



Global Horizons

Providing alpha in a smart beta world



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Foreword

Author



Arne Staal
Head of Multi-Asset
Quantitative Strategies

Smart beta evangelists advertise potential for market-beating returns generated with full transparency at low cost. The reality of smart beta investing is much more complicated and investors should approach it with a healthy dose of scepticism. Despite these concerns, the increasing availability of low cost, commoditised algorithmic investment strategies undeniably changes the investment landscape permanently. It increases the investment opportunity set for asset owners, raises the bar for active management and changes the nature of alpha. Perhaps unintuitive at first glance, it also creates

new opportunities for active investors to generate better investment outcomes. The best use of smart beta strategies is found in actively managed multi-strategy portfolios. Successful smart beta investing over the long run requires a dynamic approach. As investors become more aware of the limitations of passive smart beta investing, we expect to see increased appreciation for truly idiosyncratic returns and unique outcomes.

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Providing alpha in a smart beta world

Introduction

Smart beta is a blanket term applied to any non-market-capitalisation-weighted systematic investment strategy that can be represented by an index, i.e. any fully algorithmic, completely transparent and investable portfolio strategy. Some restrict its use to long-only indices, whereas others include the full gamut of transparent long-short strategies that aim to capture some type of systematic spread within asset classes. It is alternatively referred to as ‘exotic’ beta, ‘alternative’ beta, factor investing, liquid risk premia, style premia or alternative risk premia. There is no upside in arguing the semantics of smart beta though, what matters are the opportunities and challenges it represents to investors and how it changes the investment landscape. Most public discussion on smart beta is focused on the ever-expanding choice of products offered by providers and the challenge that poses to active managers. Smart beta’s perceived virtues have been widely sung by advocates, but less has been said about the pitfalls investors might encounter in seeking out these types of investments. Even less has been said about the changing opportunities that arise to shape investment outcomes and provide alpha in a smart beta world. We aim to shed light on these topics and discuss both the pitfalls in smart beta investing and the opportunities for using alternative passive exposures to generate value through an active investment approach. Smart beta is often loosely applied to a range of passive alternative solutions that is diverse and changing quickly, blurring the old paradigm of alpha versus beta and active versus passive. We believe the changing investment landscape is best framed in a broader context in which the rise of low cost transparent algorithmic investing calls for a focus on individual outcomes rather than one-size-fits-all benchmarking.

The changing nature of alpha and beta

The concept of smart beta is not new, or even recent. In essence, smart beta represents a class of systematic trading strategies that captures well-known return drivers that can be offered in index format with reasonably high capacity and liquidity. Academia has long advocated taking into account systematic strategies to explain equity market returns: Fama and French (1993) told us about ‘Value’ and ‘Size’ factors in their seminal paper, Jegadeesh and Titman (1993) highlighted ‘Momentum’ as a systematic factor, Piotroski (2000) advocated

‘Quality’ in a landmark paper, and low volatility investing traces back its origins to Haugen and Heines (1975). Similarly, market practitioners in fixed income have long understood the analytical return drivers in their asset class and used them to systematically deviate from market weights; for example, through duration extension and spread overweighting. It would be a mistake though to dismiss smart beta as merely repackaging existing assets based on old ideas in new investment vehicles. Technological advances, widespread data availability and democratisation of investment knowledge have taken smart beta out of the domain of academics and specialised investors, and made it widely accessible to all types of investors at relatively low cost. Investors in turn have shown strong demand for smart beta products, with assets under management rapidly growing in the last few years. Historically, beta has been delivered through passive management of portfolios that track market-weighted indices. Alpha was delivered as (out) performance by active managers above and beyond appropriate market benchmarks. In this traditional view of asset management, smart beta represents an evolution that aims to capture the domain of active managers through passive rules. It broadens the universe of available benchmarks and seems to shrink the potential for alpha in size and breadth (see Chart 1).

The main driving forces behind the demand for smart beta are low fees, accessibility and, crucially, a promise of better outcomes than historically delivered by the average active manager. Investments in these strategies are hard to measure precisely but are easily in the hundreds of billions of dollars in ETFs alone, and likely in the trillions when separate institutional mandates are included. The early adopters of smart beta concepts were institutional asset owners in Europe, primarily Dutch and Nordic pension and sovereign wealth funds. More than 70% of asset owners in the 2016 FTSE Russell Global Smart Beta Survey reported having a smart beta allocation or being in the process of actively evaluating one. Cost savings, return enhancement, risk reduction and diversification are cited as primary objectives. Widespread adoption by a rapidly growing ETF industry has made smart beta available to the general public.

Chart 1: A benchmarking approach

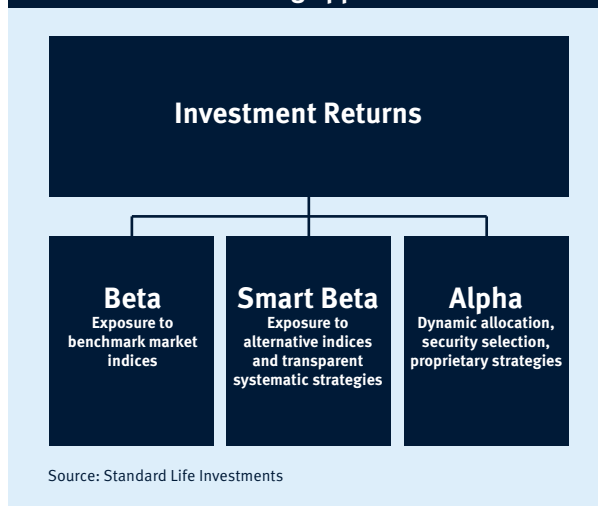
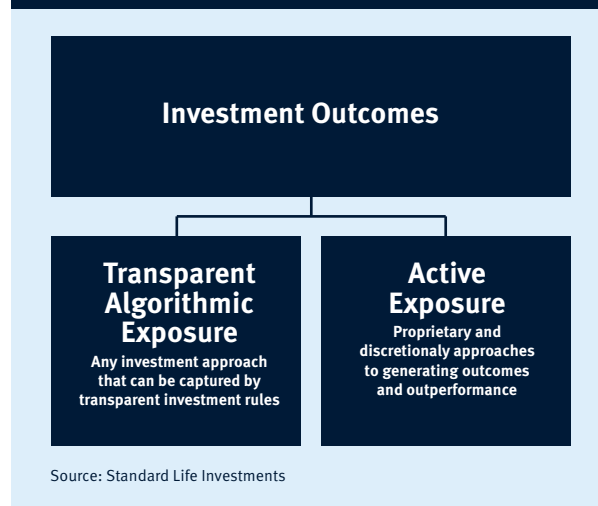


Chart 2: Focus on investment outcomes



This narrow view of how to think about investment returns ignores that smart beta comes in many shapes and forms and means different things to different people. It mistakenly assumes that smart beta is as clearly defined and agreed upon as traditional benchmark indices. As the number of available passive investment solutions grow, a one-size-fits-all approach to benchmarking becomes increasingly irrelevant. Asset owners are increasingly likely to adopt different alternatively weighted indices to measure outcomes, and indeed become more focused on overall outcomes rather than narrow return attributions to standard market indices.

The rise of smart beta does not represent a single regime shift in the investment landscape. It is a result of advances in technology, data availability and growing investor sophistication that will continue to drive development of passive solutions in different ways. Understanding the implications of this ongoing change requires a return model that recognises that outcomes are generated through different exposures that can be usefully categorised as ‘transparent algorithmic’ approaches and truly active investments. Transparent algorithmic investments include a broad and growing range of ETFs and passive alternative solutions, such as smart beta indices, but also for example certain ‘risk-parity’ or ‘volatility-targeted’ products. Active exposures are defined by their proprietary and/or discretionary nature (see Chart 2).

A focus on the nature of the exposures that drive outcomes rather than pure return-based benchmarking recognises that investors have an increasing ability to tailor their passive exposure beyond standard benchmark indices to fit their individual objectives, which tend to be more complex than ‘x% over benchmark y’. Representing beta with market indices is increasingly meaningless as investors adopt more transparent rules-based investment strategies such as smart beta. At the same time, the interpretation of alpha becomes broader as it should include any (desirable) outcome that cannot be replicated by simple mechanical investment approaches. This includes traditional security selection approaches but also the value created through dynamic allocation to algorithmic exposures (‘allocation alpha’).

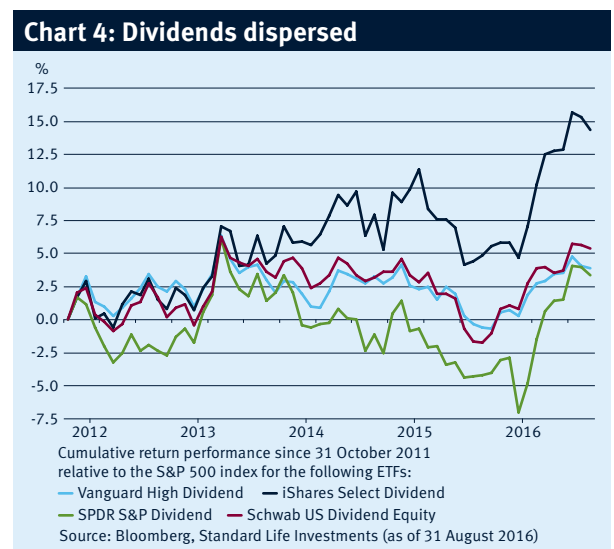
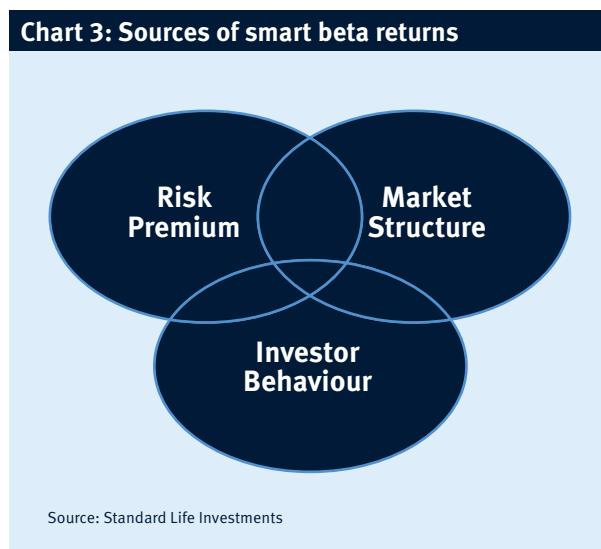
The old world of beta versus alpha was straightforward to understand. In the new paradigm of active versus transparent algorithmic exposure, passive no longer equates to ‘straightforward’ and alpha is increasingly evaluated against an increasing set of transparent rules-based exposures. This means investors are faced with a rapidly changing opportunity set, more complex evaluations and choices to make, and a wider range of associated costs to assess. Awareness of pitfalls in utilising these newly available passive tools is increasing but is not yet widely discussed.

Smart beta investing: the missing warning labels

Decreases in costs relating to development and implementation have significantly lowered the barrier to entry for providing passive alternative strategies. This has led to rapid growth in the range of smart beta products on offer – there are now more smart beta ETFs than large-cap stocks available in the US! The number of unique smart beta approaches with both a solid economic grounding and consistent historical track record is very limited though. Unsurprisingly, this means there are considerable pitfalls in evaluating any single smart beta implementation on its ability to deliver on promised outcomes. Lack of clarity in the investment objective, backward-looking biases, implementation inefficiencies and limits to sustainability are pitfalls investors should be aware of when considering smart beta strategies, or indeed other transparent algorithmic solutions. We address each in turn.

Unclear investment objectives and economic exposure

Most smart beta indices are constructed with the intention to outperform the market benchmark index. The source of this outperformance is generally attributed to a risk premium, market structure – investor segmentation, or behavioural phenomena – see Chart 3. Rarely though is there a simple unambiguous explanation for the market factors that smart betas aim to capture. For example, an equity value strategy could variously be explained as a risk premium – ‘value’ companies lack flexibility in adjusting to changing economic circumstances, for which investors demand additional compensation, a market structure outcome – value stocks



are undervalued because of benchmarking pressures, a behavioural phenomenon – investors systematically underestimate future returns on ‘value’ stocks in their fixation on high payoffs from fast growing companies, or a combination of these narratives.

This lack of clarity with respect to the driver of returns in smart beta strategies means there are numerous ways to construct different strategies with the same objectives. This naturally leads smart beta providers to develop a myriad of product variations capturing the same themes but with very different (intended and accidental) exposures.

For example, most available equity smart beta strategies can be classified by value, growth, size, momentum, quality, high-dividend and low-volatility themes. Although much less developed, similar themes are pursued in fixed income markets; see Staal et al (2015) for a deeper discussion on smart beta in fixed income. Individual smart beta strategies with these labels are best thought of as passive implementations of distinct active investment processes that are loosely based on the same theme. To illustrate this point, Chart 4 shows wide performance dispersion in the case of high-dividend index products, measured as differences in cumulative return performance relative to the S&P 500 of the four largest dividend yield ETFs in the US from different providers over their simultaneous history.

Unfortunately, most smart beta products are provided without clear articulation of investment philosophy, exposures, process and objectives; a major impediment to careful selection. Smart beta strategy selection is best approached with a similar level of due diligence as manager selection to make sure it is in line with the investment view of the user.

Backward-looking biases

A portfolio manager can be judged on their expertise and by the length and quality of their track record. Smart beta products tend to be based on algorithms whose development relies heavily on historical simulation of returns to judge effectiveness. Since simulated historical performance is prominent in smart beta marketing, index providers are incentivised to develop strategies that perform well on a historical basis. As such, both human and statistical biases

conspire to inflate the attractiveness of simulated smart beta strategies, sometimes very significantly so. Statistically, the collective efforts of both industry and academia directed at finding patterns in limited historical data means that many false discoveries of successful smart beta strategies should be expected purely by chance. Academic research has recently started to focus on this issue, see Harvey et al (2015). Suhonen, Lennkh and Perez (2016) examine backtested and actual performance of a large sample of alternative beta strategies. They find a median Sharpe ratio of 1.2 across 215 alternative beta strategies over backtested periods and a median Sharpe ratio of 0.31 over the live period.

The lesson here is that historical simulation inherent in most smart beta indices can provide useful insights into strategy behaviour, but cannot be expected to provide an honest representation of achievable results in the real world. The only safeguard against these biases is substantial ‘live’ track record and thorough understanding of the underlying investment strategy. In absence of that, it pays to avoid complexity. The best smart beta strategies capture simple themes with simple approaches.

Implementation inefficiencies

A more technical issue in the design of smart beta indices is that they are often not implemented to trade the underlying strategy efficiently. They can turn over substantial numbers of securities on a monthly basis according to a fixed rebalancing schedule. This can be costly in terms of both transaction costs and market impact. It is also vulnerable to front-running, where other market participants trade the same securities around the rebalancing moment in order to profit from predictable index flows. As a consequence, headline fees on smart beta index funds might look attractive but investment results can conceal relatively high embedded implicit costs. These implicit costs can be hard to quantify precisely but are highly relevant in any careful comparison of different investment solutions.

Limits to sustainability

Important as they are, the concerns already outlined can be overcome through careful due diligence, although it requires considerable expertise and effort to do so. An existential

Chart 5: The value of low volatility

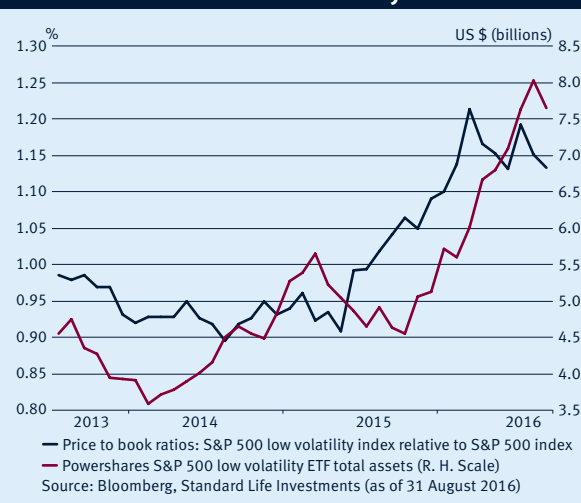
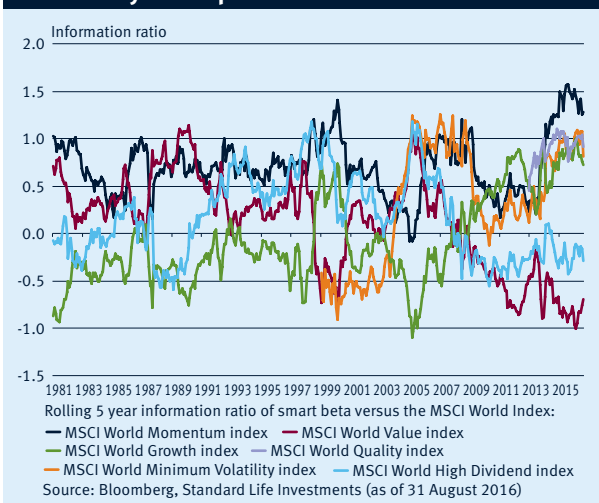


Chart 6: Dynamic performance



question about smart beta remains: can a transparent, cheap and easily accessible source of investment returns be sustained in a competitive market environment?

Smart beta investing might be passive in implementation but, without exception, represents dynamic investment strategies. Positions need to be periodically rebalanced to continue to capture the theme of the strategy. In most cases, they aim for outperformance relative to standard benchmarks through selection, or under- and over-weighting, of individual securities in the same investment universe. These are decisions similar to those made by active managers; smart beta investing requires active risk taking even if the implementation is based on passive indices. Active risk taking relative to the market-weighted benchmark index will of course net out within an asset class. In some cases, smart beta indices might complete markets and connect investors with different preferences, in others they might represent a zero-sum game.

Even if smart beta investing is not zero-sum in nature, the adaptive nature of markets suggests that successful smart beta strategies might well be self-defeating as their low cost and transparency fundamentally changes the nature of the returns they aim to capture. To illustrate, large asset flows into 'low-volatility' equity products, one of the commercially most successful smart beta strategies, have coincided with valuations for the stocks that are favoured in such exposures rising far above their historical norms. Chart 5 shows how valuations for the 100 least volatile stocks in the S&P 500 (SP5LV) have risen significantly over the past few years relative to the valuation of the overall index (SPX). This increase corresponds with significant inflows into the ETF tracking the index (SPLV). This same dynamic can be seen across different low volatility strategies and it suggests that the strategies might fall victim to their own success.

Providing alpha in a smart beta world

Our discussion on pitfalls in smart beta investing is meant to provide guidance in navigating an increasingly complex opportunity set of passive solutions, not to argue against the concept per se. At its best, smart beta can be an efficient exposure tool. These indices can transparently capture well known investment themes, commoditise often used investment styles in simple ways, be cost efficient and provide investors with novel ways to express views. They also give rise to new ways to shape outcomes and improve investment returns.

The rise of smart beta is often thought to diminish the opportunity to provide alpha through active investment management. Closet-indexers and other investors that implicitly or explicitly benchmark to easily replicable systematic strategies will indeed struggle to provide value and justify higher fees for their services (and ultimately their existence). On the other hand, those investors with the ability to deliver truly idiosyncratic returns and unique outcomes will become increasingly sought after. For less constrained active investors, there are considerable opportunities to harness the direct and indirect effects of the growth in alternative index strategies in their quest to provide alpha through active

decision making. The most direct way to harness smart beta to provide alpha is through dynamic allocation to these alternative return drivers in multi-strategy portfolios. It is also likely that the commercial success of smart beta and the broader trend towards transparent algorithmic investing will change the potential to generate performance through security selection. We discuss each in turn.

Smart beta allocation & portfolio construction

No single smart beta exposure is appropriate for static long-term exposure; it is simply unrealistic to expect consistent outperformance of any systematic strategy over the long run. To illustrate this point, Chart 6 shows that the equity smart beta indices of a major index provider have displayed highly cyclical relative performance versus the overall market index, an observation that holds true across the smart beta universe. Clearly, it has been much better to be a 'growth' than a 'value' investor since the financial crisis! Successfully navigating these cyclicalities requires a deep understanding of the economic environment and the nature of different investment exposures. Although not widely recognised, long-term successful smart beta investing requires an active allocation approach.

Allocation is only one part of successful long-term smart beta investing though. Given a view on suitability of smart beta exposures, portfolio construction becomes a key determinant of investment outcomes. Constraints on volatility, leverage, liquidity, risk exposures and single-asset limits need to be carefully balanced against costs, slippage and market impact, while shaping the portfolio to be in line with return objectives. This is not an easy task when many smart beta strategies have inconsistent, or even offsetting, characteristics – a 'value' stock might well have undesirable 'momentum' or 'low volatility' characteristics. Sophisticated active allocators have a large role to play in successfully deploying smart beta exposures.

Smart beta can increase security selection opportunities

While fundamentals and valuations will drive market values in the long run, capital flows can temporarily take over and drive market values in the short run. Flows into index funds mean flows into individual securities in accordance with the mechanics of the underlying algorithm, irrespective of any consideration of the bottom-up valuation of the underlying security. This has the potential to create pricing pressures that can be a source of alpha to active investors. To illustrate, Baltussen, Bekkum and Da (2016) document a striking change in index level serial dependence in major market indices across developed markets as index-tracking products, such as futures, ETFs and mutual funds, are introduced and grow. They conclude that indexing transmits non-fundamental shocks to individual stocks as price pressure at index level is transmitted by hedging and arbitrage activity of market makers and speculators. The indirect effects of smart beta growth on the potential to generate alpha are hard to grasp with any precision but, in the longer term, are likely to be an important source of active opportunities. At a macro level, dynamics of flows into easily identifiable themes could well generate exploitable mispricing at index levels as well, the unusually high valuations of 'low volatility' stocks come to mind.

Conclusion

Alternative index strategies offer transparency in implementation but not necessarily in their investment rationale, historical behaviour and future expected returns. Investors in smart beta are advised to make sure their chosen exposure aligns with their investment view, a task that is much less trivial than it might appear at first glance; warning labels should be provided and heeded. Nevertheless, the underlying trend of advances in technology, increasing availability of data analytics and growing investor sophistication will continue to change the investment landscape. This requires a more nuanced view on active versus passive investing than the traditional alpha-beta paradigm provides. Smart beta strategies themselves can become a source of alpha for active investors, either through use as dynamic exposures in multi-strategy portfolios or via an indirect effect on security valuations. As investors become more aware of the limitations of passive smart beta investing, we expect to see increased appreciation for truly idiosyncratic returns and unique outcomes.

Contact Details

Arne Staal

Head of Multi-Asset Quantitative Strategies

arne_staal@standardlife.com

Telephone +44 (0) 131 245 7871

Visit www.standardlifeinvestments.com or contact us at one of the following offices.

Europe

Standard Life Investments

1 George Street
Edinburgh
United Kingdom
EH2 2LL

Telephone: +44 (0)131 225 2345

Standard Life Investments

90 St. Stephen's Green
Dublin 2
Ireland

Telephone: +353(0) 1 639 7000

Standard Life Investments

30 St Mary Axe
London
EC3A 8BF

Telephone: +44 (0)207 868 5700

Standard Life Investments

1 Rue de Berri
75008 Paris
France

Telephone: +33 158 05 22 70

Standard Life Investments

Taunusanlage 11
60329 Frankfurt am Main
Germany

Telephone: +49 (0) 69 665721764

Standard Life Investments Limited

Engelbrektskatan 9-11
114 32 Stockholm
Sweden

Telephone: +46 (0) 707 507353

Standard Life Investments Limited

4th Floor 10 Via Mazzini
20123 Milan
Italy

Telephone: +39 0249 543 231

Standard Life Investments (Schweiz) AG

3rd Floor Rennweg 22
8001 Zurich
Switzerland

Telephone: +41 44 522 00 55

Standard Life Investments Limited

The Crescent
Parc Scientifique
Route de Lennick 451
1070 Anderlecht
Brussels
Belgium

Telephone: +32 470 991 668

Standard Life Investments Limited

Piet Mondriaanplein 13
3812 GZ Amersfoort
The Netherlands

Telephone: +31 6464 14172

North America

Standard Life Investments (USA) Ltd

One Beacon Street, 34th Floor
Boston
USA
MA 02108

Telephone: +1 617 720 7900

Standard Life Investments (USA) Ltd

299 Park Avenue, 6th Floor,
Room 655
New York, NY 10171
USA

Telephone: +1 212 739 0792

Standard Life Investments (USA) Ltd

11601 Wilshire Boulevard,
5th Floor, Room 505
Los Angeles
USA
CA 90025

Telephone: +1 310 235 1408

Standard Life Investments (USA) Ltd

First Canadian Place
100 King Street West
Suite 2525, PO Box 252
Toronto, Ontario, M5X 1C8
Canada

Telephone: +1 (647) 726 1424

Australia

Standard Life Investments Limited

Level 33 Chifley Tower
2 Chifley Square
Sydney NSW 2000
Australia

Telephone: +61 2 9947 1500

Asia

Standard Life Investments (Hong Kong) Ltd

30th Floor LHT Tower
31 Queen's Road Central
Hong Kong

Telephone: +852 3589 3188

Standard Life Investments Limited

1201-01 China Resource Building
8 Jianguomenbei Avenue
Beijing 100005
People's Republic of China

Telephone: +86 10 5811 1701

Standard Life Investments (Hong Kong) Ltd

Korea Representative Office
21/F Seoul Finance Center
136 Sejong-daero
Jung-gu
Seoul, 100-768
Korea

Telephone: +82 2 3782 4765

Standard Life Investments (Japan) Limited

18F Otemachi Financial City Grand Cube,
1-9-2 Otemachi, Chiyoda-ku,
Tokyo 100-0004

Telephone: +81 3 4540 7930

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