The Asset Manager’s Dilemma: How Smart Beta Is Disrupting the Investment Management Industry

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Smart beta products are a disruptive financial innovation with the potential to significantly affect the business of traditional active management. They provide an important component of active management via simple, transparent, rules-based portfolios delivered at lower fees. They clarify that what investors need from their active managers is pure alpha—returns beyond those from static exposures to smart beta factors. To effectively position themselves for this evolution in active management, asset managers need to understand the mix of smart beta and pure alpha in their products, as well as their comparative advantages relative to competitors in delivering these important components.

Smart beta is currently a hot topic among investors. Numerous articles on the topic have appeared in popular magazines as well as academic forums. Many investment seminars now include sessions on smart beta. About $330 billion is invested in smart beta products; Towers Watson clients have doubled their allocation to smart beta over the past year.1

Are smart beta strategies new? Are they just the latest fad in investment management? Or are they an innovation poised to significantly affect traditional investment management? According to one commentator, “Smart beta, done right, is a fund manager’s worst enemy.”2 And only somewhat less ominously, an Economist article describes how the investment industry is being squeezed by both index funds and smart beta, predicting that only hedge funds and private equity will remain beyond the reach of those two categories.3

Innovation

In Clayton Christensen’s (1997) influential book The Innovator’s Dilemma, he describes three types of innovation: revolutionary, sustaining, and disruptive. Revolutionary innovations are rare and result in products so improved that they simply replace the prior products, as the automobile replaced the horse and buggy. Sustaining innovations are common and improve existing products incrementally, often in response to client demands. A new version of Microsoft Word is a sustaining innovation. Disruptive innovations are somewhat rare and create new markets. They are responses not to client demands but, rather, to client needs, whether expressed or not. We believe that smart beta is a disruptive innovation with the potential to significantly affect the market for investment products, particularly traditional active products.

The ultimate goal of disruptive innovation in investment management is to deliver superior investment outcomes and meet investors’ needs (as opposed to requests). In the case of smart beta, the investment outcome is higher returns and/or lower risk after fees and costs. The innovation is motivated by a vision of how clients ought to invest—even when they do not realize a change is needed. So, investors sometimes adopt these disruptive innovations only slowly. Disruptive innovations often do not come from focus groups or client interviews, because clients are not asking for these types of innovations (e.g., no one was demanding personal computers when they first came out). Rather, they result from understanding current practice and having a vision of how to advance that practice. For example, when indexing strategies were first developed, no client demand existed.5 In fact, most of the disruptive innovations in asset management have arisen despite seemingly little, if any, appetite for them in the marketplace—in certain cases, in spite of explicit opposition to them.
Smart Beta

Smart beta strategies are active strategies with some of the characteristics of passive strategies. They use simple, rules-based, transparent approaches to building portfolios that deliver fairly static exposures (relative to capitalization-weighted benchmarks) to characteristics historically associated with excess risk-adjusted returns. They are active strategies because they require periodic rebalancing in order to maintain the desired exposures, and like any active strategy, they can underperform their cap-weighted benchmark.

Smart beta strategies are not especially new. We can trace them conceptually to a 1976 paper on arbitrage pricing theory by Stephen Ross, who postulated return premiums associated with various risk factors. Since then, researchers have documented positive risk-adjusted returns associated with factors beyond risk, including behavioral anomalies and structural impediments. The factors associated with these returns tend to be well known to investors. For example, in equities, the proposed factors include value, momentum, size, quality, and low volatility. Of course, investors do not necessarily agree on how to define these factors, and different definitions and different products can exhibit dispersion of performance. What is new about smart beta is not the underlying ideas. It is the simple and transparent packaging—carving out and lowering the cost of one significant component of active management.

In an earlier paper, we decomposed the expected return of any investment product into three components:

- The return to a cap-weighted index benchmark
- The active return from the product’s static exposures to smart beta factors
- The active return above and beyond static exposures to smart beta factors (sources here can include bottom-up security selection, top-down macroviews, and the timing of smart beta factors; we refer to this third component as pure alpha)

This decomposition of returns is also a decomposition of fees, which are low for cap-weighted index funds, intermediate for smart beta, and high for active strategies.

Smart Beta as a Disruptive Innovation

Smart beta strategies are a disruptive innovation with the potential to significantly affect the investment management industry, particularly traditional active management. The reason for this potential is that many traditional active managers deliver a significant fraction of their active returns via static exposures to smart beta factors while charging active fees.

To illustrate the scope for disruption, we examined a sample of 79 global equity managers from the eVestment database. The managers we selected were benchmarked to either the MSCI World Index or the MSCI ACWI, reported fee data for a $50 million investment, and had a minimum of 36 monthly returns over the five years of January 2010–December 2014.

Using the active returns for each fund, we estimated time-series regressions on six smart beta factors computed from the Barra Global Equity Model (GEM3)—namely, the market, small size, value, quality, momentum, and low volatility. The $R^2$ from these regressions is a measure of the fraction of managers’ active return variance that can be explained by smart beta factors. As can be seen in the histogram in Figure 1, there is a large distribution in the $R^2$ across managers. For the average manager, static exposures to these smart beta factors explain about 33% of the active variance (i.e., the $R^2$ statistic from these time-series regressions averages 33%); for 24 of the 79 managers (i.e., 30% of the managers), smart beta factors explain more than 40% of the active variance. So, active managers vary quite significantly in how much smart beta they deliver.

Although this analysis of specific funds over a particular period is hardly comprehensive, it clearly indicates that smart beta exposures are already a significant part of active management. What this finding means for investors in active products depends on how much smart beta they receive relative to the fees they pay. To explore this finding, we examined the relationship between the fees reported by these managers and the fraction of active risk that can be explained by smart beta factors. The median manager in our database charged a fee of 65 bps. We assumed that this amount was representative of the fees charged by active managers for alpha. In contrast, smart beta is now available at lower cost. Consider, for example, the two global equity multifactor smart beta exchange-traded funds (ETFs) currently trading in the United States. The iShares Enhanced International Large-Cap ETF (IEIL) has an expense ratio of 35 bps, and the iShares FactorSelect MSCI Global ETF (ACWF) has an expense ratio of 49 bps—implying an average expense of about 42 bps for pure smart beta exposures.

We do not wish to overemphasize this simplistic analysis of smart beta fees. The key point is that smart beta fees are significantly lower than active management fees. Successfully delivering pure alpha requires research capabilities and insights into a sometimes rapidly changing world. This component of active management should be—and is—more expensive than smart beta.
So, if an active global equity product delivers 100% pure alpha ($R^2 = 0$), its fee should be about 65 bps. If it delivers 100% smart beta ($R^2 = 1$), its fee should be about 42 bps. For simplicity, we modeled predicted fees as a linear function of these $R^2$ statistics. Figure 2 shows the predicted and actual fees for these products. The highlighted funds are roughly those that, in our opinion, are most likely to be disrupted by smart beta. These funds deliver a large portion of their active risk to investors in the form of static smart beta exposure while maintaining active fees. Interestingly, the funds near the far right-hand side, with a very high fraction of smart beta risk, appear to have fees more in line with their factor exposures. A closer examination of this set of funds shows that they are dominated by low-volatility and defensive funds (i.e., they are smart beta funds).

In this analysis—showing that smart beta is already an important part of active management and that some funds that deliver mainly smart beta may be significantly overpriced—we focused on equities. And in fact, most smart beta products today are equity smart beta products. But we expect to see more fixed-income and multi-asset smart beta products in the future, and they will have as much potential to disrupt those asset classes as what we now see in equities.

We have discussed several reasons—including reducing costs and sourcing valuable return components—why investors who use traditional active managers should shift partly to smart beta and partly to pure alpha managers who deliver returns beyond static exposures to factors.

But how do we know that smart beta will not go the way of 130/30 strategies or portable alpha or other occasionally popular innovations in investing? We argue that smart beta is different from past innovations that typically encouraged investors to drop long-held constraints (e.g., on short selling) only to confront risks those constraints had protected against. Smart beta products take ideas already in use—albeit as components of their existing active strategies—and deliver them more cheaply and transparently. The innovation is about cost and packaging, not about doing something investors have never done before. Nevertheless, in spite of these motivating reasons, this disruptive transition may happen slowly or stall entirely, owing to at least three challenges.

First, there is at least some anecdotal evidence that investors may hear more about the benefits of smart beta than about the risks. Smart beta factors have delivered positive risk-adjusted returns over time on average, but they have underperformed over various three- to five-year periods. There is a danger that negative smart beta investment performance will impede the evolution from traditional active to smart beta and pure alpha, especially if we enter a period of significant underperformance of many smart beta factors just as investor interest increases (Gennaioli, Shleifer, and Vishny 2012). Even without significant underperformance, we could see a wide dispersion of returns for different definitions of smart beta (e.g., book-to-price versus earnings-to-price for value). This result could dampen enthusiasm among investors who do not understand that smart beta factors are not uniquely defined.
This issue is further magnified because smart beta products change the division of responsibility between investor and manager. An investor can fire an active manager who underperforms the cap-weighted benchmark over time. The investor is responsible for hiring the manager, and the manager is responsible for outperforming the benchmark. But an investor should not fire a smart beta manager who delivers the promised exposures if those exposures lead to underperformance. The investor, not the manager, is responsible for the choice of those exposures.\textsuperscript{14}

Second, and partly driven by the change in the division of responsibility between investor and manager, the schism of traditional active management into two distinct product types will require a significant effort to educate investors. A large and growing body of academic and practitioner research on the various smart beta factors can help guide investors. This literature provides information on the various hypotheses underlying the drivers of smart beta factor returns and documents factor performance across time, geography, and asset classes.

Nevertheless, investors need additional knowledge to navigate this vast amount of information, and they need the technology to analyze their existing portfolio exposures and to build optimal combinations of index, smart beta, and active products.\textsuperscript{15} To the extent that most investors are not asking for this knowledge and technology, the education effort will require evangelism, not just technical papers. Of course, the current high level of discussion of this topic means that it is resonating with investors. So, education has already had an impact.

Third, the asset management business is fragmented and is represented by a multiplicity of voices. The evangelists for smart beta have some views in common but differ in many ways, including which factors are most appealing and how to build portfolios. The proliferation of smart beta products and indexes has confused investors, even if many of those products share similar smart beta exposures. And some traditional active managers will oppose this transformation out of self-interest.

**Conclusion**

We have argued that smart beta products—by carving out a significant component of active management and offering it more cheaply and more transparently—will disrupt the business of active management. In particular, we believe that active management will evolve into two separate product types: smart beta products with lower fees and pure alpha products with higher fees.

Because smart beta products are about delivering exposures at low cost, there should be advantages to scale. For pure alpha products, there should
be advantages for managers with strong research capabilities and perhaps the portfolio-engineering skills to keep smart beta exposures low. Although some managers could offer both types of products, in general their keys to success are different. Thus, focusing on one product or the other should work better than trying to do both.

Some active managers already deliver mainly pure alpha. They are aligned for this evolution, though they may not yet understand the significance of smart beta products for their business. Smart beta managers are also aligned for this evolution, but there will be some bumps along the way, as we noted when discussing why the transition might happen slowly or even stall.

Most active managers deliver some combination of smart beta and pure alpha, possibly at fee levels inconsistent with their particular mix. These managers face dilemmas, depending on their mix versus their fees.

Consider the managers who deliver a mix of smart beta and pure alpha at fees roughly consistent with that mix. Although they could try to convince their clients that these products are fairly priced and worthy of consideration, they face the challenge of trying to do two different things well: They must compete with pure alpha managers on pure alpha and with smart beta managers on smart beta. By trying to do both, they will be at a disadvantage for both product types relative to the focused competition.

For these managers, the dilemma is to choose whether to go with smart beta or pure alpha. They can, of course, work to protect their current franchise and impede this transformation of traditional active management, but that course is risky if the transformation is inevitable, especially if it happens quickly (e.g., over the next three years). These managers should analyze their relative strengths and move toward offering either smart beta or pure alpha with appropriate fees.

The managers who offer a mix of smart beta and pure alpha at fees too high for the mix face more than a dilemma: They face extinction. As we can see in Figure 2, these are the managers who offer smart beta at active fees. It is only a matter of time before clients understand this situation. These managers need to understand that they are competing with smart beta providers who can deliver the same returns more cheaply and transparently. Their long-term survival will require them to lower fees and increase transparency.

Finally, here is a prescription for all active managers: You need to analyze the mix of smart beta and pure alpha in your products as well as the consistency of that mix with your product fees. You must also understand your comparative advantages in offering smart beta or pure alpha relative to competitors. Only after doing all that can you effectively position yourself for this evolution in active management.

### Appendix A. Example of Multimanager Factor Risk

To understand why smart beta exposures increase in multimanager portfolios, consider an investor who hires four fundamental value managers, each with active risk of 5%, whereby the managers obtain 3% of their active risk from constant exposure to a value factor and 4% from stock-specific risk (which is uncorrelated across managers). So, the active risk for each manager is 5%, because $(5\%)^2 = (3\%)^2 + (4\%)^2$. At the manager level, 36% of the active variance comes from the value factor and 64% comes from stock-specific variance, because $36\% = (3\%)^2/(5\%)^2$ and $64\% = (4\%)^2/(5\%)^2$.

If the investor allocates an equal dollar amount to each manager, the resulting aggregate portfolio will have a tracking error of only 3.6%, consisting of 3% risk from exposure to the value factor (risk that does not diversify across managers) and only 2% stock-specific risk (which does diversify across managers, and $4\%/\sqrt{4} = 2\%$). So, $(3.6\%)^2 = (3\%)^2 + (2\%)^2$. At the aggregate level, 69% of the active variance comes from the value factor, and only 31% comes from stock-specific variance. In other words, although individual managers provide mainly stock-specific risk, in aggregate they provide mainly factor risk.

### Notes

5. See, for example, Ancel (2012).
6. Many of these ideas have played a role in quantitative active equity products since at least the 1980s. The early products, however, were neither simple nor rules based, and they evolved over time, adding new ideas and dropping old ones. Except possibly in the 2005–07 period, prior to the financial crisis, they did not attract a significant fraction of investment assets.
7. For an overview of factor-based investing, including evidence for the historical outperformance of these factors, see, for example, Ang (2014).
8. For example, should we define value on the basis of book-to-price, earnings-to-price, or some combination? The returns will vary with our choice.


10. Specifically, the market factor is the world factor from Barra, small size is \(-1\) times the Barra size factor, value is an equal-weighted combination of the Barra book-to-price and earnings yield factors, quality is an equal-weighted average of the Barra growth factor and \(-1\) times the Barra leverage factor, momentum is the Barra momentum factor, and low volatility is \(-1\) times the Barra residual volatility factor.

11. This situation generally becomes more pronounced when an investor hires several managers, each of whom derives some of his returns from exposure to smart beta factors. Even if each manager takes mainly stock-specific risk, the aggregate portfolio can have a much higher fraction of active risk in smart beta factors. See Appendix A for a concise mathematical treatment of this issue.

12. If we mix a 100% smart beta product with a 100% pure alpha product and both products have active risk \(\alpha^*\), the predicted fees should decrease monotonically with \(R^2\) and are close to linear except when we approach very close to \(R^2 = 0\) and \(R^2 = 1\).

13. At an Aon Hewitt/Cass Business School conference in London on 20 March 2014, a poll of the approximately 65 attendees (mainly pension fund trustees) revealed that although all were interested in smart beta, 57% said they could tolerate only less than 10% underperformance over any three-year period. But the historical tests of many smart beta factors violate this condition.

14. Perhaps the investor could hold the manager responsible for a particular choice of smart beta factor if it underperformed relative to other choices, even though the investor knew about that choice \textit{ex ante}.

15. For example, a June 2015 search on Google Scholar for the term “momentum investing” showed over 11,000 hits since 2013.

References


Conway, Brendan. 2014. “Smart Beta, Done Right, Is a Fund Manager’s Worst Enemy.” Focus on Funds (blog), Barron’s (20 May).


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