
ETF Specialist**Best Ideas**

By [Samuel Lee](#) | 01-17-14 | 06:00 AM | [Email Article](#)

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I'm often asked about [Market Vectors Wide Moat ETF\(MOAT\)](#). It puts me in a bit of a pickle. MOAT tracks the Morningstar Wide Moat Focus Index. Any recommendation to invest in it would be rightly perceived as coming from a conflicted party, hence the long disclosure prefacing this article. For what it's worth, I had nothing to do with MOAT's creation and am not compensated in any way by the exchange-traded fund's success or failure. I honestly think MOAT is an interesting strategy that deserves a hard look, and I also happen to be well-placed to do so in an insightful manner.

MOAT was launched in 2012, but the strategy was investable all the way back in 2007 via [ELEMENTS Morningstar Wide Moat Focus ETN\(WMW\)](#). Its performance has been good.

Still, even six years of consistent performance is not enough reason to invest in an asset. Fixating on realized performance is a classic case of attribute substitution, in which the mind reflexively swaps out a hard question ("What is my forecast of future expected performance?") with an easy one ("What was past performance like?"). Predicting future performance is hard and is better done by focusing on a strategy's process and fundamental characteristics rather than its historical returns. This is what I'll do in my analysis.

MOAT is a systematic best-ideas fund. Each quarter it buys and equal-weights the 20 wide-moat stocks trading at the deepest discounts to Morningstar equity analysts' estimates of fair value. The rationale for picking the most deeply discounted wide-moat stocks is that their future earnings are more predictable and therefore their fair values are likely to be less noisy than those of no- and narrow-moat stocks.

As reasonable as a strategy may sound, the devil is in the details. What the heck is a "moat"? How are "wide-moat" stocks identified? How is "fair value" calculated? And can combining the two be reasonably expected to add excess returns? Let's begin with the building blocks.

Moats

Warren Buffett likens an unusually profitable enterprise to a castle. An economic moat keeps competitors from hurting a firm's profit margins. Morningstar's equity

team imitates Buffett. All the stocks they rate are assigned one of three moat ratings by a committee of senior analysts—wide, narrow, or none. Wide-moat stocks are those the committee believes will earn exceptional returns on invested capital over at least 20 years. No-moat stocks are those the committee believes will earn average or below-average return on capital. Narrow-moat stocks fall in between.

Buying companies with wide moats has worked out for Buffett, but to a skeptic like me it's not at all obvious it should continue to work, especially when there are legions of Buffett disciples.

In recent years, academics have published research showing that stocks scoring high on reasonable proxies for moats or quality have consistently outperformed since at least the 1950s in the United States since the 1980s in developed foreign markets. The data suggest quality is alive and kicking.

In an instant-classic [study](#), University of Rochester professor Robert Novy-Marx found that companies with high gross profitability, defined as $(\text{revenues} - \text{cost of goods sold})/\text{assets}$, or GP/A, have earned excess returns in the U.S. and abroad over many decades. A strategy that bought the highest quintile of stocks each year, market-weighted, would have returned about 4% annualized excess returns from July 1963 to December 2010, even after controlling for value and size characteristics (which are known to also predict excess returns). Companies with high gross profits tend to have above-average profits even a decade out. Conceptually, GP/A is a particularly elegant way of capturing whether a firm has a moat, as it encapsulates profit margins and asset efficiency, two widely accepted measures of pricing power in the accounting literature. As a bonus, GP/A is harder for managers to manipulate with accounting shenanigans.

In "[Quality Minus Junk](#)," AQR researchers Cliff Asness, Andrea Frazzini, and Lasse Pedersen build on Novy-Marx's research with a multifaceted proxy for quality, mixing a combination of growth, profitability, safety, and payout signals (including GP/A). Their quality minus junk, or QMJ, factor can "explain away" most of the outperformance of Buffett's stock picks since 1980, when their data on [Berkshire Hathaway's \(BRK.A\)](#) 13F-filing portfolio begins.

Academia has finally caught up with Buffett, even if it took 50 years. Quality stocks, it's now widely agreed, have produced excess risk-adjusted returns nearly everywhere.

There's some hemming and hawing as to why it works. Diehard efficient-market believers such as Dimensional Fund Advisors think it's related to a distinct risk. I don't. Buffett and his partner Charlie Munger identified and exploited quality stocks operating under a model of investors as irrational creatures. They didn't buy [Coca-Cola \(KO\)](#) because it was risky in a different way; they bought it because they thought it was underpriced.

Can Morningstar Identify Moats (as Defined by Academics)?

I think AQR's QMJ factor is a good moat proxy. Since Frazzini and Pedersen have publicly released their QMJ data, we can test whether Morningstar's equity analysts can identify moats (as defined by academics, I quickly add!).

Morningstar calculates total return indexes going back to 2002 for wide-, narrow-, and no-moat stocks. Using return data from September 2002 to December 2012, I regressed each index's monthly total returns minus the 30-day T-bill rate on the Fama-French-Carhart factors—market (Mkt-Rf), size (SMB), value (HML), momentum (UMD)—plus quality, or QMJ. The procedure estimates “factor loadings”, or sensitivities of the indexes' monthly returns to changes in the market, size, value, momentum, and quality factors, all other factors held equal. The results are below, with coefficients statistically significant at the 5% level in bold.

Each coefficient has a simple interpretation. For a percentage point increase in a factor's return, the index's return--all other factors held constant--is predicted to change in the direction and magnitude of the coefficient, or factor loading. For example, if QMJ returns 1% (meaning quality stocks beat junk stocks by 1%), the model predicts the Morningstar Wide-Moat Index will increase by 0.28%, all other factors held constant. A bigger coefficient indicates a deeper loading.

	None	Narrow	Wide
Mkt-RF	1.07	1.01	1.00
SMB	0.24	-0.07	-0.22
HML	-0.14	-0.05	0.04
UMD	-0.05	0.01	-0.03
QMJ	-0.44	-0.13	0.28
R ²	0.95	0.98	0.92

The Morningstar No-Moat Index has an economically and statistically significant negative loading on QMJ, meaning it moves opposite of quality stocks; it's a junk-stock index. The Narrow-Moat Index has a slight negative loading, suggesting its stocks don't have identifiable moats, at least as defined by QMJ. The Wide-Moat Index has a statistically and economically significant positive loading on QMJ.

Assuming you accept QMJ as a reasonable proxy for moatiness, the data suggest Morningstar's equity analysts seem to have been able to identify moats at extremes but are perhaps too inclusive with the narrow-moat designation. Fortunately, MOAT picks only wide-moat stocks, an area where the committee has had reasonable success.

Fair Value

The other leg of MOAT's strategy is buying stocks with the lowest prices/fair value ratios, or P/FV. A stock's fair value is the sum of its discounted future cash flows.

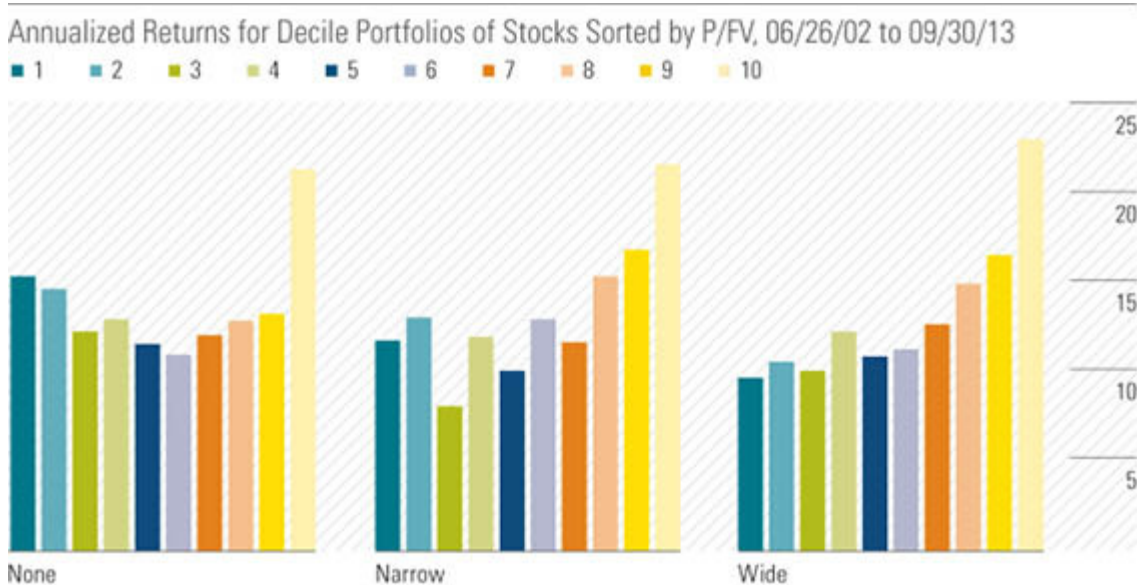
Cash flows are estimated using a three-stage model. The first stage covers the next five years. The second stage's length depends on the stock's moat rating. Stocks at this stage are assumed to begin with an above-average return on invested capital that declines over time. No-moat stocks are not assumed to have above-average ROIC, so this stage is moot. Wide-moat stocks are assumed to have gradually declining ROIC over 20 years. The third and last stage assumes the firm earns steady-state market ROIC forever.

The cash flows are discounted to the present based on an uncertainty rating, assigned after an analyst considers the firm's operating and financial leverage, its exposure to bad times, and scenario analysis of its future revenues.

The details of the methodology have changed over the years, but the goal has always been to identify the sum of a stock's future discounted cash flows. The methodology largely makes sense. It's based on classic value investing principles. Of course, stock-picking is really, really hard, even for investors grounded in the right framework.

While the procedure sounds nice and all, fair value is useless if it doesn't actually predict future returns. My colleague Warren Miller was kind enough to calculate the returns of a strategy that sorted stocks by P/FV into deciles within moat categories. Decile 10 indicates the lowest, or cheapest, P/FV group. Every day stocks are sorted and equal-weighted. Warren will be the first to point out that this is an insane strategy, and infeasible to boot. But it does suggest how well P/FV forecasts future excess returns. The sample covers June 26, 2002, to Sept. 30, 2013.

The results look pretty good. Within each moat rating category, P/FV doesn't do a good job forecasting returns within the pricier half of the market but does seem to work well in identifying extreme outliers. The biggest spread is between the extreme decile portfolio returns for wide-moat stocks.



A word of caution: The spreads between the top and bottom decile wide-moat portfolios suggest annualized returns of 13%. These are largely the artifacts of the daily rebalancing methodology. A more reasonable strategy that, say, rebalanced yearly or quarterly would have almost certainly returned far less.

Forecasting MOAT's Excess Returns

So far the data suggests that Morningstar can roughly sort through moats, and that P/FV is predictive within wide moats, at least.

Combining the two as the Wide Moat Focus Index does should yield exposure to value and quality factors. Indeed, that's what we see in the regression results on the back-tested index, covering September 2002 to December 2012. (Coefficients statistically significant at the 5% level are in bold.)

The index's loadings to small-cap, value, antimomentum, and quality stocks are big. After controlling for them, the index's excess returns are no longer statistically significant. I found qualitatively similar results performing this regression on subperiod returns.

	Wide-Moat Focus
Ann. Alpha	2.8%
Mkt-RF	1.09
SMB	0.27
HML	0.32
UMD	-0.39
QMJ	0.46
R ²	0.89

These are largely reassuring results. Even though MOAT's back-tested index is short by the standards of academic research, mountains of research demonstrate that value, size, momentum, and quality stocks have outperformed over many decades and in many countries. If MOAT exploits these sources of return in the future and we believe these factors will produce positive excess returns, we can be much more confident the strategy will work going forward.

The fly in the ointment is the large negative momentum loading. Historically, the momentum factor has returned about 6.9% annualized from 1926 to 2012. If the historical premium were realized while MOAT maintained a negative 0.40 momentum loading, MOAT would experience a massive (6.9%*-0.40) 2.8% annualized loss, large enough to wipe out the gains from its value and quality exposures.

While a longer historical perspective suggests a negative momentum loading is a bad idea, momentum stocks were decimated in 2009. The index's negative exposure to such stocks contributed a couple of percentage points of annualized return to the index over the sample. The index's historical returns, then, are arguably overstated because of a one-off event. Judging MOAT's investment merit is largely an exercise in how high you believe the momentum premium will be over your contemplated holding period and whether the other factors and possibly alpha will overcome it. If the momentum factor's returns revert to historical form, there's a good chance it'll eat up any excess returns attributable to value and quality exposures.

I don't think the momentum factor's prospective returns are as high as its historical return. It's a popular strategy, so some of the juice has been squeezed out of it. But I do think its expected return is positive. I've produced what I believe are reasonable forecasts for MOAT's factor loadings and the factor premia.

A Factor-Based Forecast of MOAT's Returns	Expected Factor Premium	Expected Loading	Premium Loading
Mkt-RF	4.0%	1.0	4.0%
SMB	0.0%	0.3	0.0%
HML	2.0%	0.3	0.6%
UMD	3.0%	-0.4	-1.2%
QMJ	4.0%	0.4	1.6%
Total Expected Return			5.0%
Excess Return			1.0%

In sum, MOAT has a reasonable process, high loadings on value and quality—two factors generally associated with excess returns—and some evidence of additional value added by Morningstar analyst input, but also negative loading on momentum. If you think momentum stocks won't do well or will be neutral at best, MOAT is probably a good bet; if you think momentum will do well, then MOAT probably isn't.

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