The PowerShares S&P 500® Low Volatility Portfolio is based on the S&P 500® Low Volatility Index. The Fund will invest at least 90% of its total assets in common stocks that comprise the Index. The Index consists of the 100 stocks from the S&P 500® Index with the lowest realized volatility over the past 12 months.

There are risks involved with investing in ETFs including possible loss of money. This fund is not actively managed and is subject to risks similar to stocks, including those related to short selling and margin maintenance. Ordinary brokerage commissions apply.

Investments focused in a particular industry are subject to greater risk, and are more greatly impacted by market volatility, than more diversified investments. The Fund is considered non-diversified and may be subject to greater risks than a diversified fund.

Equity risk is the risk that the value of equity securities, including common stocks, may fall due to both changes in general economic and political conditions that impact the market as a whole, as well as factors that directly relate to a specific company or its industry.

The S&P 500® Index is considered representative of the U.S. stock market.

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Shares are not FDIC insured, may lose value and have no bank guarantee.

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WHAT’S SMART ABOUT STRATEGIC BETA?

Increasingly, investors are embracing strategic beta to capture better risk-adjusted returns by isolating and blending specific risk factors such as value, low volatility, quality, size and others. It’s not a one-size-fits-all solution, and integrating it into a portfolio requires a new look at how investment performance is managed, achieved and measured.

Strategic beta can certainly be smart, but smart beta is not always strategic. That’s how the industry tends to be thinking these days about the passive, transparent and rules-based investing strategy that favors indices based on compensated risk factors, such as value, low volatility, quality, size and others, over those based on market capitalization, such as the S&P 500. The term ‘smart beta’ has been adopted by the broader investment industry to describe this tilt toward factors that have proven to drive returns, but most providers prefer a more descriptive—and smarter—term and one that doesn’t imply that other strategies are...well...not smart. Hence the terms strategic beta, advanced beta, active beta, alternative beta and engineered equity.

Whatever one chooses to call it, it’s growing quickly. "There has been a lot of growth in the advanced beta market," says Jennifer Bender, director of research in the Global Equity Beta Solutions group at State Street Global Advisors (SSGA). About half has come from institutions and half has come from the retail side. Among institutions, about 60 percent has been reallocated from active asset managers and 40 percent has come from traditional passive market cap-weighted index investments. Indeed, the growth of strategic beta has been driven in part by disappointment in active management. Since 2008, active managers overall have delivered only modest returns, and asset owners are increasingly disinclined to pay their high fees. "We’ve been in a fee-conscious world since..." (continued on page 5)
While much has been written recently about smart beta, alternative beta, and factor investing, some important issues have received scant attention, including historical perspective (how much is really new?), the active decisions inherent in these “passive” strategies, and the difficulty in capturing factor premia in real-world portfolios.

The new paradigm

Alternative betas or factor premia are systematic sources of return that arise from breaking down an asset class like equities into common drivers of return that are subordinated to the market beta or risk premium. These alternative betas are the raw material used to build “new” strategies. Whether it’s a lower-octane strategy like smart beta or a higher-octane hedge-fund-like strategy, the building blocks are the same (Figure 1).

What’s old is new

Alternative betas are also the building blocks for many quantitative strategies, and have been the preoccupation of academics and quantitative practitioners for decades. Factor-based investment strategies originated in the 1970s with the first index fund based on the king of all factors, the market factor. Low-volatility strategies were first proposed in the early 1970s. From the late 1970s to the early 1990s, value, size, momentum, currency carry, and other systematic sources of return were documented and used in practice. Style indexes were born. So while the terms “smart beta” and “factor investing” may be new, related strategies have existed for almost 50 years.

Why all the interest now?

Many of these ideas are now being repackaged to capitalize on investor interest in simplicity, transparency, and lower fees. Additionally, appreciation for the role of factors in asset-class returns has grown. The financial crisis highlighted factors’ roles in markets and the need to explicitly manage attendant risks. Asset owners are increasingly aware that, as with market beta, factors may not be diversified away when investing across multiple managers. Factors or alternative betas are increasingly recognized as a form of beta or premia sometimes masquerading as alpha, yet plans are paying fees more appropriate for true alpha. The old two-tier model of market beta and pure alpha is being replaced with a three-tier model of asset-class beta, alternative betas, and true alpha. Alternative betas require more skill than market beta but less than true alpha, and should be priced accordingly. Many investment plans are understandably interested in improving returns, risk, and costs by more explicitly allocating to alternative betas.

Alternative betas or systematic sources of return have other appealing attributes:

- They are intuitive and easy to describe, rather than being “black-box.”
- Returns can be attributed to factors, disentangling luck from skill.
- Factors may offer diversification benefits beyond asset-class diversification.
- As with equity beta, some factors have been challenged during recessions but have otherwise been good long-term investments.

It may be beta, but is it passive?

Some alternative betas are now being positioned as premia, like the equity risk premium. If equity beta can be a passive investment, surely sub-asset-class betas can

![Figure 1: Alternative betas are the raw material for several strategies](source: Wellington Management)
too. But passive investments represent consensus views and are unambiguous and highly liquid. Smart beta and alternative betas represent non-consensus views, are highly ambiguous, and vary in terms of liquidity.

**Non-consensus**

The average investor's return is defined by the cap-weighted indexes, against which active management is irrefutably a zero-sum game (negative after trading costs). For every overweight there must be a corresponding underweight over the aggregate sum of market values, just as every tilt toward a factor must have an offsetting tilt away from it. Indexes based on weighting schemes other than market values are, at least to some degree, active management with a non-consensus view. If they are structured with some characteristics of an index — transparency and low turnover, for example — this may blur the line between passive and active, but they still express a non-consensus expectation. It's difficult to imagine a world where the cap-weighted index does not provide a guidepost or benchmark reference: It is by definition the average investor's experience against which these strategies should be judged on dimensions of both risk and return.

Non-consensus return expectations may vary of course, as trades become more popular. As economist Jeremy Stein noted, "For a broad class of quantitative trading strategies, an important consideration for each individual arbitrageur is that he cannot know in real time exactly how many others are using the same model and taking the same position as him. This inability of traders to condition their behavior on current market-wide arbitrage capacity creates a coordination problem and, as I show further, in some cases can result in prices being pushed further away from fundamentals." Stein is commenting on some of the lessons learned about crowded trades in 2007 and 2008, when too many equity managers had similar processes and overlapping holdings. Yet some smart-beta and similar strategies are moving in the opposite direction, toward commoditization and the desire to grow assets to that of a cottage industry.

**Ambiguous**

Bets against the consensus require myriad decisions: the factors, their definitions, and their weights; position weights and portfolio construction techniques; trading strategies and turnover; and the investable universe of stocks. For example, the choice of a proxy for measuring value, such as book-to-price versus earnings yield, has had material short- and long-run return consequences. There is no consensus on the best definition of the value premium.

**Liquidity**

Many common alternative betas have historical Sharpe ratios that are higher than the equity market.3

"Why is everyone so enamored with the equity risk premium when these factors have better Sharpe ratios?" was a question I heard at a conference a few years ago. The challenge has to do with real-world frictions. The equity premium is easy to capture with the liquidity and low costs of cap-weighted indexes. Alternative betas are much more elusive in the real world. Factoring in shorting fees has a material impact on long/short profitability. Many factors are more effective in smaller stocks and in less-liquid markets, such as those in the developing world. Some factors, like momentum, require more turnover and cost more to trade. Liquidity issues are paramount to successfully capturing factor premia.

Competition is inevitable, regardless of whether smart beta and factor investing are considered new or old (though I believe most of these concepts are quite old). Weaker players will lose to those who can trade more efficiently, define and combine factors more effectively, and better manage unrewarded risks — all of which is active management, whether it’s called smart beta, factor investing, or quantitative equity.

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3When using hedged long/short spreads

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To learn more about this topic, visit
www.wellington.com/smart_beta
“We want to get these strategies in the right hands.”

“We should minimize active investment process risk, and investors should know what they’re buying according to the rules-based methodology.”

Somewhat/significantly increase
Neither increase nor decrease
Somewhat/significantly

“We're seeing people turn the corner from education to implementation,” says Matt Peron, global head of equities at Northern Trust, of the increasing adoption of strategic beta. This is what Northern Trust calls engineered equity, as it targets compensated risk factors and engineers out the risks. He says, “We have been in an education phase for a few years, but now, they ask, ‘How will we use it?’”

There are a few ways that strategic beta strategies are implemented in portfolios. First, many managers use it to provide excess returns, and second, to manage risks. “Many complement or replace active managers with an engineered equity strategy to enhance returns and/or to manage risk exposures,” he explains. Many asset owners have a collection of active managers and end up with a neutral or undesired set of exposures at the plan level. By adding in an engineered strategy, they can intentionally tilt their plan towards a desired exposure. The third way is to manage investment outcomes. There are a greater number of more sophisticated investors assessing their liabilities and using factor exposures in order to meet them, perhaps targeting value to meet long-dated liabilities or low volatility to mitigate risk.

The growth of strategic beta reflects a confluence of factors. “The financial crisis and resulting market volatility had an effect on investor psyches and the products they were looking for,” says Ido Eisenberg, portfolio manager at J.P. Morgan Asset Management. “Out of that came greater knowledge of the components of return: What’s alpha, and what’s beta.” There was more scrutiny on active managers, their performance and especially their fees. In addition, investors began to experience first-hand the risks involved in investing in market cap-weighted indexes. “Three things are happening,” he says. “There is an evolving understanding of where returns are coming from, we’re now calling these things by their name, and investors are getting what they’re asking for,” he says.

Despite the continued growth, strategic beta still represents a small percentage of the market. “We’re still in the early days,” says Dan Draper, managing director of global ETFs at Invesco.

Low-Volatility Funds Show Greatest Growth
(Among Non-Users)

Anticipated Use over the Next Three Years

<table>
<thead>
<tr>
<th>ETF Category</th>
<th>Use (%)</th>
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</thead>
<tbody>
<tr>
<td>Low volatility</td>
<td>45%</td>
</tr>
<tr>
<td>High dividend</td>
<td>40%</td>
</tr>
<tr>
<td>Fundamental weight</td>
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</tr>
<tr>
<td>Equal weight</td>
<td>20%</td>
</tr>
<tr>
<td>High beta</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: Cogent Research/Invesco PowerShares
PowerShares Capital Management. At yearend 2014, there were $234 billion in strategic beta assets. Market cap-weighted exchange-traded funds (ETFs), by comparison, claimed just under $2 trillion. “Strategic beta is just under 12 percent of total ETF assets,” he says. Growth rates differ dramatically, with strategic beta assets growing 43 percent in 2014 while traditional ETFs grew 22 percent. Market conditions in recent years with low interest rates led to high correlations among asset classes. “This has made security selection difficult for asset managers and there has been a low dispersion of returns,” he says. With the end of quantitative easing, investors anticipate rising interest rates, volatility is rising and there is a greater dispersion of returns. As a result, many investors are moving out of traditional benchmark indices and into low volatility indices.

For more sophisticated applications of strategic beta, beyond basic core-satellite strategies, adoption has been slow, and the market is still sorting out the nomenclature and figuring out how to deploy these strategies. In the long-only space, strategic beta is the evolution away from investing in traditional market cap-weighted indices, providing smart access to an asset class or a factor style of investing. Many investors here have embraced value and low volatility, which puts a sharper point on beta.

More recent is the evolution of strategic beta to alternative beta, which seeks to go beyond dynamically managed market exposures to isolate and capture other return premia, such as carry, or behavioral biases, such as momentum. This encompasses long-short strategies also. Despite having the same transparent and rules-based characteristics, these alternative strategies are in their infancy as investors aren’t always clear about what they are, which bucket they fall into and how they interact with the rest of the portfolio. Investors want to see a liquid product, low fees, a truncated downside, and low correlation in the alternatives space. Such alternative beta strategies are a new opportunity set that systematically brings alpha back into the equation, and these products give some color to the gray area between traditional beta and pure alpha. There is a passive and systematic feel, but they function in an actively managed way.

Strategic beta can now define and measure compensated risk factors. “It can identify, isolate and price them, giving them a fair market value,” says Draper. It’s about providing size, scale and liquidity to performance attribution. “You can get exposure to the 100 lowest-volatility stocks on an exchange at any one time, and do it all in real time,” he says.

Active decisions, passive implementation

“Strategic beta is really factor-based investing, and the concept has been around for a long time,” says GSAM’s Ghayur. So what’s new? Comparing traditional active management, which often seeks exposures to these same factors, with strategic beta, the biggest difference is that strategic beta is completely transparent and rules based. “It should minimize active investment process risk,” he says, “and investors should know what they’re buying according to the rules-based methodology.”

Flows into strategic beta strategies are coming from those who SSGA’s Bender calls former benchmark huggers. “Investors have moved towards advanced beta less because they think there are issues with market cap weighting and more because they want returns above market cap for lower fees,” she says. Strategic beta is another vehicle, a third way of implementing an investment strategy, and investors are making active decisions without hiring an active manager. Most clients have a core/satellite approach, with beta at the core, which is increasingly passive, often in traditional cap-weighted index funds. Satellite strategies provide alpha, and are often actively managed, although this is changing as offerings within strategic beta become more sophisticated. “It makes a lot of sense to replace the core with strategic beta,” she says, for better risk-adjusted returns. As strategies evolve, strategic beta works well alongside satellite investments as well.

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Attitudes Toward Smart Beta ETFs
(Among Non-Users)

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<thead>
<tr>
<th>Statement</th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
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<tbody>
<tr>
<td>Rules-based/smart beta ETFs can be used to manage portfolio volatility</td>
<td></td>
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<td>Rules-based/smart beta ETFs offer embedded risk management controls and features</td>
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<tr>
<td>Rules-based/smart beta ETFs can provide better risk-adjusted returns relative to market-cap ETFs</td>
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<tr>
<td>I anticipate allocating more of my institutional assets/fund assets to rules-based/smart beta ETFs in the future</td>
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<tr>
<td>Rules-based/smart beta ETFs can offer the best combination of low cost and market outperformance</td>
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<tr>
<td>Rules-based/smart beta ETFs provide much better value for the money compared to market-cap index ETFs</td>
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<tr>
<td>Rules-based/smart beta ETFs are ideal portfolio building tools</td>
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<tr>
<td>I prefer to use rules-based/smart beta ETFs over market-cap weighted ETFs when it's applicable</td>
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<tr>
<td>Rules-based/smart beta ETFs are my preferred ETF portfolios</td>
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Source: Cogent Research/Invesco PowerShares

March 2015 • Institutional Investor • 5
“Many complement or replace active managers with an engineered equity strategy to enhance returns and/or to manage risk exposures.”

While press reports have discussed how strategic beta adoption is already having an impact on active managers’ fees and volume of business, most providers of strategic beta view themselves as a complement to active management rather than a replacement. If an investor has a stable of active managers, for example, each following a specific investment strategy, strategic beta can fill any factor gaps. In sum, strategic beta can provide factor exposure with more modest fees than another active strategy and better liquidity, especially when compared with hedge funds.

For most investors that rely on a combination of active and traditional passive management, strategic beta provides a bridge. “You can use strategic beta to make factor tilts in a cost-effective way,” says PowerShares’ Draper. Strategic beta can also overcome capacity restraints in active management for those cases in which alpha can be arbitrated away. For example, many small cap and emerging-markets funds are closed. “If enhanced return is coming from a factor, strategic beta can complement the source of alpha, especially where capacity is an issue,” he says.

“Investors will be willing to pay for active management if they do what they say they’ll do,” says J.P. Morgan’s Eisenberg, noting that the two live together. “Strategic beta is not a substitute, it’s an evolution in the way we invest, and there’s room for both,” he says. Factor, or risk premium, harvesting can stand side by side with true alpha extraction from the market. Active managers are feeling the heat, however. “Some active managers have these same systematic exposures,” says Northern Trust’s Peron. Many feel the pressure because now these strategies can be replicated more efficiently. “They are pressured on fees and even their existence,” he says, adding that active managers will get full fee only if they can provide added value beyond risk exposures—true alpha.

“We find growth coming from three groups of investors,” says GSAM’s Ghayur. One has a concern about market cap-weighted indexes and is incorporating strategic beta as an alternative. “This is a strategic asset allocation decision which could change an investor’s policy benchmark,” he says. For example, an investor might change the U.S. benchmark from the Russell 3000 to 50 percent Russell 3000 and 50 percent in a Russell 3000 low-volatility strategy. The second group is those who are replacing active managers. The third category is a group of investors that are already diagnosing and optimizing their portfolio’s exposures to strategic beta. “They understand the factor exposures they have, and they like the active managers that have performed well,” he says. Now they are implementing exposure management and portfolio completion strategies with strategic beta. For example, they may identify a negative exposure to momentum in their overall portfolio. “They might choose to true up their exposure to momentum as a result, implementing that through a strategic beta solution,” he says.

Changing the policy benchmark is an enormous issue, and where much of the conceptual and philosophical debate around strategic beta is taking place. “On one hand, investors want to move away from cap weighting, which is an argument to change the policy benchmark, but then it raises a number of issues,” says Ghayur. One is the performance benchmark. If the benchmark is 50 percent Russell 3000 and 50 percent Russell 3000 low volatility, and an investor implements a momentum strategy, it’s impossible to compare that to a policy benchmark which is 50 percent low volatility. “While market cap weighted indices have many problems from an investment standpoint, one major, practical advantage is that they make excellent performance benchmarks, because market prices reflect consensus expectations,” he says.

**Expected Usage Change: Various ETF Categories**

(Within the Next Three Years)

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<thead>
<tr>
<th>Strategy</th>
<th>Percentage Distribution</th>
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</tr>
<tr>
<td>Neither increase nor decrease</td>
<td>20%</td>
</tr>
<tr>
<td>Somewhat/</td>
<td>significantly decrease</td>
</tr>
</tbody>
</table>

Source: Cogent Research/Invesco PowerShares
Comprehensive, Consistent and Customizable: 
ActiveBeta Equity Strategies from Goldman Sachs Asset Management

Goldman Sachs Asset Management (GSAM) has created a comprehensive and customizable platform for implementing factor investing in a global equity portfolio. Kal Ghayur, head of GSAM’s ActiveBeta Equity Strategies team, describes what it is, how it works and what investors need to consider.

Could you describe GSAM’s ActiveBeta Equity Strategies?

Very broadly, GSAM’s ActiveBeta Equity Strategies comprise a comprehensive framework for factor-based investing. First, it covers each of the well-vetted factors—value, momentum, quality, and volatility—which have been shown to generate positive excess returns over the long term. Second, it’s consistent—we maintain a single methodology that is applied to capture different factors across market segments and geographies. Third, it’s customizable. We primarily serve investors who wish to implement factor-based investing relative to their policy benchmarks, which tend to be market-cap-weighted. Therefore, customization happens at many different levels.

How is it customizable?

The customization is possible because our solution takes a simple, building-block approach. One level of customization is to implement our strategies based on the policy benchmark of each investor, whichever benchmark that is. It could be a large cap index, small cap, international, emerging markets, or others. We have the ability to cover all of the segments of global equities and the ability to design our strategies from any benchmark that an investor specifies.

The second level of customization is tracking error. We are able to customize the tracking error that the investor wants as we implement the factor tilts relative to the chosen policy benchmark.

The third level of customization is our factor diversification framework. In a single investment, we are able to customize the mix of factors appropriate for any particular client. For example, some investors may require a combination of value and momentum. Another investor may utilize a combination of low volatility and quality to pursue a defensive strategy. Another investor may be looking at a value and quality combination. We are able to offer a high degree of customization in an effort to blend the appropriate mix of factors according to a client’s specific investment objective.

Could you describe your methodology?

From an investment process point of view, there are certain differentiating characteristics. We employ a patented methodology and investment process which is designed to provide high efficiency capture of factors in a portfolio. The concept behind it is simple. We know that certain factors have existed and persisted over time and have performed very well compared to the market. This suggests that these characteristics can be used to identify stocks that are more likely to perform better than the overall market. To isolate them, we have developed a weighting methodology that is specifically designed to improve efficiency, meaning that the information contained in a factor is transferred into portfolio weights proportionally. For example, the most attractive security on a given factor, such as momentum, gets the highest weight in the portfolio, and the least attractive gets the lowest weight in the portfolio.

What should investors consider?

Investors should be mindful of factor diversification. Factors tend to have low or negative correlations with each other, which means that they provide valuable diversification benefits. If one factor is underperforming the market, another factor is likely to be outperforming the market. For investors, factor diversification strategies tend to provide superior risk-adjusted returns because of this benefit. When implementing factor-based investing, investors should note that individual factors have historically been highly cyclical, and they may go through periods of prolonged and pronounced underperformance, which can be hard to endure. Factor diversification may make it easier for investors to stay invested over the long term.

GSAM’s ActiveBeta suite allows us to work with our investors as a partner and solutions provider. We work closely with our clients to analyze their existing portfolios and to understand what kind of exposures they have. Then, we design bespoke strategies which seek to achieve their investment objectives.

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says. Therefore, any strategy can be compared to a cap-weighted index.

Many investors are getting stuck over this issue. As a result, they acknowledge that factors work, they have existed, persisted and outperformed over time, they want to gain exposures to these factors, but they will do it in a benchmark-relative way. “Investors are saying, ‘Our policy benchmark is what it is, we like it because it has many features that we like, and now we’re going to implement factor-based investing relative to our policy benchmark,’” says Ghayur. “That’s a much easier and simpler implementation for the investor.”

Integrating strategic beta strategies into a portfolio is an active decision on behalf of the asset owner in itself. “Benchmarking and most passive core investments are still based on cap-weighted indices,” says SSGA’s Bender. Breaking away from this is a major change as it requires changing policy benchmarks. “This is a big paradigm shift, and it won’t happen quickly,” she says. It will require the asset owner to take responsibility to make a strategic bias toward a factor, a decision usually outsourced to an active manager. “If the new benchmark doesn’t perform, someone on the team will be left holding the bag, but the benefits are compelling,” she explains. It can affect the career of the institutional investor to take it on. “In the past, you’d just hire an active manager, but now, you’re putting your career on the line in making the recommendation,” she explains.

Furthermore, patience is required to harvest the returns of a strategic beta strategy. “An investor needs a one-to-three year strategic review and a gauge to the policy benchmark,” says Bender. A low-volatility factor tilt is a good illustration, as it will underperform in a bull market, but there is excellent downside protection. “It can be hard to imagine consistent underperformance through strong growth cycles, and someone has to answer to that,” she says. If, however, it’s held through a full economic cycle, it will likely prove itself. “We’ll see a lot of debate about this,” she says. Each of the factors is cyclical and they work better for long-term investors over a long time horizon.

### Blending Strategies

The key question to ask when implementing a strategic beta strategy is, ‘What am I after, and why?’ When making the bet on factors like size, volatility, value and others, the active manager no longer owns the performance—or lack thereof. The asset owner does, and there’s more attention paid to beating the benchmark. Some have called it an ‘active manager-lite solution.’ Strategic beta provides a framework and infrastructure to tailor investments in a precise way to address specific investment objectives. In the world of alternatives, there are transparent and rules-based strategies to replicate trades. Many providers create passive vehicles that pick up return premia and behavioral biases in the market. Strategic beta broadens the beta pallet, acting as different building blocks in a well-diversified portfolio. The idea is to allow the objectives of the portfolio dictate how they’re combined. The biggest single factor now is low volatility. Investors are building more efficient portfolios and there’s a need in the space to provide enhanced returns, capture risk factors and perform over multiple market cycles. “We’re moving from single to multiple factors and providing access to multiple asset classes,” says PowerShares’ Draper. “This gives the ability simply to dial up or dial down the risk.”

Most strategic beta implementations combine risks that offset each other in a business cycle or through macro regimes. “The individual factors tend not to be correlated,” says SSGA’s Bender. Many investors like the defensive combination of value along with low volatility and quality. “This provides lower beta, but there is less drawdown in sluggish or turbulent markets,” she says.
Advanced Beta Strategies in Fixed Income

By Ritirupa Samanta, Managing Director, Head of Quantitative Research & Senior Portfolio Manager, Fixed Income Cash and Currency
and
Brian Kinney, Managing Director, Global Head of Fixed Income Beta Team

Advanced beta strategies at SSGA seek to extract factor-risk premia in fixed-income markets. Despite somewhat lagging equities as a formal construct, factor investing is not new to fixed income. Investors have traditionally positioned along risks related to duration, credit or term premia. These are, however, combinations of underlying risks. The corporate credit premium for example can be viewed as a combination of default and liquidity risk to be managed and exploited separately.

We find evidence of four key factor premia (See Figures 1-4). These are quality, value, momentum and volatility. Clearly liquidity plays a central role, and we often find that factors such as size are confounded by liquidity effects. We incorporate liquidity considerations within our design. We see evidence of these premia when a risk factor is priced in the cross section of bond returns. We sort the investment grade universe into decile portfolios ranked by each risk factor. We can see from the downward slope in returns for volatility or quality, that this factor is related to higher returns in the top relative to bottom portfolio. We also find that size, for example, or momentum has much more mixed evidence of a related premium.

While empirically interesting, advanced beta strategies have to be investible and conceptually clear in their source of return. We have designed strategies to harvest the quality, risk premium in corporate and sovereign credit space. We create portfolios of corporate or sovereign bonds that are mispriced relative to the quality/value implied by the state of firm or country fundamentals.

Corporate and Sovereign Quality

While credit has always been organized along the concept of quality, until recently ratings were the only measure available to investors. These tend to be discrete and lag actual credit events. At SSGA, we use a measure that continuously evaluates a bond’s quality as a function of its default risk and firm fundamentals. We find evidence that this ‘quality premium’ is larger as we extend further into the capital structure among BBBs and further into high yield. SSGA currently manages assets in a quality corporate strategy that tilts an A and above benchmark toward names that exhibit quality premium, and we are extending this methodology to tilt toward the higher quality names in barbelled type portfolios throughout the corporate credit universe.

Sovereign credit risk is very familiar to investors, and traditional market, cap-weighted indices are heavily concentrated in highly indebted nations. Clearly the degree of sovereign risk is tied to fundamentals, but countries can also sustain poor fundamentals for a long time until a loss of confidence triggers a crisis event. Our methodology relies on identifying long- to medium-term trends in macro conditions and rewarding or penalizing markets accordingly. During normal times investors are compensated for taking a measure of sovereign risk, and during extreme times, we use measures of market sentiment to position aggressively against countries with a loss of market confidence. The strategy operates on top of traditional market cap indices, and we have found steady compensation for sovereign risk through the Eurozone crisis, and consistently in emerging markets.

Conclusions

The advanced-beta field continues to develop rapidly in fixed income. At SSGA, we have made strong strides in developing quality/value based, factor-harvesting strategies both in corporate and sovereign credit. As we advance this work, we are extending to the full suite of premia and more broadly and deeply within credit and across markets.

**Figure 1 & 2: Volatility (LHS) and Momentum (RHS) sorted portfolios**

**Figure 3 & 4: Size (LHS) and Quality/Value (RHS) sorted portfolios**

Source: SSgA, FICC Quantitative Research as of December 2014. Past performance is not a guarantee of future results. The above charts are for illustrative purposes only.

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For more information on State Street Global Advisors Advanced Beta capability or to read this paper in its entirety, please visit ssga.com
"Strategic beta says, ‘Forget the benchmark, let’s start with a clean slate.’"

says. Adding value brings in a price dimension, and it will improve performance to stay away from factors that are near the highs of their cycles. With yields still low in fixed income, some investors combine yield and value. Momentum has been a good diversifier to value, because of low correlation, as well. “There are periods when they will all underperform,” she says. Diversifying is not a guarantee, but it can ameliorate the issue.

“The fundamental objective is to pair compensated risks for their attractive correlation properties,” says Northern Trust’s Peron. For example, quality and value have a low or slightly negative correlation, and combining them optimally and using optimization techniques can improve risk-return ratios. “We optimize the intersection of those two factors to improve risk-adjusted returns.” In general, he recommends combining quality with value, dividend and low volatility. “Quality pairs with each of them very well,” he notes.

The foundation of strategic beta lies in researching and indexing. The investment industry for years has focused on constructing benchmark indices in a better way. “Strategic beta says, ‘Forget the benchmark, let’s start with a clean slate,’” says J.P. Morgan’s Eisenberg, who blends four risk factors—value, size, momentum and low volatility—in a single strategy. One single factor can be extremely volatile, and they’re combined based on risk parity, with an inverse relationship to relative volatility among them, for a single way to have access to the global market. “From a risk perspective it gives equal exposure to factors, and we make sure we’re not building any country or sector biases,” he explains.

“We divide the world into region and sector buckets with no risk concentrated in any one of them.” The result is relatively small positions in a few hundred individual equities. “It’s a risk-parity view of the world,” he says, “and an extremely diversified portfolio.”

What to Be Thinking About
There is a strong theoretical case for strategic beta, and philosophically, it’s a strategy that leans into winners and provides a certain return profile, as custom indices impound investment style preferences into beta returns. However, investors need to ask themselves two questions before adopting this strategy. First, “What is the investment objective?” Investors need to be clear about goals, strategy, and time horizon. Second, “Can we live with it?” Adopting a strategic beta strategy represents taking a clear view on what will drive returns. Will deviation, the potential for sustained drawdowns and periods of underperformance be a problem? If it’s not understood, it’s neither smart nor strategic.

One issue that concerns investors is concentration risk. If a risk factor gets too crowded, the premium goes away. This happened in 2007 when there was a correction in value stocks while Bear Stearns was trying to unwind many of its trades. “At least with advanced beta, there is more transparency, and investors can generally know which factors flows are going into,” says Bender. “It’s a real issue and anyone investing in strategic beta strategies should be thinking about it.” However, the crowding is unlikely in this market right now. Concentration can also affect liquidity. For example, it’s possible that a small number of securities are at the intersection of combined factors. “A well-designed strategic beta portfolio will have max holding caps and liquidity restraints around these positions,” she says.

Another hurdle that investors tend to see the world through market cap-weighted benchmarks. “Investors are very much wedded to market cap,” says J.P. Morgan’s Eisenberg. “They may ask for a strategic beta exposure, but in the back of their minds they will always compare it to market cap.” Strategic beta works differently and it can’t be compared to traditional benchmarks on a year-on-year basis, but it can over a full economic cycle. Strategic beta isn’t built to outperform per se, but to provide better risk-adjusted returns. “The point of a market-cap index fund is to hold more expensive stocks in a momentum market,” he says. A strategic beta strategy rebalances regularly to reweight. “It’s part of the index construction,” he says.

Investors also have to know how to size allocations. “Some might tiptoe in and allocate three percent of their portfolio, but it doesn’t move the needle,” says Northern Trust’s Peron. There are moves that investors have to make to drive the outcomes. “First, they have to understand the exposures, and second, they have to make an allocation to change the direction of their investments,” he says. “Twenty percent is where it starts to have an impact.”

“We want to get these strategies in the right hands,” says SSGA’s Bender. A smart beta strategy is simple: it just tracks an index. However, it represents a huge shift of ownership over performance, which has been a major challenge to the space. Investors need to be in it for the really long term, have strong investment beliefs and with good governance structures in place.
There are equity risks. And there are the right equity risks.

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