HCM's Newest Funds Only Portfolio for a Client

	Symbol	Name	Type	Description	Factors (1)	Yield	(2)	Exp.	M*	Risk (3)
10	FRIFX	Fidelity Real Estate Income	OEF	US Real Estate		4.6%	Q	0.73%	4	0.6
20	OMFL	Invesco Russell 1000 Dynamic Mltfct	ETF	US Large Blend	V, M, Q, LV	1.4%	Q	0.29%	5	0.9
0	MTUM	iShares Edge MSCI USA Momentum Factor	ETF	US Large Growth	M	0.8%	Q	0.15%	3S	1.0
15	PRDSX	T. Rowe Price QM US Small-Cap Gr Eq	OEF	US Small Growth	S, V, Q, M	0.0%		0.79%	3G	1.3
15	SMLF	iShares Edge MSCI Mltfct USA SmCp	ETF	US Small Blend	S, V, M, Q	1.2%	Q	0.30%	3	1.2
10	SMMV	iShares Edge MSCI Min Vol USA SmCp	ETF	US Small Blend	S, LV	1.3%	Q	0.20%	4	0.9
10	ISCF	iShares Edge MSCI Mltfct Intl SmCp	ETF	Foreign Small/Mid Blend	S, V, M, Q	2.3%	S	0.40%	4	1.2
10	VIISX	Virtus KAR International Small-Cap I	OEF	Foreign Small Growth	S, Q	1.0%	A	1.29%	5B	1.1
10	WCMSX	WCM International Small Cap Growth Instl	OEF	Foreign Mid Growth	S, Q	0.0%		1.25%	5	1.1
						Weighted Average:				**1.0**

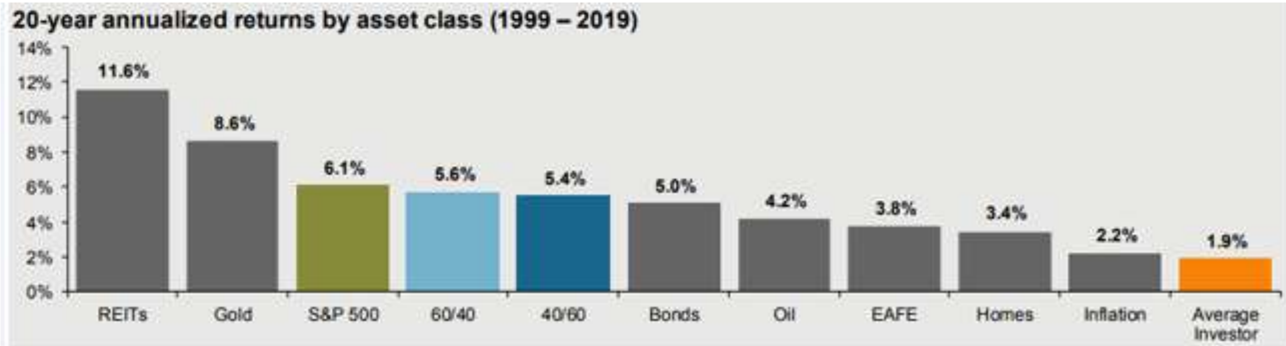
	Notes
1	V=Value, M=Momentum, Q=Quality, S=Size, LV=Low Volatility
2	Distribution Frequency: A=Annual, M=Monthly, S=Semi-Annual, Q=Quarterly
3	Ratio of average historical Max. Drawdowns to S&P 500 declines greater than 10% since 2007.

I have provided my recommended **%** allocation to each Fund, whose **Symbol, Type** (OEF=Open End Fund, ETF=Exchange Traded Fund), and **Description** (based on Morningstar's Categories) are shown, as well as their **Factors** (**Note** 1), which are fully explained on Hughes Capital Management's (HCM) website, **Yield,** Distribution Frequency (**Note** 2), **Exp**ense, **M**orningstar rating, and **Risk** (**Note** 3). Morningstar's rating system:

"Morningstar rates mutual funds and ETFs from 1 to 5 stars based on how well they've performed (after adjusting for risk and accounting for sales charges) in comparison to similar funds and ETFs. Within each Morningstar Category, the top 10% of funds and ETFs receive 5 stars and the bottom 10% receive 1 star. Funds and ETFs are rated for up to three time periods, three-, five-, and 10-years, and these ratings are combined to produce an overall rating. Funds and ETFs with less than three years of history are not rated." When followed by a Morningstar Analyst, their Rating (G=Gold, S=Silver, B=Bronze, N=Neutral) is also provided. " It "is a forward-looking analysis of a fund's likelihood to outperform." Effective last year they now focus on 3 (Process, People, and Parent) of their 5 (which also include Performance, and Price) key pillars. "A fund that receives a medalist rating of Gold, Silver, or Bronze, is expected to outperform similar funds over a full market cycle."

As noted on its website, HCM "applies the academic findings of Behavioral Finance to the management of Individual Investment Accounts .... A factor is something that explains stock returns, ranging from ... Value, to stock price Momentum. The concept of Factors has been around since Eugene Fama (who won the Nobel Prize in Economics in 2013) and Ken French began developing statistical models to explain stock returns relative to the broader market. Since their initial work, more and more factors have been added, and just in the past few years the idea has exploded in popularity, with so called "Smart Beta" funds (another term for Factor based investing) sprouting up everywhere one looks. Yet despite the newfound popularity and hype for this investing approach, very few of these Factors withstand academic scrutiny." Five of the **Factors** which we consider compelling are shown in **Note** 1.

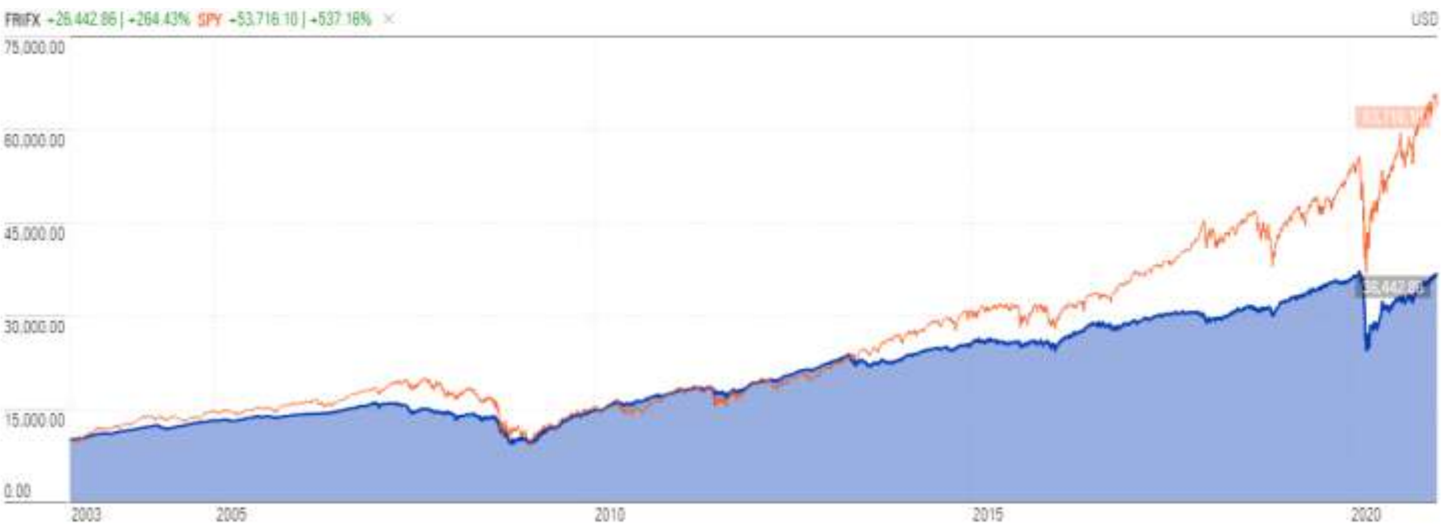
FRIFX - As detailed on our website, we consider Real Estate a separate Asset Class that provides portfolio diversification benefits, despite much higher volatility then many investors realize, with favorable returns compared to most stock indexes. I have added the S&P 500 (orange line) to FRIFX's chart for comparison.



Source: JPMorgan - Guide to the Markets - March 2020

Fidelity® Real Estate Income FRIFX ★★★★

NAV / 1-Day Return	Total Assets	Adj. Expense Ratio	Expense Ratio	Fee Level	Longest Manager Tenure
12.14 / ↓0.25 %	5.5 Bil	0.730%	0.730%	Low	18.07 years
Category	**Investment Style**	**Min. Initial Investment**	**Status**	**TTM Yield**	**Turnover**
Real Estate	Mid Value	0	Open	4.63%	32%



From Morningstar:

Lead Manager of Fidelity Real Estate Income Retiring; Fund Under Review

Analyst Note

Fidelity announced that Mark Snyderman, lead manager of Fidelity Real Estate Income FRIFX since the fund's 2003 inception, will retire as of June 30, 2021. Bill Maclay, who has worked with Snyderman for two decades and was named comanager of the fund two years ago, will be the sole listed manager after Snyderman retires. We're putting the fund Under Review until we can fully evaluate the change.

Summary | by David Kathman Feb 18, 2021

Fidelity Real Estate Income (previously rated Bronze) is Under Review after Fidelity announced that lead manager Mark Snyderman will retire in mid-2021. The following analysis was originally published on Sept. 25, 2020.

This fund aims to generate a higher yield than an all-equity real estate fund or an investment-grade bond fund, with much less volatility than other real estate funds. To do this, managers Mark Snyderman and Bill Maclay can range across the capital structures of the real estate companies they follow, so that in addition to REITs, the fund also holds real estate corporate bonds, commercial mortgage-backed securities, and REIT preferred securities. The allocations to these asset classes can vary within fairly wide ranges, based on where the managers see the best values and future returns.

No other U.S. real estate fund does quite what this one does, and Fidelity is one of the few fund companies with the resources to effectively pull off such a wide-ranging, eclectic strategy. Snyderman has managed the fund since its 2003 inception, and while Maclay was named comanager in 2019, he has worked with Snyderman since 2001. They are supported by other teams at Fidelity from both the equity and fixed-income side that are generally strong and run funds such as Gold-rated Fidelity Total Bond FTBFX and Silver-rated Fidelity Mortgage Securities FMSFX.

This fund's returns relative to the category don't look great at first glance, but that's not the best basis for comparison. Since inception, the fund's total returns have stayed even with a custom benchmark consisting of 20% REITs, 40% real estate bonds, and 40% REIT preferreds, and on a risk-adjusted basis it has handily beaten that benchmark. Its 12-month yield of 4.13% (as of Aug. 31, 2020) was well above the 3.09% category average and the 2.43% of the Bloomberg Barclays U.S. Aggregate Bond Index, consistent with the managers' goals.

Process

This strategy's distinctive, income-oriented approach has been executed well by Mark Snyderman for more than 15 years, earning it an Above Average Process rating. It aims to achieve a better yield than pure real estate equity funds and most bond funds, but with less volatility and interest-rate sensitivity. To achieve this, Snyderman and comanager Bill Maclay invest in a diverse mix of commercial real estate security types ranging across the capital structure: common stock, preferred stock, CMBS, and real estate corporate bonds. Historically, 30% or less of the portfolio has been in REIT common stocks, with roughly 10%-30% in preferred stock, 15%-30% in CMBS, 25%-50% in corporate bonds, and 0%-10% in cash and other.

With the help of Fidelity's research analysts and visits with company management, the managers keep track of all the major real estate firms in the fund's universe, thinking about their entire capital structures. Their fundamental research focuses on such factors as balance-sheet strength, property quality, cash flows, management quality, growth rates, debt/property value, debt yield, and covenants. When they find a fundamentally strong company, they determine which of its securities (common stock, preferred stock, bonds, and so on) is most attractive in terms of valuation, yield, or other fundamentals before deciding what to add to the portfolio.

As of June 30, 2020, this fund's portfolio consisted of 29% common stocks (primarily REITs), 23% preferred stock, 16% CMBS, 25% corporate bonds, and 8% cash and other. The common stock weighting, 86% of which is in the real estate sector, is about as high as it has been since the fund's 2003 inception and has stayed fairly steady since mid-2013. Manager Mark Snyderman thinks real estate stocks are currently cheap relative to real estate bonds and the value of the underlying securities, even though they're somewhat expensive relative to the broader stock market. Conversely, the fund's 25% weighting in corporate bonds is on the low side of its historical levels.

The portfolio's preferred-stock weighting of 23% is up from 18.6% a year earlier and around 10% during the 2008 global financial crisis, but it's still lower than it was in 2004-06, when it was around 30%. REIT preferreds got very cheap in early 2020 relative to the managers' estimates of their fair value, so the managers bought quite a few of them.

The portfolio's 17% weighting in CMBS is similar to what it has been for most of the fund's history except from 2010 to 2012, when it swelled above 20%. Snyderman has focused on pockets of opportunity within this asset class, such as conservatively underwritten seasoned deals, and he has avoided bonds containing mortgages dating from the pre-2007 bubble years.

People

This fund earns an Above Average People rating thanks to its experienced managers backed by deep resources. Mark Snyderman has managed the fund since its February 2003 inception. He has also managed Fidelity Strategic Real Return FSRRX and its Fidelity Advisor version since that fund's September 2005 inception, and Fidelity Series Real Estate Income FSREX since its October 2011 inception. Prior to taking on this fund, Snyderman managed institutional CMBS and REIT accounts, as well as Fidelity Real Estate High-Income, an institutional open-end fund. He has been with Fidelity since 1994, managing real estate portfolios that whole time.

Bill Maclay became comanager of this fund and its Fidelity Advisor version on March 1, 2019. Maclay is a longtime analyst and portfolio manager with Fidelity's high-yield real estate debt team, which Snyderman has headed up since this fund's launch in 2003. It includes seven investment professionals, including Snyderman and Maclay, who analyze high-yield CMBS. The managers also make use of Fidelity's high-yield, investment-grade debt, and investment-grade CMBS analysts when necessary. They also use Fidelity's eight-person U.S. real estate securities research team led by Steve Buller, manager of Fidelity Real Estate Securities FRESX, as well as the firm's 180 U.S. and international equity research analysts, to provide research on key tenants and industries.

Parent Jan 13, 2020

Fidelity earns an Above Average Parent rating because of its ability to stay ahead of its competition.

The firm's successful stock-picking mutual funds fueled its rise to prominence, and it has adapted well to investor preferences that have shifted markedly over the past two decades. Index funds and ETFs have garnered most of the industry's flows as money has gushed from actively managed products--Fidelity's included. Yet overall, the asset management division has continued to achieve positive organic growth by introducing or maintaining aggressive pricing on its own suite of passively managed funds and expanding its menu of client-demanded investment structures, such as managed accounts and collective investment trusts. These moves are made possible by the firm's strong distribution network, scale, established brand, and willingness to tolerate losses on some products in pursuit of broader strategic objectives.

Fidelity continues to invest heavily in its active managers' analytical and technological resources. It is home to a handful of the industry's most talented equity managers and boasts a topnotch fixed-income division. Across asset-class teams, elevated levels of turnover within its leadership ranks bear watching. Overall, though, the firm has served fundholders well through its competitive capabilities and costs.

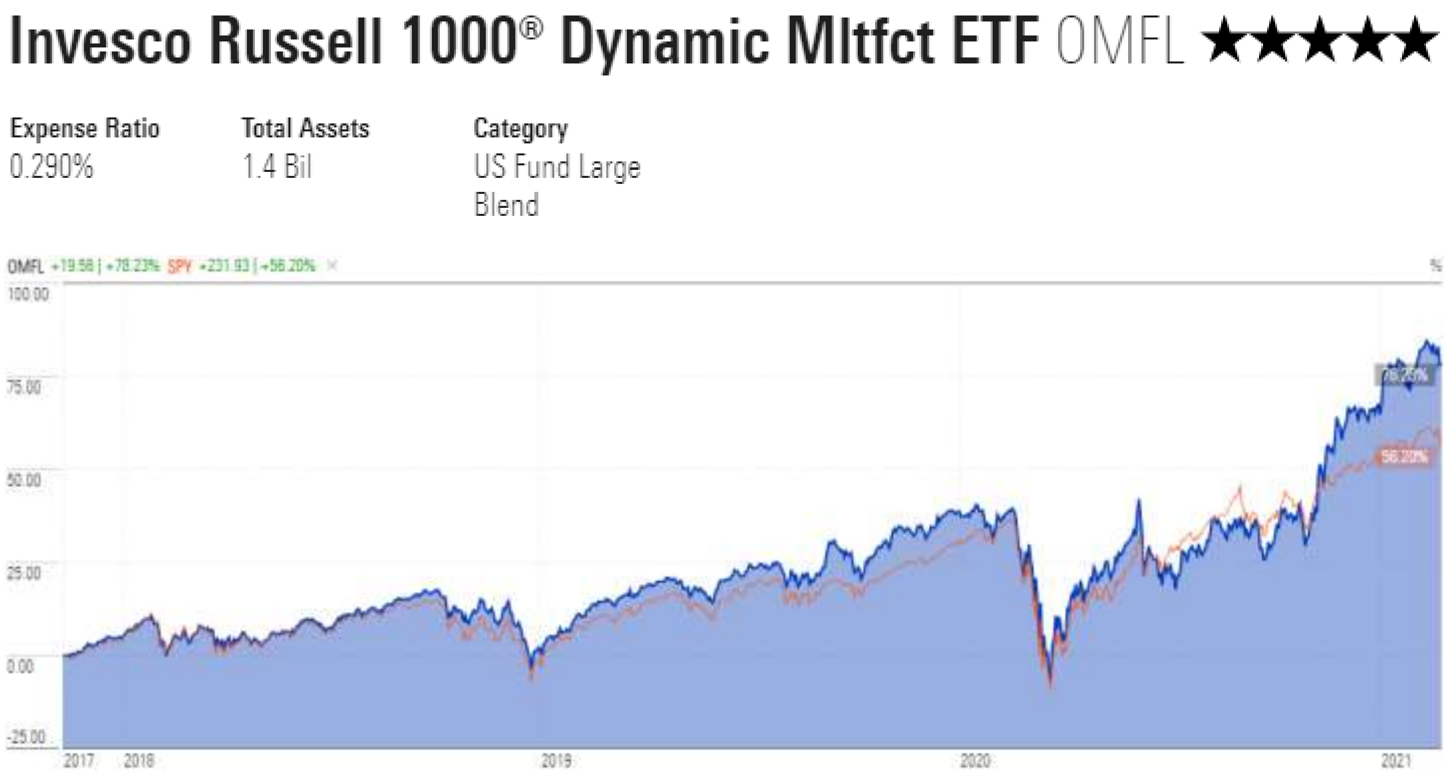
Performance

This fund's track record appears poor at first glance, but its returns look better once its unique exposures are considered. Through Aug. 31, 2020, the fund's total returns ranked in the real estate category's bottom quartile over the trailing 10 years and since the fund's 2003 inception. However, it has also posted several periods of topnotch short-term returns, resulting in feast-or-famine annual results. In 15 of 16 calendar years from 2004 through 2019, the fund ranked in either the category's top or bottom quartile, including six years in the top 10% and six years in the bottom 10%.

However, the real estate category isn't a particularly good basis for comparison, given this fund's substantial holdings in preferred and fixed-income securities, which often perform differently from real estate common stocks. Fidelity compares this fund's returns to those of the Fidelity Real Estate Income Composite Index, a custom benchmark consisting of 20% real estate common stocks, 40% real estate corporate bonds, and 40% REIT preferred securities. The fund has slightly beaten that custom benchmark over the trailing 10 years through Aug. 31, 2020, and has stayed even with it since inception.

The fund has been far less volatile than the average real estate fund, as measured by standard deviation, and has been modestly less volatile than the custom benchmark by the same measure.

OMFL - While the academic debate over timing Factor exposures continues, this ETF has been the most successful so far, and is the only such fund to outperform the S&P 500 (orange line below). This fund's 20% recommended allocation is the result of MTUM's typical 10% allocation not being added, as explained below, for now.



From OMFL's website: "The Invesco Russell 1000 Dynamic Multifactor ETF (the “Fund”) is based on the Russell 1000 Invesco Dynamic Multifactor Index (the “Index”). The Fund will invest at least 80% of its total assets in the securities that comprise the Index. The Index is constructed using a rules-based approach that re-weights large-cap securities of the Russell 1000 Index according to economic cycles and market conditions, reflected by expansion, slowdown, contraction or recovery. The securities are assigned a multi-factor score from one of five investment styles: value, momentum, quality, low volatility and size. The Fund and Index are reconstituted and rebalanced based on economic indicator signal changes, as frequently as monthly."

From Morningstar:

The Jury Is Still Out on Factor Timing

Alex Bryan, CFA 02 Jan 2019

It is hard to successfully time any investment. Adjusting a portfolio based on expectations about the future can easily backfire because the future is hard to predict. Yet there is an emerging body of research that suggests it is possible to successfully time exposure to factors like value, momentum, small size, quality, and low volatility. While each of these factors has a good long-term record, they all go through cycles of underperformance. If timing really works, it could help mitigate this cyclicality, which is one of the biggest drawbacks to factor investing.

A healthy dose of skepticism is in order. Much of the research done thus far has come from practitioners, rather than academia, who work for asset managers with a vested interest in bringing new products to market. As with most financial research, data mining is also a risk because there are many variables researchers could have tested to find a predictive relationship that worked in sample but may not work out of sample. Even if there is a return benefit from factor-timing, implementing it reduces diversification relative to a static multifactor portfolio, which may outweigh the benefit. And it's important to bear in mind that even if a timing signal works on average, it won't always get the calls right. There is no pain-free way to beat the market. That said, factor-timing warrants serious review.

Factor-Timing Signals
A recent paper from BlackRock suggests that there are four types of factor-timing signals that work: valuation, momentum, economic regime indicators, and dispersion.[1] The authors found that each of the four types of signals work well on their own and even better together. BlackRock does not currently have any factor-timing exchange-traded funds on the market, though it did launch a factor-timing model in September 2016 based on these insights.

The few shops that do offer factor-timing ETFs rely on indicators that broadly fit into one of these four categories. For instance, **Oppenheimer** (now Invesco) **Russell 1000 Dynamic Multifactor ETF** (OMFL) relies on a blend of traditional economic and market sentiment indicators to gauge the economic regime and time its factor exposures accordingly. **Global X Adaptive U.S. Factor ETF** (AUSF) uses a contrarian performance signal, which is a type of value signal because assets that underperform tend to become cheaper and may be poised to do better in the future. **PIMCO RAFI Dynamic Multi-Factor U.S. Equity ETF** (MFUS) relies on momentum and contrarian (value) performance signals to time its exposures. (In March, 2019 BlackRock entered the arena with DYNF.)

Let's take a closer look at each type of timing signal.

Economic Regime
The idea that different factors tend to do better at different points in the business cycle is intuitive. BlackRock and Oppenheimer have both found that economic regime indicators were the strongest standalone predictors of factor performance in their back-tests. However, they use different metrics to define these periods and come to slightly different conclusions about when to overweight certain factors.

There are four stages in the business cycle: recovery, expansion, slowdown, and contraction. These are defined by whether the change in economic activity is positive or negative (Oppenheimer uses "above trend" or "below trend" instead) and whether it is accelerating or decelerating. Exhibit 1 summarizes the firms' findings about when each factor tends to outperform.

Exhibit 1 Factor Outperformance During the Economic Cycle

	Recovery		Expansion		Slowdown		Contraction	
Size Segments	BlackRock	Oppenheimer	BlackRock	Oppenheimer	BlackRock	Oppenheimer	BlackRock	Oppenheimer
Value	♦	♦		♦			♦	
Small Size	♦	♦		♦			♦	
Momentum			♦	♦				♦
Quality					♦	♦	♦	♦
Low Vol					♦	♦	♦	♦

Source: BlackRock and Oppenheimer

Both firms found that the small-size and value factors tended to do the best during recoveries. Smaller stocks tend to be more cyclical than their larger counterparts, as their higher market betas attest. This is likely because fewer of them enjoy durable competitive advantages to insulate their profits from fluctuations in the business cycle.

The relationship between value and the business cycle is less intuitive--and in my view, more suspect. Broad value indexes, like the Russell 1000 Value Index, have a similar market beta to the broad market, which suggests they are not more cyclical. However, deeper-value portfolios tend to have higher betas. A possible explanation for value stocks' observed cyclicality, which Andrew Ang of BlackRock posited, is that they have higher fixed costs and less flexibility than growth stocks, so their cash flows may be more sensitive to the business cycle. These stocks may also be more beaten-down than most during tough times and poised to outperform as conditions start to improve.

During expansions, as clearly defined trends emerge, momentum has been the best-performing factor (though Oppenheimer also found that small size and value continue to do well during those periods). Unsurprisingly, low volatility and quality have tended to do the best during slowdowns.

The biggest difference in the findings between the two firms is about which factors have tended to do the best during contractions. Oppenheimer found that quality and low volatility continued to outperform as expected, as well as momentum, which benefits from clear trends in the market. In contrast, BlackRock found that all factors modestly outperform during contractions, but momentum less than the others, which was a bit surprising. However, it's possible that market trends are less clear in contraction periods based on BlackRock's definition because it looks only at traditional economic data, while Oppenheimer pairs economic data with market sentiment data to get a better read of the business cycle.

It is also a little surprising that BlackRock found that value and size tended to outperform in both contraction and recovery periods, as these two regimes represent opposite sides of business cycle trends.

While the relationship between the business cycle and factor performance is interesting, there are good reasons to be skeptical. In hindsight, it's easy to identify each stage of the business cycles past, but it's hard to know where we stand in real time. And although the signals that BlackRock and Oppenheimer tested avoid look-ahead bias, they could have been cherry-picked to look good in sample. There are thousands of data points that could be reasonable indicators of the economic cycle. By chance alone, some of those data points will likely appear to be predictive of factor performance.

In their paper, "The Promises and Pitfalls of Factor Timing," a few researchers from State Street Global Advisors conducted an exercise to illustrate the dangers of data mining.[2] They looked at which signals were most predictive of factor performance from 1970 through 1990. They found that most of the signals with predictive power in sample were not predictive over the next 20 years out of sample.

It's also important to note that economic cycles are slow-moving, so there aren't many full cycles to look at in the back-tests to infer a robust relationship between the stage of the cycle and factor performance. And every cycle is different.

The world is a different place than it used to be. Business has become increasingly global. So, it probably isn't appropriate to look only at U.S. economic data. Even if there was a strong relationship between the U.S. business cycle in the past and factor performance, it may not be as strong now. That doesn't mean that business cycle factor-timing will fail, just that more evidence is needed to build confidence in its efficacy.

Valuations
It is well-established that valuations can predict long-term asset returns (lower valuations are associated with higher future returns). This is true of asset classes, individual securities, and portfolios of securities. But that does not necessarily mean that valuations are an effective timing signal. For example, the U.S. stock market has been trading well above its historical average cyclically adjusted price/earnings ratio, or CAPE (based on data from 1880), since 2010. However, anyone who acted on that information--trimming or liquidating their U.S. stock allocation--probably regretted it, as the market delivered strong performance from January 2010 through August 2018 despite its seemingly high valuation.

If using valuations to time the market is hard, using them to time factors might be even harder, as Cliff Asness and his colleagues at AQR argue in their paper, "Contrarian Factor Timing is Deceptively Difficult."[3] That's because turnover in these portfolios reduces the predictive power of their valuations, as many of the current holdings may not stay in the portfolio long. Portfolio-level valuations are particularly unreliable for high-turnover strategies like momentum.

The relationship between valuations and factor performance is probably modest at best. ...

Other approaches to valuation-timing can lead to different results. BlackRock found that valuation-timing worked by tilting toward factors that were trading the cheapest relative to their own history over the past three years. So, if quality was trading at a significantly lower valuation than in the recent past and value was only a little cheaper than normal, this timing strategy would favor quality. But the fact that the efficacy of valuation-timing depends on how it is defined suggests that it is not particularly robust. Ideally, we'd like to see similar results with different versions of the same idea because that suggests the metric presented wasn't cherry-picked, providing greater confidence that it may work out of sample.

In practice, the two factor-timing ETFs on the market that incorporate a valuation-timing component use contrarian performance signals rather than traditional value signals to time their factor tilts. The idea is that investors may overreact to a stretch of poor performance, giving up on styles after they have become cheap. Nobel-Prize-winner Richard Thaler and his colleague Werner De Bondt demonstrated that long-term performance reversals among stocks in their 1985 paper, "Does the Stock Market Overreact?"[4]

A similar effect seems to hold at the portfolio level. ... It is less subject to data-mining risk than economic data and has been more extensively tested out of sample.

Momentum

While relative performance tends to revert to the mean in the long term, it tends to persist in the short term. This short-term persistence, known as momentum, is found nearly everywhere in financial markets, just like value. Given its well-documented ability to predict short-term performance, I would expect it to be one of the more-promising candidates for use as a factor-timing signal. But while BlackRock found evidence that momentum-driven factor-timing works, I did not. ...

Dispersion

The argument for using dispersion as a timing signal is that the return to each factor should be greater when there is greater separation among stocks in the starting universe on the metrics used to construct the factor portfolio. For example, if highly profitable stocks are more profitable than usual relative to stocks with weak profitability, the profitability/quality factor should do better.

BlackRock found that dispersion was the weakest standalone timing signal and that it worked better for value and quality than it did for other factors. The firm's study looked at tilting toward factors with the widest dispersion relative to their own history over the past three years, which had some predictive power. ...

The Jury Is Still Out

Given the complexity of factor-timing strategies, potential data-mining issues, limited research on this topic, and results that don't appear to be robust, more out-of-sample testing and live performance are necessary to build confidence in their efficacy. While it isn't prudent to write factor-timing off just yet, it's important to not to lose sight of one of the main goals of multifactor investing: diversification. Tilting toward certain factors at different times reduces diversification and can increase risk if the timing model gets the call wrong. There is also a risk that timing models that rely on valuations or momentum might effectively double down on those factors, potentially causing the portfolio to behave as if it had greater exposure to value or momentum stocks.

If factor-timing has any place at all in a portfolio, it will be important to keep factor tilts modest to maintain diversification. It is also probably best to diversify across multiple signals that tend to work to limit pain when they don't.

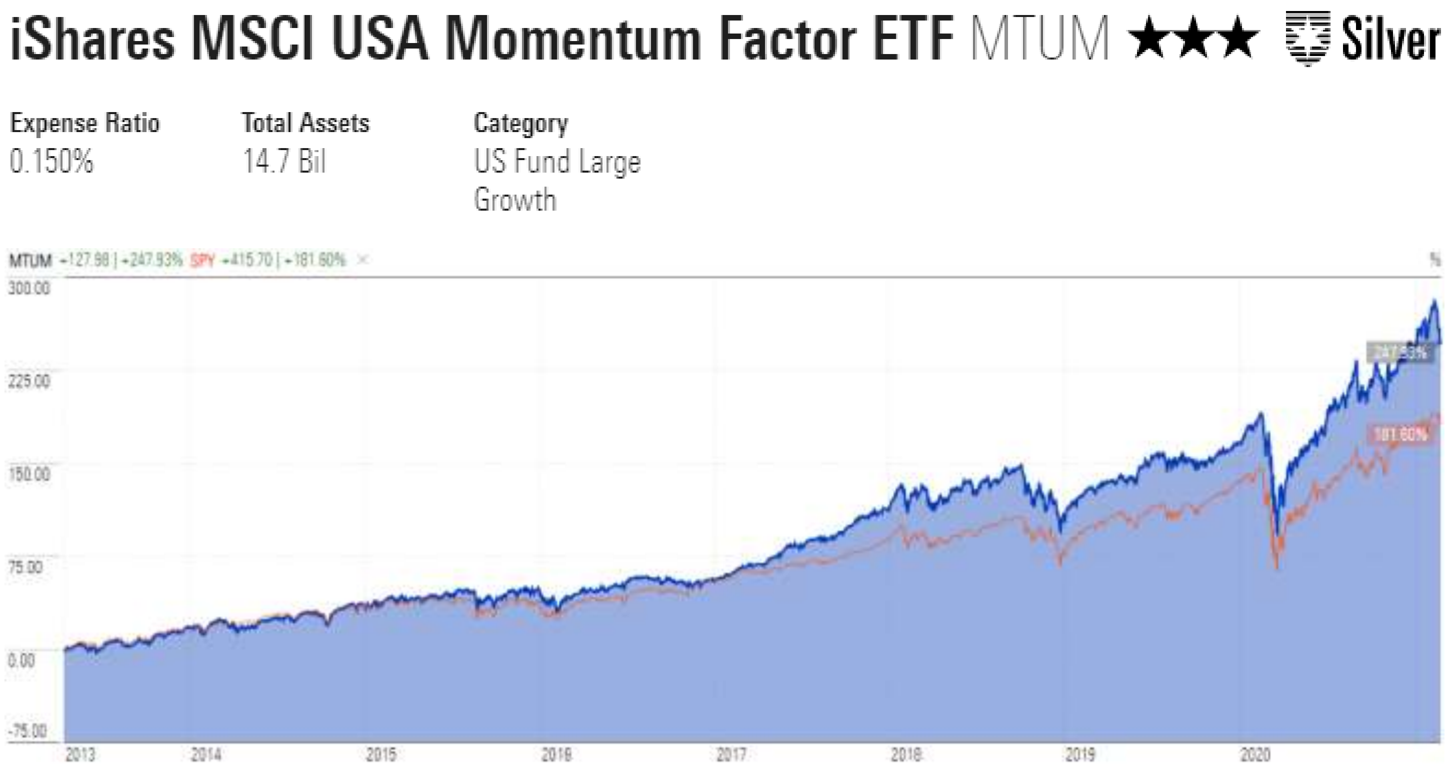
[1] Hodges, P., Hogan, K., Pederson, J., & Ang, A. 2016. "Factor Timing with Cross-Sectional and Time-Series Predictors." BlackRock. // www.blackrock.com/institutions/en-nl/literature/whitepaper/factor-timing-global-12-16.pdf

[2] Bender, J., Sun, X., Thomas, R., & Zdorovtsov, V. 2017. "The Promises and Pitfalls of Factor Timing." Univ. Pennsylvania, Wharton School of Business. //jacobslevycenter.wharton.upenn.edu/wp-content/uploads/2017/08/The-Promises-and-Pitfalls-of-Factor-Timing-1.pdf

[3] Asness, C.S., Chandra, S., Ilmanen, A., & Israel, R. 2017. "Contrarian Factor Timing is Deceptively Difficult." SSRN. //papers.ssrn.com/ sol3/papers.cfm?abstract_id=2928945

[4] De Bondt, W.F.M., & Thaler, R. 1985. "Does the Stock Market Overreact?" *J. Finance*, Vol. 40, No 3, P. 793. //breesefine7110.tulane.edu/wp-content/uploads/sites/110/2015/10/Debondt-and-Thaler.pdf

MTUM - In an interview, Eugene Fama (the father of the Efficient Market Hypothesis) admitted that "…the one thing that causes lots of trouble is the evidence that there's some short-term momentum in returns…. in my view that's the biggest challenge to market efficiency." However, given your separate exposure to Tesla, MTUM's largest position at 6.4%, the extreme over valuation of the FAANG+ stocks, and rising interest rates, as analyzed in our February Newsletter, I recommend we hold off on MTUM for now. I have added the S&P 500 (orange line) to Morningstar's chart:



From Morningstar:

This is a cost-efficient momentum strategy.

Summary

| by Alex Bryan Mar 10, 2020

IShares Edge MSCI USA Momentum Factor MTUM is one of the best momentum funds available and one of the better options within the large-growth category. It offers cost-efficient exposure to stocks with strong recent performance, which should allow it to beat the Russell 1000 Growth Index and the broad market over the long run. It earns a Morningstar Analyst Rating of Silver.

Momentum investing is based on the well-documented observation that recent performance tends to persist in the short run. This effect may arise because investors might underreact to new information, causing prices to adjust more slowly than they should. Once a trend is established, investors may pile into a trade, further accentuating these moves and potentially pushing prices away from fair value. This strategy should benefit from these behavioral biases.

The fund doesn't just go after the highest-returning stocks; instead, it targets large- and mid-cap stocks with strong recent risk-adjusted performance. This focus on risk-adjusted performance should reduce volatility and improve performance when market volatility picks up, as riskier stocks with strong momentum tend to struggle in those environments. Still, this strategy will likely underperform during periods of high market volatility, as volatility often disrupts trends.

Stocks that make the cut are weighted according to both their market capitalization and momentum. This can lead to some large positions in individual names, but the fund caps these weightings at 5%. The resulting portfolio lands squarely in the large-growth Morningstar Category. It should effectively complement value-oriented holdings because momentum tends to work well when value doesn't, and vice versa.

To mitigate turnover, this strategy reconstitutes only twice a year and applies a wide buffer around the stocks it targets. These adjustments reduce the portfolio's style purity, as momentum can shift from month to month. But they also improve cost efficiency. This is still a high-turnover strategy: Turnover here exceeded 100% in each of the past six years. However, it has not yet distributed a capital gain, thanks to the tax advantages of the exchange-traded-fund structure.

Process

Momentum is one of the most persuasive forces in financial markets. This fund effectively captures it, while mitigating cost. It warrants an Above Average Process Pillar rating.

The fund tracks the MSCI USA Momentum Index. In May and November, MSCI calculates the ratio of each stock's price returns over the past 13 and seven months (excluding the most recent one) to its volatility over the past three years. The volatility adjustment keeps the fund from loading up on the riskiest stocks during market rallies, which tend to struggle when the market turns. The one-month exclusion addresses the tendency for performance to reverse over that horizon. The index averages these two scores and selects the highest-scoring stocks until it reaches a fixed target number of stocks.

To reduce turnover, new constituents must rank in the top half of the index's target number of securities to get priority over stocks that were previously in the index. Stocks already in the index have to rank only within 1.5 times the target number of securities to remain in the index. Holdings are weighted according to both the strength of their risk-adjusted momentum and their market cap, subject to a 5% cap.

MSCI may do an off-cycle rebalance of the index when the month-over-month change in the trailing three-month volatility of the market is larger than the 95th percentile of such monthly changes historically. When this occurs, the index uses each stock's seven-month risk-adjusted momentum score. This adjustment is helpful because older return data tends to be less predictive in volatile periods.

This is a fluid portfolio with high turnover. Its turnover has exceeded 100% in each of the past six years, which isn’t uncommon for a momentum strategy. The portfolio currently includes around 120 names, including Microsoft MSFT, Visa V, and Procter & Gamble PG. This focus helps the fund avoid stocks that could dilute its momentum tilt. However, it is still reasonably well diversified. Its 5% holding cap improves diversification, as it often has a few holdings that bump up against that limit.

Semiannual rebalancing slightly weakens the fund’s momentum style purity compared with more frequent rebalancing. However, this approach reduces transaction costs and still captures the essence of the style.

Like most momentum strategies, this fund tends to favor growth stocks, which places it in the large-growth Morningstar Category. However, the sector composition of this portfolio is quite different from that of the Russell 1000 Growth Index. Relative to that benchmark, the fund has greater exposure to the utilities, real estate, and financial-services sectors and less exposure to technology and consumer cyclical stocks. There are no limits on the fund's sector tilts, which should improve the efficacy of the strategy, as recent performance has tended to persist among sectors, as well as among individual stocks. Given the poor recent performance of the energy sector, it is no surprise that the fund had no exposure to energy stocks at the end of February 2020.

People

BlackRock's equity index team is one of the industry's strongest. It has a deep bench of talent and experience, strong supporting infrastructure, and a long record of delivering high-fidelity index tracking, supporting an Above Average People Pillar rating.

Greg Savage, Jennifer Hsui, Alan Mason, Amy Whitelaw, and Rachel Aguirre lead BlackRock's equity index portfolio management team and are listed as the fund's managers. Mason is the head of the group; Whitelaw focuses on U.S., Canada, and Latin America portfolios; Aguirre focuses on developed-markets portfolios; and Hsui focuses on emerging-markets portfolios. Savage is a multi-asset portfolio specialist and provides support where necessary. The named managers lead a broader team of managers who assist with the fund's day-to-day operations.

BlackRock takes a team approach to portfolio management and has automated much of the workflow, which helps mitigate the potential impact of departures. The managers enjoy the support of a separate global trading desk and team of analysts, who help them prepare for upcoming index changes and corporate actions. They are also subject to independent oversight.

While the primary goal is to match index performance, the managers also attempt to mitigate transaction costs and taxable distributions. They may trade ahead of index changes to get a slightly better price.

Parent Jun 4, 2020

BlackRock’s advantages outweigh its disadvantages; it earns an Above Average Parent rating.

BlackRock is a $6.4 trillion money manager with unparalleled scale and influence. It's a market-leading and standard-setting passive investor with iShares. It has a deep and talented fixed-income team. Its Aladdin software is a vital risk analysis and portfolio management tool for the industry. BlackRock Financial Markets Advisory has secured the trust and mandates of many governments, including the Federal Reserve’s pandemic-inspired debt-buying program. BlackRock also has designs on alternative, factor, and private-equity investing and has pledged to double its ESG ETFs and incorporate ESG in all its strategies. Fees also have improved.

Its ascent has had setbacks, though. Multiple attempts to revamp its active equity lineup have yet to produce the revival fixed income achieved. The firm has launched some gimmicky strategies. In 2019 and 2020, it fired two executives and a closed-end fund manager for violating company code of conduct policies, showing how difficult it can be to foster and enforce an ethical culture at such a behemoth. While it preaches ESG's virtue, it has often sided with management in ESG proxy votes.

BlackRock is not the best at everything it does, but it realizes the best way to serve its public shareholders is to fulfill its fiduciary duty.

Performance

The fund's approach has worked well so far. From its inception in April 2013 through February 2020, it beat its parent index, the MSCI USA Index, by 2.99 percentage points annually, though it lagged the Russell 1000

Growth Index by 24 basis points annually. Its underweighting of the energy sector helped performance against the broad market. More favorable stock exposure in the technology and consumer cyclical sectors also helped. However, the growth benchmark benefited from many of the same sector tilts and holding many of the same big winners.

Momentum strategies, like this, may struggle during periods of high volatility or market reversals, as relative performance is less likely to persist during those periods. As a result, the fund can underperform when it is most painful. For instance, its benchmark lagged the MSCI USA Index by 3.8 percentage points during 2008. Heading into a bear market, momentum strategies tend to have an overweighting in riskier stocks, which may underperform during a correction. After a market downturn, they tend to load up on defensive stocks, and they may miss out on some of the upside during a sharp recovery. The fund's focus on risk-adjusted performance and off-cycle rebalancing when market volatility spikes helps address this issue but doesn't completely resolve it.

Full index replication and savvy portfolio management have kept index tracking error low. Over the trailing three years through February 2020, the fund lagged its index by 23 basis points annually, slightly more than the amount of its expense ratio.

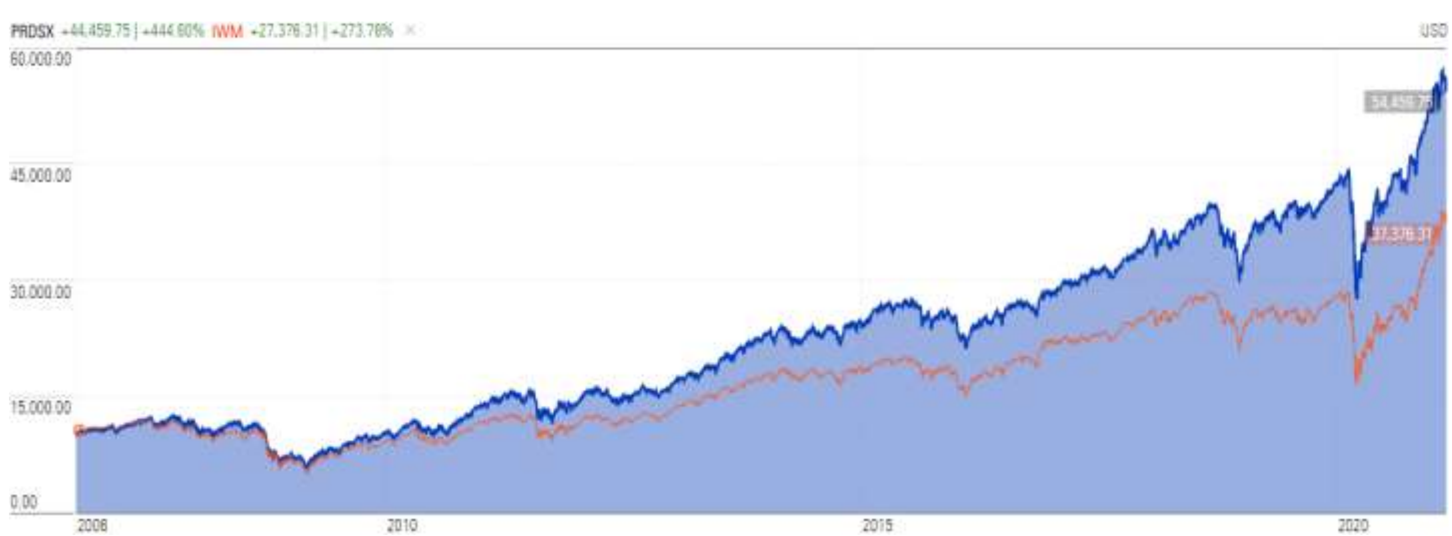
Price

It's critical to evaluate expenses, as they come directly out of returns. The share class on this report levies a fee that ranks in its Morningstar category's cheapest quintile. Based on our assessment of the fund's People, Process and Parent pillars in the context of these fees, we think this share class will be able to deliver positive alpha relative to the category benchmark index, explaining its Morningstar Analyst Rating of Silver.

PRDSX - I added IWM (orange line), the largest Russell 2000 Index ETF, for comparison:

T. Rowe Price QM US Small-Cap Gr Eq PRDSX ★★★ Gold

NAV / 1-Day Return	Total Assets	Adj. Expense Ratio	Expense Ratio	Fee Level	Longest Manager Tenure
49.71 / ↑0.28 %	10.4 Bil	0.790%	0.790%	Low	14.41 years
Category	**Investment Style**	**Min. Initial Investment**	**Status**	**TTM Yield**	**Turnover**
Small Growth	Small Growth	2,500	Limited	0.00%	35%



From Morningstar:

Summary

by Linda Abu Mushrefova Apr 23, 2020

T. Rowe Price QM US Small Cap Growth Equity's research-focused, quantitative approach is applied by a seasoned portfolio manager backed by a deep bench. Each of its share classes earns a Morningstar Analyst Rating of Gold.

An experienced manager sits at the helm backed by a deep bench of research-focused quants. Sudhir Nanda became the lead manager here in October 2006 and has successfully steered the strategy through multiple market environments. He also serves as the head of the quantitative equity team at T. Rowe Price and boasts 20 years of industry experience. He is backed by eight quantitative analysts, one portfolio specialist, and a 10-person dedicated IT team that helps to maintain and support the quantitative model that drives this team's strategies. He can also lean on T. Rowe Price's deep stable of fundamental analysts.

Together, the team applies a disciplined, research-focused approach to quantitative investing. Its model gives the heaviest weighting to valuation factors, accounting for 40%-45% of a stock's ranking, followed by a 30%-35% allocation to earnings quality and profitability metrics, and the residual is based on momentum factors. Since momentum is a relatively small piece of the puzzle, that results in low portfolio turnover relative to its small-cap growth Morningstar Category peers. Its process culminates in a broadly diversified portfolio of about 300 stocks with individual positions capped at roughly 1% of assets. It keeps sector bets to a minimum relative to the MSCI US Small Cap Growth Index, but it's not an index-hugger.

Strong model-driven stock-picking under Nanda's watch has rewarded investors with better absolute returns than its bogies while taking on less risk, as measured by standard deviation. From his October 2006 start through March 2020, the no-load share class' 9.0% annualized return trounced its typical small-cap growth category peer by 3.1 percentage points and the Russell 2000 Growth Index benchmark by 2.2 percentage points. This deliberate approach to quantitative investing should keep rewarding investors.

Process

Manager Sudhir Nanda has consistently applied a systematic, quantitative approach since taking the helm in 2006, earning the fund an Above Average Process rating.

A robust quantitative model based on the team's thoughtful research has been consistently applied since Nanda took over in October 2006. It gives the heaviest weighting to valuation, which accounts for 40%-45% of a stock's ranking, and values companies on multiple cash flow metrics. The next-largest weighting, at 30%-35%, goes to earnings quality and profitability and capital allocation. Price momentum also figures in the models, but it's the smallest piece; that results in low portfolio turnover relative to peers.

The model output for each stock is a weighted average rank of 1-10. The team typically buys stocks ranked 1-4 and sells those scoring 7-10. While it's a systematic approach, Nanda does not follow the model's output blindly. He can conduct additional oversight during times of excessive market volatility, such as in 2020's first-quarter rout. Nanda can also source T. Rowe's fundamental analysts when the model ranks two stocks similarly or in areas where it does not work as well, such as in the biotech industry. The portfolio diversifies across about 300 names. The strategy remains open despite assets in excess of $10 billion as of December 2019. Its low turnover approach affords it higher capacity than its typical peer but capacity bears watching.

The team's measured quantitative approach, which involves keeping sector bets to a minimum relative to the MSCI US Small Cap Growth Index, keeps standard deviation in check but it's not an index-hugger. The fund's active share relative to the Russell 2000 Growth Index has consistently hovered between 75% and 80%. Model-driven, bottom-up stock selection drives positioning, but it spreads its bets across 300 holdings. Position sizes are capped at roughly 1% but it can take on industry bets. For example, as of December 2019 its 7% allocation to biotech stocks was below the MSCI US Small Cap Growth Index's 10%.

Manager Sudhir Nanda is responsible for portfolio construction and he adopts a patient approach to trading. Indeed, average portfolio turnover of 20% is less than one third of its median small-growth peer's roughly 70%. He likes to enter positions gradually, typically starting at 5-10 basis points and then adding 1 or 2 basis points at a time. The sell discipline is similar, but the team will sell positions outright in extraordinary events such as a potential bankruptcy.

The model also pays more attention to valuation than its typical small-cap growth peer. The portfolio's price-to-earnings, book, cash flow, and sales ratios were all lower than those of its average rival. It's also higher quality, boasting higher average return on equity, return on assets, and return on invested capital.

People

Sudhir Nanda became the lead manager here in October 2006 and has successfully navigated the strategy through multiple market environments. He also serves as the head of the quantitative equity team at T. Rowe Price and boasts 20 years of industry experience. The quant team that supports the strategy is deep and continues to expand as it takes on additional responsibility. Nanda sets this strategy apart, combining a sound quantitative approach with skillful hands-on portfolio management. His expertise coupled with the team's depth earns it a High People rating.

Nanda is supported by a team of eight quantitative analysts, one portfolio specialist, and a 10-person dedicated IT team that helps to maintain and support the model that drives this team's strategies. The analyst team continues to expand, albeit at a measured pace, as it applies its quantitative models to new offerings. Since 2016, the quant team has added the following funds to its stable: T. Rowe Price QM U.S. Small & Mid-Cap Core Equity TQSMX, T. Rowe Price QM Global Equity TQGEX, and T. Rowe Price QM U.S. Value Equity TQMVX. That's a lot of new responsibilities, but the team has been building models for similar strategies since Nanda took over in 2006, and it is able to scale its work efficiently by applying the same model to different universes.

Parent by Katie Rushkewicz Reichart, CFA May 4, 2020

T. Rowe Price remains well-positioned in an increasingly competitive industry, earning a High Parent rating. It has withstood the headwinds facing active managers with its rigorous research process, strong performance across asset classes, and continued investment in its research team. Head count grew 9% in 2019, and T. Rowe's debt-free balance sheet gives it flexibility to keep hiring amid an economic slowdown, as it did in past downturns. A build-out of its multi-asset team in recent years supported enhancements to its prized target-date suite in 2020, and the firm has bolstered its quantitative capabilities for internal and external use. While T. Rowe typically home-grows its talent, it has made several experienced equity analyst hires in key sectors lately. This strengthened analyst bench has allowed the firm to capably handle expected manager retirements with its characteristically smooth transitions as well as the rare surprise loss, such as when star manager Henry Ellenbogen left to start his own firm in 2019.

T. Rowe is evolving from a business standpoint. It's broadening distribution outside the U.S., expanding its ESG capabilities, and planning for semitransparent exchange-traded funds, expected in late 2020. Yet it brings a measured, thoughtful approach to strategy launches and capacity management, with fundholders' interests at the forefront.

Performance

Strong model-driven stock-picking under manager Sudhir Nanda's watch has rewarded investors. From his October 2006 start through March 2020, the no load share class' 9.0% annualized return trounced its typical small-cap growth category peer by 3.1 percentage points and the Russell 2000 Growth Index benchmark by 2.2 percentage points while taking on less risk than both bogies, as measured by standard deviation.

The managers' disciplined approach keeps sector bets to a minimum and relies on security selection. The diversified portfolio of more than 300 names moderates volatility, which contributes to the fund's impressive risk-adjusted performance.

The strategy's strong results were especially pronounced in down markets. From Nanda's start through March 2020, the no-load share class' downside-capture ratio relative to the index was an impressive 84%, while its upside capture was a decent 94%.

Results are also consistent. The fund topped both its small-growth peers and the benchmark in 100% of five- and 10-year rolling periods since Nanda's start. Despite its consideration of value factors, it has also held up relatively well in 2020's downdraft. Its hefty 16.9% loss in the year to date through April 17, 2020, was better than its bogy's 19.5% loss.

Price

It's critical to evaluate expenses, as they come directly out of returns. The share class on this report levies a fee that ranks in its Morningstar category's cheapest quintile. Based on our assessment of the fund's People, Process and Parent pillars in the context of these fees, we think this share class will be able to deliver positive alpha relative to the category benchmark index, explaining its Morningstar Analyst Rating of Gold.

SMLF - Numerous academic studies, some of which are featured on our website under Worth Sharing, have shown that Factors work best in combination. This is especially true with the Size Factor. The S&P 500, Large and Mega (>$100 Billion) Caps, is a subset of the S&P 1500, which is also comprised of the S&P MidCap 400 and S&P SmallCap 600. The S&P 1500 covers approximately 90% of the U.S. market capitalization. While academics continue to debate whether there is a "pure size effect", it is clearly demonstrated by the relative performance of the S&P 600 and 400 (both of which, unlike the Russell 2000, use a Quality screen) to that of the S&P 500. As shown below, Small (IJR, blue line) beats Mid (IJH, orange line), and both clobber Large (SPY, green line).

Added IWM (orange line):

iShares MSCI USA Small-Cap Mltfctr ETF SMLF ★★★

Expense Ratio	Total Assets	Category
0.300%	824.0 Mil	US Fund Small Blend

From "For Factor Investors, It Pays to Go Small" by Morningstar's Alex Bryan, CFA on 12-6-17: "For those who do want to profit from momentum in the small-cap arena, it would probably be best to get that exposure through a multifactor fund, like iShares Edge MSCI Multifactor USA Small-Cap ETF (SMLF) (0.30% expense ratio). This is because 1) it will have lower turnover than a stand-alone momentum fund, and 2) it should better diversify risk. This fund targets small-cap stocks with strong value, momentum, quality, and small size characteristics under constraints that mitigate sector bets and turnover. Its holistic approach and demanding selection criteria should give it potent exposure to the factors it targets."

SMMV - Once it had adequate liquidity, we began using iShares Edge MSCI Min Vol USA Sm-Cp ETF, instead of the older, and slightly more expensive XSLV (1.5 Bil in Total Assets), to capture the Low Volatility

Factor in US stocks, for clients. Morningstar's chart compares these 2 ETFs with IWM (green line) since SMMV's inception:

iShares MSCI USA Sm-Cp Min Vol Fctr ETF SMMV ★★★★

Expense Ratio	Total Assets	Category
0.200%	878.0 Mil	US Fund Small Blend

ISCF - seeks to track the investment results of an index composed of global developed market small-capitalization stocks, excluding the U.S., that have favorable exposure to the Value, Quality, and Momentum Factors. We have added EFA (orange line), iShares MSCI EAFE ETF, which is the largest non-U.S. developed market ETF, to Morningstar's chart for comparison:

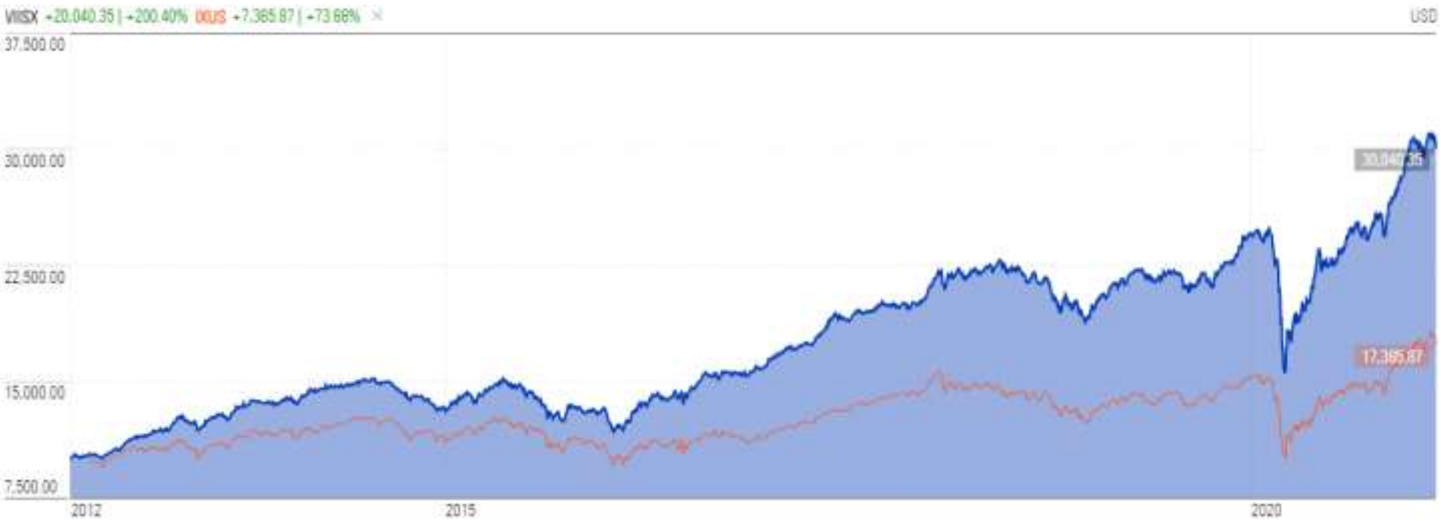
iShares MSCI Intl Small-Cap Mltfct ETF ISCF ★★★★

Expense Ratio	Total Assets	Category
0.400%	161.2 Mil	US Fund Foreign Small/Mid Blend

VIISX - Added iShares Core MSCI Total International Stock ETF (IXUS, orange line) as the most appropriate benchmark:

Virtus KAR International Small-Cap I VIISX ★★★★★ Bronze

NAV / 1-Day Return	Total Assets	Adj. Expense Ratio	Expense Ratio	Fee Level	Longest Manager Tenure
23.04 / ↓1.33 %	2.6 Bil	1.290%	1.290%	High	8.48 years
Category	**Investment Style**	**Min. Initial Investment**	**Status**	**TTM Yield**	**Turnover**
Foreign Small/Mid Growth	Small Growth	100,000	Open	0.96%	48%



From Morningstar:

Venturing where many don't.

Summary | by Adam Sabban Jan 19, 2021

Virtus KAR International Small-Cap employs a focused, patient approach to find opportunities in underfollowed companies, earning most shares a Morningstar Analyst Rating of Bronze ....

This strategy's success is predicated on going where many of its peers won't. Lead manager Craig Thrasher buys stocks of foreign small- and micro-cap companies that trade infrequently and often lack analyst coverage, hoping to uncover bargains others may miss. Thrasher assumes illiquidity risk but hedges it by investing in financially strong and flexible companies for the long haul. He seeks businesses with high levels of profitability, low fixed costs, and little debt. Such characteristics make the portfolio more durable during market drawdowns, giving Thrasher the confidence to hold during difficult economic environments when others are rushing to sell.

The first quarter of 2020 was a good test of the strategy's mettle as global lockdowns in response to the coronavirus put dents in corporate revenue streams. The strategy typically beats the best-fit MSCI All Country World Index ex USA Small Growth benchmark in tough times but fell in line with the bogy as its micro-cap tilt and select exposures in auto sales, consumer finance, and entertainment hurt more than usual. Thrasher held steady, adding to existing holdings that declined sharply while buying a few new stocks. German ticketing and events company CTS Eventim EVD fell nearly 50% from the Jan. 1-March 23 market trough, but Thrasher felt the company had enough cash on hand to survive a prolonged period of low revenues. Shares bounced back strongly through Dec. 31.

The strategy has performed well, although now at nearly $3 billion in assets, it may be harder for the managers to find new opportunities or unwind holdings quickly at fair prices in response to large redemptions from investors. Virtus has indicated it is nearing the point when it may introduce restrictions on new investment.

While its size presents risks, a sound process and team give this strategy merit.

Process

This strategy hedges its focus on smaller, less-liquid stocks with a refined quality-first approach, earning an Above Average Process rating.

The approach here is centered around quality and conviction. The team members' definition of quality is multifaceted, as they evaluate companies on factors such as competitive differentiation, cash flow generation, and efficacy of management. They seek out small-cap stocks with strong brand franchises, network effects, and high customer-switching costs, traits often possessed by an industry leader. An important part of their evaluation centers around capital allocation. They prefer companies with low leverage and a high degree of self-financing, exhibited by strong free cash flow, that allow management flexibility in running their businesses. When they do find a company that meets their criteria, they aren't shy about doubling down by purchasing a similar business in another country.

They prefer to look for smaller companies (less than $1 billion) with little analyst coverage and institutional ownership. They aren't afraid to weave their way into stocks with scant trading volumes if they see a good long-term opportunity.

They'll also invest in more well-known names that have fallen out of favor. Such firms can be larger, ranging to $5 billion, that have share prices at time of purchase that are depressed because of cyclical or company-specific concerns.

Craig Thrasher and team construct the portfolio from the bottom up, investing wherever they find opportunities while paying little heed to the MSCI ACWI ex USA Small Growth's composition. While they typically own roughly 50 stocks from about 20 different countries, the distribution is uneven. As of Sept. 30, nearly 24% of the fund's assets were invested in U.K.-domiciled companies. The portfolio had just 6% exposure to Japan, the country with the heaviest representation in the benchmark.

The team has a penchant for targeting promising themes across different markets. The strategy owns a swath of online platform companies spanning home, auto, and job listing sites. These include some of the strategy's best-performing stocks like Rightmove PLC RMV and Auto Trader Group PLC AUTO. While they've been successful, the managers' willingness to concentrate their bets can create additional risk.

The strategy has tended to focus on small, undiscovered companies. However, because of rapid asset growth, trading these less-liquid names may become more difficult. A concentrated portfolio puts further pressure on trading as the managers must transact in larger quantities of shares. While a low-turnover approach helps mitigate these concerns, the fund may be hard-pressed to unwind the portfolio efficiently to meet a large wave of redemptions.

People

Lead manager Craig Thrasher headlines a promising team that's put up impressive results, earning an Above Average People rating.

Craig Thrasher joined Los Angeles-based subadvisor Kayne Anderson Rudnick, a wholly owned subsidiary of Virtus Investment Partners, in 2008 as a generalist analyst and has thrived in his first managerial role. Thrasher comanaged alongside Craig Stone, a 20-year KAR veteran, from the strategy's 2012 inception through year-end 2018 when Stone pivoted to focus on U.S. strategies. He was replaced by Hyung Kim, who joined the firm in 2017 and quickly worked his way to portfolio manager. Kim and Thrasher also manage Virtus KAR Emerging Markets Small-Cap VIESX, though Thrasher takes the lead on this fund.

Two supporting analysts round out the compact team. Ekaterina Advena was the first analyst hire in 2015, while David Forward joined in 2018. The team is small, but both this strategy and its emerging-markets cousin are concentrated and share a fair number of holdings, meaning analyst workloads aren't too stretched. The team's focused efforts have resulted in consistently strong investment performance over the years with stock selection the primary driver of returns. While many of its calls have been good ones, the team has a good record of prudently selling losing positions, too.

Parent | by Adam Sabban, CFA Jul 16, 2020

Virtus Investment Partners boasts some strong affiliates, but a lack of depth across its offerings and high fees lead to an Average Parent rating. The publicly traded firm operates an affiliated partners approach, offering funds run by eight wholly owned managers and one majority-owned manager, as well as a handful of outside subadvisors. Much of the firm's assets are concentrated in its five largest affiliates. Of this bunch, Kayne Anderson Rudnick stands out, offering multiple funds that are Morningstar Medalists.

While Virtus' stronger affiliates have garnered assets, it has lost ground with others and has a history of frequent fund mergers and liquidations. Its product management team monitors its lineup and isn't afraid to make changes when a fund fails to gain traction, which hasn't been uncommon. While not all closures are performance related, the firm could help generate better results with more-competitive fees.

Virtus has long grown by acquisition, though in its latest move, it will become the advisor and distributor for roughly $23 billion of AllianzGI's U.S.-based strategies. This deal also includes adding AllianzGI's Dallas-based value-equity team, formerly known as NFJ Investment Group, as its ninth wholly owned affiliate. The fund-related aspects of the deal, which would increase Virtus' assets under management by roughly 20%, require fundholder approval.

Performance

The strategy has produced an outstanding track record on both an absolute and risk-adjusted basis. From its September 2012 launch through December 2020, the Institutional shares' 14.3% annualized return easily outpaced the 10.0% gain for the best-fit MSCI ACWI ex US Small Growth benchmark. Even more notable, the fund outperformed in 92% of rolling three-year periods since inception. Manager Craig Thrasher hasn't sacrificed stability to achieve these impressive returns, resulting in equally impressive risk-adjusted returns. Based on monthly return data, the strategy captured 105% of its bogy's gains in up markets but only about 76% of declines. Despite its defensive history, the fund posted more pedestrian results during the first-quarter 2020 bear market, declining 37% through the market bottom, roughly in line with the bogy. Holdings in hard-hit areas such as auto sales and entertainment stung, as did some of the fund's more sensitive micro-cap holdings.

The managers have been successful investing in small-cap companies, often buying stocks below $1 billion in market cap. The meteoric rise in assets to nearly $3.0 billion likely makes the strategy less flexible in this segment of the market. While Thrasher and team have added value buying larger companies as well, they'll still need to prove they can deliver at this asset level.

Price

It's critical to evaluate expenses, as they come directly out of returns. The share class on this report levies a fee that ranks in its Morningstar category's middle quintile. That's not great, but based on our assessment of the fund's People, Process and Parent pillars in the context of these fees, we think this share class will still be able to deliver positive alpha relative to the category benchmark index, explaining its Morningstar Analyst Rating of Bronze.

WCMSX - Added IXUS (orange line) for comparison to the newest addition to our lineup of International Funds:

WCM International Small Cap Growth Instl WCMSX ★★★★★

NAV / 1-Day Return	Total Assets	Adj. Expense Ratio	Expense Ratio	Fee Level	Longest Manager Tenure
27.78 / ↑ 2.13 %	613.3 Mil	1.250%	1.250%	High	5.25 years

Category	Investment Style	Min. Initial Investment	Status	TTM Yield	Turnover
Foreign Small/Mid Growth	Mid Growth	100,000	Open	0.00%	67%