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# **Morningstar Prospects** 04 2017

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#### Important Disclosure

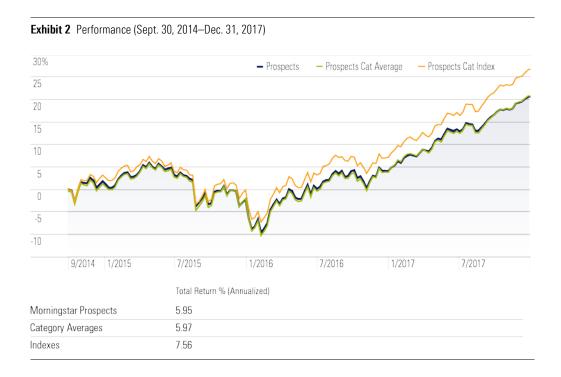
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The fourth quarter of 2017 saw a great deal of activity on the Morningstar Prospects list—a list of up-and-coming or under-the-radar investment strategies that Morningstar Manager Research thinks might be worthy of full coverage someday. We added 10 new strategies, nine others graduated to full coverage, and one strategy was dropped from the list. See Page 2 for a table of these funds and their respective asset classes, as well as the page numbers for the writeups of the new funds and the Morningstar Analyst Ratings of the graduates.

The graduates include three alternatives funds: Bronze-rated American Beacon AHL Managed Futures Strategy is managed by Man AHL, which has deep expertise in trend-following strategies; Credit Suisse Managed Futures' simple, transparent approach and low costs earn a Bronze; and Schwab Hedged Equity earns a Bronze because of a solid Parent and modest fees. Four equity funds also graduated: Davenport Equity Opportunities' experienced lead skipper and prudent approach earn a Bronze; Hood River Small-Cap Growth's veteran team is appealing, but above-average fees and high trading costs limit its rating to Neutral; Madison Mid Cap earns a Neutral because of spotty execution; and Queens Road Small Cap Value earns a Neutral because of limited resources and investing miscues. Two fixed-income strategies graduated: Bronze-rated Hartford Total Return Bond features a solid team and a proven, risk-conscious approach, and WisdomTree Barclays Yield Enhanced U.S. Aggregate Bond ETF's sensible yield-boosting strategy and low fees earn a Bronze. Also, we dropped Invesco Global Targeted Returns as outflows made it unlikely to graduate and Morningstar's UK office rates the strategy as Neutral now.

Ten strategies were added to the list, including--for the first time--target-date fund series. Both the JPMorgan SmartRetirement Blend and the State Street Target Retirement target-date series are run by teams with significant target-date experience and charge relatively low costs because of their use of passive vehicles. The series are described collectively in our overviews, but the individual funds can be found in the Morningstar Prospects table that starts on Page 4. An alternatives strategy, BlackRock Event Driven Equity, joined the list because of its seasoned team and the advantage its large parent company brings. Two low-cost, passive environmental, social, and governance equity strategies, Fidelity U.S. Sustainability Index and Fidelity International Sustainability Index, were added as well. New Prospects AQR Global Equity and AQR International Equity employ a distinctive, multipronged approach overseen by veteran quant investors. Another addition, Baird Chautauqua International Growth, is a bold, but successful growth portfolio led by the same manager since 2006. New Prospect Principal Blue Chip is just five years old but shares its team and prudent approach with Silver-rated Principal MidCap. Finally, Prudential Jennison Global Opportunities was added because of its focused approach on stable growers and long-tenured team.

Investment Name	Asset Class	Morningatar Rating
New		_
AQR Global Equity	International Equity	_
AQR International Equity	International Equity	_
Baird Chautauqua International Growth	International Equity	_
BlackRock Event-Driven Equity	Alternatives	_
Fidelity International Sustainability Index	International Equity	_
Fidelity U.S. Sustainability Index	U.S. Equity	_
JPMorgan SmartRetirement Blend Series	Allocation	_
Principal Blue Chip	U.S. Equity	_
Prudential Jennison Global Opportunities	International Equity	_
State Street Target Retirement Series	Allocation	_
Graduates		
American Beacon AHL Managed Futures	Alternatives	<b></b> Bronze
Credit Suisse Managed Futures	Alternatives	<b></b> Bronze
Davenport Equity Opportunities	U.S. Equity	₩ Bronze
Hartford Total Return	Taxable Bond	₩ Bronze
Hood River Small Cap Growth	U.S. Equity	Neutral
Madison Mid Cap	U.S. Equity	Neutral
Queens Road Small Cap Value	U.S. Equity	Neutral
Schwab Hedged Equity	Alternatives	₩ Bronze
WisdomTree Barclays Yield Enh US Aggt Bond	Taxable Bond	<b>℧</b> Bronze
Dropped		
Invesco Global Targeted Returns	Alternatives	



In the chart above, we track the performance of Morningstar Prospects funds in aggregate, from the list's September 2014 inception through December 2017. We equal-weight each fund (oldest-share class only) on the list, reconstituting the portfolio quarterly to reflect changes. We add funds to the portfolio in the quarter they first appear in Prospects and remove them—either because they've graduated to coverage or otherwise been removed—in the quarter we announce their removal. We compare this portfolio to a blended category average that mirrors the category classifications of the funds in Prospects, as well as a blended index that mirrors the indexes assigned to the funds in the Prospects list.

We do not necessarily expect every fund that we add to Prospects to outperform. Indeed, some of the funds featured can be noteworthy for reasons other than our conviction in future performance. For instance, the funds may pursue an interesting strategy or have gathered a large sum of assets in a short period. Or it could be a proven manager helming a new fund, but where it's not yet clear whether it'll be run in the same style as her previous charge. Thus, while we would expect the performance of Prospects to be above-average over longer periods, the list hasn't been assembled solely for that purpose and, therefore, might experience stretches of underperformance. (It's also worth noting that the Prospects portfolio doesn't capture the performance of funds after they graduate to full analyst coverage.)

Viewed in that light, the Prospects portfolio's underperformance-to-date doesn't come as a huge surprise. It's a relatively short time frame, and during that time active funds—which dominate the list—have had difficulty overcoming their costless benchmarks. That said, we expect performance versus the category-average benchmark to improve, and we will keep readers apprised of its progress over time.

		Iotal Returi	1 (Month	(Month End) %							
		1-Year		3-Year		5-Year					
Asset Class / Category / Strategy Name	Ticker	Return	Cat Rank	Annizd	Cat Rank	Annizd	Cat Rank	Inception Date	Net Exp Ratio %	Total Net Assets (\$Million)	Date Added to Prospects
Alternative											
Long-Short Equity											
Boston Partners Emerging Mkts L/S Instl	BELSX	24.78	3	_				2/27/15	2.11	75.4	Q3 2017
Prudential QMA Long-Short Equity Z	PLHZX	8.98	63	7.41	17	_	_	5/29/14	1.25	461.3	Q3 2017
Market Neutral											
★ BlackRock Event Driven Equity InstI	BILPX	7.14	9	3.23	_	9.95	_	12/19/07	1.54	238.9	Q4 2017
Multialternative											
Franklin K2 Alternative Strategies Adv	FABZX	6.84	28	2.94	28			10/11/13	1.98	1,088.5	Q4 2016
Oppenheimer Fundamental Alternatives I	QOPIX	1.75	79	1.95	48	_	_	2/28/13	0.95	1,216.3	Q1 2017
Taxable Bond											
Target-Date 2015										_	
★ State Street Target Retirement 2015 K	SSBHX	10.39	73	5.16	64	_	_	9/30/14	0.13	287.9	Q4 2017
Target-Date 2020		_									
★ JPMorgan SmartRetirement® Blend 2020 R6	JSYRX	13.40	33	6.34712	25	7.64	31	7/2/12	0.29	543.4	Q4 2017
★ State Street Target Retirement 2020 K	SSBOX	13.38	34	6.23	30	_	_	9/30/14	0.13	888.1	Q4 2017
Target-Date 2025		_									
★ JPMorgan SmartRetirement® Blend 2025 R6	JBYSX	15.56	32	7.16554	23	8.71	30	7/2/12	0.29	679.1	Q4 2017
★ State Street Target Retirement 2025 K	SSBSX	16.52	11	7.33	15	_	_	9/30/14	0.13	938.2	Q4 2017
Target-Date 2030											
¥ JPMorgan SmartRetirement Blend 2030 R6	JRBYX	17.44	35	7.89706	24	9.65	29	7/2/12	0.29	668.7	Q4 2017
★ State Street Target Retirement 2030 K	SSBYX	18.35	13	7.93	23	_	_	9/30/14	0.13	938.8	Q4 2017
Target-Date 2035		_									
¥ JPMorgan SmartRetirement Blend 2035 R6	JPYRX	18.90	43	8.45	24	10.36	30	7/2/12	0.29	563.7	Q4 2017
★ State Street Target Retirement 2035 K	SSCKX	19.73	22	8.46	24	_	_	9/30/14	0.13	734.4	Q4 2017
Target-Date 2040		_									
¥ JPMorgan SmartRetirement Blend 2040 R6	JOBYX	20.29	39	8.97	20	10.87	28	7/2/12	0.29	502.1	Q4 2017
★ State Street Target Retirement 2040 K	SSCQX	20.69	26	8.75	33	_	_	9/30/14	0.13	617.0	Q4 2017
Target-Date 2045											
★ JPMorgan SmartRetirement Blend 2045 R6	JMYAX	20.49	56	9.05	31	10.91	35	7/2/12	0.29	398.4	
★ State Street Target Retirement 2045 K	SSDEX	21.45	24	9.02	34	_	_	9/30/14	0.13	410.3	Q4 2017
Target-Date 2050											
¥ JPMorgan SmartRetirement Blend 2050 R6	JNYAX	20.53	60	9.03	40	10.91	44	7/2/12	0.29	263.8	
★ State Street Target Retirement 2050 K	SSDLX	21.42	34	8.91	45	_	_	9/30/14	0.13	269.9	Q4 2017
Target-Date 2055											
★ JPMorgan SmartRetirement Blend 2055 R6	JTYBX	20.41	72	9.06	42	10.84	49	7/2/12	0.29	129.4	
★ State Street Target Retirement 2055 K	SSDQX	21.53	39	8.92	49	_	_	9/30/14	0.13	93.4	Q4 2017
Target-Date 2060		_									
★ JPMorgan SmartRetirement Blend 2060 R6	JAAYX	20.52	77	_	_	_	_	8/31/16	0.29	7.9	Q4 2017
★ State Street Target Retirement 2060 K	SSDYX	21.57	40	8.89	73	_	_	9/30/14	0.13	13.1	Q4 2017

#### Morningstar Prospects List (Continued)

		Total Retur	Total Return (Month End) %								
		1-Year 3-Year			5-Year						
			Cat		Cat		Cat	Inception	Net Exp	Total Net Assets	Date Added
Asset Class / Category / Strategy Name	Ticker	Return	Rank	Annizd	Rank	Annizd	Rank	Date	Ratio %	(\$Million)	to Prospects
Target-Date Retirement											
★ JPMorgan SmartRetirement Blend Inc R6	JIYBX	10.70	17	5.18	14	5.52	24	7/2/12	0.29	313.4	Q4 2017
★ State Street Target Retirement K	SSFOX	8.83	49	4.48	36	_	_	9/30/14	0.13	183.9	Q4 2017
U.S. Equity											
Large Blend		_									
★ Fidelity U.S. Sustainability Index Inv	FENSX	_	_	_	_	_	_	5/9/17	0.21	24.7	Q4 2017
Harbor Large Cap Value Instl	HAVLX	22.31	23	13.75	1	16.21	6	12/29/87	0.68	863.4	Q3 2017
iShares MSCI USA ESG Optimized ETF	ESGU	21.25	43	_	_	_	_	12/1/16	0.15	21.1	Q3 2017
SPDR SSGA Gender Diversity ETF	SHE	19.68	67	_	_	_	_	3/7/16	0.20	375.6	Q3 2017
Large Growth											
Harbor Strategic Growth Institutional	MVSGX	25.25	66	10.75	59	15.42	52	11/1/11	0.70	66.3	Q2 2016
★ Principal Blue Chip Institutional	PBCKX	28.86	43	13.91	13	16.19	38	6/14/12	0.69	2,594.9	Q4 2017
Large Value											
Oppenheimer Large Cap Revenue ETF	RWL	19.89	14	9.95	24	15.71	5	2/22/08	0.39	897.0	Ω2 2017
Mid-cap Blend											
T. Rowe Price QM US Sm&Md-Cp Cor Eq	TQSMX	15.93	54	_				2/26/16	0.80	55.5	Q2 2017
Mid-cap Growth											
Fidelity Growth Strategies	FDEGX	21.50	67	8.79	64	15.08	21	12/28/90	0.89	2,740.6	Q2 2017
Small Blend											
Tributary Small Company Instl	FOSCX	8.49	85	10.43	25	14.04	38	6/10/96	1.20	718.8	Q1 2017
Small Value											
Dean Small Cap Value	DASCX	3.70	87	8.19	59	12.91	46	5/28/97	1.15	311.1	Q3 2014
International Equity											
Diversified Emerging Markets		_									
GQG Partners Emerging Markets EquityInst	GQGIX	32.01	63	_	_	_	_	12/28/16	1.08	563.8	Q1 2017
Neuberger Berman Emerg Mkts Eq InstI	NEMIX	41.62	15	11.01	12	6.07	19	10/8/08	1.26	1,200.0	Q3 2017
Foreign Large Blend											
★ AQR International Equity I	XIIDA	25.71	42	9.74	9	8.66	15	8/31/09	0.91	454.6	Q4 2017
¥ Fidelity Intl Sustainability Idx Inv	FNIYX	_	_	_	_	_	_	5/9/17	0.30	22.5	Q4 2017
Foreign Large Growth											
★ Baird Chautauqua Intl Growth Equity (SMA)	_	36.95		12.89	_	10.50	_	1/3/06	_	521.9	Q4 2017
WCM Focused International Growth Instl	WCMIX	31.24	44	11.80	8	11.14	10	5/31/11	1.03	5,496.0	Q2 2016
Foreign Large Value		_									
Mondrian International Equity	DPIEX	21.42	64	6.66	56	7.57	30	2/4/92	0.79	571.1	Q2 2016
Foreign Small/Mid Growth		_									
Manning & Napier Rainier Intl Discv I	RAIIX	42.04	8	15.46	15	15.38	8	3/28/12	1.16	355.7	Q3 2014

#### Morningstar Prospects List (Continued)

		Total Return (Month End) %									
		1-Year	3	-Year		5-Year					
Asset Class / Category / Strategy Name	Ticker	Return	Cat Rank	Annizd	Cat Rank	Annizd	Cat Rank	Inception Date	Net Exp Ratio %	Total Net Assets (\$Million)	Date Added to Prospects
World Large Stock											
American Beacon SGA Global Growth Instl	SGAGX	33.26	9	14.62	3	12.87	14	12/31/10	0.99	44.2	Q3 2016
★ AQR Global Equity I	AQGIX	25.44	31	11.22	15	12.79	15	1/4/10	0.81	369.2	Q4 2017
BBH Global Core Select N	BBGNX	22.51	54	7.77	70	_	_	3/28/13	1.24	142.0	Q3 2015
Morgan Stanley Inst Global Opp I	MGGIX	49.44	1	21.41	1	22.28	1	5/30/08	1.00	1,981.1	Q1 2017
★ Prudential Jennison Global Opps Z	PRJZX	43.35	1	15.52	1	15.75	4	3/14/12	0.90	722.7	Q4 2017
World Small/Mid Stock											
Polaris Global Value	PGVFX	20.60	72	11.00	46	14.19	22	6/1/98	0.99	565.7	Q3 2014
Taxable Bond Corporate Bond											
Goldman Sachs Acss Invmt Grd Corp Bd ETF	GIGB							6/6/17	0.14	162.9	Q3 2017
Western Asset Corporate Bond I	SIGYX	7.54	15	5.02	12	4.78	12	2/7/96	0.61	469.1	Q2 2017
Emerging Markets Bond											
TCW Emerging Markets Local Ccy Inc I	TGWIX	16.27	15	3.53	11	-0.71	21	12/14/10	0.99	319.3	Q4 2016
High Yield Bond											
Xtrackers USD High Yield Corp Bd ETF	HYLB	5.96	69	_	_	_		12/6/16	0.20	584.7	Q2 2017
Intermediate Term Bond											
Bridge Builder Core Bond	BBTBX	4.13	34	2.76	23			10/28/13	0.17	14,729.3	Q4 2015
NuShares Enhanced Yield US Aggt Bd ETF	NUAG	4.23	30	_	_	_	_	9/14/16	0.20	65.7	Q3 2017
Vanguard Core Bond Investor	VCORX	3.77	49	_	_	_	_	3/28/16	0.25	934.4	Q2 2016
Municipal Bond											
Muni National Intermediate											
Baird Core Intermediate Municpl Bd Instl	BMNIX	5.26	26	_		_		8/31/15	0.30	245.4	Q4 2016

### Strategy Overviews

#### **Alternatives**

#### ★ BlackRock Event Driven Equity, by Jesse Dashefsky

Asset Class	Category	Availability	Comments
Alternative	Market Neutral	Mutual Fund	Unique Process/Strategy

BlackRock Event Driven Equity bets on companies that are undergoing mergers, management changes, or similar corporate events. When a deal occurs, the fund buys stock in companies expected to benefit (typically the acquisition) and shorts stocks expected to decline (typically the acquirer). The fund aims to maintain a low correlation to equity markets while delivering 6%-8% annualized net returns.

The fund gets an edge from its seasoned team and its parent company's scale. Lead manager Mark McKenna joined BlackRock in 2014, bringing a decade of event-driven experience as well as three longtime colleagues with similar expertise. BlackRock provides McKenna's squad with ample resources, including proprietary risk models and legal guidance. Most important, the team also enjoys boardroom access thanks to BlackRock's significant holdings across equity markets.

The fund holds both stocks and credit instruments, and stocks usually comprise a larger portion of the portfolio. The fund also invests across sectors and borders, although the portfolio typically has a U.S. tilt. While the number of positions varies, each is capped at 3% risk to the fund's net asset value; a proprietary risk model guides position sizing.

Investors should be aware that the fund had a different strategy, manager, and name before May 2015, when it underwent a total overhaul.

Portfolio Manager(s) Start Date Portfolio Manager(s) Start Date

Mark McKenna 5-2015

#### Boston Partners Emerging Markets Long/Short, by Tayfun Icten

Asset Class	Category	Availability	Comments
Alternative	Long-Short Equity	Mutual Fund	New Fund/Experienced Manager

Managers Joseph Feeney and Paul Korngiebel apply the firm's well-defined three-prong investment process and quantitative screening methodology to emerging-markets stocks at this fund. Feeney is one of the original partners of the firm and manages several other funds, including Silver-rated Boston Partners Long/Short Research. Korngiebel joined the firm in 2014, bringing value-oriented experience from firms such as Brandes Investment Partners and Deccan Value Advisors (which he cofounded in 2004). Korngiebel focuses most of his efforts on small- to mid-cap stocks and outsources larger-cap research to the firm's 25-person analyst team.

The fund's primary objective is to control volatility and the large drawdowns that can plague emerging markets on a regular basis. It targets a beta of less than 0.5 to the MSCI Emerging Market Index and net equity exposure of 30% to 70%, and it holds a diversified portfolio of more than 200 stocks (longs plus shorts). This is one of the more capacity-constrained strategies at Boston Partners because emerging markets are not as liquid as their developed-markets brethren. The initial targeted size range for the fund is \$500 million to \$2 billion.

The fund has met its investment objectives from its February 2015 inception through December 2017, beating the IShares MSCI Emerging Market ETF by 1.3 percentage points with an impressively low beta of 0.37.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Joseph Feeney	2-2015	Paul Korngiebel	2-2015

#### Franklin K2 Alternative Strategies, by Heather Larsen

Asset Class	Category	Availability	Comments
Alternative	Multialternative	Mutual Fund	Unique Process/Strategy

In 2012, Franklin Templeton acquired a majority stake in K2 Advisors, an alternative investment specialist with approximately \$10 billion in assets under management. Franklin then launched this multimanager alternatives fund, modeled on the firm's flagship hedge fund strategy, in October 2013. David C. Saunders, a founding member of K2, is one of the three portfolio managers for this fund along with Brooks Ritchey, head of portfolio construction, and Robert Christian, head of research. Ritchey and Christian have been with the team 12 years and seven years, respectively.

The fund focuses on active risk management, manager research, and active strategy allocation. K2 has been researching alternative investment funds since 1994 and has an extensive database and list of contacts in this space. The fund evaluates about 1,000 hedge funds per year, filtering down the universe to 10 to 20 investable fund ideas. Currently, the fund allocates its capital to 13 hedge fund subadvisors in the long-short equity, global macro, event-driven, and relative-value strategies. From an asset-allocation perspective, Franklin K2 transfers its institutional money management expertise to this mutual fund, breaking down its portfolio exposure into specific risk factors. Since inception, this fund has returned 4.3% annualized, outpacing its typical multialternative Morningstar Category peer by 2.8 percentage points.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
David Saunders	10-2013	Brooks Ritchey	10-2014
Robert Christian	10-2014		

#### Oppenheimer Fundamental Alternatives, by Jason Kephart

Asset Class	Category	Availability	Comments
Alternative	Multialternative	Mutual Fund	Unique Process/Strategy

This multistrategy fund takes a discretionary, macro-driven approach. It aims to produce low volatility and relatively low correlations to stocks and bonds and to outperform the HFRX Global Hedge Fund Index. Michelle Borrè took over the fund in November 2011 and is backed by five analysts focused on this strategy. She had previously worked as an analyst on this fund from 2003 to 2009 and has served as portfolio manager of Oppenheimer Capital Income since 2009.

This fund has undergone significant strategy changes over time. The current approach can be traced back to April 2012, the point at which manager Borrè finished remaking the portfolio. Previously, the fund had been higher-beta, its alternative characteristics chiefly derived from long-short equity exposure. Currently, Borrè and her team oversee three separate sleeves: long-short equity, long-short credit, and global macro (which may include commodities, currencies, and rates). But the managers begin with a top-down view, developing 10 or so macroeconomic themes through which they will filter their trade ideas. They take a two- to three-year outlook, searching for market or sector imbalances they think are unsustainable and where prices are reasonable. Allocation across the three buckets is driven by asset-class valuations and the perceived opportunity set. An independent risk team performs regular risk tests on the portfolio. The highly discretionary nature of the investment process, along with the relatively concentrated thematic approach, introduce some idiosyncratic risks to the strategy.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Michelle Borrè	11-2011		

#### Prudential QMA Long-Short Equity, by Gretchen Rupp

Asset Class	Category	Availability	Comments
Alternative	Long-Short Equity	Mutual Fund	New Fund/Experienced Manager

QMA is Prudential's wholly owned subsidiary. Its strategies share the same core quantitative process, managed by a deep bench of 56 well-credentialed managers and analysts. Although this fund's track record is relatively short, its quant model has been used to short stocks since 2004. This includes a 130/30 separate account strategy that has turned in solid results since its 2006 start date.

The fund's model picks stocks from the Russell 3000 Index. The broad selection pool means this fund can own a higher percentage of small-cap stocks than its typical peer in both the long and short sleeves. A diversified portfolio of about 230 long positions and an equal number of short positions help prevent a single holding from having a large impact.

The process sorts stocks into three categories based on earnings growth expectations—slow, average, or fast. The model scores each stock using inputs that broadly roll up to three factors—value, growth, and quality—and the factor weightings adjust based on the earnings growth category grouping. The managers have been adjusting this model since 1996 and regularly test for new factors, but changes are infrequent. Model-driven results and portfolio manager input combine to determine the overall portfolio's sector weightings and net exposure. On average, investors should expect net equity exposure to be close to 50%, which is close to the long-short equity Morningstar Category norm.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Stacie Mintz	5-2014	Devang Gambhirwala	5-2014
Peter Xu	5-2014		

#### **Allocation**

#### **★ JPMorgan SmartRetirement Blend Target Date Fund Series**, by Janet Yang

Asset Class	Category	Availability	Comments
Allocation	Target Date Funds	Mutual Fund	New Fund/Experienced Manager

As 401(k) plan sponsors have become increasingly fee-conscious, a number of target-date asset managers better known for active management have added index-based holdings to their underlying lineups. That was the case for JPMorgan, which created an alternative to its flagship, Silver-rated JPMorgan SmartRetirement series of target-date funds (launched in 2007) when it launched the JPMorgan SmartRetirement Blend series in 2012.

The two series follow the same asset-allocation glide path, which maintains a below-average equity stake during an investor's early savings years and quickly gets more conservative near retirement. We have long held portfolio manager Anne Lester and her team in high regard for their thoughtful approach to asset allocation and manager selection.

Whereas the original offering draws its underlying investments exclusively from the firm's lineup of actively managed funds, SmartRetirement Blend adds a number of passive exchange-traded funds to the mix, resulting in roughly 70% exposure to passive underlying investments across the series. Lester and team use ETFs for U.S. equity and non-U.S. developed equity, but a portion of the emerging-markets equity allocation remains actively managed. On the bond side, the managers blend active and passive strategies for core bond exposure but stay active in niche areas such as emerging-markets debt and high-yield bonds.

Using ETFs results in expense ratios for the funds' R6 share class (which contains no revenue- sharing considerations) that are, depending on the fund, 12 to 21 basis points cheaper than the legacy offerings. Despite those lower fees, strong results from underlying actively managed investments have allowed funds in the original SmartRetirement funds to generally outpace their SmartRetirement Blend equivalents over the past three and five years through the end of 2017.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Jeffrey Geller	7-2012	Anne Lester	7-2012
Daniel Oldroyd	7-2012	Michael Schoenhaut	7-2012
Eric Bernbaum	11-2014		

#### \* State Street Target Retirement Target Date Fund Series, by Janet Yang

Asset Class	Category	Availability	Comments
Allocation	Target Date Funds	Mutual Fund	New Fund/Experienced Manager

State Street Global Advisors only launched its State Street Target Retirement mutual funds in December 2014, but it first began managing custom target-date mandates in 1995 and launched its flagship collective investment trust target-date funds in 2005. That longer history largely explains why plan sponsors and investors have already invested a combined \$4.4 billion in these relatively nascent funds. Both the mutual fund and CIT target-date offerings use index-based underlying holdings, and, while they have similar asset-class exposures and generally follow the same asset-allocation glide path, they're not clones of one another. For instance, the CIT offering includes exposure to commodities, which are not in the mutual fund version. The underlying holdings also track slightly different indexes in some instances.

The series generally has above-average equity exposure across the glide path. For instance, at retirement, the series has 50% equity exposure compared with an industry average of 43%. And in contrast to some index-based offerings, these funds take a more granular approach to asset allocation. By separating exposure to U.S. large- and small-cap stocks, for example, the team gives an overweighting to small-cap equities for younger investors and an underweighting to small caps for those in retirement, whereas some peers simply use a broad U.S. equity index fund. Similar to index-based competitors, the series' low fees offer an enduring advantage over most actively managed options. Uniformly priced at 0.13%, the series' K shares eschew revenue sharing, and it is the series' lowest-priced and most heavily used share class. It is not the cheapest target-date series available, but it is notably lower-priced than the target-date market place's 0.81% asset-weighted average expense ratio.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Lisa Khatri	9-2014	Charles McGinn	9-2014

#### **U.S.** Equity

#### Dean Small Cap Value, by Greg Carlson

Asset Class	Category	Availability	Comments
U.S. Equity	Small Value	Mutual Fund,	Under-the-Radar Manager
		Separate Account	

This is a straightforward small-value fund with a focus on financially healthy companies instead of deep-value plays. Manager Steve Roth and two former colleagues from American Century formed Dean Capital Management, which became subadvisor to this fund in mid-2008. Roth, who has more than \$1 million invested in the strategy, is lead manager here but receives research support from his colleagues, who lead mid- and large-cap strategies. The team figures a company's earnings through an entire business cycle and gauges the stock's current price against an average, or "normalized," annual earnings level. The team typically buys companies that are currently earning less than normal and thus trading at depressed valuations. The expectation is that the price will improve in three to five years as the industry's cycle evolves. While the outlook is long-term, the process has historically been high-turnover because Roth trades on volatility and scales in and out of positions. The strategy still has less than \$700 million in assets between the mutual fund and the separate account, and Roth estimates capacity to be around \$1.5 billion.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Steven Roth	6-2008		

#### Fidelity Growth Strategies, by Katie Reichart

Asset Class	Category	Availability	Comments
U.S. Equity	Mid-Growth	Mutual Fund	Under-the-Radar Manager

This fund had a rocky history under previous managers but has new promise under Jean Park, who took over in August 2013. Park employs a disciplined, risk-conscious approach, favoring companies with positive free cash flow yields that can provide stability during market pullbacks. Other key components are consistent and above-average returns on capital, reasonable valuations, and sound capital allocation by company management. Park is a heavy user of Fidelity's quantitative research, but she also digs into the fundamentals and leans on Fidelity's deep analyst team for ideas.

The fund has lived up to its process during her four-year tenure. The portfolio has looked cheaper than its Russell Mid Cap Growth benchmark on a price/free cash flow basis while sporting higher returns on

equity and returns on invested capital. Performance has followed the expected pattern, protecting capital better than the benchmark and its typical mid-growth Morningstar Category peer in market pullbacks while participating in up markets, though not necessarily leading the way in lower-quality rallies.

The fund's fees are reasonable, and it has been more tax-efficient than its typical peer. Park recently added another assignment to her plate, taking over large-growth offering Fidelity Fund in April 2017. While that fund will require additional attention, her asset base here is still manageable at \$2.7 billion.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Jean Park	8-2013		

#### ★ Fidelity U.S. Sustainability Index, by Daniel Sotiroff

Asset Class	Category	Availability	Comments
U.S. Equity	Large Blend	Mutual Fund	Unique Process/Strategy

This fund tracks the MSCI USA ESG Leaders Index. That benchmark is derived from screening a market-cap-weighted index of U.S. stocks, the MSCI USA Index, for companies that score high on a number of ESG-related metrics. Firms involved in businesses related to alcohol, tobacco, gambling, weapons, and nuclear power are excluded. The remaining companies are ranked by an overall ESG score developed by MSCI. The index includes those that rank highest until it captures 50% of the total market capitalization of the parent universe. These selection criteria may not outperform a broad market index because there is no direct screen for characteristics associated with market-beating returns, such as value, momentum, or profitability. As a result, the index is not tilted toward any of these styles and lands in the large-blend Morningstar Category. The fund's expense ratio is 0.21%, far cheaper than most actively managed vehicles, but index-tracking alternatives are available for a bit less. The fund was launched in May 2017 and has not had the opportunity to accumulate a substantial track record. Its risk-adjusted returns beat 80% of category peers through November 2017. But the index has a longer history, dating back to January 2001. Since then, this bogy's risk-adjusted performance has trailed 67% of surviving large-blend funds through November 2017.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Louis Bottari	5-2017	Thomas Brussard	5-2017
Dean Gyllenhaal	5-2017	Peter Matthew	5-2017
Robert Regan	5-2017	Patrick Waddell	5-2017

#### Harbor Large Cap Value, by Connor Young

Asset Class	Category	Availability	Comments
U.S. Equity	Large Value	Mutual Fund, Separate	Under-the-Radar Manager
		Account	

This fund is subadvised by Aristotle Capital Management, a value-oriented investment boutique. The firm was founded in 2010 by Howard Gleicher, former co-founder, CEO, and CIO of Metropolitan West Capital, a subsidiary of Wells Fargo. Aristotle has \$14.8 billion in assets under management, including \$12.9 billion in this strategy.

Although Aristotle has subadvised this fund since 2012, Gleicher has successfully executed this strategy through a separate account—now called Aristotle Value Equity—since 2001. Supported by roughly a dozen analysts, Gleicher focuses on companies with market capitalizations above \$2 billion that have sustainable competitive advantages, experienced management teams, compelling valuations, and potential catalysts. The team prefers quality firms when they are out of favor over mediocre firms trading at fire-sale prices. As a result, this fund lands in the large-blend Morningstar Category. Once management buys, it tends to hold on for the long term, so portfolio turnover has been 15%-35% at the fund.

While the portfolio is concentrated, typically holding 35 to 45 stocks, there are guardrails to address risk. The fund's sector weightings must remain within 50% to 200% of the S&P 500's, individual position sizes are capped at 6% of assets, and non-U.S. securities are limited to 20% of assets. The approach has worked thus far: The fund has posted solid absolute and risk-adjusted performance versus both the Russell 1000 and Russell 1000 Value indexes on Aristotle's watch.

Portfolio Manager(s) Start Date Portfolio Manager(s) Start Date
Howard Gleicher 5-2012

#### Harbor Strategic Growth, by Greg Carlson

Asset Class	Category	Availability	Comments
U.S. Equity	Large Growth	Mutual Fund, Separate Account, UCITS	Under-the-Radar Manager

The March 2017 adoption of this fund (formerly called Mar Vista Strategic Growth) by Harbor Capital hasn't diminished its appeal. The strategy is run by a team of four managers who have worked together for more than a decade. Mar Vista Investment Partners was founded in 2007, but each of the four previously worked at Roxbury Capital (which provided back-office services). Mar Vista serves as its subadvisor, and there have been no changes to the team or strategy.

Co-founders Silas Myers and Brian Massey have managed separate accounts in this conservative large-growth approach since 2004, when they were still at Roxbury. (The fund was launched in 2011.) The team runs a compact portfolio of 30-50 companies with durable competitive advantages and high ROIC that trade at significant discounts to the team's estimates of fair value. The portfolio tends to have a bigger stake in wide-moat companies than both its typical peer and the Russell 1000 Growth Index, as well as higher ROIC and ROE. The strategy typically keeps pace in rising markets and gains an edge in tough times. In 13 years at the separate account and six years at the fund, the strategy has surpassed most of its peers as well as the Russell 1000 Growth Index on a risk-adjusted basis. The team runs about \$3 billion total in the strategy.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Brian L. Massey	11-2011	Joshua Honeycutt	3-2017
Silas A. Myers	11-2011	Jeffrey Prestine	3-2017

#### iShares MSCI USA ESG Optimized ETF, by Adam McCullough

Asset Class	Category	Availability	Comments
U.S. Equity	Large Blend	ETF	Unique Process/Strategy

MSCI USA ESG Optimized ETF offers exposure to large- and mid-cap U.S. stocks that score well on ESG metrics. There is little evidence that ESG filters have a significant impact on performance, but this socially conscious fund offers a growth-oriented, broadly diversified portfolio with many of the same advantages as a traditional index fund. The fund's low expense ratio of 0.15% should give it an enduring edge over its peers in the large-blend Morningstar Category.

This fund seeks to replicate the MSCI USA ESG Focus Index, which starts with stocks from the MSCI USA Index and targets companies with high ESG ratings. This fund excludes the stocks of firms involved in the production of tobacco or controversial weapons and/or those tangled up in severe business controversies. The fund's benchmark index leverages MSCI's ESG research and ratings to tilt its holdings toward those names with the highest ESG scores. The optimization process seeks to limit tracking error versus the MSCI USA Index to 0.5% per year and keeps individual security and sector weightings in line with the MSCI USA Index. This process eliminates some well-known stocks such as Wells Fargo, Chevron, and Philip Morris, but the fund's constraints should limit the sort of persistent sector bets that drive the returns of most ESG funds.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Diane Hsiung	12-2016	Jennifer Hsui	12-2016
Greg Savage	12-2016	Alan Mason	12-2016

#### Oppenheimer Large Cap Revenue ETF, by Alex Bryan

Asset Class	Category	Availability	Comments
U.S. Equity	Large Value	ETF	Unique Process/Strategy

This is an index-based strategy that invests in the same stocks at the S&P 500 but weights them by revenue over the past year rather than by market capitalization. This causes the fund to give an overweighting to stocks trading at low multiples of sales, pulling it into the large-value Morningstar Category. When it rebalances each quarter, the fund increases its exposure to stocks that have become cheaper relative to their sales and trims positions in names that have become more expensive. This contrarian rebalancing strategy should help the fund profit from mean reversion in valuations. However, it could also increase the fund's exposure to stocks with deteriorating fundamentals because market prices are faster to pick that up than backward-looking sales data. Revenue weighting also skews the portfolio toward firms with lower margins, including many consumer cyclical and defensive stocks. So far, this strategy has worked well. From its inception in February 2008 through December 2017, the fund outpaced the Russell 1000 Value Index by 1.4 percentage points annually with comparable volatility. While the fund's 0.39% expense ratio is in the ballpark of other fundamentally weighted strategies, Schwab Fundamental US Large Company Index offers similar exposure for less (0.25%).

Portfolio Manager(s)Start DatePortfolio Manager(s)Start DateFrank Vallario8-2017Sean Reichart9-2014

#### **★ Principal Blue Chip,** by Tony Thomas

Asset Class	Category	Availability	Comments
U.S. Equity	Large Growth	Mutual Fund, Separate Account	New Fund/Experienced Manager

This fund employs the same process that lead manager Bill Nolin has executed to near-perfection on Silver-rated Principal MidCap since late 2000. Here, however, he focuses on the large-cap universe — and unlike MidCap, which closed to most new investors in 2013, this fund has been open since its launch in June 2012. It has quickly gathered \$2.5 billion in assets. Nolin and his eight-person research team put firms' management teams under the microscope. They prefer owner-operator businesses (or executives with ownerlike mentalities) because Nolin believes that such leaders tend to take a long-term view and allocate capital prudently. When the team finds good management teams with sustainable competitive advantages, it invests with conviction, building a portfolio of 40-70 names with a three- to five-year investment horizon. Many holdings have been (or still are) components of the mid-cap portfolio and have been followed by the team for years, including Brookfield Asset Management and O'Reilly. The fund's 16.5% annualized total return since inception slightly trails its Russell 1000 Growth benchmark, but the fund hasn't yet experienced the bear markets that helped to distinguish its MidCap sibling, as investors gravitated toward well-run businesses.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
William Nolin	6-2012	Thomas Rozycki	12-2012

#### SPDR SSGA Gender Diversity ETF, by Alex Bryan

Asset Class	Category	Availability	Comments
U.S. Equity	Large Blend	ETF	Unique Process/Strategy

This is a socially conscious fund that take takes aim at the persistent underrepresentation of women in corporate leadership ranks. Its index ranks the 1,000 largest U.S. stocks on three ratios that measure the number of women to men in executive and board roles and targets those with the highest scores representing 10% of the collective market capitalization in each sector. Qualifying companies must also have at least one female CEO, chairperson, or member of the board of directors. Stocks that make the cut are weighted by market capitalization. Despite its focus on a narrow sliver of the market, this portfolio is fairly well diversified. It falls squarely in large-blend territory, though it has a smaller market-cap orientation than the Russell 1000 Index. From the fund's March 2016 inception through December 2017, it has only exhibited moderate tracking error against that index, despite its high active share. However, it lagged that benchmark by 3.4% annualized over that short period. Even if the fund does not beat the market, it can still offer an attractive way for investors who care about gender diversity in corporate leadership to express that preference. The fund charges a reasonable 0.20% annual fee and

donates a portion of that revenue to SHE Impacts, a donor-advised fund that supports charitable organizations that prepare girls to become future business leaders.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Lynn Blake	3-2016	Amy Cheng	10-2016
Melissa Kapitulik	3-2016		

#### T. Rowe Price QM US Small & Mid-Cap Core Equity, by Greg Carlson

Asset Class	Category	Availability	Comments
U.S. Equity	Mid-Cap Blend	Mutual Fund	Under-the-Radar Manager

This fund just launched in early 2016, but it comes with a strong pedigree—it is managed by the same team and uses many of the same quantitative stock-picking models as T. Rowe Price QM U.S. Small-Cap Growth Equity (which earns a Morningstar Analyst Rating of Silver). That fund has been run by the team's leader, Sudhir Nanda, since 2006. In June 2017, Nanda, along with two other team members, took the reins of this fund from another member of the team, Boyko Atanassov (who is focusing on quant research for the team), but the process hasn't changed. The quant models rank stocks on valuation (price/cash flow is a preferred metric for the team), earnings quality (the models look in part for excessive accruals, which can signal inflated earnings), and price momentum (which gets the least emphasis). Unlike many quant strategies, this one has a long-term focus (portfolio turnover at T. Rowe Price QM U.S. Small-Cap Growth Equity has been in the teens and was 11% in this fund's first fiscal year). Management also limits stock-specific risk, so this fund recently held 345 stocks, and its top holding comprised just 0.6% of assets. Sector bets are also minimized versus the fund's benchmark, the Russell 2500 Index. Finally, although this fund is quite small, it already sports a below-average expense ratio of 0.8%.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Vinit Agrawal	6-2017	Sudhir Nanda	6-2017
Prashant Jeyaganesh	6-2017		

#### Tributary Small Company, by Greg Carlson

Asset Class	Category	Availability	Comments
U.S. Equity	Small Blend	Mutual Fund	Under-the-Radar Manager

This fund boasts a veteran lead manager and a strong record. Mark Wynegar, who has managed the fund since 1999, is backed by a team of five that includes comanager Michael Johnson (who joined the team 13 years ago and has been in his current role since 2007). The team generally looks for good businesses at a fair price; it is a Warren Buffett-like take on value investing (rather than deep value) that includes fairly long holding periods: Portfolio turnover has typically ranged from 20% to 35%. The team aims for above-average returns with below-average risk and diversifies the portfolio across 60-70 stocks. The fund tends to gain its biggest edge over its small-blend Morningstar Category peers and Russell 2000 Index benchmark in sideways and down markets while often lagging in big rallies led by economically sensitive fare (as it did in 2013). Fees are essentially average: The Institutional share class has a minimum investment of just \$1,000, and its expense ratio is slightly above the median for no-load small-cap funds (the most appropriate comparison group). The fund has surpassed 54% of its peers on total return and 76% of peers and the index on a risk-adjusted basis during Wynegar's tenure. The managers run a total of \$1.4 billion in the strategy and expect to close it to new investors when it hits \$1.5 billion.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Mark Wynegar	5-1999	Michael Johnson	11-2007

#### **International Equity**

#### American Beacon SGA Global Growth, by George Georgiev

Asset Class	Category	Availability	Comments
International Equity	World Stock	Mutual Fund	New Fund/Experienced Manager

This world large-stock fund has \$42 million in assets and focuses on stocks that deliver strong long-term risk-adjusted returns. Comanagers George Fraise, Gordon Marchand, and Rob Rohn invest in established large-cap firms with what subadvisor Sustainable Growth Advisers calls strong levels of cash flow available to shareholders—a conservative variant of free cash flow. The fund has a relatively concentrated portfolio; the top 10 holdings comprise roughly a third of its assets. The three managers have overseen this fund since its inception in 2010, and two of the three have more than \$1 million invested in the strategy. The team deploys similar stock-picking techniques at Bronze-rated John Hancock U.S. Global Leaders Growth (which focuses on U.S. stocks), which SGA subadvises.

Fraise, Marchand, and Rohn have an average of 33 years of industry experience and also have a succession plan in place. The three are currently in their 50s and 60s and plan to have the current three senior research principals (Tucker Brown, Alexandra Lee, and Kishore Rao) serve as SGA's next generation of leadership. SGA requires all employees to sell their equity stake back to the firm during a five-year period beginning when they turn 65.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
George Fraise	12-2010	Robert Rohn	12-2010
Gordon Marchand	12-2010		

#### **★ AQR Global Equity**, by Patricia Oey

Asset Class	Category	Availability	Comments
International Equity	World Stock	Mutual Fund, CIT	Unique Process/Strategy

AQR has created a systematic and unique approach to global equity investing, as it selects stocks and determines country weightings and currency exposure separately. For stock selection, the managers use a quantitative model to rank stocks from each country in the MSCI World Index using well-established factors (such as value and momentum) and more proprietary ones (such as those that seek to quantify investor sentiment). The portfolio will tilt toward highly rated companies. Then the managers use two macroeconomic-focused models to determine which countries and currencies to give an overweighting or underweighting to or even short. The fund holds stocks and uses derivatives for its country and

currency bets. Historically, the fund has had a large-cap focus with a slight value tilt. Over the trailing three and five years through 2017, the fund generated top-quartile risk-adjusted returns within the world large-stock Morningstar Category.

Listed managers include Cliff Asness, AQR's founder, and Jacques Friedman, head of the global stock-selection team. But, as with most AQR funds, a large team of highly credentialed individuals works together to design and monitor the process and manage the portfolio.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Clifford Asness	12-2009	John Liew	12-2009
Ronen Israel	12-2009	Oktay Kurbanov	12-2009
Jacques Friedman	3-2016	Michael Katz	3-2016

#### **★ AQR International Equity**, by Patricia Oey

Asset Class	Category	Availability	Comments
International Equity	World Stock	Mutual Fund, CIT	Unique Process/Strategy

AQR has created a systematic and unique approach to international-equity investing, as it selects stocks and determines country weightings and currency exposure separately. For stock selection, the managers use a quantitative model to rank stocks from each country in the MSCI World Index using well-established factors (such as value and momentum) and more proprietary ones (such as those that seek to quantify investor sentiment). The portfolio will tilt toward highly rated companies. Then the managers use two macroeconomic-focused models to determine which countries and currencies to give an overweighting or underweighting to or even short. The fund holds stocks and uses derivatives for its country and currency bets. Historically, the fund has had a large-cap focus with a slight value tilt. Over the trailing three and five years through 2017, the fund generated above-average risk-adjusted returns within the foreign large-blend Morningstar Category.

Listed managers include Cliff Asness, AQR's founder, and Jacques Friedman, head of the global stock-selection team. But, as with most AQR funds, a large team of highly credentialed individuals works together to design and monitor the process and manage the portfolio.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Clifford Asness	8-2009	John Liew	8-2009
Ronen Israel	8-2009	Oktay Kurbanov	8-2009
Jacques Friedman	3-2016	Michael Katz	3-2016

#### **★ Baird Chautauqua International Growth**, by Greg Carlson

Asset Class	Category	Availability	Comments
International Equity	Foreign Large Growth	Mutual Fund, Separate Account	Under the Radar Manager

This strategy's lead manager and investment approach have persisted through multiple corporate changes since the strategy's 2006 launch. Brian Beitner worked under noted growth investor Glen Bickerstaff at TCW Group and launched this vehicle while still at the firm. In 2009, he took the record with him and founded Chautauqua Capital Management; the firm was acquired by Baird in 2016 but is still run autonomously.

Beitner, now backed by a team of five that includes two former TCW colleagues, continues to seek companies with sustainable competitive advantages that can benefit from long-term trends. Expect volatility here—the portfolio is concentrated with just 30-40 stocks, and Beitner doesn't mind paying up for firms with his preferred characteristics. Indeed, the strategy's Morningstar Risk Rating is High over the trailing three, five, and 10 years through December 2017. However, investors have been well-compensated for that risk: The strategy topped more than 90% of foreign large-growth mutual funds over its 12-year history on both total and risk-adjusted returns. It is also still quite nimble, with just \$520 million in assets between the separately managed account and a mutual fund (Chautauqua International Growth) launched in 2016.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Brian Beitner	1-2006		

#### BBH Global Core Select, by David Kathman

Asset Class	Category	Availability	Comments
International Equity	World Stock	Mutual Fund, Separate Account	New Fund/Experienced Manager

BBH Global Core Select is a more geographically diverse version of the \$2.6 billion-in-assets, Silver-rated BBH Core Select. Tim Hartch is the lead manager of both funds, but here his comanager is Regina Lombardi rather than Michael Keller; both Lombardi and Keller serve as sector-focused analysts on Hartch's team, which each has been a part of since 2005. The basic process here is the same as at BBH Core Select: The managers look for companies with strong balance sheets, strong free cash flows and ROIC, and share prices at least 25% below the managers' estimates of the firms' intrinsic values. But whereas BBH Core Select typically invests less than 20% of its portfolio in non-U.S. stocks (primarily big

multinationals such as Diageo and Nestle), at least 40% of this fund is invested in non-U.S. stocks, including smaller firms such as German chemical firm Fuchs Petrolub and British industrial firm Aggreko. Like BBH Core Select, this fund is fairly concentrated, with 30 stock holdings as of Nov. 30, 2017. Its performance has not been particularly impressive since its March 2013 inception, but BBH Core Select has also underperformed during that period despite its strong long-term record. Hartch has more than \$1 million invested in this fund, and Lombardi has \$500,001 to \$1 million invested.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Timothy E. Hartch	3-2013	Regina K. Lombardi	3-2013

#### ¥ Fidelity International Sustainability Index, by Dan Sotiroff

Asset Class	Category	Availability	Comments
International Equity	Foreign Large Blend	Mutual Fund	Unique Process/Strategy

Fidelity International Sustainability Index tracks the MSCI ACWI Ex USA ESG Leaders Index. The benchmark is derived from screening a market-cap-weighted index of foreign stocks, the MSCI ACWI Ex USA Index, for companies that score high on a number of ESG-related metrics. Businesses related to alcohol, tobacco, gambling, weapons, and nuclear power are excluded. The remaining companies are ranked by a composite ESG score developed by MSCI. The index includes those that rank highest until it captures 50% of the total market capitalization of the parent universe. These selection criteria may not result in superior performance because there is no direct screen for characteristics associated with market-beating returns, such as value, momentum, or profitability. As a result, it is not tilted toward any of these styles and lands in the foreign large-blend Morningstar Category. The fund's expense ratio is 0.25%, but index-tracking alternatives are available for a bit less. The fund was launched in May 2017 and has not had the opportunity to accumulate a substantial track record. Its total and risk-adjusted returns have managed to beat about 67% of its category peers through November 2017. But its benchmark index has a longer history, dating back to October 2007. Since then, this bogy's risk-adjusted performance has been in line with the category average through November 2017.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Louis Bottari	5-2017	Thomas Brussard	5-2017
Dean Gyllenhaal	5-2017	Peter Matthew	5-2017
Robert Regan	5-2017	Patrick Waddell	5-2017

#### GOG Emerging Markets, by Gregg Wolper

Asset Class	Category	Availability	Comments
International Equity	Diversified Emerging Markets	Mutual Fund	New Fund/Experienced Manager

Rajiv Jain, this fund's manager, left his previous employer, Vontobel, in March 2016 after accumulating an impressive record at several funds, including Virtus Emerging Markets Opportunities, for which Vontobel is the subadvisor. Jain started his own firm, GQG Partners (which stands for Global Quality Growth) and launched this fund in late December 2016. None of Jain's analysts at Vontobel followed him to GQG Partners; rather, he built a new, compact analyst team, all based in GQG's headquarters in Fort Lauderdale, Florida. Jain says this fund has the same strategy as his previous charge, which means it will typically be packed with steady growers that dominate a niche or a market, and country and sector weightings may differ greatly from those of indexes or other emerging-markets funds. And that's been the case thus far. While at Vontobel, Jain's funds usually held up much better than peers when markets declined. He typically had heavy overweightings in the consumer goods sector and in India, but he has cut both sharply in this portfolio, arguing that many of the consumer goods stalwarts he once liked now post meager growth rates and became overpriced because investors were attracted to their dividends. Jain expresses a commitment to keeping the expense ratio below median and says he will close this fund to new investors when the fund and related institutional accounts reach \$10 billion in assets.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Rajiv Jain	12-2016		

#### Manning & Napier Rainier International Discovery, by William Samuel Rocco

Asset Class	Category	Availability	Comments
International Equity	Foreign Small/Mid Growth	Mutual Fund, Separate Account, CIT	New Fund/Experienced Manager

This strategy, which is available in three mutual fund share classes, as well as a separately managed account and a collective investment trust, has an experienced and talented skipper at the helm. Henrik Strabo, who serves as the head of international investments at Rainier Investment Management and as the manager of this strategy, has more than three decades of foreign-equity experience. He did a good job earlier in his career as the international CIO at American Century Investments and as a manager on that firm's foreign small/mid-growth fund. Strabo, who is supported by two analysts, favors strong growers that have superior competitive positions, strong financials, and good corporate governance, as

well as attractive valuations. He readily invests in emerging-markets stocks that meet his standards, but he also focuses further up the market-cap ladder than many of his foreign small/mid-growth peers and pays ample attention to risk controls. Strabo has led the mutual fund to superior total and risk-adjusted returns from its March 2012 opening through December 2017. The expense ratios on the three share classes of the mutual fund aren't too bad, given that there is only around \$670 million in the strategy. Finally, Manning & Napier's 2016 acquisition of a majority share in Rainier has not had any impact on the day-to-day management of the strategy.

Portfolio Manager(s) Start Date Portfolio Manager(s) Start Date

Henrik Strabo 3-2012

#### Mondrian International Equity, by Gregg Wolper

Asset Class	Category	Availability	Comments
International Equity	Foreign Large Value	Mutual Fund	Under-the-Radar Manager

Mondrian International Equity is an intriguing choice that has a long history and experienced managers. It was known as Delaware Pooled Trust International Equity until March 2016, but the same group is still running the portfolio using the same cautious strategy. The managers place a lot of emphasis on defense, hoping to minimize the damage when markets fall and accepting the trade-off that the fund won't perform as well as the market during rallies. These managers place more emphasis on macroeconomic forecasting when making investment decisions than most international-fund managers—or perhaps they're just more willing to state that fact. They estimate that about 40% of their decision-making is macro-based, while the other 60% is company-specific. They don't invest much in companies domiciled in emerging markets (that stake typically hovers around 5% of assets or less), and they hedge currencies against the U.S. dollar only when they consider a currency to be extremely overor undervalued based on its history and other factors. This approach has allowed the fund to top the foreign large-value Morningstar Category average for the trailing 10-year period, with lower volatility than the average fund in that group. The fund's turnover is typically well below the category average.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Elizabeth A. Desmond	10-1999	Nigel A. Bliss	11-2014
Melissa J.A. Platt	2-2012		

#### Morgan Stanley Inst Global Opportunities, by Christopher Franz

Asset Class	Category	Availability	Comments
International Equity	World Stock	Mutual Fund	Under-the-Radar Manager

This fund employs a bold, focused approach to global investing. Kristian Heugh, who joined Morgan Stanley in 2001 and trained under veteran Morgan Stanley growth manager Dennis Lynch, has managed the fund since its May 2008 inception. He leads a team of four investors based in Hong Kong, seeks to buy the highest-quality growth companies across the globe, and invests with high conviction--he usually packs more than half of the fund's assets in the top 10 positions and tends to own 35-50 stocks. Key to Heugh's process is determining a company's sustainable competitive advantage and how that can be monetized. While the fund has sizable exposure to U.S. stalwarts such as Facebook and Amazon.com (two of the fund's top holdings as of September 2017), it also delves into private companies such as Uber and Airbnb. Heugh leverages the experience of his analysts, all of whom are fluent in local Chinese languages, to uncover firms such as TAL Education Group, a Chinese company that offers math and science tutoring services in mainland China and was a top contributor to performance in 2017. Heugh's concentration and approach have resulted in well-above-average volatility thus far but have been beneficial for investors. From its May 2008 inception through December 2017, the fund trounced the MSCI All Country World Index and the typical fund in the world large-stock Morningstar Category.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Kristian Heugh	5-2008		

#### Neuberger Berman Emerging Markets Equity, by Greg Carlson

Asset Class	Category	Availability	Comments
International Equity	Diversified Emerging Markets	Mutual Fund	Under-the-Radar Manager

This emerging-markets fund has a mix of bolder and more cautious traits compared with its typical peer and its MSCI Emerging Markets benchmark. Conrad Saldanha, who has run the fund since its October 2008 inception, seeks companies that have relatively solid balance sheets yet are still able to generate above-average returns on equity. Given that tilt toward sturdier fare, it is rather counterintuitive that the fund owns a bigger stake in small-cap and mid-cap stocks than the category norm and the index. Thus far, the results have been impressive—the fund has edged the benchmark and beaten the majority of its peers on total return, while its risk-adjusted returns (as measured by Sharpe ratio) are topnotch. That said, it remains to be seen how it will fare in an extended downturn. Fees are slightly above average

here, but the fund's asset base is fairly modest in size. Saldanha is backed by an experienced team of four as well as a larger global equity team.

Portfolio Manager(s) Start Date Portfolio Manager(s) Start Date

Conrad Saldanha 10-2008

#### Polaris Global Value, by Gregg Wolper

Asset Class	Category	Availability	Comments
International Equity	Foreign Large Value	Mutual Fund	Under-the-Radar Manager

Polaris Global Value's portfolio isn't likely to look familiar to investors. Lead manager Bernard Horn Jr., who has been in charge since the fund's 1998 inception and ran it as a private account for years before that, uses an all-cap, very low-turnover, contrarian strategy that sets it apart. The fund stands out in many ways: It has meaningful stakes in every slice of the market-cap spectrum (giant, large, mid, small, and micro); it has much more exposure to the small Nordic markets than most world-stock funds; and its turnover rates — often in single digits, despite rising to 33% in 2016 — demonstrate an uncommon level of patience. The fund's performance has been strong overall, although it suffered through a woeful stretch in the 2007-09 financial crisis when Horn's UK homebuilders crashed (he held on to them, and the fund subsequently reaped the benefits) and other stocks hit turbulence. The fund's expense ratio used to be steep, but a fee cap imposed several years ago addressed that issue (though it has to be renewed regularly). When the fund's holdings are out of favor, Horn, who invests more than \$1 million of his own money here, isn't likely to dump them, which means that, in order to be happy here, shareholders require the same level of patience that he demonstrates.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Bernard R. Horn Jr.	6-1998	Bin Xiao	12-2012
Sumanta Biswas	12-2012		

#### ★ Prudential Jennison Global Opportunities, by Robby Greengold

Asset Class	Category	Availability	Comments
International Equity	World Large Stock	Mutual Fund, Separate Account	Under-the-Radar Manager

Renowned growth-equity shop Jennison Associates hired Mark Baribeau and Tom Davis in 2011 to run its first world-stock strategy. The managers, previously of Loomis Sayles, scour the globe for market-leading businesses with high growth rates and healthy balance sheets. Baribeau and Davis gauge companies' long-term growth prospects by conducting deep research and evaluation of their competitive advantages. To become one of the fund's 35-45 portfolio investments, a company should benefit from valuable intellectual property, economies of scale, or network effects and should be trading at a price that doesn't fully reflect the growth anticipated by the managers.

The management duo is helped by two long-tenured fundamental research analysts dedicated to the strategy (both of whom had also worked at Loomis Sayles) and 13 global growth sector specialists. This portfolio is no benchmark-hugger. Over the past five years, tech and consumer discretionary stocks have been heavily favored: Those two sectors comprised more than two thirds of the portfolio as of November 2017, much more than the index's 30% stake. From its March 2012 inception through November, the fund's 14.1% annualized gain trounced the MSCI All Country World Index by 4.3 percentage points and beat 98% of its world-stock Morningstar Category peers.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Mark Baribeau	3-2012	Thomas Davis	3-2012

#### WCM Focused International Growth, by William Samuel Rocco

Asset Class	Category	Availability	Comments
International Equity	Foreign Large Growth	Mutual Fund	New Fund/Experienced Manager

This strategy has several factors in its favor. Comanagers Michael Trigg, Peter Hunkel, Paul Black, and Kurt Winrich are seasoned and skilled, and they have a solid support team. The managers take a sound and exacting approach to investing in large caps abroad. They insist that all of their picks have durable and growing competitive advantages, superior corporate cultures, enduring tailwinds such as favorable demographic trends, and other positive attributes. They focus on 30 to 35 stocks and move at a measured pace. The aggregate portfolio is therefore quite distinctive, with high net margins, superior returns on equity, assets, and invested capital, and atypical geographic and sector positioning. What's

more, because of the managers' quality bias and security selection, the strategy has generally held up very well in downturns and incurred relatively limited volatility overall. Although it has lagged in certain rallies, the strategy has outperformed in others, and this mutual fund (which opened in mid-2011) and a similarly managed separate account (which opened in late 2004) have handily outgained their typical foreign large-growth rival and the MSCI ACWI ex USA Index on both a total return and risk-adjusted basis since their inceptions. And the expense ratios of both share classes of the mutual fund have declined considerably, though they remain significantly pricier than average.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Paul Russell Black	5-2011	Michael B. Trigg	5-2011
Peter J. Hunkel	5-2011	Kurt R. Winrich	5-2011

#### **Taxable Bond**

#### Bridge Builder Core Bond, by Sarah Bush

Asset Class	Category	Availability	Comments
Taxable Bond	Intermediate-Term Bond	Mutual Fund, UCITS	Under-the-Radar Manager

Available to investors only through Edward Jones Advisory Solutions, this young fund, which was launched in October 2013, has quickly built an impressive asset base. The fund is subadvised by four fixed-income managers: Baird, J.P. Morgan, Loomis Sayles, and Prudential Investment Management. Loomis Sayles was added as a subadvisor in July 2015; the other three managers have been subadvisors since inception. Unlike some of its competitors in the intermediate-term bond category that venture into junk-rated bonds, the fund's subadvisors focus on investment-grade securities. Bonds rated BBB or higher accounted for 97% of assets as of Sept. 30, 2017. The fund's performance record is relatively short, but it fared well relative to its category peers in both 2014 and 2015 and has topped its Bloomberg Barclays U.S. Aggregate Bond Index benchmark from its late-2013 inception through Nov. 30, 2017. With a 17-basis-point expense ratio, the fund is attractively priced, thanks in part to a fee waiver that is in place at least through late October 2018.

Portfolio Manager(s)	Start Date
Charles B. Groeschell	10-2013
Richard Piccirillo	10-2013
Warren D. Pierson	10-2013
Jay E. Schwister	10-2013
Peter D. Simons	10-2013
Mary Ellen Stanek	10-2013

Portfolio Manager(s)	Start Date
M. Sharon deGuzman	10-2013
Michael J. Collins	3-2014
Gregory Peters	3-2014
Lynne A. Royer	7-2015
Barbara E. Miller	9-2015

#### Goldman Sachs Access Investment Grade Corp Bond ETF, by Phillip Yoo

Asset Class	Category	Availability	Comments
Taxable Bond	Corporate Bond	ETF	Unique Process/Strategy

This fund offers broad exposure to the U.S. investment-grade corporate-bond market, while excluding some of the least attractive issuers. It tracks the Citi Goldman Sachs Investment Grade Corporate Bond Index. This index groups issuers into three broad industry groups: financials, industrials, and utilities. It then ranks them on operating margin and leverage and excludes the issuers representing the lowest ranking 10% of each group by market value. It includes the remaining 90% and weights them by market capitalization. This approach should modestly cut the fund's downside risk by helping it avoid the riskiest

issuers in the investment-grade market, but it shouldn't have a big impact on performance. The fund's 0.14% fee is slightly higher than the lowest-cost options in the category.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Joshua Kruk	6-2017	Jason Singer	6-2017

#### NuShares Enhanced Yield U.S. Aggregate Bond ETF, by Phillip Yoo

Asset Class	Category	Availability	Comments
Taxable Bond	Intermediate-Term Bond	ETF	Unique Process/Strategy

This fund attempts to boost returns by reweighting the components of the BofA Merrill Lynch US Broad Market Index. It tracks the BofA Merrill Lynch Enhanced Yield US Broad Bond Index, which partitions the investment universe into 38 buckets based on asset class, sector, credit quality, and maturity. The index then reweights these market segments to maximize yield, subject to some constraints to mitigate risk. These include limiting the portfolio's duration and sector tilts relative to the selection universe, as well as limiting turnover. Not surprisingly, the fund tends to take more credit risk than its parent benchmark. At the end of September 2017, the fund allocated 41% of its assets to securitized debt, 34% to corporate debt, and only 20% to Treasury bonds. The strategy's 0.20% fee is low relative to the category but higher than the cheapest market-cap-weighted alternatives.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Jayesh D. Bhansali	9-2016	Lijun (Kevin) Chen	9-2016

#### TCW Emerging Markets Local Currency Income, by Karin Anderson

Asset Class	Category	Availability	Comments
Taxable Bond	Emerging Markets Bond	Mutual Fund	New Fund/Experienced Manager

This fund, which launched in December 2010, is an intriguing option for exposure to this slice of the emerging-markets bond universe. Emerging-markets bonds denominated in local currency experienced a very rough stretch from 2013 through 2015, but veteran managers Penny Foley and David Robbins have done a good job steering this fund through the sector's tough market conditions and volatile flow patterns. They have successfully run TCW Emerging Markets Income, which can hold up to 30% in local-currency debt (in addition to hard-currency sovereigns and corporates), since 2009 and use the same playbook here in considering country and currency fundamentals, as well as relative valuations. At times, the fund makes significant country and currency bets versus the JPM GBI-EM Global Diversified Index, but overall it remains well-diversified across countries and issuers. The approach has kept this

fund in better shape than most peers and the index since its 2010 inception, and the managers' extensive experience in evaluating and trading emerging-markets bonds, plus the expertise of their analysts, bode well for the fund's future. Not-so-attractive fees are a downside, though, with institutional and no-load investors paying above-average or average fees compared with similarly sold funds.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Penny Foley	12-2010	David Robbins	12-2010

#### Vanguard Core Bond, by Sarah Bush

Asset Class	Category	Availability	Comments				
Taxable Bond	Intermediate-Term Bond	Mutual Fund, ETF	New Fund/Experienced Manager				

Launched in March 2016, this fund has quickly gathered assets. Like its actively managed Vanguard fixed-income siblings, it follows a straightforward, benchmark-conscious approach to investing. The fund is run against the Bloomberg Barclays U.S. Aggregate Bond Index and is designed as a high-quality, core fixed-income offering with below-investment-grade debt (including not-rated names) limited to 5% of the portfolio. Within these limitations, it does have the flexibility to make modest interest-rate bets and adjust its sector weightings relative to the index. The team here includes Gregory Nassour, who coheads the firm's investment-grade credit group; Gemma Wright-Casparius, who heads up its Treasury and inflation-protected group; and Brian Quigley, a 13-year Vanguard veteran. Perhaps the fund's most notable feature is its rock-bottom expense ratio, which stands at 25 basis points for its Investor share class and gives it an impressive head start over the competition.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Gregory S. Nassour	3-2016	Gemma Wright-Casparius	3-2016
Brian W. Quigley	3-2016		

#### Western Asset Corporate Bond, by Miriam Sjoblom

Asset Class	Category	Availability	Comments
Taxable Bond	Intermediate-Term Bond	Mutual Fund, ETF	New Fund/Experienced Manager

With less than half a billion dollars in assets, Western Asset Corporate Bond represents a mere fraction of the nearly \$100 billion in investment-grade corporate mandates run by Pasadena, California-based fixed-income giant Western Asset Management. The fund struggled during the financial crisis under

different leadership, but since Ryan Brist took the reins in early 2010, it has delivered strong results in markets both friendly and hostile toward credit risk. Brist, who is currently Western Asset's head of global investment-grade credit, was already an experienced corporate-bond investor when he joined the firm in 2009, having overseen credit portfolios for years at Delaware Investment Advisors and Logan Circle Partners. In addition to his exemplary long-term record on this fund, his calls have contributed to the success of the firm's diversified offerings, such as Western Asset Core Plus Bond, in recent years. With the flexibility to invest up to 20% in high-yield corporates—Brist is particularly fond of so-called crossover credits on the border between investment-grade and high-yield—the fund's portfolio may appear more intrepid than some of its more-cautious peers at times, with the performance swings to match. Overall, though, Brist's determination to avoid credits headed for trouble has paid off here, making this fund an intriguing choice for corporate-bond exposure.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Ryan Brist	4-2010	Kenneth Leech	3-2014
Michael Buchanan	10-2012		

#### X-trackers USD High Yield Corporate Bond, by Phillip Yoo

Asset Class	Category	Availability	Comments				
Taxable Bond	High Yield Bond	ETF	New Fund/Experienced Manager				

This is one of the cheapest high-yield bond index funds available. It tracks the Solactive USD High Yield Corporates Total Market Index, which provides market-cap-weighted exposure to U.S.-dollar-denominated high-yield bonds with between one and 15 years until maturity. Eligible bonds must be issued by companies domiciled in developed markets, though U.S.-based issuers make up the bulk of the portfolio. Roughly half of the portfolio is currently allocated to BB rated securities, while B rated bonds comprise an additional 36% of the portfolio. The high-yield bond market is notoriously difficult to index. Index funds, like this one, must restrict their holdings to the most liquid bonds in the market, which may not be the most attractively valued. While good active management of credit and liquidity risk has a good chance to pay off in this market segment, the fund's low 0.20% fee makes it a tempting option. The fund was launched in December 2016 and has not yet established a meaningful record.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Bryan Richards	12-2016	Tanuj Dora	12-2016
Brandon Matsui	12-2016	Alexander Bridgeforth	12-2016

#### **Municipal Bond**

#### Baird Core Intermediate Municipal Bond, by Emory Zink

Asset Class	Category	Availability	Comments
Municipal Bond	Muni National Intermediate	Mutual Fund	New Fund/Experienced Manager

In August 2015, Baird Advisors welcomed Duane McAllister and two members of his municipal team to its roster of fixed-income investment personnel. Prior to joining Baird, McAllister served as a managing director at BMO Global Asset Management, where he was the lead portfolio manager for a number of municipal strategies. An emphasis on bottom-up security analysis and vigilant risk management led to enviable performance during his July 2007 to mid-May 2015 tenure on BMO Intermediate Tax-Free Fund, which outperformed all muni national intermediate Morningstar Category peers on both an absolute and risk-adjusted basis, as well as the fund's Bloomberg Barclays Municipal Bond Index. Erik Schleicher and Joseph Czechowicz, who started their careers with McAllister at BMO, accompanied him to Baird, where the team continues to follow its rigorous, security-selection-driven process. Unlike many of the more narrowly focused Baird municipal offerings, this fund may employ greater flexibility, considering all sectors and the full gamut of credit-quality options. McAllister and his team haven't missed a step here: From the fund's inception in September 2015 through December 2017, annualized returns outpaced its Bloomberg Barclays 1-15 Year Municipal Index by 95 basis points while landing in the top quartile of the category. Risk-adjusted returns in the same period appear even more compelling, landing in the category's top decile.

Portfolio Manager(s)	Start Date	Portfolio Manager(s)	Start Date
Duane A. McAllister	8-2015	Erik R. Schleicher	8-2015
Joe J. Czechowicz	8-2015		

## Morningstar Prospects Graduates

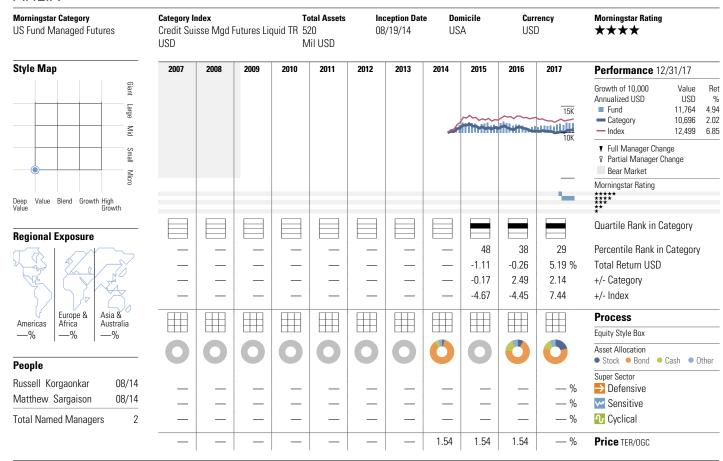
		Morningstar Analyst Rating  Positive  Neutral  Negr			<ul> <li>Negative</li> </ul>	2	Total Return %						
A ( O ( O ) ( O )	Tiele		D1-	0	D	D - (	D :	- D-1' D-1-	4.1/-	1-Yr Cat			Morningsta
Asset Class / Category / Strategy Name	Ticker	Overall	People	Process	Parent	Performance	Price	Rating Date	1-Yr	Rank	3-Yr	напк	★ Rating
<mark>Alternative</mark> Long/Short													
AQR Long-Short Equity I	QLEIX	₩ Bronze	0	0	0	0	0	8/16/17	15.73	28	14.59	1	****
Boston Partners Global Long/Short Instl	BGLSX	🐺 Bronze	0	0	0	0	0	9/19/17	7.55	72	5.46	36	****
Schwab Hedged Equity	SWHEX	🐺 Bronze	0	0	0	0	0	12/29/17	7.77	70	6.84	23	****
Managed Futures													
Abbey Capital Futures Strategy I	ABYIX	Bronze	0	0	0	0	0	9/14/17	-0.09	67	0.02	47	***
American Beacon AHL Mgd Futs Strat Instl	AHLIX	🐺 Bronze	0	0	0	<b>O</b>	•	12/21/17	5.19	29	1.23	34	****
Credit Suisse Managed Futs Strat I	CSAIX	🐺 Bronze	0	0	0	<b>O</b>	0	11/14/17	-1.47	81	1.84	28	****
LoCorr Market Trend I	LOTIX	Neutral	0	0	•	0	0	3/31/17	3.84	37	-0.14	48	***
Market													
AC Alternatives Market * Val A	ACVQX	Bronze	0	0	0	0	0	9/13/17	1.45	65	2.66	24	****
Arbitrage Event-Driven I	AEDNX	Neutral	0	0	0	0	0	3/21/17	3.90	44	0.23	61	***
Multialternative													
AQR Style Premia Alternative I	QSPIX	<b></b> Silver	0	0	0	0	0	12/11/17	12.04	9	6.64	2	****
Blackstone Alternative Multi-Strategy I	BXMIX	Neutral	0	0	0	0	0	4/4/17	7.19	25	4.00	11	****
Dreyfus Dynamic Total Return I	AVGRX	Neutral	0	0	0	0	0	10/12/17	7.70	21	2.52	38	****
Dreyfus Global Real Return I	DRRIX	😈 Silver	•	0	0	<b>O</b>	0	9/14/17	4.29	58	2.31	41	****
GMO SGM Major Markets III	GSMFX	₩ Bronze	0	0	0	0	•	9/29/17	3.89	63	2.76	32	****
Goldman Sachs Multi-Manager Alts Instl	GSMMX	Neutral	0	0	0	0	0	12/27/17	0.00	86	-0.07	84	**
William Blair Macro Allocation Instl	WMCJX	₿ Bronze	0	0	0	0	0	2/23/17	5.51	41	0.56	70	**
Option Writing													
LJM Preservation and Growth I	LJMIX	Neutral	0	0	0	0	•	7/13/17	9.45	52	11.62	1	****
Allocation													
World Allocation													
JPMorgan Global Allocation I	GAOSX	₩ Bronze	0	0	0	0	0	9/6/17	17.11	23	7.11	15	****
T. Rowe Price Global Allocation	RPGAX	3 Bronze	0	0	0	0	0	9/6/17	17.02	25	7.50	10	***

Morningstar Prospects Graduates (C	ontinued)												
		<b>M</b> orningsta	r Analyst	Rating	• Positiv	e • Neutral	<ul><li>Negative</li></ul>		Total Retu	rn %			
Acces Class (O. Access (Starters Name	Tielee	0	Danala	D	Danas	Dayfarran	Deles	- D-4: D-4-		1-Yr Cat			Morningstar
Asset Class / Category / Strategy Name	Ticker	Overall	People	Process	Parent	Performance	Price	Rating Date	1-Yr	Rank	3-Yr	напк	★ Rating
U.S. Equity Large Blend													
Ave Maria Rising Dividend	AVEDX	□ Bronze	0	0	0	0	0	6/29/17	16.82	86	8.24	82	****
Goldman Sachs ActiveBeta US LgCp Eq ETF	GSLC	🐺 Bronze	0	0	0	0	0	6/28/17	22.49	21	_	_	_
Smead Value Investor	SMVLX	Neutral	0	•	0	0	•	6/5/17	24.97	7	9.43	65	***
Large Growth													
ClearBridge Large Cap Growth A	SBLGX	Bronze	0	0	0	0	0	3/27/17	25.04	68	13.38	19	****
Polen Growth Institutional	POLIX	🐷 Bronze	0	0	0	0	•	5/31/17	26.45	58	13.43	19	***
Large Value													
Poplar Forest Partners Institutional	IPFPX	□ Bronze	0	0	0	0	•	7/14/17	6.80	99	7.90	70	***
Mid-Cap Growth													
Baird MidCap Inst	BMDIX	□ Bronze	0	0	0	0	0	9/27/17	26.88	27	8.84	62	***
Carillon Eagle Mid Cap Growth I	HAGIX	₿ Bronze	0	0	0	0	0	1/11/18	30.35	11	12.69	5	****
Davenport Equity Opportunities	DEOPX	₩ Bronze	0	0	0	0	0	12/22/17	20.79	71	6.84	89	***
Eventide Gilead I	ETILX	Neutral	0	0	0	0	0	3/9/17	33.09	6	9.69	49	****
Madison Mid Cap Y	GTSGX	Neutral	0	0	0	0	0	12/26/17	15.63	94	9.34	54	****
Mid-Cap Value													
Harbor Mid Cap Value Instl	HAMVX	₹ Silver	0	0	0	0	0	7/24/17	11.96	66	7.93	63	****
Small-Blend													
Cardinal Small Cap Value Institutional	CCMSX	₩ Bronze	0	0	0	0	0	3/20/17	13.78	37	10.92	17	***
Mairs & Power Small Cap	MSCFX	<b></b> Silver	0	0	0	0	•	4/20/17	7.64	88	9.30	47	****
Westwood SmallCap Institutional	WHGSX	₩ Bronze	0	0	0	0	0	11/22/17	12.36	53	10.69	20	****
Small-Growth													
Alger Small Cap Focus I	AOFIX	₩ Bronze	0	0	0	0	0	10/27/17	28.93	12	12.44	20	***
Hood River Small-Cap Growth Instl	HRSMX	Neutral	0	0	0	0	0	1/4/18	20.69	52	11.35	29	****
Meridian Small Cap Growth A	MSGAX	🐯 Bronze	0	0	0	0	0	5/22/17	22.60	42	10.99	35	****
Small Value													
Queens Road Small Cap Value	QRSVX	Neutral	0	0	0	0	0	12/29/17	5.86	77	6.92	77	****
International Equity													
Diversified Emerging Markets													
American Funds Dvlpg Wld Gr&Inc A	DWGAX	Neutral	0	0	0	0	0	2/16/17	27.69	80	4.76	87	**
Baron Emerging Markets Institutional	BEXIX	🐯 Bronze	0	0	0	0	0	6/27/17	40.63	19	9.23	34	****
Causeway Emerging Markets Instl	CEMIX	🐺 Bronze	0	0	0	0	0	3/20/17	39.78	23	8.62	46	***
Harding Loevner Frontier Emerg Mkts Inst	HLFMX	Neutral	0	0	0	0	0	2/10/17	25.09	89	1.11	98	***

		Morningsta	r Analyst	Rating	♠ Positiv	ve • Neutral	■ Negative	ve.	Total Retu	ırn %			
						100000	- riogati			1-Yr Cat	3	3-Yr Cat	Morningsta
Asset Class / Category / Strategy Name	Ticker	Overall	People	Process	Parent	Performance	Price	Rating Date	1-Yr	Rank	3-Yr	Rank	★ Rating
Seafarer Overseas Gr and Income Instl	SIGIX	👨 Silver	0	0	0	0	0	3/15/17	26.20	86	9.76	24	****
Foreign Large Blend													
Ariel International Institutional	AINIX	₩ Bronze	0	0	0	0	0	4/6/17	16.70	96	6.59	78	***
MI International	FMIJX	👨 Silver	0	0	0	0	0	4/21/17	15.45	99	9.44	11	****
Foreign Large Growth													
idelity International Growth	FIGFX	₩ Bronze	0	0	0	0	0	3/17/17	29.56	56	9.20	42	***
JOHCM International Select I	JOHIX	🐯 Bronze	0	0	0	0	0	11/3/17	22.89	96	7.44	82	****
/anguard Intl Div Apprec ETF	VIGI	🐺 Bronze	0	0	0	0	0	7/5/17	27.80	69	_	_	_
Foreign Large Value													
Fransamerica International Equity I	TSWIX	<b>℧</b> Bronze	0	0	0	0	0	5/19/17	22.58	48	7.78	29	****
Foreign Small/Mid Blend													
PA International Value	FPIVX	Neutral	0	0	0	0	0	8/2/17	27.12	87	9.09	95	*
Pacific/Asia ex-Japan Stk													
Matthews Emerging Asia Institutional	MIASX	Bronze	0	0	0	0	•	9/26/17	18.69	99	11.51	27	****
World Large Stock													
Causeway Global Value Inst	CGVIX	<b></b> Silver	0	0	0	0	•	12/8/17	17.93	84	5.97	90	***
World Small/Mid Stock													
Moerus Worldwide Value Institutional	MOWIX	₩ Bronze	0	0	0	0	0	9/25/17	19.35	75	_		_
/anguard Global Minimum Volatility Admr	VMNVX	₿ Silver	0	0	0	0	0	9/15/17	16.07	87	10.08	55	***
Taxable Bond													
High Yield				_									
Artisan High Income Investor	ARTFX	℧ Bronze	0	0	0	0	0	8/24/17	8.89	9	7.99	2	****
ntermediate-Term Bond		_											
Hartford Total Return Bond Y	HABYX	🐯 Bronze	0	0	0	0	0	12/28/17	4.98	12	2.84	19	****
TIAA-CREF Social Choice Bond Instl	TSBIX	🐺 Bronze	0	0	0	0	0	3/13/17	4.51	23	2.95	14	****
WisdomTree Barclays YldEnh US AggtBd ETF	AGGY	🐯 Bronze	0	0	0	0	0	12/21/17	5.22	9	_	_	_
Nontraditional Bond													
Metropolitan West Unconstrained Bd I	MWCIX	₩ Bronze	0	0	0	0	0	6/6/17	3.98	51	2.67	53	****
Ultrashort Bond													
Fidelity Conservative Income Bond Instl	FCNVX	Bronze	0	0	0	0	0	10/23/17	1.41	45	0.97	52	***
World Bond													
Dodge & Cox Global Bond	DODLX	₩ Bronze	0	0	0	0	0	6/28/17	8.31	36	3.34	17	***
Municipal Bond													
Muni National Intermediate						_							
Vanguard Tax-Exempt Bond Index Investor	VIEBX	₫ Silver	0	0	0	0	0	1/26/18	4.93	35			_
Source: Morningstar, Inc.													

**AHLIX** 

Morningstar Analyst Rating
Bronze



# A systematic trend-following program from an experienced manager.

### **Analyst View**

### **Tayfun Icten**

Senior Analyst

Morningstar Analyst Rating

Morningstar Pillars

Process | Page 2-3

Performance | Page 4

People | Page 5

Parent | Page 6

Price | Page 7

Process | Page 7

Process | Page 7

Process | Process |

### 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

<b>₩</b> Gold	₹ Silver	≅ Bronze	Neutral	Negative
---------------	----------	----------	---------	----------

Dec 21, 2017 | American Beacon AHL Managed Futures Strategy is based on the flagship managed-futures program of subadvisor Man AHL, a pioneer in systematic trend-following strategies. When coupled with an advanced process-driven execution, this deep expertise leads to an initial Morningstar Analyst Rating of Bronze.

Man AHL has more than 20 years of experience in trend-following strategies. Including privately managed funds, it manages \$96 billion in total, including \$20 billion in systematic strategies and \$4 billion in a trend-following substrategy. It sponsors a research partnership at the University of Oxford and employs 120 dedicated researchers.

Solidly grounded in time-series momentum research, the fund's strategy is based on participation in multiple market trends both on the long and short side. This fund's strategy differs from the most traditional long-term systematic trend-followers as it targets a shorter average model speed of about eight weeks (versus six months or longer). This allows the fund to take advantage of shorter trends, and it also reduces the

drawdown in choppy markets, an appropriate objective for a daily liquidity mutual fund product. In terms of asset allocation, this fund subscribes to relatively equal asset-class allocations when compared with some of its competitors targeting moreaggressive asset-class concentration.

The fund's process produced strong absolute and risk-adjusted performance, but there are downsides. The shortened average trend horizon has worked better in this environment where frequent market reversals (aside from the equity markets) were less detrimental. But in the long run returns may not be as aggressive as some of its peers' because of shorter-term trading orientation.

Like most other managed-futures funds, this fund currently holds long equity positions, which provided the lion share of its profits in 2017. It may incur temporary losses in a fast equity sell-off, surprising those investors seeking uncorrelated returns under "all" market conditions. Low rates, range-bound fixed-income markets, and challenges of shorting fixed-income instruments provide more headwinds for the strategy.

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**AHLIX** 

**Morningstar Analyst Rating** Bronze

## Process: Approach

### Morningstar Category **US Fund Managed Futures**

### Category Index Credit Suisse Mgd Futures Liquid TR USD

## Index Proxv

### An advanced process and execution.

Process Pi
------------

Positive

Dec 21, 2017 | Subadvisor Man AHL runs an advanced process supported by solid expertise in the space. It earns a Positive Process Pillar rating.

AHL's process employs 22 systematic, trend-following, and carry models in two broad categories: moving average crossovers/breakouts and carry models. It allocates 85% of the risk to

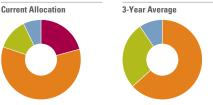
trend-following models and 15% to the carry models. The momentum models cut across five different time frames from one week to one year, and breakout component is a third of the total momentum risk. These various time frames add up to a relatively short average eight-week trend horizon. This is on the faster side of the managed-futures programs implemented by this fund's largest competitors. The net effect may be a narrower performance band both on the upside and the downside. The fund anchors its process at a 10% volatility target, which is a standard level in the industry.

AHL's process is also one of the most technologically advanced in execution and transaction cost analysis. The firm uses machine-learning algorithms, which explore various paths in real time to minimize slippage in trade executions. It also set up an over-the-counter currency-trading platform that aggregates multiple brokers' realtime price feeds in a centralized trading hub. The manager claims these execution advantages contribute an excess annualized 80 basis points to the performance.

### Equity Style Box 09/30/2017



Asset Allocation 09/30/2017



Assets %	Fund	3-Yr Avg	Category	Proxy
<ul><li>U.S. Equities</li></ul>	0.0	0.0	34.1	_
<ul><li>Non-U.S. Equities</li></ul>	20.8	0.0	0.0	_
<ul><li>Bonds</li></ul>	59.4	56.6	58.5	_
<ul><li>Cash</li></ul>	12.6	24.3	18.9	_
<ul><li>Other</li></ul>	7.2	8.4	-11.4	_

### Style Box Factors -

Market Cap	Fund	3-Yr Avq	Category	Prox
•	Tullu	3 II Avg	outcyony	TTOX
Giant/Large	_	_	_	_
Mid	_	_	_	_
Small/Micro	_	_	_	_
Avg Market Cap Bil USD	_	_	_	_
Value Measures	Fund	3-Yr Avg	Category	Proxy
Price/Prospect. Earnings	_	_	20.4	_
Price/Book	_	_	2.8	_
Price/Sales	_	_	1.8	_
Price/Cash Flow	_	_	10.8	_
Dividend Yield	_	_	2.4	_
Growth Measures	Fund	3-Yr Avg	Category	Proxy
Long-Term Earnings %	_	_	9.0	_
Historical Earnings %	_	_	-0.2	_
Sales %	_	_	-1.5	_
Cash Flow %	_	_	-1.4	_
Book-Value %	_	_	1.2	_

### Regional Exposure 09/30/2017

Market Type Equity %	Fund	3-Yr Avg	Category	Proxy
Developed	_	_	_	_
Emerging	_	_	_	_
Top 5 Countries Equity %	Fund	3-Yr Avg	Category	Proxy

### Sector Delta 09/30/17



Sectors

Fund ▲ Index Proxy

Fund 3-Yr Avg Category

Larger sector concentrations versus the index move the investment to the corner of the triangle corresponding to that equity Super Sector

Proxy

### **Economic Moat -**

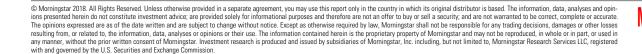
Moat Rating	Fund	3-Yr Avg	Category	Proxy
Wide Moat	_	_	45.5	_
Narrow Moat	_	_	42.3	_
No Moat	_	_	12.1	_
Coverage Ratio	_	_	0.0	_

### **Key Ratios** —

	Fund	3-Yr Avg	Category	Proxy
Net Margin %	_	_	_	_
ROA %	_	_	_	_
Debt/Total Capital %	_	_	_	_
ROE %	_	_	_	_

### Equity Sector Breakdown 09/30/2017

Defensive	_	_	_	_
📜 Consumer Defensive	_	_	_	_
Healthcare	_	_	_	_
Utilities	_	_	_	_
<b>✓</b> Sensitive	_	_	_	_
Communication Serv.	_	_	_	_
Energy	_	_	_	_
Industrials	_	_	_	_
Technology	_	_	_	_
<b>℃</b> Cyclical	_	_	_	_
🔠 Basic Materials	_	_	_	_
Consumer Cyclical	_	_	_	_
Financial Services	_	_	_	_
	_	_	_	_





**AHLIX** 

Morningstar Analyst Rating
Bronze

Process: Portfolio

Morningstar Category
US Fund Managed Futures

Category Index Credit Suisse Mgd Futures Liquid TR USD Index Proxy

### A typical managed-futures portfolio.

### **Process Pillar**

Positive

Dec 21, 2017 | The fund's current universe is 80 futures and forward markets spanning the four major asset classes: fixed income, equities, currencies, and commodities. Through September 2017, the total number of positions stood at 68, with 40 long positions, 11 short positions, and 17 currency pairs (long or short against the USD). It invested

36% in equities, 32% in commodities, 22% in currencies, and 10.4% in fixed income. The higher equity and lower fixed-income asset-class allocations are generally in line with the managed-futures positioning because equity markets have exhibited stronger momentum than the fixed-income markets. While the equity asset class has provided strong returns of the portfolio, it has the potential to adversely affect the current positioning in a rapid equity sell-off.

The fund's top active exposures as of September 2017 were long Korean Kospi and Rus-

sell 2000 futures in the equity asset class, long copper and crude oil futures in commodities, long Euribor and German Euro-BOBLs in fixed income, long Brazilian real against the USD and short Japanese yen against the USD. In the third quarter of 2017, the equity market rally was the most notable theme, followed by weak USD against most currency pairs (since the beginning of 2017), while flip-flopping rates markets, gold, and soybeans detracted from the performance in a mix of long and short positions.

### Similarity to Index Proxy —

Index Proxy Overlap

Number of Equity Holdings

Fund Index Proxy

Fund Overlap With Index Proxy

N

Holdings Overlap Asset Overlap **Largest Common Holdings** 

Fund % Proxy %

% Assets

17.76 10.28 7.33 4.77 3.41 Sector

**Largest Distinct Holdings** 

Fund %

### Portfolio Holdings 09/30/17

New Holdings Largest Purchases

urrent Portfolio Date 9/30/17	Previous Portfolio Da 06/30/17	ite	Equity Ho O	ldings		Bond Holdings 26		Asset 54%	s in Top 10 H	loldings	Turnover Ratio (Reported) —
op 10 Holdings		Country		Assets % 06/30/17	Proxy % 09/30/17	First Bought	,	Morningstar Rating for Stocks	Economic Moat	Sector	1-Yr Tota Ret 9
3mo Euro Euribor Dec18 IfI	II 20181217	_	26.71	_	_	_	_	_	_	_	_
≸ 3mo Euro Euribor Sep19 Ifl	II 20190916	_	13.83	_	_	_	_	_	_	_	-
🕏 3mo Euro Euribor Jun20 Ifl	1 20200615	_	6.73	_	_	_	_	_	_	_	_
American Beacon Cayman	Managed Mutual Fu	n —	5.05	4.09	_	_	_	_	_	_	-
≸ JPN 10Y BOND(OSE) DEC1	17 XOSE 20171213	_	4.75	_	_	_	_	_	_	_	-
≸ EURO-BOBL FUTURE DEC1	7 XEUR 20171207	_	4.69	_	_	_	_	_	_	_	_
🗴 Us 2yr Note (Cbt) Dec17 Xo	cbt 20171229	_	-4.65	_	_	_	_	_	_	_	_
≸ EURO-SCHATZ FUT DEC17	XEUR 20171207	_	4.17	_	_	_	_	_	_	_	_
≸ 90DAY STERLING FU SEP1	9 IFLL 20190918	_	-3.91	_	_	_	_	_	_	_	_
≸ 90DAY STERLING FU DEC1	18 IFLL 20181219	_	-3.23	_	_	_	_	_	_	_	_
EURO-BOBL FUTURE DEC1  US 2yr Note (Cbt) Dec17 Xr  EURO-SCHATZ FUT DEC17  ODAY STERLING FU SEP1	7 XEUR 20171207 cbt 20171229 XEUR 20171207 9 IFLL 20190918 18 IFLL 20181219		4.69 -4.65 4.17 -3.91								

Change since last portfolio:  $\oplus$  Increase  $\ominus$  Decrease  $\cancel{z}$  New

3mo Euro Euribor Dec18 IfII 20181217	26.71	3mo Euro Euribor Sep18 20180917
3mo Euro Euribor Sep19 IfII 20190916	13.83	90day Eur Futr Sep18 Xcme 20180917
3mo Euro Euribor Jun20 IfII 20200615	6.73	3mo Euro Euribor Jun19 IfII 20190617
JPN 10Y BOND(OSE) DEC17 XOSE	4.75	90day Eur Futr Jun19 Xcme 20190617
20171213 EURO-BOBL FUTURE DEC17 XEUR 20171207	4.69	90day Eur Futr Mar20 Xcme 20200316

Sector

% Assets

Largest Position Changes	Current %	Prior %
☆ 3mo Euro Euribor Dec18 IfII  20181217	26.71	0.00
★ 3mo Euro Euribor Sep19 IfII 20190916	13.83	0.00
→ 3mo Euro Euribor Sep18 20180917	0.00	17.76
	0.00	10.28

→ 3mo Euro Euribor Jun19 IfII 20190617



0.00

7.33

Eliminated Holdings Largest Sales

**AHLIX** 

Morningstar Analyst Rating
Bronze

## Performance

Morningstar Category
US Fund Managed Futures

Category Index Credit Suisse Mgd Futures Liquid TR USD

History 12/31/17
12-Month Rolling Return %

▼ Full Manager Change

Quartile Rank in Cat

Percentile Rank in Cat

Fund
 Category
 Index

Total Return USD

+/- Category

Income Return

+/- Index

7 Partial Manager Change

Fund

## Solid historical performance with a forward-looking warning sign.

### **Performance Pillar**

Positive

Dec 21, 2017 | The fund has a competitive track record among its peers. The Performance Pillar is Positive.

Since its August 2014 inception through October 2017, the fund has gained 5% annualized, putting it near the top of its category. It generated this performance with a negative 0.2 beta to the

S&P 500 TR Index, and it produced one of the highest Sharpe ratios in its peer group at 0.6, substantially higher than the SG Trend Index' 0.3, and the managed-futures Morningstar Category's Sharpe of 0.2. The strong risk-adjusted returns indicate the fund's successful execution of its process

The performance characteristics of managed-futures funds including this fund has changed in the past 18 months. The beta exposure of this fund, when measured from June 2016 through October 2017, is much higher (0.6) than its

2010

2011

2012

2014

2015

48

-1.11

-0.17

-4.67

1.94

Return %

2016

2017

20

15

-10

29

5.19 %

2.14

7.44

0.00 %

2007

2008

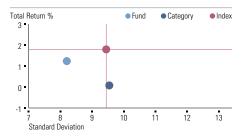
2009

longer-term beta of negative 0.2 to the equity markets because an unprecedentedly smooth equity rally has driven most of the returns in that time period, and the remaining asset classes have mildly detracted from the performance. This is a strategywide phenomenon, and it can have adverse consequences in a rapidly developing risk-off scenario. It is reasonable to expect uncorrelated performance from this fund in the long run, but the fund's positioning in certain market environments may not provide downside protection 100% of the time

# Morningstar Rating and Risk 12/31/2017 Period Load-Adj Return % Ret vs Cat Morningstar Risk vs Cat Morningstar Rating 3 Years 1.23 Avg Below Avg ★★★★ 5 Years — — —

10 Years — — — — — — Overall Rating ★★★★

### 3-Year Return and Risk Analysis 12/31/17



Return	/Risk	Analysis	12/31	/2017

	Fund	Category	Index
Standard Deviation	8.20	9.54	9.45
Sharpe Ratio	0.13	-0.02	0.19
R-Squared	63.79	47.92	_
Beta	0.69	0.67	_
Alpha	-0.11	-1.11	_

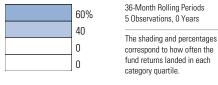
### Maximum Drawdown

	Fund	Category	Index
Max Drawdown (%)	_	-12.49	-9.95
Peak Date	_	04/15	04/15
Valley Date	_	06/17	06/17
Max Drawdown (Months)	_	27	27

## Trailing Returns (Annualized) 12/31/2017

	Total Ret %	Investor Ret %	% Rank in Cat	Cat Ret %	Index Ret %
1 Year	5.19	4.86	29	3.05	-2.25
3 Years	1.23	-0.55	34	0.07	1.79
5 Years	_	_	_	3.26	5.59
10 Years	_	_	_	-1.83	4.13
Tenure 08/14	4.94	_	_	2.02	6.85
Inception 08/14	4.94	_	_	2.02	6.85

### Rolling-Returns Summary 12/31/2017



### Calendar Year Returns

38

-0.26

2.49

-4.45

0.00



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**AHLIX** 

Morningstar Analyst Rating
Bronze

People

Morningstar Category
US Fund Managed Futures

Category Index Credit Suisse Mgd Futures Liquid TR USD

### **Experienced and well-staffed.**

### **People Pillar**

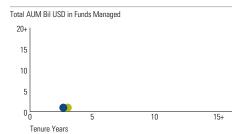
Positive

Dec 21, 2017 | The fund is in experienced hands and has the support of a large research. The People Pillar is Positive.

This fund is managed by Matthew Sargaison and Russell Korgaonkar. Sargaison is the co-CEO of AHL Partners and served as chief investment officer between 2012 and 2017, overseeing the managed-futures products. Prior to AHL, Sargaison spent 13 years working at Deutsche Bank, Barclays Capital, and UBS. Korgaonkar joined AHL in 2001 and spent several years researching and managing equity strategies such as statistical arbitrage and equity marketneutral. He moved to his current role in March 2011, and he provides high-level portfolio construction, investment management, and research. Under Sargaison's supervision, there are 120 researchers who specialize in trading strategies and model development.

Man AHL sponsors Oxford-Man Institute of Quantitative Finance academic research centre to keep a close eye on new research and recruitment opportunities. The firm separated implementation and research teams for better focus on each area. The implementation team consists of 38 people including execution/trading, execution research, and implementation. The firm has offices in London and Hong Kong. Because Sargaison and Korgaonkar are non-U.S. citizens, they do not invest in this mutual fund, but AHL employees have substantial investments in other AHL funds.

### **Experience and Asset Load**



### **Management Team**

Number of Managers Longest Tenure 2 3.42 Years

**5-Year Manager-Retention Rate** (Firm-wide)
95%

Largest Manager Investment in Fund None

Advisor

American Beacon Advisors Inc

Subadvisor AHL Partners LLP

### Russell Korgaonkar 08/14 to Present

Years of Experience 3	Investment in Fund None
Fund AUM	Current Funds Managed
659 Mil USD	2

Tenure Dates	Role	Fund Size	Investment	Turnover	Tenure	Index
		Mil USD	Mil USD	Ratio Avg	Ret %	Ret %
08/14to Present	1 of 2	520.02	None	_	4.94	6.85
12/14to Present	Lead	139.09	_	_	10.04	_
	08/14to Present	Tenure Dates Role 08/14to Present 1 of 2 12/14to Present Lead	08/14to Present 1 of 2 520.02	08/14to Present 1 of 2	Mil USD         Mil USD         Ratio Avg           08/14to Present 1 of 2         520.02         None         —	Mil USD         Mil USD         Ratio Avg         Ret %           08/14to Present 1 of 2         520.02         None         —         4.94

### Matthew Sargaison 08/14 to Present

Years of Experience 8	Investment in Fund None
Fund AUM	Current Funds Managed
520 Mil USD	3

Largest Funds Managed	Tenure Dates	Role	Fund Size	Investment	Turnover	Tenure	Inde
			Mil USD	Mil USD	Ratio Avg	Ret %	Ret 9
Man AHL Trend Alternative	07/09to Present	Lead	569.40	_	-128	2.67	_
American Beacon AHL Mgd Futs Strat Fd	08/14to Present	1 of 2	520.02	None	_	4.94	6.8



**AHLIX** 

**Morningstar Analyst Rating** Bronze

**Parent** 

**Morningstar Category US Fund Managed Futures** 

**Category Index** Credit Suisse Mgd Futures Liquid TR USD

### It has become more active lately, but sensible and invested management leads the firm.

### **Parent Pillar**

Positive

Mar 30, 2017 | American Beacon's owner has changed over the years, but it continues to do well by shareholders. The firm began as an in-house manager of American Airlines' retirement plan (its pension assets still represent a sizable stake of assets under management). The firm became independent in 1986, was purchased by private equity firms in 2008, then sold to other private equity firms in 2015. Gene Needles was hired as CEO in 2009 (and later became chairman when original CEO Bill Quinn stepped back from that role as well), bringing outside expertise from his executive role at Invesco.

American Beacon generally selects nonaffiliated subadvisors to manage its funds. It looks for managers who stay true to their mandates, tapping well-regarded firms such as Barrow Hanley and MFS. It is patient with short-term underperformance but will readily remove a subadvisor if it sees changes to style or management.

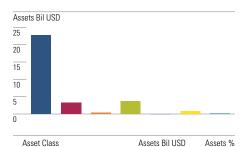
The firm has become more active lately--it has launched 12 funds since mid-2014 (it runs 31 in all) and has acquired stakes in three small firms over the past year. While the increased pace of product launches bears watching, the firm hasn't introduced gimmicky strategies.

Finally, some members of the firm's manager oversight team invest significantly in the lineup, and many subadvisors also invest substantially in their home strategies. American Beacon earns a Positive Parent rating.

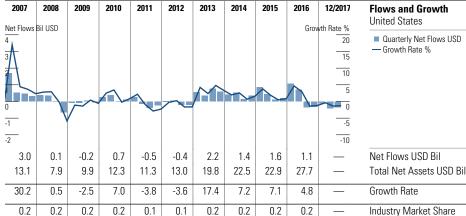
### Assets By Region, By Domicile Bil USD

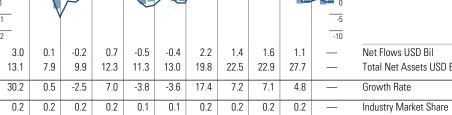


### Asset Class Breakdown United States



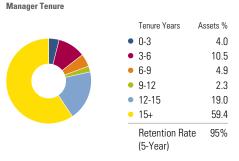
Total Assets	30.1	100.0
<ul> <li>Commodities</li> </ul>	0.0	0.0
<ul> <li>Alternative</li> </ul>	0.8	2.7
<ul> <li>Municipal Bond</li> </ul>	_	_
<ul><li>Taxable Bond</li></ul>	3.6	12.0
<ul><li>Balanced</li></ul>	0.4	1.2
<ul> <li>Non-US Stock</li> </ul>	3.2	10.7
<ul> <li>US Stock</li> </ul>	22.1	73.4

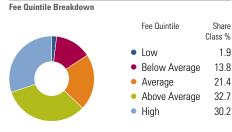




### Fund Family Details United States









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**AHLIX** 

Morningstar Analyst Rating
Bronze

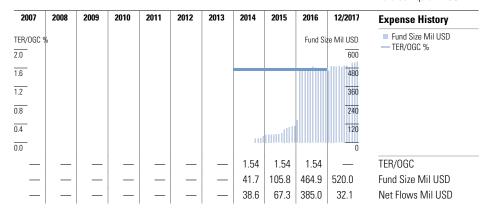
Price

Morningstar Category
US Fund Managed Futures

Category Index Credit Suisse Mgd Futures Liquid TR USD

### Transparent fee structure.

Dec 21, 2017 | This fund is offered in five share classes, and the two largest ones, Institutional and the Y shares, constitute 94% of the fund's assets, which charge Below Average fees. The fund's fees are also as advertised, whereas several funds in the category that may appear to be cheaper actually have extra management and performance fees not disclosed in the prospectus or annual report expense ratio. Thus, the fund earns a Positive Price Pillar rating.



Expense Breakdown	
Net Expense Ratio	%
Annual Report 12/31/16	1.54
Prospectus 04/28/17	1.54
Selected Components	%
Management Actual	1.35
12b-1 Fee	0.00
Brokerage Commission (% of Avg Net Assets)	0.11
Category Average	0.11
Tax Cost Ratio (3-Year)	0.88
Potential Capital Gains Exposure	-1

Fee Level		
Fee Level	Peer Group	
Avg	_	
Fee Level Breakpoints		
	High	>0.00
	Above Average	0.00-0.00
	Average	0.00-0.00
	Below Average	0.00-0.00
	Low	< 0.00
	Fund	1.54
	▼ Peer Median	1.57

### **Share Class Information**

Share Class	Identifier	Status	Expense	Fee Level	Peer Group	12b-1	Front	Deferred	Minimum	Assets	1-Yr Flow
			Ratio			Fee	Load	Load	Initial Inv	Bil USD	Mil USD
Inst	AHLIX	Open	1.54	Avg	_	0.00	_	_	250,000	0.43	19.64
Inst	AHLYX	Open	1.64	Avg	_	0.00	_	_	100,000	0.13	43.84
Inv	AHLPX	Open	1.92	Avg	_	0.00	_	_	2,500	0.02	-11.86
С	AHLCX	Open	2.69	Avg	_	1.00	_	1.00	1,000	0.01	1.18
Α	AHLAX	Open	1.94	Avg	_	0.25	5.75	_	2,500	0.00	-20.66



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### **Morningstar Analyst Rating**

	2016	2017	2018	
<b>℧</b> Gold				
Silver				
<b>Bronze</b>				
Neutral				
Negative				
Not Ratable				

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

### 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 fund's investment team is a significant key to its ability to deliver superior performance relative to its benchmark and/or peers. Evaluating a fund's investment team requires that analysts assess several relevant items including how key decisions are made.

### Paren

We believe the parent organization is of utmost importance in evaluating funds. The fund's 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.

### Proces

We look for funds 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 fund 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 fund is penalised for high fees or rewarded for low fees can vary with region. In Europe, for example, funds are penalised they land in the most expensive quintile of their Monningstar category and are rewarded if they land in the cheapest quintile. The assessment is made using annual expense ratios, but in the case of funds 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 fund; the difference between them corresponds to differences in the level of analyst conviction in a fund's ability to outperform its benchmark and peers through time, within the context of the level of risk taken.

### Gold

Represents funds that our analyst has the highest-conviction in for that given investment mandate. By giving a fund 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 fund must distinguish itself across the five pillars that are the basis for our analysis.

### Silver

Represents funds our analyst has high-conviction in, but not in all of the five pillars. With those fundamental strengths, we expect these funds 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 funds that have advantages that clearly outweigh any disadvantages across the pillars, giving analyst the conviction to award them a positive rating. We expect these funds to beat their relevant performance benchmark and/ or peer group within the context of the level of risk taken over a full market cycle (or at least five years).

### Neutra

Represents funds in which our analysts don't have a strong positive or negative conviction. In our judgment, these funds 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 funds 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 funds 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 may also use two other designations in place of a rating

### Under Reviev

This designation means that a change that occurred with the fund or at the fund 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/

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The Morningstar Star Rating is a proprietary data point that is quantitatively driven. Funds are rated from one to five stars based on how well the fund performed (after adjusting for risk and accounting for sales charges) in comparison to similar funds. Within each Morningstar Category, the top 10% of funds receive five-stars and the bottom 10% receives one-star. Funds 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. Funds with less than three years of history are not rated. Morningstar Star Ratings are based entirely on a mathematical evaluation of past performance. Morningstar 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 fund's top ten holdings as of the dated noted. For each underlying holding, a series of data points is provided including, where applicable, that security's Economic Moat 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 <u>narrow moat</u> are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. <u>Wide-moat</u> 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, <u>no-moat</u> 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.

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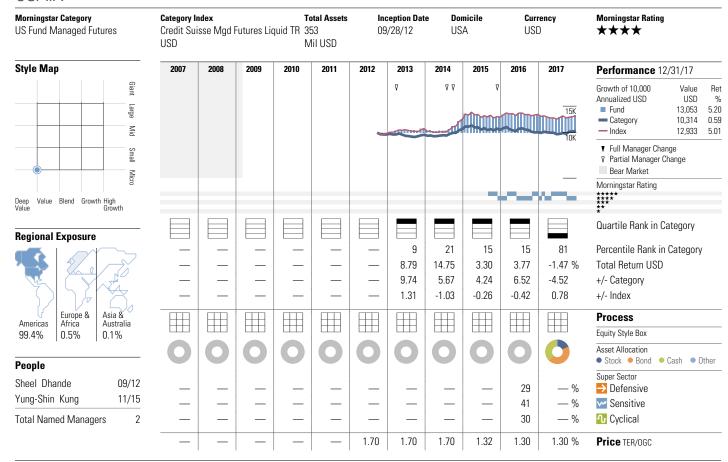
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**CSAIX** 

Morningstar Analyst Rating
Bronze



## Simple, transparent, and low costs make this fund stand out.

### **Analyst View**

### **Jason Kephart**

Senior Analyst

Morningstar Analyst Rating

Morningstar Pillars

Process | Page 2-3 Positive

Performance | Page 4 Positive

People | Page 5 Neutral

Parent | Page 6 Neutral

Price | Page 7 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

<b>₩</b> Gold	Silver	🐺 Bronze	Neutral	Negative
---------------	--------	----------	---------	----------

Nov 14, 2017 | Credit Suisse Managed Futures employs a transparent, systematic process to provide exposure to the momentum factor across the major asset classes with a low fee. It earns an initial Morningstar Analyst Rating of Bronze.

Investing in momentum is a bet that winners will keep winning and losers will keep losing. Like other managed futures strategies, this fund will perform best when there are clear and persistent market trends, like when oil fell from more than \$100 a barrel in June 2014 to the mid-\$20 range in the first quarter of 2016. It also will suffer during periods of range-bound markets, like when oil hovered between the low \$40s and \$55 a barrel from April 2016 through November 2017, or sharp reversals. Managed futures' ability to short markets allows it to generate positive returns in a declining market, and thus provide attractive diversification benefits, which most trend-following strategies did in 2008. Going forward, investors should be aware that returns in crisis periods may be subdued if long-term trends develop in interest rates that lead trend followers to short that asset class. Interest rates typically rally in severe risk-off periods and were a meaningful contributor to the strategies' historical crisis returns.

This fund takes a much simpler and transparent approach than many peers. It identifies trends by looking at the moving average of the price of futures contracts in equities, interest rates, commodities, and currencies over 16 different periods ranging from three months to 18 months. In each period, if the price is above the moving average, it is a long signal and if it's below it is a sell signal. The more periods that agree, the larger a bet the fund would take on the trend. It's a simple, yet effective way to identify trends. Many peers take this basic approach and add layers of complexity that will led to better or worse outcomes in different periods, but for investors looking for a pure trend-following strategy this direct approach will deliver the returns of the momentum factor over the longer term.

The fund is also one of the cheapest in the Morningstar Category, which bolsters its appeal.



**CSAIX** 

Morningstar Analyst Rating
Bronze

## Process: Approach

Morningstar Category
US Fund Managed Futures

Category Index Credit Suisse Mgd Futures Liquid TR USD Index Proxy

### A transparent way to capture momentum.

### **Process Pillar**

Positive

Nov 14, 2017 | This fund takes a straightforward approach to trend-following that is supported by rigorous academic research from a variety of sources. It earns a Positive rating for Process.

This strategy aims to capture momentum in various markets around the globe. Investing in momentum is a bet that winners will keep win-

ning and losers will keep losing. Like other managed futures strategy, this fund will perform best when there are clear and persistent market trends, like when oil fell from more than \$100 a barrel in June 2014 to the mid-\$20 range in the first quarter of 2016, and will suffer during periods of range bound markets, like when oil hovered between the low \$40s and \$55 a barrel from April 2016 through November 2017, or sharp reversals.

This strategy identifies trends by looking at the moving average of the price of futures contracts over 16 different periods covering from three

months to 18 months. In each period, if the price is above the moving average, it is a long signal and if it's below it is a sell signal. The more periods that agree, the larger a bet the fund would take on the trend. It's a simple, yet effective way to identify trends. Many peers take this basic approach and add layers of complexity that will led to better or worse outcomes in different periods, but for investors looking for a pure trend following strategy this direct approach will deliver the returns of the momentum factor over the longer term.

### Equity Style Box 12/31/2017

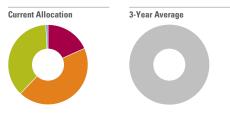


### Style Box Factors 03/31/2016

Book-Value %

•				
Market Cap	Fund	3-Yr Avg	Category	Proxy
Giant/Large	_	86.6	_	_
Mid	_	13.2	_	_
Small/Micro	_	0.1	_	_
Avg Market Cap Bil USD	_	73.2	_	_
Value Measures	Fund	3-Yr Avg	Category	Proxy
Price/Prospect. Earnings	_	18.1	19.9	_
Price/Book	_	2.5	3.0	_
Price/Sales	_	1.8	1.9	_
Price/Cash Flow	_	9.8	11.2	_
Dividend Yield	_	2.4	2.3	_
Growth Measures	Fund	3-Yr Avg	Category	Proxy
Long-Term Earnings %	_	9.1	9.2	_
Historical Earnings %	_	5.7	1.2	_
Sales %	_	1.6	-1.4	_
Cash Flow %	_	1.5	-1.2	_

### Asset Allocation 12/31/2017



### Regional Exposure 12/31/2017

Market Type Equity %

Developed Emerging	_	100.0	_	_
Top 5 Countries Equity %	Fund	3-Yr Avg	Category	Proxy
United States	99.4	99.4	99.8	_
Switzerland	0.3	0.3	0.0	_
United Kingdom	0.2	0.2	0.0	_
Singapore	0.1	0.1	0.0	_

Fund 3-Yr Avg Category

### **Economic Moat** 03/31/2016

Moat Rating	Fund	3-Yr Avg	Category	Proxy
Wide Moat	_	51.7	45.5	_
Narrow Moat	_	39.5	42.5	_
No Moat	_	8.8	12.0	_
Coverage Ratio	_	4.2	0.0	_

### Key Ratios 03/31/2016

1.2

	Fund	3-Yr Avg	Category	Proxy
Net Margin %	_	13.0	_	_
ROA %	_	7.1	_	_
Debt/Total Capital %	_	41.4	_	_
ROE %	_	21.4	_	_

### Sector Delta 12/31/17

Assets %

Bonds

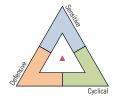
Cash

Other

Proxy

• U.S. Equities

• Non-U.S. Equities



Fund▲ Index Proxy

3-Yr Avg

0.1

-0.2

44.0

31.0

7.6

0.0

18.3

43.8

37.0

0.9

Category

11.7

0.0

89.7

58.5

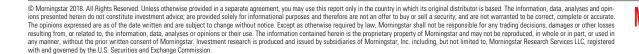
-59.8

Proxy

Larger sector concentrations versus the index move the investment to the corner of the triangle corresponding to that equity Super Sector.

### **Equity Sector Breakdown** 12/31/2017

Sectors	Fund	3-Yr Avg	Category	Prox
→ Defensive	_	28.7	_	_
Consumer Defensive	_	10.4	_	_
	_	14.8	_	_
Utilities Utilities	_	3.4	_	_
<b>✓</b> Sensitive	_	41.0	_	_
Communication Serv.	_	4.6	_	_
Energy	_	6.8	_	_
Industrials	_	10.9	_	_
Technology	_	18.7	_	_
<b>℃</b> Cyclical	_	30.4	_	_
📤 Basic Materials	_	2.7	_	_
Consumer Cyclical	_	11.2	_	_
Financial Services	_	14.0	_	_
	_	2.5	_	_





**CSAIX** 

Morningstar Analyst Rating
Bronze

Process: Portfolio

Morningstar Category
US Fund Managed Futures

Category Index Credit Suisse Mgd Futures Liquid TR USD

Index Proxy

Long and short exposure across the major asset classes.

### **Process Pillar**

Positive

Nov 14, 2017 | The portfolio covers global equities, interest rates, currencies, and commodities. The strategy looks for trends in 18 futures markets. This is far fewer contracts than peers, who sometimes trade 100 or more futures. Fewer contracts does mean less diversification but the trade-off is lower transaction costs.

The contracts the fund does trade are the most liquid in the four asset classes and are good representations of the economic risk in the different regions. In equities, it trades the most popular large-cap index in the U.S., U.K., Europe, Japan, and Hong Kong, respectively. In interest rates, it trades the 10-year sovereign contracts in the U.S., U.K., Europe, and Japan. In currencies, it trades the Australian dollar, British pound, Canadian dollar, euro and Yen, all versus the U.S. dollar. It gets access to commodities by trading broad baskets, rather than individual contracts. It trades baskets

of energy, agriculture, industrial metals, and precious metals.

Each futures contract has an equal weight in the portfolio, which gives the fund a slight skew toward equities and currencies, which each have five contracts instead of four. The overall portfolio is optimized to target an overall volatility level of 10%, which is a common target in the category.

Futures contracts only require a small amount of capital and this fund invests the collateral in cash, which could give it a slight boost as short-term rates rise in the U.S.

### Similarity to Index Proxy —

**Index Proxy Overlap** 

Number of Equity Holdings

Fund Index Proxy

Fund Overlap With Index Proxy

N

Holdings Overlap -

Asset Overlap

Largest Common Holdings

Fund % Proxy % La

**Largest Distinct Holdings** 

Fund %

### Portfolio Holdings 12/31/17

		Current Portfolio Date 12/31/17			ate Equity Hold O		ity Holdings Bond Holdings 7			Assets in Top 10 Holdings 56%					oldings	Turnover Ratio (Reported) —	
Top 10 Holdings		Country		Assets % 11/30/17	,	First Bought		Morningstar Rating for Stocks	Economic Moat	Sector	1-Yr Tota Ret 9						
	(ose 20180313	_	39.99	_	_	_	_	_	_	_	_						
Us 10yr Note (Cbt)mar18 Xo	bt 20180320	_	-13.04	-8.12	_	_	_	_	_	_	_						
⊕ LONG GILT FUTURE MAR18	3 IFLL 20180327	_	9.01	2.70	_	_	_	_	_	_	-						
★ Euro-Bund Future Mar18 Xe	eur 20180308	_	7.10	_	_	_	_	_	_	_	-						
	me 20180319	_	-5.07	_	_	_	_	_	_	_	-						
☼ Ftse 100 ldx Fut Mar18 lfll 2	20180316	_	4.34	_	_	_	_	_	_	_	_						
X Nikkei 225 (Ose) Mar18 Xos	se 20180308	_	3.97	_	_	_	_	_	_	_	_						
☆ S+p500 Emini Fut Mar18 Xo	cme 20180316	_	3.85	_	_	_	_	_	_	_	-						
☆ Hang Seng Idx Fut Jan18 XI	hkf 20180130	_	3.69	_	_	_	_	_	_	_	-						
🕸 Euro Stoxx 50 Mar18 Xeur 2	20180316	_	2.46	_	_	_	_	_	_	_	-						

Change since last portfolio: ⊕ Increase ⊕ Decrease 🔅 New

New Holdings Largest Purchases	% Assets	Sector
Jpn 10y Bond(Ose) Mar18 Xose 20180313	39.99	
Euro-Bund Future Mar18 Xeur 20180308	7.10	
Jpn Yen Curr Fut Mar18 Xcme 20180319	5.07	
Ftse 100 ldx Fut Mar18 lfll 20180316	4.34	
Nikkei 225 (Ose) Mar18 Xose 20180308	3.97	

Eliminated Holdings Largest Sales	% Assets	Sector
Jpn 10y Bond(Ose) Dec17 Xose 20171213	42.18	
EURO BUND FUTURE DEC17 XEUR 20171207	10.42	
Nikkei 225 (Ose) Dec17 Xose 20171207	4.20	
S+p500 Emini Fut Dec17 Xcme 20171215	3.99	
Ftse 100 ldx Fut Dec17 lfll 20171215	3.92	

Largest Position Changes	Current %	Prior %
	39.99	0.00
LONG GILT FUTURE MAR18 IFLL 20180327	9.01	2.70
	7.10	0.00
	0.00	42.18
● EURO BUND FUTURE DEC17 XEUR 20171207	0.00	10.42

M RNINGSTAR®

**CSAIX** 

Morningstar Analyst Rating
Bronze

## Performance

Morningstar Category
US Fund Managed Futures

Category Index Credit Suisse Mgd Futures Liquid TR USD

### Strong performance over the long term.

### **Performance Pillar**

Positive

Nov 14, 2017 | This fund has outpaced peers and sidestepped the worst of the category's draw-downs since inception. It earns a Positive rating for Performance.

Since its October 2012 inception, the fund has returned 4.76% annualized with its long-term correlation to the S&P 500 slightly negative and a

low correlation of 0.34 to the Bloomberg Barclays US Aggregate Bond Index. The fund's low correlation measures signal it has acted as a strong diversifier for traditional portfolios of stocks and bonds over the long term, while outpacing roughly 90% of peers on a total-return basis. Its risk-adjusted returns, measured by Sharpe and Sortino ratios, are similarly strong versus peers. Like other strategies, the fund may become more correlated to either asset class over short periods, but investors should focus on the long term.

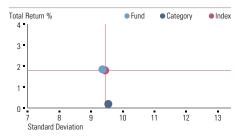
The fund's low correlations to stocks and

bonds don't mean the fund's returns will always be positive. Momentum strategies should be expected to have drawdowns from time to time. From April 2015 through June 2017, the SG Trend Index, an equal-weighted index of the 10 largest trend followers running hedge funds, fell 17% as reversals in energy commodities, the U.S. dollar, and interest rates whipsawed positions. This fund was no exception to the losses, but its slightly lower exposure to commodities and interest rates helped the fund stave off the worst of the losses. It only fell 10% over that period.

### Morningstar Rating and Risk 12/31/2017

Period	Load-Adj Return %	Morningstar Ret vs Cat	Morningstar Risk vs Cat	
3 Years 5 Years		Above Avg Above Avg		****
10 Years	_			
Overall Ra	ting			****

### 3-Year Return and Risk Analysis 12/31/17

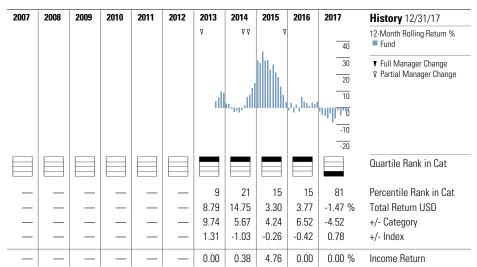


### Return/Risk Analysis 12/31/2017

	Fund	Category	Index
Standard Deviation	9.36	9.54	9.45
Sharpe Ratio	0.19	-0.02	0.19
R-Squared	99.89	47.92	_
Beta	0.99	0.67	_
Alpha	0.06	-1.11	_

### Maximum Drawdown

	Fund	Category	Index
Max Drawdown (%)	_	-12.49	-9.95
Peak Date	_	04/15	04/15
Valley Date	_	06/17	06/17
Max Drawdown (Months)	_	27	27



### Trailing Returns (Annualized) 12/31/2017

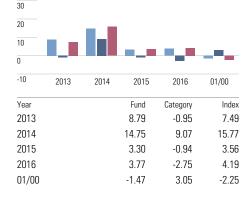
	Total Ret %	Investor Ret %	% Rank in Cat	Cat Ret %	Index Ret %
1 Year	-1.47	-0.33	81	3.05	-2.25
3 Years	1.84	1.42	28	0.07	1.79
5 Years	5.69	4.40	23	3.26	5.59
10 Years	_	_	_	-1.83	4.13
Tenure 09/12	5.20	_	_	0.59	5.01
Inception 09/12	5.20	_	_	0.59	5.01

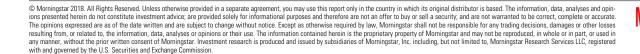
### Rolling-Returns Summary 12/31/2017

96%	36-Month Rolling Periods 28 Observations, 2 Years
0 0	The shading and percentages correspond to how often the fund returns landed in each category quartile.

### Calendar Year Returns

Return %







Fund
 Category
 Index

**CSAIX** 

Morningstar Analyst Rating
Bronze

## People

## Morningstar Category US Fund Managed Futures

### Category Index Credit Suisse Mgd Futures Liquid TR USD

### A capable team.

### **People Pillar**

Neutral

Nov 14, 2017 | This fund is managed by members of Credit Suisse's quantitative investment strategies team. The team has had above-average turnover, mainly due to an attempt to grow the quantitative team in 2013 to better compete with other quantitative investment teams that was abandoned in 2015. Still, this team has the neces-

sary resources and skill to successfully implement this strategy. On balance, it earns Neutral rating for People.

Yung-Shin Kung and Sheel Dhande are the fund's listed managers. Kung is the chief investment officer of the firm's quantitative investment strategies group that oversees the development and management of the firm's liquid alternative strategies. He has been in his current role since 2015 and a member of the team since 2009. Dhande joined the firm in 2008 from Lehman Brothers, where he worked on strategies that rep-

licated fixed-income indexes. Dhande was also part of the group that designed the methodology for the index that this fund replicates. They are backed by three analysts focused on research and three focused on trading. Trading plays a key role in keeping this fund's costs low and being part of a large bank gives the team an edge in execution.

The team has seen above-average turnover. In 2015, for example, five members left and in 2017, two more have departed. The turnover would be more of a concern if management had a more active approach to investing.

### **Experience and Asset Load**



### Management Team

Number of Managers	Longest Tenure	5-Year Manager-Retention	Largest Manager Investmen
2	5.33 Years	Rate (Firm-wide)	in Fund
2	J.JJ 16d13	92%	10,001 to 50,000 USD

Advisor Subadvisor
Credit Suisse Asset Management —

### ● Sheel Dhande 09/12 to Present

Years of Experience 5	Investment in Fund 1 to 10,000 USD
Fund AUM 498 Mil USD	Current Funds Managed

Largest Funds Managed	Tenure Dates Role	Fund Size	Investment	Turnover	Tenure	Index
		Mil USD	Mil USD	Ratio Avg	Ret %	Ret %
Credit Suisse Managed Futs Strat Fd	09/12to Present 1 of 2	352.80	< 0.01	_	5.20	5.01
Credit Suisse Multialternative Strat Fd	07/12to Present 1 of 2	104.32	None	474	2.98	8.26
CS (Lux) Multialternative Fund	01/16to Present Lead	41.03	_	_	2.32	_

### **Yung-Shin Kung** 11/15 to Present

Years of Experience 3	Investment in Fund 10,001 to 50,000 USD
Fund AUM	Current Funds Managed
457 Mil USD	2

Largest Funds Managed	Tenure Dates	Role	Fund Size	Investment	Turnover	Tenure	Index
			Mil USD	Mil USD	Ratio Avg	Ret %	Ret %
Credit Suisse Managed Futs Strat Fd	11/15to Present	1 of 2	352.80	< 0.05	_	0.91	0.67
Credit Suisse Multialternative Strat Ed	11/15to Present	1 of 2	104 32	<0.05	804	3 02	10.32



**CSAIX** 

**Morningstar Analyst Rating** Bronze

### **Parent**

**Morningstar Category US Fund Managed Futures** 

**Category Index** Credit Suisse Mgd Futures Liquid TR USD

### New leadership may be on the right track, but the firm has a history of changing direction.

### **Parent Pillar**

Neutral

Nov 13, 2017 | Over nearly two decades, Credit Suisse Asset Management has changed directions several times with regard to its U.S. assetmanagement operations. Endemic of this has been a high level of churn in the firm's U.S. lineup. In 20 years, the firm has launched and liquidated more than 25 funds; it has merged more than 15. The firm has also begun initiatives, such as environment, social, and governance, which have since been dialed back. Today, Credit Suisse offers just six open-end mutual funds in the United States, four of which were launched in 2012, as the assetmanagement group concentrates its efforts on its wealth-management business and institutional channels. Overall, the \$8 billion U.S. fund business is a tiny sliver of Credit Suisse's global assets under management.

In 2016, the firm made another change here, installing new leaders: Credit Suisse veteran Eric Varvel and Bill Johnson. The company says it plans to focus on what it considers core competencies--commodities, credit, and alternatives. Indeed, those teams have been relatively stable, with tenured portfolio managers. Fees are generally below average. This latest incarnation of Credit Suisse's U.S. asset-management operations seems on the right track; time will tell if it sticks. The firm earns a Neutral Parent rating.



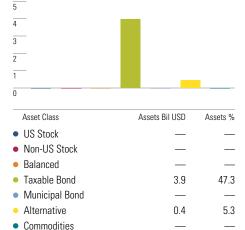
Assets By Region, By Domicile Bil USD



### Asset Class Breakdown United States

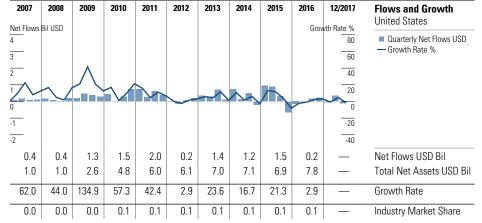
Assets Bil USD

**Total Assets** 



8.1

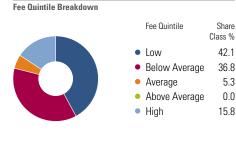
52.0

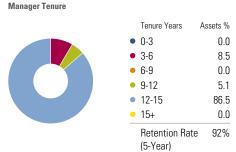


### Fund Family Details United States

Morningstar Rating Breakdown









	Investment USD	Assets %
•	Over 1 Mil	50.0
•	500K-1 Mil	0.0
•	100K-500K	0.0
•	50K-100K	43.6
•	10K-50K	6.4
•	0-10K	0.0
•	None	0.0
•	No Data	0.0

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**CSAIX** 

Morningstar Analyst Rating Bronze

Price

**Morningstar Category US Fund Managed Futures** 

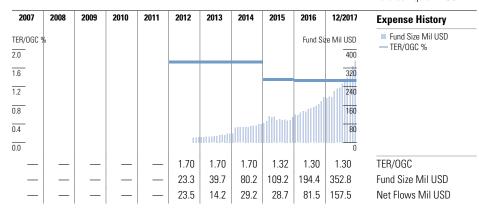
**Category Index** Credit Suisse Mgd Futures Liquid TR USD

### One of the cheapest options in the category.

Price Pillar	Positive

Nov 14, 2017 | This fund is one of the most attractively priced funds in the managed futures category. It earns a Positive rating for Price.

This fund is offered in three share classes. Most assets are in the fund's institutional shares. which have prospectus net expense ratio of 1.30%, that's cheaper than more than 80% of peers. The median fee for similarly distributed funds in the category is 1.80%. The fund's fees are also as advertised, whereas several funds in the category that may appear to be cheaper actually have extra management and performance fees not disclosed in the prospectus or annual report expense ratio.



### **Expense Breakdown Net Expense Ratio** Annual Report 10/31/17 1.30 Prospectus 03/21/17 1.30 **Selected Components** % Management Actual 1.04 12b-1 Fee Brokerage Commission (% of Avg Net Assets) 0.00 Category Average 0.11 Tax Cost Ratio (3-Year) 1.31 Potential Capital Gains Exposure 3

Fee Level		
Fee Level	Peer Group	
Below Avg	_	
Fee Level Breakpoints		
	High	>0.00
	Above Average	0.00-0.00
	Average	0.00-0.00
	Below Average	0.00-0.00
	Low	<0.00
	<b>▼</b> Fund	1.30

◆ Peer Median

1.57

### **Share Class Information**

Share Class	Identifier	Status	Expense	Fee Level	Peer Group	12b-1	Front	Deferred	Minimum	Assets	1-Yr Flow
			Ratio			Fee	Load	Load	Initial Inv	Bil USD	Mil USD
Inst	CSAIX	Open	1.30	Below Avg	_	_	_	_	250,000	0.27	89.87
Α	CSAAX	Open	1.55	Low	_	0.25	5.25	_	2,500	0.12	67.76
С	CSACX	Open	2.30	Low	_	1.00	_	1.00	2,500	0.00	-0.13



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### Morningstar Analyst Rating

	2016	2017	2018	
<b>℧</b> Gold				
Silver				
<b>Bronze</b>				
Neutral				
Negative				
Not Ratable				

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

### 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 fund's investment team is a significant key to its ability to deliver superior performance relative to its benchmark and/or peers. Evaluating a fund's investment team requires that analysts assess several relevant items including how key decisions are made.

### Paren

We believe the parent organization is of utmost importance in evaluating funds. The fund's 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.

### Proces

We look for funds 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 fund 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 fund is penalised for high fees or rewarded for low fees can vary with region. In Europe, for example, funds are penalised they land in the most expensive quintile of their Monningstar category and are rewarded if they land in the cheapest quintile. The assessment is made using annual expense ratios, but in the case of funds 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 fund; the difference between them corresponds to differences in the level of analyst conviction in a fund's ability to outperform its benchmark and peers through time, within the context of the level of risk taken.

### Gold

Represents funds that our analyst has the highest-conviction in for that given investment mandate. By giving a fund 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 fund must distinguish itself across the five pillars that are the basis for our analysis.

### Silver

Represents funds our analyst has high-conviction in, but not in all of the five pillars. With those fundamental strengths, we expect these funds 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 funds that have advantages that clearly outweigh any disadvantages across the pillars, giving analyst the conviction to award them a positive rating. We expect these funds to beat their relevant performance benchmark and/ or peer group within the context of the level of risk taken over a full market cycle (or at least five years).

### Neutra

Represents funds in which our analysts don't have a strong positive or negative conviction. In our judgment, these funds 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 funds 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 funds 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 may also use two other designations in place of a rating

### Under Reviev

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

### Not Ratable

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### **Equity-Related Data Points**

The Report lists the fund's top ten holdings as of the dated noted. For each underlying holding, a series of data points is provided including, where applicable, that security's Economic Moat 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 <u>narrow moat</u> are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. <u>Wide-moat</u> 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, <u>no-moat</u> 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.

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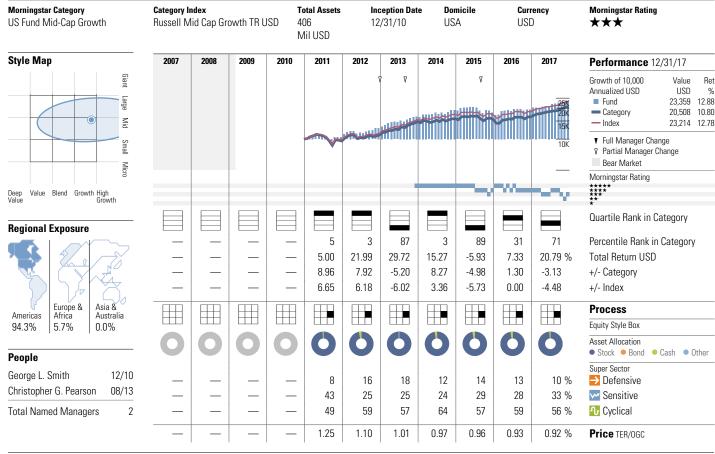
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**DEOPX** 

Morningstar Analyst Rating

Bronze



## This distinctive fund should reward patient investors.

### **Analyst View**

### **Greg Carlson**

Senior Analyst

Morningstar Analyst Rating	<b>Bronze</b>
Morningstar Pillars	
Process   Page 2-3	Positive
Performance   Page 4	Positive
People   Page 5	Positive
Parent   Page 6	<ul><li>Neutral</li></ul>
Price   Page 7	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

<b>₩</b> Gold	Silver	≅ Bronze	Neutral	Negative
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Dec 22, 2017 | Davenport Equity Opportunities' stable team, concentrated yet prudent approach, and below-average fees earn a Morningstar Analyst Rating of Bronze.

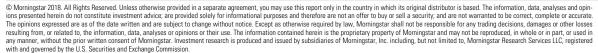
This fund has an experienced team at the helm. George Smith, a 20-year veteran of advisor Davenport & Company, has served as the lead portfolio manager since the strategy took its current form in January 2010 (the fund launched one year later). He joined the firm as an analyst in 1997. Chris Pearson, an analyst at the firm since 2006, was promoted to comanager in 2013. The duo has nine analysts at their disposal, as well as seven other investment team members who serve on the firm's investment policy committee, but in practice the managers work closely with just three of the analysts and use the rest of that team less often. That trio of analysts has worked at Davenport for an average of 13 years.

The fund doesn't require a large team, as it owns just 25-30 stocks and holds them for several years. The team seeks companies with dependable business models that they believe can

generate better profit growth than the fund's Russell Mid Cap Index benchmark, yet are selling at attractive valuations, typically because they're enduring what the managers believe are short-term issues. Smith and Pearson focus on the areas where they believe they have an advantage, such as consumer cyclicals--an area both covered as analysts--while treading lightly in sectors where they're less comfortable, such as tech.

This approach has produced solid results thus far. From the fund's December 2010 inception through November 2017, it surpassed more than 80% of its mid-growth Morningstar Category peers and its benchmark on both a total return and risk-adjusted basis. The fund has also beaten the Russell Mid Cap Growth Index. However, it has difficulty keeping up in strong growth rallies owing to its preference for steady growers and its typically light stakes in both tech and healthcare. Thus, it's best suited for patient investors.

The fund's below average expense ratio also gives it a leg up on the competition. It's a fine long-term holding.





DEOPX

**Morningstar Analyst Rating** Bronze

## Process: Approach

### Morningstar Category US Fund Mid-Cap Growth

### Category Index Russell Mid Cap Growth TR USD

### Index Proxy iShares Russell Mid-Cap Growth FTF

### A prudent and patient approach.

### **Process Pillar**

Positive

Dec 22, 2017 | This fund's fairly cautious strategy and focus on the team's areas of expertise earns a Positive Process rating.

Managers George Smith and Chris Pearson employ a highly concentrated approach that controls risk through a focus on companies that have solid business models yet sell at modest valuations. They want companies that can compound profit growth at a higher rate than the fund's Russell Mid Cap Index benchmark. In order to get such firms on the cheap, they tend to buy when they are undergoing problems that the managers believe are short-term in nature.

The fund typically holds just 25-30 stocks, and the managers focus on corners of the market where they feel they have an advantage. Thus, the fund has typically held above-average stakes in retail and telecommunication stocks; both Smith and Pearson previously covered consumer stocks, and Smith currently covers telecom firms. The managers also tend to hold stocks for fairly long periods unless an elevated valuation or broken thesis forces their hand. Portfolio turnover averaged 35% annually during the past five years, while the midgrowth median over that span was 49%. While the portfolio is compact, the managers don't place double-digit bets on individual stocks; the fund's top holding has typically comprised 5%-7% of assets and has never hit 10%.

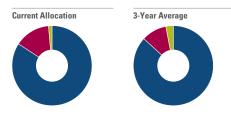
### Equity Style Box 11/30/2017



### Style Box Factors 11/30/2017

Market Cap	Fund	3-Yr Avg	Category	Proxy
Giant/Large	42.4	34.4	21.4	26.3
Mid	52.4	56.4	62.3	70.4
Small/Micro	5.3	9.1	16.3	3.3
Avg Market Cap Bil USD	16.4	12.6	12.3	13.5
Value Measures	Fund	3-Yr Avg	Category	Proxy
Price/Prospect. Earnings	29.3	21.6	25.9	25.7
Price/Book	2.8	2.2	4.1	5.7
Price/Sales	1.8	1.4	2.5	2.3
Price/Cash Flow	12.8	10.4	14.3	15.3
Dividend Yield	0.7	1.0	0.8	1.0
Growth Measures	Fund	3-Yr Avg	Category	Proxy
Long-Term Earnings %	11.6	12.3	15.4	11.6
Historical Earnings %	2.6	6.6	7.6	6.4
Sales %	8.9	7.6	12.9	5.3
Cash Flow %	8.1	2.7	7.4	7.5
Book-Value %	8.8	5.9	8.2	3.8

### Asset Allocation 11/30/2017



### Regional Exposure 11/30/2017

Market Type Equity %	Fund	3-Yr Avg	Category	Proxy
Developed	98.7	99.0	99.0	99.4
Emerging	1.3	1.0	1.1	0.6
Top 5 Countries Equity %	Fund	3-Yr Avg	Category	Proxy
United States	85.4	89.5	96.3	99.2
Canada	7.6	8.5	0.7	0.0
Belgium	5.7	0.9	0.5	0.2
Brazil	1.3	0.2	0.1	0.0

### **Economic Moat 11/30/2017**

Moat Rating	Fund	3-Yr Avg	Category	Proxy
Wide Moat	13.6	18.0	18.9	27.4
Narrow Moat	67.7	61.5	67.2	54.3
No Moat	18.7	20.5	13.9	18.3
Coverage Ratio	68.0	56.9	57.4	68.6

### Key Ratios 11/30/2017

Fund	3-Yr Avg	Category	Proxy
9.6	9.7	10.8	10.4
5.4	4.8	5.6	7.3
49.8	48.7	50.3	47.5
20.1	16.6	18.0	22.7
	9.6 5.4 49.8	5.4 4.8 49.8 48.7	9.6 9.7 10.8 5.4 4.8 5.6 49.8 48.7 50.3

#### • U.S. Equities 84.2 86.8 93.5 99.0 • Non-U.S. Equities 14.4 10.2 3.5 8.0 Bonds 0.0 0.0 0.1 0.0 Cash 1.4 3.0 2.7 0.2 Other 0.0 0.0 0.2 0.0

Fund

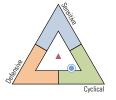
3-Yr Avg

Category

Proxv

### Sector Delta 11/30/17

Assets %

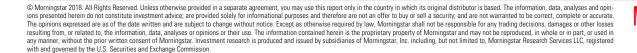


Fund ▲ Index Proxy

Larger sector concentrations versus the index move the investment to the corner of the triangle corresponding to that equity Super Sector

### Equity Sector Breakdown 11/30/2017

Sectors	Fund	3-Yr Avg	Category	Proxy
→ Defensive	10.4	12.4	19.7	18.4
Consumer Defensive	6.9	8.2	4.4	5.2
	3.5	3.1	14.6	13.1
Utilities Utilities	0.0	1.2	0.7	0.1
<b>™</b> Sensitive	33.5	28.8	43.8	47.0
Communication Serv.	13.0	10.3	1.5	8.0
<b>Energy</b>	0.0	0.0	2.4	2.4
Industrials	11.7	11.6	17.6	20.2
Technology	8.7	6.9	22.3	23.6
<b>℃</b> Cyclical	56.2	58.8	36.5	34.6
🔠 Basic Materials	8.5	3.5	3.7	4.3
Consumer Cyclical	27.4	29.5	16.6	19.3
Financial Services	14.9	16.3	12.0	8.2
♠ Real Estate	5.4	9.5	4.3	2.9





**DEOPX** 

Morningstar Analyst Rating
Bronze

### Process: Portfolio

Morningstar Category
US Fund Mid-Cap Growth

Category Index
Russell Mid Cap Growth TR
USD

Index Proxy iShares Russell Mid-Cap Growth FTF

### Idiosyncractic.

### **Process Pillar**

Positive

Dec 22, 2017 | The fund's concentrated portfolio and relatively cautious approach means it typically stands out from both its broadly diversified Russell Mid Cap Index benchmark and its midgrowth category peers, who tend to pursue rapidly growing fare. At the end of October 2017, for example, 18 of the fund's 26 holdings were constitu-

ents of the index. But those stocks comprised 66% of the fund's assets and just 3% of the index. Several of the fund's nonindex holdings are large-cap stocks first purchased in 2011, its first full year of operation, that have since seen their market caps grow faster than the market, such as cell tower operator American Tower AMT, alternative asset manager Brookfield Asset Management BAM, and software maker Intuit INTU. The fund's active share versus that index was 97% at the end of October.

The fund also tends to tread lightly in

some traditional hunting grounds for growth managers. At the end of October, for example, the fund's stake in technology was just 8.7%, well below the category average of 22.3%. And the fund's healthcare stake was 3.1%, while the category average was 14.7%. Conversely, the fund invested far more in consumer cyclicals (27.6% of assets; the category average was 16.6%) and telecommunications (13.1% of assets; its typical peer invested just 1.6% of assets there). Thus, investors shouldn't expect the fund to keep up with the category when tech and healthcare thrive.

### Similarity to Index Proxy 11/30/2017

Index Proxy Overlap
Proxy Fund

Circle size represents number of holdings.

Number of Equity Holdii	ngs
Fund	26
Index Proxy	421
Fund Overlap With Inde	x Proxy
Holdings Overlap	13
Asset Overlap	4.7%

Largest Common Holdings	Fund %	Proxv %	Largest Distinct Holdings	Fund %
CarMax Inc	5.31	0.40	American Tower Corp	5.87
Dollar Tree Inc	4.98	0.72	Brookfield Asset Management Inc Class A	5.32
Martin Marietta Materials Inc	3.83	0.38	Capital One Financial Corp	5.30
Zoetis Inc	3.45	1.14	Colfax Corp	5.21
O'Reilly Automotive Inc	3.33	0.65	Sherwin-Williams Co	4.52

### Portfolio Holdings 11/30/17

	Previous Portfolio D 10/31/17	ate	Equity Ho 26	ldings		<b>Bond Holdi</b> O	ngs	Assets in Top 10 Holdings 51%		oldings Turno 23%	Turnover Ratio (Reported) 23%	
Top 10 Holdings		Country	Assets % 11/30/17	Assets % 10/31/17	Proxy % 11/30/17	First Bought	,	Morningstar Rating for Stocks	Economic Moat	Sector		1-Yr Total Ret %
American Tower Corp		USA	5.87	5.98		01/11	<1	**	Narrow	Communicati	ion Serv.	37.48
WABCO Holdings Inc		BEL	5.64	5.68	0.24	11/14	<1	_	_	Consumer Cy	clical	35.19
Brookfield Asset Manageme	ent Inc Class A	CAN	5.32	5.49	_	01/11	<1	_	_	Real Estate		24.71
CarMax Inc		USA	5.31	5.90	0.40	01/11	<1	***	Narrow	Consumer Cy	clical	-0.40
Capital One Financial Corp		USA	5.30	5.42	_	09/11	<1	***	Narrow	📴 Financial Ser	vices	15.98
Colfax Corp		USA	5.21	5.95		09/11	<1	_	_	Industrials		10.27
Dollar Tree Inc		USA	4.98	4.51	0.72	04/15	<1	**	Narrow	📜 Consumer De	efensive	39.04
Live Nation Entertainment Ir	nc	USA	4.85	4.77	0.20	01/15	<1	_	_	Consumer Cy	clical	60.04
Sherwin-Williams Co		USA	4.52	4.56	_	07/16	<1	**	Narrow	📤 Basic Materi	als	53.84
Intuit Inc		USA	4.47	4.39	_	01/11	<1	*	Wide	Technology		38.90

Change since last portfolio:  $\oplus$  Increase  $\ominus$  Decrease  $\cancel{\approx}$  New

New Holdings Largest Purchases

Sector

% Assets

Eliminated Holdings Largest Sales

% Assets Sector

La

**(** 

argest Position Changes	Current %	Prior %
American Tower Corp	5.87	5.98
CarMax Inc	5.31	5.90
Capital One Financial Corp	5.30	5.42
Church & Dwight Co Inc	1.78	1.75
First American Treasury Obligs Z	1.41	1.04



**DEOPX** 

Morningstar Analyst Rating
Bronze

## Performance

### Morningstar Category US Fund Mid-Cap Growth

### Category Index Russell Mid Cap Growth TR USD

### Better than it looks at first glance.

### **Performance Pillar**

Positive

Dec 22, 2017 | This fund has delivered solid total and risk-adjusted returns since its December 2010 inception, earning a Positive Performance rating.

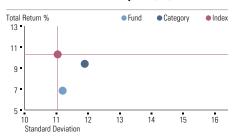
Look past this fund's return ranks during the standard periods of one, three, and five years through November 2017. While it seems subpar on that basis compared with its typical mid-growth peer, the fund doesn't tend to keep up when stocks stage strong rallies, as they have over those time frames. Its focus on sturdier fare selling at relatively modest valuations means it typically shines in down or sideways markets (such as in 2011, the fund's first full year of operation). From its December 2010 launch through November 2017, the fund's 12.9% annualized return edged past its Russell Mid Cap Index benchmark and beat 80% of its peers. And the fund's risk-adjusted returns, as measured by Sharpe and Sortino ratios, bested the index and 88% of peers. The

fund posted similar results when compared with the Russell Mid Cap Growth Index, a typical benchmark for mid-growth funds.

The fund's captures since inception underscore its conservative profile. When stocks declined during this period, the fund lost 77% as much as its typical peer and 88% as much as the Russell Mid Cap Index. Meanwhile, the fund gained 95% as much as the index and the category average when stocks rose. While it hasn't faced a full-blown bear market yet, the fund is likely to hold up relatively well in such a scenario.

#### Morningstar Rating and Risk 12/31/2017 Period Load-Adi Morningstar Morningstar Morningstar Ret vs Cat Risk vs Cat Return % Rating 3 Years 6.84 Below Avg Below Avg 5 Years 12.77 Below Avg Below Avg 10 Years Overall Rating \*\*\*

### 3-Year Return and Risk Analysis 12/31/17

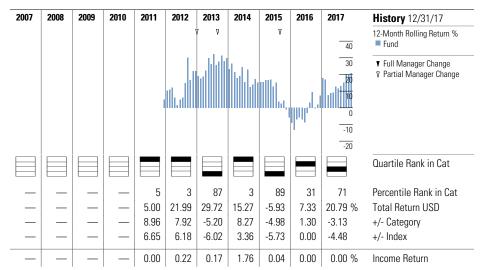


### Return/Risk Analysis 12/31/2017

	Fund	Category	Index
Standard Deviation	11.20	11.90	11.04
Sharpe Ratio	0.61	0.79	0.91
R-Squared	74.02	74.54	88.02
Beta	0.96	1.01	1.03
Alpha	-3.64	-1.80	-1.23

### **Maximum Drawdown**

	Fund	Category	Index
Max Drawdown (%)	_	-21.95	-20.89
Peak Date	_	05/11	05/11
Valley Date	_	09/11	09/11
Max Drawdown (Months)	_	5	5

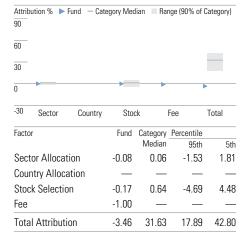


### Trailing Returns (Annualized) 12/31/2017

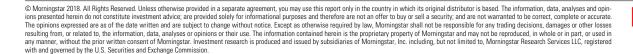
Total Ret %	Investor Ret %	% Rank in Cat	Cat Ret %	Index Ret %
20.79	20.77	71	23.91	25.27
6.84	6.71	89	9.40	10.30
12.77	10.01	71	13.73	15.30
_	_	_	7.67	9.10
12.88	_	_	10.80	12.78
12.88	_	_	10.80	12.78
	Ret % 20.79 6.84 12.77 — 12.88	Ret % Ret % 20.79 20.77 6.84 6.71 12.77 10.01 — — 12.88 —	Ret %         Ret %         in Cat           20.79         20.77         71           6.84         6.71         89           12.77         10.01         71           —         —         —           12.88         —         —	Ret %         Ret %         in Cat         Ret %           20.79         20.77         71         23.91           6.84         6.71         89         9.40           12.77         10.01         71         13.73           —         —         7.67           12.88         —         —         10.80

### Rolling-Returns Summary 12/31/2017

### 3-Year Performance Attribution 12/31/2017



Performance Attribution Index Proxy: iShares Russell Mid-Cap Growth ETF





**DEOPX** 

Morningstar Analyst Rating
Bronze

People

**Morningstar Category** US Fund Mid-Cap Growth

Category Index Russell Mid Cap Growth TR USD

## This fund is overseen by an experienced crew.

### People Pillar

Positive

Dec 22, 2017 | The veteran group behind this fund earns a Positive People rating.

George Smith has managed this fund since its December 2010 inception. He and Chris Pearson, the fund's comanager since August 2013, have worked together since the latter joined the firm in 2006 as a sell-side analyst with advisor Davenport & Company's brokerage division (a role Smith also had from 1997 to 2007). Thus far, they've generated fine total and risk-adjusted returns at this fund, as well as at Davenport Small Cap Focus DSCPX, which they've comanaged since its December 2014 launch. That fund is off to an impressive start.

Smith and Pearson are backed by an analyst team of nine, but they primarily work with three of them: David West, a 27-year Davenport veteran who covers financial and defense stocks; Kevin Bennett, a generalist who worked at the firm

as a sell-side analyst in 2007-11 before leaving and then rejoining the firm in 2016 as an analyst with this team; and Jeff Omohundro, a generalist who joined Davenport in 2012 as an analyst after 17 years at Wells Fargo covering restaurants, food, and beverages on the sell side. In addition to the six other analysts, Davenport has an investment policy committee that consists of Smith, Pearson, West, and seven other members (none of whom are analysts). The committee focuses on managing Davenport's three other funds, which have posted less impressive results.

### **Experience and Asset Load**



### **Management Team**

Number of ManagersLongest Tenure27.08 Years

**5-Year Manager-Retention Rate** (Firm-wide) 98%

Largest Manager Investment in Fund 100,001 to 500,000 USD

Advisor

Davenport & Company LLC

Subadvisor

### George L. Smith 12/10 to Present

Years of Experience	Investment in Fund
15	100,001 to 500,000 USD
Fund AUM	Current Funds Managed
1,756 Mil USD	5

Largest Funds Managed	Tenure Dates Role	Fund Size Mil USD	Investment Mil USD	Turnover Ratio Avg	Tenure Ret %	Index Ret %
Davenport Value & Income Fund	12/10to Present 1 of 7	661.43	None	25	13.40	12.46
Davenport Core Fund	08/10to Present 1 of 7	462.47	None	25	13.84	16.49
Davenport Equity Opportunities Fund	12/10to Present 1 of 2	405.67	< 0.5	31	12.88	12.78
Davenport Balanced Income Fund	12/15to Present 1 of 9	122.19	None	12	10.12	11.56
Davenport Small Cap Focus Fund	12/14to Present 1 of 2	103.81	< 0.5	33	11.36	9.95

### Christopher G. Pearson 08/13 to Present

Years of Experience 11	Investment in Fund 100,001 to 500,000 USD
Fund AUM	Current Funds Managed
509 Mil USD	2

Largest Funds Managed	Tenure Dates	Role	Fund Size	Investment	Turnover	Tenure	Index
			Mil USD	Mil USD	Ratio Avg	Ret %	Ret %
Davenport Equity Opportunities Fund	08/13to Present	1 of 2	405.67	< 0.5	33	9.89	11.89
Davenport Small Cap Focus Fund	12/14to Present	1 of 2	103.81	< 0.5	33	11.36	9.95



**DEOPX** 

Morningstar Analyst Rating
Bronze

## **Parent**

Morningstar Category
US Fund Mid-Cap Growth
TR USD
Category Index
Russell Mid Cap Growth
TR USD

## Some elements are appealing, but the overall picture is mixed.

### **Parent Pillar**

Neutral

Dec 21, 2017 | Davenport & Company, based in Richmond, Virginia, has pockets of strength in its asset-management business. But it is not stellar on that front, and the firm's brokerage is a complicating factor. It earns a Neutral Parent rating.

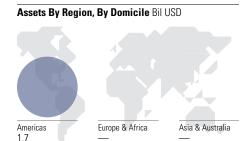
The firm's history as a broker dates back to the 1860s, while its asset-management division

didn't get started until the 1980s as an outgrowth of the management of the firm's profit-sharing plan. However, the asset manager has gradually grown--it now oversees \$7 billion in assets and generates 55% of Davenport's revenues. Two of the firm's five strategies are more than 15 years old; they're managed by an investment policy committee backed by an analyst team, and while their risk-adjusted results are solid, total returns are unremarkable. Two newer strategies are managed by a subset of that team and have thus far been more distinctive in both their approach and their records.

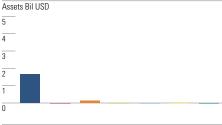
The fifth strategy is a 60/40 combination of one of the old strategies and bond ladders.

The funds clear virtually all of their trades through the in-house brokerage, which creates the potential for a conflict of interest, but the firm has waived all commissions for the funds and intends to continue that practice. If the funds grow substantially--a possibility, as the firm is expanding their distribution--trading costs could as well.

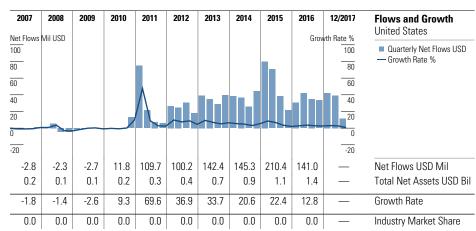
Firm ownership is spread across 250 employees, and no one can own more than 10% of the firm



### Asset Class Breakdown United States

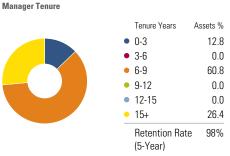


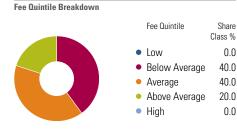


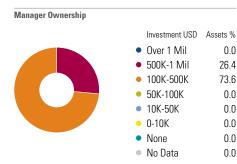


### Fund Family Details United States









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**DEOPX** 

Morningstar Analyst Rating
Bronze

Price

Morningstar Category
US Fund Mid-Cap Growth

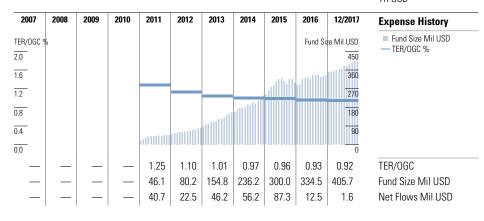
Category Index Russell Mid Cap Growth TR USD

### Fundholders get a good deal here.

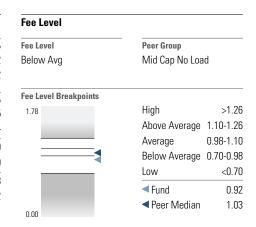
### Price Pillar • Positive

Dec 22, 2017 | This fund earns a Positive Price rating for its relatively modest fees. It charges 0.92%, 11 basis points below the median for no-load midcap stock funds, earning a Morningstar Fee Level of Below Average. The fund also does not pay brokerage commissions: Its trades go through Davenport's affiliated brokerage, and the firm waives the commissions (as it does for its other four funds). The firm intends to continue that practice.

The fund's tax efficiency has been average. Its tax-cost ratio (the amount per year that the fundholders in taxable accounts lose to taxes on distributions) was 1.41% over five years—a little below the category median.



### **Expense Breakdown Net Expense Ratio** 0.92 Annual Report 03/31/17 Prospectus 08/01/17 0.92 **Selected Components** % Management Actual 0.75 12b-1 Fee Brokerage Commission (% of Avg Net Assets) 0.00 Category Average 0.10 Tax Cost Ratio (3-Year) 0.48 Potential Capital Gains Exposure 22



### **Share Class Information**

Other	DEOPX	Open	0.92	Below Avg	Mid Cap No Load	_	_	_	5,000	0.43	1.57
			Ratio			Fee	Load	Load	Initial Inv	Bil USD	Mil USD
Share Class	Identifier	Status	Expense	Fee Level	Peer Group	12b-1	Front	Deferred	Minimum	Assets	1-Yr Flow



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	2016	2017	2018	
<b>℧</b> Gold				
Silver				
<b>Bronze</b>				
Neutral				
Negative				
Not Ratable				

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

### 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 fund's investment team is a significant key to its ability to deliver superior performance relative to its benchmark and/or peers. Evaluating a fund's investment team requires that analysts assess several relevant items including how key decisions are made.

### Paren

We believe the parent organization is of utmost importance in evaluating funds. The fund's 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.

### Proces

We look for funds 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 fund 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 fund is penalised for high fees or rewarded for low fees can vary with region. In Europe, for example, funds are penalised they land in the most expensive quintile of their Monningstar category and are rewarded if they land in the cheapest quintile. The assessment is made using annual expense ratios, but in the case of funds 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 fund; the difference between them corresponds to differences in the level of analyst conviction in a fund's ability to outperform its benchmark and peers through time, within the context of the level of risk taken.

### Gold

Represents funds that our analyst has the highest-conviction in for that given investment mandate. By giving a fund 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 fund must distinguish itself across the five pillars that are the basis for our analysis.

### Silver

Represents funds our analyst has high-conviction in, but not in all of the five pillars. With those fundamental strengths, we expect these funds 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 funds that have advantages that clearly outweigh any disadvantages across the pillars, giving analyst the conviction to award them a positive rating. We expect these funds to beat their relevant performance benchmark and/ or peer group within the context of the level of risk taken over a full market cycle (or at least five years).

### Neutra

Represents funds in which our analysts don't have a strong positive or negative conviction. In our judgment, these funds 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 funds 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 funds 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 may also use two other designations in place of a rating

### Under Reviev

This designation means that a change that occurred with the fund or at the fund 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.

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The Morningstar Star Rating is a proprietary data point that is quantitatively driven. Funds are rated from one to five stars based on how well the fund performed (after adjusting for risk and accounting for sales charges) in comparison to similar funds. Within each Morningstar Category, the top 10% of funds receive five-stars and the bottom 10% receives one-star. Funds 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. Funds with less than three years of history are not rated. Morningstar Star Ratings are based entirely on a mathematical evaluation of past performance. Morningstar 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 fund's top ten holdings as of the dated noted. For each underlying holding, a series of data points is provided including, where applicable, that security's Economic Moat 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 <u>narrow moat</u> are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. <u>Wide-moat</u> 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, <u>no-moat</u> companies will see their normalized returns gravitate toward the firm's cost of capital more quickly than companies with moats.

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**HABYX** 

Morningstar Analyst Rating

Bronze

**Morningstar Category Category Index** Total Assets Current Yield % Inception Date Domicile/ **Morningstar Rating** Currency US Fund Intermediate-Term Bond BBgBarc US Agg Bond TR USD 2 3 3 4 27 07/22/96 \*\*\* USA/USD Mil USD **Fixed Income Style** 2008 2009 2011 2012 2013 2015 2016 2017 Performance 12/31/17 ∇ ∇ Growth of 10.000 Ret Annualized USD USD ■ Fund 15,645 4.15 t Quality 20K Med 15,194 Category 3.88 Index 15,842 Low ▼ Full Manager Change 7 Partial Manager Change Mod Ltd Fxt → Bear Market Interest Rate Sensitivity Morningstar Rating **Regional Exposure** Quartile Rank in Category 63 56 48 55 37 39 44 36 69 23 12 Percentile Rank in Category 7.24 -1.47 -0.56 4.69 -5.39 13.29 6.70 7.49 5.77 4.20 4.98 % Total Return (USD) -0.02 -0.69 -0.69 0.84 0.48 0.59 -0.31 0.97 -0.47-0.04 1.27 +/- Category Furone & Asia & -10.63 -2.28 7.35 0.70 -1.14 3.27 0.56 -0.20-1.11 1.55 1.44 +/- Index 2.5% 72.2% 0.0% **Process** Fixed Income Style Box People Asset Allocation 03/12 Stock
 Bond
 Cash
 Other Campe Goodman Joseph F. Marvan 03/12 Top 3 Fixed Income Super Sectors 46 % 43 30 41 41 41 38 43 52 48 Robert D. Burn 03/16 22 18 25 20 16 21 30 % **Government** 15 16 14 **Total Named Managers** 3 31 36 37 29 30 19 % Corporate 33 30 29 26 0.59 0.58 0.56 0.54 0.49 0.55 0.51 0.44 0.45 0.46 % Price TER/OGC

### So far, so good.

### **Analyst View**

### **Elizabeth Foos**

Senior Analyst

Morningstar Analyst Rating

Morningstar Pillars

Process | Page 2-3 Positive

Performance | Page 4 Neutral

People | Page 5 Positive

Parent | Page 6 Neutral

### Morningstar Analyst Rating

Price | Page 7

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.

Neutral

### Analyst Rating Spectrum

<b>♥</b> Gold <b>♥</b> Silver <b>♥</b> Bronze	Neutral	Negative
---	---------	----------

Dec 28, 2017 | Hartford Total Return Bond is run by an experienced team of managers who apply a solid, risk-conscious approach. Returns have been solid over the current team's tenure, albeit more volatile than the intermediate-term bond Morningstar Category norm, while some of its share classes are attractively priced. The fund earns a Morningstar Analyst Rating of Bronze.

The resources backing the fund are impressive. In March 2012, Hartford transferred responsibility for managing its fixed-income fund lineup to subadvisor Wellington Management. At that time, veteran Wellington managers Joseph Marvan, Campe Goodman, and L.T. Hill took over the portfolio. Longtime contributor Robert Burn replaced Hill as a named manager here when Hill retired in mid-2016. The current managers boast significant experience, have solid records at other, similarly run separate accounts, and are backed by a large and seasoned analyst team. Wellington also reports continually investing in comprehensive risk systems and quantitative research to support its fixed-income team, which in-

corporates these tools into the day-to-day management of the fund.

And for the most part, the fund has delivered solid returns under this team's watch. From March 2012 through November 2017, the fund earned an average annual return of 3.1%, beating two thirds of a distinct group of category peers and topping its Bloomberg Barclays U.S. Aggregate Bond Index benchmark by 80 basis points. The team attributes some of that success to sector allocation and security selection in the investment-grade corporate-bond space. The fund's flexibility to take credit risk in out-ofbenchmark positions in high-yield bonds, bank loans, and emerging-markets debt may have helped in credit rallies, but it has also generated more volatility than its typical peer. For example, the fund got stung when fixed-income markets got rocky from mid-2015 through early 2016.

While investors in the fund's F shares benefit from below-average fees, fees on other share classes have room to come down. Overall, though, this fund is worth a look.

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HABYX

**Morningstar Analyst Rating** Bronze

Process: Approach

**Morningstar Category** US Fund Intermediate-Term Bond

**Category Index** BBgBarc US Agg Bond TR USD

**Index Proxy** Morningstar US Core Bd TR USD

### Fluid communication and a robust risk framework.

### **Process Pillar**

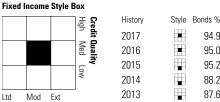
Positive

Dec 28, 2017 | Managers Joseph Marvan, Robert Burn, and Campe Goodman take a "core-plus" approach to investing in the fixed-income markets. In addition to the usual mix of investment-grade corporates, Treasuries, and mortgages, this fund can invest up to 20% in high yield and 40% in foreign bonds. It can also take foreign currency posi-

tions, with a 20% limit on non-U.S.-dollar investments, and can deviate from the duration of the Aggregate Index by up to 1.5 years.

The team's goal is to build a diversified portfolio that outperforms under a variety of market scenarios. The three managers are responsible for determining the fund's broad sector, yieldcurve, and duration exposure, and they solicit feedback through regular meetings with Wellington's cadre of sector specialists and large analyst team. Once these broad parameters are set, sector specialists select securities for various subportfolios that meet the managers' criteria. Risk management is integrated into the day-to-day running of the fund. The team uses an internal risk-management system, which provides regular updates on portfolio tracking error and allows the managers to run scenario analyses and to assess the risk-adjusted performance of the various sleeves of the portfolio. Fluid communication between the managers and research combined with a robust risk framework support a Positive Process rating.

### Style Surveyed 12/31/17



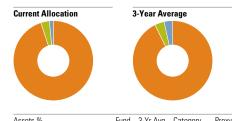
### 94.9 95.0 95.2 88.2 87.6 Interest Rate Sensitivity Bonds % is based on portfolio data **Style Box Factors**

Credit Quality	Fund	3-Yr Avg	Category	Proxy
Average Credit Quality	BBB	BBB	BBB	AA
Investment Grade %	90.0	85.4	94.1	100.0
Below Invest Grade %	9.2	11.6	5.4	0.0
Interest Rate Sensitivity				
Avg Effective Duration	6.0	5.6	5.1	5.8
Avg Modified Duration	_	_	5.0	_
Avg Effective Maturity	8.9	9.6	7.2	7.7

### Income 12/29/17

12,20,17				
	Fund	3-Yr Avg	Category	Proxy
Current Yield	2.7	_	2.8	_
12-Month Yield	3.6	2.8	2.4	_
SEC Yield	2.7	2.9	2.3	_
SEC Yield surveyed 12/31/17				
Average Coupon	3.1	3.1	3.4	3.1
Average Coupon surveyed 12/31/17				

### Asset Allocation 12/31/17



A33613 /0	Tullu	J-11 Avy	Category	ΠΟΛΥ
<ul> <li>U.S. Equities</li> </ul>	0.0	0.0	0.0	0.0
<ul><li>Non-U.S. Equities</li></ul>	0.0	0.0	0.0	0.0
<ul><li>Bonds</li></ul>	94.9	92.7	96.5	100.0
<ul><li>Cash</li></ul>	3.5	3.9	2.8	0.0
<ul><li>Other</li></ul>	1.6	3.4	0.7	0.0

### Regional Exposure 12/31/17

Top 5 Countries Bond %	Fund	3-Yr Avg	Category	Proxy
United States	66.3	35.4	86.1	67.8
Cayman Islands	4.9	4.5	1.1	0.0
United Kingdom	0.7	0.6	1.5	1.4
Canada	0.4	0.2	1.1	0.9
United Arab Emirates	0.4	0.0	0.0	0.1

### **Sectors** 12/31/17 **Fixed Income Super Sectors** Assets % ■ Fund — Cat — Proxy 60 45 30 15 ή 0 企 72

ixed Income Sectors	Fund	3-Yr Avg	Category	Proxy
Government	29.6	13.1	25.8	42.4
U.S. Treasury	6.9	7.9	20.7	40.0
U.S. Treasury Inflation-Protected	3.6	1.6	2.4	_
U.S. Agency	0.0	0.3	1.2	1.3
Non-U.S. Government	0.9	1.5	1.3	0.0
Other Government Related	18.2	1.8	0.2	1.0
Corporate	18.5	26.7	31.3	28.9
Corporate Bond	16.1	23.7	31.0	28.9
Bank Loan	1.6	2.6	0.1	0.0
Convertible	0.8	0.3	0.2	0.0
Preferred	0.0	0.0	0.1	0.0
Securitized	46.5	52.5	38.4	28.7
Agency MBS Pass- Through	20.6	17.1	22.9	28.7
Agency MBS ARM	0.0	0.0	0.2	0.0
Agency MBS CMO	1.5	1.4	3.7	0.0
Non-Agency Residential MBS	4.1	5.6	1.1	0.0
Commercial MBS	5.2	18.0	2.7	0.0
Asset-Backed	15.0	10.5	7.5	0.0
Other Securitized	0.0	0.0	0.1	0.0
Municipal	0.9	0.7	0.8	0.0

3.4

-0.2

Cash

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2.7

-0.1

0.0

0.0

3.9

0.0

HABYX

**Morningstar Analyst Rating** Bronze

Process: Portfolio **Morningstar Category** US Fund Intermediate-Term Bond

**Category Index** BBgBarc US Agg Bond TR USD

**Index Proxy** Morningstar US Core Bd TR USD

### This is a "core-plus" approach to the fixedincome market.

### **Process Pillar**

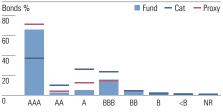
Positive

Dec 28, 2017 | Typically, the managers allocate roughly 70% of the portfolio in core sectors, which include a broad range of investment-grade fixed-income securities in U.S. government and corporate debt, mortgage-backed securities, and other asset-backed securities. The remaining 30% of assets are invested in "plus" sectors: high-yield bonds and bank loans, non-U.S.-dollar bonds, and emerging-markets debt.

As of November 2017, the fund maintained moderate overweighting to mortgages (44% of assets), ABS (16%), including collateralized loan obligations, and commercial MBS (6%), relative to the Aggregate Index. Among plus sectors, the portfolio also held modest stakes in highyield bonds and bank loans (roughly 2% each), favoring BB rated securities and contingent convertibles of large European banks. The fund also held small stakes developed non-U.S.-dollar debt and emerging-markets debt, which were both roughly 2.5% of assets in September 2017 but decreased to below 2% as of Nov. 30.

The fund held a modest underweighting to investment-grade corporates (24%) with a preference for financials. This position was down from roughly 30% at the end of 2016 and was just shy of its bogy's. The fund was also light in Treasuries (16%), holding nearly half the amount of its benchmark.

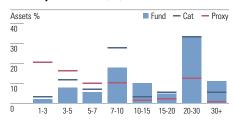
### Credit Quality 12/31/17



00								
40								
20		_						
0	AAA	AA	А	BBB	BB	В	<b< td=""><td>NR</td></b<>	NR
Credi	t Quality			Fund	3-Yr <i>A</i>	lvg	Category	Proxy
ДДД	١			65.9	57	7.9	36.4	70.6
ΑА				2.8	3	8.8	9.3	3.6
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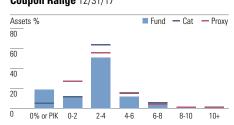
AAA	65.9	57.9	36.4	/0.6
AA	2.8	3.8	9.3	3.6
Α	5.3	7.4	25.5	11.9
BBB	16.0	16.3	22.8	13.9
BB	3.7	5.6	4.1	0.0
В	3.2	2.7	8.0	0.0
Below B	2.3	3.3	0.4	0.0
Not Rated	0.8	3.0	0.5	0.0

### Maturity Schedule 12/31/17



Maturity (Years)	Fund	3-Yr Avg	Category	Proxy
1 to 3	2.0	2.9	2.9	20.1
3 to 5	7.8	6.7	11.5	15.9
5 to 7	5.7	5.8	6.6	9.7
7 to 10	17.9	15.2	27.3	9.8
10 to 15	10.1	8.7	2.8	1.2
15 to 20	4.8	6.1	5.1	1.9
20 to 30	33.3	23.6	32.9	12.1
Over 30	11.1	20.1	5.2	0.5

### **Coupon Range** 12/31/17



Coupon Range	Fund	3-Yr Avg	Category	Proxy
0% or Paid In Kind	18.6	2.7	4.6	0.0
0 to 2	11.0	17.9	10.7	26.3
2 to 4	50.6	49.9	62.7	54.7
4 to 6	11.7	17.0	14.3	15.1
6 to 8	3.4	4.9	4.9	3.3
8 to 10	0.3	8.0	0.4	0.6
More than 10	0.2	0.1	0.2	0.0

### Portfolio Holdings 12/31/17

Bond Holdings Ed 1,523 0	quity Holdings	Other H 78	Other Holdings 78		Assets in Top 10 Ho $26\%$	Idings Turnover Ratio (F 56%	Reported) Current Yield 2.7%
Top 10 Holdings		Country	Currency	Assets %	Super Sector	Primary Sector	Secondary Sector
Us 5yr Note (Cbt) Mar18 Xcbt 20	180329	_	_	12.68	Government	Government Related	Treasury Future
Us 2yr Note (Cbt) Mar18 Xcbt 20	180329	_	_	4.52	Government	Government Related	Treasury Future
Fed Natl Mort Assc 3.5%		USA	USD	3.06	Securitized	Agency Mortgage Backed	Agency Pass Thru
US Treasury Note		USA	USD	1.91	Government	Government	Inflation Protected
FHLMC 3%		USA	USD	1.76	♠ Securitized	Agency Mortgage Backed	Agency Pass Thru
US Treasury Note		USA	USD	1.73	Government	Government	Inflation Protected
GNMA 3%		USA	_	1.73	Securitized	Agency Mortgage Backed	Agency Pass Thru
US LONG BOND(CBT) MAR18 XC	BT 20180320	_	_	1.68	Government	Government Related	Treasury Future
Fannie Mae Single Family TBA 2.	.5%	USA	_	-1.68	★ Securitized	Agency Mortgage Backed	Agency Pass Thru
LONG GILT FUTURE MAR18 IFLL	20180327	_	_	-1.65	Government	Government Related	Treasury Future



**HABYX** 

Morningstar Analyst Rating
Bronze

### Performance

Morningstar Category US Fund Intermediate-Term Bond Category Index BBgBarc US Agg Bond TR USD

### Solid returns over the longer haul.

### Performance Pillar

Neutral

Dec 28, 2017 | Lead manager Joe Marvan and the team at Wellington took over responsibility for this portfolio in early March 2012. Since then through November 2017, the fund gained an average annual return of 3.1%, topping more than two-thirds of a distinct group of peers in the intermediate-bond Category and its index by nearly 80

basis points. Investors in the fund's pricier A shares fared a bit worse but still average overall. Those results were accompanied by more volatility, as measured by standard deviation, than most rivals, which supports a Neutral Performance rating.

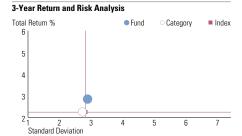
Over time, this fund's flexibility to invest in riskier corners of the market can provide a boost in environments that reward risk-taking but expose it to trouble in flights to quality. For example, in the turbulent markets of late 2015 and early 2016, the fund lost roughly 90 basis points

and landed in the worst quartile of its rivals. Allocations to high yield and emerging-markets debt were the primary detractors. The fund's 4.5% return for the year to date through November 2017 landed in the category's best quartile (distinct funds). While positioning in corporate credit debt was a positive contributor overall, the fund's allocation to those riskier segments, including emerging-markets debt, high yield, and nonagency MBS also helped. In particular, the fund's stake in BB rated high-yield bonds, bank loans, and European financials helped it keep pace.

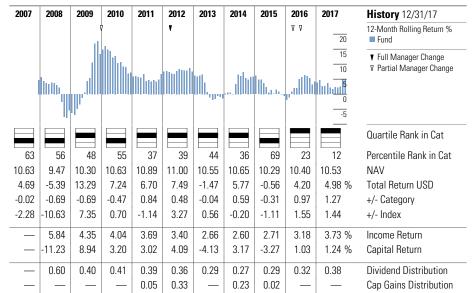


Overall Morningstar Rating ★★★★

### Risk Analysis 12/31/17



3-Year Risk Measures	Fund	Category	Index
Standard Deviation	2.89	2.72	2.82
Sharpe Ratio	0.83	0.67	0.64
R-Squared	84.03	84.55	_
Beta	0.94	0.87	_
Alpha	0.71	0.21	_
Maximum Drawdown	Fund	Category	Index
Max Drawdown (%)	-9.79	-9.87	-3.83
Peak Date	03/08	02/08	04/08
Valley Date	10/08	10/08	10/08
Max Drawdown (Months)	8	9	7
Upside/Downside	Fund	Category	Index
Upside Capture Ratio	105.5	93.5	_
Downside Capture Ratio	86.8	88.6	_



### **Returns** 12/31/17

Trailing Returns	Total Ret %	Investor Ret %	% Rank in Cat	Cat Ret %	Index Ret %
1 Year	4.98	4.73	12	3.71	3.54
3 Years	2.84	1.84	19	2.22	2.24
5 Years	2.54	1.56	23	2.05	2.10
10 Years	4.10	3.26	53	4.06	4.01
Tenure 03/12	3.16	_	_	2.63	2.40
Inception 07/96	5.41	_	_	4.76	5.33

### **Rolling Return Summary**

30%	36-Month Rolling Periods 176 Observations, 14 Years
42 28	The shading and percentages correspond to how often the fund returns landed in each
0	category quartile.



Year	Income	Income %	Capital	Capital %
	Ret %	Rank in Cat	Ret %	Rank in Cat
2013	2.66	38	-4.13	57
2014	2.60	50	3.17	37
2015	2.71	33	-3.27	73
2016	3.18	14	1.03	38
01/00	3.73	4	1.24	50

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**HABYX** 

Morningstar Analyst Rating Bronze

## People

**Morningstar Category** US Fund Intermediate-Term Bond Category Index BBgBarc US Agg Bond TR USD

### An experienced team at the helm.

### **People Pillar**



Dec 28, 2017 | Wellington Management took over subadvisory responsibilities here in March 2012; previously the fund was run by Hartford Investment Management Company. An experienced team of Wellington veterans--Joseph Marvan, Campe Goodman, and L.T. Hill--took over management of the portfolio at that time. Marvan,

who heads the fixed-income group's broad market team and has been with the firm since 2003, is now the lead manager. Goodman, who heads the sector-rotation team, has been at the firm since 1999. Upon his retirement in mid-2016, Hill was replaced by Robert Burn. Although recently named to the fund, Burn has been with the firm since 2007 and has been contributing to the effort here for several years. The team has a good record running similarly managed separate accounts, which further supports a Positive People rating.

Marvan, Goodman, and Burn are responsible for making broad asset-allocation, duration, and yield-curve decisions, while sector specialists implement these recommendations within the various sleeves of the portfolio. Christopher Jones, a two-decade Wellington veteran, is responsible for the high-yield subportfolio.

The team is backed by a deep and experienced analyst bench that includes a 12-person investment-grade credit team and a 12-strong high-yield credit research group, both with close to two decades of investment experience on average.

### **Management Team**

Tenure Years

Years of Experience

### **Experience and Asset Load**



Number of Managers	Longest Tenure	Manager Retention Rate	Largest Manager Investment
3	5.83 Years	5-Year	in Fund
		93%	100,001 to 500,000 USD

### Advisor

Hartford Funds Management Company, LLC

### Subadvisor

Wellington Management Company LLP

### Campe Goodman 03/12 to Present

18	10,001 to 50,000 USD
Fund AUM	Current Funds Managed
9.036 Mil USD	16

Largest Funds Managed	Tenure Dates	Role	Fund Size Bil USD	Investment Mil USD	Turnover Ratio Avg	Tenure Ret %	Index Ret %
Hartford Total Return Bond HLS Fund	03/12to Present	1 of 3	2.41	< 0.05	71	3.24	2.39
Hartford Total Return Bond Fund	03/12to Present	1 of 3	2.33	< 0.05	70	3.16	2.40
Brighthouse/Wellington Balanced Port	02/14to Present	1 of 5	1.28	None	372	9.54	7.25
Seasons Ser Tr Diversified Fxd Inc Port	10/13to Present	1 of 7	1.00	None	55	2.88	2.96
Hartford Strategic Income Fund	04/12to Present	1 of 3	0.48	< 0.5	75	4.49	2.96

### Joseph F. Marvan 03/12 to Present

100,001 to 500,000 USD
Current Funds Managed
17

Investment in Fund

Largest Funds Managed	Tenure Dates	Role	Fund Size Bil USD	Investment Mil USD	Turnover Ratio Avg	Tenure Ret %	Index Ret %
Hartford Total Return Bond HLS Fund	03/12to Present	1 of 3	2.41	None	71	3.24	2.39
Hartford Total Return Bond Fund	03/12to Present	1 of 3	2.33	< 0.5	70	3.16	2.40
Brighthouse/Wellington Balanced Port	02/14to Present	1 of 5	1.28	None	372	9.54	7.25
Seasons Ser Tr Diversified Fxd Inc Port	10/13to Present	1 of 7	1.00	None	55	2.88	2.96
Seasons Ser Tr Real Return Port Shares	05/15to Present	1 of 3	0.75	None	43	1.39	1.94



**HABYX** 

Morningstar Analyst Rating Bronze

### **Parent**

Morningstar Category US Fund Intermediate-Term Bond Category Index BBgBarc US Agg Bond TR USD

### Improvement continues.

### **Parent Pillar**

Neutral

Nov 17, 2017 | Hartford Funds, a subsidiary of The Hartford, has improved its stewardship profile but remains Neutral-rated while recent changes take hold. In 2012, The Hartford trimmed its business lineup, refocusing on its property-casualty, group benefits, and mutual fund units. At the same time, it moved its fixed-income funds, previously run in-

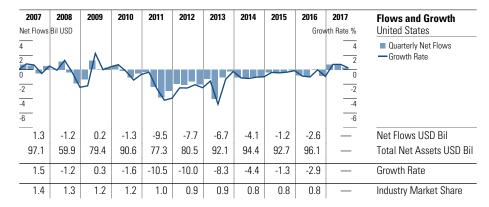
house with mixed results, to well-respected subadvisor Wellington Management Company. Wellington has long run the firm's equity funds--about two thirds of its roughly \$91 billion in fund assets. In 2016, Hartford Funds acquired Lattice Strategies, marking its expansion into exchangetraded funds, and the firm partnered with U.K.based Schroders to expand its investment platform further. After both deals, the firm added 10 strategic-beta and actively managed ETFs and 10 actively managed mutual funds to its offerings.

While the firm mostly leaves day-to-day

investment decisions to its subadvisors, it leads product management and distribution. In 2013, the firm reorganized its distribution effort and grew its internal sales team. The board and management also merged offerings, introduced new strategies, and lowered fees on several funds. While these changes have been positive, and there have been no flagrant missteps, the transitions remain new. Should the firm's recent efforts yield good experiences for fundholders at increasingly competitive costs, our confidence in Hartford Funds would grow.

### Assets By Region, By Domicile Bil USD



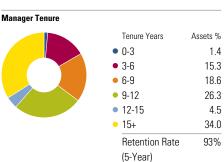


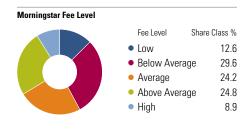
### Asset Class Breakdown United States

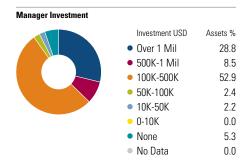


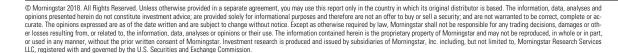
### **Fund Family Details** United States













**HABYX** 

Morningstar Analyst Rating
Bronze

Category Index
BBgBarc US Agg Bond

TR USD

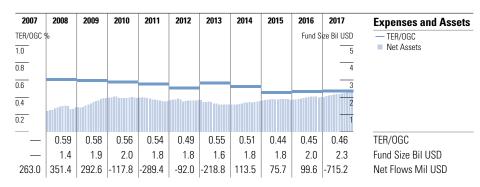
Price

Morningstar Category
US Fund IntermediateTerm Bond

### Below average for some.

### Price Pillar • Neutral

Dec 28, 2017 | Expenses for most of this fund's share classes have come down slightly since 2013 yet are still uneven, supporting a Neutral Price rating. For example, fees on the fund's A shares (34% of net assets) dropped to 87 basis points from 95 basis points in the past four years. Still, that ranks average when compared with similarly distributed share classes in the intermediate-bond category. At the same time, Hartford Funds introduced the less expensive F share class in February 2017, which levies a 45-basis point fee. That's a better deal for those who can afford the \$1 million minimum (42% of assets), as it ranks below average when compared with similarly structured options.

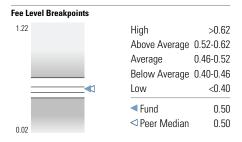


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### **Expense Breakdown Net Expense Ratio** % Annual Report 10/31/17 0.46 Prospectus 03/01/17 0.50 % **Selected Components** Management Actual 0.39 12b-1 Fee Brokerage Commission (% of Avg Net Assets) 0.00 0.07 Category Average Tax Cost Ratio (3-Year) 1.36

Potential Capital Gains Exposure





Share Class Information												
	Share Class	Identifier	Status	Expense	Fee Level	Peer Group	12b-1	Front	Deferred	Minimum	Assets	1-Yr Flow
				Ratio			Fee	Load	Load	Initial Inv	Bil USD	Mil USD
	Inst	HABYX	Open	0.50	Avg	Intermediate-Term Bond Institutional	_	_	_	250,000	0.45	-602.53
	Other	ITBFX	Open	0.45	Below Avg	Intermediate-Term Bond Institutional	_	_	_	1,000,000	0.97	_
	Α	ITBAX	Open	0.87	Above Avg	Intermediate-Term Bond Front Load	0.25	4.50	_	2,000	0.78	8.80
	С	HABCX	Open	1.60	Above Avg	Intermediate-Term Bond Level Load	1.00	_	1.00	2,000	0.06	-11.52
	Inst	ITBIX	Open	0.61	Above Avg	Intermediate-Term Bond Institutional	_	_	_	2,000	0.04	-109.77
	Retirement	ITBUX	Open	0.86	Low	Intermediate-Term Bond Retirement, Medium	0.25	_	_	0	0.01	-1.04



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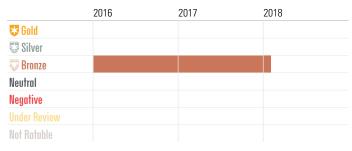
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The date shown next to the Morningstar Analyst Rating is the date on which Morningstar Manager Research Analyst assigned or reaffirmed the current rating for the fund based on the analyst's latest review and research report for the

#### 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 fund's investment team is a significant key to its ability to deliver superior performance relative to its benchmark and/or peers. Evaluating a fund's investment team requires that analysts assess several relevant items including how key decisions are made.

#### Paren

We believe the parent organization is of utmost importance in evaluating funds. The fund's 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 funds 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

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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 fund 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 fund is penalised for high fees or rewarded for low fees can vary with region. In Europe, for example, funds are penalised 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 annual expense ratios, but in the case of funds 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 fund; the difference between them corresponds to differences in the level of analyst conviction in a fund's ability to outperform its benchmark and peers through time, within the context of the level of risk taken.

#### Gold

Represents funds that our analyst has the highest-conviction in for that given investment mandate. By giving a fund 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 fund must distinguish itself across the five pillars that are the basis for our analysis.

#### Silve

Represents funds our analyst has high-conviction in, but not in all of the five pillars. With those fundamental strengths, we expect these funds 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 funds that have advantages that clearly outweigh any disadvantages across the pillars, giving analyst the conviction to award them a positive rating. We expect these funds to beat their relevant performance benchmark and/ or peer group within the context of the level of risk taken over a full market cycle for at least five years).

#### Neutral

Represents funds in which our analysts don't have a strong positive or negative conviction. In our judgment, these funds 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 funds 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 funds 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 may also use two other designations in place of a rating:

#### Under Reviev

This designation means that a change that occurred with the fund or at the fund 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 <a href="http://corporate1.morningstar.com/ResearchLibrary/">http://corporate1.morningstar.com/ResearchLibrary/</a>

#### Morningstar Star Rating

The Morningstar Star Rating is a proprietary data point that is quantitatively driven. Funds are rated from one to five stars based on how well the fund performed (after adjusting for risk and accounting for sales charges) in comparison to similar funds. Within each Morningstar Category, the top 10% of funds receive five-stars and the bottom 10% receives one-star. Funds 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. Funds with less than three years of history are not rated. Morningstar Star Ratings are based entirely on a mathematical evaluation of past performance. Morningstar 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 fund's top ten holdings as of the dated noted. For each underlying holding, a series of data points is provided including, where applicable, that security's Economic Moat as of the date noted.

#### Economic Moa

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 <u>narrow moat</u> are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. <u>Wide-moat</u> 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, <u>no-moat</u> 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.morphostar.com/equitydisclosures

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

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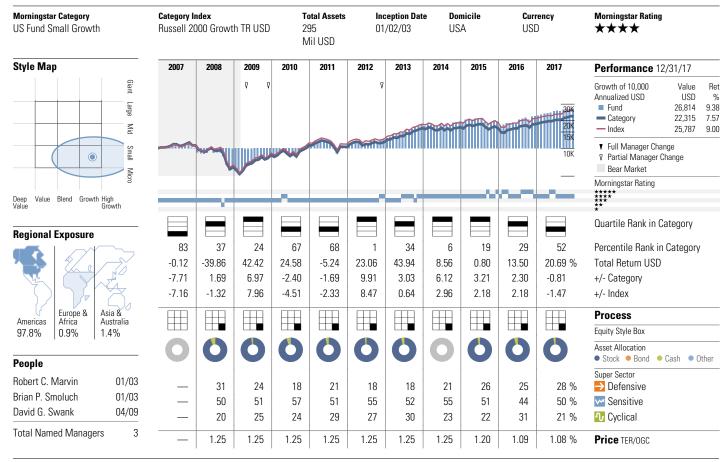
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**HRSMX** 

Morningstar Analyst Rating



# A high price tag limits this fund's appeal.

#### **Analyst View**

#### Andrew Daniels, CFA, CMA

Senior Analyst

Morningstar Analyst Rating	Neutral			
Morningstar Pillars				
Process   Page 2-3	<ul><li>Neutral</li></ul>			
Performance   Page 4	Positive			
People   Page 5	Positive			
Parent   Page 6	Positive			
Price   Page 7	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

<b>₩</b> Gold	Silver	<b>ॗ</b> Bronze	Neutral	Negative
---------------	--------	-----------------	---------	----------

Jan 04, 2018 | Hood River Small-Cap Growth features a veteran management team, but it may struggle to overcome its high expenses. The fund earns a Morningstar Analyst Rating of Neutral.

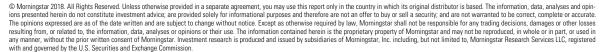
Brian Smoluch, Robert Marvin, and David Swank lead this strategy. Smoluch and Marvin left Columbia Management's small- and mid-cap investment team in 2002 to launch this strategy through a separate account. The team launched this mutual fund in 2003 and recruited Swank from GMT Capital in 2009. The experienced trio is supported by a single research analyst, Rohan Kumar.

The team aims to exploit an information gap in small-cap stocks, where it believes that limited and declining sell-side coverage yields opportunities to gain information advantages over the market. The team pursues unique insights into potential investments by speaking with firms' management teams, suppliers, customers, as well as industry experts. With these insights, the team forecasts earnings and purchases stocks that it believes are likely to beat Wall Street's earnings estimates. When the managers buy a stock, they in-

tend to hold it until the gap between their own estimates and Wall Street's converges--often triggered by a positive earnings surprise. This focus on shorter-term results generates high turnover. Indeed, the fund's turnover has averaged 136% over the past five calendar years, well above its typical small-growth peer's 82%.

The fund has delivered strong long-term results. From its January 2003 inception through December 2017, its 12.4% annualized return topped the Russell 2000 Growth Index's 11.4% gain and 92% of its small-growth peers. The fund has also outperformed on a risk-adjusted basis. But this is an expensive offering: All three of the fund's share classes earn Morningstar Fee Levels of Above Average. Moreover, the high-turnover approach results in elevated brokerage commissions, which are not included in the expense ratio. Overall, high expenses present a large hurdle for the fund to overcome; thus, the fund's prospects relative to lower-cost alternatives are questionable.

Connor Young contributed to this report.





**HRSMX** 

Morningstar Analyst Rating

### Process: Approach

Morningstar Category US Fund Small Growth Category Index Russell 2000 Growth TR USD Index Proxy iShares Russell 2000 Growth FTF

#### Shorter-term focused.

#### **Process Pillar**

Neutral

Jan 04, 2018 | It's unclear whether the fund's high-turnover approach offers an enduring edge over peers, and it earns a Neutral Process rating.

The team focuses on firms with market caps less than \$5 billion, an area where it believes that limited and declining sell-side analyst coverage yields opportunities to gain information

advantages over the market. Within this universe, the team targets firms that have grown revenues or earnings by at least 15%, sell superior products in expanding industries, generate strong cash flows, and are guided by capable management teams. It dives into prospective investments' fundamentals--meeting with firms' management, customers, suppliers, as well as industry experts--to obtain unique insights into potential investments. With these insights, the team forecasts earnings and purchases stocks that it believes are likely to beat Wall Street's earnings estimates.

When the managers buy a stock, they intend to hold it until the gap between their own estimates and Wall Street's converges--often triggered by a positive earnings surprise. This focus on shorter-term results generates high turnover. Indeed, the fund's turnover has averaged 136% over the past five years, well above its typical small-growth peer's 82%. This results in high brokerage commissions, which are not included in the already uncompetitive expense ratio. It's questionable as to whether the approach will provide an enduring edge over lower-cost alternatives.

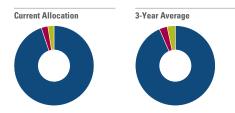
#### Equity Style Box 09/30/2017



### Style Box Factors 09/30/2017

Market Cap	Fund	3-Yr Avg	Category	Proxy
Giant/Large	0.0	0.3	0.3	0.0
Mid	30.7	24.4	30.1	7.0
Small/Micro	69.3	75.3	69.6	93.0
Avg Market Cap Bil USD	2.3	1.9	3.7	1.9
Value Measures	Fund	3-Yr Avg	Category	Proxy
Price/Prospect. Earnings	24.6	22.0	29.0	23.6
Price/Book	3.4	2.9	4.1	3.8
Price/Sales	1.5	1.4	2.2	1.5
Price/Cash Flow	9.6	10.5	14.1	10.2
Dividend Yield	0.3	0.4	0.6	8.0
Growth Measures	Fund	3-Yr Avg	Category	Proxy
Long-Term Earnings %	12.7	15.3	11.4	13.1
Historical Earnings %	46.7	19.7	15.7	9.9
Sales %	5.4	-7.0	13.5	6.5
Cash Flow %	12.4	10.1	26.1	11.1
Book-Value %	3.5	0.6	2.9	2.9

#### Asset Allocation 09/30/2017



#### Regional Exposure 09/30/2017

Market Type Fauity %

			,	. ,
Developed	100.0	98.7	99.7	100.0
Emerging	0.0	1.3	0.3	0.0
Top 5 Countries Equity %	Fund	3-Yr Avg	Category	Proxy
United States	97.3	96.7	97.3	99.6
Korea, Republic Of	1.4	0.3	0.0	0.0
Israel	0.9	1.1	0.6	0.1
Canada	0.5	0.7	0.6	0.0

Fund 3-Yr Avg Category

Proxy

#### Economic Moat 09/30/2017

Moat Rating	Fund	3-Yr Avg	Category	Proxy
Wide Moat	4.4	3.1	36.2	7.0
Narrow Moat	36.0	47.0	42.5	35.3
No Moat	59.6	50.0	21.3	57.7
Coverage Ratio	18.8	13.8	17.3	10.1

#### Key Ratios 09/30/2017

	Fund	3-Yr Avg	Category	Proxy
Net Margin %	3.4	2.8	6.6	4.9
ROA %	1.7	1.4	3.7	-0.1
Debt/Total Capital %	32.2	37.2	43.8	40.3
ROE %	7.0	7.8	12.2	7.5

#### • U.S. Equities 94.9 93.5 94.4 99.9 • Non-U.S. Equities 2.7 3.2 2.6 0.4 Bonds 0.0 0.0 0.1 0.0 Cash 2.5 3.3 2.6 -0.3 Other 0.0 0.0 0.4 0.0

#### Sector Delta 09/30/17

Assets %



● Fund▲ Index Proxy

3-Yr Avg

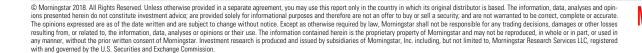
Category

Proxv

Larger sector concentrations versus the index move the investment to the corner of the triangle corresponding to that equity Super Sector.

#### Equity Sector Breakdown 09/30/2017

Sectors	Fund	3-Yr Avg	Category	Proxy
→ Defensive	28.2	23.7	21.9	<b>27.6</b>
Consumer Defensive	4.2	3.0	4.2	3.9
Healthcare	23.9	20.4	16.8	23.0
Utilities Utilities	0.0	0.3	0.9	0.7
<b>™</b> Sensitive	50.3	51.7	45.2	42.6
Communication Serv.	2.3	0.8	0.9	1.6
	0.6	0.2	2.1	1.0
☼ Industrials	13.5	20.2	16.9	15.6
Technology	33.8	30.6	25.3	24.4
<b>℃</b> Cyclical	21.5	24.6	32.9	29.8
📤 Basic Materials	5.5	3.7	5.6	6.8
Consumer Cyclical	7.5	12.8	12.5	13.1
Financial Services	5.9	6.1	11.1	6.5
<b>⚠</b> Real Estate	2.6	2.0	3.7	3.4





**HRSMX** 

Morningstar Analyst Rating

Process: Portfolio

Morningstar Category
US Fund Small Growth

Category Index Russell 2000 Growth TR USD Index Proxy iShares Russell 2000 Growth FTF

#### Favoring technology stocks.

#### **Process Pillar**

Neutral

Jan 04, 2018 | The managers construct a portfolio of 75 to 95 stocks. This diversification, plus a cap on individual positions at 5% of assets, helps to reduce stock-specific risk. The portfolio's sector weightings, however, can be daring: Sector weightings may deviate up to 15 percentage points from the Russell 2000 Growth Index's.

As of September 2017, the fund had a large overweighting to technology at 34% of assets, compared with the benchmark's 24% allocation. Large holdings within tech included photonics-based solutions supplier Coherent COHR and telehealth firm Teladoc TDOC. Conversely, the fund was 6 percentage points underweight in consumer cyclicals. Despite being overweight in healthcare, it was 6 percentage points underweight in biotechnology. The managers believe biotech valuations are stretched, and they are averse to the industry's characteristically low cash

flows and poor product-pipeline visibility.

The team is sensitive to valuations, so price multiples such as price/earnings and price/book value have trended in line with--or below--the benchmark's. Quality metrics are mixed: The fund's return on invested capital and return on assets relative to the benchmark have varied.

The team estimates that it can manage an amount roughly equal to the weighted average market cap of the Russell 2000 Growth Index, which as of December 2017 was around \$2.6 billion. Currently, the strategy holds \$1.6 billion.

#### Similarity to Index Proxy 01/24/2018

Proxy Fund

Circle size represents number of holdings.

Number of Equity Hold	dings
Fund	84
Index Proxy	1,174
Fund Overlap With Inc	lex Proxy
Holdings Overlap	57
Asset Overlap	8.0%

Largest Common Holdings	Fund %	Proxy %
PRA Health Sciences Inc	3.85	0.40
Knight-Swift Transportation Holdings Inc A	2.84	0.51
Integrated Device Technology Inc	1.55	0.38
Grand Canyon Education Inc	1.07	0.38
MKS Instruments Inc	0.99	0.50

Fund %
2.75
2.48
1.99
1.86
1.81

Current Portfolio Date Previous Portfo 09/30/17 06/30/17		ate	Equity Hol 84	laings		Bond Holdings O	5	27%	s in Top 10 H	lolaings	Turnover Ratio (Reported) 134%
Top 10 Holdings		Country		Assets % 06/30/17	Proxy % 09/30/17	First Bought	,	Morningstar Rating for Stocks	Economic Moat	Sector	1-Yr Total Ret %
→ PRA Health Sciences In	С	USA	3.85	3.08	0.40	09/15	<1	**	Narrow	Health	ncare 65.22
Tivity Health Inc		USA	3.57	3.01	0.08	03/17	<1	_	_	🗀 Health	ncare 60.66
⊕ MasTec Inc		USA	3.12	3.29	0.31	12/15	<1	_	_	Indust	rials 27.97
Knight-Swift Transporta	ation Holdings Inc	USA	2.84	1.02	0.51	06/17	<1	*	None	🔅 Indust	rials 33.01
⊕ Coherent Inc		USA	2.75	2.75	_	03/17	<1	_	_	Technology	ology 105.42
Magellan Health Inc		USA	2.72	1.65	0.16	06/17	<1	_	_	Health	ncare 28.31
<ul> <li>First American Treasury</li> </ul>	Obligs Z	USA	2.48	4.03	_	_	_	_	_	_	_
<ul> <li>Lumentum Holdings Inc</li> </ul>		USA	2.09	1.07	0.24	06/17	<1	***	None	Technology	ology 26.52
Old Dominion Freight Li	nes Inc	USA	1.99	1.80	_	03/08	<1	*	None	Indust	rials 53.81
⊕ Teladoc Inc		USA	1.98	1.60	0.16	03/17	<1	_	_	Technology	ology 111.21

New Holdings Largest Purchases	% Assets	Sector	Eliminated Holdings Largest Sales	% Assets	Sector	Largest Position Change
Eldorado Resorts Inc	1.28	<b>A</b>	US Concrete Inc	2.01	A	<ul><li>Lumentum Holding</li></ul>
TTM Technologies Inc	1.01		Swift Transportation Co	1.61	<b>‡</b>	♯ Eldorado Resorts Ir
MKS Instruments Inc	0.99		NuVasive Inc	1.43	•	US Concrete Inc
United Natural Foods Inc	0.97	=	Carbonite Inc	1.13		<ul> <li>Swift Transportation</li> </ul>
Select Medical Holdings Corp	0.83		Bank of the Ozarks Inc	0.59	<b>_</b>	NuVasive Inc     ■

Largest Position Changes	Current %	Prior %
① Lumentum Holdings Inc	2.09	1.07
☼ Eldorado Resorts Inc	1.28	0.00
□ US Concrete Inc     □	0.00	2.01
<ul> <li>Swift Transportation Co</li> </ul>	0.00	1.61
	0.00	1.43



**HRSMX** 

**Morningstar Analyst Rating** Neutral

### Morningstar Category

US Fund Small Growth

2014

data Militarian.

34

43.94

3.03

0.64

0.00

6

8.56

6.12

2.96

0.00

19

0.80

3.21

2.18

0.00

2015

2016

2017

160

120

80

-40

-80

52

20.69 %

-0.81

-1.47

0.00 %

3-Year Performance Attribution 12/31/2017

Category Index Russell 2000 Growth TR HSD

#### Solid long-term results.

Performance

#### **Performance Pillar**

Positive

Jan 04, 2018 | The fund has posted impressive results since its inception and earns a Positive Performance rating.

From the fund's January 2003 inception through December 2017, its 12.4% annualized return topped the Russell 2000 Growth Index's 11.4% gain and 92% of its small-growth peers. Risk-adjusted returns are also solid. In fact, the fund's Sharpe ratio of 0.68 during the same period beat the benchmark's 0.62 and its typical peer's 0.58. What's more, the fund has performed consistently across different market environments, beating its benchmark in 59% of the rolling oneyear periods since inception.

As of December 2017, the fund's five-year trailing return beat 88% of its small-growth peers, driven primarily by the fund's overweighting in-and strong stock selection within--technology. Within technology, semiconductors were the

2010

2011

2012

2007

83

-0.12

-7.71

-7.16

37

-39.86

1.69

-1.32

0.02

2008

2009

largest contributor by a wide margin, as firms including Skyworks Solutions SWKS, Oclaro OCLR, and Integrated Device Technology IDTI posted large gains. Additionally, the fund's underweighting in energy boosted relative performance, as did its bets in consumer cyclicals and basic materials.

The fund turned in a middling 2017, as its 20.7% return lagged its benchmark's 22.2% gain and 51% of its small-growth peers. Its healthcare picks, specifically in biotech, weighed on results during the period. Still, the fund's longer-term record remains solid.

> **History** 12/31/17 12-Month Rolling Return %

▼ Full Manager Change 7 Partial Manager Change

Quartile Rank in Cat

Percentile Bank in Cat

Total Return USD

+/- Category

Income Return

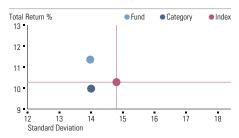
+/- Index

Fund

### Morningstar Rating and Risk 12/31/2017

×	****	7.49	71000071109		Overall Rat
	****	Δvn	Above Avg	10 38	10 Years
*	****	Avg	Above Avg	16.63	5 Years
*	****	Avg	Above Avg	11.35	3 Years
gstar		Morningstar Risk vs Cat	Morningstar Ret vs Cat	Load-Adj Return %	Period
	Mornin	Morningstar	Morningstar	Load-Adj	Period

#### 3-Year Return and Risk Analysis 12/31/17



#### Return/Risk Analysis 12/31/2017

	Fund	Category	Index
Standard Deviation	13.97	14.00	14.80
Sharpe Ratio	0.81	0.73	0.71
R-Squared	53.35	61.20	67.05
Beta	1.02	1.08	1.21
Alpha	0.25	-1.74	-2.68

### **Maximum Drawdown**

	Fund	Category	Index
Max Drawdown (%)	-48.69	-50.82	-49.10
Peak Date	12/07	01/08	01/08
Valley Date	02/09	02/09	02/09
Max Drawdown (Months)	15	14	14

### Trailing Returns (Annualized) 12/31/2017

24

42.42

6.97

7.96

0.00

67

24.58

-2.40

-4.51

0.00

68

23.06

9.91

8.47

0.00

-5.24

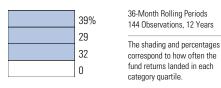
-1.69

-2.33

0.00

	Total Ret %	Investor Ret %	% Rank in Cat	Cat Ret %	Index Ret %
1 Year	20.69	19.47	52	21.50	22.17
3 Years	11.35	12.53	29	9.97	10.28
5 Years	16.63	16.25	12	13.96	15.21
10 Years	10.38	4.89	13	8.42	9.19
Tenure 01/03	12.42	_	_	10.00	11.39
Inception 01/03	12.42	_	_	10.00	11.39

#### Rolling-Returns Summary 12/31/2017



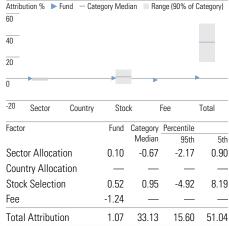
29

13.50

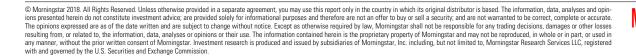
2.30

2.18

0.00



Performance Attribution Index Proxy: iShares Russell 2000 Growth ETF





**HRSMX** 

Morningstar Analyst Rating

### People

### Morningstar Category US Fund Small Growth

### Category Index

Russell 2000 Growth TR

#### An experienced team.

# team in 2009 from GMT Capital, where he was the healthcare sector head of a hedge fund.

done infrequently, may veto any position down to 50 basis points. This collaboration, as well as the experience and generalist focus of each team

member, helps to reduce key-person risk.

#### People Pillar

Positive

Jan 04, 2018 | A stable and experienced team leads this fund, earning it a Positive People rating.

Brian Smoluch and Robert Marvin have comanaged this fund since its 2003 inception. The pair was previously part of the small- and mid-cap investment team at Columbia Management. The fund's third comanager, David Swank, joined the

The three managers are supported by just one analyst, Rohan Kumar, who joined the firm in 2015. Given this lean structure, each manager also serves as a research analyst and conducts independent fundamental research across all sectors.

The trio does not designate a lead manager. Rather, each stock in the portfolio is researched, purchased, and sold by one manager. Still, the three work together, as the other two managers will monitor the stock and, though it is

The managers invest their own assets in this fund, helping to align their interests with fundholders'. Smoluch has more than \$1 million personally invested in the fund, while Marvin has between \$500,001 and \$1 million invested. Swank has between \$100,001 and \$500,000 invested.

#### **Experience and Asset Load**



### Management Team

er of Managers	<b>Longest Tenure</b> 15 Years	5-Year Manager-Retention Rate (Firm-wide) 100%	Largest Manager Investment in Fund More than 1 Mil USD

#### Advisor

Numbe

3

Hood River Capital Management LLC

Subadvisor

#### ■ Robert C. Marvin 01/03 to Present

Years of Experience 15	Investment in Fund 500,001 to 1,000,000 USD
Fund AUM	Current Funds Managed
295 Mil USD	1

Largest Funds Managed	Tenure Dates	Role	Fund Size Mil USD	Investment Mil USD	Turnover Ratio Ava	Tenure Ret %	Index Ret %
Hood River Small-Cap Growth Fund	01/03to Present	1 of 3	294.73	<1	150	12.42	11.39

#### Brian P. Smoluch 01/03 to Present

Years of Experience	Investment in Fund
15	More than 1 Mil USD
Fund AUM	Current Funds Managed
295 Mil USD	1

Largest Funds Managed	Tenure Dates	Role	Fund Size Mil USD	Investment Mil USD	Turnover Ratio Ava	Tenure Ret %	Index Ret %
Hood River Small-Cap Growth Fund	01/03to Present	1 of 3	294.73	>1	150	12.42	11.39

#### David G. Swank 04/09 to Present

Years of Experience 8	Investment in Fund 100,001 to 500,000 USD
Fund AUM	Current Funds Managed
295 Mil USD	1

Largest Funds Managed	Tenure Dates	Role	Fund Size	Investment	Turnover	Tenure	Index
			Mil USD	Mil USD	Ratio Avg	Ret %	Ret %
Hood River Small-Cap Growth Fund	04/09to Present	1 of 3	294.73	< 0.5	151	17.99	16.55



**HRSMX** 

**Parent** 

Morningstar Analyst Rating

### Morningstar Category

US Fund Small Growth

Category Index Russell 2000 Growth TR

# This small-cap-focused shop serves investors well.

#### **Parent Pillar**

Positive

Jan 04, 2018 | Hood River Capital Management is an Oregon-based investment boutique founded in 2013 by Brian Smoluch, Robert Marvin, and David Swank. The firm, which managed \$1.6 billion as of September 2017, runs a single strategy: Hood River Small-Cap Growth HRSMX. Its three cofounders formerly managed this strategy--under a

different name--at Roxbury Capital Management before they spun off as an independent firm. Smoluch and Marvin were members of the strategy's original management team in 2002, and Swank joined in 2009.

The trio is supported by just one analyst, so each also has research responsibilities. The team members are experienced, and all have a generalist focus, which helps to reduce key-person risk. The three managers also own 100% of the firm, which gives them incentive to stay here. Other factors provide further confidence in the

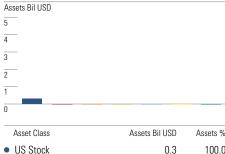
firm's prospects. The managers invest meaningfully in the fund, which aligns their incentives with fundholders'. Moreover, the managers prudently closed the capacity-constrained strategy in 2005 to help maintain the integrity of its small-cap mandate, though they've since re-opened it following a stretch of outflows.

The firm's modest size, however, does present drawbacks. It has leaner resources than peers and lacks the scale to offer competitive fees. Nonetheless, the firm has displayed responsible stewardship and earns a Positive Parent rating.

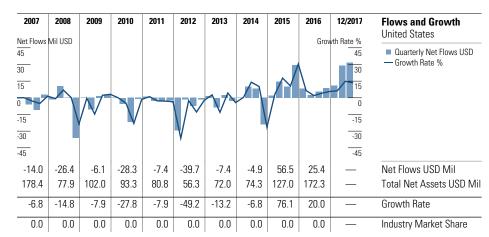
#### Assets By Region, By Domicile Bil USD



#### Asset Class Breakdown United States



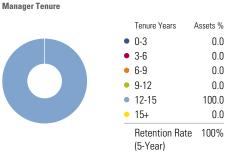


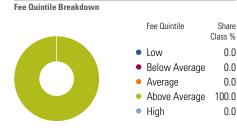


### Fund Family Details United States

Morningstar Rating Breakdown









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**HRSMX** 

Morningstar Analyst Rating

Price

Morningstar Category
US Fund Small Growth

Category Index
Russell 2000 Growth TR

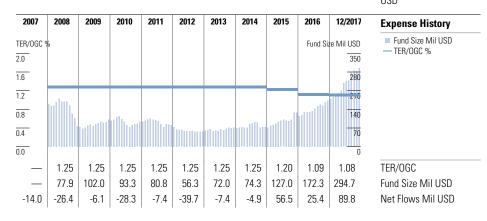
### A pricey option.

#### 

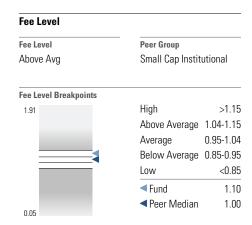
Jan 04, 2018 | The fund has above-average fees compared with peers, so it earns a Negative Price rating.

The institutional shares hold 84% of the fund's assets, charge 1.10%, and earn a Morning-star Fee Level of Above Average. For comparison, the median net expense ratio for the small-cap institutional peer group is 1.00%. The balance of assets is in the no-load and retirement shares, both of which earn Above Average fee levels.

In addition, trading costs are quite high. The fund's brokerage commissions as a percentage of net assets in 2016 was 0.30%, much higher than the small-growth median of 0.12%. This cost is not captured in the expense ratio.



#### **Expense Breakdown Net Expense Ratio** Annual Report 06/30/17 1.08 Prospectus 10/30/17 1.10 **Selected Components** % Management Actual 0.90 12b-1 Fee Brokerage Commission (% of Avg Net Assets) 0.30 Category Average 0.15 Tax Cost Ratio (3-Year) 1.04 Potential Capital Gains Exposure 18



#### **Share Class Information**

Share Class	Identifier	Status	Expense Ratio	Fee Level	Peer Group	12b-1 Fee	Front Load	Deferred Load	Minimum Initial Inv	Assets Bil USD	1-Yr Flow Mil USD
Inst	HRSMX	Open	1.10	Above Avg	Small Cap Institutional	<del>-</del>			25,000	0.26	44.02
Retirement	HRSIX	Open	1.00	Above Avg	Small Cap Retirement, Large	_	_	_	0	0.04	_
Inv	HRSRX	Open	1.35	Above Avg	Small Cap No Load	0.25	_	_	1,000	0.01	9.23



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	2016	2017	2018	
<b>℧</b> Gold				
Silver				
<b>Bronze</b>				
Neutral				
Negative				
Not Ratable				

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#### 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 fund's investment team is a significant key to its ability to deliver superior performance relative to its benchmark and/or peers. Evaluating a fund's investment team requires that analysts assess several relevant items including how key decisions are made.

#### Paren

We believe the parent organization is of utmost importance in evaluating funds. The fund's 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.

#### Proces

We look for funds 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 fund 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 fund is penalised for high fees or rewarded for low fees can vary with region. In Europe, for example, funds are penalised if they land in the most expensive quintile of their Monningstar category and are rewarded if they land in the cheapest quintile. The assessment is made using annual expense ratios, but in the case of funds 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 fund; the difference between them corresponds to differences in the level of analyst conviction in a fund's ability to outperform its benchmark and peers through time, within the context of the level of risk taken.

#### Gold

Represents funds that our analyst has the highest-conviction in for that given investment mandate. By giving a fund 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 fund must distinguish itself across the five pillars that are the basis for our analysis.

#### Silver

Represents funds our analyst has high-conviction in, but not in all of the five pillars. With those fundamental strengths, we expect these funds 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 funds that have advantages that clearly outweigh any disadvantages across the pillars, giving analyst the conviction to award them a positive rating. We expect these funds to beat their relevant performance benchmark and/ or peer group within the context of the level of risk taken over a full market cycle (or at least five years).

#### Neutra

Represents funds in which our analysts don't have a strong positive or negative conviction. In our judgment, these funds 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 funds 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 funds 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 may also use two other designations in place of a rating

#### Under Reviev

This designation means that a change that occurred with the fund or at the fund 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.

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#### **Equity-Related Data Points**

The Report lists the fund's top ten holdings as of the dated noted. For each underlying holding, a series of data points is provided including, where applicable, that security's Economic Moat 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 <u>narrow moat</u> are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. <u>Wide-moat</u> 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, <u>no-moat</u> companies will see their normalized returns gravitate toward the firm's cost of capital more quickly than companies with moats.

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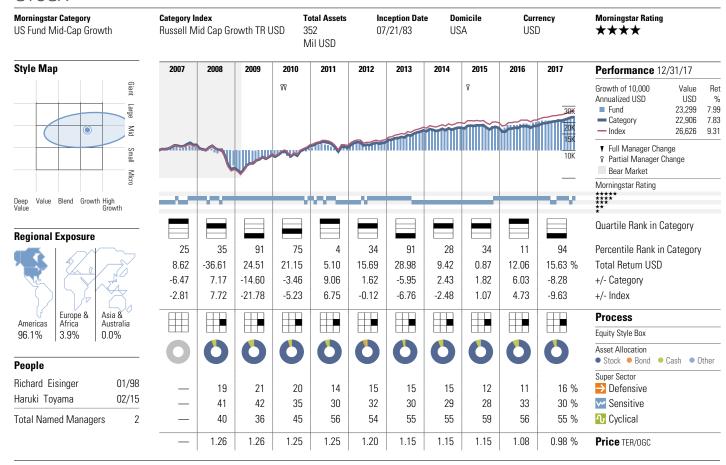
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GTSGX

Morningstar Analyst Rating



# This fund has appealing traits but doesn't make the grade.

#### **Analyst View**

### **Greg Carlson**

Senior Analyst

Morningstar Analyst Rating	Neutral
Morningstar Pillars	
Process   Page 2-3	<ul><li>Neutral</li></ul>
Performance   Page 4	<ul><li>Neutral</li></ul>
People   Page 5	<ul><li>Neutral</li></ul>
Parent   Page 6	<ul><li>Neutral</li></ul>
Price   Page 7	<ul><li>Neutral</li></ul>

### 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

<b>₩</b> Gold <b>ॐ</b> Silver	≅ Bronze	Neutral	Negative
-------------------------------	----------	---------	----------

Dec 26, 2017 | Madison Mid Cap is run by a veteran team plying a prudent philosophy, but execution has fallen short. It earns a Morningstar Analyst Rating of Neutral.

Rich Eisinger has managed this fund since 1998, and he has experienced help. Haruki Toyama, his comanager, has racked up 20 years of industry experience, including five at Madison Asset Management. The duo is backed by a team of five that also supports Madison Investors MINVX. That team includes equity CIO Jay Sekelsky, who expects to retire in 2018, and Matt Hayner, a 15-year Madison veteran who is taking over Investors from Sekelsky. Two associate managers with eight years' tenure each at the firm help with both funds, as does an analyst who joined in 2015.

The fund doesn't require a big team as it holds just 30-40 stocks and trades infrequently, and it and Madison Investors hold a total of 49 stocks. This fund focuses on mid-caps with economic moats that generate above-average returns on capital. The managers try to buy them cheaply based on discounted cash flow analysis and other

measures. They're also willing to let cash build when they can't find enough compelling ideas.

The fund has generated strong risk-adjusted results over Eisinger's nearly 20-year tenure through November 2017, but its record is unimpressive when measured since stocks' October 2007 peak (arguably a full market cycle). Total returns have been around the mid-growth Morningstar Category norm over both periods. The fund's best relative performance came in the 2000-02 bear market, in part because its cash stake hovered near 20%. Cash hasn't exceeded 11% over the past decade.

Stock-selection issues have dented returns. For example, the managers invested in retailer Sally Beauty Holdings SBH but missed the extent to which management had underinvested in stores and staff, leading to a drop in business. Another misfire was World Fuel Services INT, which saw the competitive advantage of its strong balance sheet erode when competitors were able to take on debt in a low-rate environment and offer similar or better prices for fuel delivery.



GTSGX

Morningstar Analyst Rating

### Process: Approach

### Morningstar Category US Fund Mid-Cap Growth

#### Category Index Russell Mid Cap Growth TR USD

#### Index Proxy iShares Russell Mid-Cap Growth FTF

# The fund's approach has merits, but misfires limit its appeal.

#### **Process Pillar**

Neutral

Dec 26, 2017 | This fund's strategy has fundamental appeal, but execution issues limit its Process rating to Neutral.

Managers Rich Eisinger and Haruki Toyama employ a prudent strategy. They favor midcap firms that they believe have sustainable competitive advantages, yet trade at attractive prices based on discounted cash flow analysis and other valuation measures. Key profitability measures for the managers include consistently above-average free cash flows and returns on capital. They hold only 30-40 stocks and focus on corners of the market they believe they know best. They will also build cash when they can't find enough compelling ideas; cash has occasionally hit double digits in recent years. The fund's typical mid-growth Morningstar Category peer, in contrast, consistently holds a low single-digit cash position.

The fund's resulting profile is fairly sturdy;

it invests more in companies with economic moats (as determined by Morningstar) than its typical peer and its Russell Mid Cap benchmark.

However, execution has been wanting at times. For example, the fund owned Sally Beauty Holdings SBH, which detracted from returns because the managers missed the degree to which the company had underinvested in its stores and staff. Another misfire, World Fuel Services INT, was hit hard when competitors were able to take on debt in a low-rate environment and offer similar or better prices for fuel delivery.

Fund

86.8

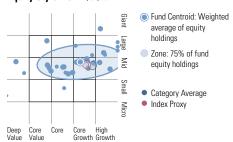
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5.2

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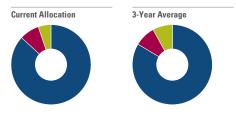
#### Equity Style Box 12/31/2017



### Style Box Factors 12/31/2017

Market Cap	Fund	3-Yr Avg	Category	Proxy
Giant/Large	25.6	27.4	21.2	25.5
Mid	71.1	66.1	62.0	71.0
Small/Micro	3.3	6.5	16.7	3.4
Avg Market Cap Bil USD	15.3	11.6	12.1	13.3
Value Measures	Fund	3-Yr Avg	Category	Proxy
Price/Prospect. Earnings	24.0	21.3	24.4	25.6
Price/Book	3.3	2.6	4.2	5.7
Price/Sales	1.8	1.2	2.7	2.3
Price/Cash Flow	13.5	11.1	14.4	15.1
Dividend Yield	8.0	0.9	0.7	1.1
Growth Measures	Fund	3-Yr Avg	Category	Proxy
Long-Term Earnings %	10.9	11.2	15.4	11.6
Historical Earnings %	7.4	3.9	7.8	6.0
Sales %	5.7	5.0	12.9	5.4
Cash Flow %	5.9	5.8	7.5	7.9
Book-Value %	8.6	8.7	7.8	3.9

#### Asset Allocation 12/31/2017



#### Regional Exposure 12/31/2017

Market Tyne Fauity %

wanter Type Equity 70	Turiu	J-11 Avy	Category	TTUNY
Developed	100.0	100.0	99.0	99.4
Emerging	0.0	0.0	1.0	0.6
T FO F :: 0/		0.1/. 4	0.	
Top 5 Countries Equity %	Fund	3-Yr Avg	Category	Proxy
United States	91.5	90.8	96.2	99.2
Canada	4.5	5.0	8.0	0.0
United Kingdom	3.9	4.2	0.5	0.0

Fund 3-Yr Avg Category

#### Economic Moat 12/31/2017

Moat Rating	Fund	3-Yr Avg	Category	Proxy
Wide Moat	23.1	20.7	15.5	27.9
Narrow Moat	68.6	69.0	69.6	53.4
No Moat	8.3	10.4	14.9	18.7
Coverage Ratio	62.5	59.5	58.7	68.4

#### Key Ratios 12/31/2017

	Fund	3-Yr Avg	Category	Proxy
Net Margin %	11.7	10.7	11.4	10.3
ROA %	6.6	6.8	6.0	7.2
Debt/Total Capital %	48.1	47.0	49.0	47.7
ROE %	23.0	20.8	19.4	22.7

### Sector Delta 12/31/17

Assets %

Bonds

Cash

Other

• U.S. Equities

• Non-U.S. Equities



Fund▲ Index Proxy

3-Yr Avg

83.6

8.4

0.0

8.0

0.0

Category

93.5

3.7

0.1

2.4

0.3

Proxv

99.1

8.0

0.0

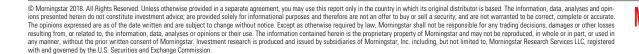
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0.0

Larger sector concentrations versus the index move the investment to the corner of the triangle corresponding to that equity Super Sector.

#### Equity Sector Breakdown 12/31/2017

Sectors	Fund	3-Yr Avg	Category	Proxy
→ Defensive	15.7	12.1	19.4	17.7
Consumer Defensive	1.8	2.4	4.3	5.4
Healthcare	13.9	9.7	14.3	12.2
Utilities	0.0	0.0	0.7	0.1
<b>✓</b> Sensitive	29.6	32.2	43.8	47.5
Communication Serv.	10.5	9.6	1.4	0.7
Energy	0.9	3.5	2.3	2.5
Industrials	11.7	11.8	17.6	20.6
Technology	6.5	7.3	22.4	23.7
<b>℃</b> Cyclical	54.7	55.7	36.8	34.8
🔠 Basic Materials	3.9	1.7	3.8	4.4
Consumer Cyclical	25.3	28.8	16.7	19.2
Financial Services	18.6	20.7	12.2	8.3
♠ Real Estate	6.9	4.6	4.2	2.9





GTSGX

Morningstar Analyst Rating

### Process: Portfolio

### Morningstar Category US Fund Mid-Cap Growth

# Category Index Russell Mid Cap Growth TR USD

#### **Index Proxy** iShares Russell Mid-Cap Growth ETF

### Diverging far from the norm.

#### **Process Pillar**

Neutral

Dec 26, 2017 | This concentrated fund rarely looks much like the competition or its benchmark, and its November 2017 portfolio was no exception. The fund invested 26% of its assets in consumer cyclicals stocks, including auto dealer Copart CPRT (the fund's top holding), compared with the Russell Mid Cap Index's 15% and the mid-growth

Morningstar Category norm of 17%. The fund held another 19% of assets in financials, while the benchmark's weighting was 14% and its typical peer held a 12% stake. The managers have a long-standing preference for the insurance industry; Markel MKL was the second-largest holding, and the fund also held insurance broker Brown & Brown BRO.

The managers have typically invested just a modest amount in technology stocks. The fund recently held a 7% stake in the sector, half as much as the index's and just one third of the mid-

cap growth norm. Indeed, the fund held just two tech stocks at the end of November--tech services firm CDW CDW and electronic component maker Amphenol APH. The fund's light tech stake is a big reason why it has lagged more than 90% of its peers in 2017's growth stock rally.

The fund differs from the Russell Mid Cap Index in another way. While 24 of its 30 holdings at the end of November were constituents of the index, those stocks comprised 82% of the fund's assets but less than 5% of the index. The fund's active share versus the index was 95%.

#### Similarity to Index Proxy 01/24/2018

Proxy Fund

Circle size represents number of holdings.

Number of Equity Holdi	ngs
Fund	30
Index Proxy	421
Fund Overlap With Inde	x Proxy
Holdings Overlap	17
Asset Overlap	7.4%

Largest Common Holdings	Fund %	Proxy %	Largest Distinct Holdings	Fund %
Omnicom Group Inc	3.57	0.53	Markel Corp	5.20
Ross Stores Inc	3.22	0.96	Brookfield Asset Management Inc Class A	4.30
O'Reilly Automotive Inc	3.18	0.69	Liberty Broadband Corp C	4.01
Zoetis Inc	2.66	1.16	Brown & Brown Inc	3.82
Amphenol Corp Class A	2.06	0.82	Liberty Global PLC C	3.71

#### Portfolio Holdings 12/31/17

Current Portfolio Date Previous Portfolio 12/31/17 11/30/17		1 7		ldings	Bond Holdings O			Assets in Top 10 Holdings 42%			Turnover Ratio (Reported) 22%	
Top 10 Holdings		Country	Assets % 12/31/17	Assets % 11/30/17	,	First Bought	,	Morningstar Rating for Stocks	Economic Moat	Sector		1-Yr Tota Ret %
Copart Inc		USA	5.24	5.24	0.27	10/08	<1	_	_	Consum	er Cyclical	55.89
Markel Corp		USA	5.20	5.05	_	12/00	<1	**	None	🚅 Financia	al Services	25.94
Brookfield Asset Manag	jement Inc Class A	CAN	4.30	4.10	_	10/06	<1	_	_	Real Es <sup>a</sup>	tate	24.71
CDW Corp		USA	4.12	4.15	0.34	05/14	<1	_	_	Technol	ogy	34.73
<ul><li>Liberty Broadband Corp</li></ul>	С	USA	4.01	3.56	_	02/16	<1	_	_	Commu	nication Serv.	14.97
Brown & Brown Inc		USA	3.82	3.81	_	05/07	<1	_	_	Financia	al Services	15.99
⊕ CarMax Inc		USA	3.81	3.51	0.39	07/04	<1	***	Narrow	Consum	er Cyclical	-0.40
Expeditors International	of Washington In	USA	3.79	3.79	0.25	10/12	<1	**	Wide	Industri	als	23.73
Liberty Global PLC C		GBR	3.71	3.38	_	09/05	<1	_	Narrow	Commu	nication Serv.	13.94
<ul> <li>Axalta Coating Systems</li> </ul>	Ltd	USA	3.69	3.80	0.20	07/16	<1	_	_	🔠 Basic M	laterials	18.9

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% Assets

Sector

New Holdings Largest Purchases

Eliminated Holdings Largest Sales

% Assets Sector

Largest Position Changes	Current %	Prior %
⊕ Liberty Broadband Corp C	4.01	3.56
⊕ CarMax Inc	3.81	3.51
Axalta Coating Systems Ltd	3.69	3.80
O'Reilly Automotive Inc	3.18	3.44
American Tower Corp	2.20	2.22



**GTSGX** 

Morningstar Analyst Rating

### Performance

Morningstar Category US Fund Mid-Cap Growth

2016

2015

2017

60

40

-20

-40

-60

94

15.63 %

-8.28

-9.63

2014

Category Index Russell Mid Cap Growth TR USD

History 12/31/17
12-Month Rolling Return %

▼ Full Manager Change▼ Partial Manager Change

Quartile Rank in Cat

Percentile Rank in Cat

Total Return USD

+/- Category

Income Return

+/- Index

Fund

# Above average on a risk-adjusted basis, but not strong.

#### Performance Pillar

Neutral

Dec 26, 2017 | This fund is less volatile than its typical peer and benchmark, but its returns aren't up to snuff. It earns a Neutral Performance rating.

Total returns here have been middling during manager Rich Eisinger's tenure. From January 1998 through November 2017, the fund gained an annualized 9.5%, beating just over half of its mid-

growth Morningstar Category peers and trailing its Russell Mid Cap benchmark by 0.3 percentage points. The fund fared better on a risk-adjusted basis; its Sharpe and Sortino ratios beat roughly 80% of peers and the index.

The fund's record is less attractive since stocks' October 2007 peak (arguably a full market cycle). From that point through November 2017, the fund again finished just ahead of its typical mid-growth peer, but it lagged the Russell Mid Cap Index by a bigger margin--1.1 percentage points. The fund's risk-adjusted returns were

2010

2007

25

8.62

-6.47

-2.81

35

-36.61

7.17

7.72

0.00

2008

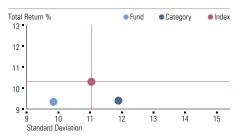
2009

closer to the middle of the pack over this span, landing just around the cusp of the category's top third and matching the benchmark's. True, this period included an 8.5-year bull market, and the fund typically won't outperform in rallies given its focus on steadier fare and a propensity to hold more cash than its typical peer. But that span also included the 2007-09 bear market; the fund lost 5.4 percentage points less than the index in that decline, but that edge was quickly wiped out in the ensuing rally that marked the rest of 2009.

### Morningstar Rating and Risk 12/31/2017

Overall Rat	tina			****
10 Years	7.93	Avg	Low	****
5 Years	13.03	Avg	Low	***
3 Years	9.34	Avg	Low	***
Period	Load-Adj Return %	Morningstar Ret vs Cat	Morningstar Risk vs Cat	

#### 3-Year Return and Risk Analysis 12/31/17



#### Return/Risk Analysis 12/31/2017

	Fund	Category	Index
Standard Deviation	9.85	11.90	11.04
Sharpe Ratio	0.91	0.79	0.91
R-Squared	81.58	74.54	88.02
Beta	0.88	1.01	1.03
Alpha	-0.65	-1.80	-1.23

#### **Maximum Drawdown**

	Fund	Category	Index
Max Drawdown (%)	-46.47	-50.61	-51.14
Peak Date	12/07	01/08	06/08
Valley Date	02/09	02/09	02/09
Max Drawdown (Months)	15	14	9

### Trailing Returns (Annualized) 12/31/2017

91

24.51

14.60

-21.78

0.00

75

5.10

9.06

6.75

0.00

21.15

-3.46

-5.23

0.00

34

15.69

1.62

-0.12

0.00

91

28.98

-5.95

-6.76

0.00

28

9.42

2.43

-2.48

0.00

34

0.87

1.82

1.07

0.00

11

12.06

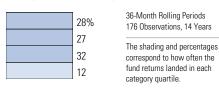
6.03

4.73

0.00

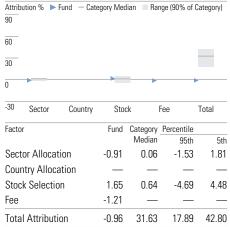
	Total Ret %	Investor Ret %	% Rank in Cat	Cat Ret %	Index Ret %
1 Year	15.63	15.13	94	23.91	25.27
3 Years	9.34	9.37	54	9.40	10.30
5 Years	13.03	_	66	13.73	15.30
10 Years	7.93	_	46	7.67	9.10
Tenure 01/98	9.19	_	_	7.51	8.34
Inception 07/83	10.30	_	_	10.05	_

#### Rolling-Returns Summary 12/31/2017



#### 3-Year Performance Attribution 12/31/2017

0.00 %



Performance Attribution Index Proxy: iShares Russell Mid-Cap Growth ETF

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**GTSGX** 

Morningstar Analyst Rating

### People

# Morningstar Category US Fund Mid-Cap Growth

#### Category Index Russell Mid Cap Growth TR USD

#### Plenty of experience, but a mixed record.

#### **People Pillar**

Neutral

Dec 26, 2017 | This fund is run by an experienced team, but the team's overall track record doesn't stand out. It earns a Neutral People rating.

Veteran investors helm this fund. Rich Eisinger has managed it since January 1998, while comanager Haruki Toyama has 20 years of experience as a manager and analyst, including five at

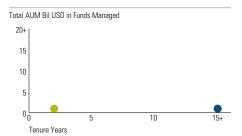
the fund's advisor, Madison Asset Management.

The duo is backed by a team of five that also works on Madison Investors MINVX. Andy Romanowich, an associate portfolio manager, joined the firm in 2009 as an analyst after five years covering stocks elsewhere. Another associate manager, Adam Sweet, also joined Madison in 2009 as an analyst. Analyst Eric Haight joined in 2015 after three years as a research assistant at Harris Associates. The other two team members spend most of their time on Madison Investors: Jay Sekelsky, CIO of equities and a longtime man-

ager of that fund who is expected to retire in 2018, and Matt Hayner, a 15-year Madison veteran who's gradually becoming the lead on that fund.

This team's results have not been exceptional. This fund has turned in solid risk-adjusted returns over the whole of Eisinger's tenure, but they're less impressive over the past decade, and its total returns are middling during both periods. Madison Investors, which Eisinger comanaged for 10 years, lags its typical large-growth peer since it adopted its current approach in 1998.

#### **Experience and Asset Load**



#### Management Team

Number of Managers Longest Tenure 2 20 Years

5-Year Manager-Retention Rate (Firm-wide) 92% Largest Manager Investment in Fund More than 1 Mil USD

Advisor

Madison Asset Management, LLC

Subadvisor

#### Richard Eisinger 01/98 to Present

Years of Experience	Investment in Fund
20	More than 1 Mil USD
Fund AUM	Current Funds Managed
554 Mil USD	2

Largest Funds Managed	Tenure Dates	Role	Fund Size	Investment	Turnover	Tenure	Index
			Mil USD	Mil USD	Ratio Avg	Ret %	Ret %
Madison Mid Cap Fund	01/98to Present	1 of 2	351.58	>1	46	9.19	8.34
Ultra Series Mid Cap Fund	10/00to Present	1 of 2	202.62	None	92	4.08	5.72

### Haruki Toyama 02/15 to Present

Years of Experience	100,001 to 500,000 USE
Fund AUM	Current Funds Managed
554 Mil USD	2

Largest Funds Managed	Tenure Dates	Role	Fund Size	Investment	Turnover	Tenure	Index
			Mil USD	Mil USD	Ratio Avg	Ret %	Ret %
Madison Mid Cap Fund	02/15to Present	1 of 2	351.58	< 0.5	26	8.88	8.99
Ultra Series Mid Cap Fund	05/15to Present	1 of 2	202.62	None	25	9.76	9.33



**GTSGX** 

Morningstar Analyst Rating

## Parent

Morningstar Category US Fund Mid-Cap Growth Category Index Russell Mid Cap Growth TR USD

#### Pretty average, and undergoing changes.

#### **Parent Pillar**

Neutral

Dec 21, 2017 | Madison Investments' mix of attractive and concerning traits earns a Neutral Parent rating.

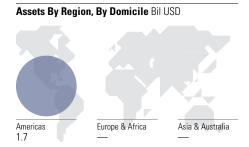
The firm is an employee-owned asset manager with a fund lineup that has delivered mixed results and is undergoing significant changes. The firm has merged away or liquidated

five funds since early 2013 but still has 17 funds (including two subadvised offerings), and management expects to trim the lineup further. Nearly all of the funds have seen moderate net outflows over the past three and five years, and five of the 18 have less than \$50 million in assets. Their average Morningstar Rating is 2.75 stars, indicating slightly subpar risk-adjusted returns. The U.S. equity team has, on average, turned in the best results.

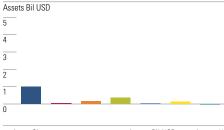
The firm itself has seen changes as well.

True, many of the investment professionals are

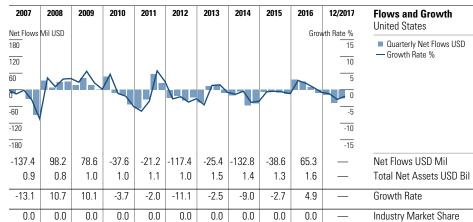
long-tenured, and roughly 74% of Madison's fund assets are overseen by at least one portfolio manager with more than \$1 million invested alongside fundholders. But the firm has also made two acquisitions in recent years, one of a smaller firm and its fund lineup that resulted in 18 of the 22 employees eventually departing. In the other case, the firm acquired a team that has largely been stable but has lost nearly 90% of its assets under management since the 2014 deal. (Madison did expect 50% of the assets to be pulled at the time of purchase.)



#### Asset Class Breakdown United States

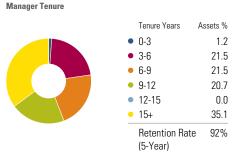


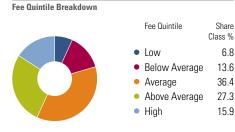
Total Assets	1.7	101.0
Commodities	_	_
Alternative	0.1	7.7
Municipal Bond	0.0	2.8
Taxable Bond	0.4	20.7
Balanced	0.2	9.9
Non-US Stock	0.0	1.9
US Stock	1.0	57.1
Asset Class	Assets Bil USD	Assets %



### Fund Family Details United States











**GTSGX** 

Morningstar Analyst Rating

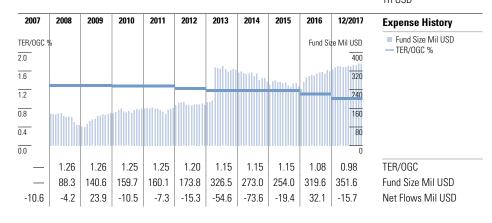
Price

Morningstar Category US Fund Mid-Cap Growth **Category Index** Russell Mid Cap Growth TR USD

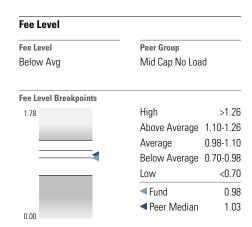
### Merely average.

Price Pillar	<ul><li>Neutral</li></ul>	

Dec 26, 2017 | This fund levies average fees overall, earning a Neutral rating for Price. Its Y shares, which hold 79% of the fund's assets, charge 0.98% (5 basis points below the no-load mid-cap median) and barely earn a Morningstar Fee Level of Below Average. The A shares, meanwhile, hold 17% of the assets and charge a lofty 1.4%, which earns an Above Average, pushing the fund's overall fee score well into the middle quintile. (The R6 and B shares hold just 4% of the assets combined.)



#### **Expense Breakdown** Net Expense Ratio Annual Report 10/31/17 0.98 Prospectus 02/14/17 0.98 **Selected Components** % Management Actual 0.75 12b-1 Fee Brokerage Commission (% of Avg Net Assets) 0.04 Category Average 0.10 Tax Cost Ratio (3-Year) 1.05 Potential Capital Gains Exposure 39



#### **Share Class Information**

Share Class	Identifier	Status	Expense Ratio	Fee Level	Peer Group	12b-1 Fee	Front Load	Deferred Load	Minimum Initial Inv	Assets Bil USD	1-Yr Flow Mil USD
No Load	GTSGX	Open	0.98	Below Avg	Mid Cap No Load	_	_	_	0	0.29	-12.07
Α	MERAX	Open	1.40	Above Avg	Mid Cap Front Load	0.25	5.75	_	1,000	0.06	-2.04
Retirement	MMCRX	Open	0.77	Below Avg	Mid Cap Retirement, Large	_	_	_	500,000	0.01	-0.76
В	MERBX	Closed	2.15	High	Mid Cap Defer Load	1.00	_	4.50	1,000	0.00	-0.80



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#### **Morningstar Analyst Rating**

	2016	2017	2018	
<b>₩</b> Gold				
Silver				
<b>Bronze</b>				
Neutral				
Negative				
Not Ratable				

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#### The Morningstar Analyst Rating™ for Funds

The Morningstar Analyst Rating™ for Funds is a forward-looking analysis of a fund. The Analyst Rating does not express a view on a given asset class or peer group; rather, it seeks to evaluate each fund 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 Morningstar Manager Research Analyst assigned or reaffirmed the current rating for the fund based on the analyst's latest review and research report for the fund

#### 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 fund's investment team is a significant key to its ability to deliver superior performance relative to its benchmark and/or peers. Evaluating a fund's investment team requires that analysts assess several relevant items including how key decisions are made.

#### Paren

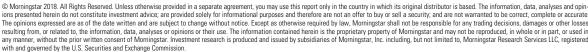
We believe the parent organization is of utmost importance in evaluating funds. The fund's management set the tone for key elements of our evaluation, including capacity management, risk management, recruitment and retention of talent, and incentive pay. Beyond these operational areas, we prefer firms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

#### Proces

We look for funds 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

mation, data, analyses and opinpe correct, complete or accurate.
isions, damages or other losses
d, in whole or in part, or used in
peace 15 capital LC capitated



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 fund 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 fund is penalised for high fees or rewarded for low fees can vary with region. In Europe, for example, funds are penalised if they land in the most expensive quintile of their Monningstar category and are rewarded if they land in the cheapest quintile. The assessment is made using annual expense ratios, but in the case of funds 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 fund; the difference between them corresponds to differences in the level of analyst conviction in a fund's ability to outperform its benchmark and peers through time, within the context of the level of risk taken.

#### Gold

Represents funds that our analyst has the highest-conviction in for that given investment mandate. By giving a fund 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 fund must distinguish itself across the five pillars that are the basis for our analysis.

#### Silver

Represents funds our analyst has high-conviction in, but not in all of the five pillars. With those fundamental strengths, we expect these funds 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 funds that have advantages that clearly outweigh any disadvantages across the pillars, giving analyst the conviction to award them a positive rating. We expect these funds to beat their relevant performance benchmark and/ or peer group within the context of the level of risk taken over a full market cycle (or at least five years).

#### Neutra

Represents funds in which our analysts don't have a strong positive or negative conviction. In our judgment, these funds 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 funds 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 funds 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 may also use two other designations in place of a rating

#### Under Reviev

This designation means that a change that occurred with the fund or at the fund 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. Funds are rated from one to five stars based on how well the fund performed (after adjusting for risk and accounting for sales charges) in comparison to similar funds. Within each Morningstar Category, the top 10% of funds receive five-stars and the bottom 10% receives one-star. Funds 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. Funds with less than three years of history are not rated. Morningstar Star Ratings are based entirely on a mathematical evaluation of past performance. Morningstar 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 fund's top ten holdings as of the dated noted. For each underlying holding, a series of data points is provided including, where applicable, that security's Economic Moat 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 <u>narrow moat</u> are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. <u>Wide-moat</u> 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, <u>no-moat</u> 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.

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

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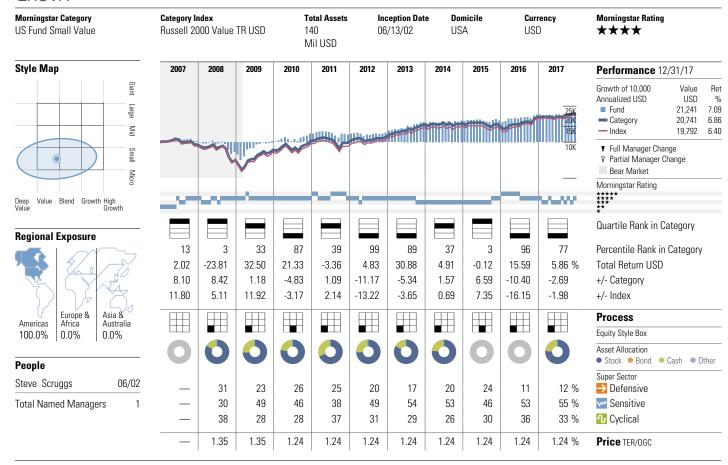
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ORSVX

Morningstar Analyst Rating



# Not bad, but could use some touching-up.

#### **Analyst View**

#### **Tony Thomas**

Analyst

Morningstar Analyst Rating	Neutral
Morningstar Pillars	
Process   Page 2-3	<ul><li>Neutral</li></ul>
Performance   Page 4	<ul><li>Neutral</li></ul>
People   Page 5	<ul><li>Neutral</li></ul>
Parent   Page 6	<ul><li>Neutral</li></ul>
Price   Page 7	<ul><li>Neutral</li></ul>

### 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

<b>℧</b> Gold 🐺 Sil	ver 😇 Bronze	Neutral	Negative
---------------------	--------------	---------	----------

Dec 29, 2017 | Queens Road Small Cap Value's risk-conscious process has its attractions, but some adjustments are needed to get to the next level. The fund earns a Morningstar Analyst Rating of Neutral.

The fund isn't without its qualities. Manager Steve Scruggs has been at the helm since its June 2002 inception. As a member of a five-person investment committee, he vets small-cap firms for solid balance sheets, reasonable debt, and strong free cash flow. He values companies by normalizing their earnings over a full market cycle. His restrained style typically keeps turnover low, and he won't buy a stock if the fundamentals aren't right.

That said, the stringent process has its weak spots. Scruggs admits he has held too much cash at times, and he's undercut his generally good stock-picking (especially in industrials, the fund's largest sector weighting as of November 2017) by carrying an average of 22% of assets in cash since March 2009. As Scruggs looks to get more fully invested, we will watch to see if he

maintains his discipline or is forced to make concessions on the strong points of the fund's process.

Meanwhile, the fund's advisor, Bragg Financial Advisors, is a small, family-owned firm where employees wear many hats. Scruggs is no exception: He is fund manager, director of research, and chief compliance officer. Although an associate performs many of the day-to-day compliance tasks, it is worrisome that the same person has official portfolio management and compliance-monitoring responsibilities. An independent CCO would strengthen oversight, reduce risk, and allow Scruggs to focus on portfolio management.

The firm has the opportunity to up its game. Its assets under management have grown steadily to \$1.4 billion despite not marketing its products widely. The growth provides the opportunity to hire new staff and cut fees. In fact, this fund's management fee will fall to 1.18% from 1.24% in early 2018. For a risk-aware firm, addressing some of its own risks and tightening its process will only further serve investor interests.

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Morningstar Analyst Rating

**QRSVX** 

### Process: Approach

Morningstar Category
US Fund Small Value

Category Index Russell 2000 Value TR USD Index Proxy iShares Russell 2000 Value FTF

#### Almost too conservative at times.

#### **Process Pillar**

Neutral

Dec 29, 2017 | This fund's manager uses a conservative, risk-aware process that tends to reward investors over the full market cycle, but he's been too cautious with his cash position, earning the fund a Neutral Process rating.

Manager Steve Scruggs and his firm's investment committee execute a four-step process

on this fund. They comb through small-cap stocks (which they define as having market caps under \$4 billion) looking for firms with strong balance sheets, manageable debt, and healthy free cash flow. Next, they value firms by normalizing their earnings over a full market cycle. At the third and fourth steps, they scrutinize the long-term record of candidates' executive teams and examine firms' sectors/industries for favorable economic conditions.

Scruggs typically builds a portfolio of 40-70 holdings. He weights individual positions on conviction: He considers a stake of roughly 1% of assets as underweight, 2% as equal-weight, and 3% as overweight. Turnover is usually low here (it averaged 10% annually from 2012 through 2016), but Scruggs says that strong correlations in the market didn't open up trading opportunities during that time. He targets a three- to five-year holding period under normal conditions. When he can't find opportunities, Scruggs isn't shy about holding cash: He has left an average of 22% on the sidelines since early 2009.

Fund

76.2

0.0

0.0

22.7

1.0

3-Yr Avg

76.6

0.0

0.0

22.8

0.6

Category

94.9

2.5

0.1

2.4

0.0

Proxv

98.1

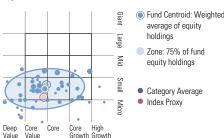
1.6

0.0

0.3

0.0

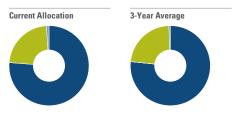
#### Equity Style Box 11/30/2017



### Style Box Factors 11/30/2017

Market Cap	Fund	3-Yr Avg	Category	Proxy
Giant/Large	0.0	0.0	0.2	0.0
Mid	23.9	20.8	15.9	4.9
Small/Micro	76.1	79.2	83.9	95.1
Avg Market Cap Bil USD	2.6	2.0	3.2	1.6
Value Measures	Fund	3-Yr Avg	Category	Proxy
Price/Prospect. Earnings	20.6	17.1	20.7	19.4
Price/Book	2.1	1.7	1.8	1.4
Price/Sales	0.8	0.7	1.1	1.0
Price/Cash Flow	8.8	8.0	8.9	6.6
Dividend Yield	1.4	1.5	1.5	2.0
Growth Measures	Fund	3-Yr Avg	Category	Proxy
Long-Term Earnings %	10.3	9.9	9.0	9.6
Historical Earnings %	-4.7	0.3	8.2	-6.2
Sales %	1.7	3.6	1.1	-18.7
Cash Flow %	3.7	2.6	-9.2	-23.0
Book-Value %	4.0	5.1	7.6	-24.0

#### Asset Allocation 11/30/2017



#### Regional Exposure 11/30/2017

Market Type Equity %	Fund	3-Yr Avg	Category	Proxy
Developed	100.0	100.0	99.6	99.6
Emerging	0.0	0.0	0.4	0.4
Top 5 Countries Equity $\%$	Fund	3-Yr Avg	Category	Proxy
United States	100.0	100.0	97.4	98.4

# Sector Delta 11/30/17

Assets %

Bonds

Cash

Other

• U.S. Equities

• Non-U.S. Equities



● Fund
▲ Index Proxy

Larger sector concept

Larger sector concentrations versus the index move the investment to the corner of the triangle corresponding to that equity Super Sector.

#### **Economic Moat** 11/30/2017

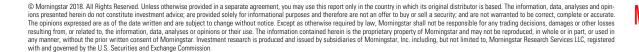
Moat Rating	Fund	3-Yr Avg	Category	Proxy
Wide Moat	0.0	8.2	1.3	0.2
Narrow Moat	77.4	46.5	43.2	42.1
No Moat	22.6	45.3	55.6	57.7
Coverage Ratio	6.5	10.8	11.9	8.8

#### Key Ratios 11/30/2017

	Fund	3-Yr Avg	Category	Proxy
Net Margin %	5.5	6.0	9.6	10.0
ROA %	4.1	4.9	3.4	1.0
Debt/Total Capital %	31.1	30.5	36.4	36.1
ROE %	10.4	11.5	10.0	4.6

### Equity Sector Breakdown 11/30/2017

Sectors	Fund	3-Yr Avg	Category	Proxy
→ Defensive	11.8	16.8	12.0	15.7
Consumer Defensive	0.0	1.0	3.3	3.2
	3.5	7.9	4.8	5.6
Utilities Utilities	8.3	7.9	3.9	6.8
<b>™</b> Sensitive	55.5	51.6	33.7	27.6
Communication Serv.	0.0	0.0	0.5	0.6
	0.0	0.1	5.1	5.1
Industrials	37.2	31.5	17.4	13.2
Technology	18.2	19.9	10.7	8.7
<b>℃</b> Cyclical	32.8	31.6	54.4	56.8
🔠 Basic Materials	3.1	1.7	6.9	4.6
Consumer Cyclical	17.6	16.4	13.4	10.5
Financial Services	12.1	13.5	25.9	29.5
	0.0	0.0	8.0	12.2





Morningstar Analyst Rating

QRSVX

Process: Portfolio

Morningstar Category
US Fund Small Value

Category Index Russell 2000 Value TR USD Index Proxy iShares Russell 2000 Value FTF

#### Differentiated and defensive.

#### **Process Pillar**

Neutral

Dec 29, 2017 | The fund's conservative process affects its sector positioning. Scruggs has long favored industrials, and the October 2017 portfolio's 38% sector weighting dwarfs the 18% small-value Morningstar Category average and is nearly triple the Russell 2000 Value Index's allocation. The fund is heavily overweight such unflashy

industries as machinery, where Scruggs has ridden steadily growing Graco GGG to long-term success. Conversely, Scruggs' growth and balance-sheet expectations keep him light on energy, healthcare, and financials, with insurers such as RLI Corp. RLI and Horace Mann Educators HMN notable exceptions to the latter.

Scruggs' interest in growing firms differentiates the portfolio from its Russell 2000 Value Index benchmark. Though on balance the portfolio usually resides within or near the small-value Morningstar Style Box, picks such as mid-growth

Graco and mid-blend Orbital ATK OA are among the 19 ex-benchmark holdings in the 48-stock October 2017 portfolio. Together, the nonindex names hold a third of the fund's assets.

Two holdings reveal the fund's defensive stance but add costs. Scruggs parks cash in a Morgan Stanley money market fund and invests about 1% of assets in the Central Fund of Canada, which offers exposure to gold and silver bullion. Both come with acquired fund expenses, but investors should expect these to drop in 2018 as the firm switches its cash vehicle.

#### Similarity to Index Proxy 11/30/2017

Proxy Fund

Circle size represents number of holdings.

Number of Equity Holdi	ngs					
Fund	48					
Index Proxy	1,385					
Fund Overlap With Index Proxy						
Holdings Overlap	28					
Asset Overlan	44%					

Largest Common Holdings	Fund %	Proxy %	Largest Distinct Holdings	Fund %
Vishay Intertechnology Inc	3.71	0.29	Morgan Stanley Liq Govt- Inst	22.72
Synnex Corp	2.81	0.31	Graco Inc	3.42
Tech Data Corp	2.80	0.31	Orbital ATK Inc	3.34
New Jersey Resources Corp	2.24	0.35	Oshkosh Corp	3.01
CNO Financial Group Inc	0.51	0.39	UGI Corp	2.78

#### Portfolio Holdings 11/30/17

Current Portfolio Date Previous Portfolio 11/30/17 10/31/17		Date	Equity Holdings 48			<b>Bond Holdings</b> O	;	Asset 31%	s in Top 10 H	oldings	Turnover Ratio (Reported) 27%	
Top 10 Holdings		Country	Assets % 11/30/17	Assets % 10/31/17	,	First Bought	,	Morningstar Rating for Stocks	Economic Moat	Sector		1-Yr Tota Ret %
Morgan Stanley Liq Govt	t- Inst	_	22.72	23.72	_	_		_	_	_		_
Vishay Intertechnology Ir	nc	USA	3.71	3.82	0.29	01/12	<1	_	_	Techr	ology	29.66
Meredith Corp		USA	3.42	2.70	0.26	02/12	<1	_	_	Consu	ımer Cyclical	15.18
Graco Inc		USA	3.42	3.47	_	02/09	<1	_	_	Indus	trials	65.00
Orbital ATK Inc		USA	3.34	3.41	_	01/12	<1	_	_	🔯 Indus	trials	51.35
Deckers Outdoor Corp		USA	3.02	2.79	0.22	12/15	<1	_	_	Consu	ımer Cyclical	44.88
Oshkosh Corp		USA	3.01	3.10	_	10/02	<1	_	_	Indus	trials	42.02
UniFirst Corp		USA	2.89	2.82	0.24	08/10	<1	_	_	Consu	ımer Cyclical	14.90
Synnex Corp		USA	2.81	2.82	0.31	08/12	<1	_	_	Indus	trials	13.20
Tech Data Corp		USA	2.80	2.73	0.31	08/10	<1	_	_	Techr	ology	15.69

Change since last portfolio:  $\oplus$  Increase  $\ominus$  Decrease  $\cancel{\approx}$  New

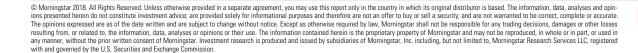
New Holdings Largest Purchases

% Assets Sector

Eliminated Holdings Largest Sales

% Assets Sector

Largest Position Changes	Current %	Prior %
☼ Morgan Stanley Liq Govt- Inst	22.72	23.72
Orbital ATK Inc	3.34	3.41
Hilltop Holdings Inc	2.42	2.32
Owens & Minor Inc	1.01	1.34
<ul><li>Synaptics Inc</li></ul>	0.45	0.61





ORSVX

**Morningstar Analyst Rating** Neutral

### Performance

#### Morningstar Category US Fund Small Value

#### Category Index Russell 2000 Value TR HSD

**History** 12/31/17 12-Month Rolling Return %

▼ Full Manager Change 7 Partial Manager Change

Quartile Rank in Cat

Percentile Rank in Cat

Total Return USD

+/- Category

Income Return

+/- Index

Fund

#### Cash helps--and hurts.

#### **Performance Pillar**

Neutral

Dec 29, 2017 | This fund distinguishes itself over a full market cycle, but the cash stake that drives its durability in downturns also drags on the manager's good stock-picking, resulting in a Neutral Performance rating.

Standard trailing-period returns don't tell the full story. From its June 2002 launch through November 2017, the fund's 9.7% annualized total return bested the 9.0% tally for both the Russell 2000 Value Index prospectus benchmark and the small-value Morningstar Category average. Strong relative performance in market downturns helped: The index had 18 down quarters during that time, and the fund beat the index in 15 of those periods by an average of 4.4 percentage points. Meanwhile, the fund's volatility, as measured by standard deviation, was 24% lower than the benchmark's.

Cash plays a role in performance--for bet-

2011

2012

2013

2014

IIII հավառու

2015

2016

2010

2009

2007

ter or worse. Manager Steve Scruggs entered the global financial crisis with 26% in cash, and although the fund lost 50% of its value from Oct. 8, 2007 through March 9, 2009, that was better than the average peer's 58% drop and the index's 60% fall. But Scruggs has struggled to get more fully invested since the recovery began, carrying an average cash balance of 22% through November 2017 that erased advantages from stock selection. As a result, the index's 18% annualized return during that time dusted the fund's 14.8% mark.

2017

80

60

40

-20

-40

77

5.86 %

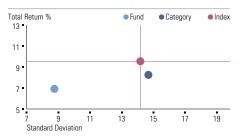
-2.69

-1.98

### Morningstar Rating and Risk 12/31/2017

Return Re	***
Return % Ret vs Cat Risk vs Cat Rat  3 Years 6.92 Below Avg Low 🛨	***
Return % Ret vs Cat Risk vs Cat Rat	**
,gg	**
Period Load-Adj Morningstar Morningstar Mo	

#### 3-Year Return and Risk Analysis 12/31/17



#### Return/Risk Analysis 12/31/2017

	Fund	Category	Index
Standard Deviation	8.75	14.68	14.17
Sharpe Ratio	0.76	0.60	0.68
R-Squared	53.31	50.67	51.37
Beta	0.64	1.02	1.01
Alpha	-0.30	-2.55	-1.35

### **Maximum Drawdown**

	Fund	Category	Index
Max Drawdown (%)	-38.76	-47.72	-47.98
Peak Date	06/08	12/07	12/07
Valley Date	02/09	02/09	02/09
Max Drawdown (Months)	9	15	15

#### 13 3 33 87 39 99 89 37 3 96 2.02 -23.81 32.50 21.33 -3.36 4.83 30.88 4.91 -0.12 15.59 8.10 8.42 1.18 -4.83 1.09 11.17 -5.34 1.57 6.59 -10.40 11.80 5.11 11.92 -3.17 2.14 -13.22 -3.65 0.69 7.35 -16.15 0.53 0.00 0.00 0.40 0.28 0.00 0.00 0.00 0.00

### Trailing Returns (Annualized) 12/31/2017

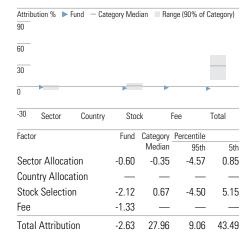
	Total Ret %	Investor Ret %	% Rank in Cat	Cat Ret %	Index Ret %
1 Year	5.86	5.10	77	8.54	7.84
3 Years	6.92	7.65	77	8.25	9.55
5 Years	10.91	10.84	78	12.23	13.01
10 Years	7.61	_	70	8.22	8.17
Tenure 06/02	9.59	_	_	9.05	9.12
Inception 06/02	9.59	_	_	9.05	9.12

#### Rolling-Returns Summary 12/31/2017

29% 10 25 36	36-Month Rolling Periods 151 Observations, 12 Years  The shading and percentages correspond to how often the fund returns landed in each category quartile.
	category quartile.

### 3-Year Performance Attribution 12/31/2017

0.00 %



Performance Attribution Index Proxy: iShares Russell 2000 Value ETF

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ORSVX

**Morningstar Analyst Rating** Neutral

#### People **Morningstar Category** US Fund Small Value

**Category Index** Russell 2000 Value TR HSD

#### Veteran manager wears one too many hats.

**People Pillar** 

Neutral

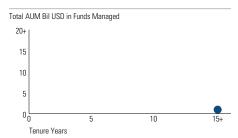
Dec 29, 2017 | Other duties stretch this small investment team's resources, earning the fund a Neutral People rating.

Steve Scruggs has been the fund's sole named manager since its June 2002 inception. He has also managed the smaller Queens Road Value QRVLX (\$45 million in total assets), which uses a large-cap version of this fund's strategy, since 2004. For years, Scruggs provided much of the research for both funds, aided by Benton Bragg, the president and CEO of Bragg Financial Advisors. The firm added a dedicated analyst to each fund in recent years, hiring Matt DeVries for this fund in 2015. Scruggs, Bragg, and DeVries join with two others to form the firm's investment committee, which makes allocation decisions for the advisory business and oversees Scruggs' portfolio management.

But Scruggs is more than a portfolio man-

ager. He's also director of research and, unusually, the firm's chief compliance officer. In order for a CCO to effectively police trading activity, the job must be distinct from portfolio management duties. Although Bragg Financial Advisors manages a relatively small amount of assets (\$1.4 billion as of November 2017), comparable firms distinguish compliance from investment personnel. A similar move here would reduce risk and, along with additional hires, round out this team's resources and sharpen its focus on fund management.

#### **Experience and Asset Load**



#### **Management Team**

Advisor

Number of Managers 1	Longest Tenure 15.58 Years	5-Year Manager-Retention Rate (Firm-wide) 100%	Largest Manager Investmen in Fund USD

Subadvisor

Bragg Financial Advisors Inc

#### Steve Scruggs 06/02 to Present

Years of Experience 15	Investment in Fund USD
Fund AUM	Current Funds Managed
185 Mil USD	2

Largest Funds Managed	Tenure Dates	Role	Fund Size Mil USD	Investment Mil USD	Turnover Ratio Avg	Tenure Ret %	Index Ret %
Queens Road Small Cap Value Fund	06/02to Present	Lead	140.25	_	32	9.59	9.12
Queens Road Value Fund	04/04to Present	Lead	45.00	_	16	7.43	8.21



**QRSVX** 

**Parent** 

Morningstar Analyst Rating

Morningstar Category
US Fund Small Value

Category Index Russell 2000 Value TR USD

# This tight-knit firm might be stretched by growth.

#### **Parent Pillar**

Neutral

Dec 12, 2017 | The team at Bragg Financial Advisors embraces a risk-aware approach across its strategies, but it lacks depth at key positions, earning the firm a Neutral Parent rating.

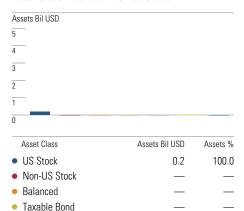
The small, family-owned firm is based in Charlotte, North Carolina and invests conservatively. Its two mutual fund strategies, Queens Road Small Cap Value and Queens Road Value (both opened in 2002), are run by portfolio manager Steve Scruggs and a four-person investment committee. The funds' quality bias and cash buffer help them hold up better than their respective peers in downturns, but not being fully invested has hurt in extended rallies. This restrained approach isn't for everyone, and the firm does not market the funds widely.

Still, the firm's small size makes the depth of its resources a concern. Scruggs is the sole manager of both funds, and he doubles as the

firm's chief compliance officer. President and CEO Benton Bragg runs the firm, performs analyst duties, and is Queens Road Value's second in command. These arrangements present some challenges. For Scruggs, there are potential conflicts of interest, as the CCO's role is to oversee the investment process that he leads. Though the firm's investment scope and assets are limited (it managed \$1.4 billion as of November 2017), additional compliance and research resources would lower the firm's operational and compliance risks and bring this firm's staffing in line with competitors'.



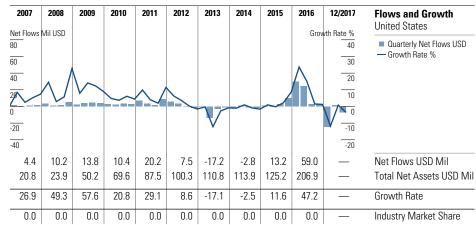
#### Asset Class Breakdown United States





Municipal Bond

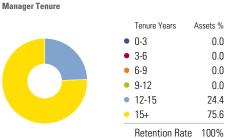
Alternative



### Fund Family Details United States

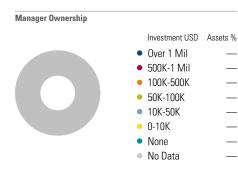
Morningstar Rating Breakdown





(5-Year)





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**ORSVX** 

Morningstar Analyst Rating

Price

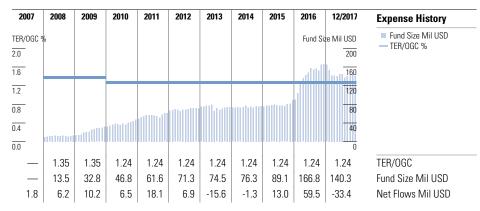
Morningstar Category Category Index
US Fund Small Value Russell 2000 Value TR
USD

### Cuts are on the horizon.

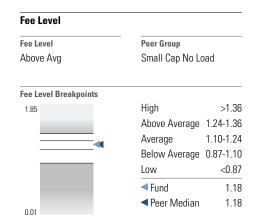
### Price Pillar • Neutral

Dec 29, 2017 | An upcoming fee reduction will bring this fund's expense ratio closer to the peer average, earning it a Neutral Price rating.

The fund's board voted in December 2017 to cut the management fee on its sole share class to 1.18% from 1.24%, effective Jan. 1, 2018. This will put the fund's expense ratio at 1.22%, which is middle of the pack versus no-load, small-cap fund shares. In addition, the firm also expects to eliminate its 0.04% acquired fund expenses by parking its sometimes-sizable cash balance in a different product. Once completed, this move should give the fund a slight fee advantage over the average peer.



#### **Expense Breakdown Net Expense Ratio** Annual Report 05/31/17 1.24 Prospectus 10/01/17 1.18 **Selected Components** % Management Actual 1.18 12b-1 Fee Brokerage Commission (% of Avg Net Assets) 0.04 Category Average 0.17 Tax Cost Ratio (3-Year) 0.61 Potential Capital Gains Exposure 32



#### **Share Class Information**

No Load	QRSVX	Open	1.18	Above Avg	Small Cap No Load	_	_	_	2,500	0.14	-33.40
			Ratio			Fee	Load	Load	Initial Inv	Bil USD	Mil USD
Share Class	Identifier	Status	Expense	Fee Level	Peer Group	12b-1	Front	Deferred	Minimum	Assets	1-Yr Flow



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	2016	2017	2018	
<b>₩</b> Gold				
Silver				
<b>Bronze</b>				
Neutral				
Negative				
Not Ratable				

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

#### 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 fund's investment team is a significant key to its ability to deliver superior performance relative to its benchmark and/or peers. Evaluating a fund's investment team requires that analysts assess several relevant items including how key decisions are made.

#### Paren

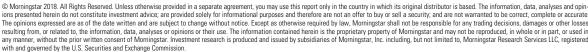
We believe the parent organization is of utmost importance in evaluating funds. The fund's management set the tone for key elements of our evaluation, including capacity management, risk management, recruitment and retention of talent, and incentive pay. Beyond these operational areas, we prefer firms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

#### Proces

We look for funds 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

mation, data, analyses and opinpe correct, complete or accurate.
isions, damages or other losses
d, in whole or in part, or used in
peace 15 capital LC capitated



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 fund 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 fund is penalised for high fees or rewarded for low fees can vary with region. In Europe, for example, funds are penalised if they land in the most expensive quintile of their Monningstar category and are rewarded if they land in the cheapest quintile. The assessment is made using annual expense ratios, but in the case of funds 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 fund; the difference between them corresponds to differences in the level of analyst conviction in a fund's ability to outperform its benchmark and peers through time, within the context of the level of risk taken.

#### Gold

Represents funds that our analyst has the highest-conviction in for that given investment mandate. By giving a fund 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 fund must distinguish itself across the five pillars that are the basis for our analysis.

#### Silver

Represents funds our analyst has high-conviction in, but not in all of the five pillars. With those fundamental strengths, we expect these funds 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 funds that have advantages that clearly outweigh any disadvantages across the pillars, giving analyst the conviction to award them a positive rating. We expect these funds to beat their relevant performance benchmark and/ or peer group within the context of the level of risk taken over a full market cycle (or at least five years).

#### Neutra

Represents funds in which our analysts don't have a strong positive or negative conviction. In our judgment, these funds 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 funds 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 funds 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 may also use two other designations in place of a rating

#### Under Reviev

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

#### Not Ratable

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#### **Equity-Related Data Points**

The Report lists the fund's top ten holdings as of the dated noted. For each underlying holding, a series of data points is provided including, where applicable, that security's Economic Moat 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 <u>narrow moat</u> are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. <u>Wide-moat</u> 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, <u>no-moat</u> companies will see their normalized returns gravitate toward the firm's cost of capital more quickly than companies with moats.

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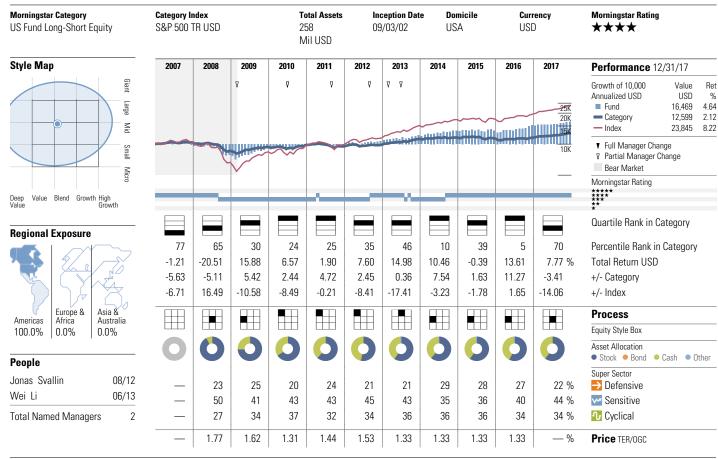
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**SWHEX** 

Morningstar Analyst Rating
Bronze



### A good start for this team.

#### **Analyst View**

#### Patricia Oey

Senior Analyst

Morningstar Analyst Rating	Bronze
Morningstar Pillars	
Process   Page 2-3	<ul><li>Neutral</li></ul>
Performance   Page 4	Positive
People   Page 5	<ul><li>Neutral</li></ul>
Parent   Page 6	Positive
Price   Page 7	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

<b>℧</b> Gold	Silver	≅ Bronze	Neutral	Negative
---------------	--------	----------	---------	----------

Dec 29, 2017 | Schwab Hedged Equity is a longshort equity strategy that employs a systematic process with a qualitative overlay. With below average fees and a positive parent in Schwab, this fund earns an initial Morningstar Analyst Rating of Bronze.

This fund incepted in 2002, but current managers Jonas Svallin and Wei Li modified the process when they took in 2012. Prior to their arrival, the fund relied primarily on Schwab Equity Ratings to identify long and short ideas. SER provides ratings on 3000 U.S. stocks, using four categories of signals: fundamentals, valuation, momentum, and risk. Svallin and Li use the SER ratings as the initial screen, and then apply another set of refined signals to companies grouped by sectors. The output is a ranking for about 1,600 names, with highly ranked stocks held long and low-ranked stocks sold short. At this point, the team might make some changes to the rankings after some fundamental analysis. The portfolio is managed with the help of an optimizer to ensure diversification and minimize trading costs. The team's monitoring the effectiveness of the signals, as well as researching potential new signals, are integrated into the investment process.

Over the trailing five years through November, the fund's 9.10% return was better than 79% of its long-short equity peers. Its Sharpe ratio of 1.24 was also significantly higher than the category average of 0.79 over the same period. On a calendar-year basis, the long portfolio (whose gross exposure is 100%) generally slightly outperforms the MSCI Mid Cap Index. The short portfolio has been a more significant contributor of returns, particularly in 2014 through 2016. In years when markets were up, the short portfolio did not really detract from returns, and in 2015 when mid-caps declined, the short portfolio provided over 400 basis points of positive contribution. But it is worth noting that equity markets have not been particularly volatile over the past five years.

With only \$250 million in assets, the fund is small. Given the fund's focus on mid-caps, it is worth monitoring any significant change in portfolio traits as the fund grows in size.

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**SWHEX** 

Morningstar Analyst Rating
Bronze

### Process: Approach

Morningstar Category
US Fund Long-Short Equity

Category Index S&P 500 TR USD Index Proxy iShares Core S&P 500

#### Disciplined and robust.

#### **Process Pillar**

Neutral

Dec 29, 2017 | This systematic process is rooted in the scientific method but is untested in a significant market downturn. As a result, the Process rating is Neutral.

The process starts with the purely quantitative Schwab Equity Ratings, which rank a universe of about 3,000 U.S. companies on four cat-

egories of screens: healthy or improving fundamentals, attractive valuations, momentum, and lower risk. The managers take about 1,600 of the largest, highest-ranking names, and then groups them by sector. They then apply another set of signals, which are similar and complementary to the SER signals, but are somewhat customized by sector. Then the stocks are grouped into 55 industries and ranked.

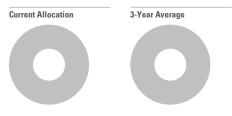
The goal is to have an average 60% beta to the S&P 500 over a cycle. Generally, this means the fund will have a 100% long allocation, and a

20%-60% short allocation. The managers seek to generate alpha from small and mid-caps, taking long positions in highly ranked companies and short positions in low-ranked companies. Beta exposure tends to come from long positions in large and mid-cap stocks. The managers use a portfolio-optimization software to reduce unintended bets on sectors or risk factors, as well as to minimize transaction costs. The team continuously monitors the portfolio and may make some adjustments after additional fundamental analysis. Generally, they do not impose top-down changes.

#### Equity Style Box 12/31/2017



#### Asset Allocation 12/31/2017



#### Assets % Fund 3-Yr Avg Category Proxv • U.S. Equities 61.7 59.9 45.5 98.9 • Non-U.S. Equities -1.5 -0.7 7.1 0.9 Bonds 0.0 0.0 9.7 0.0 Cash 39.7 40.6 38.4 0.3 Other 0.0 -0.7 0.3 0.0

### Style Box Factors 12/31/2017

Book-Value %

Market Cap	Fund	3-Yr Avg	Category	Proxy
Giant/Large	45.7	37.6	60.9	86.7
Mid	30.3	32.8	29.8	13.2
Small/Micro	24.1	29.6	9.4	0.1
Avg Market Cap Bil USD	20.3	13.8	40.5	95.6
Value Measures	Fund	3-Yr Avg	Category	Proxy
Price/Prospect. Earnings	17.8	16.1	16.5	21.7
Price/Book	2.6	2.0	2.3	3.1
Price/Sales	1.1	0.8	1.4	2.3
Price/Cash Flow	8.1	5.6	8.5	12.5
Dividend Yield	1.5	1.8	1.7	1.9
Growth Measures	Fund	3-Yr Avg	Category	Proxy
Long-Term Earnings %	10.3	10.1	10.5	9.9
Historical Earnings %	4.1	6.3	8.5	4.6
Sales %	-1.0	0.6	0.9	0.7
Cash Flow %	-2.9	9.7	7.8	0.2

-2.3

0.6

4 1

3.9

### Regional Exposure 12/31/2017

Market Type Equity %	Fund	3-Yr Avg	Category	Proxy
Developed	100.0	100.0	96.6	99.5
Emerging	0.0	0.0	3.4	0.5
Top 5 Countries Equity %	Fund	3-Yr Avg	Category	Proxy
United States	99.6	99.5	80.3	99.1
Puerto Rico	0.4	0.1	0.3	0.0
. 40.10 1.100	0.4	0.1	0.0	0.0

### Sector Delta 12/31/17



● Fund▲ Index Proxy

Larger sector concentrations versus the index move the investment to the corner of the triangle corresponding to that equity Super Sector.

### **Economic Moat** 12/31/2017

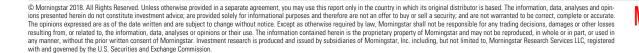
Moat Rating	Fund	3-Yr Avg	Category	Proxy
Wide Moat	31.6	29.9	35.8	48.4
Narrow Moat	45.1	40.5	47.7	41.3
No Moat	23.3	29.6	16.5	10.3
Coverage Ratio	59.1	55.2	70.6	95.6

### Key Ratios 12/31/2017

	Fund	3-Yr Avg	Category	Proxy
Net Margin %	9.1	8.7	15.4	15.1
ROA %	5.0	4.8	7.3	7.6
Debt/Total Capital %	48.1	46.8	39.6	42.7
ROE %	17.7	17.6	19.7	21.9

#### Equity Sector Breakdown 12/31/2017

Sectors	Fund	3-Yr Avg	Category	Proxy
→ Defensive	22.3	25.9	20.0	25.3
Consumer Defensive	6.6	7.8	6.3	8.4
Healthcare	12.9	15.3	11.9	14.0
Utilities Utilities	2.8	2.8	1.8	2.9
<b>✓</b> Sensitive	43.6	38.0	42.3	41.6
Communication Serv.	3.6	1.1	2.7	3.6
Energy	9.1	7.7	6.4	6.1
Industrials	9.0	10.9	13.5	10.7
Technology	21.9	18.2	19.6	21.3
<b>℃</b> Cyclical	34.1	36.1	37.7	33.1
📤 Basic Materials	1.4	3.7	4.9	2.8
Consumer Cyclical	13.9	15.4	13.2	11.1
Financial Services	13.7	13.5	17.6	16.8
Real Estate	5.2	3.5	2.1	2.4





**SWHEX** 

Morningstar Analyst Rating
Bronze

Process: Portfolio

Morningstar Category
US Fund Long-Short Equity

S&P 500 TR USD

Index Proxy
iShares Core S&P 500
FTF

### Focused more on mid-caps.

#### **Process Pillar**

Neutral

Dec 29, 2017 | The short book is carefully monitored, as a strong rally in these names can really detract from returns. The team harvests gains from shorts, and won't let positions get too large. Across the portfolio, they focus on the outliers and the largest contributors to risk. They also run paper portfolios incorporating varying levels of sig-

nals to estimate the contribution from each part of the process. In addition to portfolio management, the team also researches potential new signals or data sets, and tests current signals. Over the past few years, they have added a few signals and have recalibrated some signals to improve their efficacy.

The fund currently has about 170 long positions, and historically, the top 10 will account for about 20%, which is average for the category. The long portfolio typically sits between mid-blend and mid-value, with an average market cap of \$14

billion. The short book has about 100 positions, and skews towards growth names. The average market cap of this portfolio is much lower, at \$5 billion. A shift towards larger-cap names in the short portfolio (as a result of large inflows) would be a trend worth monitoring. Under the fund's current managers, the fund's net exposure has been fairly consistent between 60% and 65%. The managers prefer to hold common stocks and generally do not use derivatives. Turnover for the long and short portfolio has been around 100% and 50%, respectively.

#### Similarity to Index Proxy 01/24/2018

Index Proxy Overlap

Proxy

Circle size represents number of holdings.

Number of Equity Hold	ings
Fund	275
Index Proxy	505
Fund Overlap With Ind	ex Proxy
Holdings Overlap	101
Asset Overlap	23.3%

Largest Common Holdings	Fund %	Proxy %	Largest Distinct Holdings	Fund %
Alphabet Inc A	1.54	1.44	Progress Software Corp	2.03
Apple Inc	1.54	3.68	Allison Transmission Holdings Inc	1.95
Bank of America Corporation	1.47	1.28	Live Nation Entertainment Inc	1.89
Amazon.com Inc	1.12	2.24	Retail Properties of America Inc Class A	1.66
Microsoft Corp	1.03	2.92	Las Vegas Sands Corp	1.41

#### Portfolio Holdings 12/31/17

	revious Portfolio Date 9/30/17	Equity Ho 275	ldings		Bond Holdi O	ings	<b>Asset</b> 19%	s in Top 10 H	loldings Turi 163	nover Ratio (Re 8%	eported)
Top 10 Holdings	Country		Assets % 09/30/17	,	First Bought	,	Morningstar Rating for Stocks	Economic Moat	Sector		1-Yr Tota Ret %
Citigroup Inc	USA	2.37	2.33	0.86	07/13	<1	***	Narrow	Financial S	ervices	26.82
	USA	2.11	2.06	0.15	03/17	<1	**	None	📴 Financial S	ervices	43.27
Eli Lilly and Co	USA	2.08	2.12	0.34	06/17	<1	***	Wide	Healthcare		17.66
<ul> <li>Progress Software Corp</li> </ul>	USA	2.03	2.05	_	03/17	<1	_	_	Technology	1	34.94
Allison Transmission Holdings	s Inc USA	1.95	1.71	_	06/15	<1	_	_	Consumer	Cyclical	29.62
Live Nation Entertainment Inc	USA	1.89	1.95	_	09/16	<1	_	_	Consumer C	Cyclical	60.04
Express Scripts Holding Co	USA	1.87	1.54	0.19	12/16	<1	****	Wide	Healthcare		8.50
FirstEnergy Corp	USA	1.73	1.76	0.06	12/15	<1	****	Narrow	Utilities		3.52
⊕ Halliburton Co	USA	1.66	1.00	0.20	09/17	<1	**	Narrow	Energy		-8.32
Retail Properties of America I	nc Class A USA	1.66	1.63	_	12/16	<1	_	_	neal Estate	)	-8.01

Change since last portfolio:	Increase	<ul><li>Decrease</li></ul>	💥 New
------------------------------	----------	----------------------------	-------

New Holdings Largest Purchases	% Assets	Sector	Eliminated Holdings Largest Sales	% Assets	Sector	Largest Position Changes	Current %	Prior %
Costco Wholesale Corp	1.44		Oshkosh Corp	1.63	<b>‡</b>	☼ Costco Wholesale Corp	1.44	0.00
Accenture PLC A	1.01		Emergent BioSolutions Inc	1.22	+	<ul> <li>Wal-Mart Stores Inc</li> </ul>	0.78	1.72
Santander Consumer USA Holdings Inc	0.93		Anixter International Inc	0.69	<b>‡</b>	<ul><li>Pfizer Inc</li></ul>	0.58	1.85
Affiliated Managers Group Inc	0.89		CBOE Holdings Inc	0.65		<ul><li>PepsiCo Inc</li></ul>	0.18	1.75
Semgroup Corp	0.78	•	Ross Stores Inc	0.63	<b>~</b>	Oshkosh Corp	0.00	1.63



**SWHEX** 

Morningstar Analyst Rating
Bronze

### Morningstar Category

Morningstar Category Category Index
US Fund Long-Short Equity S&P 500 TR USD

#### Solid relative to peers.

Performance

#### **Performance Pillar**

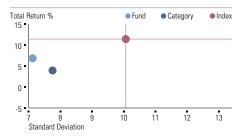
Positive

Dec 29, 2017 | This fund has generated strong riskadjusted returns versus similar long-short peers. As such, it earns a Positive Performance rating. Over the trailing five years through November 2017, the fund returned 9.10% annualized, topquartile performance within the long-short equity Morningstar Category. The fund exhibited similar levels of outperformance on a trailing three-year basis. As for risk, the fund's maximum drawdown under the current managers (starting August 2012) was 7.00%, better than the category average of 7.91%. On a trailing three- and five-year basis, the fund's volatility has remained below average. The fund's long portfolio (which has a 100% gross exposure) has generally outperformed both the S&P 500 and the MSCI Mid Cap Index each calendar year from 2012 through 2016, except in 2015, which was a challenging year for value (the portfolio is focused on mid-caps, with a slight value

tilt). But that year, the short portfolio generated 400 basis points of contribution, so the fund's return of negative 0.39% was still above average within the long-short equity category. The short portfolio also performed well in 2014 and 2016 when it didn't detract from performance even when markets were up. However, in 2017, the short portfolio detracted 700 basis points through September due to strong performance by growth stocks, which the fund tends to short. For long-short funds, the short portfolio's performance can be a significant source of volatility.

#### Morningstar Rating and Risk 12/31/2017 Period Load-Adi Morningstar Morningstar Morningstar Ret vs Cat Risk vs Cat Rating Return % 6.84 Above Avg 3 Years Ava 5 Years 9.14 Above Avg 10 Years 5.24 Overall Rating

#### 3-Year Return and Risk Analysis 12/31/17

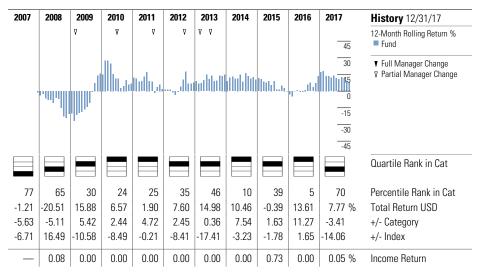


#### Return/Risk Analysis 12/31/2017

	Fund	Category	Index
Standard Deviation	7.18	7.75	10.07
Sharpe Ratio	0.90	0.49	1.08
R-Squared	71.99	50.64	_
Beta	0.61	0.52	_
Alpha	-0.16	-1.93	_

#### Maximum Drawdown

	Fund	Category	Index
Max Drawdown (%)	-29.92	-21.98	-48.81
Peak Date	12/07	12/07	12/07
Valley Date	02/09	02/09	02/09
Max Drawdown (Months)	15	15	15



### Trailing Returns (Annualized) 12/31/2017

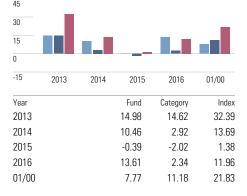
	Total Ret %	Investor Ret %	% Rank in Cat	Cat Ret %	Index Ret %
1 Year	7.77	7.09	70	11.18	21.83
3 Years	6.84	5.97	23	3.93	11.41
5 Years	9.14	8.23	15	6.23	15.79
10 Years	5.24	_	38	4.43	8.50
Tenure 08/12	8.87	_	_	5.32	15.26
Inception 09/02	7.12	_	_	3.03	9.76

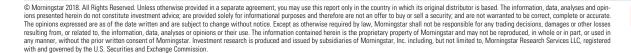
#### Rolling-Returns Summary 12/31/2017

		49% 31 19	36-Month Rolling Periods 148 Observations, 12 Years  The shading and percentages correspond to how often the fund returns landed in each category quartile.
--	--	-----------------	---

#### Calendar Year Returns

Return %







Fund
 Category
 Index

**SWHEX** 

Morningstar Analyst Rating
Bronze

### People

Morningstar Category
US Fund Long-Short Equity

Category Index S&P 500 TR USD

#### A measured build-out of a new team.

#### **People Pillar**

Neutral

Dec 29, 2017 | Comanager Jonas Svallin joined Schwab in 2012 and spent the next few years building a new Active Equity team, which currently runs eight strategies, all of which employ the same systematic investment process. More than half of the seven-person team have been at Schwab for three years or less, so at this time, this

fund earns a Neutral People rating.

Svallin has an 18-year career employing quantitative tools for investing, attribution analysis, and risk management. Prior to Schwab, he was director of quant analytics at Fiduciary Research & Consulting, and before that, he was head portfolio manager of Algert Global Equity Market Neutral from 2003 to 2009.

Wei Li is the other listed manager for this and the other Active Equity strategies. She joined Schwab in 2012 and prior to that, was at BGI/Blackrock for more than a decade in a number

of roles, including quant research. She has a Ph.D. in statistics from UC Berkeley. Both Svallin and Li have small investments in a few strategies. We prefer to see a higher level of investment to better align managers' and fundholders' interests.

There are four other senior members of the team--two are managers on other Active Equity strategies and two are senior researchers who monitor the effectiveness of the process and research new signals. Steven Greiner heads up Schwab Equity Ratings and is based in Chicago. All five have quantitative investing experience.

#### **Experience and Asset Load**



#### **Management Team**

Number of Managers Longest Tenure 2 5.42 Years

**5-Year Manager-Retention Rate** (Firm-wide)
91%

Largest Manager Investment in Fund 1 to 10,000 USD

Advisor

Charles Schwab Investment Management Inc

Subadvisor

#### Jonas Svallin 08/12 to Present

1 to 10,000 USD
Current Funds Managed
8

Largest Funds Managed	Tenure Dates	Role	Fund Size	Investment	Turnover	Tenure	Index
			Bil USD	Mil USD	Ratio Avg	Ret %	Ret %
Schwab Core Equity Fund™	09/12to Present	Lead	2.38	< 0.01	73	13.90	14.57
Schwab Dividend Equity Fund™	08/12to Present	1 of 3	1.48	< 0.01	68	12.39	14.15
Schwab® International Core Equity Fund	08/12to Present	1 of 3	1.29	< 0.05	90	10.94	8.44
Schwab Health Care Fund™	08/12to Present	1 of 3	0.85	None	57	16.20	17.57
Schwab Small-Cap Equity Fund™	08/12to Present	1 of 2	0.64	< 0.05	95	15.88	14.70

#### ● Wei Li 06/13 to Present

Years of Experience

4	None
Fund AUM	Current Funds Managed
7,441 Mil USD	8

Investment in Fund

Largest Funds Managed	Tenure Dates	Role	Fund Size	Investment	Turnover	Tenure	Index
			Bil USD	Mil USD	Ratio Avg	Ret %	Ret %
Schwab Core Equity Fund™	06/13to Present	1 of 3	2.38	< 0.01	78	13.40	13.80
Schwab Dividend Equity Fund™	06/13to Present	1 of 3	1.48	< 0.01	71	10.29	11.64
Schwab® International Core Equity Fund	06/13to Present	1 of 3	1.29	None	85	8.81	6.89
Schwab Health Care Fund™	06/13to Present	1 of 3	0.85	None	56	13.28	14.70
Schwab Small-Cap Equity Fund™	06/13to Present	1 of 2	0.64	< 0.01	93	12.43	11.87



**SWHEX** 

Morningstar Analyst Rating
Bronze

Parent

Morningstar Category
US Fund Long-Short Equity

Category Index S&P 500 TR USD

# Schwab has strengthened its investment team and risk management culture.

#### **Parent Pillar**

Positive

Mar 24, 2017 | Over the past several years, Schwab has strengthened its executive management, investment team, and risk management, while generally sticking to low-cost portfolio building blocks. Morningstar is upgrading its Parent Pillar Rating to Positive from Neutral.

After one of the firm's ultrashort bond

funds, Schwab YieldPlus, fell sharply during the financial crisis, the firm brought in new leadership, which has made significant changes to the organization to reduce the risk of a similar gaffe. Among these, the team added risk management as a component of managers' variable compensation. The firm has also expanded its investment team and is well equipped to run the index and money market funds that account for the bulk of its assets. However, many members of the portfolio management team are new to the firm, and there has been moderate turnover on the team. Key-person

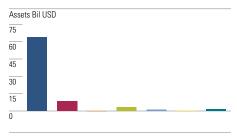
risk is minimal because the firm fosters a collaborative environment that eschews star managers.

The firm's product development strategy has been disciplined, focusing on low-cost core strategies meant to serve as long-term holdings. It sets low investment minimums to make these low fees available to all investors. That said, the firm offers a handful of funds subadvised by Laudus that look a bit out of step with its low-cost philosophy.

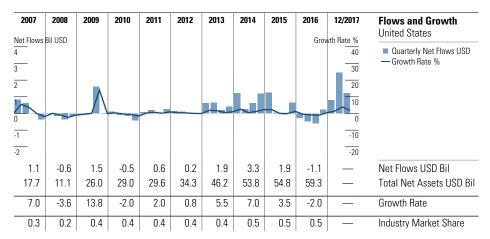




#### Asset Class Breakdown United States

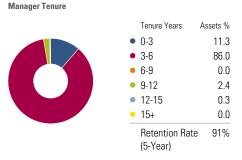


Total Assets	75.8	100.0
<ul> <li>Commodities</li> </ul>	1.3	1.7
<ul> <li>Alternative</li> </ul>	0.3	0.3
<ul> <li>Municipal Bond</li> </ul>	1.1	1.4
<ul><li>Taxable Bond</li></ul>	3.2	4.2
<ul> <li>Balanced</li> </ul>	_	_
<ul> <li>Non-US Stock</li> </ul>	8.2	10.8
<ul> <li>US Stock</li> </ul>	61.9	81.6
Asset Class	Assets Bil USD	Assets %

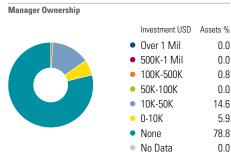


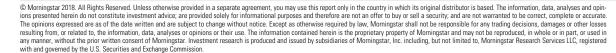
### Fund Family Details United States

Morningstar Rating Breakdown











**SWHEX** 

Morningstar Analyst Rating
Bronze

Price

Morningstar Category
US Fund Long-Short Equity
US Fund Long-Short Equity

Category Index
S&P 500 TR USD



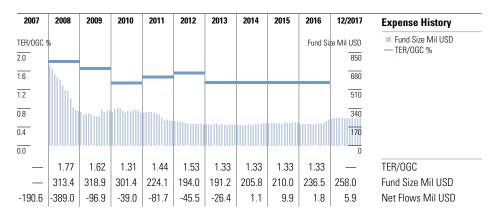


Dec 29, 2017 | Below-average fees support a Positive Price rating.

There is only one share class, which charges a 1.33% expense ratio. This is composed of a 1.05% management fee and 0.30% in other fees, net a 0.02% reduction so that the expense ratio does not exceed 1.33%. In the fiscal year ended October 2016, the fund incurred shorting costs (which is not included in the expense ratio, but is reflected in performance) of 0.52%.

The fund is small, with about \$250 million in assets as of November 2017. Capacity is not an issue now, but a mid-cap tilt in its short portfolio limits the fund's ability to become very large.

Relative to long-short peers, this fund has distributed more capital gains, and does not have any realized losses.



Expense Breakdown	
Net Expense Ratio	%
Annual Report 10/31/17	_
Prospectus 02/28/17	1.33
Selected Components	%
Management Actual	1.05
12b-1 Fee	_
Brokerage Commission (% of Avg Net Assets)	0.13
Category Average	0.30
Tax Cost Ratio (3-Year)	1.76
Potential Capital Gains Exposure	13

Fee Level		
Fee Level	Peer Group	
Below Avg	_	
Fee Level Breakpoints		
	High	>0.00
	Above Average	0.00-0.00
	Average	0.00-0.00
	Below Average	0.00-0.00
	Low	<0.00
	Fund	1.33
	◆ Peer Median	1.52

#### **Share Class Information**

Other	SWHEX	Open	1.33	Below Avg	_	_	_	_	100	0.26	5.88
			Ratio			Fee	Load	Load	Initial Inv	Bil USD	Mil USD
Share Class	Identifier	Status	Expense	Fee Level	Peer Group	12b-1	Front	Deferred	Minimum	Assets	1-Yr Flow
01 01	11	0		- I I	D 0	401.4		D ( 1	N 41: 1		4



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#### **Morningstar Analyst Rating**

	2016	2017	2018	
<b>℧</b> Gold				
Silver				
<b>Bronze</b>				
Neutral				
Negative				
Not Ratable				

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#### The Morningstar Analyst Rating™ for Funds

The Morningstar Analyst Rating™ for Funds is a forward-looking analysis of a fund. The Analyst Rating does not express a view on a given asset class or peer group; rather, it seeks to evaluate each fund 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 Morningstar Manager Research Analyst assigned or reaffirmed the current rating for the fund based on the analyst's latest review and research report for the fund

#### 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 fund's investment team is a significant key to its ability to deliver superior performance relative to its benchmark and/or peers. Evaluating a fund's investment team requires that analysts assess several relevant items including how key decisions are made.

#### Paren

We believe the parent organization is of utmost importance in evaluating funds. The fund's 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.

#### Proces

We look for funds 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 fund 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 fund is penalised for high fees or rewarded for low fees can vary with region. In Europe, for example, funds are penalised they land in the most expensive quintile of their Monningstar category and are rewarded if they land in the cheapest quintile. The assessment is made using annual expense ratios, but in the case of funds 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 fund; the difference between them corresponds to differences in the level of analyst conviction in a fund's ability to outperform its benchmark and peers through time, within the context of the level of risk taken.

#### Gold

Represents funds that our analyst has the highest-conviction in for that given investment mandate. By giving a fund 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 fund must distinguish itself across the five pillars that are the basis for our analysis.

#### Silver

Represents funds our analyst has high-conviction in, but not in all of the five pillars. With those fundamental strengths, we expect these funds 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 funds that have advantages that clearly outweigh any disadvantages across the pillars, giving analyst the conviction to award them a positive rating. We expect these funds to beat their relevant performance benchmark and/ or peer group within the context of the level of risk taken over a full market cycle (or at least five years).

#### Neutra

Represents funds in which our analysts don't have a strong positive or negative conviction. In our judgment, these funds 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 funds 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 funds 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 may also use two other designations in place of a rating

#### Under Reviev

This designation means that a change that occurred with the fund or at the fund 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.

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The Morningstar Star Rating is a proprietary data point that is quantitatively driven. Funds are rated from one to five stars based on how well the fund performed (after adjusting for risk and accounting for sales charges) in comparison to similar funds. Within each Morningstar Category, the top 10% of funds receive five-stars and the bottom 10% receives one-star. Funds 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. Funds with less than three years of history are not rated. Morningstar Star Ratings are based entirely on a mathematical evaluation of past performance. Morningstar 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 fund's top ten holdings as of the dated noted. For each underlying holding, a series of data points is provided including, where applicable, that security's Economic Moat 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 <u>narrow moat</u> are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. <u>Wide-moat</u> 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, <u>no-moat</u> companies will see their normalized returns gravitate toward the firm's cost of capital more quickly than companies with moats.

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Overall Morningstar Rating™

Morningstar Analyst Rating

Bronze

12/21/2017

Morningstar Category
US Fund Intermediate-Term Bond

Category Index BBgBarc US Agg Bond TR USD **Prospectus Benchmark** BBgBarc US Agg Enhanced Yield TR USD

847 Funds in Category

#### **Fixed Income Asset Allocation**



# Performance Since Inception - Growth of 10,000



Performance data presented is non-standardized. For standardized performance see page 5.

# Snapshot

Inception Date	7/9/2015
Gross Expense Ratio	0.20
Assets (millions US	D) 335
Avg Dly Vol (3 Mo)	83,622
Portfolio Date	1/23/2018
Distribution Freq	Monthly
Exchange Traded N	ote No
Replication Method	Physical-Sample
Fund Lgl Structure	Open Ended Investment Company

#### **Annual Total Returns %**

*annualized returns	Inception*	2013	2014	2015	2016	2017	YTD
WisdomTree Barclays YldEnh US Aç	3.13	_	_	_	4.11	5.22	-1.09
BBgBarc US Agg Bond TR USD	7.41	-2.02	5.97	0.55	2.65	3.54	-1.04
US Fund Intermediate-Term Bond	6.44	-1.36	5.14	-0.27	3.25	3.79	-0.77

### **Monthly Fund Flows (millions USD)**



\*Performance Disclosure: The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate; thus an investor's shares, when sold, may be worth more or less than their original cost. Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call (866) 909-9473 or visit www.wisdomtree.com.

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

#### **Morningstar Analyst Pillar Ratings**

Process Pillar	Neutral
Performance Pillar	Neutral
People Pillar	Neutral
Parent Pillar	Neutral
Price Pillar	Positive

# **Morningstar Take**

By Phillip Yoo 12/21/2017

WisdomTree Barclays Yield Enhanced U.S. Aggregate Bond AGGY is an attractive, inexpensive strategy that attempts to boost return by reweighting the components of the Bloomberg Barclays U.S. Aggregate Bond Index. But this additional yield is not free. It comes with greater credit risk and often slightly greater interest-rate risk. This and the fund's short record limit the strategy to a Morningstar Analyst Rating of Bronze.

The fund's benchmark, the Bloomberg Barclays U.S. Aggregate Enhanced Yield Index, divides the investment-grade-focused Aggregate Index into 20 subcomponents. These are defined by sector (securitized, corporate credit, and government), maturity, and credit rating. Each month, the fund reweights these subsectors to maximize the portfolio's yield under a set of constraints to limit turnover, preserve diversification, and limit risk. Compared with the Aggregate Index, the reconstructed index's subsectors can only deviate up to 20%, and its monthly tracking error relative to the original index is capped at 0.35%.

While the fund does take greater credit risk than its

parent benchmark, this risk is still moderate and is more representative of how active managers in the Morningstar Category invest. The fund currently allocates roughly half of its assets to corporate bonds, 20 percentage points more than the Aggregate Index, about 30% to securitized products, and the balance to Treasury securities. The Aggregate Index's Treasury exposure is around 40%. Though the portfolio's duration of 6.8 years as of this writing is in line with the original index, this fund's tilt toward credit enables the fund to offer a higher yield.

Given the strategy's recent launch (July 2015), its record is short. From its inception through October 2017, the fund trailed the benchmark by 0.18%. This gap is on par with the expense ratio of 0.12%. However, the fee waiver of 0.08% is set to expire in December 2017.

# Risk/Return Analysis (3 Years)

	ETF	Cat Index	Cat Avg
Total Ret Annlzd %	_	2.24	2.22
Standard Deviation %	_	2.82	2.72
Arithmetic Mean %	_	0.19	0.19
Sharpe Ratio	_	0.64	0.67
R-Squared	_	_	84.55
Beta	_	_	0.87
Alpha %	_	_	0.21
Treynor Ratio	_	_	2.09
Sortino Ratio	_	1.02	1.10



Category Index BBgBarc US Agg Bond TR USD **Prospectus Benchmark** BBgBarc US Agg Enhanced Yield TR USD 847 Funds in Category

Overall Morningstar Rating™

Morningstar Analyst Rating

**Bronze** 

12/21/2017

# **Fundamental View**

Morningstar Category

US Fund Intermediate-Term Bond

Though there is a strong argument to be made for investing in a broad market-cap-weighted bond index, the approach does have drawbacks. One of the biggest drawbacks is that issuers' financing activities have a significant impact on the composition of the universe. In the investment-grade bond market, the U.S. government has issued a record amount of debt. In 2012, the Treasury Department started issuing longer-term bonds to address long-term Medicare and Social Security related expenses, while taking advantage of low interest rates. As a result, Treasury securities make up approximately 40% the broad market-cap-weighted Aggregate Index, limiting its return potential.

To increase its return, the portfolio reweights the components of the Aggregate Index to emphasize the higher-yielding areas of the investment-grade market. This dynamic approach allows the fund to shift its sector exposure (credit, securitized, and government) as the interest-rate environment evolves. The portfolio has a few constraints to keep the portfolio diversified and prevent it from taking too much risk. These include limiting tracking error to the Aggregate Index, keeping the subcomponent weightings within 20% of the parent index, and limiting duration to no more than one year longer than that benchmark.

Although the investment universe is confined to investment-grade bonds, the process does increase the portfolio's credit risk. The fund is permitted to add up to 20% more securities rated BBB than its parent index. While there has not been a single default by a BBB rated bond from 2012 to 2016 according to S&P, this rating is the lowest for an investment-grade bond. As of October 2017, the portfolio's BBB exposure was

around one fifth of assets, in line with the intermediate-term bond category average and 5 percentage points more than the Aggregate Index.

In addition, the fund's interest-rate-risk profile is likely to move in tandem with the broad market-capweighted index thanks to its duration-variation cap of one year against the Aggregate Index. The strategy had a duration of 6.8 years compared with the category average of 5.3 years as of October 2017.

This strategy is not completely free from the broad market composition, since it constrains its portfolio against the Aggregate Index. For example, within the portfolio's corporate-bond sector, financial firms are the largest holdings of the fund. This is because there have been active issuances by U.S. financial institutions in recent years. During 2016 alone, U.S. financial firms issued \$299 billion of debt, pushing the sector's total outstanding debt to \$1.6 trillion as of December 2016 according to Fitch. The issuances were largely driven by low rates and post-crisis regulatory changes.

Despite its short history, this fund has produced a decent performance. From its July 2015 inception through October 2017, its annual return was 3.6%, beating 80% of its peers in the category. On a risk-adjusted basis, as measured by Sharpe ratio, it ranked in the top third of the category over that period.

# Fund Credit Quality

	ETF	Cat Avg
AAA %	47.30	36.42
AA %	3.90	9.33
A %	25.04	25.53
BBB %	23.75	22.84
BB %	0.00	4.13
B %	0.00	0.83
Below B %	0.00	0.43
Not Rated %	0.00	0.49

### **Coupon Range**

	ETF	Cat Avg
0 to 1 %	_	2.96
1 to 2 %	_	7.76
2 to 3 %	_	29.47
3 to 4 %	_	33.21
4 to 5 %	_	8.40
5 to 6 %	_	5.87
6 to 7 %	_	4.06
7 to 8 %	_	0.79
8 to 9 %	_	0.23
9 to 10 %	_	0.20
10 to 11 %	_	0.10
11 to 12 %	_	0.10
12 to 15 %	_	0.00
15+ %	_	0.00

# **Market Performance Statistics**

Time Period: 7/10/2015 to 1/22/2018						
	ETF	Cat Index	Cat Avg			
Up Capture Ratio %	115.03	100.00	81.31			
Down Capture Ratio %	111.67	100.00	78.54			
Max Drawdown %	-4.96	-4.38	-3.62			
Max Gain %	10.08	7.75	7.76			
Best Month %	2.20	1.80	1.61			
Worst Month %	-2.82	-2.37	-2.18			

#### **Historical 12 Month Yield**

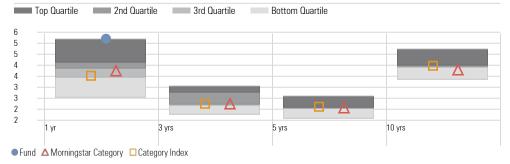
Time Period: Since Inception to 12/31/2017



Performance data presented is non-standardized. For standardized performance see page 5.

# Trailing Returns Relative to Peer Group %

Peer Group (5-95%): Exchange Traded Funds - U.S. - Intermediate-Term Bond



	1 yr	3 yrs	5 yrs	10 yrs
WisdomTree Barclays YldEnh US AggtBd ETF	5.22	<u> </u>		
Peer group percentile	5	_	_	_
BBgBarc US Agg Bond TR USD	3.54	2.24	2.10	4.01
US Fund Intermediate-Term Bond	3.79	2.24	2.08	3.80
# of investments ranked in peer group	23	13	9	6



Overall Morningstar Rating™

Morningstar Analyst Rating

Bronze

12/21/2017

Morningstar Category
US Fund Intermediate-Term Bond

Category Index BBgBarc US Agg Bond TR USD **Prospectus Benchmark** BBgBarc US Agg Enhanced Yield TR USD

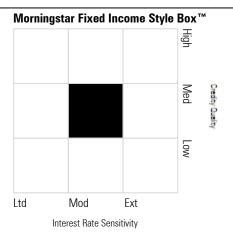
847 Funds in Category

# **Portfolio Construction**

The fund employs representative sampling to track the Bloomberg Barclays U.S. Aggregate Enhanced Yield Index. This broad portfolio is arguably more representative of how active managers in the category invest than the market-cap-weighted Bloomberg Barclays U.S. Aggregate Bond Index. It takes reasonable steps to boost yield, without taking excessive risk, and keeps turnover under control. It warrants a Positive Process Pillar rating.

This strategy divides the Aggregate Index into 20 subcomponents based on different risk dimensions, including sector exposure, interest-rate risk, and credit risk. In total, six of these buckets cover Treasury and agency debt, nine cover corporate debt, and five cover securitized debt. It then reweights them to maximize

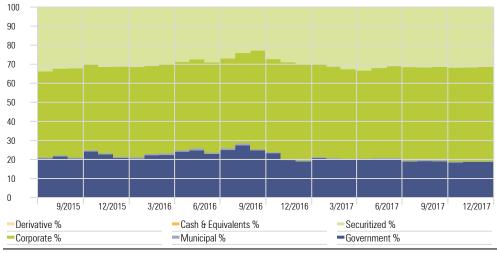
yield under a set of constraints. These include limiting tracking error relative to the Aggregate Index, keeping sector weightings within 20% of that index and preventing duration from extending beyond a year longer than the index. It also limits turnover each month. Eligible securities include U.S.-dollar-denominated investment-grade bonds with at least \$300 million in par outstanding. Asset-backed and commercial mortgage-backed bonds have different liquidity requirements. Yield to worst is the primary measure for calculating expected yields.



	ETF	Cat Avg		ETF	Cat Avg
Yield to Maturity %	3.29	2.83	Turnover Ratio %	134.00	223.03
12 Month Yield %	2.78	2.40	% Asset in Top 10	6.67	47.13
30-Day SEC Yield	_	2.29	# of Holdings	1,603	724

Fixed Income Portfolio Statistics					
	ETF	Cat Avg			
Average Eff Duration (yrs)	6.79	5.13			
Average Eff Maturity (yrs)	_	7.15			
Average Coupon %	3.87	3.43			
Average Price	104.36	_			

#### Fixed Income Super Sector Breakdown History



#### Current Fixed Income Sub Sector Breakdown

	ETF	Cat Avg
Government %	17.55	24.12
Government Related %	1.28	3.79
Municipal Taxable %	0.26	0.72
Municipal Tax-Exempt %	0.00	0.02
Bank Loan %	0.00	0.07
Convertible %	0.21	0.18
Corporate Bond %	49.06	30.54
Preferred Stock %	0.00	0.04
Agency Mortgage-Backed %	27.05	26.36
Non-Agency Residential MBS %	0.19	1.10
Commercial Mortgage-Backed %	4.36	2.76
Covered Bond %	0.00	0.29
Asset-Backed %	0.04	7.49
Cash & Equivalents %	0.00	4.40

# **Top 10 Holdings**

Portfolio Date: 1/24/2018

	Maturity Date	Portfolio Weighting %
US Treasury Note 1.5%	5/31/2019	1.38
US Treasury Note 2.5%	8/15/2023	1.17
FNMA	2/13/2048	0.73
Fed Natl Mort Assc 4%	2/15/2046	0.63
FNMA	2/13/2048	0.60
FNMA	2/13/2048	0.53
Freddie Mac Gold Single Family TBA 4.5%	2/1/2048	0.47
Freddie Mac Gold Single Family TBA 3.5%	2/1/2048	0.47
Freddie Mac Gold Single Family TBA 3%	2/1/2048	0.46
FNMA	2/13/2048	0.46

Bond Maturity Breakdown					
	ETF	Cat Avg			
1 to 3 Years %	6.87	2.88			
3 to 5 Years %	8.93	11.11			
5 to 7 Years %	12.63	6.53			
7 to 10 Years %	21.24	26.84			
10 to 15 Years %	2.16	2.90			
15 to 20 Years %	3.84	5.17			
20 to 30 Years %	38.44	32.14			
30+ Years %	5.59	4.79			





Overall Morningstar Rating™

Morningstar Analyst Rating

Bronze

12/21/2017

**Morningstar Category**US Fund Intermediate-Term Bond

Category Index BBgBarc US Agg Bond TR USD **Prospectus Benchmark** BBgBarc US Agg Enhanced Yield TR USD

847 Funds in Category

# **Fees**

The fund has an expense ratio of 0.12%, net of a 0.08% fee waiver, which gives the strategy a durable edge and supports the Positive Price Pillar rating. In fact, this fund's fee is cheaper than 96% of its intermediate-term bond category peers and is lower than the 0.56% category average fee. The 0.08% fee waiver is set to expire at the end of 2017. That would

increase the expense ratio to 0.20%, which would still put the strategy in the category's cheapest decile. Over the past year, the fund has lagged its benchmark by 26 basis points, slightly more than the amount of its expense ratio.

 Expenses

 Gross Expense Ratio %
 0.20
 1.09

 Net Expense Ratio %
 0.12
 0.78

 Expense Waiver
 —
 —

 Expense Waiver Expiration Date
 12/31/2017
 —

 Expense Waiver Type
 Contractual
 —

 Prospectus Date
 1/1/2018
 —

**Estimated Holding Cost** is essentially the difference between the ETF return and the benchmark return and represents the realized cost of replicating the benchmark. Lower or even negative costs indicate that the ETF is doing a better job of matching its benchmark while minimizing costs.

**Tracking Volatility** measures the uncertainty with which an ETF tracks a benchmark. A higher tracking error indicates a wider confidence interval for expected performance around the benchmark. Lower numbers and ranks are better.

Market Impact Cost represents the liquidity of the ETF and is based on the average market price movement in percent caused by a \$100,000 trade in the ETF. Calculated as the residual volatility unexplained by movements in NAV and the previous day's premium or discount, scaled by average dollar volume traded. Lower numbers and ranks are better.

Total Cost Analysis Data Points

Estimated Holding Cost % —

Tracking Volatility % —

Market Impact Cost % 0.02

# **Alternatives**

There are several Silver-rated, low-cost funds that track the market-cap-weighted Bloomberg Barclays U.S. Aggregate Bond Index. Accordingly, the composition of this index is heavier in Treasuries than AGGY's. These funds include Schwab U.S. Aggregate Bond SCHZ (0.04% expense ratio), SPDR Portfolio Aggregate Bond ETF SPAB (0.04%), and iShares Core U.S. Aggregate Bond AGG (0.05%).

Vanguard Total Bond Market ETF BND (0.05% expense ratio) tracks a float-adjusted version of this index. This index excludes securities held by the Federal Reserve from its weighting calculations. As of this writing, however, the composition is similar to the Aggregate Index.

Silver-rated iShares Core Total USD Bond Market IUSB provides market-cap-weighted exposure to the entire U.S.-dollar-denominated bond market, including bonds across the full credit spectrum. The fund efficiently tracks the Bloomberg Barclays U.S. Universal Index, and it is currently the only fund replicating that index. Also, its fee is one of the lowest in the intermediate-term bond category.

Dodge & Cox Income DODIX (0.43% expense ratio) is a great actively managed option. A veteran and well-resourced team, time-tested process, low expenses, and an impressive long-term record support this fund's Gold rating.

Operations	
Longest Tenured Manager	Multiple
Manager Tenure (Longest)	2.25
Manager Tenure (Average)	2.25
Web Address	www.wisdomtree.com
Exchange	NYSE ARCA

Morningstar Rating and Risk	As of 12/31/2017	Morningstar Category: US Fund Intermediate-Term Bond			
	3 Yr	5 Yr	10 Yr	Overall	The Overall Moi
				o rorum	adjusted returns

 Morningstar Rating
 —
 —
 —
 —

 Morningstar Risk
 —
 —
 —
 —

 Morningstar Return
 —
 —
 —
 —

 # of ETFs
 847
 778
 554
 847

The Overall Morningstar Rating is based on riskadjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.



# ETF Report Disclosure Statement

The Exchange-traded Fund (ETF) Report is supplemental sales literature, and therefore must be preceded or accompanied by the fund's current prospectus or an equivalent statement. Please read this information carefully. In all cases, this disclosure statement should accompany the ETF Report. Morningstar is not a FINRA-member firm.

The information contained in this report is from the most recent information available to Morningstar as of the release date and may or may not be an accurate reflection of current data for securities included in the portfolio. There is no assurance that the data will remain the same.

ETFs trading on a secondary market may trade at, above, or below their net asset value (NAV). If an ETF's shares trade at a price above their NAV they are said to be trading at a "premium." Conversely, if they are trading at a price below their NAV, they are said to be trading at a "discount."

#### Performance

The performance data given represents past performance and should not be considered indicative of future results. Principal value and investment return will fluctuate, so that an investor's shares, when sold, may be worth more or less than the original investment. Portfolio statistics change over time. ETFs are not FDIC-insured, may lose value, and are not guaranteed by a bank or other financial institution.

For ETFs, standardized total return is reflected as of the last market close minus one day. It depicts performance without adjusting for brokerage commissions and the effects of taxation, but is adjusted to reflect all actual ongoing ETF expenses and assumes reinvestment of dividends and capital gains. If adjusted, the effects of brokerage commissions and taxation would reduce the performance quoted.

Morningstar calculates after-tax returns using the highest applicable federal marginal income tax rate plus the Medicare surcharge. As of 2016, this rate is 39.6% plus 0.9% Medicare surcharge, or 40.5%, this has been unchanged since 2013. This rate changes periodically in accordance with changes in federal law.

### 12 Month Yield %

12 Month Yield % is derived by summing the trailing 12-months' income distributions and dividing the sum by the last month's ending NAV, plus any capital gains distributed over the same period. Income refers only to interest payments from fixed-income securities and dividend payoffs from common stocks.

#### 30-Day SEC Yield

The 30-day SEC Yield is a calculation based on a 30-day period ending on the last day of the previous month. It is

computed by dividing the net investment income per share earned during the period by the maximum offering price per share on the last day of the period. The figure listed lags by one month. When a dash appears, the yield available is more than 30 days old. This information is taken from fund surveys.

#### 30-Day Unsubsidized Yield

The 30-day Unsubsidized Yield is computed under a SEC standardized formula based on net income earned over the past 30 days. It excludes contractual expense reimbursements, resulting in a lower yield.

#### Alpha

Alpha is a measure of the difference between a security or portfolio's actual returns and its expected performance, given its level of risk (as measured by beta.) Alpha is often seen as a measure of the value added or subtracted by a portfolio manager.

#### Assets

Assets are the total net assets at the share class level, expressed in millions of U.S Dollars.

#### **Average Daily Volume**

The average daily trading volume of the fund's shares over the trailing three month period, expressed in number of shares. The daily volume is collected, but the average daily volume is calculated.

#### **Best Month**

Best Month is the highest monthly return of the fund since its inception or for as long as Morningstar has data available.

#### Beta

Beta is a measure of a security or portfolio's sensitivity to market movements (proxied using an index.) A beta of greater than 1 indicates more volatility than the market, and a beta of less than 1 indicates less volatility than the market.

#### **Book-Value Growth%**

Book-Value Growth is the estimation of the book value growth for a stock. This is calculated by averaging the book-value growth rate per share of the stock for up to the previous four years. A fund's book value growth % is calculated by taking a share-weighted average of the book value of all the stocks in its portfolio.

### Cash Flow Growth%

Cash Flow Growth is the estimation of the cash flow growth for a stock. This is calculated by averaging the cash flow growth rate per share of the stock for up to the previous four years. A fund's cash flow growth % is calculated by taking a share-weighted average of the cash flow of all the stocks in its portfolio.

#### **Debt to Capital %**

Debt to Capital measures a company's financial leverage. This ratio is calculated by dividing long-term debt (excluding other liabilities) by the total capitalization. Total capitalization is the sum of common equity, preferred equity, and long-term debt. The resulting figure is then multiplied by 100. A fund's Debt to Capital % is calculated by taking an asset-weighted median of the debt/total capital of all the stocks in the portfolio. This figure is not provided for financial companies.

#### Distribution Frequency

Distribution Frequency is the number of times per year that a fund intends to make payments from dividends. Generally monthly, quarterly, semiannually, or annually.

#### Down Capture Ratio %

Down Capture Ratio measures a fund's performance in down markets. A down-market is defined as those periods (months or quarters) in which market return is less than 0. In essence, it tells you what percentage of the down-market was captured by the fund. For example, if the ratio is 110%, the fund captured 110% of the down-market and therefore underperformed the market on the downside.

#### **Exchange-Traded Notes**

Exchange-Traded Notes, or ETNs, are unsecured, unsubordinated debt securities issued with the backing of a financial institution. Unlike an ETF, which physically holds a portfolio of securities in order to track its benchmark, an ETN represents a promissory obligation on behalf of the backing financial institution to deliver the performance of the referenced benchmark, less fees.

#### Expense Ratio %

The expense ratio is the annual fee that all funds charge their shareholders. It expresses the percentage of assets deducted each fiscal year for fund expenses, including 12b-1 fees, management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Portfolio transaction fees, or brokerage costs, as well as front-end or deferred sales charges are not included in the expense ratio. The expense ratio, which is deducted from the fund's average net assets, is accrued on a daily basis. The gross expense ratio, in contract to the net expense ratio, includes interest and dividends on borrowed securities but does not reflect any fee waivers in effect during the time period.

# **Expense Waiver**

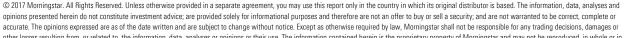
Taken from the prospectus, this is the amount of expenses on a percentage basis that the fund has agreed to waive.

#### **Expense Waiver Expiration Date**

Taken from the prospectus, this indicates when a fund's Expense Waiver is set to expire.

#### **Expense Waiver Type**

Taken from the prospectus, this indicates if a fund's Expense Waiver is contractual or voluntary.





#### **Fair Value Estimate**

The Fair Value Estimate for ETFs is the aggregate, asset weighted fair value of the stocks in an ETF's portfolio that are under coverage by Morningstar equity analysts, divided by the ETF's shares outstanding. (It is also derived it by dividing the ETF's market price by its price/fair value ratio.) Depending on the coverage rate, the fair value estimate may not include all of the stocks in the portfolio. As such, when calculating the fair value estimate, it is assume that all stocks not under coverage are trading at fair value. An ETF must have at least two-thirds of its market capitalization covered by Morningstar equity analysts in order to calculate an aggregate fair value estimate.

### **Fund Legal Structure**

Fund Legal Structure describes the legal structure of the ETF and has implications for how an ETF is registered and regulated. The majority of ETFs are organized as Open-End Investment Companies, just like traditional mutual funds. Notable exceptions include ETFs that invest primarily in futures contracts, as wells as exchange-trade notes (ETNs). ETFs that hold futures contracts are generally organized as Partnerships (3C1). ETNs are organized as Uncollateralized Debt Instruments. A small number of ETFs are organized as Unit Investment Trusts or Grantor Trusts.

#### **Geometric Average Market Capitalization**

Geometric Average Market Capitalization is a measure of the size of the companies in which a portfolio invests.

#### Growth of 10,000

For funds, this graph compares the growth of an investment of 10,000 (in the base currency of the fund) with that of an  $\,$ index and/or with that of the average for all funds in its Morningstar Category. The NAV total returns are not adjusted to reflect the effects of taxation, but are adjusted to reflect actual ongoing fund expenses, and they assume reinvestment of dividends and capital gains. If adjusted, the effect of taxation would reduce the performance quoted. Please note, while the investor obtaining an ETF through the secondary market does not obtain it at NAV, the purpose in presenting this graph based on NAV is to provide an illustration of the historical performance of the ETF strategy. In no way should this performance be considered indicative of or a guarantee of the future performance of this ETF nor should it be viewed as a substitute for an actual investor experience.

The index in the Growth of 10,000 graph is an unmanaged portfolio of specified securities and cannot be invested in directly. The index does not reflect any initial or ongoing expenses. A fund's portfolio may differ significantly from the securities in the index. The index is chosen by Morningstar.

#### **Inception Date**

The date on which a fund began its operations.

#### Long-Term Earnings Growth%

Long-Term Earnings Growth is the estimation of the long-term earnings growth forecast of a stock. This is collected as a third-party estimate. A fund's long-term earnings % is calculated by taking an asset-weighted average of the long-term earnings of all the stocks in the portfolio.

#### Max Drawdown %

Max Drawdown measures the peak-to-trough decline during a specific record period of a fund. It is usually quoted as the percentage between the peak and trough.

#### Max Gain %

Max Gain is the peak to trough increase during a specific record period of a fund. It is usually quoted as the percentage between the trough and peak.

#### Maximum Redemption Fee %

The Maximum Redemption Fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase (for example, 30, 180, or 365 days).

#### Mean

Mean is the annualized geometric return for the period shown

#### **Monthly Fund Flows**

Monthly Fund Flows is estimated share-class level net flow computed using beginning and ending monthly Total Net Assets and monthly Total Return.

#### Morningstar Analyst Rating™

The Morningstar Analyst Rating<sup>™</sup> is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark, or in the case of exchangetraded funds and index mutual funds, a relevant peer group, over the long term on a risk-adjusted basis. They consider quantitative and qualitative factors in their research, and the weight of each pillar may vary. The Analyst Rating scale is Gold, Silver, Bronze, Neutral, and Negative. A Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's conviction in a fund's prospects for outperformance. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at least every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to global.morningstar.com/managerdisclosures/.

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

#### Morningstar Category

Morningstar Category is assigned by placing funds into peer groups based on their underlying holdings. The underlying securities in each portfolio are the primary factor in our analysis as the investment objective and investment strategy stated in a fund's prospectus may not be sufficiently detailed for our proprietary classification methodology. Funds are placed in a category based on their portfolio statistics and compositions over the past three years. Analysis of performance and other indicative facts are also considered. If the fund is new and has no portfolio history, Morningstar estimates where it will fall before giving it a permanent category assignment. Categories may be changed based on recent changes to the portfolio.

#### Morningstar Economic Moat

The idea of an economic moat refers to how likely companies are to keep competitors at bay for an extended period. The following attributes can give companies a wider economic moat: huge market share; low cost producer; patents, copyrights, or governmental approvals and licenses; unique corporate culture; high customer-switching costs; and network effect. A company can be rated as having no economic moat, a narrow economic moat, or a wide economic moat. The moat ratings of the fund's underlying equities are aggregated and displayed as a percentage of the fund's equity holdings with moat ratings.

# Morningstar Pillar Ratings

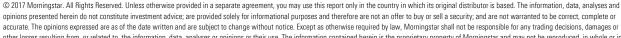
Morningstar Pillar Ratings are subjective evaluations of funds performed by manager research analysts of Morningstar. Morningstar evaluates funds based on five key pillars, which are process, performance, people, parent, and price. Morningstar's analysts assign each pillar a rating of Positive, Neutral, or Negative. Morningstar Pillar Scores are then used to help determine the fund's Morningstar Analyst Rating.

The Morningstar Pillar Rating should not be used as the sole basis in evaluating a fund. Morningstar Pillar Ratings involve unknown risks and uncertainties which may cause Morningstar's expectations not to occur or to differ significantly from what we expected.

#### Morningstar Rank

Morningstar Rank is the total return percentile rank within each Morningstar Category. The highest (or most favorable) percentile rank is zero and the lowest (or least favorable) percentile rank is 100. Historical percentile ranks are based on a snapshot of a fund at the time of calculation.

Morningstar Rating<sup>™</sup> for Funds





The Morningstar Rating<sup>™</sup> for funds, or "star rating", is calculated for managed products (including mutual funds, variable annuity and variable life subaccounts, exchangetraded funds, closed-end funds, and separate accounts) with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. The weights are: 100% three-year rating for 36-59 months of total returns, 60% five-year rating/40% three-year rating for 60-119 months of total returns, and 50% 10-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. While the 10-year overall star rating formula seems to give the most weight to the 10-year period, the most recent three-year period actually has the greatest impact because it is included in all three rating periods.

# $\textbf{Morningstar Rating}^{\text{TM}} \textbf{for Stocks}$

The Morningstar Rating™ for stocks is a forward looking, analyst-driven measure of a stock's current price relative to the analyst's estimate of what the shares are worth. Stock star ratings indicate whether a stock, in the equity analyst's educated opinion, is cheap, expensive, or fairly priced. To rate a stock, an analyst estimates what he thinks it is worth (its "fair value"), using a detailed, long-term cash flow forecast for the company. A stock's star rating depends on whether its current market price is above or below the fair value estimate. Those stocks trading at large discounts to their fair values receive the highest ratings (4 or 5 stars). Stocks trading at large premiums to their fair values receive lower ratings (1 or 2 stars). A 3-star rating means the current stock price is fairly close to the analyst's fair value estimate.

#### Morningstar Return

The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+Avg), the middle 35% Average (Avg), the next 22.5% Below Average (-Ave), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an

overall measure for the product. Products with less than three years of performance history are not rated.

#### Morningstar Risk

Morningstar Risk evaluates a managed product's downside volatility relative to that of other products in its Morningstar category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk, the next 22.5% Below Average, the middle 35% Average, the next 22.5% Above Average, and the top 10% High. Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

#### Morningstar Style Box™

The Morningstar Style  $Box^{TM}$  reveals a fund's investment strategy as of the date noted on this report.

For equity funds, the vertical axis shows the market capitalization of the long stocks owned, and the horizontal axis shows the investment style (value, blend, or growth.) A darkened square in the style box indicates the weighted average style of the portfolio.

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest-rate sensitivity as measured by a bond's effective duration. Morningstar seeks credit rating information from fund companies on a periodic basis (for example, quarterly). In compiling credit rating information, Morningstar accepts credit ratings reported by fund companies that have been issued by all Nationally Recognized Statistical Rating Organizations. For a list of all NRSROs, please visit

http://www.sec.gov/divisions/marketreg/
ratingagency.htm. Additionally, Morningstar accepts foreign
credit ratings from widely recognized or registered rating
agencies. If two rating organizations/ agencies have rated a
security, fund companies are to report the lower rating; if
three or more organizations/agencies have rated a security,
fund companies are to report the median rating; and in
cases where there are more than two organization/agency
ratings and a median rating does not exist, fund companies
are to use the lower of the two middle ratings.

Please Note: Morningstar, Inc. is not an NRSRO nor does it issue a credit rating on the fund. NRSRO or rating agency ratings can change from time to time.

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds

to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low," "medium," or "high" based on their average credit quality. Funds with a "low" credit quality are those whose weighted-average credit quality is determined to be less than "BBB-"; "medium" are those less than "AA-", but greater or equal to "BBB-"; and "high" are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest-rate sensitivity based on the effective duration of the Morningstar Core Bond Index, which is currently three years. The classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of MCBI's average effective duration; funds whose average effective duration is between 75% to 125% of the MCBI will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCBI will be classified as Extensive.

For municipal-bond funds, Morningstar also obtains from fund companies the average effective duration. In these cases, static breakpoints are used. These breakpoints are as follows: (i) Limited: 4.5 years or less; (ii) Moderate: more than 4.5 years but less than 7 years; and (iii) Extensive: more than 7 years. In addition, for non-U.S. taxable and non-U.S. domiciled fixed-income funds, static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: more than 3.5 years but less than or equal to 6 years; (iii) Extensive: more than 6 years.

Interest-rate sensitivity for non-U.S. domiciled funds (excluding funds in convertible categories) may be measured with modified duration when effective duration is not available.

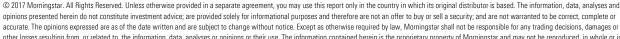
#### Net Margin %

Net Margin is equal to trailing-12- months net income divided by the trailing-12-months revenues. The resulting figure is then multiplied by 100. A fund's Net Margin % is calculated by taking an asset-weighted median of the net margin of all the stocks in the portfolio.

**Peer Group:** The rating group is a group of similar funds that are compared against each other for the purpose of assigning a Morningstar Risk-Adjusted Rating. For ETFs and mutual funds, the rating group is the Morningstar Category.

### Portfolio Date

Portfolio Date is the date the fund's portfolio was reported.





#### Price/Book

The Price/Book Ratio for a fund is the weighted average of the Price/Book Ratio of the stocks in its portfolio. Book value is the total assets of a company, less total liabilities. The Price/Book ratio of a company is calculated by dividing the market price of its outstanding stock by the company's book value, and then adjusting for the number of shares outstanding. Stocks with negative book values are excluded from this calculation. It shows approximately how much an investor is paying for a company's assets based on historical valuations.

#### Price/Cash Flow

The Price/Cash Flow Ratio for a fund is the weighted average of the Price/Cash Flow Ratio of the stocks in its portfolio. The Price/Cash Flow Ratio of a stock represents the amount an investor is willing to pay for a dollar generated from a company's operations. It shows the ability of a company to generate cash and acts as a gauge of liquidity and solvency.

#### Price/Fair Value

The Price/Fair Value Ratio for a fund is the market price of the fund divided by the fund's Fair Value Estimate. If the Price/Fail Value Ratio is above 1.0, that indicates that the fund is trading above its Fair Value Estimate. A P/FV Ratio below 1.0 indicates that the fund is trading below its Fair Value Estimate.

#### **Price/Prospective Earnings**

The Price/Prospective Earnings Ratio for a fund is the weighted average of the reciprocal of the earnings yields (or E/P) of the stocks in its portfolio. The E/P of a stock is the company's estimated earnings per share for the current fiscal year divided by the stock's most recent month-end share price.

### Price/Sales

The Price/Sales Ratio for a fund is the weighted average of the price/sales ratios of the stocks in its portfolio. Price/sales represents the amount an investor is willing to pay for a dollar of revenue generated from a particular company's operations.

# Percentile Rank in Category

Percentile Rank is a standardized way of ranking items within a peer group, in this case, funds within the same Morningstar Category. The observation with the largest numerical value is ranked zero the observation with the smallest numerical value is ranked 100. The remaining observations are placed equal distance from one another on the rating scale. Note that lower percentile ranks are generally more favorable for returns (high returns), while higher percentile ranks are generally more favorable for risk measures (low risk).

#### Performance Quartile

Performance Quartile reflects a fund's Morningstar Rank.

#### R-Squared

R-squared is the percentage of a security or portfolio's return movements that are explained by movements in its benchmark index, showing the degree of correlation between the security or portfolio and the benchmark. This figure is helpful in assessing how likely it is that beta and alpha are statistically significant. A value of 1 indicates perfect correlation between the security or portfolio and its benchmark. The lower the R-squared value, the lower the correlation

#### Regional Exposure

The regional exposure is a display of the portfolio's assets invested in the regions shown on the report.

#### Replication Method

Replication Method data point shows which portfolio management technique(s) are employed to replicate the returns of the index the fund is tracking:

Physical – Full: An index-tracking fund employing full physical replication will own all of the securities (not including derivatives) and physical commodities of the underlying index in proportion to the weights within the index. Funds with minimal exposure to cash, and very small exposures to derivatives tracking the index of the portfolio, may also be treated as products using full physical replication.

**Physical – Sample:** An index-tracking fund employing sampling, or optimized, physical replication will own a representative set of index components in order to achieve the objective of tracking the stated benchmark. These portfolios can contain a limited number of securities outside of the index and small but material exposures gained through derivatives.

Derivatives Based: Index-tracking portfolios using derivatives-based replication primarily hold cash and exchange-traded derivatives. Some portfolios combining exchange-traded derivatives and OTC derivatives are also considered derivatives-based. This replication method includes funds that track indexes composed of exchange-traded derivatives, such as those tracking commodity indexes. Funds tracking hedge fund or other strategy indexes through combinations of derivatives are considered derivatives based. Some optimized replication techniques combining physical holdings and derivatives are considered derivatives-based because of a majority of exposure being gained through derivatives.

Synthetic: Portfolios using synthetic replication enter into one or more over-the-counter derivatives to gain direct exposure to the index that the fund is tracking. The OTC derivative(s) deliver the return of the index less certain fees or premiums. The portfolios of funds using synthetic replication report the OTC derivative(s) (generally a swap, forward agreement, or access product) and collateral within financial statements in certain situations. The collateral

holdings of funds using synthetic replication will frequently contain securities unrelated to the return of the index. Please note: While the term synthetic exposure denotes economic exposures gained through derivative contracts, the term synthetic replication only connotes index-tracking funds gaining economic exposure through OTC derivatives. **Not Applicable:** Some index-tracking products use

approaches that are not portfolio-based, such as exchanged-traded notes. ETNs and other non-portfolio based tracking products will be assigned to the Not Applicable tag. All ETCs, ETNs, and other listed structured products that are not ETFs are classified as Not Applicable. Additionally, as many investors assume all ETFs are indextracking portfolios, all actively managed ETFs will also be assigned to the Not Applicable replication method.

#### Return on Assets %

Return on Assets is the percentage a company earns on its assets in a given period. It is calculated as trailing-12-month net income divided by ending total assets. The resulting figure is then multiplied by 100. A fund's Return on Assets is calculated by taking an asset-weighted median of the Return on Assets of all the stocks in the fund's portfolio.

#### Return on Equity %

Return on Equity is calculated as the trailing-12-months net income divided by the end-of year shareholders' equity. The resulting figure is then multiplied by 100. A fund's Return on Equity is calculated by taking an asset-weighted median of the returns on equity of all the stocks in the portfolio.

#### Sales Growth%

Sales Growth is the estimation of the growth of sales for a stock. This is calculated by averaging the sales-growth rate per share of the stock for up to the previous four years. A fund's sales growth % is calculated by taking a share-weighted average of the collective sales for all stocks in its portfolio.

# **Sector Weightings**

Super Sectors represent Morningstar's broadest classification of equity sectors by assigning the 11 equity sectors into three classifications. The Cyclical Super Sector includes industries significantly impacted by economic shifts, and the stocks included in these sectors generally have betas greater than 1. The Defensive Super Sector generally includes industries that are relatively immune to economic cycles, and the stocks in these industries generally have betas less than 1. The Sensitive Super Sector includes industries that ebb and flow with the overall economy, but not severely so. Stocks in the Sensitive Super Sector generally have betas that are close to 1.

#### Sharpe Ratio

Sharpe Ratio uses standard deviation and excess return (a measure of a security or portfolio's return in excess of the U.S. Treasury three-month Treasury Bill) to determine the reward per unit of risk.



#### Sortino Ratio

Sortino Ratio is a performance efficiency measure (like Sharpe Ratio) calculated by dividing excess return by downside risk (Downside Deviation). (Volatility caused by negative returns is considered bad or undesirable by an investor, while volatility caused by positive returns is good or acceptable.) In this way, the Sortino ratio can help an investor assess risk in a better manner than simply looking at excess returns to total volatility, as such a measure does not consider how often returns are positive as opposed to how often they're negative.

#### **Standard Deviation**

Standard deviation is a statistical measure of the volatility of the security or portfolio's returns. The larger the standard deviation, the greater the volatility of return.

#### Standardized Returns

Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experience if the security was purchased at the beginning of the period and sold at the end, incurring transaction charges.

#### **Total Return**

Total Return, or "Non Load-Adjusted Return", reflects performance without adjusting for sales charges (if applicable) or the effects of taxation, but it is adjusted to reflect all actual ongoing security expenses and assumes reinvestment of dividends and capital gains. It is the return an investor would have experienced if the fund was held throughout the period. If adjusted for sales charges and the effects of taxation, the performance quoted would be significantly reduced.

Total Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

#### **Trailing Returns**

Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experienced if the fund was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Trailing Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index

and/or Morningstar Category Index) over the time periods shown.

#### **Treynor Ratio**

Treynor Ratio is a performance efficiency measure (like Sharpe Ratio) calculated by dividing excess return by market risk (Beta). Good performance efficiency is measured by a high ratio.

#### Turnover Ratio %

Turnover Ratio measures the trading activity in a fund's portfolio by taking the lesser of purchases or sales (excluding all securities with maturities of less than one year) and dividing by average monthly net assets. In practical terms, the resulting percentage loosely represents the percentage of the fund's underlying holdings that have changed over the past year. The inverse of a fund's turnover ratio is the average holding period for a security in that fund.

#### **Up Capture Ratio %**

Up Capture Ratio measures a fund's performance in up markets relative to the market (benchmark) itself. It is calculated by taking the fund's upside capture return and dividing it by the benchmark's upside capture return.

#### **Valuation Rating**

Not to be confused with the Morningstar Rating<sup>™</sup> (the star rating), which is based on a fund's trailing, risk-adjusted relative returns, the ETF Valuation Rating is a forwardlooking, holdings-based assessment of a stock ETF's investment merit. There are three distinct analyst ratings--"undervalued," "fairly valued," and "neutral." The "undervalued" rating is reserved for an ETF that is trading at a significant discount to Morningstar's estimate of its intrinsic worth, which is based on Morningstar's fair value estimates for the ETF's underlying holdings. The size of the discount demanded before deeming an ETF "undervalued" varies with the risk of the ETF; typically, Morningstar demands at least an 8% discount to the fair value estimate before placing an "undervalued" rating on a lower-risk ETF, at least 15% for a moderate-risk ETF, and 20%-plus for an above-average risk ETF. By contrast, the "overvalued" rating is applied to any ETF that's trading at a meaningful premium to the fair value estimate. The size of the premium also depends on the ETF's risk. Lower-risk ETFs receive the "overvalued" rating when they're trading at least 7% above Morningstar's fair value estimate, moderate-risk ETFs when they're at a 14% or greater premium, and above-average risk ETFs at a 22% premium. ETFs that trade in between those boundaries are rated as "fairly valued". Generally speaking, Morningstar expects an "undervalued" ETF's annualized returns to exceed its hurdle rate by at least three percentage points.

#### **Worst Month**

Worst Month is the lowest monthly return of the fund since its inception or for as long as Morningstar has data available.

# **Investment Risks**

International/Emerging Market Equities: Investing in international securities involves special additional risks. These risks include, but are not limited to, currency risk, political risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

**Sector Strategies:** Portfolios that invest exclusively in one sector or industry involve additional risks. The lack of industry diversification subjects the investor to increased industry-specific risks.

**Non-Diversified Strategies:** Portfolios that invest a significant percentage of assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

**Small Cap Equities:** Portfolios that invest in stocks of small companies involve additional risks. Smaller companies typically have a higher risk of failure, and are not as well established as larger blue-chip companies. Historically, smaller- company stocks have experienced a greater degree of market volatility than the overall market average.

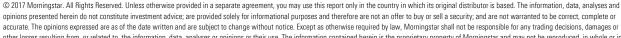
Mid Cap Equities: Portfolios that invest in companies with market capitalization below \$10 billion involve additional risks. The securities of these companies may be more volatile and less liquid than the securities of larger companies.

**High-Yield Bonds:** Portfolios that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the portfolio. The investor should be aware of the possible higher level of volatility, and increased risk of default

**Tax-Free Municipal Bonds:** The investor should note that the income from tax- free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax.

**Bonds:** Bonds are subject to interest rate risk. As the prevailing level of bond interest rates rise, the value of bonds already held in a portfolio declines. Portfolios that hold bonds are subject to declines and increases in value due to general changes in interest rates.

**HOLDRs:** The investor should note that these are narrow industry-focused products that, if the industry is hit by hard times, will lack diversification and possible loss of investment would be likely. These securities can trade at a discount to market price, ownership is of a fractional share interest, the underlying investments may not be





representative of the particular industry, the HOLDR might be delisted from the AMEX if the number of underlying companies drops below nine, and the investor may experience trading halts.

Hedge Funds: The investor should note that hedge fund investing involves specialized risks that are dependent upon the type of strategies undertaken by the manager. This can include distressed or event-driven strategies, long/short strategies, using arbitrage (exploiting price inefficiencies), international investing, and use of leverage, options and/or derivatives. Although the goal of hedge fund managers may be to reduce volatility and produce positive absolute return under a variety of market conditions, hedge funds may involve a high degree of risk and are suitable only for investors of substantial financial means who could bear the entire loss of their investment.

Bank Loan/Senior Debt: Bank loans and senior loans are impacted by the risks associated with fixed income in general, including interest rate risk and default risk. They are often non-investment grade; therefore, the risk of default is high. These securities are also relatively illiquid. Managed products that invest in bank loans/senior debt are often highly leveraged, producing a high risk of return volatility

**Exchange Traded Notes (ETNs):** ETNs are unsecured debt obligations. Any repayment of notes is subject to the issuer's ability to repay its obligations. ETNs do not typically pay interest.

**Leveraged ETFs:** Leveraged investments are designed to meet multiples of the return performance of the index they track and seek to meet their fund objectives on a daily basis (or other time period stated within the prospectus objective). The leverage/gearing ratio is the amount of excess return that a leveraged investment is designed to achieve in comparison to its index performance (i.e. 200%, 300%, -200%, or -300% or 2X, 3X, -2X, -3X). Compounding has the ability to affect the performance of the fund to be either greater or less than the index performance multiplied by the multiple stated within the funds objective over a stated time period.

**Short Positions:** When a short position moves in an unfavorable way, the losses are theoretically unlimited. The broker may demand more collateral and a manager might have to close out a short position at an inopportune time to limit further losses.

**Long-Short:** Due to the strategies used by long-short funds, which may include but are not limited to leverage, short selling, short-term trading, and investing in derivatives, these funds may have greater risk, volatility, and expenses than those focusing on traditional investment strategies.

**Liquidity Risk:** Closed-end fund, ETF, and HOLDR trading may be halted due to market conditions, impacting an investor's ability to sell a fund.

Market Price Risk: The market price of ETFs, HOLDRs, and closed-end funds traded on the secondary market is subject to the forces of supply and demand and thus independent of the NAV. This can result in the market price trading at a premium or discount to the NAV, which will affect an investor's value.

Market Risk: The market prices of ETFs and HOLDRs can fluctuate as a result of several factors, such as security-specific factors or general investor sentiment. Therefore, investors should be aware of the prospect of market fluctuations and the impact it may have on the market price.

Target-Date Funds: Target-date funds typically invest in other mutual funds and are designed for investors who are planning to retire during the target date year. The fund's target date is the approximate date when investors expect to begin withdrawing their money. A target-date fund's investment objective/strategy typically becomes more conservative over time, primarily by reducing its allocation to equity mutual funds and increasing its allocations in fixed-income mutual funds. An investor's principal value in a target-date fund is not guaranteed at any time, including at the fund's target date.

**High double- and triple-digit returns:** High double- and triple-digit returns were the result of extremely favorable market conditions, which may not continue to be the case. High returns for short time periods must not be a major factor when making investment decisions.

# **Benchmark Disclosure**

# Barclays US Agg Bond TR USD

This index is composed of the BarCap Government/Credit Index, the Mortgage-Backed Securities Index, and the Asset-Backed Securities Index. The returns we publish for the index are total returns, which include the daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core US Aggregate Bond.

#### MSCI EAFE NR USD

This Europe, Australasia, and Far East index is a marketcapitalization-weighted index of 21 non-U.S., industrialized country indexes.

This disclosure applies to all MSCI indices: Certain information included herein is derived by Morningstar in part from MSCI's Index Constituents (the "Index Data"). However, MSCI has not reviewed any information contained herein and does not endorse or express any opinion such information or analysis. MSCI does not make any express or

implied warranties, representations or guarantees concerning the Index Data or any information or data derived therefrom, and in no event will MSCI have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) relating to any use of this information.

#### S&P 500 TR USD

A market capitalization-weighted index composed of the 500 most widely held stocks whose assets and/or revenues are based in the US; it's often used as a proxy for the stock market. TR (Total Return) indexes include daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core S&P 500.

#### **USTREAS T-Bill Auction Ave 3 Mon**

Three-month T-bills are government-backed, short-term investments considered to be risk-free and as good as cash because the maturity is only three months. Morningstar collects yields on the T-bill on a weekly basis from the Wall Street Journal.

# Morningstar Research Group

The analysis within this report is prepared by the person(s) noted in their capacity as an analyst for Morningstar's manager research group. The manager research group consists of various Morningstar, Inc. subsidiaries ("Manager Research Group)". In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission.

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The Manager Research Group believes its analysts make a reasonable effort to carefully research information contained in the analysis. The information on which the analysis is based has been obtained from sources believed to be reliable. While the Manager Research Group has obtained data, statistics and information from sources it believes to be reliable, neither the Manager Research Group nor Morningstar, Inc. performs an audit or seeks independent verification of any of the data, statistics, and information it receives.

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# **Process**

Morningstar Manager Research analysts compile and maintain the Morningstar Prospects list. The idea is to create and maintain a list of up-and-coming or under-the-radar fund managers and strategies that our team believes may offer enduring advantages and long-term appeal. These are managers and strategies that typically have not been subject to full analyst coverage in the past but that may merit such coverage in the future.

Morningstar analysts consider a variety of quantitative and qualitative factors when proposing candidates for the Prospects list, including management experience, uniqueness and durability of strategy, performance, and fees. The final decision is made by a committee of senior analysts and team leaders with extensive experience assessing global equity, fixed-income, and alternatives strategies.

The following delineates the Morningstar Prospects process in more detail:

# 1. Idea Generation

Any Morningstar Manager Research analyst can recommend a manager or strategy for the list, with ideas typically coming from:

- ► Screening new or small funds for managers with promising records or established records at other open-end mutual funds or other vehicles, such as separate accounts.
- ► Reviewing requests for coverage from internal and external consumers of Manager Research or the asset managers themselves.
- Researching individual managers and strategies.
- ► Communicating with other investors, managers, and industry contacts.
- Monitoring regulatory filings for new funds.

### 2. Fundamental Research

The committee considers each recommended fund or strategy and assembles the final list, based on the following considerations:

#### Size

Morningstar Prospects emphasizes funds and strategies with smaller asset bases and more capacity relative to their peers, but there is no hard cap on fund size.

#### Track records

If a strategy is old enough to have a Morningstar Rating (the star rating), the committee will consider that among other quantitative measures of risk and return but does not use the star rating as a dispositive screen.

### Age

Funds younger than three years are generally subject to extra scrutiny because of their short track records.

# 3. List Composition

Morningstar Prospects doesn't include a set number of strategies or try to offer ideas for every asset class, category, and subcategory, but it does try to offer a balance of funds from areas where it can be difficult to find good funds with capacity, such as emerging-markets debt, and funds from more-traditional categories. Prospects generally fall into one or more of these broad classifications:

### **Existing Fund/New Manager**

A previously unappealing fund gets a promising new leader, team, or strategy.

# **New Fund/Experienced Manager**

A manager with a long, impressive track record elsewhere or a firm with established expertise launches a new fund.

### **Under-the-Radar Manager**

A fund with a long track record that has not yet attracted attention or assets.

# **Unique Process/Strategy**

A manager that offers a distinctive approach.

# 4. Strategy Profiles

Morningstar analysts prepare a short narrative summarizing the funds' key attributes and justification for inclusion on the list. The list is published quarterly with featured strategy profiles on a subset of the list.

# 5. Ongoing Maintenance

The committee reviews the list at least quarterly, making additions and deletions as necessary. There is no maximum or minimum time a manager or strategy can remain a Prospect. A fund can leave the

Prospects list for the following reasons:

- ► It has graduated to full analyst coverage.
- ► There has been a material change to management or strategy that lowers our confidence.
- ► It has closed to new investors.
- ► New ideas are more compelling.

# Disclosure

Strategies on the Morningstar Prospects list are selected based on the Morningstar Manager Research team's assessment that they may be worthy of additional investor attention and eventual regular Morningstar analyst coverage. Morningstar evaluates funds for inclusion on the list based on the uniqueness of the strategy, the experience of the manager, and prospective return based on the investment process, past performance, and expenses. Inclusion on the list does not guarantee that a strategy will be subject to full analyst coverage. Inclusion on the list should not be the sole basis for evaluating a strategy on the list; it is not a guarantee of future performance and should not be viewed by investors as such. Strategies on the list involve unknown risks and uncertainties that may cause Morningstar's judgment to differ significantly from expectations.

Morningstar Prospects may include nontraditional strategies. Such strategies may subject an investor to significant risks not inherent in traditional asset classes. They may not be appropriate for many investors, and great care should be taken to ensure your client fully understands the significant risks inherent in such securities.

### **Morningstar Category**

In an effort to distinguish funds by what they own, as well as by their prospectus objectives and styles, Morningstar developed the Morningstar Categories. While the prospectus objective identifies a fund's investment goals identified in the fund prospectus, the Morningstar Category identifies funds based on their actual investment styles as measured by their underlying portfolio holdings (portfolio and other statistics over the past three years).

# Performance

The performance data given represent past performance and should not be considered indicative of future results. Principal value and investment return will fluctuate, so that an investor's shares, when redeemed, may be worth more or less than the original investment.

Total Return reflects performance without adjusting for sales charges or the effects of taxation, but it is adjusted to reflect all actual ongoing fund expenses and assumes reinvestment of dividends and capital gains. If adjusted for sales charges and the effects of taxation, the performance quoted would be reduced.

Morningstar % Rank within Morningstar Category does not account for a fund's sales charge, if applicable.

# **Category Rank**

The placement of a particular fund in a ranking, with 1 being the highest percentile and 100 the lowest, of its peers (that is, Morningstar Category) for a specific data point.

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# **Net Expense Ratio**

The percentage of fund assets used to pay for operating expenses and management fees, including 12b-1 fees, administrative fees, and all other asset-based costs incurred by the fund, with the exception of brokerage costs. Fund expenses are reflected in the fund's NAV. Sales charges are not included in the expense ratio. The expense ratio for funds of funds includes only the wrap or sponsor fees and does not include the underlying fund fees.

### **About Morningstar Manager Research**

Morningstar Manager Research provides independent, fundamental analysis on managed investment strategies. Analyst views are expressed in the form of Analyst Ratings, which are derived through research of five key pillars—Process, Performance, Parent, People, and Price. A global research team issues detailed analyst reports on strategies that span vehicle, asset class, and geography.

# **About Morningstar Manager Research Services**

Morningstar Manager Research Services combines the firm's fund research reports, ratings, software, tools, and proprietary data with access to Morningstar's manager research analysts. It complements internal due-diligence functions for institutions such as banks, wealth managers, insurers, sovereign wealth funds, pensions, endowments, and foundations.



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