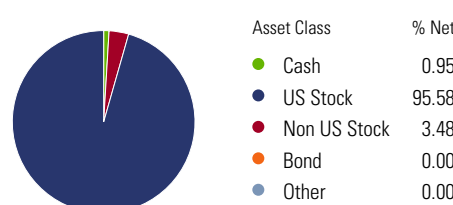
## Pillars

Process	⊕ Positive
Performance	⊕ Positive
People	⊕ Positive
Parent	⊕ Positive
Price	⊕ Positive
Rating	<b>Bronze</b>

## Style Map



## Asset Allocation



## Management

	Start Date
Judith M. Vale	02-01-1994
Robert W. D'Alelio	08-01-1997
Brett S. Reiner	12-19-2005
Gregory G. Spiegel	02-01-2015



# Neuberger Berman Genesis Fund Trust Class NBGEX

## Analysis

### Deserves to be Neuberger's largest equity fund.

By Tony Thomas 11/21/2018

Neuberger Berman Genesis' veteran management and conservative but effective approach merit a Morningstar Analyst Rating of Bronze, even if the strategy's size bears watching.

Two senior portfolio managers stand on a firm foundation here. Judy Vale and Bob D'Alelio have run this fund together since August 1997, with Vale's tenure going back farther to 1994. Each is approaching 40 years of industry experience. As veteran managers and research generalists, they've fleshed out a team to support them. It includes associate managers Brett Reiner and Greg Spiegel and four dedicated analysts who provide sector-specific insights.

Vale and D'Alelio employ a conservative, low-turnover approach to small-cap investing. They aren't interested in the flashiest growers; instead, they want strong companies with low debt and high returns on assets. The managers and their team pore over 10 years of financial statements to find growing free cash flow and how it's used. They look for companies with defensible competitive advantages that allow for steady, modest rates of future growth. Once they settle on a name, Vale and D'Alelio wade in gradually, making sure their thesis is correct. They will buy and hold for long periods and exit gradually, too. These traits make the fund a more-staid member of the small-growth Morningstar Category, though it often toes the Morningstar Style Box lines between small/mid-cap and blend/growth.

Category classifications aside, sound execution gives the fund a long-term performance edge. The high-quality portfolio stands out for its durability in down markets and below-average volatility. Some of that owes to the managers' willingness to hold winners as they grow into stable mid-cap companies.

Granted, the strategy's \$15 billion asset base lends itself to holding a hefty dose of mid-caps rel-

ative to most peers, but other signs of strained capacity are lacking. The managers have proved adept at keeping the portfolio's number of holdings, turnover, and average market cap in check. As long as those indicators remain benign, this is an attractive smaller-cap fund.

#### Process Pillar: Positive

The managers' conservative approach to growth stocks leads to a high-quality portfolio, earning the fund a Positive Process rating.

The process filters out flashier growth companies in favor of moderate growers. The team begins by screening for firms with market caps generally less than \$2 billion and showing signs of profitability such as above-average or improving three-year returns on assets. Ideas can also come from meetings with management, competitors, or customers. The team's analysts then scrutinize 10 years of prospects' financial statements. They focus first on how each firm generates and uses cash, followed by the visibility of its earnings and competitors' barriers to entry. Ideal companies can grow earnings at a sustainable, modest rate (usually in the midteens in a normal economic environment) yet trade at a discount to their historical averages and the Russell 2000 Index as a whole.

A long-term investing horizon allows the managers to scale into or out of positions gradually. They like to start individual positions at under 0.5% of assets each and add only if a few rounds of earnings reports show they've hit on the right opportunity. They will also trim winners slowly or pare existing holdings to make room for new picks. The managers' incremental trading also often tilts the portfolio back toward smaller companies.

The portfolio holds roughly 90-150 names. Individual position sizes usually stay below 2.5%. Gradual buying and selling typically leaves numerous small positions (each less than 0.5% in size). The managers are benchmark-agnostic, but don't expect high sector concentrations. Technology was the September 2018 portfolio's largest sector weighting at 20% versus the Russell 2000's 16%.

### Morningstar's Take

Morningstar Analyst Rating



#### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Positive
Price	 Positive

#### Morningstar Analyst Rating

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

#### Analyst Rating Spectrum

 Gold  Silver  Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	6.17	-0.97
2018	-6.74	-0.98
2017	15.50	-6.00
2016	18.06	6.86
2015	0.15	2.56

# Neuberger Berman Genesis Fund Trust Class NBGEX

## Analysis

The portfolio reflects the managers' conservative, buy-and-hold philosophy. Their interest in "moderate growth" keeps the portfolio from tilting too far toward companies with lofty price multiples. It often straddles the lines between blend/growth and small/mid, landing in the small-growth category since September 2015. While the managers prefer to buy small caps, their willingness to hold winners makes this more of a mid-cap fund, with mid-caps taking up nearly 59% of assets as of September 2018. The managers first bought Iddex Laboratories IDXX in early 2001; its market cap has grown nearly 19-fold since.

An emphasis on profitable companies with healthy balance sheets typically helps the portfolio stack up well on average returns on equity, returns on assets, and returns on invested capital. Its companies also tend to have higher net margins and lower debt burdens. Only three of its 124 equity holdings in September 2018 lost money in their most-recent fiscal year versus more than a third of index constituents.

### Performance Pillar: Positive

A solid long-term record and attractive reward/risk profile earn the fund a Positive Performance rating.

Despite category shifts through the years, this fund's performance is far from erratic. Comanagers Judy Vale and Bob D'Alelio invest in higher-quality, modest-growth companies that tend to be durable and reward investors over full market cycles. From D'Alelio's August 1997 start through October 2018, the fund's 10.5% annualized return beat the Russell 2000 benchmark's 7.7%. Despite toeing the lines between blend/growth and small/mid-cap in the style box through the years, its tally topped the category averages for each segment, including the 7.7% gain for its typical small-growth peer.

Some of the fund's advantage owes to its resilience in down markets. The fund fell only 57% as far as the benchmark in stock sell-offs during the managers' tenure. For example, it shone as the dot-com bubble burst in the early 2000s, thumping the Russell 2000's tally by over 24 percentage

points in the three years ended February 2003, gaining 11% versus the index's 13% decline. It also held up relatively well in the 2007-09 global financial crisis, falling 38% from June 2007 through February 2009 while the index dropped 53%. Meanwhile, the fund's volatility--as measured by standard deviation--in the Vale/D'Alelio era was nearly 4.7 percentage points below the index.

### People Pillar: Positive

An established pair of managers backed by an array of resources earns this fund a Positive People rating.

The fund's management team is experienced and aligned with investors through fund ownership. Judy Vale has managed the fund since February 1994, and Bob D'Alelio joined her as a comanager in August 1997. Each has nearly 40 years of industry experience. Though neither intends to retire soon, they've ensured stability by cultivating associate managers. They promoted analysts Brett Reiner and Gregory Spiegel to that role in 2005 and 2015, respectively. Reiner and Spiegel help oversee the portfolio and may add to or trim positions on the comanagers' behalf. Vale, D'Alelio, and Reiner each invest more than \$1 million here, the highest level the SEC discloses. Spiegel invests between \$500,001 and \$1 million.

The managers and four dedicated analysts handle most of this fund's small- and mid-cap stock research. Vale and D'Alelio are generalists, but the rest of the team has sector responsibilities--though the managers encourage a healthy intellectual environment where analysts may explore other sectors and critique others' picks. Although the four analysts each joined the team in 2012 or after, they average 14 years of industry experience, and two came from elsewhere in the firm. The team also taps Neuberger Berman's 41-member centralized global equity research unit as needed.

### Parent Pillar: Positive

Neuberger Berman's steady approach to its evolution earns the firm a Positive Parent rating.

The firm, founded in 1939, emerged from the collapse of Lehman Brothers with new capabilities and a new ownership structure. Lehman's fixed-income and private-equity acquisitions became part of Neuberger Berman in the wake of Lehman's 2008 collapse, when chairman and CEO George Walker led employees in taking the more diversified firm private. Over 460 employees now own the business, which manages \$270 billion in assets.

Once known primarily as a U.S. value equities shop, the new Neuberger Berman sees growth opportunities in Europe and Asia. Clients in those regions own 30% of the firm's assets under management. Although solely an investment manager, its retail mutual funds make up only one fifth of business. The rest is institutional and private client money, long bastions of the firm's identity.

The firm has lifted a few teams out of other firms to expand its circle of competence, including a talented emerging-markets-debt team from ING in 2013. While the firm has been selective in its acquisitions, its hands-off approach lets the new teams do what they do best. Meanwhile, the firm's partnership structure allows these new teams to integrate more fully into Neuberger by becoming managing partners over time.

### Price Pillar: Positive

Competitive fees earn this fund a Positive Price rating.

Most of the fund's share classes carry expense ratios below their respective peer medians. The R6 share class, which holds two fifths of the fund's assets, charges 0.75% after a small waiver. That's below the 0.86% median for similarly distributed shares. The institutional shares, at 0.85%, are also below-median. Fees have remained relatively stable in recent years: The fund's current expense ratios are a notch or two below those in the 2013 annual report.

The fund is best held in a nontaxable account. It

# Neuberger Berman Genesis Fund Trust Class NBGEX

---

## Analysis

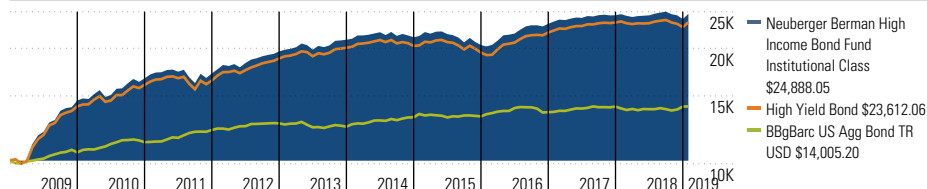
sits on sizable unrealized capital gains because of the managers' successful stock-picking and buy-and-hold philosophy.

# Neuberger Berman High Income Bond Fund Institutional Class NHILX

Morningstar Analyst Rating  
Silver

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
8.28	↑0.02   0.26	5.82	2.2	Open	\$1 mil	None	0.71%	★★★	High Yield Bond	Low/Ltd

## Growth of 10,000 01-16-2009 - 01-16-2019



## Investment Strategy

The investment seeks high total return consistent with capital preservation. To pursue its goal, the fund normally invests mainly in a diversified portfolio of U.S. dollar-denominated, High-Yield Bonds, with an emphasis on debt securities rated below investment grade (commonly called "junk bonds"). The fund is normally expected to have a weighted averaged maturity between five and ten years.

## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,332	10,106	10,021	12,453	11,627	—
Fund	3.32	1.06	0.21	7.59	3.06	—
+/- BBgBarc US Agg Bond TR USD	3.22	0.05	-0.34	5.83	0.68	—
+/- Category	0.28	-0.11	0.59	0.09	-0.11	—
% Rank in Cat	45	62	34	51	58	—
# of Funds in Cat	724	721	698	604	507	329

\* Currency is displayed in USD

## Top Holdings 11-30-2018

	Weight %	Maturity Date	Amount Mil	Value Mil
Ally Financial Inc. 8%	1.24	03-15-2020	23.84	25.02
⊕ Sprint Corporation 7.12%	1.00	06-15-2024	19.79	20.09
⊕ Altice Luxembourg S.A. 7.75%	0.96	05-15-2022	20.36	19.39
⊕ Intelsat Jackson Holdings, Ltd. 5.5%	0.94	08-01-2023	21.50	18.97
⊖ Frontier Communications Corporation 11%	0.90	09-15-2025	25.69	18.11
% Assets in Top 5 Holdings	5.03			

⊕ Increase ⊖ Decrease ☆ New to Portfolio

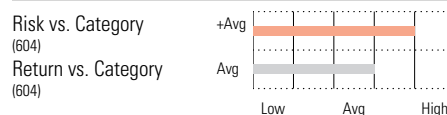
## Top Sectors 11-30-2018

	Fund	BMark	Cat Avg
Corporate Bond	87.54	—	—
Bank Loan	6.74	—	—
Asset-Backed	1.38	—	—
Convertible	0.24	—	—
Preferred	0.00	—	—

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-31-2018	8.03	0.0000	0.0000	0.0000	0.0408	0.0408
11-30-2018	8.26	0.0000	0.0000	0.0000	0.0394	0.0394
10-31-2018	8.36	0.0000	0.0000	0.0000	0.0389	0.0389
09-28-2018	8.53	0.0000	0.0000	0.0000	0.0386	0.0386
08-31-2018	8.52	0.0000	0.0000	0.0000	0.0386	0.0386

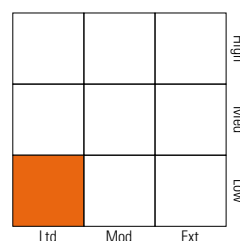
## 3 Year Average Morningstar Risk Measures



## Pillars

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

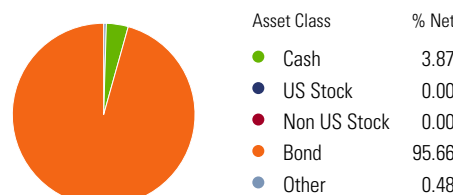
## Style Map 09-30-2018



## Bond Statistics

	Value
Average Effective Duration	3.33
Average Effective Maturity (Years)	5.84
Average Credit Quality	BB
Average Weighted Coupon	5.68
Average Weighted Price	96.66

## Asset Allocation



## Management

	Start Date
Thomas P. O'Reilly	10-03-2005
William (Russ) Covode	02-28-2011
Daniel J. Doyle	02-28-2014
Patrick Flynn	01-01-2016
Joseph W. Lind	07-30-2018

# Neuberger Berman High Income Bond Fund Institutional Class NHILX

## Analysis

### A credible way to gain high-yield exposure.

By Maciej Kowara 2/20/2018

Neuberger Berman High Income's cautious approach, experienced team, and deep resources are definite positives, though its returns have been lackluster of late. We still come down on the side of maintaining the fund's Analyst Rating of Silver, but its performance bears watching.

The last two calendar years in which the fund unambiguously shone were 2008 and 2009. The fund entered the financial crisis of 2008 with an underweighting in the riskiest parts of the high-yield market. After the worst of the crisis was over, the fund managed to transition quickly to a more aggressive stance and was able to capitalize well on the huge high-yield rally of 2009. Ever since, however, performance has been mediocre. The fund trailed its average unique-share-class peer in five of the next eight calendar years. In the three years in which it did beat its peers, the margins were small.

That said, performance is just one of many attractive features here. Each of the fund's four managers has no less than 25 years of industry experience. They are backed by 27 credit analysts—mostly in the United States and Europe—which, by industry standards, is a very large team. Furthermore, the group has been reasonably stable; there has been some turnover, but nothing that would raise concerns. The last notable change was the 2015 retirement of longtime head of high yield, Anne Benjamin. The managers who took over had worked with her for a long time, though, and maintained continuity of the investment process.

That process is thorough and extensive and is codified in the firm's proprietary "Credit Best Practices" checklist. It ensures that all the portfolio's candidates for investment are compared against the same set of criteria. These range from global macro considerations, such as economic indicators, credit cycle stage, regulatory and political concerns, and industry attractiveness among others,

down to issue-specific factors such as business fundamentals, cash flow quality, capital structure, and the like.

### Process Pillar: Positive

Based on the thoroughness of its credit analysis and emphasis on downside risk protection, the fund earns a Positive Process rating.

Downside risk protection is the overriding theme of this fund's approach. The fund focuses on liquid BB and B rated issues—it filters out most illiquid, distressed, and defaulted names—though it allows itself an opportunistic use of CCC (and BBB) rated paper. The fund does not invest in non-USD debt (developed or emerging) or derivatives, but it can hold up to 20% in bank loans, a sector for which the firm has a dedicated team.

The fund's decision-making process combines top-down considerations with individual security selection and is formalized in the firm's proprietary "Credit Best Practices" checklist, which ensures that all bonds are evaluated on the same set of criteria. Its top-down analysis looks to take measure of global economic trends, credit attractiveness, and valuations, and then supplement it with analysis of individual industries. The bottom-up part of the process looks at fundamentals, such as interest coverage, valuations, a company's ability to deleverage, and susceptibility to market shocks, while also considering less quantifiable items such as management quality. That does not guarantee the outcomes of this process are always correct, but the process itself is well-structured.


As of Dec. 31, 2017, the fund was positioned relatively conservatively on several levels. Management had brought down the fund's CCC rated stake to 8% from an already market-underweighted 11.6% at the end of 2016, and carried an overweighting in the junk market's highest tier BB strata. The fund held 4.7% in bank loans, which offer better structural security than bonds, the latter of which included a 2.3% position in investment-grade paper. Finally, the fund's duration was marginally shorter than that of its ICE BofA Merrill Lynch U.S. High Yield Master II Constrained Index

### Morningstar's Take

Morningstar Analyst Rating



### Morningstar Pillars

Process	 Positive
Performance	 Neutral
People	 Positive
Parent	 Positive
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

### Fund Performance

	Total Return %	+/- Category
YTD	3.32	0.28
2018	-2.35	0.24
2017	5.46	-1.01
2016	14.17	0.87
2015	-4.77	-0.77

# Neuberger Berman High Income Bond Fund Institutional Class NHILX

## Analysis

benchmark and had been so for the whole year. This conservative stance, evident at the end of 2017 but in force throughout the year, was rooted in heightened concerns about potential new-administration-driven disruptions in the regulatory and trade environment, as well as an anticipation of higher interest rates. As it turned out, these concerns were by-and-large nonevents, and the cautious bias that they reflected—and continue to reflect—stymied fund's performance in 2017 as high yield outperformed bank loans and lower rungs of the credit universe outperformed higher-quality paper.

While the fund is trimming risks on the margins, Neuberger Berman is generally positive on the high-yield market as a whole, as it sees solid fundamentals are constructive and improving U.S. economic growth.

### Performance Pillar: ● Neutral

It's been a while since the fund showed convincingly strong returns, and we are downgrading its Performance rating to Neutral.

The last two calendar years in which the fund unambiguously shone were 2008 and 2009. Ever since, however, its performance has been mediocre. The fund trailed its average unique-share-class peer in five of the subsequent eight calendar years. In the three years in which it did beat them, the outperformance margins were small. As result, while the fund's 10-year return of 7.8% looks very competitive with the rest of its peers, its shorter-term returns do not. Volatility-adjusted metrics tell the same story.

Most of this peer-relative deterioration was recent. The fund was tripped up by a 2014 overweighting in energy, whose weakness spilled into 2015 and infected the whole high-yield market. The fund ended both 2014 and 2015 behind its index and its average peer. More recently, after a reasonably good 2016, the fund entered 2017 quite cautiously and missed out on hot performance among lower-rated credits. 2017 also saw several issue-specific misses, such as Frontier Communications FTR, whose 2025 maturity bonds declined

by more than 25% on troubles related to integrating wireline and broadband operations acquired from Verizon VZ in California and Texas. The fund finished the year in the bottom quintile of the high yield Morningstar Category.

### People Pillar: ● Positive

The fund earns a Positive People rating based on the experience of its management team, the depth of its resources, and well-aligned incentives.

The fund is managed by four comanagers, one of whom, Tom O'Reilly, is recognized as the team leader. O'Reilly joined Neuberger Berman in 1997, has been on the fund since 2005, and became the team leader in late 2015, when previous lead Ann Benjamin retired. O'Reilly is joined by comanagers Russ Covode, Dan Doyle, and Patrick Flynn, who filled in the slot vacated by Benjamin. Each of the four managers has at least 25 years of industry experience.

The overall credit research team is large, experienced, and has had relatively low turnover. There are nine portfolio managers and 27 credit analysts. In 2017, the group saw one departure of a relatively junior analyst and an internal transfer of another. On the hiring side, the credit research team added four analysts, two of them very junior, and two quite seasoned.

The managers' incentives are properly aligned. Up to 20% of each one's bonus (depending on seniority) goes into funds the managers run and is locked up for three years. As a result, O'Reilly has more than \$1 million dollars invested in the fund; the other comanagers have smaller, but not negligible, amounts in it. Finally, almost half of the team owns equity in the firm.

### Parent Pillar: ● Positive

Neuberger Berman's steady approach to its evolution earns the firm a Positive Parent rating.

The firm, founded in 1939, emerged from the collapse of Lehman Brothers with new capabilities and a new ownership structure. Lehman's fixed-income and private-equity acquisitions became part of Neuberger Berman in the wake of Lehman's

2008 collapse, when chairman and CEO George Walker led employees in taking the more diversified firm private. Over 460 employees now own the business, which manages \$270 billion in assets.

Once known primarily as a U.S. value equities shop, the new Neuberger Berman sees growth opportunities in Europe and Asia. Clients in those regions own 30% of the firm's assets under management. Although solely an investment manager, its retail mutual funds make up only one fifth of business. The rest is institutional and private client money, long bastions of the firm's identity.

The firm has lifted a few teams out of other firms to expand its circle of competence, including a talented emerging-markets-debt team from ING in 2013. While the firm has been selective in its acquisitions, its hands-off approach lets the new teams do what they do best. Meanwhile, the firm's partnership structure allows these new teams to integrate more fully into Neuberger by becoming managing partners over time.

### Price Pillar: ● Neutral

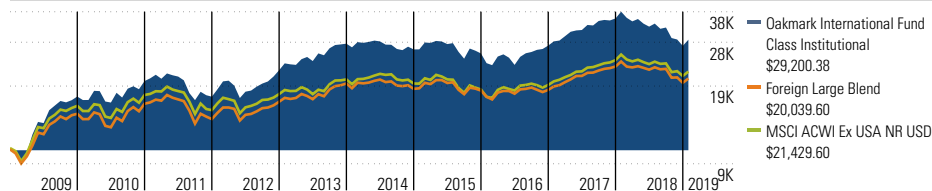
The fund hasn't changed its fee structure, but the industry has moved in the cheaper direction. Accordingly, the fund's fees, which held Morningstar Fee Level rankings of Below Average are now Average. Relative to its peers, the fund is thus less attractive on price and earns a Neutral Price Pillar rating.



# Oakmark International Fund Class Institutional OANIX

**Morningstar Analyst Rating**  
**Gold**

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
21.71	↑0.12   0.56	2.35	33	Open	\$1	None	0.77%	★★★★	Foreign Large Blend	Large Value

**Growth of 10,000 01-16-2009 - 01-16-2019**

**Investment Strategy**

The investment seeks long-term capital appreciation. The fund invests primarily in a diversified portfolio of common stocks of non-U.S. companies. It may invest in non-U.S. markets throughout the world, including emerging markets. Ordinarily, the fund will invest in the securities of at least five countries outside of the U.S. There are no geographic limits on the fund's non-U.S. investments. The fund may invest in securities of large-, mid-, and small- capitalization companies.

**Performance 01-16-2019**

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,621	10,438	7,667	12,822	10,339	29,229
Fund	6.21	4.38	-23.33	8.64	0.67	11.32
+/- MSCI ACWI Ex USA NR USD	1.89	1.70	-8.93	-0.83	-0.99	3.63
+/- Category	1.96	1.76	-8.71	1.27	-0.30	4.17
% Rank in Cat	3	4	99	—	—	—
# of Funds in Cat	777	774	725	626	495	372

\* Currency is displayed in USD

**Top Holdings 09-30-2018**

	Weight %	Last Price	Day Chg %	52 Week Range
⊖ Daimler AG	4.42	48.94 USD	-1.84 ↓	44.51 - 76.48
⊖ BNP Paribas	4.28	41.42 USD	-3.85 ↓	38.13 - 68.66
⊖ Hennes & Mauritz AB B	4.27	134.10 USD	0.30 ↑	117.10 - 173.00
⊖ Lloyds Banking Group PLC	4.02	56.13 USD	0.00 ↓	49.51 - 72.68
⊕ Intesa Sanpaolo	3.68	2.01 USD	-0.81 ↓	1.86 - 3.35

% Assets in Top 5 Holdings 20.67

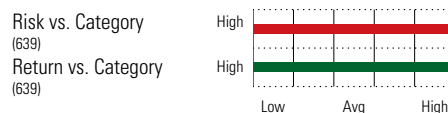
⊕ Increase ⊖ Decrease ☆ New to Portfolio

**Top Sectors 09-30-2018**

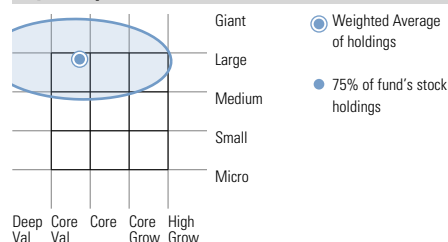
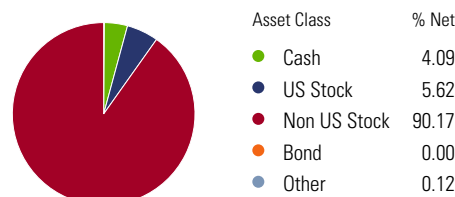
	Fund	3 Yr High	3 Yr Low	Cat Avg	
Financial Services	29.34	33.45	29.34	20.01	■ Fund ▼ Cat Avg
Consumer Cyclical	27.78	31.12	27.38	11.62	
Industrials	15.84	19.12	14.43	13.22	
Basic Materials	8.04	9.54	8.04	8.19	
Technology	6.51	6.51	2.66	11.00	

**Dividend and Capital Gains Distributions**

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-13-2018	21.11	1.0260	0.0000	0.0000	0.5040	1.5300
12-14-2017	28.13	0.4836	0.0000	0.0000	0.4338	0.9174

**3 Year Average Morningstar Risk Measures**

**Pillars**

Process	⊕ Positive
Performance	⊕ Positive
People	⊕ Positive
Parent	⊖ Neutral
Price	⊖ Neutral
Rating	★ Gold

**Style Map**

**Asset Allocation**

**Management**

	Start Date
David G. Herro	09-30-1992
Michael L. Manelli	11-30-2016

# Oakmark International Fund Class Institutional OANIX

## Analysis

### Solid as ever.

By Dan Culloton 9/17/2018

Oakmark International's topnotch management and distinctive approach earn it a Morningstar Analyst Rating of Gold.

The fund's high-conviction, value-oriented manager has proved himself through multiple market cycles and is backed by a deep team. David Herro is one of the most tenured and decorated non-U.S. stock-pickers working, but he hasn't been a one-man show for a while. Eight analysts and managers who are steeped in subadvisor Harris Associates' absolute value style support him. While that team has seen some notable departures in the past, such as the retirement of veteran comanager Rob Taylor in 2016, it also has developed talent, including current comanager Michael Manelli, who has been with the firm for 13 years and has comanaged Oakmark International Small Cap OAKEX since 2011. Not counting Herro, the team averages more than 14 years of industry and eight years of firm experience.

That seasoning is key for implementing the fund's contrarian, long-term-focused approach. This fund buys stocks at steep discounts to the team's estimates of underlying business values. This often involves investing in the midst of fearsome news or macroeconomic events, such as buying Japanese shares after 2011's catastrophic earthquake and tsunami, snapping up mining conglomerate Glencore in the midst of a commodity rout in 2015, buying U.K. stocks after the 2016 Brexit vote, or holding European automakers and financials amid global trade war fears in 2018. These aren't macro-driven moves, though. Herro and his team are inveterate, bottom-up investors who spend a lot of time traveling and studying business models and balance sheets, building an approved list of companies they'd like to own and then waiting for their share prices to diverge from their issuers' intrinsic values.

The result is a portfolio that pays little heed to index or average peer group allocations, and that

can often look out of step with peers and benchmarks, as it did in the first eight months of 2018 when the fund ranked in the pits of the foreign large-blend Morningstar Category. Patience has paid off here in the past, though.

### Process Pillar: Positive

Manager David Herro and team's disciplined approach to contrarian investing earns a Positive Process Pillar rating.

The managers seek stocks trading at deep discounts to their assessments of companies' intrinsic values. They're contrarian, but not cigar-butt value investors. They gravitate to the shares of companies that are out of favor but that are still growing, generating cash flow, and reinvesting that money in profitable ways. They like management teams that own a lot of shares of the companies they run and run those companies like they are owners.

The fund's managers and analysts travel often and widely to meet with businesses and their customers, competitors, and suppliers; but they avoid countries where the rule of law is suspect, such as Russia. The team resorts to a variety of valuation metrics, including price/net asset value, enterprise value/operating income, and returns on capital employed. They'll also reference corporate buyouts of similar companies.

Analysts present their bottom-up research to a stock-selection committee composed of Herro, comanager Michael Manelli, and rotating members Justin Hance, Eric Liu, and Jason Long. They curate an approved list of companies to buy when their shares are discounted. Herro and team are willing to wait three to five years for those valuation gaps to close. Turnover is below average.

This fund's motto might be "the closer to danger, the farther from harm."


Manager David Herro often seeks paths to strong risk-adjusted returns that lead through controversy. That hasn't changed. Despite ranking in the bottom of its foreign large-blend category through

### Morningstar's Take

Morningstar Analyst Rating



### 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

### Fund Performance

	Total Return %	+/- Category
YTD	6.21	1.96
2018	-23.32	-8.74
2017	30.00	4.88
2016	—	—
2015	—	—

# Oakmark International Fund Class Institutional OANIX

## Analysis

the first eight months of 2018, the fund has maintained big positions in some of the most hard-hit areas of the global markets. Tariff and trade war threats have beaten up European automakers and car part suppliers, but Herro thinks Daimler AG and others have been punished far beyond their values, even after considering the potential negative effects of more-restricted trade. Fears of Italian debt default have crunched European banks BNP Paribas, Lloyds, and Credit Suisse, but Herro contends their balance sheets and business values have actually improved as their shares have fallen. Such positions contributed to huge consumer discretionary and financial sector overweights; they took up nearly two thirds of the portfolio as of mid-2018.

The fund's regional leanings are also contrarian. Nearly 60% of its assets were in developed Europe, which isn't surprising, given where Herro and company have been finding bottom-up picks. Meanwhile, the fund has tread lightly in emerging markets and Japan, where Herro has been historically critical and skeptical of corporate culture and governance.

The portfolio is as distinctive as ever.

### Performance Pillar: Positive

Despite periodic rough periods, the fund has delivered excellent absolute, relative, and risk-adjusted returns since inception and over the tenure of its lead manager; it earns a Positive Performance Pillar rating.

The fund gained 9.7% annualized between its October 1992 inception and Aug. 31, 2018, beating the 6.0% of its MSCI World ex USA Index prospectus benchmark and the 6.3% of the typical foreign large-value category fund and the 5.7% of the average foreign large-blend rival.

While this is not a conservative fund, it has afforded some downside protection over the years. It's willing to look very different from peers and benchmark and thus has experienced periods when its weak returns reflect how out of favor

some of its stocks are, such as most of 2018. But over its history, the fund has captured more of the upside of its benchmark and category average than the downside. The fund has lost 94% as much as its typical peer in down markets while gaining 11% more in upturns. It has claimed just 86% of its index's downside and nearly 4% more of its upside.

The ride at this compact and highly active fund is sure to be bumpy from time to time. Big stakes in automakers and financials hurt in 2014, 2015, and in the first eight months of 2018. Over the long term, though, its risk-adjusted returns, as measured by its Sharpe and Sortino ratios, have been more than competitive.

### People Pillar: Positive

The fund's accomplished, veteran leader and solid supporting cast of managers and analysts earn a Positive People rating.

David Herro has managed this fund since its 1992 inception and has generated a stellar record during his tenure. Michael Manelli has comanaged the fund since November 2016 and also has comanaged Oakmark International Small Cap with Herro since 2011. Manelli has been an analyst at the fund's subadvisor, Harris Associates, since 2005. Seven other managers and analysts with an average of seven years experience at Harris and 12 years of investment experience support Herro and Manelli. The deeper and more seasoned team has allowed it to absorb the 2016 loss of veteran comanager Rob Taylor.

Harris' deep bench should help make it more resilient in the future, too. Herro's long tenure and record demonstrate his value to this strategy; there is some key-man risk here. Herro, 58, has no plans to retire, but he has devolved some responsibility in recent years. He and Manelli serve on the strategy's stock-selection committee with a rotating cast of team members, including Justin Hance, Jason Long, and Eric Liu. Hance, Long, and Liu also have been named as comanagers on Oakmark International Small Cap, Oakmark Global OAKGX, and Oakmark Global Select OAKWX, respectively.

This is a solid team that has been working on its transition game.

### Parent Pillar: Neutral

Paris-based Natixis Global Asset Management is the parent to a number of different asset managers globally, including Natixis AM in France and Loomis Sayles and Harris Associates in the United States. These affiliated companies have maintained a large degree of autonomy, both in operational terms and in terms of their investment philosophies. The quality of investment culture varies significantly from one subsidiary to another. The results of the teams at Loomis Sayles and Harris Associates, manager for the U.S. Oakmark funds, for example, are excellent, communications with investors are of high quality, and fund launches have been minimal. NGAM's latest acquisition, DNCA, has also begun improving its funds' fee structures.

On the other hand, the results obtained by Natixis AM are more mixed, and its teams are less stable. Furthermore, in July 2017, the French financial regulator Autorité des Marchés Financiers imposed a EUR 35 million fine on Natixis AM for failings relative to its range of formula-based funds, arguing that the firm had overcharged investors and had failed to adequately disclose charges in the funds' filings. The sanction on Natixis AM thus weighs negatively on our assessment of the group's stewardship, but we recognize that strengths in other parts of the organization, particularly in the U.S.-based affiliates, partly compensate for this weakness, resulting in a Neutral Parent Pillar rating.

### Price Pillar: Neutral

Fees for the investor share class, the fund's largest, have dropped from about 1.00% to 0.95% as of the most recent prospectus (January 2018) but still look average relative to similarly sold foreign large-cap funds. The fund also has been less tax-efficient than others in its category, primarily because of capital gains distributions made between 2013 and 2015 and in 2017.

Judged by asset size, the fund doesn't look like a bargain. At \$43 billion, it ranks among the foreign large-blend category's largest offerings. The fund

# Oakmark International Fund Class Institutional OANIX

---

## Analysis

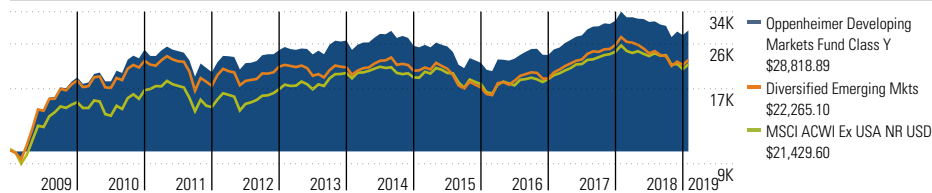
could stand to share more of its economies of scale with fundholders. It earns a Price Pillar rating of Neutral.

# Oppenheimer Developing Markets Fund Class Y ODVYX

Morningstar Analyst Rating  
Silver

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
39.17	↑0.16   0.41	0.62	37.0	Limited	—	None	1.05%	★★★★	Diversified Emerging Mkts	Large Growth Mkts

## Growth of 10,000 01-16-2009 - 01-16-2019



## Investment Strategy

The investment seeks capital appreciation. The fund mainly invests in common stocks of issuers in developing and emerging markets throughout the world and at times it may invest up to 100% of its total assets in foreign securities. Under normal market conditions, it will invest at least 80% of its net assets, plus borrowings for investment purposes, in equity securities of issuers whose principal activities are in a developing market, i.e. are in a developing market or are economically tied to a developing market country. The fund will invest in at least three developing markets.

## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,420	10,371	8,748	14,855	11,129	28,590
Fund	4.20	3.71	-12.52	14.10	2.16	11.08
+/- MSCI ACWI Ex USA NR USD	-0.12	1.03	1.88	4.63	0.51	3.39
+/- Category	-0.27	-0.35	3.48	1.57	0.33	2.35
% Rank in Cat	63	68	18	36	50	7
# of Funds in Cat	900	896	838	706	530	235

\* Currency is displayed in USD

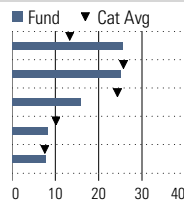
## Top Holdings 11-30-2018

	Weight %	Last Price	Day Chg %	52 Week Range
Alibaba Group Holding Ltd ADR	6.45	154.89 USD	0.03 ↑	129.77 - 211.70
Taiwan Semiconductor Manufacturing Co Ltd	5.09	220.50 USD	1.38 ↑	206.50 - 268.00
Tencent Holdings Ltd	4.58	331.20 USD	0.06 ↑	251.40 - 476.60
NOVATEK PJSC GDR	4.34	178.00 USD	-0.56 ↓	116.50 - 189.80
⊕ Housing Development Finance Corp Ltd	3.68	— USD	0.00 ↓	1,644.50 - 2,052.95
% Assets in Top 5 Holdings	24.13			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

## Top Sectors 12-31-2018

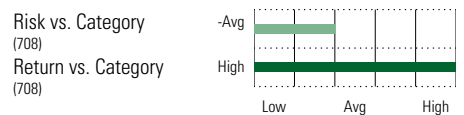
	Fund	3 Yr High	3 Yr Low	Cat Avg
Consumer Cyclical	25.59	25.59	23.46	12.40
Financial Services	25.04	25.04	21.41	24.80
Technology	15.76	20.14	15.76	23.41
Consumer Defensive	8.29	13.76	8.29	9.23
Basic Materials	7.72	7.72	3.34	6.66



## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-03-2018	39.58	0.0000	0.0000	0.0000	0.2323	0.2323
12-04-2017	41.64	0.0000	0.0000	0.0000	0.2451	0.2451
12-02-2016	31.52	0.0000	0.0000	0.0000	0.1664	0.1664
12-02-2015	30.90	0.0000	0.0000	0.0000	0.2240	0.2240
12-05-2014	36.45	0.5977	0.0000	0.0000	0.2236	0.8213

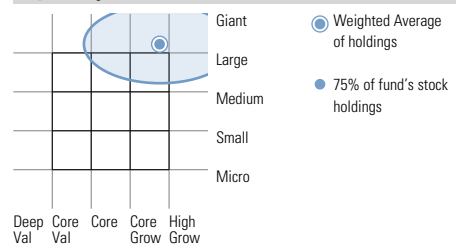
## 3 Year Average Morningstar Risk Measures



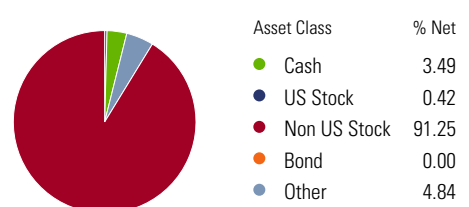
## Pillars

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

## Style Map



## Asset Allocation



## Management

Justin M. Leverenz  
Start Date: 05-01-2007

# Oppenheimer Developing Markets Fund Class Y ODVYX

## Analysis

### Going its own way, and usually benefiting.

By Gregg Wolper 9/4/2018

Oppenheimer Developing Markets has an experienced manager, a successful growth-leaning strategy, and below-average fees. It retains its Morningstar Analyst Rating of Silver.

Manager Justin Leverenz looks for firms that he thinks will benefit from growth trends in emerging markets, such as e-commerce and healthcare, and that have what he considers enduring competitive advantages. He'll buy companies domiciled in developed markets if they are otherwise appealing and have extensive business in emerging markets, but tries to limit that portion of the portfolio to 15% of assets (though he concedes it's currently slightly above that figure).

What the fund doesn't own is as important as what it does. Though Leverenz is primarily a bottom-up investor, in 2018 the fund has benefited from his long-held skepticism of Turkey's financial situation. Unlike some rivals who bought what they considered bargains in Turkey's banks--among the biggest stocks in that country--he has only small stakes in two food-and-beverage holdings. He also avoids many of the government-controlled firms and capital-intensive cyclical companies popular in emerging markets, thinking they don't have the competitive advantages and strong earnings growth potential that he's looking for. This approach has helped the fund land in the top decile of the diversified-emerging-markets Morningstar Category for the year to date through July 2018, even though some heavily weighting top holdings--Tencent in particular--have faltered. Also helpful has been France-based luxury firm Kering, an example of the fund's developed-markets stocks. Leverenz' strategy doesn't always pan out, though. In 2016, for example, emerging-markets returns were driven by the commodity sector, which Leverenz typically has underweighted. And his growth tastes can put the fund out of step when investors turn cautious. But over the trailing 10-year period though July 2018--which essentially matches his tenure--the fund has topped the

category average and the MSCI Emerging Markets Index by more than 2.5 percentage points each, annualized. It should continue to succeed over time.

#### Process Pillar: Positive

This fund's unconventional, growth-oriented strategy earns it a Positive rating for Process.

Justin Leverenz looks for firms that he thinks will benefit from growth trends in emerging markets, such as e-commerce and healthcare, and that have a competitive advantage that should remain in place a long time. He says he tries to imagine what a company could be doing in the future that will keep it ahead of its rivals, even if it's a business line that's currently not prominent, or only potential. He instructs his recently built analyst staff to do the same, and to evaluate companies only for their business and management traits, not as potential investments. Leverenz is solely responsible for buy-sell decisions. The focus is bottom up, but Leverenz and the analysts also consider a country's financial and governance climates and how companies located there are influenced by those factors. He generally disdains commodity industries but will own individual firms in those sectors if he thinks they're exceptional in some way. Leverenz buys companies domiciled in developed markets if they are otherwise appealing and have extensive business in emerging markets, but tries to limit that portion of the portfolio to 15% of assets (though he concedes it's currently slightly above that figure). Leverenz says he invests for the long term, and indeed, annual turnover has ranged between 18%-36% over the past five years, a relatively modest amount.


In some ways, this fund's portfolio doesn't look all that unusual. As of June 30, 2018, the popular Chinese Internet companies Alibaba BABA and Tencent occupied the No. 1 and No. 3 spots in the portfolio, while equally well-known giant Taiwan Semiconductor Manufacturing TSM took the second position. However, despite the presence of those index heavyweights, manager Justin Lever-

### Morningstar's Take

Morningstar Analyst Rating



#### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Neutral
Price	 Positive

#### Morningstar Analyst Rating

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

Analyst Rating Spectrum

 Gold  Silver  Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	4.20	-0.27
2018	-11.95	4.13
2017	35.10	0.93
2016	7.17	-1.30
2015	-13.84	-0.05



# Oppenheimer Developing Markets Fund Class Y ODVYX

## Analysis

enz did not merely follow the crowd on China. None of the other China-domiciled names in the top 20 of the MSCI Emerging Markets Index--Baidu, China Construction Bank, Industrial and Commercial Bank of China, Ping An Insurance, China Mobile, Bank of China, and CNOOC--appeared anywhere in this fund's June portfolio. That's no surprise: Leverenz is generally not a fan of state-controlled entities, and he also prefers rapidly growing firms in areas that are in the forefront of future trends. Energy companies typically don't fit the bill, but Leverenz will make exceptions. A major holding in the latest portfolio is Novatek of Russia, which Leverenz says has changed its business strategy three times in the past 10 years, moving into different, more profitable areas of the industry. That pick has worked out well, but one that didn't remains at the bottom of the portfolio: South African holding Steinhoff ran into serious trouble after he bought it last year, and Leverenz concedes it was a mistake to own it.

### Performance Pillar: Positive

This fund has an impressive history. It earns a Positive Performance rating. Over the trailing 10-year period through July 31, 2018--essentially the period during which manager Justin Leverenz has run this portfolio--the fund's A-shares have returned 5.5% on an annualized basis. That easily surpasses the 2.7% return of the diversified emerging-markets category average and the 2.9% gain posted by the MSCI Emerging Markets Index (the fund's benchmark).

The fund tends to outshine its peers in challenging markets, while still making solid gains in rallies. On the downside, the fund captured only 85% of the index's losses during downturns over the prior 10 years, while its upside capture ratio was 95%. However, because Leverenz is a bold thinker who is not simply trying to be defensive, this pattern does not always hold. For example, in the third quarter of 2015, this fund lost 17.4%, about the same as the index and a bit worse than the category average.

Thus far in 2018 the fund has been a standout.

Leverenz' doubts about Turkey's finances led him to keep only a minimal stake in that country--and in consumer firms, not the big banks--so the fund has largely avoided the meltdown in its market and currency that has waylaid some rivals. Meanwhile, holdings more prominent here than at rivals--Novatek, a Russian energy firm, and Kering, a France-based luxury group--have both shone.

### People Pillar: Positive

Manager Justin Leverenz is experienced and knowledgeable in the emerging-markets realm, has developed a compelling strategy over 10 years here, and recently has built a medium sized analyst team to join him in researching companies. The fund earns a Positive People rating. Leverenz has over 20 years of investment experience, including expertise in the Greater China region. He is fluent in Chinese. He joined Oppenheimer's international equity team in 2004 as an analyst for Rajeev Bhaman on Oppenheimer Global OPPAX and took over as portfolio manager on this fund in May 2007. He is also the director of emerging-markets equities, where he leads a team of 10 professionals who focus in this fund and small-cap-focused Emerging Markets Innovators EMIAX, for which he serves as comanager. Over the past three years, he has hired a group of new analysts, building a team--now totaling seven--in a shift from the past when he had few or no analysts dedicated to the fund. Leverenz is nowhere near retirement age and managers of Oppenheimer's international equity funds typically stay on for decades. Yet given his unique investment approach, there is some key-person risk here. In September 2015, seven-year veteran analyst John Paul Lech was named co-portfolio manager, but he stepped down and left the firm in 2017 and there currently are no comanagers. There have been no other analyst departures under Leverenz.

### Parent Pillar: Neutral

OppenheimerFunds is a fairly traditional shop in many ways, with a lineup of actively managed funds sold mainly through intermediaries such as brokers. Amid the rapid growth of passive investment vehicles, the firm has leaned in to its status as an active manager while also gaining a foothold in less-traditional areas that it sees as keys to fu-

ture growth. This project is still a work in progress, so the firm maintains its Neutral Parent rating.

The firm's strength has long been its international and global equity funds, which now make up half of its USD 247 billion in AUM (as of June 2018). Those funds suffered a loss when Rajeev Bhaman of Oppenheimer Global announced plans to retire in 2019, but the firm is handling the transition well, as it has with past manager transitions. The domestic equity funds have been more problematic, as the firm has fired several managers on poor performance.

In 2015 Oppenheimer purchased a manager of "smart-beta" exchange-traded funds, and it has since launched 13 new smart-beta ETFs and hired a head of beta solutions who reports directly to CEO Art Steinmetz. Oppenheimer sees this as a big potential growth area, but it remains a tiny part of total firm assets, as do other areas of focus such as multi-asset portfolios and alternatives. It remains to be seen how well Oppenheimer can grow these businesses.

### Price Pillar: Positive

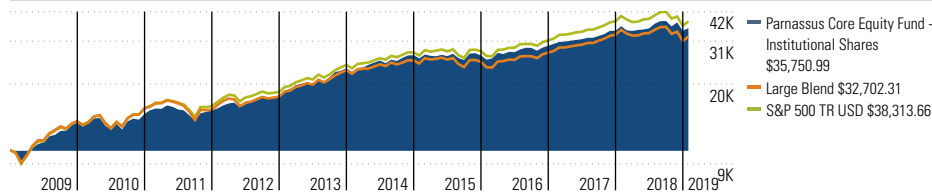
The fund's fees as listed in the most recent prospectus are in the second-least-costly quintile among emerging-markets funds, on an asset-weighted basis of all the share classes compared against their respective distribution channels. For that reason, this fund earns a Positive Price rating.

# Parnassus Core Equity Fund - Institutional Shares PRILX

Morningstar Analyst Rating  
Silver

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
40.11	↑0.07   0.18	1.29	15	Open	\$100,000	None	0.64%	★★★★	Large Blend	Large Growth

## Growth of 10,000 01-16-2009 - 01-16-2019



## Investment Strategy

The investment seeks to achieve both capital appreciation and current income. The fund's objective is to achieve both capital appreciation and current income by investing primarily in a diversified portfolio of equity securities. Equity securities include common and preferred stock. Under normal circumstances, the fund will invest a minimum of 80% of its net assets (plus borrowings for investment purposes) in equity securities. At least 75% of the fund's total assets will normally be invested in equity securities that pay interest or dividends.

## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,271	9,921	9,933	14,416	15,234	35,474
Fund	2.71	-0.79	-0.67	12.97	8.78	13.50
+/- S&P 500 TR USD	-1.72	-1.56	3.23	-0.98	-0.67	-0.79
+/- Category	-1.72	-1.70	5.00	0.57	1.16	0.43
% Rank in Cat	91	91	4	48	31	45
# of Funds in Cat	1,461	1,458	1,385	1,193	1,054	793

\* Currency is displayed in USD

## Top Holdings 12-31-2018

	Weight %	Last Price	Day Chg %	52 Week Range
Walt Disney Co	4.87	110.60 USD	-0.25 ↓	97.68 - 120.20
⊖ Linde PLC	4.73	157.31 USD	0.01 ↑	140.00 - 169.75
⊖ CVS Health Corp	4.57	63.91 USD	-0.02 ↓	60.14 - 83.88
⊖ 3M Co	4.03	190.05 USD	0.32 ↑	176.87 - 259.77
⊖ Clorox Co	3.80	151.66 USD	-0.17 ↓	113.57 - 167.70
% Assets in Top 5 Holdings	21.99			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

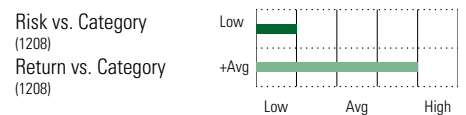
## Top Sectors 12-31-2018

	Fund	3 Yr High	3 Yr Low	Cat Avg
Technology	21.06	23.00	15.50	20.96
Industrials	17.54	21.94	15.16	11.02
Healthcare	13.35	21.02	13.35	15.02
Financial Services	12.75	13.57	11.97	16.73
Consumer Cyclical	11.45	11.57	6.86	11.65

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-27-2018	38.74	0.0000	0.0000	0.0000	0.1148	0.1148
11-20-2018	40.95	3.3146	0.0000	0.0000	0.0000	3.3146
09-28-2018	46.80	0.0000	0.0000	0.0000	0.1377	0.1377
06-29-2018	43.50	0.0000	0.0000	0.0000	0.1146	0.1146
03-29-2018	42.46	0.0000	0.0000	0.0000	0.1799	0.1799

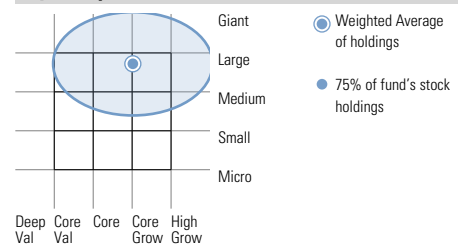
## 3 Year Average Morningstar Risk Measures



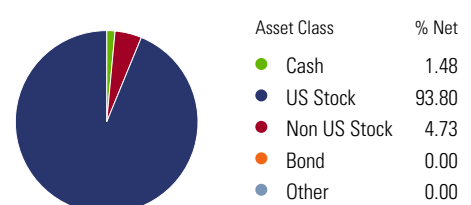
## Pillars

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

## Style Map



## Asset Allocation



## Management

	Start Date
Todd C. Ahlsten	05-01-2001
Benjamin E. Allen	05-01-2012

# Parnassus Core Equity Fund - Institutional Shares PRILX

## Analysis

### This fund is a good bet.

By Connor Young 9/14/2018

Parnassus Core Equity's veteran leadership, along with a sound and consistently applied approach, earn the fund a Morningstar Analyst Rating of Silver.

Parnassus' flagship fund is backed by a deep team. Chief investment officer Todd Ahlsten became lead manager in 2002, and CEO Ben Allen joined as comanager in 2012. The pair is supported by 13 others, including seven managers with research responsibilities; three environmental, social, and governance, or ESG, analysts; and three fundamental analysts, all of whom also have other duties.

The fund has gotten ahead by owning a compact portfolio focused on downside protection. Ahlsten and Allen invest in roughly 40 firms with sustainable competitive advantages, relevant products or services, capable management, and desirable ESG qualities. The managers pay close attention to downside risk, aiming to gain ground during turbulent markets. They consider bull-, bear-, and base-case scenarios when valuing securities; ultimately, they favor stocks with more predictable results. Indeed, as of July 2018, 24 of the 31 portfolio holdings covered by Morningstar equity analysts received Fair Value Uncertainty ratings of Low or Medium. This is one reason the fund is light in financials, as banks tend to have wide ranges of plausible outcomes. The managers try not to overpay, instead waiting patiently to purchase firms they've thoroughly researched when the price is right. Their long-term mindset is reflected in the fund's typical 20% turnover, well below the Morningstar Category norm.

Management has executed well. From Ahlsten's May 2001 start as comanager, through August 2018, the fund topped 98% of large-blend category peers. Consistent with the approach, it outperformed in all 32 rolling three-year periods in which the S&P 500 benchmark posted losses during his tenure. Conversely, it has struggled to con-

sistently keep up in bull markets, lagging the benchmark for the three- and five-year periods through August. Nevertheless, the fund remains poised to outperform through a full market cycle.

### Process Pillar: Positive

This fund's disciplined approach earns a Positive Process rating.

The team narrows its investment universe by screening stocks based on various quality and valuation metrics, as well as by filtering out companies that derive significant revenue from alcohol, tobacco, weapons, nuclear power, gambling, or have ties to Sudan. From there, it looks for companies with sustainable competitive advantages, increasingly relevant products or services, exemplary management, and ethical practices. If a stock meets these criteria, the team dives into its fundamentals to assess its fair value based on its three-year bull, bear, and base-case scenarios. The managers pay close attention to downside risk, and they prefer stocks that have narrow ranges of potential outcomes. As of July 2018, 24 of the 31 portfolio holdings covered by Morningstar equity analysts received Fair Value Uncertainty ratings of Low or Medium. The managers are careful not to overpay for a good business; after thoroughly researching a company, they often wait patiently until the price reaches an attractive level to buy.

This bottom-up approach can lead to sector biases, but the managers limit sector weightings to twice that of the S&P 500 benchmark. They also cap individual position sizes at 5% of assets. While the fund must have 75% of assets in dividend-paying stocks, there is no particular emphasis on high dividends or dividend growth.

The fund holds 40 or so stocks, and the managers tend to hang on for the long haul. Therefore, annual portfolio turnover has averaged just 21% during the past five years.

### Morningstar's Take

Morningstar Analyst Rating



### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Positive
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

### Fund Performance

	Total Return %	+/- Category
YTD	2.71	-1.72
2018	0.05	6.32
2017	16.81	-3.63
2016	10.60	0.24
2015	-0.33	0.74

# Parnassus Core Equity Fund - Institutional Shares PRILX

## Analysis

The fund has a clear quality focus: As of July 2018, 65% of assets were invested in firms with Wide Morningstar Economic Moat Ratings, more than the S&P 500 benchmark's 49% allocation. Furthermore, its profitability metrics such as return on assets and return on equity have trended higher than the bogy's. The fund also has a smaller-cap bent, as its 19% stake in mid-cap firms was more than the benchmark's 9%.

Relative to the benchmark, the fund favored basic materials, industrials, and healthcare as of July. In healthcare, the team focuses on firms that are either reducing costs or improving access to healthcare, such as CVS Health CVS, or those with innovative science, such as Gilead Sciences GILD. Conversely, the fund had below-benchmark exposure to technology and financial services. The managers won't stomach the valuations of many high-flying tech companies, nor the wide ranges of possible outcomes for most banks. The fund is also light in energy, but it doesn't avoid fossil-fuel stocks entirely, as some ESG funds do.

The managers recently bought industrials conglomerate 3M MMM because they think it's an innovative company with high recurring revenue streams; they bought the stock after its shares tumbled to an attractive valuation in early 2018.

### Performance Pillar: Positive

This fund's outstanding long-term record earns a Positive Performance rating.

Since lead manager Todd Ahlsten joined this fund in May 2001, through August 2018, the fund's 9.6% annualized gain beat the S&P 500 benchmark's 7.1% and bested 98% of large-blend peers. Consistent with management's approach, the fund has also been less volatile than its bogies (as measured by standard deviation of returns), and it earns a Low Morningstar Risk Rating. As a result, risk-adjusted results are also impressive.

The fund has typically held up better than its bogies when stocks decline. Notably, during the bear

market from October 2007 to March 2009, the fund's 30.7% loss--while large in absolute terms--fared much better than the benchmark's 43.0% decline. More recently, the fund also outperformed during the 2015-16 market sell-off. On the flip side, it hasn't done as well during market rallies. Indeed, during the past five years ending August 2018--a period of rising equity prices--the fund trailed the benchmark by nearly 150 annualized basis points. While the approach isn't designed to shine in rallies, the team also had its share of missteps during this time. Poor healthcare picks--including Gilead and Perrigo PRGO--weighed on results, as did consumer cyclical stocks such as Walt Disney DIS and Starbucks SBUX. Nevertheless, the fund remains poised to outperform through a full market cycle.

### People Pillar: Positive

This team is experienced and capable. It earns a Positive People rating.

Lead manager Todd Ahlsten is Parnassus' chief investment officer. He joined the firm as a research analyst in 1995 and became director of research in 1998. Ahlsten began comanaging this fund with Parnassus' founder Jerome Dodson in 2001 and took over as sole manager in 2002.

Ben Allen joined as comanager in May 2012. Allen joined Parnassus as an analyst in 2005 and posted solid results at Parnassus Mid Cap PARMX from October 2008 through April 2012 before stepping on here. He's held many roles around the firm, including director of research, and was appointed CEO in May 2018.

While Ahlsten has final say on picks, each manager has areas of focus. Ahlsten generally covers healthcare and technology stocks, while Allen favors industrials and business services. The managers are supported by 13 others on the investment team, including seven managers with research responsibilities, three ESG analysts, and three fundamental research analysts. The team divvies up coverage responsibilities and draws on

each other for investment ideas. As of July 2018, 18 of the 36 stocks in this portfolio were also held in Parnassus Mid Cap PARMX, and 14 were held in Parnassus PARNX. Both managers invest more than \$1 million in the fund, demonstrating that their interests are aligned with shareholders'.

### Parent Pillar: Positive

Parnassus Investments' well-defined wheelhouse and investment-driven culture earn it a Positive Parent rating.

Parnassus is an independent and employee-owned firm founded by Jerome Dodson in 1984. It manages \$24.5 billion in assets--more than any other sustainability focused U.S. fund manager--across four U.S. equity funds and one U.S. fixed-income fund. Its equity funds employ a consistent approach: each invests in firms with sustainable competitive advantages, viable products, exemplary management, and ethical practices, and the managers aim to buy when a stock is undervalued. The fixed-income fund also leverages equity research for security selection.

The firm has steadily grown its investment team to 15 members. Almost without exception, incoming analysts join from the firm's internship program, and portfolio managers are promoted from the analyst ranks. This helps ensure team members' cultural fit, and as a result, newcomers tend to stick around.

As part of a well-planned transition, Ben Allen succeeded Dodson as chief executive officer in May 2018. Allen has served as the firm's president since January 2017 and as a member of the investment team since 2005. He's talented and deeply rooted in the firm's culture, so the change in leadership should be smooth. Furthermore, Dodson remains with the firm as chairman and portfolio manager.

### Price Pillar: Neutral

This fund doesn't offer much of a fee advantage,

# Parnassus Core Equity Fund - Institutional Shares PRILX

---

## Analysis

so it earns a Neutral Price rating.

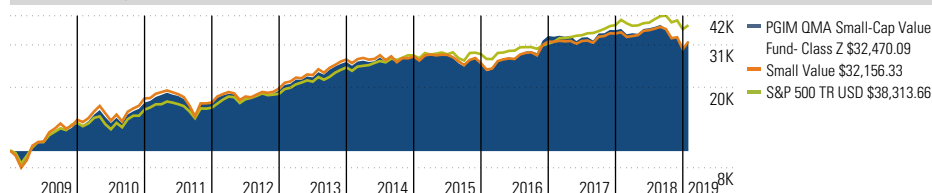
The fund offers two share classes: Investor and Institutional. For retail investors, the no-load Investor shares hold 57% of assets, charge 0.87%, and earn a Morningstar Fee Level of Average. The fund's Institutional shares hold 43% of assets, charge 0.64%, and rank as Below Average. For comparison, the median net expense ratio for the large-cap institutional peer group is 0.73%.

# PGIM QMA Small-Cap Value Fund- Class Z TASVX

Morningstar Analyst Rating

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
16.34	↑0.19   1.18	2.15	1.3	Open	\$5 mil	None	0.69%	★★★	Small Value	Small Value

## Growth of 10,000 01-16-2009 - 01-16-2019



## Investment Strategy

The investment seeks above-average capital appreciation. The fund normally invests at least 80% of its investable assets in equity and equity-related securities of small-cap companies. The subadviser considers small-cap companies to be companies with market capitalizations within the market cap range of companies included in the Russell 2000 Index or the Standard & Poor's SmallCap 600 Index. Most assets will typically be invested in U.S. equity and equity-related securities, including up to 25% of total assets in real estate investment trusts (REITs).

## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	11,018	10,543	8,688	14,447	12,560	32,111
Fund	10.18	5.43	-13.12	13.05	4.66	12.37
+/- S&P 500 TR USD	5.74	4.66	-9.22	-0.90	-4.79	-1.92
+/- Category	1.79	1.28	-2.53	1.05	1.13	-0.19
% Rank in Cat	15	16	77	33	31	53
# of Funds in Cat	432	427	418	374	325	227

\* Currency is displayed in USD

## Top Holdings 12-31-2018

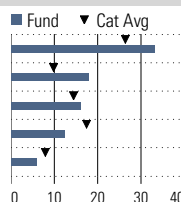
	Weight %	Last Price	Day Chg %	52 Week Range
⊖ MGIC Investment Corp	1.12	11.55 USD	-0.39 ↓	9.41 - 16.21
⊖ Tech Data Corp	1.11	92.44 USD	0.91 ↑	66.93 - 108.62
⊖ Radian Group Inc	1.10	17.93 USD	0.45 ↑	14.06 - 23.49
⊕ IBERIABANK Corp	1.03	73.37 USD	0.69 ↑	60.82 - 87.55
⊖ American Equity Investment Life Holding Co	0.99	30.95 USD	1.16 ↑	25.27 - 38.56

% Assets in Top 5 Holdings 5.35

⊕ Increase ⊖ Decrease ★ New to Portfolio

## Top Sectors 12-31-2018

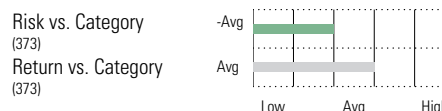
	Fund	3 Yr High	3 Yr Low	Cat Avg
Financial Services	33.04	38.03	33.04	25.47
Real Estate	17.92	17.92	12.16	8.90
Consumer Cyclical	16.09	18.44	12.37	13.52
Industrials	12.27	15.18	12.27	16.52
Basic Materials	5.91	5.91	4.72	7.00



## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-17-2018	15.22	0.7140	0.5522	0.0000	0.3456	1.6118
12-13-2017	20.07	1.6322	0.7317	0.0000	0.3707	2.7346
12-19-2016	21.81	0.0000	0.0534	0.0000	0.3426	0.3961
12-15-2015	16.42	6.3835	0.3703	0.0000	0.6137	7.3674
12-22-2014	25.45	2.4013	0.1384	0.0000	0.2763	2.8159

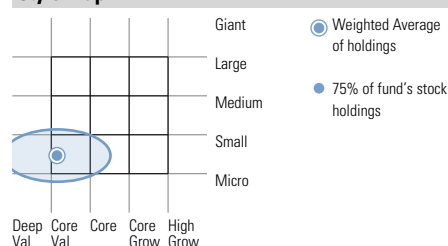
## 3 Year Average Morningstar Risk Measures



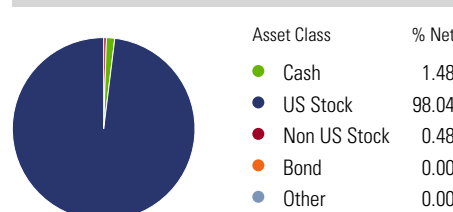
## Pillars

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

## Style Map



## Asset Allocation



## Management

	Start Date
Stephen Courtney	01-15-2015
Mitchell B. Stern	01-15-2015

# PGIM QMA Small-Cap Value Fund- Class Z TASVX

## Analysis

### Morningstar's Take

Morningstar Analyst Rating —

### Morningstar Pillars

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

### Morningstar Analyst Rating

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

Analyst Rating Spectrum

 Gold
  Silver
  Bronze
 Neutral
 Negative

### Fund Performance

	Total Return %	+/- Category
YTD	10.18	1.79
2018	-18.85	-3.39
2017	6.31	-2.23
2016	33.94	7.95
2015	-7.04	-0.34

We do not currently publish an Analyst Report for this fund.

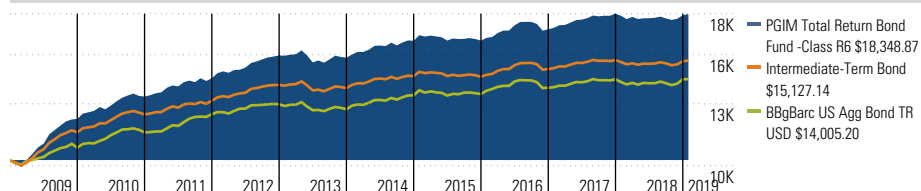


# PGIM Total Return Bond Fund -Class R6 PTRQX

Morningstar Analyst Rating  
Silver

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
13.97	↓0.00   0.01	4.10	36	Open	\$5	None	0.41%	★★★★★	Intermediate-Term Bond	Med/Mod

## Growth of 10,000 01-16-2009 - 01-16-2019



## Investment Strategy

The investment seeks total return. The fund will seek to achieve its objective through a mix of current income and capital appreciation as determined by the fund's investment subadviser. It invests, under normal circumstances, at least 80% of the fund's investable assets in bonds. For purposes of this policy, bonds include all fixed-income securities, other than preferred stock, with a maturity at date of issue of greater than one year. The fund may invest up to 30% of its investable assets in high risk, below investment-grade securities having a rating of not lower than CCC. It may invest up to 30% of its investable assets in foreign debt securities.

## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,044	10,116	10,008	11,086	11,861	18,340
Fund	0.44	1.16	0.08	3.50	3.47	6.25
+/- BBG US Agg Bond TR USD	0.35	0.15	-0.47	1.74	1.09	2.80
+/- Category	0.13	0.18	-0.02	1.40	1.28	1.98
% Rank in Cat	30	18	53	7	3	—
# of Funds in Cat	1,071	1,070	1,003	859	751	547

\* Currency is displayed in USD

## Top Holdings 12-31-2018

	Weight %	Maturity Date	Amount Mil	Value Mil
⊕ US 5 Year Note (CBT) Mar19	24.23	03-29-2019	0.12	14,058.05
⊕ US 10 Year Note (CBT) Mar19	16.33	03-20-2019	0.08	9,471.59
⚡ Recv Cmm 102 Fra	8.78	01-14-2019	5,094.60	5,094.60
⚡ Payb 7 Yr Cmt Fra	-8.78	01-14-2019	5,094.60	-5,094.60
⚡ Payb Cmm 102 Fra	-8.77	01-14-2019	5,094.60	-5,084.31
% Assets in Top 5 Holdings	31.80			

⊕ Increase ⊖ Decrease ⚡ New to Portfolio

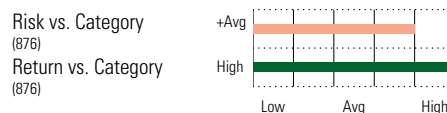
## Top Sectors 12-31-2018

	Fund	BMark	Cat Avg	
Other Government Related	41.04	—	—	■ Fund ▼ Cat Avg
Corporate Bond	20.78	—	—	
Asset-Backed	16.68	—	—	
Commercial MBS	7.17	—	—	
Non-U.S. Government	6.66	—	—	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-31-2018	13.93	0.0000	0.0000	0.0000	0.0421	0.0421
12-21-2018	13.88	0.0000	0.0000	0.0000	0.0862	0.0862
11-30-2018	13.85	0.0000	0.0000	0.0000	0.0441	0.0441
10-31-2018	13.83	0.0000	0.0000	0.0000	0.0460	0.0460
09-28-2018	13.96	0.0000	0.0000	0.0000	0.0350	0.0350

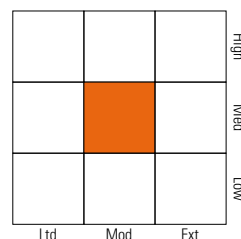
## 3 Year Average Morningstar Risk Measures



## Pillars

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

## Style Map 12-31-2018



## Bond Statistics

	Value
Average Effective Duration	6.20
Average Effective Maturity (Years)	—
Average Credit Quality	BBB
Average Weighted Coupon	—
Average Weighted Price	—

## Asset Allocation

	% Net	% Short	% Long	Bench mark	Cat Avg
● Cash	0.41	0.36	0.77	—	-5.22
● US Stock	-0.01	0.01	0.00	—	-0.04
● Non US Stock	0.00	0.00	0.00	—	-0.01
● Bond	98.87	42.27	141.14	—	103.86
● Other	0.73	0.06	0.78	—	1.42

## Management

	Start Date
Robert Tipp	10-30-2002
Michael J. Collins	11-18-2009
Richard Piccirillo	12-31-2012
Gregory Peters	03-05-2014

# PGIM Total Return Bond Fund -Class R6 PTRQX

## Analysis

### Investors here benefit from a methodical approach and impressive resources.

By Eric Jacobson 4/9/2018

Prudential Total Return Bond boasts a methodical approach, a strong risk framework, and impressive resources. Combined with reasonable pricing, those factors help support its Morningstar Analyst Rating of Silver.

This fund (which will become PGIM Total Return Bond in mid-2018 as part of a branding change) is run by a fixed-income group that's well-resourced in people and analytics. Prudential has roots in the insurance industry, and the firm boasts at least 80 credit analysts and has historically carried something of a credit bias.

But while the fund's corporate exposure has long topped the benchmark's (including its high-yield bonds and bank loans), valuations have pressed its managers to trim corporate credit risk in recent years, mostly in favor of securitized assets. Corporates and bank loans constituted 35% of the fund as of December 2017, compared with 49% two years earlier. Securitized assets had risen to 43% of the portfolio at that point, up from 34% at the end of 2015. That mix has included highly rated collateralized-loan-obligation tranches and both nonagency residential and commercial mortgage-backed securities. By contrast, the fund held 7% in U.S. government bonds--roughly a tenth of their weighting in the benchmark--down from 43% at the end of 2007. That shift might be a greater challenge for a team with fewer resources, but Prudential has a fairly large staff dedicated to securitized sectors, including eight portfolio managers and 10-plus analysts.

That profile normally gives the fund a different look than most peers', though many have been adding to their securitized holdings, too. Despite its modest Treasury exposure, though, the fund has been willing to take more interest risk than its index, with a 6.5-year duration at the end of 2017 versus 5.9 years for the boggy.

The fund has endured above-average volatility and requires a level of comfort with its composition, but it has survived rough markets without severe or lasting damage: In 2008, it had exposure to rallying Treasuries as its other sector exposures struggled, keeping it from deeper trouble.

#### Process Pillar: Positive

This fund's managers focus on finding issues that have good fundamentals but generate a healthy amount of income. That gives it a bias toward corporates, securitized assets, and smaller helpings in non-U.S. developed- and emerging-markets debt, with very little exposure to Treasuries and agencies.

The team has long gravitated toward corporate credit. In that context, the managers compare internal credit scores against rating agencies', assign scores based on yield premiums versus the broad market, and build rankings based on liquidity and event risk. Internally developed risk analytics are then applied to portfolios.

The team targets a goal of 150 basis points of out-performance per year over the Bloomberg Barclays U.S. Aggregate Bond Index, ideally averaging contributions of roughly 75 basis points from sector allocation, 60 basis points from subsector and security selection, and 15 basis points from plays on duration, currency, and the yield curve. With the use of its risk models, the team also looks to cap the fund's tracking error at 250 basis points.

Overall, the team has managed strong execution of a straightforward, well-developed strategy, which has earned the fund a Positive Process Pillar rating.

The fund still carries a credit bias, but with a greater securitized tilt and a longer duration. After taking that figure to 3.8 years in March 2009, the fund's managers drove it up to 6.5 years as of December 2017, more than a half-year longer than the benchmark's and nearly a year longer than the (distinct) intermediate-bond Morningstar Category median.

### Morningstar's Take

Morningstar Analyst Rating



#### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Positive
Price	 Positive

#### Morningstar Analyst Rating

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

#### Analyst Rating Spectrum

 Gold  Silver  Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	0.44	0.13
2018	-0.63	-0.14
2017	6.71	3.00
2016	4.83	1.59
2015	0.09	0.34

# PGIM Total Return Bond Fund -Class R6 PTRQX

## Analysis

The fund held 35% in corporate credit, roughly three fourths of which was investment-grade, with the rest in high-yield and bank loans, reflecting a continued trimming of credit risk: That figure had hovered around 49% two years earlier. Many of those assets have been absorbed into the fund's securitized exposure, which totaled 43% at the end of 2017.

That allocation was heavily tilted toward highly rated CLO tranches, which the team has favored more and more for their reasonable valuations and high credit quality. The rest comprised other asset-backed sectors, nonagency residential mortgages, and commercial-mortgage-backed securities. The fund also held 8% in foreign government and 5% in emerging-markets issues (nearly doubling the latter in early 2018). With only a 1% stake in agency mortgages and 4% in Treasuries and agency debt, that leaves the fund with a massive underweighting in those sectors relative to its benchmark, and the category, albeit to a lesser degree.

### Performance Pillar: Positive

The fund's long-term record has been attractive: Its trailing long-term returns all place in its category's best quartile. And though its volatility during those periods has been higher than average, it hasn't been extreme, and the fund hasn't suffered serious blows. It earns a Positive Performance Pillar rating.

The ride has been a little choppy at times. The fund's duration was 3.8 years in early 2009 and ratcheted up to 6.5 years by December 2017. Many rivals trimmed rate sensitivity, though, producing different relative outcomes. Unsurprisingly, the fund suffered a bit more than its average peer when Treasury yields spiked during the last four months of 2016 and again during the first two of 2018.

When Treasury yields spiked between Oct. 8, 2010, and Feb. 10, 2011, though, the fund's duration was still in the range of 4.5-4.9 years, and its 1.4% loss placed in the best third of distinct funds in the group. And while it trimmed credit risk over

the past couple of years, the fund has been more aggressive there since 2008 when it placed in the category's middle and dipped to the group's bottom half during the third-quarter 2011 credit sell-off. The fund also had some poor relative months when credit sold off in the second half of 2014 and then 2015, but it didn't fare notably worse on a relative basis than during the third quarter of 2011.

### People Pillar: Positive

The fund is run by Michael J. Collins, Robert Tipp, Richard Piccirillo, and Gregory Peters; they also manage Prudential Absolute Return Bond PADZX. They average more than 20 years of experience and are backed by a group with big research manpower by virtue of a cadre of portfolio managers and roughly 100 analysts. The group also draws on a team focused on proprietary analytics, risk management, and performance attribution. The managers' record and substantial resources support a Positive People rating and helped them win Morningstar's 2017 Fixed-Income Fund Manager of the Year award.

Collins also manages some of the firm's other multisector strategies. He has been at Prudential since 1986 and has experience as a high-yield manager and developing proprietary quantitative international interest-rate and currency models. Tipp has been with the firm since 1991; he heads its global bonds team and drives global rate positioning for several portfolios. Piccirillo has been with Prudential since 1993 and specializes in mortgage- and asset-backed securities. Prior to joining the firm, he worked as a fixed-income analyst for Fischer Francis Trees & Watts. Peters has experience as Morgan Stanley's global director of fixed income and economic research and was responsible for that firm's macro research and asset-allocation strategy. His prior experience included stints at Salomon Smith Barney and the U.S. Treasury.

### Parent Pillar: Positive

PGIM is the new name for the former Prudential Investment Management, the asset-management arm of conglomerate Prudential Financial, and its fund lineup has completed the gradual rebranding effort to the new moniker. PGIM has notable strengths, including a positive culture, and it has

continued to move in the right direction. Our increasing confidence in the firm earns it a Positive Parent rating.

The PGIM funds are subadvised by subsidiaries of the firm, primarily Jennison Associates, Quantitative Management Associates, PGIM Fixed Income, and PGIM Real Estate. The fixed-income team, with more than half of the firm's fund assets, is well-resourced and risk-aware, while the actively managed fundamental equity funds are run by Jennison with an established, repeatable investment process. The PGIM funds as a group have respectable long-term records.

PGIM has launched a lot of new funds since 2010, about half of its 71 open-end funds (as of June 2018). That's a potential concern, but these new funds have been in areas where the firm already has significant resources.

The PGIM funds are overseen by an engaged, active board. The trustees have pushed for lower fees, and the fund's expenses have been coming down, including through the recent implementation of some expense caps and reduced management fees. Manager investment in the PGIM funds has also improved.

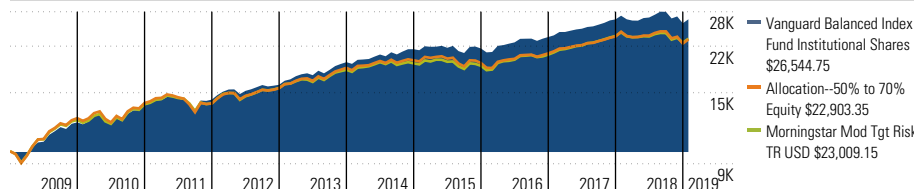
### Price Pillar: Positive

The fund's pricing had historically been a mixed bag, with share classes holding half its assets all priced below average relative to their respective peer groups of similarly distributed funds, with the other half of the fund's asset base residing in classes charging above-average fees. Prudential addressed that problem in early 2016, however, contractually limiting expenses on the fund's share classes. They're not required to maintain that agreement, but it would be unusual for a bond fund to raise its prices after such a move. Since then, enough assets have been charged below-average fees to push the fund's Price Pillar rating to Positive.

# Vanguard Balanced Index Fund Institutional Shares VBAIX

**Morningstar Analyst Rating**  
**Gold**

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
33.98	↑0.06   0.18	2.33	36	Open	\$5	None	0.06%	★★★★	Allocation--50% to 70% Equity	Large Blend

**Growth of 10,000** 01-16-2009 - 01-16-2019

**Performance** 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,297	10,120	9,806	13,003	13,644	26,429
Fund	2.97	1.20	-1.94	9.15	6.41	10.21
+/- Morningstar Mod Tgt Risk TR USD	0.04	-0.58	2.09	0.44	1.77	1.59
+/- Category	-0.26	-0.14	2.95	1.30	2.09	1.21
% Rank in Cat	59	60	11	18	10	19
# of Funds in Cat	768	768	755	681	596	436

\* Currency is displayed in USD

**Top Holdings** 12-31-2018

	Weight %	Last Price	Day Chg %	52 Week Range
⊕ Microsoft Corp	1.87	105.55 USD	0.16 ↑	83.83 - 116.18
⊕ Apple Inc	1.61	154.62 USD	-0.18 ↓	142.00 - 233.47
⊕ Amazon.com Inc	1.49	— USD	0.33 ↑	1,265.93 - 2,050.50
⊕ Berkshire Hathaway Inc B	0.88	197.86 USD	-0.24 ↓	184.75 - 224.07
⊕ Johnson & Johnson	0.83	129.00 USD	0.77 ↑	118.62 - 148.99
% Assets in Top 5 Holdings	6.67			

⊕ Increase ⊖ Decrease ☆ New to Portfolio

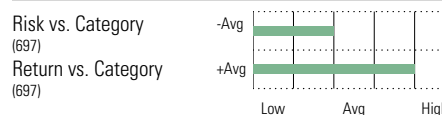
**Top Sectors** 12-31-2018

	Fund	3 Yr High	3 Yr Low	Cat Avg
Technology	21.39	21.39	17.73	18.71
Financial Services	15.67	16.64	15.67	17.40
Healthcare	14.90	14.90	13.28	14.46
Consumer Cyclical	12.13	12.13	11.32	11.43
Industrials	10.41	11.43	10.41	10.46

	Fund	BMark	Cat Avg
Government	16.22	15.12	11.01
Agency Mortgage-Backed	9.28	15.39	6.46
Government-Related	1.95	0.96	2.51
Commercial MBS	0.51	0.00	0.57
Asset-Backed	0.28	0.00	2.04

**Dividend and Capital Gains Distributions**

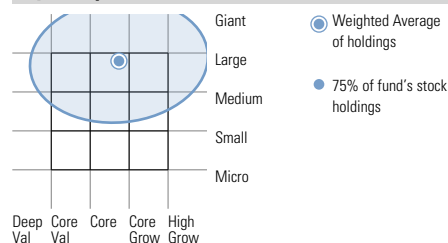
Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-21-2018	32.19	0.0000	0.0000	0.0000	0.2041	0.2041
09-27-2018	36.11	0.0000	0.0000	0.0000	0.2032	0.2032
06-21-2018	35.08	0.0000	0.0000	0.0000	0.1814	0.1814
03-21-2018	34.70	0.0000	0.0000	0.0000	0.1791	0.1791
12-22-2017	34.72	0.0000	0.0000	0.0000	0.1908	0.1908

**3 Year Average Morningstar Risk Measures**

**Pillars**

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

**Investment Strategy**

The investment seeks to track the performance of the benchmark index that measures the investment return of the overall U.S. stock market with 60% of its assets; the fund seeks to track the performance of a broad, market-weighted bond index with 40% of its assets. The fund employs an indexing investment approach designed to track the performance of two benchmark indexes. With approximately 60% of its assets, the fund seeks to track the investment performance of the CRSP US Total Market Index. With approximately 40% of its assets, the fund seeks to track the investment performance of the Bloomberg Barclays U.S. Aggregate Float Adjusted Index.

**Style Map**

**Asset Allocation**

	% Net	% Short	% Long	Bench mark	Cat Avg
Cash	0.81	0.00	0.81	1.01	5.71
US Stock	59.23	0.00	59.23	35.88	45.84
Non US Stock	0.49	0.00	0.49	23.19	12.74
Bond	39.38	0.58	39.96	39.84	33.60
Other	0.09	0.00	0.09	0.08	2.11

**Management**

	Start Date
Joshua C. Barrickman	02-22-2013
William A. Coleman	04-26-2016
Gerard C. O'Reilly	04-26-2016

# Vanguard Balanced Index Fund Institutional Shares VBAIX

## Analysis

### An extremely cheap, domestic balanced fund.

By Patricia Oey 12/9/2018

Vanguard Balanced Index is a 60/40 allocation fund that uses broad indexes for U.S. equity and bond exposure. This efficient portfolio, combined with Vanguard's indexing capabilities and rock-bottom fees, earn this fund a Morningstar Analyst Rating of Gold.

This fund stands out among its peers for its simplicity. Unlike many rival fund managers who use tactical management to adjust attributes like overall stock/bond weighting, credit quality, or growth and value tilts, the leads here stick to their 60/40 target allocation, which eliminates the risk of ill-timed portfolio changes. Its stock portfolio tracks the CRSP U.S. Total Stock Market Index, which includes virtually the entire domestic stock market. The bond sleeve tracks the Bloomberg Barclays U.S. Aggregate Float Adjusted Bond Index, which serves as a proxy for U.S. investment-grade taxable bonds.

But this fund's different approach can affect relative performance. First, the equity sleeve holds only U.S. equities, whereas its peers in the allocation -- 50% to 70% equity Morningstar Category currently have about 12% in foreign equities. From 2010 through November 2018, the S&P 500 outperformed developed market equities (as measured by MSCI EAFE) by more than 800 basis points annualized, and this contributed to the fund's strong 9.1% annualized returns versus the category average's 6.9% over that time period. On the flip side, the fund is likely to underperform when U.S. equities underperform its foreign peers over a sustained period. The high-quality bond sleeve is also a bit different as it doesn't hold high-yield debt, whereas its average peer invests 18% of assets in unrated bonds or those rated BB and below. This preference benefited the fund during the credit crunch from July 2011 through September 2011, when the fund lost about 260 basis points less than its typical peer.

For investors looking for a domestic-focused bal-

anced fund, this is an excellent, low-cost option. Those who want more diversification via a global exposure can consider Gold-rated Vanguard LifeStrategy Moderate Growth VSMGX, which is also a 60/40 fund.

#### Process Pillar: Positive

The managers successfully employ a practical and efficient process for this balanced fund, earning it a Positive Process rating.

Unlike many of its peers in the allocation -- 50% to 70% equity category, the managers here stick to a traditional balanced fund allocation of 60% equity and 40% bond. They accomplish this by using investor flows and S&P 500 mini-futures.

The equity sleeve tracks the CRSP U.S. Total Stock Market Index. This index includes 3,600 holdings, from micro-caps to mega-caps, and accurately reflects the composition of the U.S. stock markets. The fund employs almost full replication, holding 3,500 of the largest names and sampling the smallest securities. Like most index funds, the managers engage in securities lending in an effort to improve tracking performance.

The fixed-income sleeve's benchmark is the Bloomberg Barclays U.S. Aggregate Float-Adjusted Bond Index, which includes investment-grade corporate, government, agency-, and mortgage-backed securities denominated in U.S. dollars, re-balanced monthly. The fixed-income index team has a solid, long-term track record of using statistical sampling techniques to construct a portfolio that reflects the key attributes (such as duration and credit) of the index. It is not practical to hold all the securities in the index, as many constituents have low trading volumes.

Overall, the portfolio has remained close to its 60% equity and 40% bond allocation target.


On the equity side, the fund's 60% allocation has been in line with category peers over the past few years. Style, size, and sector exposures also tend

### Morningstar's Take

Morningstar Analyst Rating



### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Positive
Price	 Positive

### Morningstar Analyst Rating

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

Analyst Rating Spectrum

 Gold  Silver  Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	2.97	-0.26
2018	-2.82	2.95
2017	13.86	0.65
2016	8.81	1.47
2015	0.52	2.45



# Vanguard Balanced Index Fund Institutional Shares VBAIX

## Analysis

to be fairly similar to category averages. But notably, this fund invests only in U.S. equities, while the average peer has about a 12% allocation in international equities. This sleeve is essentially the same as Gold-rated Vanguard Total Stock Market Index VTSAX.

On the bond side, the float-adjusted, market-cap-weighted index results in a larger treasury exposure. It started to track this float-adjusted index (which does not include securities held by the Federal Reserve) in 2009. The fund's overall average credit quality is AA, versus the category average of BB, a result of some managers taking on more credit risk. Duration here is currently at 6.2 years, versus the category average of 4.8 years, mainly because the index excludes securities with less than one year to maturity. This fund also does not hold Treasury Inflation-Protected Securities or non-U.S. dollar bonds. This sleeve is essentially the same as Silver-rated Vanguard Total Bond Market Index VBTXX.

The fund strives to be fully invested, so it holds less cash, at around 2%, versus the category average of around 5%.

### Performance Pillar: Positive

This fund has generated superior long-term performance relative to its category peers, earning it a Positive Performance rating.

Since its inception in 1992, this fund's rolling five-year returns have outperformed its average category peer 97% of the time. A key contributor of this performance has been low fees. More recently, strong outperformance of U.S. equities versus international equities has been a tailwind for this domestic fund, as category peers tend to have some non-U.S. exposure. From 2010 through November 2018, the S&P 500 outperformed developed market equities (as measured by MSCI EAFE) by more than 800 basis points annualized, and this contributed to the fund's 9.1% annualized returns versus the category average's 6.9% over that time period.

The equity outperformance during this decade was slightly offset by underperformance in the bond sleeve, where its relatively higher-quality portfolio wasn't able to benefit as much from better performance from the riskier areas of the market. That said, over the trailing 15 years, the fund's standard deviation of 8.4% was lower than the category average's 9.5%, resulting in a Sharpe ratio of 0.72 versus the category average of 0.55.

The fund's low turnover and steady inflows, which aid in the rebalancing process, have contributed to its tax efficiency. It has not distributed capital gains to fundholders since 2001.

### People Pillar: Positive

The seasoned managers have the support of a large, well-resourced team. The equity and bond index teams' experience, deep bench of talent, and strong trading infrastructure support a Positive People rating.

On the equity side, Vanguard's Equity Index Group includes more than 20 portfolio managers or traders. Portfolio manager rotation occurs every few years, as the team believes this further develops expertise and minimizes key-manager risk. Current managers Gerard O'Reilly and William Coleman took the helm in April 2016, when Christine Franquin stepped down, but she continued to serve as lead for international equity index funds. O'Reilly has been with Vanguard since 1992 and has managed stock index portfolios since 1994. He manages other funds, including Gold-rated Vanguard Total Stock Market VTSAX, which tracks the same index as this fund's equity sleeve. Coleman joined Vanguard in 2006 and is a co-manager for Vanguard's Gold-rated target-date funds.

Joshua Barrickman has managed the bond sleeve since February 2013. He joined Vanguard in 1998 and has managed funds since 2005. He oversees Silver-rated Vanguard Total Bond Market VBTXX, which tracks the same index as this fund's bond portfolio. Christopher Wrazen was a named manager from July 2015 until April 2018, when he was appointed head of the bond index group in Europe.

### Parent Pillar: Positive

The Vanguard Group is the world's biggest provider of open-end funds and its second-biggest provider of exchange-traded funds. Innovative and iconoclastic from its mid-1970s origins, the firm's mutual ownership structure, commitment to low fees, and sensible active and passive investment strategies are hallmarks that support its Positive Parent rating.

Vanguard is committed to serving all investors, not just its own. Indeed, the firm celebrates when its entry into an asset class prompts rivals to lower their fees to remain competitive, as occurred when Vanguard launched index funds in London in 2009 and factor-based strategies in the United States in early 2018.

New CEO Tim Buckley, Vanguard's fourth, faces the challenge of expanding the firm's mission to non-U.S. investors, who currently account for less than a tenth of the firm's \$5 trillion in global assets under management. He must also navigate the tension between Vanguard's burgeoning discretionary asset-management business, Personal Advisor Services, and financial advisors who may feel threatened by the firm's efforts to lower the cost of investment advice. Perhaps Vanguard's greatest challenge, though, will be keeping pace with its own growth, especially in overcoming the service problems that have bedeviled the firm the past few years. Vanguard's 2017 implementation of client-experience testing labs should help the firm improve there, too.

### Price Pillar: Positive

Vanguard is based on the concept of low-cost investing, and this fund is no exception. It earns a Positive Price rating.

About 60% of the fund's assets are in the Admiral share class, which charges 0.07%, making it the cheapest no-load, moderate-allocation fund. Vanguard has also lowered the initial minimum investment to \$3,000 from \$10,000 as it phases out the Investor share class for this fund (along with 37 other index funds), which used to charge 0.19%.

# Vanguard Balanced Index Fund Institutional Shares VBAIX

---

## Analysis

Unlike many of Vanguard's passive strategies, this fund does not offer an exchange-traded fund share class.

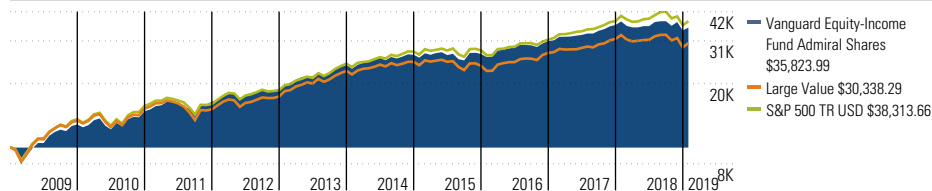


# Vanguard Equity-Income Fund Admiral Shares VEIRX

Morningstar Analyst Rating  
Silver

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
68.50	↑0.02   0.03	3.02	30	Open	\$50,000	None	0.17%	★★★★	Large Value	Large Value

## Growth of 10,000 01-16-2009 - 01-16-2019



## Investment Strategy

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

## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,312	9,976	9,490	14,222	14,953	35,663
Fund	3.12	-0.24	-5.10	12.46	8.38	13.56
+/- S&P 500 TR USD	-1.32	-1.01	-1.20	-1.49	-1.08	-0.73
+/- Category	-1.36	-1.02	2.36	0.98	2.01	1.46
% Rank in Cat	84	80	23	29	11	17
# of Funds in Cat	1,255	1,254	1,225	1,085	923	674

\* Currency is displayed in USD

## Top Holdings 09-30-2018

	Weight %	Last Price	Day Chg %	52 Week Range
⊕ JPMorgan Chase & Co	4.18	102.84 USD	0.35 ↑	91.11 - 119.33
⊖ Johnson & Johnson	3.26	129.00 USD	0.77 ↑	118.62 - 148.99
⊕ Verizon Communications Inc	2.75	56.38 USD	-1.21 ↓	46.08 - 61.58
⊖ Chevron Corp	2.52	111.26 USD	-0.12 ↓	100.22 - 133.88
⊖ Cisco Systems Inc	2.50	43.96 USD	0.02 ↑	37.35 - 49.47
% Assets in Top 5 Holdings	15.21			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

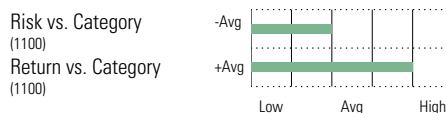
## Top Sectors 09-30-2018

	Fund	3 Yr High	3 Yr Low	Cat Avg	
Financial Services	16.34	18.17	16.34	21.20	■ Fund ▼ Cat Avg
Healthcare	15.56	15.56	12.23	15.06	
Consumer Defensive	12.92	12.92	12.04	8.79	
Energy	11.59	11.59	11.14	10.52	
Industrials	11.22	12.88	10.63	9.73	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-18-2018	67.11	5.1291	0.0000	0.0000	0.6593	5.7884
09-21-2018	80.93	0.0000	0.0000	0.0000	0.5545	0.5545
06-15-2018	77.14	0.0000	0.0000	0.0000	0.5471	0.5471
03-15-2018	77.27	0.0000	0.0000	0.0000	0.4012	0.4012
12-18-2017	78.04	0.7366	0.1996	0.0000	0.5454	1.4816

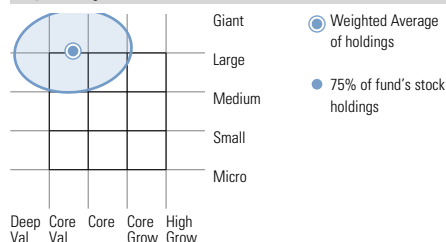
## 3 Year Average Morningstar Risk Measures



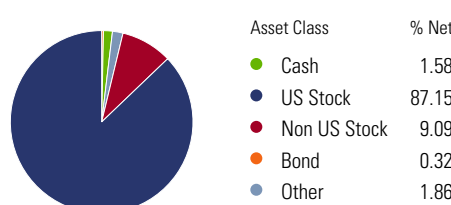
## Pillars

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

## Style Map



## Asset Allocation



## Management

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

# Vanguard Equity-Income Fund Admiral Shares VEIRX

## Analysis

### Reliable.

By Alec Lucas, Ph.D. 5/16/2018

Vanguard Equity-Income's complementary subadvisor duo, reliability, and low fees support its Morningstar Analyst Rating of Silver.

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

The teams' strategies work well together. Reckmeyer's invests in roughly 60-70 dividend payers with unappreciated growth prospects; even when a pick works out, there can be bumps along the way. His thesis that top-10 holding Philip Morris International's PM IQOS tobacco heating product would spur greater than anticipated revenue encountered headwinds in April 2018 when the company reported disappointing results. Vanguard's sleeve, on the other hand, spreads its bets across 100-plus names based on factors such as valuation and earnings sustainability.

The fund's sector weightings hew closely to those of FTSE High Dividend Yield Index, rarely diverging by more than 5 percentage points. Versus its large-value Morningstar Category peer group, however, the fund tends to tread heavily in income-oriented sectors such as utilities and telecom. As of March 2018, the fund's 12% combined stake in these sectors ranked near the category's top decile.

The fund is at its relative best whenever investors seek safety in yield-rich sectors. Indeed, the fund held up better than 90% of its large-value Morningstar Category peers in the 2015-16 correction. The fund, though, is prone to lag when interest rates spike, as in 2016's second half and between September 2017 and late April 2018 when the yield on the 10-year Treasury shot up about 100 basis points.

Over the long haul, Reckmeyer's stock-picking skill and the Vanguard quant team's model have produced strong risk-adjusted results. From Reckmeyer's late 2007 start date through April 2018, the fund's top-decile 8.1% annualized gain edged its benchmark with less volatility.

### Process Pillar: + Positive

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

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

The fund has a diverse portfolio of about 150-200 dividend-paying stocks. They consistently produce an above-average yield versus the large-value category norm, although they are typically well-capitalized firms. Currently, the fund derives its top-decile 2.4% trailing 12-month yield from stocks that, on average, have a return on assets that

### Morningstar's Take

Morningstar Analyst Rating



### Morningstar Pillars

Process	+ Positive
Performance	+ Positive
People	+ Positive
Parent	+ Positive
Price	+ Positive

### Morningstar Analyst Rating

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

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	3.12	-1.36
2018	-5.65	2.89
2017	18.49	2.55
2016	14.82	0.01
2015	0.86	4.90

# Vanguard Equity-Income Fund Admiral Shares VEIRX

## Analysis

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

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

Sector weightings tend to stay fairly close to the fund's benchmark but can diverge dramatically from the Russell 1000 Value Index. Financials claimed 16.7% of the fund's assets as of March 2018. That was more than any other sector but still below the Russell index's 27.1% stake. While exposure to dividend havens like telecom and utilities (a combined 12% presently) can be significant, the fund is more diversified than most income-oriented peers.

### Performance Pillar: Positive

The fund's Positive Performance Pillar rating reflects its strong record under the current subadvisor lineup. Since Wellington Management and Vanguard's in-house quantitative equity group became solely responsible for this fund's asset base in late 2005, its 8.8% annualized gain through April 2018 beat the Russell 1000 Value Index by 1.6 percentage points and landed in the large-value category's top decile, with below-average volatility.

Wellington's management team underwent a change at year-end 2007, when Michael Reckmeyer took over the lead role from John Ryan. That transition went smoothly because Reckmeyer had been a longtime member of the firm's value equity-income team and he uses the same approach as his predecessor. The fund has continued to fare well. From January 2008 through April 2018, it topped the Russell index in 52 of 65 five-

year rolling periods. The fund has had less success against the FTSE High Dividend Yield Index, its primary prospectus benchmark since mid-2007, but maintains a slight cumulative edge versus that boggy during the same period.

Vanguard does not disclose individual subadvisors' results, but Reckmeyer's use of a nearly identical strategy on Hartford Equity Income HQIAX gives a sense of how the two teams have done. Although the Hartford fund has better long-term gross returns, there are years when the quant group adds value, like 2011 and 2014.

### People Pillar: Positive

Consistent and capable subadvisor leadership earns the fund a Positive People Pillar rating. Since late 2005, the fund's assets have been split between anchor Wellington Management and Vanguard's in-house quantitative equity group. Wellington, a subadvisor here since 2000, boasts ample resources in overseeing about two thirds of assets. Michael Reckmeyer took over as lead manager of Wellington's slice in late 2007 and has been a member of the firm's now eight-person value equity-income team since 1994. Industrials analyst Betsy George joined most recently in late 2017, with about a decade of experience, and the team will add another analyst in view of veteran member Karen Grimes' year-end 2018 retirement. The team also has access to the firm's 50-plus global industry analysts.

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

Reckmeyer invests more than \$1 million in the fund.

### Parent Pillar: Positive

The Vanguard Group is the world's biggest provider of open-end funds and its second-biggest provider of exchange-traded funds. Innovative and iconoclastic from its mid-1970s origins, the firm's mutual ownership structure, commitment to low fees, and sensible active and passive investment strategies are hallmarks that support its Positive Parent rating.

Vanguard is committed to serving all investors, not just its own. Indeed, the firm celebrates when its entry into an asset class prompts rivals to lower their fees to remain competitive, as occurred when Vanguard launched index funds in London in 2009 and factor-based strategies in the United States in early 2018.

New CEO Tim Buckley, Vanguard's fourth, faces the challenge of expanding the firm's mission to non-U.S. investors, who currently account for less than a tenth of the firm's \$5 trillion in global assets under management. He must also navigate the tension between Vanguard's burgeoning discretionary asset-management business, Personal Advisor Services, and financial advisors who may feel threatened by the firm's efforts to lower the cost of investment advice. Perhaps Vanguard's greatest challenge, though, will be keeping pace with its own growth, especially in overcoming the service problems that have bedeviled the firm the past few years. Vanguard's 2017 implementation of client-experience testing labs should help the firm improve there, too.

### Price Pillar: Positive

Rock-bottom fees earn the fund a Positive Price Pillar rating. The Investor shares' 0.26% expense ratio, which applies to about one fifth of the fund's assets, is 63 basis points below the large-cap no-load peer median and lower than 91% of those peers. The Admiral shares contain the rest of the fund's assets and are even cheaper at 0.17%, which beats 94% of their rivals' fees. Brokerage fees as a percentage of average net assets routinely fall below the category median and capital gains distributions in 2017 were modest.

# Vanguard Equity-Income Fund Admiral Shares VEIRX

---

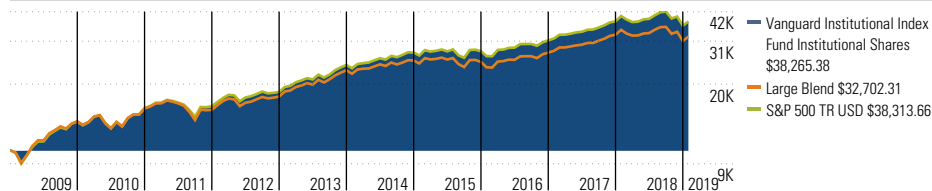
## Analysis

The fund's price tag will shift some. Vanguard pays subadvisor Wellington an asset-based fee, with breakpoints, and the expense ratio also includes a performance adjustment based on the fund's three-year rolling return versus the FTSE High Dividend Yield Index.

# Vanguard Institutional Index Fund Institutional Shares VINIX

**Morningstar Analyst Rating**  
**Gold**

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
237.65	↑0.53   0.22	2.12	200	Open	\$5	None	0.04%	★★★★	Large Blend	Large Blend

**Growth of 10,000 01-16-2009 - 01-16-2019**

**Investment Strategy**

The investment seeks to track the performance of a benchmark index that measures the investment return of large-capitalization stocks. The fund employs an indexing investment approach designed to track the performance of the Standard & Poor's 500 Index, a widely recognized benchmark of U.S. stock market performance that is dominated by the stocks of large U.S. companies. The advisor attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

**Performance 01-16-2019**

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,444	10,077	9,606	14,779	15,688	37,975
Fund	4.44	0.77	-3.94	13.91	9.42	14.27
+/- S&P 500 TR USD	0.00	-0.01	-0.04	-0.04	-0.03	-0.02
+/- Category	0.00	-0.14	1.73	1.51	1.80	1.20
% Rank in Cat	53	57	27	20	9	19
# of Funds in Cat	1,461	1,458	1,385	1,193	1,054	793

\* Currency is displayed in USD

**Top Holdings 12-31-2018**

	Weight %	Last Price	Day Chg %	52 Week Range
⊕ Microsoft Corp	3.72	106.40 USD	0.97 ↑	83.83 - 116.18
⊖ Apple Inc	3.37	156.52 USD	1.04 ↑	142.00 - 233.47
⊕ Amazon.com Inc	2.92	— USD	0.88 ↑	1,265.93 - 2,050.50
⊕ Berkshire Hathaway Inc B	1.85	199.12 USD	0.40 ↑	184.75 - 224.07
⊕ Johnson & Johnson	1.64	129.42 USD	1.09 ↑	118.62 - 148.99
% Assets in Top 5 Holdings	13.49			

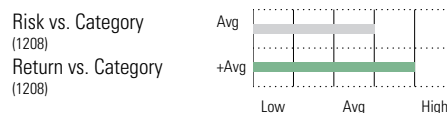
⊕ Increase ⊖ Decrease ✱ New to Portfolio

**Top Sectors 12-31-2018**

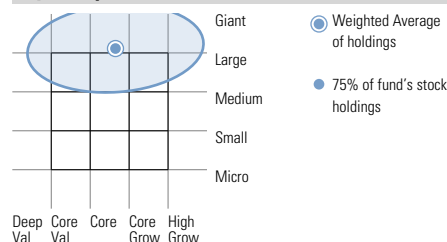
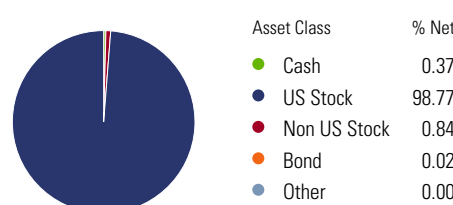
	Fund	3 Yr High	3 Yr Low	Cat Avg	
Technology	21.94	21.94	18.58	20.96	■ Fund ▼ Cat Avg
Financial Services	15.87	16.80	15.87	16.73	
Healthcare	15.50	15.50	13.75	15.02	
Consumer Cyclical	11.82	11.82	10.97	11.65	
Industrials	9.75	11.03	9.75	11.02	

**Dividend and Capital Gains Distributions**

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-18-2018	230.99	0.4957	0.2023	0.0000	1.3336	2.0316
09-21-2018	266.82	0.0000	0.0000	0.0000	1.3676	1.3676
06-15-2018	253.25	0.0000	0.0000	0.0000	1.1362	1.1362
03-15-2018	250.22	0.0000	0.0000	0.0000	0.9996	0.9996
12-22-2017	244.26	0.0000	0.0000	0.0000	1.2258	1.2258

**3 Year Average Morningstar Risk Measures**

**Pillars**

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

**Style Map**

**Asset Allocation**

**Management**

	Start Date
Donald M. Butler	12-31-2000
Michelle Louie	11-30-2017

# Vanguard Institutional Index Fund Institutional Shares VINIX

## Analysis

**This is among the cheapest S&P 500 trackers available.**

By Adam McCullough 3/23/2018

Vanguard Institutional Index is a compelling option. This fund gains a leg up over most of its Morningstar Category peers by efficiently tracking a broadly diversified and representative benchmark at a low cost. It earns a Morningstar Analyst Rating of Gold.

The fund tracks the S&P 500, a market-cap-weighted index that includes large-cap stocks representing about 80% of the U.S. stock market. A committee selects the index's holdings, and this offers more flexibility than indexes that adhere to rigid rules but also reduces transparency. However, the S&P 500's performance has been, and should continue to be, highly correlated with large-cap indexes that follow mechanical rules.

Market-cap weighting pulls the portfolio toward the largest U.S. stocks and accurately reflects the composition of the market. The fund's average market capitalization of just under \$100 billion is nearly double the market cap of the average fund in the category. The fund is broadly diversified, which should help control individual stock risk. Its top 10 holdings make up about 20% of its portfolio and include household names like Apple AAPL, Microsoft MSFT, and Amazon.com AMZN.

Low turnover is a key advantage of the fund's broad market-cap-weighted approach. Lower turnover equates to lower transaction costs and a smaller likelihood of taxable capital gains distributions. The fund's average turnover over the past decade was 5%, much lower than the category average of over 60%. Tax efficiency adds to the fund's appeal. It has not distributed any capital gains since its inception.

The fund's cost advantage has translated into strong performance. During the decade through February 2018, its Admiral share class outpaced the large-blend category by 1.7% annually, and the fund's risk-adjusted returns, as measured by

Sharpe ratio, landed in the category's top quintile. Because this index fund remains fully invested, it suffered a larger drawdown than the category average during the financial crisis. But its smaller cash drag pays off during bull markets, and the fund's performance during the market recovery more than made up for its larger drawdown.

**Process Pillar:**  Positive

This fund uses full replication to track the S&P 500. This index effectively diversifies risk, promotes low turnover, and accurately represents its target market segment, supporting the Positive Process rating.

Unlike many other indexes, a committee selects the constituents for the S&P 500. These large-cap stocks represent about 80% of the total market capitalization of the U.S. stock market. The S&P 500 has a slight quality tilt because new constituents must be profitable before they are eligible to be added in the index. However, that screen probably won't have a big impact on performance because most large-cap stocks meet this requirement. While qualifying stocks must pass some quantitative screens, the index committee has some discretion in its stock-selection process. This gives the S&P 500 a greater degree of flexibility than indexes that follow more-mechanical rules, though it also reduces transparency. Despite this difference, the S&P 500's performance has been, and should continue to be, highly correlated with other large-cap indexes that follow mechanical rules.

The portfolio managers use dividend reinvesting and derivatives to keep pace with the benchmark. The fund has historically used securities lending to generate additional income to offset expenses.


This is a well-diversified offering that captures nearly 80% of the investable U.S. equity market. Its top 10 holdings represent just under 20% of the portfolio and include household names such as Apple, Microsoft, Amazon, and Exxon Mobil XOM. Sector weightings for the fund nearly match those of the large-blend category average because the fund's index relies on market capitalization to

### Morningstar's Take

Morningstar Analyst Rating



### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Positive
Price	 Positive

### Morningstar Analyst Rating

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

### Analyst Rating Spectrum

 Gold  Silver  Bronze **Neutral** **Negative**

### Fund Performance

	Total Return %	+/- Category
YTD	4.44	0.00
2018	-4.42	1.85
2017	21.79	1.35
2016	11.93	1.56
2015	1.37	2.44



# Vanguard Institutional Index Fund Institutional Shares VINIX

## Analysis

weight its holdings. The technology, healthcare, and financial-services sectors represent the fund's largest sector weightings, while the real estate, utilities, and materials sectors carry the smallest weightings.

Stocks are added and removed from the S&P 500 at the committee's discretion, so it can be difficult to anticipate changes ahead of time. Because this is one of the most widely tracked indexes, changes tend to move stock prices. In January 2010, S&P announced Berkshire Hathaway BRK.B would be added to the index, and Berkshire's stock price appreciated more than 10% over the next few days.

The portfolio managers reinvest dividends and use index futures to keep pace with the benchmark and manage redemptions. During the past decade through February 2018, the fund averaged only a 0.3% cash allocation, about a tenth of its average actively managed peer. The fund has historically used securities lending to generate additional income to offset expenses.

### Performance Pillar: Positive

The fund has generated strong risk-adjusted long-term performance compared with its large-blend category peers. It earns a Positive Performance Pillar rating.

During the past 10 years through February 2018, the fund's return topped the category average by 1.7 percentage points annually. The fund's cost advantage and efficient construction have contributed the most to its outperformance over the long-run. Because the fund generates its edge from its low cost, its advantage is consistent. Over the trailing 14 years through February 2018, the fund's rolling three-year returns landed in the top half of the category 99% of the time. Because it was fully invested, this fund performed worse than the category average during the bear market drawdown from October 2007 to March 2009, but its subsequent recovery more than made up for the slightly larger drawdown.

The fund benefits from securities lending and the use of derivatives to efficiently track its index. It

has not distributed capital gains over the prior decade. And its annualized tax-cost ratio was 0.5% over the past 10 years, compared with the 0.9% average of all S&P 500-tracking funds. That places this offering in top decile of S&P 500-tracking funds.

### People Pillar: Positive

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

Vanguard veteran Donald Butler has served as a manager on the fund since December 2000. Butler is a principal of Vanguard Group, has been with the firm since 1992, and has managed investment portfolios since 1997. Butler comanaged the fund with George Sauter until April 2005, when Sauter went on to lead Vanguard's retail investor group. Sauter led that initiative until his retirement June 2012. Michelle Louie replaced Scott Geiger as a portfolio manager in November 2017. Louie has been a portfolio manager since 2012 and has been with Vanguard since 2010. Butler and Louie also manage the more accessible Admiral share class version of this fund, Vanguard 500 Index VFIAX.

According to the Statement of Additional Information, neither manager has money invested in the fund. Vanguard links the managers' compensation to operating efficiency, which helps keep costs low and aligns their interests with investors'. Minimizing costs and tracking error are their primary objectives. Vanguard has automated much of this process and provides the managers with robust tools to handle flows, corporate actions, and benchmark changes.

### Parent Pillar: Positive

The Vanguard Group is the world's biggest provider of open-end funds and its second-biggest provider of exchange-traded funds. Innovative and iconoclastic from its mid-1970s origins, the firm's mutual ownership structure, commitment to low fees, and sensible active and passive investment strategies are hallmarks that support its Positive Parent rating.

Vanguard is committed to serving all investors, not just its own. Indeed, the firm celebrates when its entry into an asset class prompts rivals to lower their fees to remain competitive, as occurred when Vanguard launched index funds in London in 2009 and factor-based strategies in the United States in early 2018.

New CEO Tim Buckley, Vanguard's fourth, faces the challenge of expanding the firm's mission to non-U.S. investors, who currently account for less than a tenth of the firm's \$5 trillion in global assets under management. He must also navigate the tension between Vanguard's burgeoning discretionary asset-management business, Personal Advisor Services, and financial advisors who may feel threatened by the firm's efforts to lower the cost of investment advice. Perhaps Vanguard's greatest challenge, though, will be keeping pace with its own growth, especially in overcoming the service problems that have bedeviled the firm the past few years. Vanguard's 2017 implementation of client-experience testing labs should help the firm improve there, too.

### Price Pillar: Positive

This is among the cheapest S&P 500-tracking funds. It charges a low 0.04% annual fee, well below the large-blend category median of 0.84%, supporting its Positive Price Pillar rating.

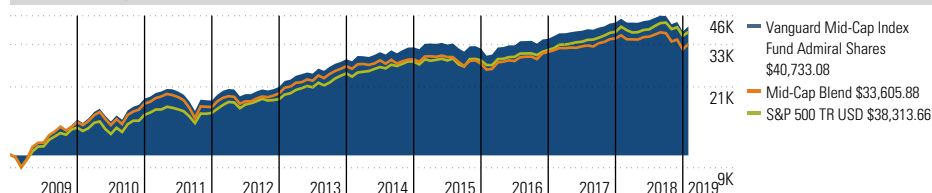
As an institutional-focused fund, this fund's minimum initial purchase amount is high but may be available on select 401(k) platforms. Vanguard 500 Index also tracks the S&P 500 and levies a 0.04% fee, but this fund's minimum initial purchase is a more accessible \$10,000. The portfolio's ETF equivalent, Vanguard S&P 500 VOO, also levies 0.04% per year but does not require an initial minimum purchase beyond the cost of one share.



# Vanguard Mid-Cap Index Fund Admiral Shares VIMAX

**Morningstar Analyst Rating**  
**Gold**

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
181.01	↑0.61   0.34	1.82	87	Open	\$3,000	None	0.05%	★★★★	Mid-Cap Blend	Mid Blend

**Growth of 10,000 01-16-2009 - 01-16-2019**

**Investment Strategy**

The investment seeks to track the performance of a benchmark index that measures the investment return of mid-capitalization stocks. The fund employs an indexing investment approach designed to track the performance of the CRSP US Mid Cap Index, a broadly diversified index of stocks of mid-size U.S. companies. The advisor attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

**Performance 01-16-2019**

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,583	10,146	9,330	14,113	14,232	40,095
Fund	5.83	1.46	-6.70	12.17	7.31	14.90
+/- S&P 500 TR USD	1.39	0.68	-2.80	-1.78	-2.14	0.61
+/- Category	-0.26	-0.75	1.74	1.06	2.12	1.89
% Rank in Cat	59	74	34	47	14	12
# of Funds in Cat	465	464	456	374	327	233

\* Currency is displayed in USD

**Top Holdings 12-31-2018**

	Weight %	Last Price	Day Chg %	52 Week Range
⊕ Edwards Lifesciences Corp	0.88	160.09 USD	2.20 ↑	119.93 - 175.00
⊕ Red Hat Inc	0.85	175.60 USD	0.16 ↑	115.31 - 179.49
⊖ Fiserv Inc	0.80	74.22 USD	2.34 ↑	62.76 - 82.41
⊕ Autodesk Inc	0.77	136.68 USD	1.07 ↑	101.55 - 159.94
⊕ Roper Technologies Inc	0.76	274.02 USD	0.56 ↑	245.59 - 312.65
% Assets in Top 5 Holdings	4.06			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

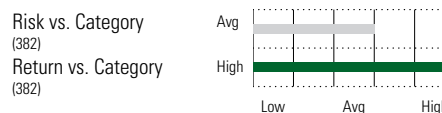
**Top Sectors 12-31-2018**

	Fund	3 Yr High	3 Yr Low	Cat Avg
Technology	18.55	18.55	15.49	16.58
Consumer Cyclical	14.76	17.16	14.76	14.44
Industrials	14.18	14.25	13.70	15.23
Financial Services	12.81	15.04	12.81	15.84
Healthcare	10.10	10.10	8.22	10.24

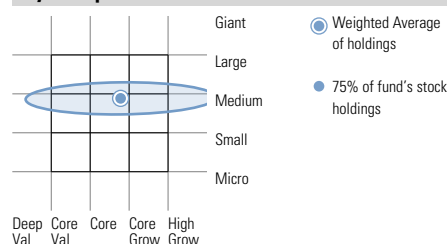
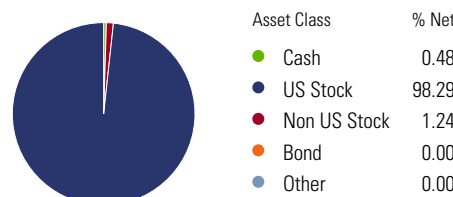
0 5 10 15 20

**Dividend and Capital Gains Distributions**

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-21-2018	165.20	0.0000	0.0000	0.0000	0.8389	0.8389
09-27-2018	202.89	0.0000	0.0000	0.0000	0.9342	0.9342
06-21-2018	198.43	0.0000	0.0000	0.0000	0.6951	0.6951
03-21-2018	195.71	0.0000	0.0000	0.0000	0.6376	0.6376
12-20-2017	190.95	0.0000	0.0000	0.0000	0.8025	0.8025

**3 Year Average Morningstar Risk Measures**

**Pillars**

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

**Style Map**

**Asset Allocation**

**Management**

	Start Date
Donald M. Butler	05-21-1998
Michael A. Johnson	04-27-2016

# Vanguard Mid-Cap Index Fund Admiral Shares VIMAX

## Analysis

### A top-rated mid-cap stock index fund that offers broad diversification at a low cost.

By Adam McCullough 8/24/2018

Vanguard Mid-Cap Index is one of the best funds available for U.S. mid-cap stock exposure. This broadly diversified fund enjoys a durable edge over its category peers by efficiently tracking a well-constructed benchmark at a low fee. It earns a Morningstar Analyst Rating of Gold.

The fund tracks the market-cap-weighted CRSP U.S. Mid Cap Index, which targets U.S. stocks that fall between the smallest 70%–85% as ranked by market capitalization, accurately representing the mid-cap segment. The fund's broad reach and market-cap-weighting approach help it effectively diversify risk while keeping costs down by mitigating turnover, which has consistently been among the lowest in the category.

By using market capitalization to weight its holdings, the fund relies on the cumulative knowledge incorporated in stock prices to size its positions. While market participants have done a good job valuing stocks over the long term, the market has gone through episodes of mania and panic. But this risk is worth the cost advantage gained from market-cap weighting. Market-cap-weighted index funds are cheaper to run than most actively managed funds because they require fewer investment personnel and their low turnover translates into low transaction costs.

The index that this fund tracks is built to be investable and seeks to magnify the efficiency of market-cap weighting that reduces its transaction costs. It invests in larger stocks than many of its category peers. These stocks tend to be more liquid and less expensive to trade than their smaller counterparts. And its index employs generous buffering rules to mitigate turnover. It waits until stocks are solidly in an adjacent size segment before trading them. It only moves half of the position at a time and spreads the trade over five days to further reduce market-impact costs.

During the past decade through July 2018, this fund bested the category average by 2.2 percentage points annually with similar risk. Much of this relative outperformance can be attributed to the fund's cost advantage and smaller than average cash drag.

#### Process Pillar: Positive

The fund offers exposure to mid-cap stocks by tracking an index that effectively diversifies risk, promotes low turnover, and accurately represents its target market segment. It earns a Positive Process Pillar rating.

This fund tracks the CRSP U.S. Mid Cap Index, which offers exposure to U.S. stocks smaller than the largest 70% ranked by market capitalization and larger than the smallest 15%. Unlike some of its index peers, CRSP uses wide size segment breakpoints, so it tends to own stocks with larger market capitalization than other mid-cap indexes. CRSP indexes also employ more-generous buffering rules than other index families to limit unnecessary turnover. When the index moves positions into or out of the portfolio, it breaks the trade in half to smooth the transition between size segments and reduce transaction costs. The index reconstitutes quarterly and spreads its trades out over five days, which should further lower transaction costs. In January 2013, the fund switched from a similar index provided by MSCI to reduce licensing fees. Vanguard managed the transition seamlessly.

Broadly diversified, market-cap-weighted index funds like this one earn a durable edge from cost-efficient portfolio construction. The fund's broad, market-cap-weighted portfolio accurately represents its peers' opportunity set. Stock prices, which drive the fund's weightings, quickly incorporate new information and reflect the collective wisdom of the market (or madness of the crowd).


There are some drawbacks to market-cap weighting. By design, market-cap weighting increases the fund's exposure to stocks as they become larger and more expensive and reduces its exposure to names as they become smaller and cheaper, which

### Morningstar's Take

Morningstar Analyst Rating



#### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Positive
Price	 Positive

#### Morningstar Analyst Rating

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

Analyst Rating Spectrum

 Gold  Silver  Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	5.83	-0.26
2018	-9.23	1.92
2017	19.25	3.32
2016	11.22	-2.92
2015	-1.34	3.41

# Vanguard Mid-Cap Index Fund Admiral Shares VIMAX

## Analysis

may have higher expected returns. But the fund's cost advantage more than offsets this risk, and its broadly diversified portfolio mitigates firm-specific risk. Market-cap-weighted index funds are cheaper to run than most actively managed funds because they require fewer investment personnel. And the fund benefits from low turnover and transaction costs.

Market-cap weighting skews the portfolio toward the largest names in the mid-cap segment. The fund's market-cap orientation is double that of the mid-blend category average. Most of the fund's sector weightings are similar to the category average. But as of this writing, it has more exposure to information technology stocks than the average fund in the category and fewer materials-sector stock holdings.

### Performance Pillar: Positive

Relative to its mid-cap blend category peers, the fund has generated strong long-term performance, underpinning its Positive Performance Pillar rating.

During the past decade through July 2018, the fund's return topped the mid-blend category by 2.2 percentage points annually with similar risk. Compared with its category, the fund benefited the most from its cost advantage. Its market-cap-weighted portfolio promotes low turnover, and the fund hasn't issued a capital gains distribution since its inception. In fact, the fund's tax-cost ratio, a measure of the portion of the fund's returns forgone to taxes, has measured 0.4% during the trailing 10 years through July 2018. This places the fund's tax-cost ratio in the best quintile of the mid-blend Morningstar Category.

As a market-cap-weighted index fund, this portfolio is always fully invested, giving it a lower cash balance than its actively managed counterparts, which helps performance during bull markets but hurts during bear markets. For example, the fund lost 58 percentage points during the bear market from October 2007 through March 2009, slightly more than the category average. From the trough of the bear market in March 2009 through July 2018, this fund returned 19.8% annually com-

pared with 18.2% for the average fund in the category.

### People Pillar: Positive

A well-equipped group of portfolio managers maintains Vanguard's equity index funds. The team's extensive experience, deep bench of talent, and strong trading infrastructure underpin this fund's Positive People Pillar rating.

Donald Butler and Michael Johnson comanage the fund. Butler is a Principal of Vanguard Group, has been with the firm since 1992, managed investment portfolios since 1997, and served as comanager of this fund since 1998. Johnson has been with Vanguard since 1999 and began managing portfolios in 2010. Johnson began serving as comanager on this fund in 2016. Both managers are members of Vanguard's Global Equity Index Group, which offers trade execution and risk-management support for the fund. Vanguard's team approach keeps its portfolio managers' workloads manageable.

According to the Statement of Additional Information, neither manager has money invested in this fund, but Vanguard links the managers' compensation to operating efficiency, which helps keep costs low and aligns their interests with investors'. Minimizing costs and tracking error are their primary objectives. Vanguard has automated much of this process and provides the managers with robust tools to handle flows, corporate actions, and benchmark changes.

### Parent Pillar: Positive

The Vanguard Group is the world's biggest provider of open-end funds and its second-biggest provider of exchange-traded funds. Innovative and iconoclastic from its mid-1970s origins, the firm's mutual ownership structure, commitment to low fees, and sensible active and passive investment strategies are hallmarks that support its Positive Parent rating.

Vanguard is committed to serving all investors, not just its own. Indeed, the firm celebrates when its entry into an asset class prompts rivals to lower their fees to remain competitive, as occurred when

Vanguard launched index funds in London in 2009 and factor-based strategies in the United States in early 2018.

New CEO Tim Buckley, Vanguard's fourth, faces the challenge of expanding the firm's mission to non-U.S. investors, who currently account for less than a tenth of the firm's \$5 trillion in global assets under management. He must also navigate the tension between Vanguard's burgeoning discretionary asset-management business, Personal Advisor Services, and financial advisors who may feel threatened by the firm's efforts to lower the cost of investment advice. Perhaps Vanguard's greatest challenge, though, will be keeping pace with its own growth, especially in overcoming the service problems that have bedeviled the firm the past few years. Vanguard's 2017 implementation of client-experience testing labs should help the firm improve there, too.

### Price Pillar: Positive

This is among the cheapest market-cap-weighted mid-cap blend funds available, which supports its Positive Price Pillar rating.

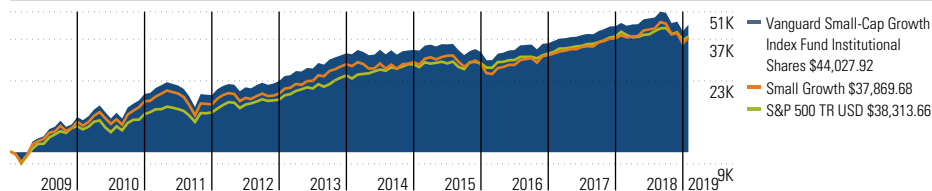
The Investor share class charges an 0.17% fee and carry a \$3,000 minimum investment requirement. The Admiral shares carry a \$10,000 minimum but only levy a 0.05% fee. The exchange-traded fund share class' expense ratio matches the Admiral share class at 0.05%, but it doesn't have a minimum investment beyond the price of one share. The Institutional share class (VMCIX) carries a 0.04% fee but may be available to investors only through qualified accounts such as those on a 401(k) platform. The fund uses index derivatives to manage cash and uses securities lending to generate additional income to offset part of the fund's expenses.

# Vanguard Small-Cap Growth Index Fund Institutional Shares VSGIX

Morningstar Analyst Rating  
Silver

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$ Bil	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
45.74	↑0.19   0.42	0.80	20.2	Open	\$5 mil	None	0.06%	★★★★	Small Growth	Mid Growth

## Growth of 10,000 01-16-2009 - 01-16-2019



## Investment Strategy

The investment seeks to track the performance of a benchmark index that measures the investment return of small-capitalization growth stocks. The fund employs an indexing investment approach designed to track the performance of the CRSP US Small Cap Growth Index, a broadly diversified index of growth stocks of small U.S. companies. The advisor attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,788	10,366	9,941	15,470	13,718	43,525
Fund	7.88	3.66	-0.59	15.65	6.53	15.84
+/- S&P 500 TR USD	3.44	2.88	3.31	1.71	-2.93	1.55
+/- Category	0.74	0.39	1.14	0.25	0.25	1.18
% Rank in Cat	30	37	43	46	47	29
# of Funds in Cat	694	692	667	578	510	387

\* Currency is displayed in USD

## Top Holdings 12-31-2018

	Weight %	Last Price	Day Chg %	52 Week Range
⊖ Burlington Stores Inc	0.78	167.00 USD	1.24 ↑	109.62 - 180.27
⊖ PTC Inc	0.63	87.99 USD	0.65 ↑	65.48 - 107.44
⊕ Tableau Software Inc A	0.61	122.17 USD	3.60 ↑	72.43 - 131.82
⊖ Zebra Technologies Corp	0.61	174.02 USD	3.19 ↑	110.48 - 184.75
⊖ Lennox International Inc	0.59	219.98 USD	0.02 ↑	177.36 - 230.66
% Assets in Top 5 Holdings	3.22			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

## Top Sectors 12-31-2018

	Fund	3 Yr High	3 Yr Low	Cat Avg
Technology	25.82	25.82	21.15	25.28
Healthcare	18.27	18.27	13.14	19.13
Industrials	13.65	15.36	13.65	16.22
Consumer Cyclical	12.62	15.10	12.62	13.11
Real Estate	11.51	15.18	11.51	2.97

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-21-2018	40.23	0.0000	0.0000	0.0000	0.1216	0.1216
09-27-2018	52.46	0.0000	0.0000	0.0000	0.0816	0.0816
06-21-2018	50.70	0.0000	0.0000	0.0000	0.0688	0.0688
03-21-2018	47.48	0.0000	0.0000	0.0000	0.0674	0.0674
12-20-2017	45.14	0.0000	0.0000	0.0000	0.1572	0.1572

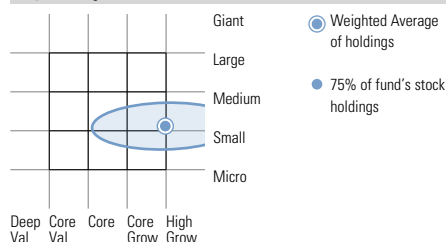
## 3 Year Average Morningstar Risk Measures



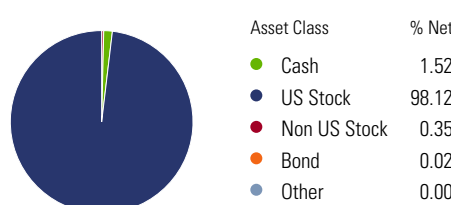
## Pillars

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

## Style Map



## Asset Allocation



## Management

	Start Date
Gerard C. O'Reilly	12-30-2004
William A. Coleman	04-27-2016

# Vanguard Small-Cap Growth Index Fund Institutional Shares VSGIX

## Analysis

**This is one of the cheapest small-growth funds available.**

By Alex Bryan 3/26/2018

Vanguard Small Cap Growth Index is one of the lowest-cost small-growth funds available. It effectively diversifies risk, accurately represents its actively managed peers' opportunity set, and applies generous buffer rules to mitigate unnecessary turnover, supporting its Morningstar Analyst Rating of Silver.

The fund targets stocks representing the faster-growing and more richly valued half of the U.S. small-cap market and weights them by market capitalization. This brings in more than 600 holdings, most of which are not well-known and lack durable competitive advantages. These stocks have greater growth potential than their larger counterparts, but they also tend to be riskier. While the fund's holdings tend to have attractive outlooks, there is always a risk that they won't live up to the market's expectations. However, the fund's broadly diversified portfolio limits its exposure to firm-specific risk and keeps it from loading up on highly speculative names.

To mitigate unnecessary turnover and transaction costs, the fund's benchmark holds on to stocks that move slightly outside of its targeted market segment. So, it tends to hold on to stocks with slowing growth and rising market caps longer than do the Russell 2000 Value and S&P Small-Cap 600 indexes. But it also has less overlap with its growth counterpart than do rival value and growth funds based on those two indexes. The resulting portfolio offers a similar growth orientation, though it does climb further up the market-cap ladder.

To further reduce these costs, the fund's index moves only half of each position into or out of the portfolio at a time. In September 2017, the fund started to spread its rebalancing trades across five days, so it doesn't move prices as much as it had concentrating all the trades on one day.

While this portfolio often looks a lot like the small-growth Morningstar Category norm, its low fee and broad diversification have been a winning combination. The fund outpaced the category average by 1.39 percentage points annualized during the trailing 10 years through February 2018, with comparable volatility.

**Process Pillar:**  Positive

The fund employs full replication to track the CRSP U.S. Small Cap Growth Index. This broad, market-cap-weighted index diversifies risk, accurately reflects the composition of the small-growth investment style, and keeps turnover low, supporting the Positive Process rating.

CRSP ranks all U.S. stocks by market cap and excludes the largest 85% and smallest 2% from the small-cap universe. It then ranks those stocks on their composite value and growth characteristics. The growth metrics include projected short- and long-term earnings-per-share growth, three-year historical earnings and sales-per-share growth, current investment/assets, and return on assets. CRSP evaluates value on book/price, forward and trailing earnings/price, dividend yield, and sales/price. It fully allocates stocks with the strongest growth characteristics to the small-cap growth index until it represents half the assets in the small-cap market.

CRSP keeps 100% of each stock in its respective style index until it passes through a buffer zone. At that point, it moves only 50% of the stock from one style index to the other, spreading the trades across five days. If the stock stays on the opposite side of the buffer zone at the following quarterly review, CRSP will transfer the remaining half. This mitigates turnover where it does not significantly affect the fund's style characteristics.

This is a broadly diversified portfolio that includes more than 600 stocks, each of which represents less than 1% of the portfolio. While these companies have strong growth prospects, about 21% of the fund is invested in stocks that were not profitable over the trailing 12 months through February 2018.

### Morningstar's Take

Morningstar Analyst Rating



### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Positive
Price	 Positive

### Morningstar Analyst Rating

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

Analyst Rating Spectrum

 Gold  Silver  Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	7.88	0.74
2018	-5.69	0.07
2017	21.94	0.44
2016	10.74	-0.46
2015	-2.52	-0.11

# Vanguard Small-Cap Growth Index Fund Institutional Shares VSGIX

## Analysis

The fund does not constrain its sector weightings or apply any sector-relative adjustments in its stock selection process, leading to persistent sector biases. Most of the fund's sector weightings are similar to the category average, though the fund has greater exposure to real estate stocks. While these firms may not grow as quickly as many other growth stocks, many qualified for inclusion because they have experienced high historical growth rates and currently trade at high earnings multiples.

Market-cap weighting does not necessarily pull the portfolio toward the fastest-growing stocks, but it does reflect the market's view about the relative value of each stock. It also promotes low turnover, as do the fund's style-buffering rules, which allow stocks with slowing growth to stay in the portfolio longer. That said, the fund's growth orientation is usually similar to the category norm, but it does have a larger market-cap orientation than most of its category peers.

### Performance Pillar: Positive

The fund has regularly outperformed most of its small-growth category peers and thus warrants a Positive Performance rating. From its inception in May 1998 through February 2018, the fund outpaced the category average by 1.28 percentage points annually. It continued this strong performance streak over the past decade, beating the category average by 1.39 percentage points annualized, with comparable volatility, largely thanks to its cost advantage and more-favorable stock exposure in the consumer cyclical and healthcare sectors.

Performance also looks good over shorter horizons. The fund's returns ranked in the top half of the category average in 88% of all three-year rolling periods over the trailing 14 years through February 2018. As an added benefit, the fund has not distributed a capital gain in the past 10 years. This is because of the fund's low turnover, savvy tax management, and separate exchange-traded fund share class, which allows the managers to transfer low-cost-basis shares out of the portfolio in a

tax-free transaction with the fund's authorized participants.

Full index replication has kept tracking error low. Over the trailing three years through February 2017, the fund's Admiral share class beat the benchmark by 7 basis points annually. This was partially because of securities-lending revenue, which helped offset the fund's expenses.

### People Pillar: Positive

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

William Coleman and Gerard O'Reilly have been listed as the fund's managers since April 2016 and December 2004, respectively. O'Reilly has served as a portfolio manager at Vanguard since 1994 and is a Principal with the firm. Coleman joined the firm in 2006 and has served as a portfolio manager since 2013. The duo manages several other index funds, but Vanguard's team approach and supporting infrastructure keep their workload manageable.

Vanguard's equity index management team extends beyond the named portfolio managers. Coleman and O'Reilly draw on the firm's equity trading desk and supporting analysts, who help the managers prepare for corporate actions and upcoming changes to the index portfolio.

The managers do not have any money invested in this fund. Vanguard links their compensation to operating efficiency, which helps keep costs low and align their interests with investors'. Minimizing transaction costs and tracking error are their primary objectives, though they also pay attention to tax efficiency.

### Parent Pillar: Positive

The Vanguard Group is the world's biggest provider of open-end funds and its second-biggest provider of exchange-traded funds. Innovative and iconoclastic from its mid-1970s origins, the firm's mutual ownership structure, commitment to low

fees, and sensible active and passive investment strategies are hallmarks that support its Positive Parent rating.

Vanguard is committed to serving all investors, not just its own. Indeed, the firm celebrates when its entry into an asset class prompts rivals to lower their fees to remain competitive, as occurred when Vanguard launched index funds in London in 2009 and factor-based strategies in the United States in early 2018.

New CEO Tim Buckley, Vanguard's fourth, faces the challenge of expanding the firm's mission to non-U.S. investors, who currently account for less than a tenth of the firm's \$5 trillion in global assets under management. He must also navigate the tension between Vanguard's burgeoning discretionary asset-management business, Personal Advisor Services, and financial advisors who may feel threatened by the firm's efforts to lower the cost of investment advice. Perhaps Vanguard's greatest challenge, though, will be keeping pace with its own growth, especially in overcoming the service problems that have bedeviled the firm the past few years. Vanguard's 2017 implementation of client-experience testing labs should help the firm improve there, too.

### Price Pillar: Positive

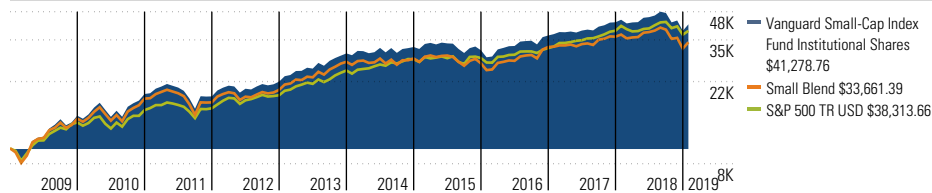
Vanguard charges a razor-thin 0.07% expense ratio for the fund's Admiral shares and 0.19% for the Investor shares, which makes it the cheapest option in the category and supports the Positive Price rating. The minimum investments for the Investor and Admiral shares are \$3,000 and \$10,000, respectively. Vanguard charges a \$20 annual account maintenance fee for balances below \$10,000, but investors can avoid it by agreeing to receive statements and fund documents electronically. Vanguard also offers this fund in an ETF format, Vanguard Small-Cap Growth ETF VBK, for a 0.07% fee with no minimum. The managers generate ancillary income for the fund through securities lending, which partially offsets its expenses.



# Vanguard Small-Cap Index Fund Institutional Shares VSCIX

**Morningstar Analyst Rating**  
**Gold**

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
68.10	↑0.44   0.65	1.68	78	Open	\$5	None	0.04%	★★★★★	Small Blend	Mid Blend

**Growth of 10,000 01-16-2009 - 01-16-2019**

**Investment Strategy**

The investment seeks to track the performance of a benchmark index that measures the investment return of small-capitalization stocks. The fund employs an indexing investment approach designed to track the performance of the CRSP US Small Cap Index, a broadly diversified index of stocks of small U.S. companies. The advisor attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

**Performance 01-16-2019**

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,772	10,325	9,548	14,995	13,786	40,850
Fund	7.72	3.25	-4.52	14.46	6.63	15.11
+/- S&P 500 TR USD	3.28	2.48	-0.61	0.51	-2.82	0.82
+/- Category	0.26	-0.26	4.07	2.04	1.95	2.03
% Rank in Cat	40	55	13	25	15	8
# of Funds in Cat	775	772	754	637	527	383

\* Currency is displayed in USD

**Top Holdings 12-31-2018**

	Weight %	Last Price	Day Chg %	52 Week Range
⊕ Burlington Stores Inc	0.36	167.00 USD	1.24 ↑	109.62 - 180.27
⊖ NRG Energy Inc	0.36	41.46 USD	1.89 ↑	23.75 - 43.08
⊕ W.P. Carey Inc	0.34	69.42 USD	-0.33 ↓	59.23 - 71.29
⊕ Atmos Energy Corp	0.34	94.86 USD	0.54 ↑	76.46 - 100.76
⊕ IDEX Corp	0.32	137.17 USD	1.07 ↑	117.72 - 157.84
% Assets in Top 5 Holdings	1.71			

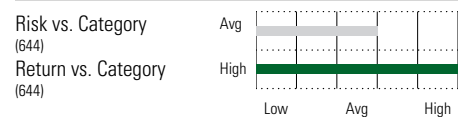
⊕ Increase ⊖ Decrease ✱ New to Portfolio

**Top Sectors 12-31-2018**

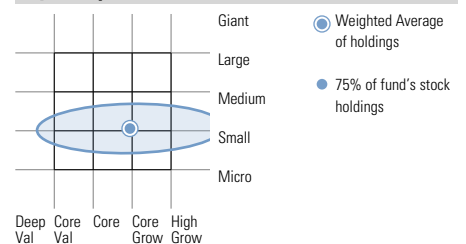
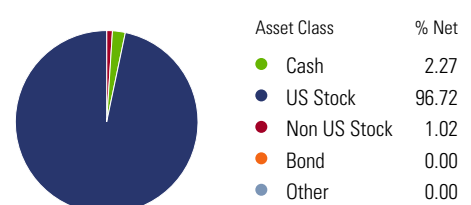
	Fund	3 Yr High	3 Yr Low	Cat Avg	
Technology	17.11	17.11	14.84	14.95	■ Fund ▼ Cat Avg
Industrials	15.46	16.58	15.46	17.12	
Financial Services	14.10	14.46	13.19	18.14	
Consumer Cyclical	12.86	13.38	12.86	13.87	
Real Estate	12.07	12.58	11.26	7.46	

**Dividend and Capital Gains Distributions**

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-21-2018	60.72	0.0000	0.0000	0.0000	0.3447	0.3447
09-27-2018	77.54	0.0000	0.0000	0.0000	0.3117	0.3117
06-21-2018	76.15	0.0000	0.0000	0.0000	0.1849	0.1849
03-21-2018	72.18	0.0000	0.0000	0.0000	0.2198	0.2198
12-20-2017	70.59	0.0000	0.0000	0.0000	0.3736	0.3736

**3 Year Average Morningstar Risk Measures**

**Pillars**

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

**Style Map**

**Asset Allocation**

**Management**

	Start Date
William A. Coleman	04-27-2016
Gerard C. O'Reilly	04-27-2016



# Vanguard Small-Cap Index Fund Institutional Shares VSCIX

## Analysis

**This is a well-constructed small-cap index fund with a sizable cost advantage.**

By Adam McCullough 7/18/2018

Vanguard Small-Cap Index is one of the best U.S. small-cap funds available. This well-diversified fund generates a sustainable edge over its Morningstar Category peers by efficiently tracking a soundly constructed benchmark at a low fee. It earns a Morningstar Analyst Rating of Gold.

The fund tracks the CRSP U.S. Small Cap Index, a market-cap-weighted index that targets U.S. stocks that fall between the smallest 85%-98% as ranked by market capitalization and accurately represents the small-cap segment. Most of these small-cap names haven't established durable competitive advantages and tend to be riskier than their large-cap counterparts. But this fund's broad reach helps it effectively diversify firm-specific risk. Market-cap weighting relies on the information aggregated in stock prices to weight its holdings. Most of the time, the risks of portfolio concentration that may sully index funds are more than offset by the cost advantage and efficiency gained from market-cap weighting.

The fund layers two more advantages on top of the inherent efficiency of market-cap weighting that reduce its transaction costs. It invests in larger stocks than many of its category peers. These stocks tend to be more liquid and less expensive to trade than their smaller counterparts. And its index employs generous buffering rules. It waits until stocks are solidly in an adjacent size segment before trading them. It only moves half of the position at a time and spreads the trade over five days to further reduce market impact costs. The fund's average 10-year turnover of 15% is less than one fourth of the turnover for the average fund in the small-cap blend category.

During the trailing decade through June 2018, this fund bested the category average by 2.4 percentage points per year with similar volatility. Much of this relative outperformance can be attributed to the fund's cost advantage and the efficiency of

market-cap weighting. Because this index fund is always fully invested, it suffered a larger draw-down than the category average during the financial crisis. But its smaller cash drag pays off during bull markets.

**Process Pillar:**  Positive

The fund tracks the CRSP U.S. Small Cap Index, a market-cap-weighted index that targets U.S. stocks that land between 85% and 98% ranked by market capitalization. This index diversifies risk, promotes low turnover, and accurately represents the small-cap segment. It earns a Positive Process Pillar rating.

Its index likely incurs lower transaction costs than many of its index peers for several reasons. CRSP uses wider size segment breakpoints so it tends to own larger stocks, which are less expensive to trade. CRSP indexes also employ buffering rules that are more generous than other index families that are designed to limit turnover where it would not have a significant impact on its portfolio. When the index moves positions into or out of the portfolio, it breaks the trade in half to smooth the transition between size segments and reduce transaction costs. The index reconstitutes quarterly and spreads its trades out over five days, which further lowers transaction costs.

To be included in the index, at least 12.5% of the stock's shares must publicly trade, and like most of its index peers, the fund weights its holdings by free-float market capitalization. Stocks must also meet trading liquidity hurdles. The index rebalances quarterly. In early 2013, the fund changed its underlying index to the CRSP U.S. Small Cap Index from the MSCI U.S. Small Cap Index to reduce expenses.

Broadly diversified, market-cap-weighted index funds, like this one, derive a persistent edge from efficient portfolio construction. Stock prices, which drive the fund's weightings, quickly incorporate new information and reflect the collective wisdom of the market. However, market-cap weighting makes it vulnerable to episodes of mania and panic. While the portfolio is well-diversified, it may be

### Morningstar's Take

Morningstar Analyst Rating



### Morningstar Pillars

Process	 Positive
Performance	 Positive
People	 Positive
Parent	 Positive
Price	 Positive

### Morningstar Analyst Rating

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

### Analyst Rating Spectrum

 Gold  Silver  Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	7.72	0.26
2018	-9.32	3.40
2017	16.25	3.96
2016	18.32	-2.46
2015	-3.63	1.75

# Vanguard Small-Cap Index Fund Institutional Shares VSCIX

## Analysis

prone to concentration risk. But this risk is a small price to pay for the efficiency and cost advantage gained from market-cap weighting.

Market-cap weighting and wide size segment breakpoints skew its holdings to larger stocks in the small-cap segment and keep turnover low. The fund's average market capitalization is double the category average. Its turnover has averaged 15% during the past 10 years through 2017, less than one fourth of the category average. The fund's sector weightings are similar to the category average, but it has a greater real estate sector weight and less exposure to financial stocks.

Small-cap stocks tend to be riskier than large-cap names because they lack durable competitive advantages and are more sensitive to the business cycle. But they offer diversification benefits and may compensate investors with higher returns. Over the long term, small-cap stocks have outpaced their larger counterparts, but can experience decade-long stretches of underperformance.

### Performance Pillar: Positive

Relative to its small-cap blend category peers, the fund has generated strong long-term performance, underpinning its Positive Performance Pillar rating.

During the past decade through June 2018, the fund's return topped that of the small-blend category by 2.4 percentage points annually with similar volatility. Compared with its category, the fund benefited the most from its cost advantage. Its market-cap-weighted portfolio promotes low turnover, and the fund hasn't issued a capital gain distribution since its inception. In fact, the fund's tax-cost ratio, a measure of the portion of the fund's returns forgone to taxes, has measured 0.5% during the trailing 10 years through June 2018. This places the fund's tax-cost ratio in the best quintile of the small-blend category.

As a market-cap-weighted index fund, this portfolio is always fully invested, giving it lower cash balances than its actively managed counterparts, which helps performance during bull markets but hurts during bear markets. For example, the fund

lost 59 percentage points during the bear market from October 2007 through March 2009, slightly more than the category average. From the trough of the bear market in March 2009 through June 2018, this fund returned 21.2% annually compared with 19.2% for the average fund in the category.

### People Pillar: Positive

A well-equipped group of portfolio managers maintains Vanguard's equity index funds. The team's extensive experience, deep bench of talent, and strong trading infrastructure underpin this fund's Positive People Pillar rating.

Vanguard occasionally rotates managers across its equity index funds. It replaced Michael Buek with William Coleman and Gerard O'Reilly as named managers on the fund in April 2016. O'Reilly joined Vanguard in 1992 and has served as a portfolio manager since 1994. Coleman has been with Vanguard since 2006 and has served as a named portfolio manager there since 2013. Both managers are members of Vanguard's Global Equity Index Group, which offers trade execution and risk-management support for the fund. Vanguard's team approach keeps its portfolio manager's workload manageable.

The managers do not have any money invested in this fund. Vanguard links their compensation to operating efficiency, which helps keep costs low and align their interests with investors'. Minimizing costs and tracking error are their primary objectives. Vanguard has automated much of this process and provides the managers with robust tools to handle flows, corporate actions, and benchmark changes.

### Parent Pillar: Positive

The Vanguard Group is the world's biggest provider of open-end funds and its second-biggest provider of exchange-traded funds. Innovative and iconoclastic from its mid-1970s origins, the firm's mutual ownership structure, commitment to low fees, and sensible active and passive investment strategies are hallmarks that support its Positive Parent rating.

Vanguard is committed to serving all investors, not just its own. Indeed, the firm celebrates when its entry into an asset class prompts rivals to lower their fees to remain competitive, as occurred when Vanguard launched index funds in London in 2009 and factor-based strategies in the United States in early 2018.

New CEO Tim Buckley, Vanguard's fourth, faces the challenge of expanding the firm's mission to non-U.S. investors, who currently account for less than a tenth of the firm's \$5 trillion in global assets under management. He must also navigate the tension between Vanguard's burgeoning discretionary asset-management business, Personal Advisor Services, and financial advisors who may feel threatened by the firm's efforts to lower the cost of investment advice. Perhaps Vanguard's greatest challenge, though, will be keeping pace with its own growth, especially in overcoming the service problems that have bedeviled the firm the past few years. Vanguard's 2017 implementation of client-experience testing labs should help the firm improve there, too.

### Price Pillar: Positive

This is among the cheapest market-cap-weighted small-cap index funds available, which supports its Positive Price Pillar rating.

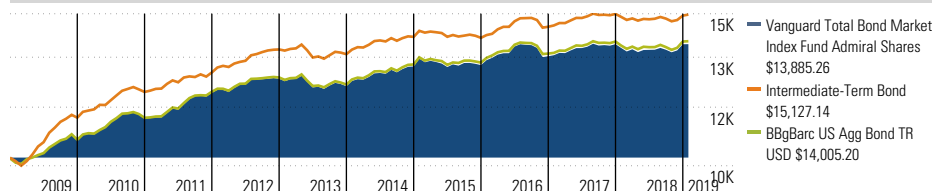
The Investor share class charges an 0.17% fee and have a \$3,000 minimum investment requirement. The Admiral shares carry a \$10,000 minimum, but only levy a 0.05% fee. The ETF share class's expense ratio matches the Admiral share class at 0.05%, but it doesn't have a minimum investment beyond the price of one share. The Institutional share class (VSCIX) carries a 0.04% fee, but may be only available to investors through qualified accounts such as those on a 401(k) platform. The fund uses index derivatives to manage cash which should benefit shareholders by minimizing its cash drag.

# Vanguard Total Bond Market Index Fund Admiral Shares VBTX

Morningstar Analyst Rating  
Silver

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
10.44	↓0.00   0.01	2.78	204	Open	\$3,000	None	0.05%	★★★	Intermediate-Term Bond	High/Mod

## Growth of 10,000 01-16-2009 - 01-16-2019



## Investment Strategy

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

## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,002	10,103	10,036	10,514	11,198	13,905
Fund	0.02	1.03	0.36	1.69	2.29	3.35
+/- BBGBarc US Agg Bond TR USD	-0.07	0.02	-0.19	-0.07	-0.09	-0.10
+/- Category	-0.29	0.05	0.26	-0.41	0.10	-0.92
% Rank in Cat	83	42	39	65	44	79
# of Funds in Cat	1,071	1,070	1,003	859	751	547

\* Currency is displayed in USD

## Top Holdings 12-31-2018

	Weight %	Maturity Date	Amount Mil	Value Mil
United States Treasury Notes 2.12%	0.46	05-15-2025	975.22	949.16
⊖ United States Treasury Notes 2.88%	0.45	08-15-2028	915.24	929.68
United States Treasury Notes 2.62%	0.42	11-15-2020	853.68	855.15
United States Treasury Notes 2.12%	0.42	12-31-2022	867.13	854.93
United States Treasury Notes 1.38%	0.41	02-15-2020	858.02	846.23

% Assets in Top 5 Holdings

2.16

⊕ Increase ⊖ Decrease ✱ New to Portfolio

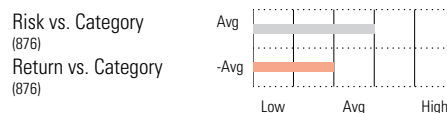
## Top Sectors 12-31-2018

	Fund	BMark	Cat Avg	
U.S. Treasury	41.24	—	—	■ Fund ▼ Cat Avg
Corporate Bond	26.06	—	—	
Agency MBS Pass-Through	22.08	—	—	
Other Government Related	3.36	—	—	
U.S. Agency	1.38	—	—	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-31-2018	10.45	0.0000	0.0000	0.0000	0.0258	0.0258
11-30-2018	10.29	0.0000	0.0000	0.0000	0.0249	0.0249
10-31-2018	10.26	0.0000	0.0000	0.0000	0.0251	0.0251
09-28-2018	10.36	0.0000	0.0000	0.0000	0.0243	0.0243
08-31-2018	10.44	0.0000	0.0000	0.0000	0.0246	0.0246

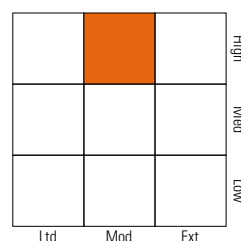
## 3 Year Average Morningstar Risk Measures



## Pillars

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

## Style Map 09-30-2018



## Bond Statistics

	Value
Average Effective Duration	6.24
Average Effective Maturity (Years)	8.60
Average Credit Quality	AA
Average Weighted Coupon	3.22
Average Weighted Price	100.35

## Asset Allocation

	% Net	% Short	% Long	Bench mark	Cat Avg
● Cash	1.19	0.00	1.19	—	-5.22
● US Stock	0.00	0.00	0.00	—	-0.04
● Non US Stock	0.00	0.00	0.00	—	-0.01
● Bond	98.61	0.19	98.80	—	103.86
● Other	0.20	0.00	0.20	—	1.42

## Management

	Start Date
Joshua C. Barrickman	02-22-2013

# Vanguard Total Bond Market Index Fund Admiral Shares VBTIX

## Analysis

### Low-cost, low-credit-risk option.

By Phillip Yoo 7/27/2018

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

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

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

The portfolio's bias toward highly rated securities provides protection against market downturns, but it also limits its return potential. The fund's annual return of 3.6% over the trailing 10 years through June 2018 was behind the average return of its surviving peers by 40 basis points. Its risk-adjusted return, as measured by Sharpe ratio, was slightly behind the category average as well.

The managers have kept the fund's performance close to its index. Over the trailing five years

through June 2018, the fund trailed the Bloomberg Barclays US Aggregate Float Adjusted Index by 6 basis points annually. This gap is in line with the expense ratio of 0.05%.

### Process Pillar: Positive

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

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

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

### Morningstar's Take

Morningstar Analyst Rating



### Morningstar Pillars

Process	 Positive
Performance	 Neutral
People	 Positive
Parent	 Positive
Price	 Positive

### Morningstar Analyst Rating

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

### Analyst Rating Spectrum

 Gold  Silver  Bronze **Neutral** **Negative**

### Fund Performance

	Total Return %	+/- Category
YTD	0.02	-0.29
2018	-0.03	0.47
2017	3.56	-0.15
2016	2.60	-0.64
2015	0.40	0.66

# Vanguard Total Bond Market Index Fund Admiral Shares VBTLX

## Analysis

duration can change over time because it does not impose a maximum maturity limit and weights its holdings by market capitalization.

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

### Performance Pillar: ⚪ Neutral

This low credit-risk portfolio has tended to trail its peers with greater exposure to corporate bonds in normal to strong credit environments. The fund's underperformance over the trailing five years through June 2018 is principally attributable to the muted volatility of the investment-grade market where its peers reaped rewards for taking on greater credit risk. However, the fund's Treasury-heavy portfolio should insulate investors from large losses during stress periods.

Given its conservative holdings, this fund performed well during market downturns. For example, the fund outperformed the majority of its category peers during the financial crisis between 2007 and 2008. The fund's solid performance during that period helped to offset its underperformance in the ensuing credit rally in 2009, when the fund lagged 85% of its competitors.

Overall, the fund's performance has been in line with the category norm. From its inception in April 2007 through June 2018, the fund beat the category average by 40 basis points, but its 3.8% annualized return ranked in the category middle-third. Its Sharpe ratio, a measure of risk-adjusted return, was in line with the category mean, war-

ranting a Neutral Performance Pillar rating.

### People Pillar: ⚪ Positive

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

Joshua Barrickman was named as manager in 2013. He has worked in investment management at Vanguard since 1999 and managed investment portfolios there since 2005. In 2013, he was promoted to head of Vanguard's Bond Index Group. While Barrickman does not have an investment in the fund, Vanguard aligns managers' incentives with investors' by tying compensation to operational efficiency.

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

### Parent Pillar: ⚪ Positive

The Vanguard Group is the world's biggest provider of open-end funds and its second-biggest provider of exchange-traded funds. Innovative and iconoclastic from its mid-1970s origins, the firm's mutual ownership structure, commitment to low fees, and sensible active and passive investment strategies are hallmarks that support its Positive Parent rating.

Vanguard is committed to serving all investors, not just its own. Indeed, the firm celebrates when its

entry into an asset class prompts rivals to lower their fees to remain competitive, as occurred when Vanguard launched index funds in London in 2009 and factor-based strategies in the United States in early 2018.

New CEO Tim Buckley, Vanguard's fourth, faces the challenge of expanding the firm's mission to non-U.S. investors, who currently account for less than a tenth of the firm's \$5 trillion in global assets under management. He must also navigate the tension between Vanguard's burgeoning discretionary asset-management business, Personal Advisor Services, and financial advisors who may feel threatened by the firm's efforts to lower the cost of investment advice. Perhaps Vanguard's greatest challenge, though, will be keeping pace with its own growth, especially in overcoming the service problems that have bedeviled the firm the past few years. Vanguard's 2017 implementation of client-experience testing labs should help the firm improve there, too.

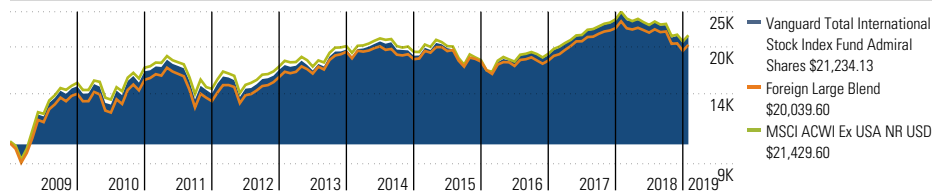
### Price Pillar: ⚪ Positive

The fund's Admiral share class (minimum investment: \$10,000) has an expense ratio of 0.05%, which is hard to beat, supporting the Positive Price Pillar rating. In fact, this fund is cheaper than 95% of its intermediate-term bond category peers and is substantially lower than the 0.60% category average fee. This fund's Investor share class (minimum investment: \$3,000) charges 0.15%, while the exchange-traded fund version charges 0.05% and does not have a minimum investment requirement.

# Vanguard Total International Stock Index Fund Admiral Shares VTIAX Morningstar Analyst Rating **Gold**

NAV \$	NAV Day Change %	Yield TTM %	Total Assets \$	Status	Min. Inv.	Load	Expenses	Morningstar Rating™	Category	Investment Style
26.51	↑0.07   0.27	3.16	327	Open	\$3,000	None	0.11%	★★★★	Foreign Large Blend	Large Blend

## Growth of 10,000 01-16-2009 - 01-16-2019



## Investment Strategy

The investment seeks to track the performance of a benchmark index that measures the investment return of stocks issued by companies located in developed and emerging markets, excluding the United States. The fund employs an indexing investment approach designed to track the performance of the FTSE Global All Cap ex US Index, a float-adjusted market-capitalization-weighted index designed to measure equity market performance of companies located in developed and emerging markets, excluding the United States. The index includes approximately 5,800 stocks of companies located in over 45 countries.

## Performance 01-16-2019

	YTD	1 Mo	1 Yr	3Yr Ann	5Yr Ann	10Yr Ann
Growth of 10,000	10,449	10,324	8,560	13,213	10,999	21,127
Fund	4.49	3.24	-14.40	9.73	1.92	7.77
+/- MSCI ACWI Ex USA NR USD	0.17	0.57	0.00	0.26	0.27	0.08
+/- Category	0.24	0.62	0.22	2.36	0.95	0.61
% Rank in Cat	35	22	45	9	18	—
# of Funds in Cat	777	774	725	626	495	372

\* Currency is displayed in USD

## Top Holdings 12-31-2018

	Weight %	Last Price	Day Chg %	52 Week Range
⊕ Nestle SA	1.12	83.94 USD	0.99 ↑	72.92 - 85.96
⊕ Tencent Holdings Ltd	1.05	331.20 USD	0.06 ↑	251.40 - 476.60
⊕ Novartis AG	0.85	88.02 USD	0.73 ↑	71.84 - 92.80
⊕ Roche Holding AG Dividend Right Cert.	0.79	257.15 USD	0.04 ↑	206.35 - 260.00
⊕ Taiwan Semiconductor Manufacturing Co Ltd	0.79	220.50 USD	1.38 ↑	206.50 - 268.00
% Assets in Top 5 Holdings	4.60			

⊕ Increase ⊖ Decrease ✱ New to Portfolio

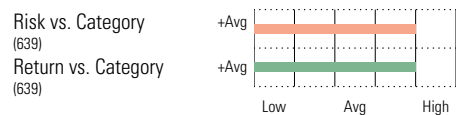
## Top Sectors 12-31-2018

	Fund	3 Yr High	3 Yr Low	Cat Avg	
🏦 Financial Services	21.51	21.51	21.18	20.67	■ Fund ▼ Cat Avg
⚙️ Industrials	11.90	12.23	11.90	12.92	
🛒 Consumer Cyclical	11.34	11.62	11.34	11.38	
💻 Technology	11.23	11.49	9.36	10.82	
🏠 Consumer Defensive	9.61	9.68	9.54	11.04	

## Dividend and Capital Gains Distributions

Distribution Date	Distribution NAV	Long-Term Capital Gain	Short-Term Capital Gain	Return of Capital	Dividend Income	Distribution Total
12-21-2018	24.78	0.0000	0.0000	0.0000	0.2626	0.2626
09-25-2018	29.23	0.0000	0.0000	0.0000	0.1443	0.1443
06-21-2018	29.07	0.0000	0.0000	0.0000	0.3187	0.3187
03-23-2018	29.66	0.0000	0.0000	0.0000	0.0765	0.0765
12-20-2017	30.06	0.0000	0.0000	0.0000	0.2896	0.2896

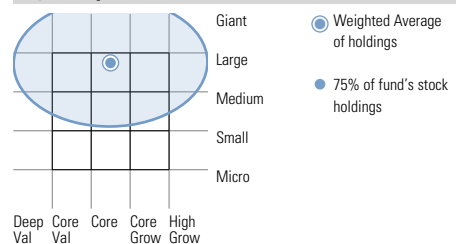
## 3 Year Average Morningstar Risk Measures



## Pillars

Process	⊕ Positive
Performance	⊖ Neutral
People	⊕ Positive
Parent	⊕ Positive
Price	⊕ Positive
Rating	<b>Gold</b>

## Style Map



## Asset Allocation

	% Net	% Short	% Long	Bench mark	Cat Avg
● Cash	2.18	0.00	2.18	0.01	2.13
● US Stock	0.93	0.00	0.93	0.79	3.58
● Non US Stock	96.69	0.00	96.69	99.13	93.21
● Bond	0.03	0.00	0.03	0.00	0.15
● Other	0.18	0.00	0.18	0.07	0.93

## Management

	Start Date
Michael Perre	08-05-2008
Christine D. Franquin	11-30-2017



# Vanguard Total International Stock Index Fund Admiral Shares VTIAX

## Analysis

### A cheap and comprehensive foreign-stock portfolio.

By Daniel Sotiroff 12/18/2018

Vanguard Total International Stock Index is a great foreign-stock fund. Its low-cost, low-turnover portfolio is one of the most comprehensive in the foreign large-blend Morningstar Category, earning a Morningstar Analyst Rating of Gold.

The fund tracks the FTSE Global All Cap ex US Index, which targets stocks of all sizes from more than 40 overseas developed and emerging markets. It weights its holdings by market capitalization, an approach that benefits investors by capturing the market's consensus opinion of each stock's value while mitigating turnover. Markets usually get long-term prices correct, but they occasionally make mistakes. Investors can drive valuations up if they get excited about a particular area of the market, and market-cap-weighting will increase the fund's exposure to it.

Broad diversification mitigates the impact of the worst performers on the fund's overall performance. The portfolio includes more than 6,000 stocks, and its 10 largest names account for only 8% of assets.

Non-U.S. stock funds like this one can diversify a U.S. stock portfolio. The portfolio's sector weightings are comparable to its average category peer, and it allocates 10% more than the category average to emerging-markets stocks. But this modest gap shouldn't impact the fund's category-relative performance.

The fund's total and risk-adjusted returns were similar to the category average between its launch in April 1996 and November 2018. It remains fully invested, while its better-performing competitors were more defensive, giving them an advantage during this period of lackluster market performance. The fund's 0.11% expense ratio is a sizable cost advantage over most of its competitors. In a stronger market environment, its smaller cash balance should help its category-relative perform-

ance.

#### Process Pillar: Positive

This fund tracks a comprehensive, low-turnover index of overseas stocks while capturing the market's collective opinion of each stock's value. It earns a Positive Process Pillar rating.

The managers employ full replication to track the FTSE Global All Cap ex US Index, which starts with all stocks listed in more than 40 countries across developed and emerging markets. It sorts this wide cohort by free-float-adjusted market cap and holds stocks that rank in the top 98% by market cap. The index uses buffering rules around the cutoff point to help mitigate turnover, and qualifying stocks are subject to liquidity screens to ensure that the index is investable. It weights final holdings by market cap, which mitigates turnover and the related trading costs. The index reconstitutes semiannually in March and September.

The resulting portfolio is one of the most comprehensive in the foreign large-blend category. It includes more than 6,000 stocks, while its 10 largest holdings represent only 8% of assets. For comparison, the corresponding figure for the category average is 26%. Its market-cap-weighted approach favors large multinational firms like Nestle, Novartis, and Samsung. Since its inception in April 1996, the fund's turnover ratio has historically landed in the midsingle digits and rarely exceeds 10%. Low turnover leads to lower trading costs.

Most of the fund's sector weightings are comparable to the category average. Financial firms account for the fund's largest sector allocation, representing 21% of the portfolio, while industrials and technology each make up an additional 12%.

Eurozone stocks account for 20% of the portfolio, with those from Japan and the United Kingdom making up an additional 18% and 11%, respectively. The fund also has a 17% allocation to emerging-markets stocks, more than double the category average. Like most of its peers, the fund does not hedge its currency risk, so it has exposure to the euro, yen, and pound. Changes in the ex-

### Morningstar's Take

Morningstar Analyst Rating



#### Morningstar Pillars

Process	 Positive
Performance	 Neutral
People	 Positive
Parent	 Positive
Price	 Positive

#### Morningstar Analyst Rating

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

Analyst Rating Spectrum

 Gold  Silver  Bronze Neutral Negative

### Fund Performance

	Total Return %	+/- Category
YTD	4.49	0.24
2018	-14.43	0.16
2017	27.55	2.43
2016	4.67	3.89
2015	-4.26	-2.67



# Vanguard Total International Stock Index Fund Admiral Shares VTIAX

## Analysis

change rate between these currencies and the U.S. dollar can add to the fund's volatility.

### Performance Pillar: ● Neutral

The fund's long-term track record and more recent performance have been mediocre, warranting a Neutral Performance Pillar rating. From its launch in April 1996 through November 2018, its total and risk-adjusted return landed near the category average. The fund's higher-than-average exposure to Japanese stocks detracted from performance, as the Japanese market was one of the worst performers over the past two decades.

While the portfolio's allocation to Japanese stocks has come down over time, its category-relative performance has failed to improve. The fund tracks the FTSE Global All Cap ex US Index and stays fully invested. Many of the fund's better-performing active competitors have been more defensive over the past several years. This gave them an advantage over a stretch of poor market performance (by historical standards). While staying fully invested can hurt performance during periods of lackluster returns, it should help the fund during strong market rallies.

The fund's heavier-than-average stake in emerging-markets stocks has caused it to look riskier than the category norm. While stocks from these regions are more volatile, they also improve diversification and shouldn't impact the fund's long-term returns.

### People Pillar: ● Positive

This fund's two portfolio managers are equipped with a global support staff and Vanguard's portfolio management technology, earning a Positive People Pillar rating.

Michael Perre and Christine Franquin not only oversee the portfolio but also execute trades on a day-to-day basis. Perre is a principal in the Vanguard Equity Index Group and has been with the firm since 1990. Franquin replaced Michelle Louie in November 2017. She is a principal at Vanguard and has been managing portfolios since she joined the firm in 2000.

Vanguard's portfolio management team typically consists of two comanagers on each fund, and these managers rotate to different funds every few years to improve their breadth and depth of expertise. They also have access to Vanguard's trading desks around the world, which enables them to make the most efficient transactions in various global markets.

The managers are compensated with a bonus that factors in the gross, pretax performance of the fund relative to its objectives. This includes the manager's record of tracking a benchmark index over the prior 12 months.

### Parent Pillar: ● Positive

The Vanguard Group is the world's biggest provider of open-end funds and its second-biggest provider of exchange-traded funds. Innovative and iconoclastic from its mid-1970s origins, the firm's mutual ownership structure, commitment to low fees, and sensible active and passive investment strategies are hallmarks that support its Positive Parent rating.

Vanguard is committed to serving all investors, not just its own. Indeed, the firm celebrates when its entry into an asset class prompts rivals to lower their fees to remain competitive, as occurred when Vanguard launched index funds in London in 2009 and factor-based strategies in the United States in early 2018.

New CEO Tim Buckley, Vanguard's fourth, faces the challenge of expanding the firm's mission to non-U.S. investors, who currently account for less than a tenth of the firm's \$5 trillion in global assets under management. He must also navigate the tension between Vanguard's burgeoning discretionary asset-management business, Personal Advisor Services, and financial advisors who may feel threatened by the firm's efforts to lower the cost of investment advice. Perhaps Vanguard's greatest challenge, though, will be keeping pace with its own growth, especially in overcoming the service problems that have bedeviled the firm the past few years. Vanguard's 2017 implementation of client-experience testing labs should help the

firm improve there, too.

### Price Pillar: ● Positive

Vanguard offers this fund through two low-cost share classes, so it earns a Positive Price Pillar rating. In November 2018, Vanguard closed the Investor share class and lowered the investment minimum on the Admiral share class to \$3,000 from \$10,000 (\$3,000 was the minimum for the outgoing Investor share class). The Admiral shares and the exchange-traded fund both charge 0.11%, which ranks among the lowest fees in the foreign large-blend category. The ETF led the fund's target index by 4 basis points annually over the trailing three years through November 2018. Securities-lending revenue helped the fund recover some its expenses, but investors should not expect this activity to produce long-term index-beating returns.