Under the Hood: What's in *Your* Index?

(An Ongoing Series, November 2015)

The Beta Game – Part I

Are ETFs designed to be purchased or are they designed to be sold? Which is to ask whether the selection of securities in an ETF is based on their marketing appeal to investors as opposed to their utility as investments. The ETF-o-sphere has mushroomed into well over 1,000 different offerings, all framed as indexes designed to provide a specific (and ever more exotic) type of exposure (like emerging market high-yield debt). How can we assess whether ETFs are just investments or a business? Does the drug company suggest you ask your doctor for the pill because it's good for you or because they made a bunch? And if the animating motive to create an ETF is more a business motive than an investment motive, and if that affects how it is constructed, will it affect how buyers should expect to fare? One way to form an opinion is by studying the beta game.

First things first, beta, or β, is a statistical measure of price risk. It is such an important factor in choosing an ETF that it is provided in every ETF factsheet on its provider's website, or in the description/risk statistics section of financial websites like Yahoo Finance. Beta measures an ETF's price change relative to the broad market over, typically, 1 year, 3 years or longer. As the usual benchmark, the S&P 500, by definition, has a beta of 1.00. If an ETF has been more volatile than the S&P 500, it has a beta greater than 1; a beta of 1.20 says that on a daily basis the ETF has risen and fallen by 20% more than the S&P during the measurement period. A beta of 0.80 means the ETF has varied by 20% less than the S&P 500. There is nothing predictive about it; one collects what the daily price changes have been, and a formula produces the result.

Assets Under Management of High Beta ETFs

($ mill)		AUM
SPHB	PowerShares S&P 500 High Beta Portfolio	$77.0
IDHB	PowerShares S&P Int'l. Developed High Beta Portfolio	3.5
EEHB	PowerShares S&P Emerging Markets High Beta Port.	1.5
		$82.0

Source: etfdb.com

It is entirely logical, in a risk-statistic-centric investment environment, given the turbulence in equity markets, to try to lower risk by purchasing low-beta ETFs. As to how important this has become from a business or selling point of view, one can simply peruse, on a website like ETF.com, all of the funds categorized as low-beta versus those categorized as high-beta. It lists three ETFs – that's it, three – categorized as *high*-beta, and they are shown in the first table above. Also listed are their assets under management, which is all of $82 million. In the low-fee ETF world, two of the three funds are loss-making propositions; the largest, at only a 0.25% management fee: who knows?

Assets Under Management of Low Volatility (Low Beta) ETFs

($ mill)		AUM
USMV	iShares MSCI USA Minimum Volatility ETF	$6,422
SPLV	PowerShares S&P 500 Low Volatility Portfolio	4,932
FTLB	First Trust Low Beta Income ETF	4,950
EFAV	iShares MSCI EAFE Minimum Volatility ETF	3,286
EEMV	iShares MSCI Emerging Markets Minimum Volatility ETF	2,778
ACWV	iShares MSCI All Country World Minimum Volatility ETF	2,158
IDLV	PowerShares S&P Intl. Developed Country Low Volatility Port.	312
SIZE	iShares MSCI USA Size Factor ETF	197
EELV	PowerShares S&P Emerging Markets Low Volatility Portfolio	178
XSLV	PowerShares S&P Small Cap Low Volatility Portfolio ETF	123
		$22,400

Source: etfdb.com

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As to the list of *low* volatility ETFs, only a portion of which appears on the accompanying table, it is quite extensive. By comparison with the rounding error of $82 million, the largest five have a collective $22 billion of assets under management. Nor does the list include the currently popular currency hedged ETFs, which strategy is another means of attaining low volatility, and it doesn't include another popular group of ETFs: hedged or volatility response ETFs that mitigate risk by changing equity exposure in response to volatility signals.

The purpose of the exercise is to demonstrate that there really is no market for a high volatility ETF. Have an excellent idea for an ETF that should produce high long-term returns from an undervalued, virtually unknown, but growing group of companies? If it has a beta greater than 1, no one will back you – it won't be sold.

Now, you might ask, why would anyone want a high-beta ETF anyway? We'll get to that. But first, one should understand what happens when a single factor becomes the animating motive for the manufacturer of a product and, in turn, the impact of the buying power of the investing public upon that product. Here's where we play the Beta Game.

Equity Beta of Small Capitalization Indexes, 7/31/2015

IWM	iShares Russell 2000 ETF	0.92
IWO	iShares Russell 2000 Growth ETF	0.95
IWN	iShares Russell 2000 Value ETF	0.88

Source: iShares

There is, on the one hand, academic and statistical rigor and, on the other, reality. One might believe that small capitalization equities are more volatile than large company stocks. However, the available data does not substantiate this view. Consider the betas of some small capitalization iShares Russell indexes: the iShares Russell 2000 ETF, the iShares Russell 2000 Growth ETF, and the iShares Russell 2000 Value ETF. All have betas well less than the S&P, no matter if they're growth or value. Essentially, ETFs that receive consistent cash inflow will exhibit low volatility (it's tough for the price of anything to go down if, mostly, people are buying it). If it exhibits low volatility, naturally it will receive cash flow. Thus, computer enabled circular logic prevails.

Beta for iShares Biotech ETF

3-Year Beta	5-Year Beta	10-Year Beta
0.98	0.76	0.67

Calculated through 8/31/15.

Here's a stronger example. It is beyond dispute, even by the academic/investment professional community, much less the average newspaper reader, that biotechnology companies are riskier as businesses than the average: they have greater product development risk and expense, regulatory approval risk, product obsolescence risk, funding risk and, of course, valuation risk since they tend to be priced like lottery tickets on any good news. So, with the market having a beta of 1.0, what is the beta of the iShares Biotech ETF. Well, it was a lot lower than the S&P 500, at least through August 31st.

Annual Net Asset Flows for IBB, in $ millions

2012	2013	2014	1/1/15 – 9/30/15
$287	$747	$994	$1,383

Source: ETF.com

That's the statistical reality, but is it reliable reality?[1] If one looks at how much net money was flooding into this ETF in recent years, with the ETF buying ever more shares of the same companies, the low beta makes sense. Not sense from the perspective of business risk or company valuation, but sense in that we know investors were buying this ETF like mad: $280 million in 2012, then $750 million, then $1 billion, then $1.4 billion.

Let's go a little farther afield – literally. This next is a list of some of our favorites. One ETF on the list, the iShares MSCI Frontier 100, may not be familiar to many. It has a negative 14.4% year-to-date return. It has

[1] In the last couple of months, prominent news of price gouging, and in a political season, caused sharp price drops in many drug sector stocks. IBB has since underperformed the S&P 500, its 3-year Beta, through October 30th, is now 1.03, and in the 4 weeks ended November 11th, it had over $400 million of *outflow*.

26.3% exposure in Kuwait, 14.6% in Nigeria (the home of Boko Haram), 11.2% in Argentina, and 10.4% in Pakistan. Knowing this, no one would ridicule you for thinking the beta should be 2 – or 3 – or more. But it is 0.4. It is dramatically safer, by this measure, than the S&P 500 Index. If you really, really believe in the statistics by which advisors allocate capital, and you're really worried about the impact of higher interest rates in the U.S., take your money and invest it in the Frontier 100. It is, by definition and mathematics, safer.

Year to date, the Turkish ETF is down 30.7%. Some would assert that is evidence of some volatility; however, the beta is 0.81. The iShares China Large-Cap ETF has a 0.98 beta. The iShares MSCI India Large-Cap ETF has a beta of 0.64 and the iShares MSCI India Small-Cap ETF has a 0.81 beta.

Betas as of August 31, 2015

IWC	iShares Micro-Cap ETF	0.79
FM	iShares MSCI Frontier 100 ETF	0.40
TUR	iShares MSCI Turkey ETF	0.81
FXI	iShares China Large-Cap ETF	0.98
INDA	iShares MSCI India ETF	0.64
SMIN	iShares MSCI India Small-Cap ETF	0.81

Source: iShares

Essentially, any portfolio with a high beta in the post 2008 to 2009 environment is unmarketable. Consequently, high beta portfolios are rapidly becoming extinct in the investment world.

Subsequent to the 2008/2009 period, the vast cash flow into the indices that are comprised of low beta equities is probably a contributive factor to their success. However, sooner or later even these indices will experience episodes of volatility that will serve to raise their betas above 1. In that case, by the peculiar logic of modern portfolio theory, the asset allocators will be compelled to own fewer of these types of securities. Of course, one might be inclined to reject this proposition, but that would imply that one believes that virtually every asset class has, and will maintain, a lower beta than the S&P 500.

Now, there are some questions still to answer, such as how can a volatile asset have a low beta, and why would an investor have an interest (and it might be a very good idea, actually) in a high-beta security? And there is some fun to have with constructing the lowest beta portfolio around (which we have done). These will be addressed in Part II.

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