Factor Investing

The unedited Morningstar article is available at http://news.morningstar.com/articlenet/article.aspx?id=770825

Arnott and Asness Square Off on Factor Investing

By Ben Johnson, CFA | 09-24-16

It is hard to find two more renowned figures in the mutual fund world than Rob Arnott and Cliff Asness. Arnott is the founder and chairman of Research Affiliates .... Asness is founder, chief investment officer, and managing partner of AQR Capital Management .... Both excel at conducting academic-level research and leveraging their findings in investing strategies. Alas, the different outcomes of their respective research papers mean they don't always agree on certain topics. Indeed, factor investing is one area where the two investors have some disagreements--in particular which factors persist over the long term.

Ben Johnson, director of passive strategies on Morningstar's manager research team, sat down with Arnott and Asness at this year's Morningstar Investment Conference. Excerpts of their conversation appear below and have been edited for length and clarity.

Ben Johnson: I want to start at a theoretical level with a discussion of the efficient market hypothesis. Cliff, as many in our audience know, was a teaching assistant for Eugene Fama at the University of Chicago for two years. Fama was his dissertation advisor. Cliff, what is your take on your mentor's hypothesis?

Cliff Asness: I get very nervous talking about how efficient markets are in Chicago, because I feel like Gene is close and listening. I don't think he would be upset by this, but on the coasts, I'm a little more in the behavioralist camp.

The efficient market hypothesis, as Gene puts it, is the idea that prices reflect all available information. Now that we've introduced Gene, I'll defend him a little bit. First, he likes to shock his first-year Ph.D. class. I sat through this class three times. It's not because I failed it; it's because I was the TA the next two years. About the third week in, he says to the class something like, "Markets are almost certainly not perfectly efficient." You get a gasp out of the class. Only in Fama's class in Chicago could that entail a gasp. Anywhere else in the world, students either don't care, don't know, or they say, "Yeah, we know that."

Second, I wrote my dissertation for Gene on the success of the price momentum strategy. Any of the things we'll discuss today can have an efficient markets, risk-based, or a behavioralist irrationality-based story. Momentum is still one of the hardest ones to reconcile with efficient markets. I was terrified to ask him if I could write it. I think I mumbled as I said, "Gene, I'd like to write a dissertation on the efficient market hypothesis, and by the way, I find momentum works really well." And he says something like, "What was that?" I'm like, "Momentum works really well."

He was very good with me writing it. So, he is clearly on the spectrum pretty far toward efficient markets compared with me--I'm sure with Rob--but he's not quite the zealot he's made out to be.

My own view is a wishy-washy, middle one. I think markets are highly efficient in a very broad, long-term sense. But are they anywhere near perfect? No.

I will admit that living through the technology bubble and the global financial crisis has probably moved me even more toward the middle. Of the many things in finance we get paid for, we get paid for taking risk, but in some cases it's for taking the other side of bad behavior. So, long-winded way of me saying I am courageously in the center. (laughter)

Johnson: Rob, where would you locate yourself on this spectrum?

Rob Arnott: Let me frame this as a question for the audience. How many people here think that the markets are broadly efficient? OK, lots of hands. Now let me be more specific. How many people here think that prices are pretty close to the true fair value of every asset in every market in every minute of every day? Ah, OK. So, folks aren't as enthused about efficient markets as perhaps they thought.

How many think that market inefficiencies are unchanging, reliable things you can depend upon, so that if you use a particular strategy, you can pretty much always depend on it working and giving you a path to beating the market? Got a couple of hands going up. I would say that's tough. The markets, by their very nature, are going to look for inefficiencies and squash them. The inefficiencies are likely to be dynamic. They're likely to change over time. There are a few timeless ones--momentum, for sure; value, for sure; small-cap effect, maybe. But being timeless doesn't mean being reliable, working every year. So, the inefficiencies, such as they are, will always test us, will always challenge us. The markets will always do their best to disabuse us of our beliefs.

We did a paper three years ago with Harry Markowitz on the noise-in-price model-- the notion that price equals fair value, plus or minus some random noise. Basically, we found that the markets are guessing what the fair value is and getting it a little wrong and trying to correct those errors. That's the basis of the noise-in-price model. If price movements are 90% correct--meaning 90% of all price action is a change in the true fair value of an asset due to exogenous shocks or whatever-- and 10% is mean-reverting noise, that's all you need to explain the entire value effect. Well, that's kind of cool. It suggests that a little bit of inefficiency and the value effect are two sides of the same coin.

Bottom line is I come out with an ambivalent view--sort of toward the middle, probably a little more toward the inefficient side than Cliff, but not a lot. I view that inefficiencies are constantly changing, the markets by their very nature will make it tough, but there are some semi-reliable inefficiencies for the patient investor.

The Factor Zoo

Johnson: Among those inefficiencies that we've covered, we've mentioned value and momentum, which I think most would agree are sort of the bedrock efficiencies that have been tested across multiple asset classes and geographies. Cliff, what else is out there in terms of the roster of inefficiencies? If you look at some academic research, you see eager Ph.D. candidates data-mine their hardest and find 300-some-odd variables that they think reliably predict future excess returns. Which are the ones that investors can rely on? Are they actually exploitable, or is there just too much friction between the magical world of academia, which doesn't take into account transaction costs and taxes, etc., and investors' reality?

Asness: ... As to the data-mining, it's a very large problem, but maybe a somewhat smaller problem than this gigantic set you're talking about. John Cochrane calls it the "factor zoo." But a fair amount of what goes into the factor zoo are actually small tweaks to other factors. ...

Of the factors we think are real and will stay, value and momentum are two biggies. Then maybe the most controversial--and this might be where Rob and I differ a bit-- are the defensive and the quality strategies--low

beta, profitability, strong margins. I'm a bigger believer in the defensive low beta than I am in the profitability strategies.

Small-cap is one where I am firmly on the fence. I've long said that I require data and an economic story at the same time. The data for the small-cap effect is there. It's a little bit weaker than some of the other stand-alone premia, but it's there. ... We've recently written a paper saying that the small-cap effect is much stronger if you make sure it's not biased toward junky stocks, as small stocks tend to be. ... I'm now faced with a premium that's double or triple the size it was before. ...

Wedges of Alpha

Johnson: Rob, as Cliff's framed it, the story and the data, does small-cap pass your sniff test as being a dependable factor? After all, small-cap has been enshrined on the short list of dependable factors in many investors' minds.

Arnott: Let me address that, but in a circuitous way. I'll start with the data-mining story. The value effect is the granddaddy of all factors. Over the last 50 years, the cheap stocks, which classically are defined as the companies with low price/book value ratios, beat the growth stocks, which are the ones with high price/book values by about 2.5% a year. Cool. Wonderful. The effect was, to the best of my knowledge, first published by Sanjoy Basu in 1977 after a stupendous five-year run following the bursting of the Nifty Fifty, in which value beat growth by more than 1,000 basis points a year.

Now, if you measure the power of the value effect from 1977 to date--oh, gee, it's added 0.5% a year. ... Does this mean that the value effect made a bunch of money before it was discovered and has been useless ever since? Empirically, you'd think that it's pretty close to that, but no. Value stocks when he published his paper were one third as expensive as the growth stocks. ... That sounds like a big spread. It's not. Historic norm is five to one. It's now eight to one. So, it's gone from being priced a third the price of growth to an eighth the price of growth. And during that time, it's added value. That means the performance has been up a little, the pricing has been down a lot. The wedge between the two is big. The wedge is your structural alpha. Value has a structural alpha.

Same thing with small-cap. Small-cap was first published, best of my knowledge, by Rolf Banz in 1981. In 1983, it hit an all-time high of relative valuation never seen since. In 1981, it was in the top 3% to 5% of the historical range of valuations. So, Banz discovered it because it had outperformed massively.

Was he data-mining? Yes. Was it nefarious? Absolutely not. He noticed it because it worked. But did it work? Well, there once again you have this huge surge in performance. It pogos around, and it's no higher now than it was back in 1981 in terms of cumulative returns. But it's cheaper. So, you have that wedge again. The wedge tells you that there's a structural alpha.

You see the same thing with momentum. The valuation of momentum soars and crashes. Does it mean that the high-momentum stocks have tremendous volatility? Of course not. The portfolio is reconstituted every month. But the performance bounces along higher and higher, so you have a wedge.

So, I view the three of those as having a wedge that is big enough to say with some confidence there's an effect here that is reliable for the long-term investor. Does that mean it works all the time? No, of course not. Does that mean that there aren't other effects that work? Probably, yes. Illiquidity would be an example that I think has merit. Low beta, I'm not as sure. The wedge is much more ambiguous. Profitability? I'm not as sure.

Will Factors Persist?

Johnson: Rob, what gives you a level of conviction that these things are going to persist? Smart beta is trending everywhere. As more and more people are piling into these strategies, why should we have any degree of confidence that they'll persist and that we won't be up here 10 years from now talking about a completely different lineup of factors?

Arnott: Russel Kinnel has done the wonderful series of papers called "Mind the Gap." What he shows is that people pile into what's worked recently and they yank money out of what's hurt them recently. The consequence is they earn 1% to 2% a year less than is available to them in these funds.

George Soros famously said that investing is painful. Correct investing is painful. Something that is newly loftily priced has two attributes that we can all recognize as reasonably reliable: fabulous past returns, making it an easy thing to persuade our clients to use, and lousy future returns, especially if there's any mean reversion. Anything that's newly cheap has the opposite two attributes: horrible past returns and pretty good future returns.

... So, the essence of successful investing is fighting against human nature. This is why I think value is the most important factor, but not the be-all, end-all. When value is trading expensive, meaning that the spread between growth and value is a lot narrower than normal, I would say throw value out. We're not there. The spread's wider than normal.

Johnson: Cliff, is it our reptilian instincts that will ensure that these factors--value in particular--persist into the future?

Asness: To some extent, yes. Behavioral biases do matter. Rob tells a great story for why value investing works. Part of that, though, is human beings' overconfidence. That's one of the many biases we have here. But I think Rob is overconfident about our ability to take advantage of their overconfidence. Value works. But it's a wild ride. Sometimes the market's right. Sometimes people go crazy and you have a bubble. Sometimes the fundamentals come in and value was just wrong. The low price thing should have had an even lower price.

You asked about all of the attention focused on factors. ... Money changes prices. Where these flows are coming from is fascinating. We've seen flows out of traditional stock-picking active management into both straight indexes and smart beta or factor tilt portfolios. If they've come out of things that share some of the characteristics, they don't necessarily have to change in total pricing. So, maybe one reason value has not benefited from a big inflow into smart beta is some of the outflows have been from value managers.

Arnott: Absolutely.

Asness: In some sense, I have to admit, I think of value as the grandparent of the other factors. If that ever goes away, I would start to think maybe the world has gotten more efficient on maybe these other fronts also. But can a strategy go away if it's based on behavior? If it's based on risk, it never has to go away, which is the good part. The bad part is it's fricking risky. If it's based on behavior, it can go away because people stop making an error or too many people like Rob and I try to take the opposite side of their error. I somewhat sarcastically call this "the supply and demand for investor error." I have absolutely no worry that the world has gotten way more rational than it used to be and nobody's making an error.

Arnott: Actually, it's moved the opposite direction.

Asness: Perhaps the opposite. So, I don't worry. Are too many people trying to exploit it? I think the number of people trying to exploit it--the traditional active managers--has shrunk. For value itself, many people will look at the last 10 years for value and make the wrong call and say, "Now that everyone knows about the price/book effect, it can't work anymore. No. Rob's right. Value has cheapened a lot. And for value, which is a low-turnover strategy, that matters. I think it's amazing people would say it's gone away because people know. No. The problem is people don't give a crap, if you'll excuse me. ...

Ben Johnson, CFA, is director of global ETF research for Morningstar and editor of Morningstar ETFInvestor, a monthly newsletter.

Our thoughts:

This joint interview only hints at the ongoing debate between Arnott and Asness, whose respective firms, it should be remembered, are competitors. Their debate centers on the advisability of investors attempting to time their Factor exposure, and the capacity of various Factors to handle the flow of funds to what has recently worked as investors chase performance. We discuss this last issue with respect to Low-Volatility on our website. While we side with those that consider Low-Volatility to be a separate Factor, we also recognize that it has become over valued and are not currently recommending exposure. We agree with Arnott when he states that "Something that is newly loftily priced has two attributes that we can all recognize as reasonably reliable: fabulous past returns, making it an easy thing to persuade our clients to use, and lousy future returns, especially if there's any mean reversion." Our favorite global Low-Volatility Fund comes from Vanguard. VMNVX has trounced its World Stock peers (orange line) while outperforming the S&P 500 (yellow line) during a period

Vanguard Global Minimum Volatility Fund Admiral Shares VMNVX

Morningstar StockInvestor
Free Download.

FF Fund Family Data | Add to Portfolio | Get E-mail Alerts | PDF Report | ? Data Question

Quote | Chart | Fund Analysis | Performance | Ratings & Risk | Management | Stewardship | Portfolio | Expense | Tax | Purchase | Filings

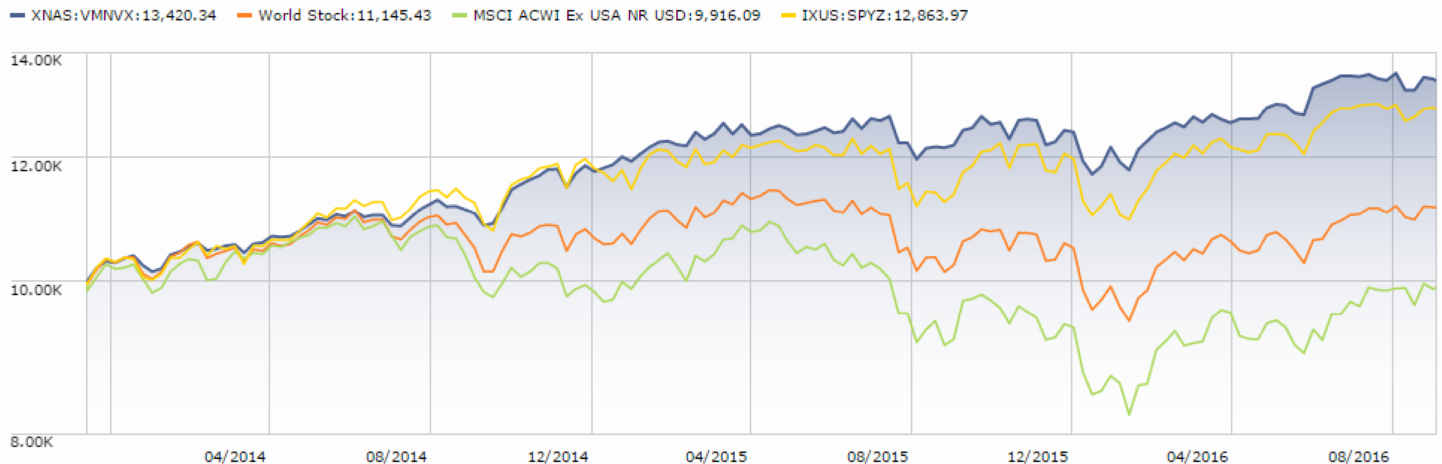
NAV	1-Day Total Return	TTM Yield	Load	Total Assets	Expenses	Fee Level	Turnover	Status	Min. Inv.
$24.37	-0.29%	1.72%	None	$ 1.7 bil	0.21%	Low	57%	Open	$ 50,000

USD | NAV as of 03 Oct 2016 | 1-Day Return as of 03 Oct 2016

30-Day SEC Yield	Category	Investment Style
--	World Stock	Large Blend

Growth ▾ Benchmark ▾ Event ▾ Moving Avg US Dollar ▾ Reset

12/12/2013 - 10/03/2016 Zoom: 1M 3M YTD 1Y 3Y 5Y 10Y Maximum Custom



when U.S. outperformed International stocks (green line), even though its ratio of average historical Maximum Drawdowns to S&P 500 declines greater than 10% is 0.9 (our **Risk** metric). An easy sell, so it was not surprising that we had to spend considerable time with a client recently convincing them to avoid Low-Volatility Funds for now.

Our IVE System's Value criteria requires that a stock's PEG, if available, otherwise EV/EBITDA or EV/EBIT, be in the lowest decile. QVAL, a domestic ETF, is 1 of 3 Funds we currently use as Transitional Funds while we wait for individual stock opportunities. It, along with its international sibling IVAL, which we consider a Core Holding, use EV/EBIT to capture the Value Factor. KNOW, another Transitional ETF, uses a Value overlay after screening for Insider Buying and positive Earnings Estimate Trends.

Due to high turnover the Momentum Factor is best captured by an ETF. Depending on a client's primary objective (Capital Appreciation, Income, or Capital Preservation) and Risk Profile, we use QMOM (domestic) and IMOM (international) as Core Holdings, and, for now due to its superior liquidity, MTUM (domestic), as the 3rd Transitional Fund.

Since most Insider Buying that is sufficient to meet our criteria occurs in Small Cap stocks, our IVE System captures the Size Factor indirectly. For Small Cap international exposure we use OBIOX, whose quantitative process incorporates Momentum, for clients with an IRA, otherwise GPIIX, which, like our IVE System, uses PEG as its valuation metric.

One of the advantages to our IVE System, whose track record is detailed in our White Paper, is that it has us buying during market selloffs. Otherwise, we do not attempt to time our Factor exposure to Value, Momentum, or Size.

Meb Faber's podcast has 2 recent interviews on Factor Investing that we highly recommend:

On September 7th he spent an hour with Arnott: http://mebfaber.com/2016/09/07/episode-18-rob-arnott-people-need-ratchet-return-expectations/

On October 5th he interviewed Gregg Fisher, CFA for 53 minutes: http://mebfaber.com/2016/10/05/podcast-23-gregg-fisher-sometimes-best-investment-strategy-isnt-right-investment-strategy/

Fisher mentions an animated video (7 minutes) that can be seen here: http://gersteinfisher.com/gf_article/multi-factor-investing/