REIMAGINING ACTIVE

VALUE BEYOND ALPHA
Strategic Partnerships for Better Outcomes

TIME FOR ACTIVE VALUE INVESTING
Opportunities in High Dispersion

GETTING ACTIVE WITH ESG
Creating Change with Capital
As increased dispersion and lower correlations create greater opportunities for active managers, we look at new ways to get active, add value and provide outperformance across multiple dimensions of the investment lifecycle to target better outcomes.
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Amid last year’s headlines about continued investor flows out of active strategies into passive, we argued that this neither spelled the end of active management nor did it pave a “silent road to serfdom” for investors.¹

For us, the question has never been active versus passive. Instead, the new investment reality we have described underscores that in a muted return environment, investors will need thoughtful combinations of both active and passive exposures to achieve their long-term investment objectives.² We also pointed out that despite recent flow activity, actively managed assets still dwarf passive at more than three-quarters of global assets under management (Figure 1). In fact, the greater the flow of assets into passive strategies, the likelier that price distortions will arise for active managers to exploit, inviting investors back into active management. Moreover, as we move toward a rising rate environment and begin to see both a greater dispersion in equity market returns as well as a multiyear low in asset class correlations (Figure 2), we find we might finally be moving toward market conditions that provide more potential for active managers to outperform.

In our view, reports of active management’s premature death have always been greatly exaggerated. At the same time, however, we recognize that we are at an important inflection point in the investment management industry. First, the world is changing for active management because of a more effective use of systematic analysis and factor-based investment approaches. Second, specific security selection is becoming more technology-driven as a result of big data, with consequences that are still unfolding before us. Both of these developments are encroaching upon territory previously occupied solely by traditional active managers and raising the bar on them to show their comparative advantage. We think this is a positive development for end investors. They will benefit from a more capital-efficient exploitation of both systematic sources of returns as well as those available only from more idiosyncratic research and techniques.
Getting Active Takes Multiple Forms

As the world of active management evolves, so, too, is the idea of active investing. There is a growing appreciation of the different ways that investors can reimagine getting active with their investments beyond traditional notions of alpha. In this issue of the IQ we explore how managers can help investors get active, add value and provide outperformance across multiple dimensions of the investment lifecycle, including less obvious areas like trading.

First we look at new models of engagement developing between asset owners and asset managers in the shift from single-strategy investment mandates to more holistic and more complex outcome-oriented multi-asset class solutions. A recent report from Greenwich Associates argues that the successful managers of the future will be the ones who are able to forge deep, long-term strategic partnerships with asset owners. They will add value beyond performance alone in the form of actionable research, capital market insights, risk management frameworks, product innovations and capital-efficient solutions to complex challenges. In a roundtable discussion on the new client alpha, our senior investment leaders speak to the lead author of the Greenwich report as well as the Chief Investment Officer of one of Australia’s largest superannuation retirement funds to consider how the relationship between asset owners and asset managers is evolving.

Figure 1
Global AUM in trillions ($)

ACTIVE VS. PASSIVE

Asset Allocation Alpha

The move toward multi-asset class portfolio solutions puts asset allocation expertise front and center. To deliver on an investment objective, there will need to be a level of transparency across the entire portfolio and an understanding of the underlying risk exposures and their correlations over time. Getting the strategic allocation right up front will always be an important driver of long-term returns. But in a muted return environment, active asset allocation is becoming another approach for adding incremental return or managing portfolio volatility in a way that might be less correlated to other active strategies in the portfolio.

With a growing focus on fees, asset allocators can also create more efficient portfolios by helping investors analyze and refine their active manager lineup or reconfigure beta exposures through factor-based approaches. In this issue, our Investment Solutions Group (ISG) describes how they have helped a large US public fund replace its core fixed income allocation with a multi-factor solution that provides balanced risk exposures across fixed income sectors in a highly fee-efficient way.

In this new rising rate market environment, we also look at the changing complexion of value investing and the growing sector and regional dispersions that are providing the potential for active value managers to outperform. Our team discusses why they believe value investing has turned a corner and will continue to build on a more supportive backdrop in 2017.

Finally, we showcase the growing interest investors have in getting active with their views about environmental, social and governance (ESG) issues that can impact value. Our head of Equity Beta Research discusses how investors can express their views on ESG issues in their portfolios without diluting or duplicating their exposure to desired factor premia to target more durable and sustainable performance. Although as an industry we are still in the early stages of fully integrating ESG into investment management as we look to more research and data, we believe that ESG issues will become an increasingly important part of investment analysis. As the potential impact of these issues on long-term returns is compelling, we have made ESG a centerpiece of our active stewardship program as one of the largest index managers in the world, and describe how we engage with companies in our index strategies to help them focus on generating sustainable returns.

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CLIENT ALPHA THE NEW STRATEGIC ADVISORY MODEL
Investors have faced a daunting investment environment for the last decade, marked by sluggish growth, low interest rates and policy uncertainty. However, even as we pivot away from a lower-for-longer interest rate regime, institutional investors will still require more complex, scalable solutions to achieve their long-term investment objectives. The shift toward outcome-oriented, multi-asset class solutions rather than relative-performance objectives alone is not only changing how investors view the value drivers in their portfolios, it is also changing the nature of the relationship between asset owners and asset managers. The challenge for a growing number of institutions in a resource-constrained world is “doing more with less”: finding ways to improve upon muted market returns, extracting more value from the fees they pay, and supplementing limited internal investment resources with fresh thinking and actionable perspectives from their asset managers. SSGA’s Deputy Global CIO Lori Heinel and Investment Solutions Group CIO Dan Farley recently discussed the evolution of investor needs and how that is transforming investment solutions and engagement models with Ian Patrick, CIO of Sunsuper, one of Australia’s largest superannuation pension plans, and Andrew McCollum, head of Greenwich Associates’ North American investment management practice and the lead author of a new report on the future of active management.1
How are investors’ needs pushing the boundaries of what it means to be active?

HEINEL We think investors tied to conventional, passive market-cap-weighted benchmarks are unlikely to be well served in the future. This is partly because of a low return environment that necessitates more innovative and varied ways of generating incremental return to build upon what we expect to be suboptimal beta returns. But it is also because when you start from an investor’s objective, whether it’s income, growth, protection, or something else, those goals might not align with conventional beta exposures. Getting active increasingly means moving away from those traditional approaches to create a very different risk and return profile for your portfolio.

For example, most clients understand they will continue to need meaningful exposures to equities to achieve their long-term objectives, but they want to dampen the volatility that comes with that, especially during this current shift to a new macro regime. That can lead to a discussion around defensive equities or other managed volatility approaches that will give them the return profile they want, but provide stronger drawdown protection. Similarly with income objectives, solutions might involve a diversified allocation to fixed income sectors, but it could also include dividend-paying equities, again creating a different risk/return profile for the overall portfolio.

The idea of new alpha sources is also evolving. In addition to outperforming a benchmark through a factor-based approach or true, skill-based alpha, adding tactical or dynamic asset allocation overlays might be an effective way to achieve an uncorrelated source of return, or better manage risk, especially for large investors who might find it difficult to scale their active manager program for a large pool of assets. Finally, getting active is increasingly covering new avenues of risk and return objectives, such as aligning investment programs with views on environmental, social and governance issues (ESG). We know we are still in the early stages as an industry, but that is an increasingly important focus for our clients.

Getting active is increasingly covering new avenues of risk and return objectives, such as aligning investment programs with views on environmental, social and governance issues.

LORI HEINEL
What did the Greenwich study uncover about the future of active management, and what are institutional investors looking for from their managers?

"When we ask institutional investors what is keeping them up at night, they don’t mention an underperforming US equity manager. Instead, they are focused on holistic, portfolio-wide issues around funding levels or volatility in the marketplace. They want performance plus advice."

ANDREW MCCOLLUM

MCCOLLUM Although investors’ increased appetite for passive investments appears to be secular rather than cyclical, we are optimistic about the future of active management for the same reasons Lori mentioned: Investors will need uncorrelated sources of alpha to achieve their goals. However, client needs are shifting and moving beyond alpha. In short, they want better outcomes, and are showing an elevated demand for advice and counseling even as much of the asset management industry is still focused on delivering relative performance across a limited set of traditional products.

When we ask institutional investors what is keeping them up at night, they don’t mention an underperforming US equity manager. Instead, they are focused on holistic, portfolio-wide issues around funding levels or volatility in the marketplace. They want performance plus advice. We see two main opportunities for active managers: 1) partnering with clients in areas with high levels of complexity and in which they have unique insight or the capabilities to exploit information asymmetry and 2) providing solutions to clients’ complex challenges and adding value in cost-efficient ways. Large institutions around the world tell us they want managers to add value beyond alpha. Performance will always remain important, but it becomes less important to the overall health of the relationship in these longer-term, solutions-oriented partnerships.

How have Sunsuper’s needs and relationships with asset managers evolved?

PATRICK In Australia, the asset pools were initially small, so hiring a small number of adequately performing active managers in major asset classes was the goal. Now 20 years on, asset pools are large and continuing to grow, and we have much stronger internal expertise and governance. In my view, active management has been able to evolve along with that in a good way to deploy a greater array of strategies and instruments. Now there is a lot of focus on the ability of the manager to supplement the delivery of alpha with other services, such as better insights into markets, new perspectives and research, and access to alternative points of view. I think of asset managers as curators of capabilities and insights in the interests of large asset owner partners. I see strategic partnerships as a bit like a life partner. They will be able to fulfill your core set of needs. But those core partners will always be supplemented by a range of other managers who provide differentiated expertise.
What is driving the shift toward solutions, and how is that changing the relationships between asset owners and asset managers?

FARLEY As institutional investors face a low return and resource-constrained world, they want asset managers to move beyond just providing a return stream and become actively engaged with idea generation, portfolio construction, and solving problems. They want to get a better understanding of the risk make-up of their portfolios and how their different active managers are working together.

Getting the long-term positioning right for the portfolio is important, but we have found that an ability to be active in asset allocation is a real benefit, especially since those drivers might be different from what drives active stock or bond picking. So you might have a lower correlation of alpha between asset allocation calls and what you might get from an additional manager. Active asset allocation can be both an alpha generator and a risk mitigator. The ability to move quickly from risk-on to risk-off across the portfolio is a key part of that active asset allocation call.

For really large asset owners, our conversations are less around whether they should be active and more around where they should be active. We essentially say: maybe it's time to stop looking for that 59th active developed, large-cap manager and start to think about your active exposures from a factor perspective. You can use Smart Beta to get a lot of that factor exposure, and add some incremental active on top of that for a much more capital-efficient portfolio.

More importantly, for those who are truly long-term providers of capital, we advise them to look for market dislocations and be nimble enough to exploit them opportunistically. For example, European real estate after the financial crisis or moving back into high yield at the appropriate time: leveraging those opportunities in a timely way can have a meaningful impact on the portfolio. You need to establish those active risk parameters up front by building that flexibility into the governance structure.

HEINEL As a manager, you need to do a lot more discovery and really dig into what the investor is trying to accomplish across a variety of dimensions, and rank order what's most important. Previously it might have been good enough to understand the risk and return objective from a fairly simple view of how much volatility the client could tolerate and how much return they needed to achieve their target.

Increasingly, the context matters. If you think about what a portfolio drawdown means for a DB plan's funded status or additional sponsor contributions, then volatility matters in a very different way. For pension plans, the funded status is not a function of the assets but of the interaction between assets and liabilities that can move in tandem or in opposite directions. That deeper understanding is important. Finally, it's even more critical than before to look at the total portfolio to understand what the aggregated risk and return profile looks like.

FARLEY That's right, Lori. I would also say that sharing our intellectual capital is a priority for us, and something our clients increasingly look for. We are proactive in publishing case studies of solutions we've developed for clients that might resonate with other investors or introduce new ideas that come through our research projects for clients. It also involves the quality of conversations we have with clients, understanding their issues, sharing our perspectives and understanding that most often one size does not fit all, even if our past engagements help inform the kinds of ideas we bring to clients.

We are seeing a huge demand for that kind of engagement: five years ago we did an average of about 50 research projects for clients a year; now it's more than triple that, covering everything from their active manager program, when and where to go active or passive, how to establish the right governance structures, risk analytics, etc.
We work with some of the most sophisticated institutional investors in the world, so that every engagement with clients, regardless of their size or region, is informed by everything we’ve learned in previous interactions. What could be a good answer for an insurance company in the US might be appropriate for retirement planning in Australia or a good feature to add to a target-date strategy in the UK. Our ability to create solutions based on a deep understanding of investors’ needs and export that around the world has been very powerful.

HEINEL These long-term relationships with clients also help us recognize what their important trigger points are, whether it’s a back-up in US interest rates or some other market move. For example, we’ve seen an improvement in the funded status of US pension plans because of strong market performance and a rise in the AA corporate rate, so knowing at what point a client wants to immunize their liabilities or begin to de-risk their portfolio helps us act as an honest broker and reflect on those decisions with them when those milestones are reached.

MCCOLLUM Our experience shows that these partnerships tend to work best with firms that have broad investment capabilities and are culturally client-centric. Our advice to managers is listen first and talk second, as opposed to being very product-centric. Every asset owner will have different needs: Some will want a customized solution, others will simply be looking for a fresh perspective on a particular capability from someone they trust and has who credibility.

It’s also important to mention how this shift will change the role of the distribution professional in asset management. The sales professional will need to be more technical and analytical, so we see the need to upskill the client-facing teams and switch out people who are unable to have those kinds of deep client conversations with people who are.

PATRICK I think there will be more partnerships than there are today, because we’re still in the transformation from a product-driven, selling approach to an open architecture, solution-engineering approach in terms of how asset owners interact with asset managers. I expect that will reach a new level of maturity but some organizations won’t have the values or the behaviors or the breadth of capabilities. To build partnerships, I think there has to be a mutual curiosity and a very strong foundation of trust as well as a tendency towards collaborative candor and a longer-term mindset.

Those are generally hard things to build and sustain, and they have to be well nurtured through time. There’s a reason everybody says “culture eats strategy for breakfast.” Those really productive partnerships will be about the cultures aligning or becoming sufficiently compatible to endure through the long term. Otherwise the partnership won’t work. It will be a transaction that will come under stress at some point and it will fail. I think there will also be a core group of very good specialist asset managers who will want to remain small and won’t be the type of strategic partner we have in SSGA.

To build partnerships, I think there has to be a mutual curiosity and a very strong foundation of trust as well as a tendency towards collaborative candor and a longer-term mindset.

IAN PATRICK
ASSET ALLOCATION TAKES CENTER STAGE

GEOFF KELLEY, CFA
Global Head of Research
Investment Solutions Group

RIC THOMAS, CFA
Global Head of Strategy and Research
Investment Solutions Group
The shift away from products to an objectives-based multi-asset solution reinforces the need for deep asset allocation expertise. In many ways asset allocation has become the new model of active management, where understanding the drivers of risk across asset class exposures can help investors build more resilient portfolios and incremental return. Applying a factor lens to portfolios can also help investors reduce risk in more comprehensive, dynamic and capital-efficient ways.

A recent engagement with a large public pension fund reconsidering its fixed income program illustrates how important factor know-how and asset allocation expertise have become.

Despite the well-known shortcomings of today’s fixed income indices, most institutional investors continue to search for active fixed income managers benchmarked against the Bloomberg Barclays Aggregate Bond Index (the Agg) or the Global Aggregate Bond Index (the Global Agg). That search process typically involves an RFP, followed by on-site visits from managers, walking through investment philosophy, process and performance, hoping to convince the investor that their particular product is best poised to beat the index.

But this raises the question whether an investor should invest in the conventional investment-grade fixed income benchmarks to begin with. Given the current level of rates, the prospective yield on investment-grade bonds will not cover even the expenses of most public pension plans. With the duration of these conventional investment-grade indices at an all-time high and rates potentially on the rise, public funds prefer a more balanced solution that embraces credit risk in an equal proportion to interest rate risk.

This is the point at which a manager with a deeper understanding of factor-based asset allocation options can play a more consultative role with clients to examine other potential paths that will lead to a better outcome. This approach requires flexibility and customization, which can be a costly business model for some asset managers, but we believe this is the future of active management.

The point of departure for the engagement with the public fund client was a recognition that the global fixed income markets have changed noticeably over the past 10–15 years, making the index less attractive to investors. Figure 1 shows that the duration of major fixed income indices has extended significantly. In addition, heavy Treasury issuance since the global financial crisis has boosted the Treasury weight at the expense of agency and mortgage debt. So, just when rates have hit a secular low, the interest rate risk has hit a secular high.

But there is a way to construct a better fixed income allocation by recombining components of fixed income subsectors that track well-known indices. In this way we can efficiently build a better strategic benchmark. Using subsectors of the asset class such as Treasuries, investment-grade corporates, high yield, and bank loans, we can allocate to fixed income using a factor parity approach that boosts yield while keeping the largest factor risks in balance.
The first step is to reveal the major risk factors that drive fixed income returns. Then we can diversify among the most significant factors in equal proportions. That creates a more diversified allocation, with higher return potential over the long run.

In order to understand the risk premiums that drive the fixed income market, we first need to identify the dominant factors that drive asset class returns across the total investment universe. To do this, we apply a factor-based technique called principal component analysis (PCA) to the main asset classes of interest to institutional investors. PCA searches for correlations and groups asset classes together in order to identify the key drivers of asset returns. PCA produces a number of principal factors that are uncorrelated with each other. Hence, each factor brings a unique information set to bear and allows for a much cleaner interpretation of the results.

Figure 2 shows the first two principal components for a multi-asset universe and the weights to each factor from the different asset classes. PCA factors explain variation in the underlying assets in descending order. Therefore, the first two components each explain more of the variation in these assets than any other factor resulting from the analysis. Also, PCA factors are not defined in advance, but are merely a product of the data. As a result, the output needs to be interpreted in order to reveal the intuition behind a given factor.

Notice that the first factor contains positive weights from many asset classes, and these weights decline as we go from equity-based asset classes to fixed-income-based asset classes. We call this factor “Growth.”

The second factor portfolio is heavily influenced by interest rates, since it shows large positive weights for many fixed income asset classes and de minimis weights for other assets. We label this factor “Term Structure.” Figure 2 demonstrates that the two most important factors that drive this set of asset class returns are changes in equities (Growth) and changes in interest rates (Term Structure).

But how do these two risk factors influence the returns to fixed income?

Our next step is to quantify how much exposure the Global Agg has to each of these two principal factor portfolios. To do so, we regress the historical monthly returns from the Global Agg on return series that represent the historical behavior of these two dominant factor drivers. Specifically, the analysis was run on USD currency hedged returns for the Global Agg. This removes the volatility associated with unhedged global fixed income returns which would otherwise cloud the risk analysis.

This risk-balanced portfolio is an illustration of how factor-based tools can help re-weight asset classes and improve strategic asset allocation to better align actual risks with the desired risks.

Figure 3 shows the first two principal factor portfolios. To identify the key drivers of asset returns, we apply a factor-based technique called principal component analysis (PCA) to the main asset classes of interest to institutional investors. PCA searches for correlations and groups asset classes together in order to identify the key drivers of asset returns. PCA produces a number of principal factors that are uncorrelated with each other. Hence, each factor brings a unique information set to bear and allows for a much cleaner interpretation of the results.

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Fortunately, this same framework allows us to pair the Global Agg with other “pure” credit asset classes to create a more diversified, risk-balanced approach. This allows us to introduce equity-sensitive fixed-income asset classes in order to raise the Growth exposure to the level of Term Structure exposure. Figure 4 shows that adding 20 percent in investment-grade credit and less than 20 percent

This risk-balanced portfolio is an illustration of how factor-based tools can help re-weight asset classes and improve strategic asset allocation to better align actual risks with the desired risks. In this case, a better alignment of risks may help mitigate potential damage from Term Structure risk in a rising rate environment. And, despite the addition of speculative-grade credit sectors, it is now a more diversified portfolio from a factor basis. This should have measurable risk benefits over the long run. As an additional benefit, it seeks a higher strategic yield profile.

Overweighting credit is actually what many active fixed income managers do as a general practice. However, here we do so systematically, strategically and with a transparent purpose. And we do not confuse this with alpha. Nonetheless, this type of analysis is a form of active management. Thoughtfully restructuring a client’s exposure to fixed income betas with new tools is certainly a new angle on active investing. An added benefit is that this type of an approach could be expanded to include more targeted factors such as inflation, volatility, and currency risk. The example shown here is also an example of how a factor perspective can lead to a more fee-efficient way of providing investors with the core beta exposures they want in their portfolios. Each investor will have different preferences and parameters, which is why the consultative approach of an asset-allocation-driven Solutions Group must increasingly encompass all three critical areas of advice, design and implementation. We think this is the way forward for institutional investors who need more than a one-size-fits-all solution to help them achieve their objectives.
Barclays Global Aggregate 61.3
Euro Corporate 10.0
US Corporate 10.0
Euro High Yield 2.3
US High Yield 2.3
Euro High Yield 4.7
EM Local Currency Sovg Debt 4.7
US Bank Loans 4.7
Weights are as of the date indicated, are subject to change, and should not be relied upon as current thereafter.

Figure 2

Figure 3
The Overwhelming Bet on Term Structure in the Global Agg
Barclays Global Aggregate Index (Hedged)

Figure 4
Creating a Risk-Balanced Allocation to Fixed Income Sectors
More Diversified Fixed Income Portfolio

Source: SSGA, as of 12/31/2016.

Source: Tables use a standardized unit to reflect relative factor exposures across fixed income sectors.

Source: SSGA, as of 12/31/2016.

Source: Tables use a standardized unit to reflect relative factor exposures across fixed income sectors.

Emerging Markets Equities
Developed Markets Large Equities
Euro High Yield
US Convertible Bonds
US High Yield
Emerging Markets Local Currency Sovereign
Short US High Yield
US Bank Loans
Euro Corporate Bonds
Commodities
US Corporate Bonds
Global Aggregate Bond Index
Global Aggregate Bond Index Currency
Developed Markets Sovereign Bonds
German Treasury
Cash
US Treasury Hedged Euro
Developed Markets Sovereign Slope Change
Chicago Board of Exchange Volatility Index

-1 -0.5 0 0.5 1

-1 -0.5 0 0.5 1

80.46% Term Structure
4.75% Inflation
4.28% Currency
1.29% Growth
9.23% Other

37.69% Growth
37.64% Term Structure
4.79% Currency
11.00% Inflation
8.88% Other

Source: SSGA, as of 12/31/2016.

Source: SSGA, as of 12/31/2016.

Asset Class
Barclays Global Aggregate
Euro Corporate
US Corporate
Euro High Yield
US High Yield
US Short Term High Yield
EM Local Currency Sovg Debt
US Bank Loans

Weight (%) 61.3
10.0
10.0
2.3
2.3
4.7
4.7
4.7

Weights are as of the date indicated, are subject to change, and should not be relied upon as current thereafter.
THE CHANGING FACE OF VALUE INVESTING

WILLIAM KILLEEN, PHD, CFA
Portfolio Manager, Fundamental Equities

OLIVER MCCLURE, CFA
Research Analyst, Fundamental Equities
The past decade has been a testing time for value investors, with value as a style significantly underperforming since 2007. The more recent period of underperformance has been bleak enough for some observers to conclude that the value premium has been consigned to the history books. Figure 1 sets out the recent period of underperformance of large-cap US value versus the broader benchmark in the context of 65 years of historical data.

In Figure 1 periods of underperformance are shaded in light blue. It is clear that the last decade has been a challenge for value as an investing style. We have recently witnessed the longest period of underperformance of value since the late 1940s. As a result, it would seem that value has less mindshare with institutional investors than ever before. The scepticism is understandable. However, it is also worth noting that, even including the most recent period of underperformance, the value premium over the broader benchmark has averaged 3.4% over the last 65 years.

As is often the case, when an investment style falls out of favor, there can be violent snapbacks in relative performance. That is what we have experienced in the last 12 months. However, we believe there is still a compelling opportunity for those willing to take a fresh look at value.

“We believe there is still a compelling opportunity for those willing to take a fresh look at value.”
The Changing Opportunity Set

When deciding to invest in a value strategy, investors need to be aware of the changing complexion of the stocks that make up value. Since the tech bubble burst in 2000, the sector and geographic makeup of the cheapest segment of the market has evolved considerably. The MSCI Europe Value Index provides a good example. As Figure 2 shows, back in 2001, the value index had a much higher proportion of its market capitalization represented by defensive sectors, such as consumer staples, health care, utilities and telecoms. In January 2001, these four sectors together comprised 33% of the market capitalization of the index. In late 2011, during the Eurozone crisis, these sectors comprised over 40% of the market capitalization of the index. In late 2011, during the Eurozone crisis, these sectors comprised over 40% of the MSCI Europe Value Index. Today, however, as a result of a dramatic rerating, these sectors account for just 18% — close to their lowest combined share in almost two decades. While defensive sectors have seen their representation in the value opportunity set diminish materially in recent times, the share of more cyclical sectors, such as materials, industrials and financials, has been increasing.

Why the change in sector makeup? During the post-financial-crisis era of central bank intervention, with the attendant impact of very low interest rates, companies with more bond-like, bankable cash flows attracted a premium valuation. The result has been a dramatic rerating of some sectors, leading to highly divergent valuations between global sectors, as well as a growing disparity in regional valuations. We believe that this dispersion presents a significant opportunity for active value investors.

Dispersion in Sector and Regional Valuations

When analyzing where price-to-book valuations sit today in the context of their 10-year ranges, the divergence in global sector valuations becomes evident (see Figure 3). There would appear to be less value in information technology, consumer staples, consumer discretionary and telecoms, which are now rated toward the top of their 10-year price-to-book ranges. On the other hand, more economically sensitive sectors, such as financials and energy, present more value.

The dispersion in regional valuations is equally dramatic. Figure 4 shows that North American equities are trading close to the richest multiples in a decade. On the other hand, multiples in the Eurozone, Asia and emerging markets broadly appear to present more compelling value.

A Time for Active Value Investing

The valuation dispersion in both global sectors and regions creates a potentially rewarding opportunity for active value investors. In our view, investors who can be agnostic to sector and geographic benchmark weights are potentially well positioned to capitalize on this environment, and add alpha beyond benchmark-relative approaches. It is worth noting, for instance, that the MSCI World Index currently has an allocation of about 62% to North America and just over 13% toward Asia-Pacific. The MSCI World Value Index has identical regional weightings, despite the valuation disparities identified in Figure 4. To our mind, investing in high active share, concentrated portfolios without geographic or sectoral constraints is the most effective way to capitalize on this opportunity.
At a stock level, the change in the opportunity set has also made value investing a much more uncomfortable experience. Prior to the consensus around lower-for-longer interest rates, the typical value investment was a company headquartered in a developed market, with a strong franchise and stable cash flows. Not only were these companies relatively cheap, but there was much less margin of error in assessing the intrinsic value by virtue of their more stable cash flows.

Today, when the cheapest segment of the market is largely populated by stocks with more cyclical cash flows, the task of assessing intrinsic value is much more difficult. Many value investors have opted to close their eyes to the high valuations of stocks within their comfort zone, rather than adapt to the changing opportunity set.

With the changing face of value, what is crucial in the investment process is to have the research resources to determine which businesses have been structurally impaired versus those that are experiencing a temporary dip in earnings power. A systematic approach to value investing will potentially view both types of companies as equally cheap. The fundamental value investor, on the other hand, adds value by making a distinction between good companies and bad companies. The fact that cyclical sectors, with greater risk of cyclical drawdown, appear to present value calls for an investment framework with careful due diligence of fundamentals. The sustainability of cash earnings and the strength of balance sheets to absorb earnings setbacks are crucial inputs to the process of weighing up the risk-reward trade-off. In fact, we would argue that agnosticism on a company’s future earnings power is the occupational hazard of the value manager (see Avoiding Value Traps on following page). Put simply, cheap is often just not enough.

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**Figure 3**

**Dispersion in Global Sector Valuations**

Price to Book

<table>
<thead>
<tr>
<th>0</th>
<th>Financials</th>
<th>Utilities</th>
<th>Energy</th>
<th>Materials</th>
<th>Telecoms</th>
<th>Industrials</th>
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Source: MSCI, FactSet, SSGA.

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**Figure 4**

**Dispersion in Regional Valuations**

Price to Book

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Source: MSCI, FactSet, SSGA.
How Much More Room to Run?

Undoubtedly the last year has been a better time for value investors. In fact, the MSCI World Value Index outperformed the broader MSCI World Index significantly for the first time in 10 years. According to the eVestment database, the median active value manager outperformed in 10 out of 12 months in 2016. According to our calculations, it was also the best performance seen by active value managers in five years.

The question is, of course, can this outperformance be sustained? The answer, we believe, lies in some historical perspective on valuation dispersion. We have already seen that the dispersion in valuation between sectors and regions is wide versus history. In Figure 5, we show a stock level analysis of valuation dispersion by comparing the median price to book of the most expensive quintile of the MSCI World Index with the cheapest quintile over the last 20 years.

Over the last 20 years, there have been two extremes in valuation dispersion (gold line). The first, in the late 1990s, was driven by the dramatic rerating of technology and telecom stocks as the market bought into a new paradigm driven by expectations of the impact of the arrival of the Internet. The second, peaking in June 2016, was also driven by an acceptance of a new paradigm: lower-for-longer interest rates, low inflation and subpar economic growth. In comparison with the late 1990s, the recent expansion in valuation dispersion has been more broadly based, driven by a rerating of companies with stable cash flows.

The data presented in Figure 5 suggest that extremes in price-to-book dispersion are closely but inversely related to turning points in the relative performance of value. Using price-to-book valuation dispersion as a coincident indicator suggests that this normalization process has some way to go. Value could well continue to outperform from here. Indeed a glance back at Figure 1 shows that periods when value underperforms are persistent, but so too are the periods when value outperforms.

Ironically, despite the maturity of the economic cycle, with the prospect of a rising rate environment, there may turn out to be more margin of safety in stocks that are considered to run greater risk of a cyclical drawdown in earnings. We believe this polarization of valuation creates an emphatic case for active value investing.

Source: SSGA, FactSet, MSCI. As of January 2017.
Past performance does not guarantee future results. Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect capital gains and losses, income, and the reinvestment of dividends.
Sectors shown are as of the date indicated and are subject to change. This information should not be considered a recommendation to invest in a particular sector or to buy or sell any security shown. It is not known whether the sectors or securities shown will be profitable in the future.
We define a value trap as a stock in which declining earnings power, or increasing capital intensity overwhelm the prospects of any potential upward market rerating. If sustainable earnings power falls, market rating will likely follow.

We illustrate this point in Figure 6. Imagine you are researching a stock with a market rating of 1.2x price to book. In your initial assessment, you believe the company can sustain a 12% Return on equity (ROE) — stock B in Figure 6. As the chart highlights, this places that stock firmly in cheap territory. However, as your fundamental research endeavor continues, it becomes clear that the ROE of 12% is completely unsustainable. This was a temporary development. Actually, a 3% ROE now looks like a more reasonable assessment of long-term earnings power (stock A). On this basis, the stock now looks expensive.

Value traps are not just the occupational hazard of value managers. Every investment style incurs a risk of failed investment cases. So how do we try to mitigate this risk in our investment process?

The greatest protection against value traps, in our view, is generated by in-depth due diligence on the long-term earnings power of each company we invest in, including the moat around revenue and margins. Only when we have assessed the strength of business franchise can we make an assessment of long-term earnings power.

We try to tip the odds against the risk of finding value traps by ensuring that our portfolio of stocks stays below the line and to the right in Figure 6.

Figure 6
Defining Value: The Trade-off Between Market Rating and Earnings Power

Market Valuation (Price to Book)
In a muted return environment, cost consciousness takes on new importance for investors as fees in all forms will have an outsized effect on outcomes. Every basis point counts. At SSGA, we are committed to helping clients achieve capital efficiencies throughout the entire investment lifecycle. This includes a continuous effort to improve trading costs wherever and whenever possible.

One of the most powerful catalysts for achieving trading cost efficiencies has been the transaction cost analysis (TCA) platform SSGA’s global trading group has developed since 2000 across equities, futures, fixed income and currencies. With over 150 million records analyzed and archived, TCA has allowed our traders to save tens of millions of dollars in transaction costs by systematically and transparently tracking our global trading decisions.

At a time when global markets have become faster, more complex, and at times liquidity-challenged, constant improvement to our trading capabilities adds fresh meaning to “outperformance” when it comes to best execution for our clients. Market structures have changed, and while equity trading size has diminished in order to better execute large-block trades, the trading volume has gone up (Figure 1). This has implications for all investors, and we believe staying attuned to the nuances of execution can help us better target the best returns possible.

Figure 1
Trading Volume Rising, Size of Trades Falling on US Equity Markets

Source: SSGA Trading Analytics using KCG Holdings Data as of November 30, 2016.

A Broader View on Best Execution

For us, best execution is about an entire trading process rather than a price at a single point in time. TCA is a valuable part of that process because it provides a clear measure of trading performance, allowing our portfolio managers and traders to evaluate investments in a systematic and iterative manner. Frequent assessment of transactions can provide insights on trading cost trends across asset classes and around the world. TCA can confirm the efficacy of current processes and highlight opportunities to improve them as well. It creates a highly effective feedback loop that connects traders with portfolio managers and investors, with the ultimate benefits passed along to our clients.

Measuring the cost of trading has been a topic of academic and practitioner interest for nearly half a century because of the impact trading costs can have on a portfolio’s performance. In addition, identifying securities with high expected trading costs can provide actionable insights to a portfolio manager, who may adjust the strategy or possibly avoid investing altogether when the costs of trading would be prohibitive relative to the expected return of the investment. An important distinction here is the difference between ex-ante (“before the event”) and ex-post (“after the fact”) TCA, both of which provide key insights.
Ex-ante cost estimates are calculated from models designed to forecast the expected cost of trading based on trade size and the time horizon in which the transaction is expected to be completed. The parameters used in ex-ante trade cost models can vary, but typically an asset’s liquidity and volatility are the primary factors that influence the model’s cost estimate.

Estimating the optimal trading time horizon is driven by an effort to minimize the expected market impact and contain the opportunity cost. If there is less liquidity for a given asset, the expected time to trade is lengthened. The longer an incomplete order is present in the market, the greater the uncertainty of executing near the benchmark price, which is represented as an opportunity cost. Ex-ante TCA reporting provides the foundation for traders and portfolio managers to collaborate on a strategic approach towards challenging trades ahead of time.

Ex-post TCA provides the cost of an actual transaction. Although this might seem trivial, it can be a complex operation. Capturing execution data and comparing a particular instance in execution to an appropriate market data set is straightforward, but drawing conclusions from that data is far more complex.

Consider a simple exercise of comparing trading costs for a specific fund on two different days. Should we compare the costs blindly, without considering the market conditions when the trades were being executed? If the fund were buying assets on both days, but the overall market rose sharply on one of the days and fell sharply on the other day, it could be misleading to simply compare trading costs side by side. Clearly it is an easier task to buy an asset when the overall market is trending downward and the analytical results should reflect that.

Post-trade adjustments to normalize the realized costs in different market environments and the influence of other exogenous factors are necessary in order to evaluate costs for trades effectively. This adjustment creates a useful data set for traders and portfolio managers in evaluating internal processes and strategies over longer time horizons with minimal influence from market conditions.

By taking a thoughtful approach to the challenges of execution, SSGA has consistently ranked in the top quartile, which translates into tens of millions of dollars in cost savings over time, surpassing many of our peers and helping our clients achieve better overall outcomes.

Optimizing Trading Costs for Active Strategies

TCA plays a valuable role in shaping active strategies, since managers need to keep trading costs in mind when choosing which securities to buy and sell. Before the trade (ex-ante), TCA tools provide an estimate of those trading costs, which provides significant value to the portfolio construction process. Once a security has become part of an active strategy, SSGA’s TCA platform continues to measure the performance of each transaction (ex-post). This data collection across all transactions is reviewed in detail with the active portfolio management teams on a regular basis, with the ultimate goal of affirming that we delivered best execution.

Index Strategies: Not All Passive

Even with passive strategies, managers must focus on trading efficiencies as they design portfolios to match an index. Liquidity events, including index rebalancing, can attract a wider range of market participants and create abnormal trading activity. SSGA’s TCA platform is designed to identify and capture index rebalancing activity, and it provides quantitative results to support and inform trading and portfolio management under all market conditions.

Measuring Trading Outperformance

We track our own trading performance in two ways. First, through a leading TCA vendor with a robust peer universe of equity transactions, we can compare ourselves to other asset managers. According to that industry measure, our global equity results have ranked in the top quartile three out of the last four calendar quarters. A second method is to compare current trading results to our historic trading costs to observe potential trends or outliers, which is also supported by the TCA platform. By taking a thoughtful approach to the challenges of execution, SSGA has consistently ranked in the top quartile, which translates into tens of millions of dollars in cost savings over time, surpassing many of our peers and helping our clients achieve better overall outcomes.\(^1\)

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\(^1\) Ranking calculated by ITG, Inc. through their Transaction Cost Analysis services for global equities and foreign exchange. ITG is a quarterly Situational Ranking Report and this report ranks our global equity trading results to the results of similar trades from within ITG’s peer universe.
On the eve of International Women’s Day, SSGA placed a statue of a young girl, representing the future, in the heart of New York City’s Wall Street district to underscore our call on companies to increase gender diversity on corporate boards. We believe diversity of thought, skills and backgrounds is key to effective, independent board leadership and the promotion of long-term value creation.

Sculpture by Kristen Visbal
For some, it's about excluding investments that are not in keeping with their missions or goals (for example, screening out so-called sin stocks such as tobacco, alcohol or gambling and potentially reducing total return). Other investors want to tilt their portfolios toward companies that exhibit positive ESG attributes to achieve market-like or better returns as well as a particular environmental or social impact. Still other investors are beginning to fully integrate ESG across their entire investment program the way that factor investing has been fully integrated by some larger institutional investors to target better risk-adjusted returns over the long run.

In a forthcoming survey of 470 global institutional investors, SSGA found that 80% of them have incorporated ESG issues in some way, shape or form into their portfolios. Although as an industry we are still in the early stages of fully integrating ESG into investment management, as we look to more research and data, we believe that ESG issues will become an increasingly important part of investment analysis. As the potential impact of these issues on long-term returns is compelling, we have made ESG a centerpiece of our active stewardship program and describe in this issue how we engage with companies in our index strategies to help them focus on generating sustainable returns. We have also made ESG a central component of our research agenda. In the following article we illustrate the framework we created to help investors seamlessly capture both positive ESG attributes and long-term factor premia for targeting more durable and sustainable performance.

For a growing number of global investors, actively aligning their portfolios with their views on environmental, social and governance (ESG) issues is taking on new importance.
The vast majority of investors in our latest survey have some exposure to ESG strategies. Many are highly satisfied with the performance of their ESG investments.

The depth of exposure is low for all but a small group of investors. ESG strategies account for only a third of investments on average. Momentum is strongest for those with higher exposure who are looking to more rapid, deeper ESG integration into investment strategy.

80% use ESG components within their investment strategy.

77% think ESG factors are important for financial performance.

84% are satisfied with the performance of their ESG investment strategy.

44% have a quarter of assets with exposure to ESG strategies.

37% have a quarter – a half of assets with exposure to ESG strategies.

17% have more than half of assets with exposure to ESG strategies.
**PRIMARY BARRIERS**

Addressing these will be crucial for helping different groups of investors align their ESG needs with strategy.

**OTHER CHALLENGES**

Hindering deeper integration of ESG strategies.

**PERFORMANCE**

- **Cost**
  - Concerns over costs and fees, particularly among low adopters

**CULTURE**

- **Internal Capabilities**
  - Lack of internal capabilities and insight

**DATA**

- **Stakeholder Demand**
  - Need to align stakeholder interests with ESG aspirations

**AWARENESS TO ACTION**

SSGA, in conjunction with Longitude Research, recently surveyed 470 institutional investors worldwide to investigate the role of ESG in their investment strategy.

We investigated the factors driving or hindering investors from adoption or even deeper integration of ESG principles into their investment strategy.

Helping investors to harness the full potential of ESG ultimately demands a multi-faceted approach. Investors need to gauge what is often an uncertain balance of ESG goals with broader risk-adjusted return objectives.

And, as an industry, actions that enable ESG adoption and integration by addressing issues around data, products and performance will be crucial.

Get the full report on ssga.com (available in April, 2017)

All data as at 31 January 2017.

ALIGNING FACTOR & ESG VIEWS

JENN BENDER, PhD
Director of Research
Global Equity Beta Solutions

XIAOLE SUN
Vice President
Global Equity Beta Solutions
In the same way that the study of the underlying drivers of risk and return has helped investors identify long-term, durable factor premia, growing research into the potential impacts of environmental, social and governance (ESG) issues on a company’s financial performance is also helping investors understand how to integrate ESG risks and opportunities into their investment decision-making. More investors are seeking to construct portfolios that allow them to capture both the long-term, durable premia of recognized factor tilts as well as invest in companies with attractive ESG attributes. A recent research project from our Global Equity Beta Solutions team showed investors how to invest in companies with positive ESG attributes without compromising their desire to capture long-term factor premia to target better risk-adjusted returns over the long run.

At the heart of the challenge is that ESG and factors will not always be aligned: companies with high ESG ratings will sometimes have undesired factor characteristics. Likewise, companies with desirable factor characteristics may not have the appropriate ESG profile investors want. Fortunately, modern portfolio construction toolkits offer an effective way to resolve this problem. Using a portfolio algorithm such as a mean-variance optimizer allows us to balance competing objectives in a straightforward way, delivering portfolios with the desired factor and ESG profile.

The Relationship Between Factors & ESG

First it is important to understand how factors and ESG attributes are related. At SSGA, we focus on the five factors that have been researched for decades and have been shown to deliver a durable premium over the long term: Value, Low Volatility, Low Size, Momentum and Quality. The sidebar shows how we define those five factors. Using MSCI ESG ratings (see Figure 1) to reflect the environmental, social and corporate governance performance of companies, we then analyze the factor exposures of these different ratings categories. Factor exposures are simply normalized scores across the universe (in this case, the MSCI World universe).

Comparing factor exposures over time, we can see how the factor characteristics of highly rated ESG issues will change (see comparisons from 2011–2016 across all five factors on next page). For example, as of December 31, 2016, highly rated ESG companies have a positive Value exposure. Holding highly rated AAA and AA categories will also give an investor exposure to relatively cheap stocks. The lowest-rated CCC category is also very cheap as well but does not affect the ability of an investor to capture both Value and ESG themes in the same portfolio, unless the investor is forced to hold all the names in the MSCI World Index.

We then extend this view to the other factors — Momentum, Quality, Low Volatility, and Low Size — for the end-December period in both 2011 and 2016. This analysis shows us that highly rated ESG stocks have been negative momentum, high quality, low volatility and larger cap in the past as well as currently.
Figure 1

**MSCI ESG Ratings**

MSCI uses ESG criteria to score securities on a scale of AAA–CCC. AAA is the highest rating possible, relative to a company or issuer’s peer group, while CCC is the lowest. On the equity side, MSCI ESG ratings cover more than 6,000 public companies. For fixed income, they cover roughly 11,000 issuers.

* Average Exposure by ESG Rating
† Source: SSGA, MSCI. Ratings as of December 31, 2011.
^ Source: SSGA, MSCI. Ratings as of December 31, 2016.

### Avg Exposure by ESG Rating

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Comparing factor exposures over time, we can see how the factor characteristics of highly rated ESG issues will change and can adjust accordingly.
Building a Portfolio That Satisfies Both Factors and ESG

The preceding charts provide the insight we need for building portfolios with high ESG ratings as well as the factor exposures that investors desire. For example, the multi-factor Smart Beta portfolios we construct seek exposure to high Momentum, high Quality, low Volatility, low Size, and high Value (cheap) companies, because the premia associated with those factors have been positive over the last 20 plus years.

As we saw in the previous section, highly rated ESG stocks have historically been high Value, negative Momentum, high Quality, low Volatility and larger cap. For a multi-factor portfolio targeting the five desired premia, the challenge is to include highly rated ESG companies into the portfolio while delivering positive momentum and a small cap bias (which highly rated ESG companies do not naturally have exposure to).

Using an optimizer can efficiently balance the desired ESG and factor exposures. To show how this can be done, we can create a model portfolio for illustrative purposes only (using market data as of December 31, 2016) that tries to meet both objectives. We start by removing the lowest ESG category, CCC, from the MSCI World Index. We then apply a mean-variance optimization to this universe, maximizing the factor exposure, where the usual return input is replaced with factor scores. This exercise is less about measuring performance and more about lining up both the ESG and factor characteristics that investors are targeting. (Each stock’s factor score is an equal-weighted composite of the five individual factor exposures, e.g., normalized scores, for Value, low Size, low Volatility, Momentum, and Quality.) We also apply a number of constraints as shown in Figure 2.

The results of this portfolio construction exercise are shown in Figure 5. We compare the portfolio against one in which we use the entire universe to start. The exposures fall only slightly between the first column and second (moving from the whole universe to start to one that excludes the CCC category). There are only 51 CCC-rated companies, however, so next we exclude both CCC and B companies, the two lowest ESG ratings. The starting universe at this point has 1,341 securities and the resulting optimized portfolio continues to preserve strong factor exposures, though notably the constraints for Momentum, low Size, and Value are all now consistent inputs. The fact that they are all accounted for (at 0.50, a strong signal and the lowest exposure we allowed the optimizer to take) reflects that companies in the universe (BB and above) tend to be lower Momentum and larger cap, as we saw before. In the final column, we exclude CCC, B, BB and BBB ratings, keeping only the A, AA and AAA categories, or the highest-rated ESG companies. Now, all constraints are reflected as inputs, but a 0.50 factor exposure is still very strong. Thus, significant desired factor exposures can be preserved while simultaneously honing in on higher ESG securities.
At the same time that investors in a muted-return environment want to tilt their portfolios toward long-term, durable factor premia to enhance return, risk and diversification, this research shows that they can also incorporate their views on ESG risks and opportunities to target even more sustainable portfolio performance.

Figure 5
ESG Multifactor Portfolios

| Number of names in starting universe before optimization | 1560 | 1509 | 1341 | 690 |
| Ex ante TE (%) | 2.84 | 2.83 | 2.80 | 3.60 |
| Ex ante beta | 0.89 | 0.90 | 0.90 | 0.90 |
| Predicted return | 0.65 | 0.63 | 0.59 | 0.50 |
| Number of securities | 151 | 158 | 151 | 100 |
| Low Volatility | 0.81 | 0.74 | 0.66 | 0.50 |
| Momentum | 0.52 | 0.50 | 0.5 | 0.50 |
| Quality | 0.92 | 0.89 | 0.81 | 0.50 |
| Low Size | 0.50 | 0.50 | 0.5 | 0.50 |
| Value | 0.52 | 0.50 | 0.5 | 0.50 |

2 Optimization process results in fewer securities.
3 The Predicted Return is weighted average factor scores as the usual return input is replaced with factor scores in this exercise.

Past performance does not guarantee future results.

**ADDITIONAL READING**

**Factor Investing**
Our Spring and Fall 2016 issues of the IQ feature several articles on factor investing, including:
- Factor Timing
- The Factor Revolution
- Making It Work: Factor Pathways

**ESG**
Read an interview with SSGA’s Chris McKnett and Altas Kassam about the evolution of ESG at ssga.com.
- ESG Investing Comes of Age as Risk, Return and Impact Align in New Approaches
ACTIVE STEWARDSHIP SUSTAINABLE VALUE

RAKHICUMAR
Head of ESG Investments and Asset Stewardship
One of the most important areas of getting active for SSGA is the asset stewardship program we have developed on behalf of our clients invested in our index strategies. This active form of stewardship is aimed at engaging with companies in the index on issues that potentially affect their ability to generate the attractive, long-term returns our clients need to help them achieve their objectives.

Focus on the Long Term

Unlike active managers who can sell companies when they disagree with management, passive managers represent near permanent capital that cannot vote with its feet. As long as a company is included in the index, it remains in the portfolio. It is precisely that long-term ownership, together with our size and global scale, that enhances our perspective and influence with our portfolio companies. As global investors, we bring a unique, top-down vantage point across industries and countries on the kinds of environmental, social and governance (ESG) risks and opportunities that might affect long-term value. Ensuring effective, independent board leadership is our main focus. Active engagement, rather than passive inaction or adversarial interaction, is the hallmark of our approach. Through this patient and consistent engagement, using both our voice and our vote, we seek to focus capital on the long term and promote positive change for our clients and the broader economy.

Maximizing Impact

Because we are invested in thousands of companies through our index strategies, we have developed a scalable framework for deciding the issues and companies to focus on in order to maximize our impact. We prioritize across a number of factors: the size of our holdings; poor long-term financial performance within a sector; lagging market or industry standards; and issues tied to emerging environmental, social or governance risks.

For example, a sector project focused on oil and gas companies explored how companies are navigating the challenges of falling crude oil prices, geopolitical risks in Russia, Africa and the Middle East, as well as the ongoing debate around climate change, stranded assets and emission reductions. Talks with a Taiwanese packaged food company centered on monitoring food safety within its supply chain. Meetings with a garment sector company raised ways that labor supply chains and fire safety standards could be improved. After a multiyear engagement with various companies on environmental standards, we saw significant improvements in the quality and transparency of reporting around hydraulic fracturing processes as well as water and waste management practices.

Guidance on ESG Issues

In addition to hundreds of meetings with board directors around the world, each year we issue detailed guidance around specific ESG issues and publish quarterly reports on our engagement and proxy voting. As engagement is a two-way street, we are committed to providing maximum transparency to our portfolio companies around our views, expectations and voting decisions. We also work with other asset managers and asset owners to create principles aimed at promoting good governance and protecting the shareholder interests of long-term investors. We recently helped spearhead a multiyear collaboration of asset owners and managers that culminated in a set of comprehensive stewardship and governance principles as part of the Investor Stewardship Group.¹

"Through this patient and consistent engagement, using both our voice and our vote, we seek to focus capital on the long term and promote positive change for our clients and the broader economy."
While we engage with companies across a full range of ESG issues, our overarching governance focus has been on ensuring effective, independent board leadership as a threshold requirement for long-term value creation. This means ensuring boards have the right skills and diversity of thought to help management articulate and execute a long-term strategy and have the independence to hold management accountable. We recently called on boards to enhance gender diversity as a way to achieve a broader set of perspectives. Our view is that a strong, effective board committed to the long term and independent of management is more likely to lead to attractive results for our clients. It is also probably the most effective counterweight to the many short-term pressures that markets and other forces exert on company management. Over the last few years we have issued extensive guidance around board governance issues.

Effective, Independent Board Leadership

This year we are asking companies to focus on the environmental and social sustainability risks and opportunities that could impact long-term value. These include areas such as climate change, water and waste management, supply chain management, safety issues, workplace diversity and talent development, to name just a few examples. Many of these issues are inherently long term, and this year we have called upon companies to consider how they might affect their businesses. While we make no claim to have a definitive answer to these challenges and acknowledge that different industries will face different issues, we do think boards should be considering the potential impacts as they would other business risks.

Environmental & Social Sustainability

Since 2014, climate change has been a priority engagement issue for us. Last year we created a framework to help boards capture and evaluate the different kinds of physical, regulatory and economic risks associated with climate change within specific sectors. We provided guidance for what we believe boards must do to effectively oversee a company's assessment of climate risk and preparedness for addressing it. We have also sought to make sure that our voting record is consistent with the principles we have communicated to our portfolio companies. While we make case-by-case decisions when voting proxies, we will support climate resolutions if we think companies' disclosure, practice and board governance structures are inadequate. That was the rationale behind our climate resolution votes in 2016 that set us apart in the industry (see Figure 1).
As we have engaged with companies on these issues over the last few years, we have experienced a range of ways companies are considering ESG impacts. In many cases, we have seen impressive examples of how companies are proactively using sustainability issues to drive growth and innovation for the future by investing in new products, businesses or capabilities. But we have also seen examples of companies that are completely disregarding ESG issues. As we have written and spoken out about these issues, boards have asked us for guidance on how they might incorporate a sustainability lens into their long-term strategy, especially following our votes in 2016 supporting shareholder resolutions on climate change initiatives.

In response we have proposed a series of questions that boards can use to begin to incorporate a sustainability lens into their long-term strategy (Figure 2).

For our part, we have started to categorize companies according to their progress across three main areas to assess their approaches to sustainability:

- Has the company identified material environmental and social sustainability issues relevant to its business?
- Has the company done the work to assess these thoroughly and, where necessary, incorporated the implications into their long-term strategy?
- Has the company adequately reported on its approach to sustainability issues and its influence on strategy?

We think getting more companies and boards to commit to focus on these three areas are likely to lead to a dramatic improvement in how ESG issues are considered from a business perspective. It will also help to generate the company data investment managers will need to make ESG a meaningful part of their investment process as the field of ESG investing develops.

SSGA’s active stewardship practice is a central part of our overall ESG program. It will continue to inform our research efforts to integrate ESG risks and opportunities into our investment process as well as our ongoing ESG product development. As long-term stewards of our clients’ assets, we believe our active engagement across ESG issues will help more companies focus on the long term and help to create the prosperous future our clients want to invest in.

For more details, visit www.isgframework.org.

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1 For more details, visit www.isgframework.org.
INTEGRATING ESG INTO ACTIVE GLOBAL EQUITIES
For decades, Australia has been on the forefront of workplace retirement plan innovations. In the early 1990s, Australia adopted a compulsory superannuation system, mandating employer contributions and offering employees an opportunity to make their own salary deferrals as well. Increasingly, superannuation funds are also showing interest in integrating ESG approaches into their investment options. The following case study highlights how SSGA collaborated with an Australian superannuation fund to develop and manage an international core equity mandate through an ESG lens.

Challenge

The superannuation fund seeks to provide members with investment choices that reflect their values. The benchmark for the international core equity mandate is the MSCI World Ex Australia Index, screened for tobacco. The screened benchmark provides a starting point for creating an integrated ESG strategy for the international component of the retirement fund.

The superannuation fund has offered its members a sustainable investment option since 2001. In 2013, the fund decided to take a fresh look at how their international core equity mandate was being managed and asked SSGA to explore ways to bring an innovative, active approach to incorporating ESG criteria to the strategy. Interested in capturing the upside potential of highly rated ESG stocks, the client also wanted to stay relatively close to the MSCI World Ex Australia Index, with no more than plus or minus 1-2% difference in annualized returns.
To help craft a solution, SSGA worked closely with the superannuation fund’s investment team to understand their priorities and guidelines. Our recommendation included using ESG criteria as part of the overall stock-ranking system, alongside more traditional factor premia, such as value, quality and momentum. Our recommendation was to allow the weight of ESG criteria to fluctuate slightly over time according to the strength of the ESG signal within the overall alpha model. We believed this approach would more dynamically capture the payoff from ESG compared to a static weight or excluding stocks on ESG grounds.

In 2014, we began managing an international core equity mandate that incorporated ESG stock rankings to the client’s specifications. A distinctive feature of the mandate is that the ESG theme is considered purely on its own financial merits. Stocks that earn high ESG scores are often high-quality stocks according to more traditional balance sheet measures. When investors get nervous, high-quality stocks are often in demand. As a result, we place more emphasis on selecting highly rated ESG stocks (and other high-quality stocks) when markets are volatile or declining and quality is being sought by investors. Conversely, quality stocks tend to be less in demand when markets are rising rapidly and investors are seeking riskier assets. So we tend to de-emphasize ESG rankings in bullish markets. Having the flexibility to moderate the ESG signal based on market conditions lets us take advantage of different phases of the market cycle.

First and foremost, the strategy seeks to use ESG ratings to enhance performance. At the same time, including ESG ratings in our overall stock selection model can provide a degree of risk management. The core international equity strategy is designed to track fairly closely to the overall market, so incorporating ESG criteria into an active quant model will not buffer against general market declines. However, it may help reduce exposure to individual companies that are especially vulnerable to ESG risks.

Our data-driven, systematic approach to incorporating ESG criteria into the international core equity mandate has generated encouraging results. For the three year-period ending 12/31/16, the mandate has consistently outperformed its benchmark. We believe combining ESG with other key financial metrics in an active quant model can continue to offer the potential for outperformance over the long term. As the evidence grows that incorporating ESG into investment strategies can be additive to performance as well as help manage risk, we expect to see increasing interest across a broad base of institutional and individual investors.

We believe combining ESG with other key financial metrics...can continue to offer the potential for outperformance over the long term.
Glossary

Active An actively managed approach involves a manager choosing securities to build, say, a fixed-income portfolio.

Alpha A gauge of risk-adjusted outperformance that is measured relative to a benchmark because benchmarks are often considered to represent the market’s movement as a whole. The excess returns of a fund relative to the return of a benchmark index is the fund’s alpha.

Average of Return on Assets (ROA) The average of net income divided by the total assets.

Bank Loans A debt financing obligation issued by a bank or similar financial institution to a company or individual that holds legal claim to the borrower’s assets above all other debt obligations.

Bloomberg Barclays Global Aggregate Index The index is a market-weighted index of global government, government-related agencies, corporate and securitized fixed-income investments.

Bloomberg Barclays US Aggregate Index The index measures the performance of the US investment grade bond market. It invests in a wide spectrum of public, investment-grade, taxable, fixed income securities in the United States – including government, corporate, and international dollar-denominated bonds, as well as mortgage-backed and asset-backed securities, all with maturities of more than 1 year.

Beta Measures the volatility of a security or portfolio in relation to the market, with the broad market usually measured by the S&P 500 Index. A beta of 1 indicates the security will move with the market. A beta of 1.3 means the security is expected to be 30% more volatile than the market, while a beta of 0.8 means the security is expected to be 20% less volatile than the market.

Beta exposures Refers to the amount of beta that can be lost in an investment. Beta is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole.

Big data A term for data sets that are so large or complex that traditional data processing applications are inadequate. Challenges include analysis, capture, data curation, search, sharing, storage, transfer, visualization, querying and information privacy.

Book Value This refers to the value at which the asset is carried on a balance sheet and is calculated by taking the cost of an asset minus the accumulated depreciation.

Cash A legal tender or coins that can be used to exchange goods, debt or services. Sometimes it also includes the value of assets that can be converted into cash immediately, as reported by a company.

Cash Flow The net amount of cash and cash-equivalents moving into and out of a business.

Change (Chg) Change can refer to many things in finance. For an options or futures contract, it is the difference between the current price and the previous day’s settlement price. For an index or average, change is the difference between the current value and the previous day’s market close. For a stock or bond quote, change is the difference between the current price and the last trade of the previous day. For interest rates, change is benchmarked against a major market rate and may only be updated once a quarter.

Commodities (Commod) Bought and sold on the cash market, and they are traded on the futures exchanges in the form of futures contracts. Prices are driven by supply and demand.

Convertible Bonds (Converts) Hybrid securities that combine elements of stocks and bonds. convertible bonds pay a periodic fixed amount as a coupon payment but, under convertible bond covenants, can be converted into common stock at a specific price.

Corporate Bonds (Corp) A debt security issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations. In some cases, the company’s physical assets may be used as collateral for bonds.

Correlation The historical tendency of two investments to move together. Investors often combine investments with low correlations to diversify portfolios.

Developed Markets (DM) Refers to countries or market areas with relatively high levels of economic growth, market liquidity and transparency as well as political stability, rule of law and safety.

Dispersion A statistical term describing the size of the range of values expected for a particular variable. In finance, dispersion is used in studying the effects of investor and analyst beliefs on securities trading, and in the study of the variability of returns from a particular trading strategy or investment portfolio. It is often interpreted as a measure of the degree of uncertainty, and thus risk, associated with a particular security or investment portfolio.

Dividend A distribution of a portion of a company’s earnings, decided by the board of directors, to a class of its shareholders. Dividends can be issued as cash payments, as shares of stock, or other property.

Drawdown The peak-to-trough decline during a specific recorded period of an investment, fund or commodity.

Duration A measure of the sensitivity of the price – the value of principal – of a fixed-income investment to a change in interest rates.

Earnings Typically refer to after-tax net income. Earnings are the main determinant of share price, because earnings and the circumstances relating to them can indicate whether the business will be profitable and successful in the long run.

Emerging Markets (EM) Developing countries where the characteristics of mature economies, such as political stability, market liquidity and accounting transparency, are beginning to manifest. Emerging market investments are generally expected to achieve higher returns than developed markets but are also accompanied by greater risk, decreasing their correlation to investments in developed markets.

Environmental, Social and Governance (ESG) Refers to the three main areas of concern that have developed as central factors in measuring the sustainability and ethical impact of an investment in a company or business.

EPS Variability Fluctuations in a corporation’s net income or earnings per share during a given period.

Euro (EUR) The official currency of the European Union’s (EU) member states. The euro was introduced by the EU to the financial community in 1999 and physical euro coins and paper notes were introduced in 2002. Euros are printed and managed by the European System of Central Banks (ESCB).

Equities An instrument that signifies an ownership position, or equity, in a corporation, and which represents a claim on its proportionate share in the corporation’s assets and profits.

Ex ante beta Ex-ante, derived from the Latin for “before the event”, is a term that refers to future events, such as future returns or prospects of a company. Beta is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole.

Ex ante tracking error (TE) Ex-ante, derived from the Latin for “before the event”, is a term that refers to future events, such as future returns or prospects of a company. Tracking error is defined as the difference between portfolio returns and the benchmark portfolio returns.
Factor based Investing

Factor investing is an investment strategy in which securities are chosen based on attributes that are associated with higher returns. Factor investing requires investors to take into account an increased level of granularity when choosing securities; specifically, more granular than asset class. Common factors reviewed in factor investing include style, size, and risk.

Factor parity

Parity refers to two things being equal to each other. The term “par value” for a bond is similar to parity. Parity can also refer to two securities having equal value, such as a convertible bond and the value of the stock if the bondholder chooses to convert into common stock.

Factor Premia Investing

An investment approach that focuses on underlying factors that define risk, return, and correlation. This approach seeks to explain why some asset classes move together and offer more efficient portfolio construction than other methods.

Free float market capitalization

Calculated by taking the equity’s price and multiplying it by the number of shares readily available in the market. Instead of using all of the active and inactive shares, as with the full-market capitalization method, the free-float method excludes locked-in shares such as those held by insiders, promoters and governments.

Hedged (Hed)

An investment to reduce the risk of adverse price movements in an asset. Normally, a hedge consists of taking an offsetting position in a related security, such as a futures contract.

High Yield (HY) A company or bond that is rated ‘BB’ or lower is known as junk grade or high yield, in which case the probability that the company will repay its issued debt is deemed to be speculative.

Investment Grade Corporates A rating that indicates that a municipal or corporate bond has a relatively low risk of default.

Local Currency (LC) In the context of sovereign debt, bonds denominated in the issuing country’s own currency, rather than in the currencies of foreign investors.

LT Debt/Equity normalized scores

Adjusting values measured on different scales to a notionally common scale, often prior to averaging.

Mean-Variance Optimizer

A quantitative tool which will allow you to allocate your investments between different assets by considering the trade-off between risk and return.

MSCI Europe Value Index

Captures large and midcap securities exhibiting overall value style characteristics across the 15 Developed Markets (DM) countries in Europe. The value investment style characteristics for index construction are defined using three variables book value to price, 12-month forward earnings to price and dividend yield.

MSCI World Index

A broad global equity benchmark that represents large and mid-cap equity performance across 23 developed markets countries. It covers approximately 85% of the free float-adjusted market capitalization in each country but does not offer exposure to emerging markets.

MSCI World Ex Australia Index

Captures large and mid cap representation across 22 of 23 Developed Markets countries* (excluding Australial). With 1,581 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

Passive

A passive approach involves managing a portfolio so that it tracks an index such as the Bloomberg Barclays U.S. Aggregate Bond Index.

Portfolio algorithm

A set of rules for accomplishing a task in a certain number of steps.

Predicted return

The predicted gain or loss of a security in a particular period.

Price to Book

A valuation metric that compares a company’s current share price against its book value, or the value of all its assets minus intangible assets and liabilities. The P/B is a ratio of investor sentiment on the value of a stock to its actual value according to the Generally Accepted Accounting Principles (GAAP). A high P/B means either that investors have overvalued the company, or that its accountants have undervalued it.

Request For Proposal (RFP)

A type of bidding selection in which a company or organization announces that funding is available for a particular project or program, and companies can place bids for the project’s completion.

Return on Equity (ROE)

The amount of net income returned as a percentage of common shareholders’ equity. ROE shows how well a company uses investment funds to generate earnings growth.

Sales

The revenue that a company derives from the sale of its products.

Sovereign (Sovg)

Bonds issued by a national government in a foreign currency, in order to finance the issuing country’s growth. Sovereign debt is generally a riskier investment when it comes from a developing country, and a safer investment when it comes from a developed country.

Treasuries

Includes short-term Treasury bills (T-bills), medium-term Treasury notes and long-term Treasury bonds (T-bonds). One major advantage of treasuries is that they are exempt from state and municipal taxes — this is especially important in states with high income tax rates.

VIX

A trademarked ticker symbol for the CBOE Volatility Index, a popular measure of the implied volatility of S&P 500 index options; the VIX is calculated by the Chicago Board Options Exchange (CBOE).
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