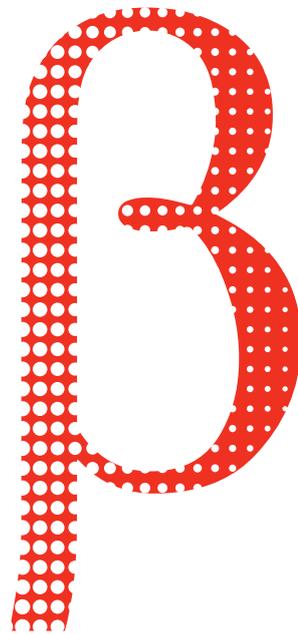


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A large, stylized letter 'B' composed of a grid of small red dots, centered within a white circle. This white circle is itself centered within a larger, solid orange circle. The background of the entire page is a solid red color.

Smart Beta

October 2014

Acknowledgements

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Foreword

The industry is increasingly embracing this new approach and some notable and large pension funds have adopted significant Smart Beta exposures.

Andy Clark

CEO, UK, HSBC Global Asset Management

At HSBC Global Asset Management, we seek to develop long-term partnerships and successful relationships by providing appropriate and transparent investment solutions and by providing information in a clear and understandable format.

As such, we are delighted to publish our second NAPF Made Simple guide, this time on the topic of Smart Beta, which is gaining popularity as an investment strategy and is increasingly being considered by trustees, pension managers and their investment consultants. Through our own range of Smart Beta indices, we seek to offer clients stable and attractive returns, via an intuitive and cost effective solution and notably in 2014, the UK's National Employment Savings Trust (NEST) selected our approach to provide members with exposure to emerging markets by weighting companies based on their 'economic footprint', rather than their market capitalisation.

This guide has been written to offer an overview of Smart Beta, answering some of the questions you may have when exploring this asset class for the first time.

Stuart White

Head of Institutional, UK, HSBC Global Asset Management

The world of investment management has long been divided in two approaches: passive management (matching the performance of a given benchmark) and active management (beating the performance of a given benchmark). Smart Beta offers another way: the transparency, reliability and cost efficiency of passive management allied with the outperformance potential of active management.

The industry is increasingly embracing this new approach and some notable and large pension funds have adopted significant Smart Beta exposures. For example the Dutch pension fund PGGM has invested 40% of its equity exposure into Smart Beta; APG, another Dutch fund has also invested; and The Japanese Government Pension Investment Fund has recently announced that it has moved money into Smart Beta strategies.

We hope that you find this Smart Beta guide and the glossary section useful and that it provides you with practical insights to assist you in your decision making process.

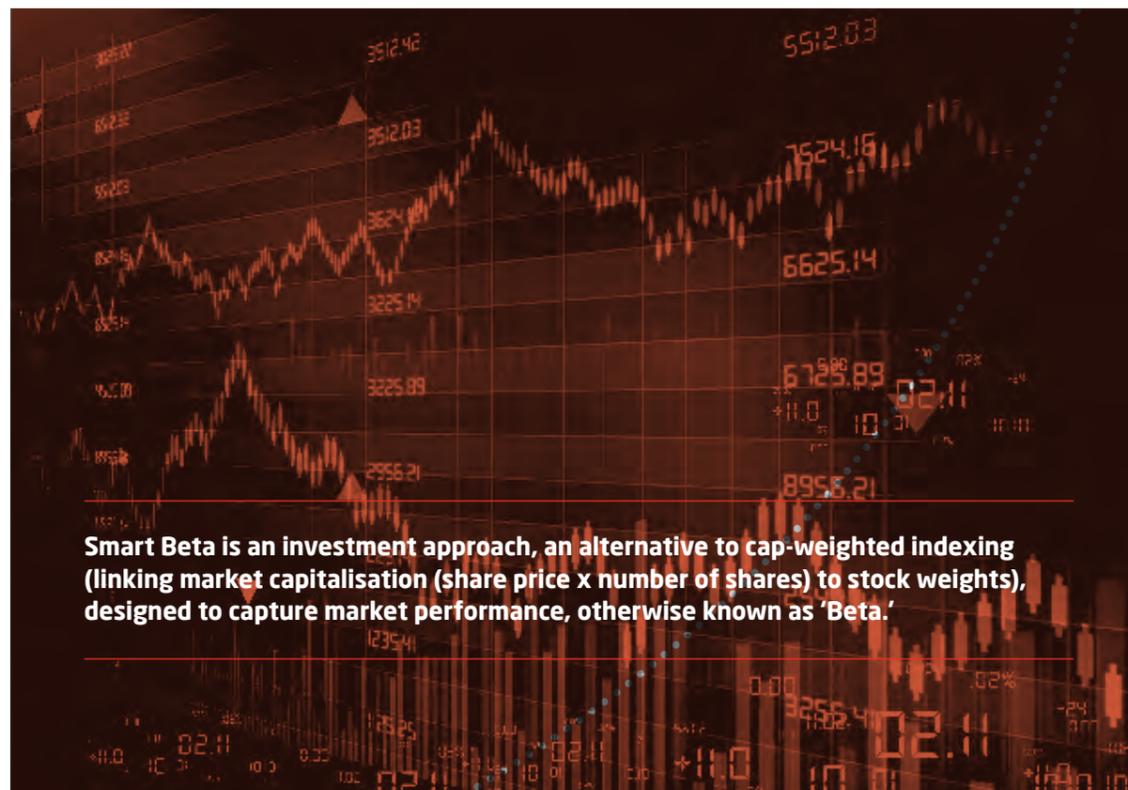
Executive Summary

This guide (including a glossary section) aims to provide clarity and insight into Smart Beta and how it can be used to help meet the investment objectives of Pension Schemes.

European investors are leading the way in allocating assets to Smart Beta solutions. In Europe, 40% of those surveyed have made an allocation to these strategies. The Dutch pension fund PGGM, for example, has invested 40% of its equity exposure in alternative-weighting schemes. In total, European

institutions have allocated more than USD100 billion to Smart Beta, and this is expected to increase fourfold to over USD400 billion by 2018¹. In the UK there has been a growing interest in Smart Beta.

At HSBC Global Asset Management, we recognise that Smart Beta is gaining industry traction, as these strategies aim to keep the better part of indexing (low cost, transparency, highly diversified, etc.) whilst offering potentially better performance than traditional cap-weighted indexing.



¹ For more details see Spence Johnson's Investment Product Market Intelligence Smart Beta 2014 report

1 What's in a name?

There are a wide variety of Smart Beta strategies. Each strategy is a way of capturing a particular source of alpha or returns over the risk free rate, that is a driver of returns, ranging from the more passively implemented (seeking to faithfully track a given index) to the more actively implemented (seeking to outperform a given index).

We at **HSBC Global Asset Management**, just as others such as **Spence Johnson** and **Cass Consulting**, broadly categorise Smart Beta as weighting techniques which can be simple (eg equal weighting) or mathematical based (eg low volatility / minimum variance). **Towers Watson** also define Smart Beta in a similar manner 'Smart Beta is simply about trying to identify good ideas that can be structured better, whether that is improving existing beta opportunities or creating exposures or themes that are implementable in a low cost, systematic way'. In summary they think Smart Beta should be simple, low cost, transparent and systematic.

Below is a list of terms (although not exhaustive) that fall under the umbrella of Smart Beta:

- Smart Beta**
- Efficient Beta**
- Alternative Beta**
- Advanced Beta**
- Customised Beta**
- Strategic Beta**
- Alternative indexation**
- Enhanced indices**
- Alternative weightings**

The term 'Smart Beta' is a broad umbrella term, covering many definitions and classifications, ranging from simple to complex methodologies. Each offers an alternative to cap-weighting schemes.

2

The traditional approach: cap-weighted indexation

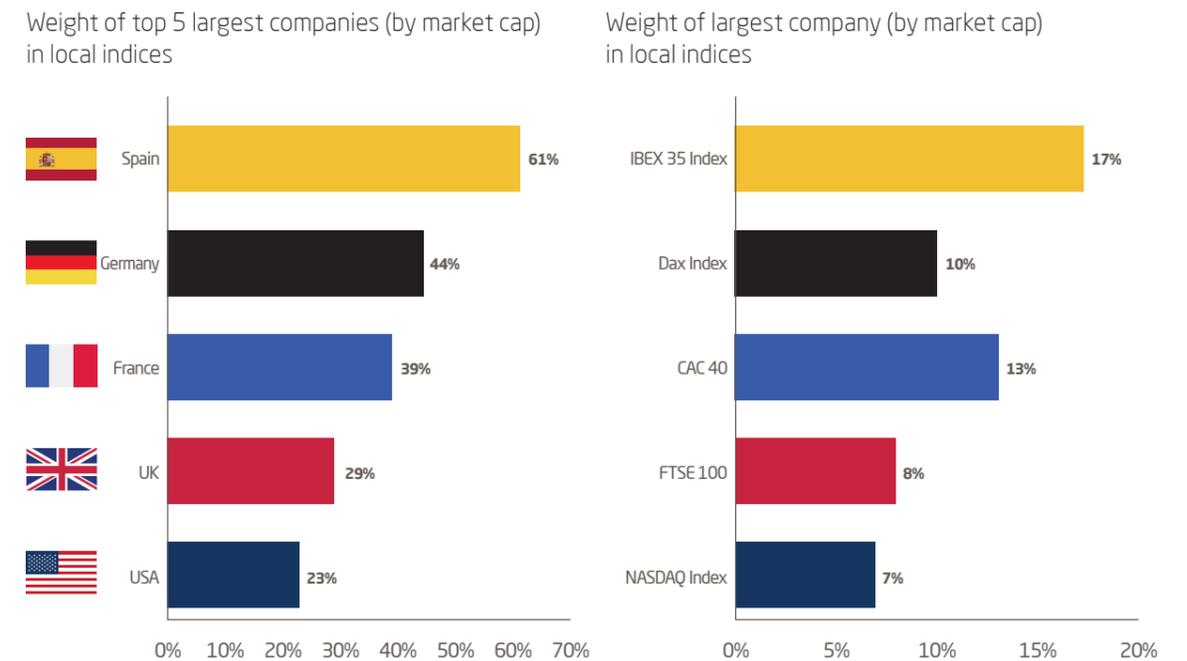
In allocating assets, investors have traditionally focused on combining low-cost, passive strategies with alpha-seeking active management. For some time, market-cap-weighted indexation has been the most popular way to gain exposure to the market (capture risk premium, or beta). The cap-weighted index also remains the main reference/benchmark for most investors when assessing the performance of active managers.

In cap-weighted indices, weightings are based on stock prices and vary as stock prices move. This leads to some unwelcome index characteristics:

- **Chase winners and larger capitalised stocks:** When markets rise sharply, these indices chase and own more of the past 'winners'. This gives cap-weighted indices a bias towards larger-capitalisation stocks and trending markets (momentum). It also means that cap-weighted indices are particularly exposed to market 'bubbles' – such as those that occurred in Japanese equities in the late 1980s and in the global technology sector in the late 1990s. At the peak of these bubbles, the indices held a high weight in stocks with a greater potential for correction (fall in share price). So, as the market regained its valuation discipline (ie stocks were bought and sold dependant on whether they represented good value to investors), the reversal in the upward movement in stock prices led to sharper declines in value.

- **Do not re-balance:** Stock prices move up and down, this is typically, but not always, dependant on whether investors believe that a stock is good value or not. If you reviewed these movements over time, you would notice that the share price would fluctuate around a particular value, usually the perceived 'fair value'. This movement towards 'fair value' is called mean reversion and we discuss this in more detail in chapter 6. As share prices move up, so will its weight within the cap weighted index, and it would decline if the share price was to move down. The cap weighted index does not look to capture these movements or profit from them as some Smart Beta strategies do. Hence, the cap weighted index forgoes potential gains.
- **Concentration:** At a regional and country level, cap-weighted indices may be overly concentrated in a few sectors or stocks that may not be representative of the underlying economy. For example, the largest constituent of the FTSE 100 represents 8% of the total index,² and the largest five stocks represent more than a quarter of the weight of the index. This can be seen in more detail in Figure 1.

Figure 1: Stock concentration in developed markets



Source: HSBC Global Asset Management, moex.com, data as at June 2014 - (1) IBEX 35, (2) DAX, (3) CAC 40, (4) FTSE 100, (5) NASDAQ. For illustrative purposes only.

Market cap weighted indices have some inherent practical limitations:

- Chase winners
- Does not capture potential gains from stock price movements
- Can contain large single stock weightings

² Source: HSBC Global Asset Management, moex.com, as of 30 June 2014

3

The alternative: Smart Beta

Given these limitations outlined above, investors have explored other ways of accessing beta. Historically, cap-weighted indices were designed to measure the movement and sentiment of markets, not to serve as investment vehicles. It is therefore unsurprising that investors have started to look for alternatives.

Smart Beta is an umbrella term, covering many definitions and classifications, ranging from simple to complex methodologies – each offers an alternative to cap-weighting schemes.

A key aspect of Smart Beta approaches is that they do not assume that markets are efficient. Passive strategies, based on cap-weighted indexation presuppose that stock prices efficiently reflect all the available information (also known as the 'efficient markets hypothesis'). But in practice equity markets are frequently inefficient and irrational, with price movements becoming disconnected from information on the underlying companies. Moreover, cap-weighted indices are frequently adopted as 'set and forget' portfolios. Rebalancing to capture mean reversion in stock prices is an important feature and performance driver of Smart Beta strategies. Weightings are systematically reset to target levels. We will examine this in more depth later in this guide.

Indices were never created as investment vehicles; they were designed to be tools to measure the movement and sentiment of the markets.

DID YOU KNOW?

'Monkeys can beat market cap indices'

Fresh research from Cass Business School has found that market-cap weighted indices have performed worse over the past 40 years than randomized lists of stocks.

The research was carried out to build the literature base which supports the use of "Smart Beta" strategies.

Co-author Professor Andrew Clare explained: "We programmed a computer to randomly pick and weight each of the 1,000 stocks in the sample; we effectively simulated the stock-picking abilities of a monkey. The process was repeated 10 million times over each of the 43 years of the study.

"The results of this experiment showed that many of the monkey fund managers would have generated a superior performance than was produced by some of the alternative indexing techniques. However, perhaps most shockingly we found that nearly every one of the 10 million monkey fund managers beat the performance of the market cap-weighted index."

The researchers created a range of alternative indices to test against both the random lists and market-cap weighted indices. The most successful alternative index in the study proved to be one which weighted holdings based on the sales of the underlying companies. This index beat 99% of the randomly-constructed indices.

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The development of Smart Beta

The current popularity of Smart Beta among investors has been driven in part by the desire for cost efficiency in a low return, low interest rate environment and the degree of transparency index based investing brings. However, the study of cap-weighted indices and the approaches collectively known as Smart Beta have been around for many years.

The behaviour of equity markets and the sources of excess returns have been the subject of academic research and investor observation for decades, and this research has offered new perspectives and ideas about how markets work and what drives returns. In 2013, Eugene Fama and Robert Shiller won the Nobel Prize for their work in these areas.

Three findings have been important in the development of Smart Beta strategies:

- **Factor investing** - Fama suggested that equity returns could be explained simply by the level of portfolio exposure to the market, the value factor and the small-cap factor. Examples of such investing include **equal weighting**, where all stocks within the index are equally weighted, ie the smallest companies are given the same weightings as the larger companies, allowing companies to be on an equal playing field which results in small cap stocks being overweight when compared to a cap weighted index which is known as a small cap bias.
- **Fundamental investing** - A common calculation of a stock's fair value is based on the expected dividends paid to shareholders. Shiller observed that market prices varied more

than one would expect based on the changes in underlying dividends. This suggested that stock prices were 'noisy' and not efficient, and that prices would fluctuate around some value considered 'fair'. As an example, the **HSBC Economic Scale Indexation** weights stocks by economic impact or contribution to GNP, not price. Other examples could be weighting schemes that weight a company based on accounting factors such as book value, dividends or sales.

- **Low-volatility investing** - Robert Haugen found that low-volatility portfolios had greater average returns than higher-volatility portfolios, contrary to the belief that generating higher returns required taking on higher levels of risk. This kind of investing can enable a higher allocation to equity within a defined risk budget, and it can **compensate for the higher volatility** of traditional active managers. A very simple example of a low volatility index could be including only stocks with volatility below a defined number.

Popular Smart Beta strategies have been developed to take advantage of these insights. These strategies seek either to improve their return profile or alter their risk profile relative to more traditional cap-weighted benchmarks. The strategies do not use cap-weighted indices as a reference for investment strategy.

Smart Beta strategies seek either to improve their return profile or alter their risk profile relative to more traditional cap-weighted benchmarks.

5

Types of Smart Beta

As discussed in the previous chapter, the most popular Smart Beta solutions fall into three categories:

- Factor investing
- Fundamental investing
- Low-volatility investing

We will now look at each of these strategies in more depth, setting out what they try to achieve, how they work, and how they can be used within an equity asset allocation, as well as any specific considerations that apply.

Factor investing

Factor investing aims to generate excess returns versus the cap-weighted index by increasing a portfolio's exposure to a specific factor. The factors that have been shown to deliver excess returns are:

- **Value** - stocks of companies that are believed to be undervalued
- **Small-cap** - companies with a smaller market capitalisation. The FTSE Small Cap Index is comprised of the 351st to 619th largest listed companies
- **Momentum** - following trends in the market for example buying stocks that are doing well and selling those that are falling.

The concept of factor investing is not entirely new. In fact, active managers have invested using equity styles for some time, with managers described as 'value managers' or 'quality managers,' for example. Investors often compare returns with the relevant

style indices and analyse whether managers have added value beyond their simple style exposure.

Within an equity allocation, factor investing can offer investors low-cost and consistent exposure to factors that can improve the return potential to the portfolio. Also, factor strategies can be blended within a larger portfolio. For example, if the initial manager selection results in a large-cap bias, the equity portfolio might be balanced by including a small-cap manager, if desired.

It should be noted that factor returns may have long cycles (periods when market conditions may result in one factor performing better than others), so the timing of the initial investment and tactical allocation decisions will increase in importance. To diversify this cyclical, investors might choose to employ more than one factor in a multi-factor portfolio.

Fundamental investing

Fundamental indexation aims to deliver broad market exposure and to generate excess return by using rebalancing to capture stock price movements (mean reversion in stock prices). Fundamental index weights are set in proportion to a measure of economic size (they are not linked to price as with the cap-weighted index), and the portfolio is rebalanced systematically to these target weights.

Broad market exposure is gained by including a large number of stocks in the index. There is typically a high degree of overlap with traditional cap-weighted indices. That is, the stocks you find in a fundamental index are similar to those that you would find in an equivalent cap-weighted index; however the weights or exposure to each will vary.

The index-weighting methodology is important, as it determines the characteristics of the fundamental index. Index weights should vary slowly and reflect the evolution of a company's importance within the economy over time, thus 'future-proofing' the index. For example, at HSBC we use 'economic value added', a measure that indicates a given company's contribution to gross national product, providing a sensible reflection of the changing relationship between companies, sectors, countries and regions over time. The value-added approach allows the portfolio to avoid the 'winner chasing' that results from cap-weighted indexation, as weightings reflect economic contribution rather than stock-price performance. In this way, the fundamental index reflects hard information rather than market sentiment.

Adopting an alternative-weighting approach rather than a cap-weighted index naturally results in an increased bias towards value and small-cap factors. The choice of fundamental weighting methodology influences the extent of this bias. For example, one may see a stronger value and small-cap bias if the fundamental index is weighted according to accounting measures such as revenue, earnings, cash flow or book value. In contrast, weighting the index according to the economic value added results.

Within an equity allocation, fundamental indexation can offer higher return potential than cap-weighted indexation, because of the added value from rebalancing. Given the passive implementation of fundamental indexation, manager fees can be comparable with those of conventional passive strategies. Tempered factor bias within a fundamental index can give a purer exposure to rebalancing and can help simplify the allocation decision as it would have less impact on overall factor exposure.

Low volatility investing

Investors have looked to equities to deliver capital appreciation, yet frequent and large drawdowns in equity markets have instilled a sense of caution. Low-volatility strategies aim to deliver equity exposure with a smoother performance pattern: that is, better risk-adjusted returns relative to cap-weighted indexation, and volatility that is generally two-thirds to three-quarters that of the cap-weighted index.

Most low-volatility approaches fall into two main categories:

- Capturing the '**low-volatility anomaly**' by building portfolios of low-volatility (stocks with less movement in their price) or low-beta (stocks that move less than the market over time) stocks. Academic studies have shown that lower-volatility stocks can outperform higher-volatility stocks.
- Using a **minimum-variance optimisation** with a set of stocks to suggest the stock weights that would create the lowest-volatility portfolio. The optimisation process incorporates historic price movements and correlations (measure of movement relative to each other, low correlation indicates independence) between a set of stocks.

Within an equity allocation, a low-volatility strategy can help investors have more confidence in maintaining a stable capital base and meeting year-to-year liabilities. A low-volatility portfolio can enable a higher allocation to equity within a defined risk budget.

SUMMARY OF SMART BETA APPROACHES

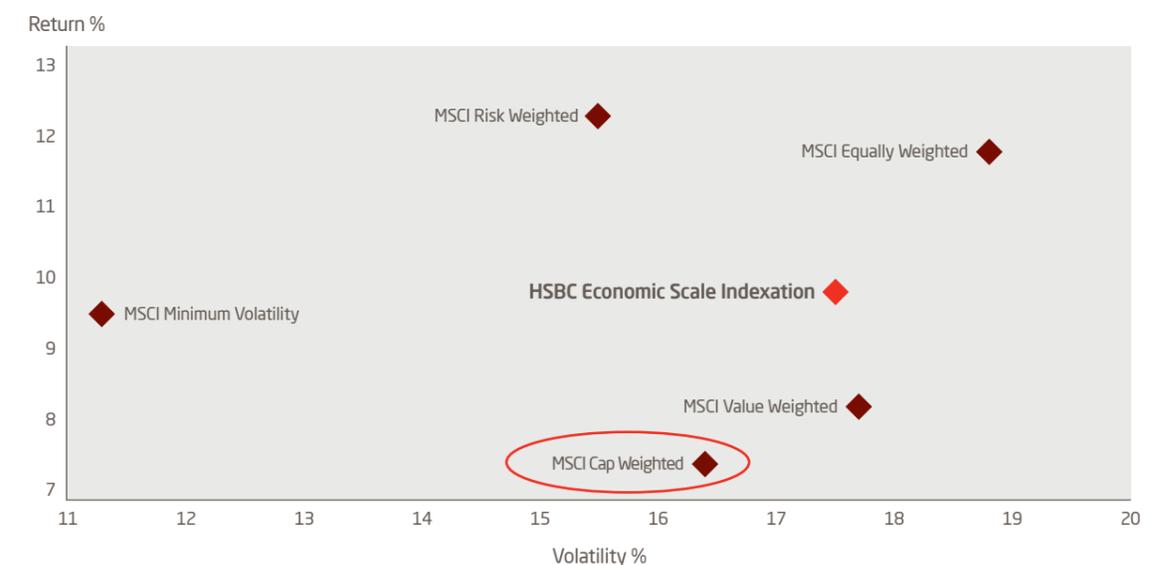
	Factor investing	Fundamental investing	Low-volatility investing
Objective	<ul style="list-style-type: none"> Generate higher returns relative to the cap-weighted index 	<ul style="list-style-type: none"> Provide broad market exposure and generate excess returns 	<ul style="list-style-type: none"> Provide equity exposure with lower volatility and better risk-adjusted returns
How it works	<ul style="list-style-type: none"> Increases exposure to specific or multiple risk factors, such as value, small cap and momentum 	<ul style="list-style-type: none"> Utilises rebalancing to capture market volatility, or share price movements 	<ul style="list-style-type: none"> Owns a portfolio of low-volatility stocks or uses optimisation to create a low-volatility portfolio Usually a more concentrated portfolio of 40-60 stocks
Benefits for investors	<ul style="list-style-type: none"> Adds return potential Can compensate for underweight factor exposures 	<ul style="list-style-type: none"> Provides market exposure while adding return potential Adds diversification to cap-weighted indexation 	<ul style="list-style-type: none"> Lowers overall portfolio volatility with higher confidence in meeting plan liabilities Enables a higher allocation to equity within a defined risk budget
Examples of	<ul style="list-style-type: none"> Equal weighting / Value weighting 	<ul style="list-style-type: none"> HSBC Economic Scale Indexation / FTSE RAFI 	<ul style="list-style-type: none"> Minimum Volatility / Risk Weighted

As an investor, it is important to know what type of Smart Beta you are investing in, what the exposures are and whether this then truly fits into your existing portfolio.

As the chart makes clear, these alternative weighting approaches have delivered higher risk adjusted returns versus the cap weighted alternative. Each strategy shown offers investors different characteristics dependent on their investment objectives.



Figure 2: Alternative weighting schemes within All Country World



Source: Bloomberg, Datastream, MSCI Barra, HSBC Global Asset Management

Returns are monthly total returns with gross dividends re-invested) from 31st December 2001 to 30 June 2014. HSBC Economic Scale Index and other Smart Beta indices data prior to 15 June 2012 is back tested (simulated) data calculated by the independent calculation agent, the Euromoney Indices team. Data subsequent to the Index launch date has been calculated daily by Euromoney. **Past performance and back tested (simulated) data are not a reliable indication of future returns.** Back tested performance results have many inherent limitations and were achieved with the benefit of hindsight by means of a retrospective application of the HSBC Economic Scale index rules based methodology to determine the appropriate weightings. The results do not represent the results of actual trading using client assets and as such do not include any dealing costs that may be incurred by funds tracking an Index. No representation is being made that the Index will or is likely to achieve results similar to those shown. In fact, there are frequently sharp differences between back tested performance results and actual results subsequently achieved.

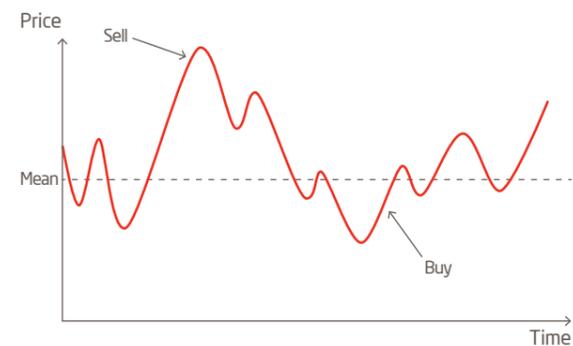
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How rebalancing can generate excess returns

A common feature of Smart Beta strategies is the value that is added through systematic rebalancing: that is, resetting the portfolio back to target weights. Given the importance of rebalancing to Smart Beta, we will take a closer look at why and how it works.

Shiller's research provides the basis for why rebalancing can be effective. He suggests that market inefficiencies exist and those prices are 'noisy' and fluctuate around some 'fair values'. Why should this be? Market participants will have different views of a stock, buying and selling based on whether they see it as inexpensive or expensive. Also, investors may buy or avoid stocks based on certain investment objectives or constraints. If prices deviate too much from a 'fair value,' a stock may become attractive for traditional active fundamental stock-pickers who are disciplined in identifying and confirming such opportunities. This has been described before as a swinging pendulum effect around a stock price, below we illustrate the movement as an example.

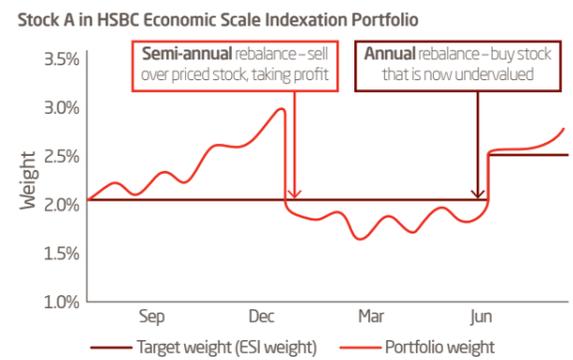
Figure 3: Mean reversion 'market noise' in stock prices



Source: HSBC

Immediately after the portfolio is built, individual stock weights will not match the target index weights because of price movements. If a stock price has risen, a stock may have a higher weight in the portfolio relative to its target weight, and vice versa. To generate excess return from these price movements, investors can employ a systematic approach to bring individual stock weights back to target weights. This is, in effect, a contrarian approach, in that one sells stocks that have appreciated and buys stocks that have declined. The frequency of rebalancing to target weights then becomes a trade-off between return capture and trading costs. Twice-yearly rebalancing is a common frequency; this is far from a 'high-frequency' trading strategy that would look at intraday movements. Below, we show an example of re-balancing in practise within the HSBC Economic Scale Indexation Portfolio.

Figure 4: Rebalancing in practise - HSBC Economic Scale Indexation (HSBC ESI)



What value can rebalancing add? To estimate this, we can try to explain portfolio returns by looking at a portfolio's exposure to the market, to the value factor, and to the small-cap factor. This breakdown would explain most of a portfolio's returns, and the

remainder, or the portion of returns not explained by these exposures, could be considered a manager's 'alpha' or 'skill.' If this same analysis is applied to fundamental indexation, the remainder 'alpha' would be simply the value added through systematic rebalancing.

The value of rebalancing is shown clearly in figure 5, where the value of rebalancing is the return not explained by market, value and small-cap factors. As could be expected, the value of rebalancing is significant, and the value increases with the volatility or 'noise' of the underlying market. As market volatility increases worldwide, spreading from developed to emerging markets, so does the alpha potential from rebalancing.

Rebalancing to target weights can generate excess returns for fundamental indices, but by definition this rebalancing cannot feature in cap-weighted indexation. In cap-weighted indices, stock weights vary with price, so a cap-weighted index has no target weight to rebalance to. In a cap-weighted context, rebalancing is limited to the periodic inclusion and exclusion of names from the index.

It should be noted that rebalancing approaches might underperform the respective cap-weighted index when pricing errors persist. For example, as bubbles form, a rebalancing approach would sell stocks that would then continue to appreciate. One would expect a rebound in relative performance once the market's pricing discipline is restored and prices revert to the mean.

Figure 5: Value of Rebalancing in comparison to equivalent MSCI market cap index

Index	Out-performance	'Unexplained Alpha'	Market Beta	Small-cap Beta	Value Beta	Tracking error
HSBC ESI World	1.79%	1.07%	0.997	0.212	0.261	2.80%
HSBC ESI Worldwide	2.29%	1.46%	0.995	0.236	0.260	2.70%
HSBC ESI Emerging Markets	4.18%	3.81%	0.975	0.055	0.286	3.74%

Index data prior to 15 June 2012 is back-tested (simulated) data calculated by the independent calculation agent, Euromoney Indices. Data subsequent to the Index launch date has been calculated daily by Euromoney Indices. Past performance and back-tested (simulated) data are not a reliable indication of future returns. Back-tested performance results have many inherent limitations and were achieved with the benefit of hindsight by means of a retrospective application of the HSBC Economic Scale Index rules-based methodology to determine the appropriate weightings. The results do not represent the results of actual trading using client assets and as such do not include any dealing costs that may be incurred by funds tracking an index. No representation is being made that the Index will or is likely to achieve results similar to those shown. In fact, there are frequently sharp differences between back tested performance results and actual results subsequently achieved.

Source: Datastream, data (using weekly total returns in GBP with gross dividends re-invested) from 4th July 2001 to 1st January 2014.

Rebalancing is a key performance driver in Smart Beta portfolios, however, as an investor, it should be understood how often rebalancing takes place versus the trading costs associated with this.

7

Where does Smart Beta fit in to a given portfolio?

Smart Beta strategies add to the investment toolkit available to investors. Smart Beta is simply a new set of strategies for consideration, each with its individual profile of return, risk and other relevant characteristics such as factor and risk exposures.

By definition, Smart Beta will introduce tracking error relative to the cap-weighted index, given that these strategies are weighted differently by design. As Smart Beta strategies may bring advantages to the overall equity portfolio, this tracking error could be well justified within the context of the entire portfolio.

It is difficult to categorise Smart Beta as a whole as either a passive or active solution, because factor portfolios and fundamental indices can be implemented passively, while low-volatility strategies can be implemented either passively or actively, with fundamental or quantitative approaches. Investors should instead determine how a Smart Beta strategy fits within their equity allocation. It will then become clear whether the allocation is funded from the current passive allocation or the current active allocation.

At the strategy level, Smart Beta is likely to require a similar degree of due diligence to traditional investment offerings. For passive strategies, investors should review indexation capabilities, including weighting rules, transparency, liquidity, investability and capacity. For quantitative strategies, investors need to have confidence in the methodology and return profile in different market conditions. For active fundamental strategies, investment philosophy and process need to be analysed. As always, simplicity, transparency and clarity are critical in developing confidence in how any strategy could behave and the potential range of investment outcomes.

Smart Beta strategies can add a diversification element to existing portfolios but as an investor, understanding how this would be beneficial ie what the factor exposures are; what is the additional tracking error and whether this fits more into the passive or active portion of existing portfolios.

8

Fixed income Smart Beta

As in equity markets, standard government bond indices adopt a market capitalisation weighting scheme. Once again, this approach has a number of limitations.

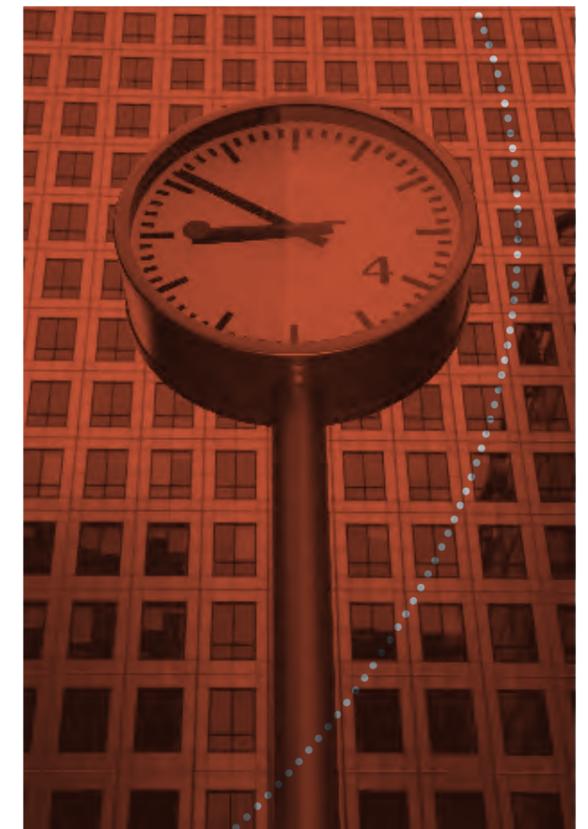
Cap weighted approaches give higher index weights to the most indebted issuers with the greatest amount of outstanding debt. For example, the market cap index weight in Japan was 22.8% (as at June 2014) while debt/GDP ratio has increased and remains high relative to other advanced economies. Concentration issues are again a challenge; taken together Japanese and US government bonds account for more than 50% of the global government index (BoA/ML index data, as at June 2014). These indices may not offer efficient diversification.

What can be done about this? Many investors will already be familiar with fixed income Smart Beta, having recognised the limitations in passive fixed income investing. One simple option is to cap exposure to an individual issuer. Another would be to adopt an equally-weighted mix between different issuers. Other methodologies can be more complex still.

DID YOU KNOW?

Institutions are turning to 'Smart Beta'

Independent research carried out by Cogent Research between September and October 2013 found that some 53% of institutional investors are planning to increase their use of 'Smart Beta' strategies over the coming three years.



9

What do investors need to consider before investing?

We feel there are a few specific aspects to Smart Beta investing that need to be understood before investing. These should be discussed with your provider and advisor at some length, but we have highlighted a few of the more important issues:

Factor exposures - Investors need to understand which exposures are captured via the investment strategy and which ones they are willing to be exposed to. Different methodologies are exposed to different factors. Typical biases include value, momentum, low beta, small cap, less liquidity and low volatility. We think it is important to understand where the added value really comes from. Research has shown that the weighting schemes tend to result in structural tilts towards certain factors, and that the premiums which are known to be associated with these factors can be the driver of performance.

Schemes that use accounting-based methodologies such as the fundamentally weighted schemes are more exposed to value or small-cap biases, in comparison with cap-weighting.

Schemes that use lower-volatility stocks tend to have exposure to the volatility factor and can lead to sector biases (to utility stocks, for example).

Fees - Investors must not underestimate the importance of costs. Typically, the largest cost is the investment-management fee. Depending on the asset manager, this fee can vary. Some providers offer to track their own Smart Beta indices, which mean that investment management fees are more competitive as they exclude the licence fees that index providers charge. But the reality is that most Smart Beta managers include these licence fees in the overall cost.

Transaction costs - There will also be transaction costs due to the rebalancing, which will typically be higher than passive investments but lower than actively managed strategies, because of the higher turnover. In addition, there will be costs linked to the fund vehicle chosen to invest. Operating charges and tax-related costs will vary depending on the fund vehicle.

Out/underperformance - Investors also need to be aware that Smart Beta strategies will not outperform all of the time, as there will be certain periods when some risk premiums will be out of favour. For example, when stock prices and valuations become irrational in a price-bubble scenario, cap-weighted indices will tend to outperform value-bias strategies, but they are likely to underperform momentum-bias strategies. By the very nature of cap-weighting calculations, which have a built-in momentum bias, cap-weighted indices will outperform during episodes such as the tech bubble, and non-cap-weighting indices will not. When the bubble bursts, however, non-cap-weighted indices will be in a better position to capture positive movements, thus adding diversity to any portfolio that has cap-weighting within it.

Investors need to understand where fees are coming from and what is being compensated for, as well as environments where Smart Beta strategies will out and underperform.

10

Why invest in Smart Beta strategies?

The main reasons for investors to consider Smart Beta strategies are as follows:

- They understand that market-cap weighted indexing has limitations
- They are looking to diversify their equity allocation and want an alternative, effective, lower-cost strategy
- They want to improve the returns of an allocation to passive equities

The idea behind these strategies is that in an inefficient market, security prices are too volatile relative to fundamentals; they are 'noisy' and mean revert towards fair value. A cap-weighted index is not an optimal template for an index fund in this situation because it cannot exploit this 'noise'.

The key features of all these strategies are:

- Weights of stocks in the template index vary slowly
- Weights are not based on market prices
- The index periodically rebalances back to target weights

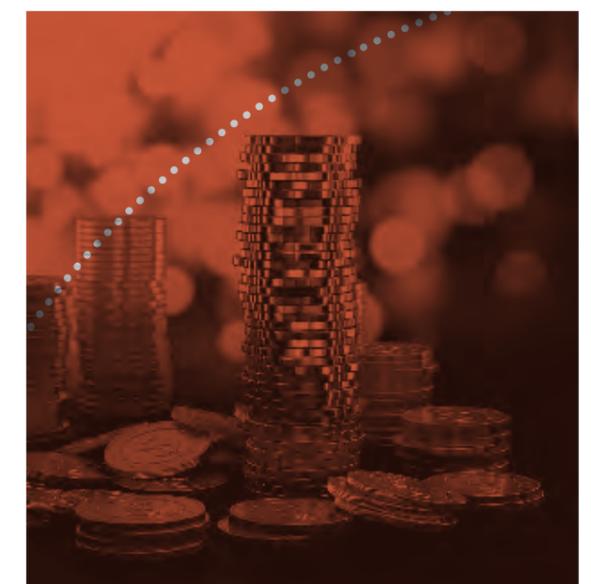
Market cap weighting does have limitations; Smart Beta is another diversifier to existing portfolios; Smart Beta strategies can improve returns to existing portfolios.

DID YOU KNOW?

Towers Watson finds popular 'Smart Beta' strategies outperform

Pension consultant Towers Watson has tested a variety of 'Smart Beta' strategies against a US market-cap weighted benchmark over a 48-year period.

It found that over the period the US-cap weighted benchmark had delivered a return of 9.7%. However, over the period five 'Smart Beta' strategies all outperformed that return. The most effective was a 'risk-efficient' portfolio. This was a mean-variance optimized portfolio based on the model developed in Amenc et al (2010).



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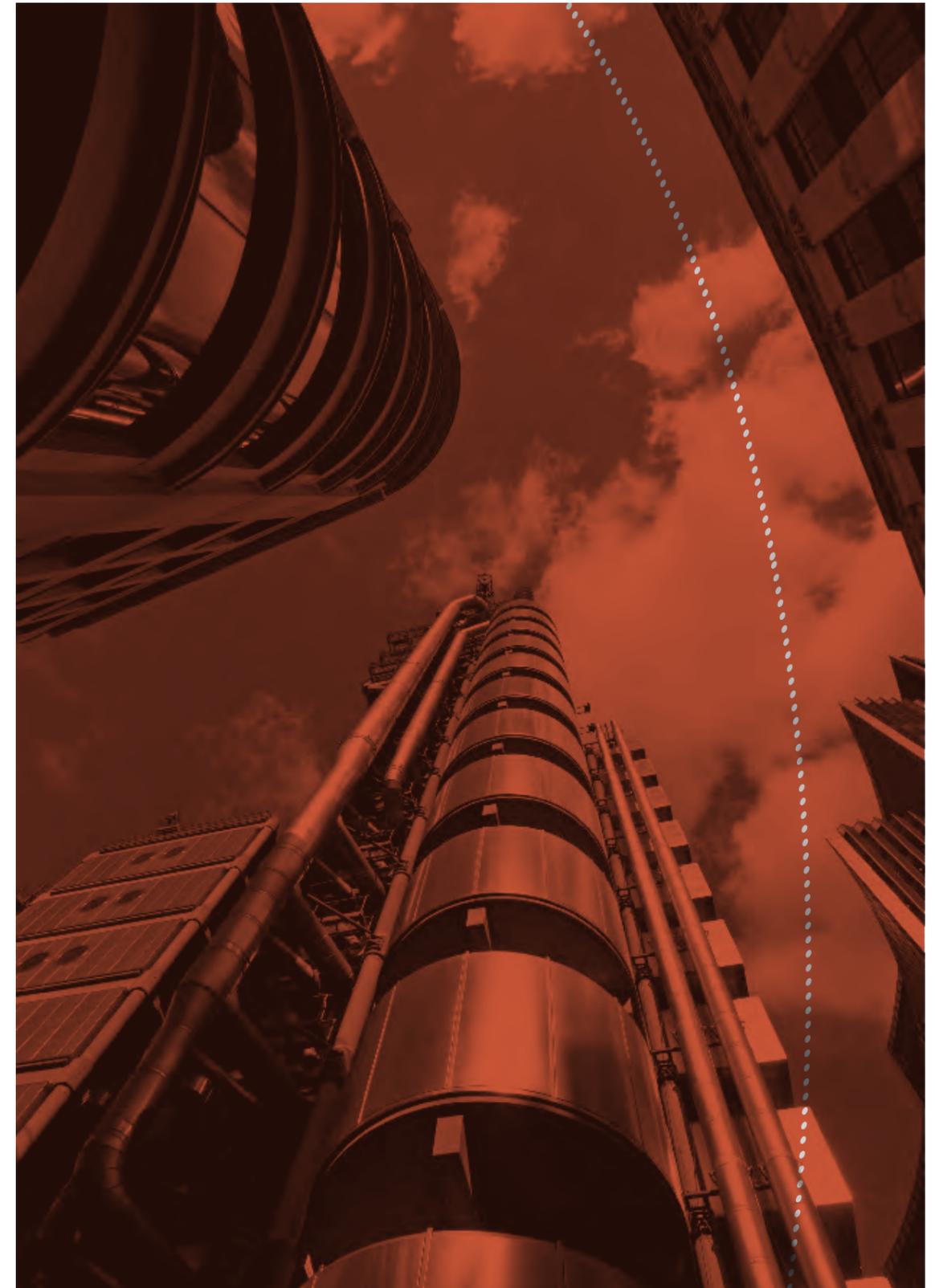
Conclusion

Market cap-weighted indices are not always optimal and have practical limitations. Smart Beta strategies aim to capture the equity risk premium in a more efficient way and can offer investors better risk-adjusted returns.

Interest in Smart Beta products is mounting, as investors see the advantages of conventional indexing but are keen to obtain higher risk-adjusted returns and are sceptical of their ability to pick active managers who can outperform. Smart Beta offers a practical and cost-effective solution to current investor needs, allowing attractive and diversifying approaches within equity allocations.

We believe that a sensible weighting scheme and a high degree of diversification are the key criteria in selecting a Smart Beta manager. There should be logic to the country, sector and individual company weightings. The index should include all liquid securities in the market, rather than a subset of them. Further, the trading required to track the index should be moderate and straightforward. Finally, as all risk premiums do not work all the time, investors should always take a long-term view.

We hope that this short guide has provided some clarity on Smart Beta and how it can help investors achieve their investment objectives.



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Glossary

Active investing refers to a portfolio management strategy in which the manager makes specific investments with the goal of outperforming an investment benchmark index such as the FTSE All Share.

Alpha is a risk-adjusted measure of the active return on an investment. It is the return in excess of the compensation for the risk borne (eg market, risk factors, etc.) and is thus commonly used to assess active managers' performances.

Alternative weighting schemes are a methodology that weights its constituents by means other than market capitalisation. For example:

- **Equal weighted** is where all stocks within the index are equally weighted, ie the smallest companies are given the same weightings as the larger companies ie allowing companies to be on an equal playing field
- **HSBC Economic Scale Indexation** is where stocks are weighted by a non-price measure of company size ie company fundamentals
- **Minimum volatility** stocks are weighted such that the index in total has the lowest volatility
- **Risk weighted** stocks are weighted inverse to their historic volatility, ie, stocks with lower volatility have higher weighting and stocks with higher volatility have lower weighting

Arithmetic average is the simple average of a set of numbers.

Beta is a measure of the risk arising from exposure to the general market or risk factor as opposed to idiosyncratic factors.

Book value is the value of an asset according to its balance-sheet account balance.

Cap weighting is an index-weighting methodology in which components are weighted according to the total market value of their outstanding stocks.

Equity risk premium also known as equity beta is the return of an individual stock or the overall stock market over the risk-free rate that compensates investors for taking on higher risk.

Factor bias is the degree to which a portfolio is exposed to a particular factor, often described relative to an underlying benchmark index.

Geometric average is the central tendency or typical value of a set of numbers by using the product of their values (as opposed to the arithmetic mean which uses their sum). The geometric mean is defined as the nth root of the product of n numbers.

Gross national product (GNP) is the market value of all the products and services produced in one year by labour and property supplied by the citizens of a country. Unlike gross domestic product (GDP), which defines production based on the geographical location of production, GNP allocates production based on location of ownership.

Low beta stocks refer to a security or portfolio of securities that is relatively less volatile than the market; that is, when the market moves, the security moves by less than the market. A security with a beta of less than one is said to have a low beta, and a security with a beta greater than one is said to have a high beta.

Market cap is the public market value of a company's equity. It is equal to the stock price times the number of stocks outstanding.

Mean reversion is tendency for a share price to move towards an average price or fair value over time. If markets are noisy and a share price deviates too far from this average price, it may create an investment opportunity which can be captured as mean reversion takes hold.

Minimum variance optimisation is a method of selecting securities, based on their historic volatility and correlation with each other, such that the variance of the portfolio is minimised.

Momentum is an observed tendency for rising asset prices to rise further, and falling prices to keep falling. It has been explained by behavioural economics: the market participants react to new information at different rates, some earlier, some later.

Passive investing is a financial strategy in which an investor (or a fund manager) invests in accordance with a pre-determined, rules-based strategy, often to mimic the performance of an externally specified index.

Sharpe ratio is a measure of risk-adjusted performance. Mathematically, it is the difference of the asset return versus the risk-free rate of return divided by the standard deviation of this excess return

Tracking error is a measure of how closely a portfolio follows the index to which it is benchmarked. The best measure is the root-mean-square of the difference between the portfolio and index returns.

Volatility is a measure of the variation of price or returns of a financial instrument over time. It is often calculated as the standard deviation.



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