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## Risk & Reward #01/2024

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### Rethinking 60/40 – systematic strategies to weatherproof balanced portfolios

Moritz Brand and Khanika Gadzhieva

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### Unlocking the edge of European outperforming funds

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We see a considerable performance differential between funds systematically exposed to established factors and those without a factor focus. On average, funds with positive factor exposures have a better chance of outperformance – and the more factors are used, the better the results.

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### THEORY AND PRACTICE

#### A perspective on the state of modern finance with Brian Bruce

Kenneth Blay

In our new series Theory and Practice, Kenneth Blay talks to asset management professionals who not only have a proven track record but are also leading academics. His first guest is Brian Bruce, founder of Hillcrest Asset Management and editor of various journals in the field of finance and investment.

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**Andrew Schlossberg**  
President and CEO  
of Invesco Ltd.

Some things in asset management rarely, if ever, change. The popularity of the 60/40 portfolio is one of these. However, our research shows that state-of-the-art modeling can improve even this perennial concept.

Indeed, the timeless idea – introduced to the world by Harry Markowitz in 1952 – of a portfolio with 60% equities and 40% bonds can deliver even better results when combined with a factor and risk overlay. That’s what our Quantitative Strategies Team found, based on a thorough analysis of past data.

And that’s not all our quantitative analysts share with you in this edition of Risk & Reward.

As you know, we believe strongly in the benefits of active management to not only enhance returns but also reduce risks vis-à-vis ever more popular passive approaches. Since not all active strategies are equally successful, we’ve examined why some funds outperform others – and made an interesting observation: there is a considerable performance differential between funds systematically exposed to established factors and those without a factor focus.

And we’ve launched a new interview series called Theory and Practice. In this edition, Kenneth Blay, Head of Research – Global Thought Leadership at Invesco, talks to Brian Bruce, founder of Hillcrest Asset Management and editor of various journals in the field of finance and investment. Find out what Brian has to say about topics from ESG to AI and more.

Take some time to enjoy this informative edition of Risk & Reward!

Best regards,

A handwritten signature in white ink that reads "Andrew".

**Andrew Schlossberg**  
President and CEO of Invesco Ltd.

# Rethinking 60/40 – systematic strategies to weatherproof balanced portfolios

By Moritz Brand and Khanika Gadzhieva

60% equities and 40% bonds – the ‘60/40 portfolio’ – is the longstanding archetype of a balanced portfolio. We examine the foundational 60/40 portfolio in detail and show how its risk and return profile can be further enhanced through factor and risk overlays.

Originally invented by Harry Markowitz in 1952,<sup>1</sup> the 60/40 portfolio still enjoys widespread popularity more than 70 years later. Markowitz argued that the limited correlation between stocks and bonds means allocating 60% to equities and 40% to fixed income will maximize risk-adjusted returns.

In theory, the equity portion of the portfolio drives returns while the bond allocation steadily collects carry and serves as an anchor in downward markets. Over the past 20 years, a global 60/40 portfolio would have returned 5.85% p.a. at an annualized volatility of 10.60% (table 1). With a Sharpe Ratio of 0.42, its risk-adjusted return would have been considerably above that of a pure bond portfolio and slightly above that of a pure equity portfolio – none of the other portfolio allocations in our table achieve a Sharpe Ratio above 0.42.



Table 1  
The 60/40 portfolio in comparison

(Equities/Bonds)	100/0	90/10	80/20	70/30	60/40	50/50	40/60	30/70	20/80	10/90	0/100
20-year Sharpe Ratio	0.41	0.42	0.42	0.42	<b>0.42</b>	0.41	0.40	0.37	0.33	0.26	0.17

Source: Invesco, Bloomberg; based on monthly data from January 2004 to December 2023 with monthly rebalancing. Equities as measured by the MSCI World Net Total Return Index (USD), bonds as measured by the Bloomberg Barclays Global Aggregate Total Return Index (USD).

But, despite such convincing long-term results, the feasibility of the 60/40 portfolio has frequently been a topic of debate among academics and practitioners. In periods of attractive bond yields, for instance, fixed income is often described as the more stable and less risky alternative. Conversely, the hunt for higher returns in low yield environments drives investors toward equities. Of course, timing remains crucial, so we will now decompose the risk and return profile and outline how investors can apply systematic strategies to deal with fluctuations and weatherproof the 60/40 portfolio.

#### Dissecting the 60/40 portfolio

Decomposing the volatility of our 60/40 model portfolio, 85.8% of its risk is attributable to the equity allocation. From the return perspective, a similar picture emerges with more than 80% of return performance stemming from stocks. In other words: Even though 40% of the portfolio consists of bonds, its return is largely driven by equities. For comparison, to achieve equal risk contributions from the two asset classes, roughly 72% would have to be allocated to bonds and 28% to equities.

Figure 1 shows the salient macroeconomic drivers behind a 60/40 portfolio as compared to pure equity and bond strategies. In line with the macro factor framework by Lohre et al. (2020), equities exhibit a strong exposure to growth and a moderately positive exposure to inflation. On the other

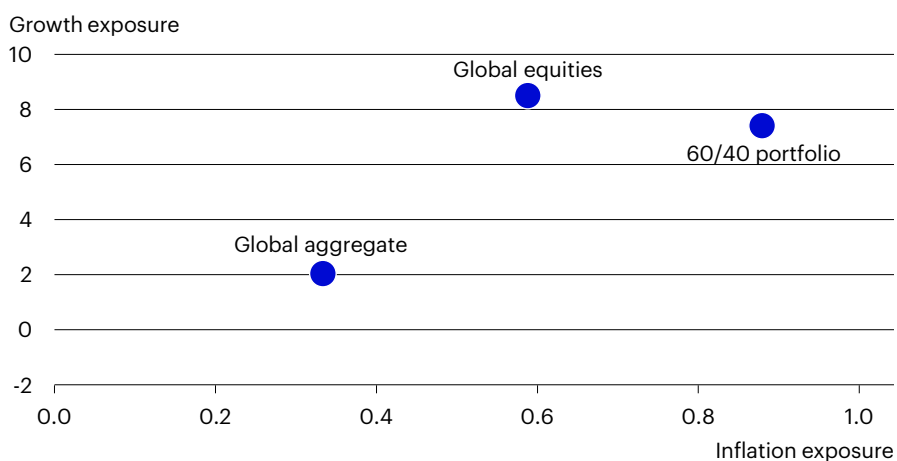
hand, fixed income as an asset class is moderately exposed to inflation and growth. This is because it is modeled as a combination of government and corporate bonds, with government bonds being defined as a pure defensive asset having negative exposure to both growth and inflation and corporate bonds being positively exposed to both factors. Despite a fixed income allocation of more than a third, the 60/40 portfolio is driven by growth exposure, though slightly dampened compared to a pure equity portfolio.<sup>2</sup>

#### Factor investing as a source of diversification

Often, the notion of diversification is limited to different asset classes, regions and industries. But within asset classes, factors can also offer an effective source of diversification. Factors describe quantifiable characteristics of securities, which can explain a significant portion of return differences within a given asset class.

Factor investing utilizes these characteristics – termed ‘style factors’ – to overweight securities with attractive risk and return characteristics and underweight securities with unattractive characteristics in a way that enhances diversification. By neutralizing unwanted active risks like country or industry positioning, asset managers can target excess returns via factor performance. We will now analyze the impact of a factor strategy on the 60/40 portfolio’s risk, return and diversification

Figure 1  
Growth and inflation exposure of different portfolio allocations I



Based on the macro framework developed by Lohre et al. (2020).  
Source: Invesco, Bloomberg; based on monthly data from January 2004 to December 2023 with monthly rebalancing. Equities as measured by the MSCI World Net Total Return Index (USD), bonds as measured by the Bloomberg Barclays Global Aggregate Total Return Index (USD).

Table 2

## Factors used in our analysis and their implementation

	Factor and rationale	Implementation
<b>Equity factors</b>	<p><b>Momentum:</b> Stocks with positive momentum tend to continue outperforming their peers.</p> <p><b>Quality:</b> Stocks with strong balance sheet quality tend to outperform those of companies with weaker balance sheets.</p> <p><b>Value:</b> Stocks with attractive valuations tend to outperform their more expensive counterparts.</p>	<ul style="list-style-type: none"> <li>Ranking-based creation of single-factor portfolios</li> <li>Equal risk contribution weighting to create a model portfolio</li> <li>Combining the model portfolio with an optimization benchmark</li> <li>Optimization to maximize alignment with the industry/region-neutral model portfolio, subject to constraints and transaction costs</li> </ul>
<b>Government bond (rates) factors</b>	<p><b>Carry:</b> Markets with steeper curves, historically high volatility and poor macro fundamentals tend to offer higher carry.</p> <p><b>Quality:</b> Lower volatility bonds tend to offer higher risk-adjusted returns.</p> <p><b>Momentum:</b> Bonds with positive return momentum tend to continue outperforming bonds with negative momentum.</p> <p><b>Value:</b> Bonds with higher real yields tend to outperform bonds with lower real yields, i.e., higher valuations.</p>	<ul style="list-style-type: none"> <li>Ranking-based creation of single-factor portfolios</li> <li>Equal risk contribution weighting to create a model portfolio</li> </ul>
<b>Corporate bond factors</b>	<p><b>Carry:</b> Bonds with the highest option-adjusted spreads tend to outperform.</p> <p><b>Low Volatility:</b> Lower risk bonds tend to outperform their riskier peers on a risk-adjusted basis.</p> <p><b>Value:</b> Bonds with higher spreads tend to outperform other bonds with similar characteristics.</p>	<ul style="list-style-type: none"> <li>Ranking-based creation of single-factor portfolios</li> <li>Equal risk contribution weighting to create a model portfolio</li> <li>Combining the model portfolio with an optimization benchmark</li> <li>Optimization to maximize alignment with the model portfolio, subject to constraints and transaction costs</li> </ul>

Source: Invesco. For government bond (rates) factors, see Kothe et al. (2021); for corporate bond factors, see Raol et al. (2023).

profile using a number of factors for the different asset classes and implementing them as described in table 2.

Integrating style factors into the equity and (government and corporate) bond components of the 60/40 model portfolio, as can be seen in table 3, would have led to more favorable overall portfolio characteristics. The annual return would have been 54 basis points higher with a comparable level of absolute volatility. Based on a realized tracking error of 1.7%, the factor overlay would have led to an information ratio of 0.31. However, the maximum drawdown of the strategy would have increased by roughly 1% due to the challenging factor performance during the Global Financial Crisis (GFC).

In terms of calendar year performance (not shown here), two periods stand out negatively – 2007/08 as well as 2018-2020. During those five years, factor weakness weighed on passive 60/40 performance by an average of 300 bp p.a., while the average active annual return over the remaining 15 years was a positive 175 bp.

For the factor overlay, we observe a neutral exposure to growth (-0.04) and a positive exposure to inflation (1.15), as shown in figure 2. Nevertheless, the overlay does not significantly change the 60/40 portfolio's macro factor exposures, which are still driven by equity beta. While the factor overlay offers a viable option to add a systematic excess return driver, as well as a diversifying element, portfolio risk remains dominated by the growth factor.

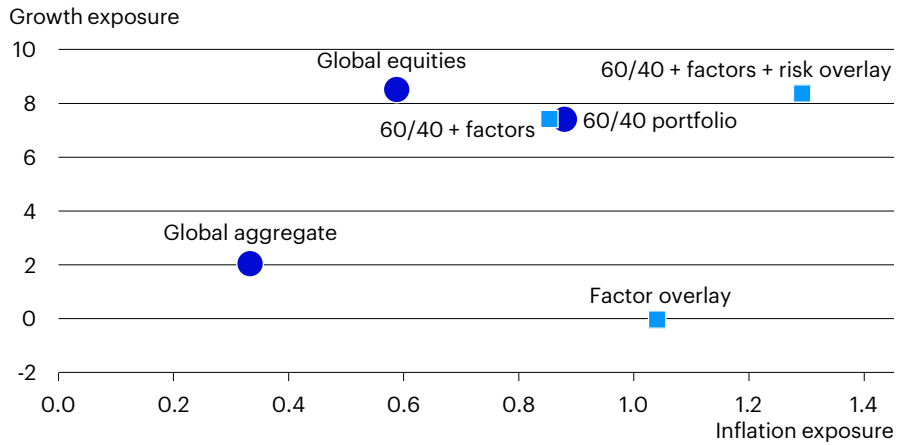
Table 3

## The 60/40 portfolio with different overlays in comparison

	60/40	60/40 with factor overlay	60/40 with factor and risk overlay	Cash
Return (p.a.)	5.85%	6.40%	7.08%	1.40%
Volatility (p.a.)	10.60%	10.71%	9.02%	-
Sharpe Ratio	0.42	0.47	0.63	-
Tracking Error	-	1.74%	3.53%	-
IR (vs. 60/40)	-	0.32	0.35	-
Max DD	-36.40%	-37.58%	-26.29%	-

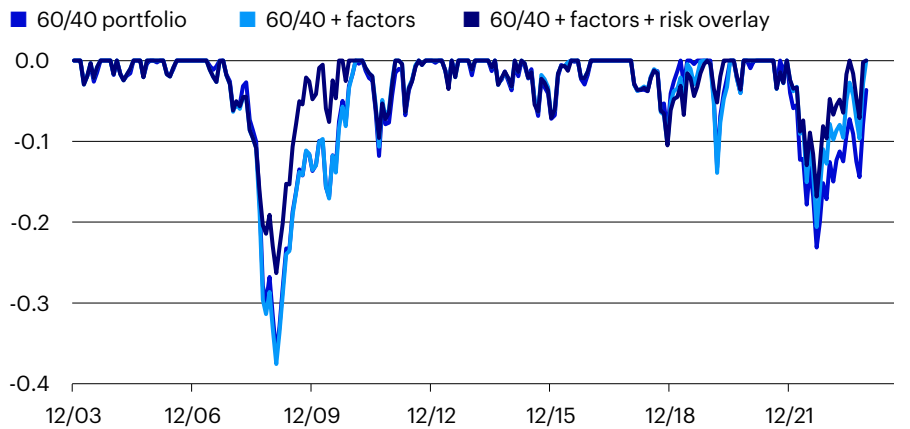
Source: Invesco, Bloomberg; based on monthly data from January 2004 to December 2023 with monthly rebalancing. Equities as measured by the MSCI World Net Total Return Index (USD), bonds as measured by the Bloomberg Barclays Global Aggregate Total Return Index (USD).

Figure 2  
**Growth and inflation exposure of different portfolio allocations II**



Source: Invesco, Bloomberg; based on monthly data from January 2004 to December 2023 with monthly rebalancing. Equities as measured by the MSCI World Net Total Return Index (USD), bonds as measured by the Bloomberg Barclays Global Aggregate Total Return Index (USD).

Figure 3  
**Maximum drawdown over time**



Source: Invesco, Bloomberg; based on monthly data from January 2004 to December 2023 with monthly rebalancing. Equities as measured by the MSCI World Net Total Return Index (USD), bonds as measured by the Bloomberg Barclays Global Aggregate Total Return Index (USD).

Consequently, even after factor integration, the 60/40 portfolio could be subject to stock market crashes such as during the Global Financial Crisis or the Covid-19 sell-off.

**Risk overlay as a defensive addition**

Accordingly, we will also add a risk management overlay; since we are not aiming to achieve a predefined drawdown limit, we use an expected shortfall cap strategy.<sup>3</sup> In essence, our t-GARCH copula risk model<sup>4</sup> evaluates portfolio risk daily. Whenever the daily expected shortfall estimate exceeds 2.5%, equity exposure and duration risk are hedged proportionally to reach an estimated expected shortfall of 2.5%. As sharp market drawdowns typically go hand in hand with elevated volatility, this mechanism can help implicitly reduce drawdowns. The results of a 60/40 portfolio with both a factor and a risk overlay are also shown in table 3.

The risk overlay effectively reduces volatility and maximum drawdown, while absolute and risk-adjusted performance increase. In general, risk overlay strategies are comparable to buying drawdown insurance, which is expected to reduce absolute returns over the long run. It is possible, therefore, that the observed increase driven by the high effectiveness of the risk overlay mechanism during both the GFC in 2008/09 and the Covid-19 sell-off in the 1st quarter of 2020 may represent an exception.

Since the risk overlay has a positive inflation exposure, total inflation exposure rises when it is added to the passive 60/40 portfolio (figure 2).

Furthermore, as expected, the risk overlay carries a strong negative growth exposure. Surprisingly, however, the portfolio's growth exposure rises rather than falls when the overlay is added. Its defensive qualities manifest themselves in the

volatility and drawdown reduction shown in table 3 – and they can be further observed in the development of the maximum drawdown over time, as can be seen in figure 3.

### Conclusion

Systematic investment strategies can help long-only equity and bond investors weatherproof their growth-driven portfolios through application of defensive and inflation-sensitive overlays. A risk management mechanism can serve as a

safety net in times of elevated market volatility, whereas factors in the equity and bond allocation exhibit positive inflation exposure which can improve portfolio performance during inflationary periods. While our 20-year period dominated by low inflation may not be fully representative for all potential future scenarios, our analysis indicates that incorporating factors would indeed have added significant value over the past three years of high inflation.

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### Notes

- 1 Markowitz (1952).
- 2 In a subsequent article, we will analyze how a 60/40 can be made more resilient by adding inflation and defensive exposure through a combination of systematic elements while limiting the investment universe to equities and (government and corporate) bonds, plus short positions in listed futures on those asset classes (for hedging).
- 3 For different methods see Lohre et al. (2018).
- 4 Happersberger et al. (2019).



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# Unlocking the edge of European outperforming funds

By Georg Elsaesser, Viorel Roscovan and Hao Zou

We see a considerable performance differential between funds systematically exposed to established academic factors and those without a factor focus. On average, funds with positive factor exposures have a better chance of outperformance and achieve significantly higher alphas – and the more and the more rewarding factors one uses, factors are used, the better the outperformance outcomes.



**Active equity funds have garnered renewed attention of late, propelled by the performance rebound in recent years. Amidst the ebb and flow of relative returns, a subset of active managers has demonstrated the ability to generate considerable alpha – at least before costs.**

We've analyzed a sample of established pan-European equity funds managers, aiming to uncover the underlying drivers contributing to their success. To this end, we looked at the nuanced interplay between proven factors and their impact on performance.<sup>1</sup> As such, we implicitly tested the hypothesis that every investor is a factor investor. By systematically assessing the exposures to specific factors of the strategies in the sample, we show that funds with positive factor exposures have better chances to outperform their peers.

## **Methodology and data: a long-term perspective**

We take a long-term perspective to assess the performance drivers across different market environments, including periods marked by significant crises, such as the Global Financial Crisis and the Covid-19 pandemic. Our sample consists of all pan-European funds in the eVestment database with at least 20 years of return data between January 1991 to September 2023 – 259 in total, representing a broad and diverse sample with a long track record. Since not all funds have existed throughout the full sample period, we are left with an unbalanced sample. Some funds weren't launched until later, others ceased to exist before the end of the assessment period, and in some cases both are true. The sole requirement for inclusion is that the fund existed for at least 20 years within the date range.

To ensure that our sample is representative of the MSCI Europe benchmark, we first run a 1-factor model regression (CAPM) and retain only funds with an R-squared above 60%, i.e., a risk and return profile similar to the broader market index. 66 funds meet our criteria of long-term perspective and alignment with the European investment opportunity set. Fund performance is measured via the intercept from this 1-factor regression.

To classify a fund as a factor fund, we closely follow the concept methodology proposed by van Gelderen and Huij (2014).

For each fund in our sample, based on European monthly factor returns from Kenneth French's data library, we estimate a five-factor Fama and French model,<sup>2</sup> augmented by the momentum factor and using all available return observations. Following Fama and French, we use "Market" (MKT) for the low beta factor, "Small Minus Big" (SMB) for the size factor, "High Minus Low" (HML) for the value factor, "Robust Minus Weak" (RMW) for the profitability factor and "Conservative Minus Aggressive" (CMA) for the quality factor. The momentum factor is represented by "Winner Minus Loser" (WML).<sup>3</sup>

A fund is deemed to be a factor fund if the regression coefficient of the respective factor is positive and statistically significant – i.e., we require the t-statistic of the corresponding coefficient to be greater than 2. A fund is classified as low beta if the market beta from the corresponding augmented Fama and French regression is below 0.9. Because a fund can have positive exposures to one or more of the above factors, a single fund may be assigned to different factor categories.

The next step is to investigate whether the funds in our sample using a factor investing strategy earn higher alphas than actively managed mutual funds without a factor focus. To this end, we compare the distribution of fund alphas of conventional funds with those of funds with significant factor exposures.

With respect to our sample selection, fund classification, and performance evaluation, it is important to acknowledge potential caveats. For instance, survivorship bias is inherent in every database, stemming from removal of unsuccessful strategies over time. Furthermore, our analysis disregards management costs, focusing solely on gross returns; this could skew results in favor of funds without significant factor exposures, as traditional actively managed funds tend to have higher management fees. Lastly, while the 20-year horizon may appear somewhat arbitrary, it was intentionally chosen to ensure the inclusion of multiple distress periods, including the Global Financial Crisis and the COVID-19 crash, while still having a reasonably large sample size. Our choices closely follow the academic literature with regard to cut-offs for R<sup>2</sup>, the definition of a low beta fund, and the t-statistic threshold. It is also crucial to note that this analysis, centered as it is on returns, does not explicitly capture any dimensions of risk.

#### Empirical results

Our results indicate that factor funds are far more likely to achieve active returns (table 1) – and that funds with multiple factor exposures, i.e., positive sensitivities to more than one factor, perform significantly better still (table 2).

According to table 1, funds focusing on specific factors are more likely to achieve alpha than traditionally managed mutual

Table 1  
**Success ratios by factor exposure**

	Alpha < 0%	Alpha > 0%	Number of funds
All funds	19.7%	80.3%	66
Funds without factor exposure	64.3%	35.7%	14
Size	3.4%	96.6%	29
Value	13.3%	86.7%	15
Momentum	9.1%	90.9%	22
Profitability	0.0%	100.0%	14
Quality	0.0%	100.0%	10
Low beta	0.0%	100.0%	6

Sources: eVestment, Ken French database, MSCI, Invesco. Sample period from January 31, 1993 to September 30, 2023.

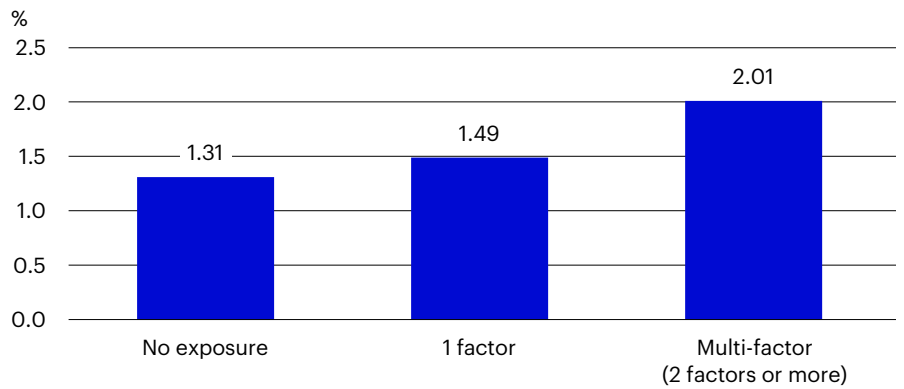
Table 2  
**Success ratios of traditional, single, and multi-factor funds**

	Alpha < 0%	Alpha > 0%	Number of funds
No factor exposure	64.3%	35.7%	14
1 factor	13.0%	87.0%	23
2 factors	5.9%	94.1%	17
3 factors	0.0%	100.0%	9
4 factors	0.0%	100.0%	3

Sources: eVestment, Ken French database, MSCI, Invesco. Sample period from January 31, 1993 to September 30, 2023.

Figure 1

**Annualized alpha of traditional, single, and multi-factor funds**



Sources: eVestment, Ken French database, MSCI, Invesco. Sample period from 1 January 31, 1993 to September 30, 2023. **Past performance does not predict future returns.**

funds. While a substantial 80.3% of funds in our sample tend to outperform the benchmark (before costs), a significantly lower 35.7% of traditionally managed mutual funds achieve long-term alpha. Notably, this percentage dramatically increases for certain factors – to 96.6% for size, 86.7% for value, 90.9% for momentum, and 100% for quality and low beta funds.

The final step is to categorize funds based on the number of factors to which they are exposed (table 2). Interestingly, we found no funds with simultaneous exposure to all factors. The results show that outperformance of both single and multi-factor funds is far more likely than outperformance of funds with no factor exposure. Furthermore, when more factors are incorporated, chances of outperformance increase substantially.

To quantify the performance differentials between factor funds and conventional actively managed funds, we plot the annualized alphas of the different groups (figure 1). In our sample, the average

buy-and-hold alpha (before costs) of a traditionally managed fund is 131 bps p.a., compared to 149 bps for single-factor funds and a remarkable 201 for multi-factor funds.

**Conclusions**

For actively managed pan-European equity funds with a long track record, our results show a clear difference between funds with positive exposures to established academic factors and funds without. On average, funds with positive factor exposures are more likely to outperform – and exhibit significantly higher alphas. This underscores the potential benefits of allocating funds to managers who systematically harvest factor premiums. Furthermore, since the probability of outperformance increases with the number of factors harvested, asset owners should consider multi-factor rather than single-factor funds. This gives them an even better chance to leverage the inherent advantages of systematic factor premium harvesting over the long term.

**Notes**

- 1 At Invesco Quantitative Strategies, we recognize size as an enabler that facilitates harvesting of value, momentum, quality, and low volatility premiums. Hence, we do not unwaveringly accept the existence a size premium. Nevertheless, the size factor remains popular in both academia and the industry. As such, we incorporate it into our analysis.
- 2 Fama and French (2015).
- 3 A description of the five Fama-French factors can be found at [https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data\\_library/f-f\\_5\\_factors\\_2x3.html](https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library/f-f_5_factors_2x3.html) and [https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data\\_Library/f-f\\_developed\\_mom.html](https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data_Library/f-f_developed_mom.html), respectively.



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# A perspective on the state of modern finance with Brian Bruce

In our new interview series Theory and Practice, Kenneth Blay, Head of Research, Global Thought Leadership at Invesco, talks to leading finance researchers and practitioners to gain insights on the latest thinking shaping the practice of investment management.

**Kenneth's first guest is Brian Bruce, editor of The Journal of Beta Investment Strategies, The Journal of Investing, and The Journal of Impact and ESG Investing. That puts him at the center of the latest thinking by investment academics and practitioners across three different domains, including what are arguably two of the most dynamic areas of investing today.**

**Brian recently retired from Hillcrest Asset Management where he was CEO and CIO. Before founding Hillcrest, Brian was CIO at Panagora Asset Management, director of the Alternative Asset Management Center at the Cox School of Business at Southern Methodist University and held investment roles at State Street Global Advisors and Northern Trust.**

## The Evolution of ESG

### **Kenneth Blay**

To begin our conversation, what are you seeing that's particularly significant in finance today?

### **Brian Bruce**

The short answer: ESG! It's evolving so quickly.

When I first got involved in ESG at State Street Global Advisors in 1990, it was still called socially responsible investing – and it was a very niche product. Eventually, it became ESG and has become extremely popular in Europe. Environmental concerns began driving a lot of organizations to include ESG in their models. It seemed like everybody was creating an ESG product. But that led to greenwashing: If you didn't have an ESG product, you took an existing product and said, "Our analysts also look at ESG factors." This caused a huge political backlash in the US.

Will ESG continue to grow? Well, there are still substantial asset inflows – but they've stopped growing at the tremendous pace of two to three years ago. That said, investors should always be wary of trendy investments. Portfolio insurance was supposed to be the next big thing, 130-30 investing was supposed to change investing forever. Investors need to distinguish between what's a significant improvement and what's simply created to gather assets and collect fees.



### **Kenneth Blay**

We've published research that argues ESG should be treated as separate objective alongside return and risk objectives. We then proposed an evaluation and attribution framework for understanding what's actually happening in an ESG investment. The key is understanding whether an investment is really accomplishing its stated ESG objectives. Are investors now taking this proposal to heart—that if we're going to do ESG, we need to do it right?

### **Brian Bruce**

I think ESG came on so quickly that people didn't really think about what its purpose should be. Should a public fund take a position that not all their beneficiaries agree with? For a large fund with a lot of beneficiaries, ESG should be part of the investment process if it adds to the existing process. If you're just trying to exclude something, that's an investment for an affinity group. Cater your ESG to who the actual investor is.

### **Kenneth Blay**

This reminds me of what Thomas Sowell said so well: "The most basic question is not what is best, but who shall decide what is best." Investors today are realizing that they can't simply outsource their values. They are paying much more attention to whether a fund aligns with their preferences. To me, that's a positive.

### **Brian Bruce**

Absolutely. As a beneficiary, I don't want a gatekeeper deciding which values should apply. It's much better, and much more stable long-term, when people can make those decisions themselves.

## **Build In-House or Hire Expertise?**

### **Kenneth Blay**

A continuing trend among investors is the focus on costs. McKinsey recently observed that as larger institutional investors have grown, many are building their own investment capabilities. But there is a tradeoff in terms of costs and capabilities. What should they build in-house, and what should they partner on? Has technology such as generative AI and LLMs changed things?

### **Brian Bruce**

The internal-external hybrid has been around for a long time. There are many variations on the same theme. And for each firm, the ultimate configuration depends on what the costs are, because two of the biggest drags on investment performance are fees and expenses. For example, a pension fund we worked with indexed everything in-house. With low internal indexing costs, they saved hundreds of thousands per year. That goes straight to beneficiaries – and that's fabulous!

On the other hand, consider the earliest active models: If you didn't have your own

earnings revision model, you could buy it and include it in your investment process. And it added something. But soon, everyone else was doing it too, and so it added less – there's your trade-off. For example, one academic analyzed "information clusters": a press release and analyst reactions to it over five days would be a cluster. As the industry moved to that shorter and shorter time period, we found that everybody was ignoring the longer-term data. And there's value in longer term trends. So that's another trade-off – using outside sources may also stop you from thinking about that part of the process and understanding what's happening.

When everybody is looking at the same signal, you have to be fastest to implement the information. That's not what a long-term investor should do. We should build products for retirees with long holding periods, and without the transaction costs or high turnover that lower retirees' returns. Firms really have to think about all those tradeoffs – what they're gaining, what they're missing – and really focus on costs.

### **Kenneth Blay**

But doesn't it make sense to work with an asset manager who has access to all the data – and experience in using it? Natural Language Processing is a key example – the data costs can be prohibitive for a regular investor and fully understanding the nuances of the data can be daunting. It seems only the big firms will be able to actually use it. What's your view?

### **Brian Bruce**

As data becomes more expensive, and as models become more expensive, it again goes back to costs. A partner who can provide that access and expertise is clearly at an advantage. But every year the data bill goes up – especially for data providers where there's no alternative. And, at the same time, you're trying to come up with a strategy with costs that don't eat away too much at returns, which is really important for investors.

### **Kenneth Blay**

And there are also economies of scale not on just the data costs but also on the expertise required to implement that data. That's something I think a lot of people miss. These are teams that have spent years analyzing and understanding the nuances of the data. That's something you simply will not get without spending the time reviewing, understanding, and cleaning the data.

### **Brian Bruce**

That has always been the case. At SSGA, we got 20 or 30 different data feeds and employed six people who did nothing but load and clean data to put it in our databases. When we first met with one of the data aggregators, we were thrilled. They cleaned all the data and – with 450 clients – if there was a problem, it was immediately fixed. And we got all that for less than the price of one employee. So

that has always been the case and, with even more data out there, including more ESG data, that's even more important.

## The Impact of Artificial Intelligence

### Kenneth Blay

Let's talk a little about the impact of generative AI on institutional investors and asset managers.

### Brian Bruce

I think it'll be most useful in helping investment analysts go through data. Retail analysts use AI to scrape through tons of information – for instance, AI can analyze how full parking lots are over time at different stores. All these things AI can do will give analysts better information for making better, more informed decisions. But I don't think we're anywhere close to throwing in every factor you can think of and telling an AI to pick a stock. That's asking way too much of the technology.

### Kenneth Blay

Indeed ... I recently asked AI to write an abstract for a hundred-page document. In about 30 seconds it produced something reasonable, but a lot of context was missing. Then there's the black box problem: As a fiduciary, how do you explain the performance of an AI when you don't understand why it's selecting a security? Harry Markowitz wrote about the division of labor between man and machine. It doesn't seem to me that man can be taken out of the equation and that it's going to be all machine. I can see AI helping to inform decision-making. But man needs to apply judgment over what's actually happening.

### Brian Bruce

You're absolutely right! Just because it's AI doesn't mean you don't have the problems you've always had with quantitative investing. It's really just a more sophisticated method of quantitative analysis. There are still clearly issues with AI. My favorite example: They trained an AI to distinguish between dogs and wolves. They had a set of training data and they did it all the right way. When they ran it through out-of-sample data, it was perfect. Then they rolled it out – and it was wrong half the time or more. It was just random. No ability to predict whatsoever. What they finally figured out was that all the sample wolf pictures had snow in the background and none of the dog pictures did. The AI's main decision rule was, if there's snow, it's a wolf. It backs up the point about the black box. And this is what you have to be worried about as an investor – turning over asset management to something you don't really understand.

### Kenneth Blay

This explains why there's now a focus on "causal correlations". For example, looking at the data, it might seem like ice cream sales and shark attacks are related... they both increase at the same time. But it's not

that those two things are related – they're both related to a third factor, which is summer. However, looking at ice cream sales tells you nothing about shark attacks and vice versa.

AI developers are spending a lot of time trying to get machines to distinguish between correlated things that are causally related and things that aren't. But I think that still has a long way to go.

### Brian Bruce

We're nowhere near AI being able to understand that kind of nuance.

## Passive, Systematic, and Beta Investing

### Kenneth Blay

Now ... let's talk about risk. One of the biggest advances in investment management is the focus on risk. In 1952, Harry Markowitz put forth variance (standard deviation) as a metric that allowed for a quantification of risk. Risk management research has advanced substantially since then. I would argue that nowhere is risk management most central to portfolio management than in modern customized systematic investing strategies that have some type of benchmark- or exposure-awareness. Was that behind the 2022 relaunch of The Journal of Index Investing, when it became The Journal of Beta Investment Strategies? What's your perspective on this shift from pure indexing to strategic beta and systematic strategies?

### Brian Bruce

Even when I ran SSGA's global index group many years ago, we had a number of different products beside just straight indexing. And there were different ways of replicating an index – stratified sampling, and so on. And we'd be asked when is it indexing and when is it active management? My answer was: "If you own all 500 names in the exact proportion they're represented in the S&P 500, that's indexing. If you own only one name, that's an active fund." But where along that continuum does a strategy move from active to passive? If I tilt toward value in my index fund, is it passive or active? It can get quite murky.

Back then, SSGA had a passive group and an active group. About 10 years ago, the passive group became the beta group, and included all the smart beta and factor products. Today we see all sorts of variations. And so, "The Journal of Index Investing" as a title seemed antiquated. "The Journal of Beta Investment Strategies" really captures where the industry has gone – and continues to go.

### Kenneth Blay

Ultimately, any investment strategy has two components: a set of securities and a set of weights. Traditional passive is just the broad market, and the weighting rule is the market cap weights. There are very low information requirements.

To me, anytime you begin incorporating information that needs to be updated regularly, that becomes an active strategy, whether it's in security selection or in how securities are being weighted in the portfolio.

In research we've conducted as part of producing a forthcoming monograph for the CFA Institute Research Foundation on the future of asset management beyond passive investing, we've found that a very large portion of passive investing is actually US Large Cap equities and, more specifically, US Large Cap Blend equities. In fact, we argue that the most "at-risk" strategies going forward will be these core passive exposures. Technology advancements and decreasing trading costs have allowed for the customization of these exposures to include client preferences. This transition to what we call hyper-managed strategies that will use "systematic" approaches to address multiple objectives. First the investor's long-term objective, then the inclusion of preferences or exposures the investor wants. "Systematic" seems much more descriptive of what's actually happening.

#### **Brian Bruce**

"Systematic" is a nice umbrella term on the beta side. You've got strict passive strategies and then you've got systematic strategies.

#### **Kenneth Blay**

Smart beta strategies, which are essentially systematic investing, took off and started gaining traction around 2010. Now they seem to have plateaued in terms of global AUM. Is there really waning interest in these strategies or are they simply leaving pooled funds and going into separately hyper-managed investor accounts?

#### **Brian Bruce**

I've got a slightly more behavioral view of the slowdown in systematic strategies. People have a very hard time not chasing returns. But if the benchmark beats you a lot, you're not as eager to move away from baseline. Today, the Magnificent Seven have been driving large cap returns – and I think that quells the desire to move to other strategies, because they have a harder time showing outperformance. And that's what people are trying to buy.

#### **Kenneth Blay**

But that exposes you to other risks, which more risk-managed strategies are designed to address.

### **Active Investing Today**

#### **Brian Bruce**

It makes active management hard too. Let's say there are three companies in the S&P 500 doing so well that they're each 5% or 6% of the benchmark. Let's also say I'm really concentrated, really active, and I have a standard position of 4% – and I want to own those three large names. If I buy my 4% position, I'm underweight, so I'll

underperform the benchmark because I don't have a weight above 4%. If I believe in a company with a 5% weight – how do I get an active position? Well, I have to buy 9%! Regarding risks and portfolio construction, when some companies in the market are very large and doing very well, you need to put a lot of thought into how you're building portfolios and what you want to invest in.

But people often don't understand that. If an investor has a position in the biggest company in S&P 500 and it does well, the investor is still going to underperform the benchmark because they didn't overweight the company!

#### **Kenneth Blay**

That's a key problem with active management – having to be benchmark aware. Concentrated markets take away your ability to make active bets. When seven stocks make up 30% of your benchmark you have substantially less freedom to add value with active positions while maintaining benchmark awareness.

#### **Brian Bruce**

That's the key – you're managing risk relative to the benchmark.

#### **Kenneth Blay**

And that's why I think, if active management is going to thrive, it has to somehow break that tie – which will require a lot of understanding from investors. We see it with market cap weight and equal weight versions of S&P 500 index funds. Under normal market conditions, equal weight outperforms market cap weight. In concentrated markets, equal weight tends to underperform, while market cap-weighted funds are more exposed to the winners.

#### **Brian Bruce**

Which makes perfect sense. How do you get to be the biggest weight in the index? It's because everything's gone right. For instance, say you have tremendous market share: Your company is hitting on all cylinders, investors love you and they bid up your multiple to a 50% increase over the benchmark. What is likely to happen over some reasonable period of time? You'll do worse! Your multiple will fall toward the average because your product won't get to one hundred percent market share.

Today, the largest companies are doing best. That's why the benchmark is hard to beat. When the largest companies have peaked and are starting to return to normal returns, if investors weight them equally they're underweighting the largest companies relative to the benchmark. That should be the normal state of investing – and that suggests you should outperform most of the time with an equal-weighted benchmark.

#### **Kenneth Blay**

So, are you seeing a lot of interest in direct indexing?



**Brian Bruce**

It's going to be a core capability of all the major investment firms. I think younger generations are more interested in having their beliefs reflected in their portfolios. That's going to fuel direct indexing, so I see it over the next five or 10 years as a significant place for asset flows. We dedicate one issue every year to direct indexing because there is so much interest.

**How Can Asset Managers Differentiate Themselves?**

**Kenneth Blay**

That means asset managers will need to stand out as experts in customization. Research and innovation are key, as is broadly sharing your ideas. I believe one of the best ways to do that is through publishing research in journals like yours.

**Brian Bruce**

Even if you have a decent reputation, people still read your marketing piece as marketing – intended to sell. A journal takes the marketing out of the equation.

The ideas you share in your article need to be testable. You have to show you've done your research, show you have expertise and that you've created something with it, and everything has been blind reviewed. This gives readers significantly greater confidence that they are being presented with a good, vetted idea. The advantage of published articles is that they're not marketing. They're peer-reviewed, they're vetted. Demonstrating that you can produce research that stands up to scrutiny will become an increasingly important differentiator for most firms.

**Kenneth Blay**

Brian, thank you very much for your time.



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Head of Research  
Global Thought Leadership

Kenneth leads the development of original research through collaborations with investment teams, industry researchers and institutional clients.



**Brian Bruce**

As editor of The Journal of Beta Investment Strategies, The Journal of Investing, and The Journal of Impact and ESG Investing, Brian Bruce has his finger on the pulse of the latest thinking by investment academics and practitioners alike. He recently retired from Hillcrest Asset Management – where he was CEO and CIO. Before founding Hillcrest, Bruce was CIO at Panagora Asset Management and Director of the Alternative Asset Management Center at the Cox School of Business, Southern Methodist University. He also held investment roles at State Street Global Advisors (SSGA) and Northern Trust.

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