AVIVA INVESTORS
INVESTING FOR OUTCOMES

Shangri-La Hotel at The Shard, London
5 November 2015

Sustainable Income | Capital Growth | Beating Inflation | Meeting Liabilities

For today's investor

AVIVA INVESTORS

Contents

WELCOME

Dear Investor,

Welcome to the Shangri-La Hotel at the Shard.

I have spent over 20 years talking to a wide variety of clients, from individual savers to institutional investors, and have found that what matters most is achieving one of four financial goals: consistent fund growth, securing a reliable income stream, obtaining a return that exceeds inflation or – especially for pension schemes and insurers – increasing the likelihood that a specific future financial liability will be met.

I recognise some of the many issues that keep you awake at night include market volatility, funding pressure from your corporate sponsor and how to choose the best investment solution to meet your specific needs.

As we will hear today, pension schemes are now taking brave steps in radically transforming their investment approach and are seeking solutions to provide financial well-being in retirement for their members. Approaches can include increasing allocations to alternative income sources such as infrastructure or real estate debt, or investing in multi-strategy solutions designed to limit the impact of market volatility.

I have complete confidence that by working together, pension schemes, insurance companies and asset managers such as ourselves can successfully deliver investment success for scheme members.

I hope that you find today's sessions both informative and engaging, and we welcome your feedback.

Thank you for joining us.

Euan Munro,

CEO Aviva Investors

AGENDA

13:00

Registration and coffee

14:00

Welcome remarks
Euan Munro, CEO

14:10

Investment strategy innovation: it's all about the outcomes, not the benchmarks

Mark Versey, CIO Global Investment Solutions

14:40

Outcome-orientated investing

Norbert Fullerton FIA, Partner, Financial Strategy Group
Mercer

Rob Gardner, Co-CEO
Redington

Mark Thompson, CIO
HSBC Bank (UK) Pension Scheme

15:20

Coffee and networking

15:50

Building blocks

An introduction to and hosting of the educational sessions.

Matthew Williams,
Head of Portfolio Management Group

15:55

Session one

The Evolution of LDI: new approaches and what can be learned from insurers' experiences

Neil Snyman, Head of Liability-Driven Investment

16:10

Session two

The benefits of alternative income assets

Ted Jennings, Portfolio Manager

16:25

Session three

Real estate investment as part of a liability-matching strategy

David Skinner,
Global Head of Strategy and Portfolio Management, Real Estate

16:40

Session four

Annuity-style credit investing for pension schemes explained

Mahmoud El-Shaer,
Head of Liability-Driven Credit

16:55

Session five

The evolution of multi-strategy investing

Peter Fitzgerald, Head of Multi-Assets

17:10

Portfolio construction: practical challenges and other important considerations

John Chilman, Group Reward and Pensions Director
FirstGroup

Jon Exley, Partner, Pensions Investment Advisory
KPMG

Paul Haines, Chief Investment Officer
Trafalgar House Pensions Administration

17:50

Closing remarks

Louise Kay, Global Head of Client Solutions

17:55

Drinks reception

18:40

Dinner

Enjoy the views of the City of London on Fireworks Night, whilst enjoying featured dishes prepared by the chefs of TĪNG restaurant

PANEL ONE: OUTCOME-ORIENTATED INVESTING

NORBERT FULLERTON, FIA

Partner, Financial Strategy Group – Mercer

Norbert is a Partner at Mercer, responsible for the firm's strategic investment and risk advice to large institutional investors.

Prior to re-joining Mercer in 2014, he held various senior roles within pensions and investment strategy consulting at Towers Watson and Russell Investments. He has nearly 20 years' experience in investment and pensions consulting, fiduciary management, leadership, strategy and business development.

Norbert is a Fellow of the Institute and Faculty of Actuaries, has a MSc degree in actuarial science and a first class honours BSc degree in mathematics.

ROB GARDNER,

Co-CEO – Redington Ltd.

Robert is passionate about transforming people's financial future from hoping for the best to knowing what to do. In 2006 he Co-Founded Redington with Dawid Konotey-Ahulu to transform the pensions industry, with the dream of helping everyone feel confident and in control of their financial future.

In 2012 he co-founded RedSTART with the goal of teaching 1 million young people to budget, save, invest and give back by 2025. Redington is currently the 4th largest investment consultant in the UK and advises pension funds around the world with assets of over £300 billion.

MARK THOMPSON

Chief Investment Officer of the HSBC Bank Pension Scheme

Mark Thompson is the Chief Investment Officer of the HSBC Bank Pension Trust (UK) Limited. The Trust is a hybrid scheme with a Defined Benefit Section (approx £23.4bn fum) and a Defined Contribution Section (approx. £2.2bn fum).

Prior to joining HSBC in 2011 Mark held a number of senior investment roles in over 20 years at Prudential/M&G. Roles included UK equity fund manager, Head of Equity Research, Director of Collective Investments and Investment and Strategy Director for Prudential Europe. While at the Prudential Mark was also a Trustee of the Prudential's UK Pensions Scheme, where he was a member of the Defined Benefit Asset and Liability Committee and Chair of the Defined Contribution Committee.

Mark has a Masters Degree in Economics from the London School of Economics.

PANEL TWO: PORTFOLIO CONSTRUCTION

JOHN CHILMAN

Group Reward and Pensions Director – FirstGroup

John joined FirstGroup in 1999 to manage the consolidation and redesign of the UK pension offerings. After 2 years as Group Head of Reward at HBOS, he returned to FirstGroup in late 2005 as Group Reward and Pensions Director.

John developed and introduced the benefits currently in place in FirstGroup, and believes in offering benefits colleagues need and want, communicating these in an engaging and straightforward way to deliver results.

John is Chairman of the £22bn Railways Pension Scheme, and was previously a Director of Railpen Investments and RPMI. John is also a Trustee of FirstGroup's pension arrangements in the USA and Canada.

John has an MA from St. Anne's College, Oxford, and is a Chartered Accountant.

JON EXLEY

Partner, Pensions Investment Advisory – KPMG

Jon Exley is a partner in the Investment Advisory practice of KPMG. In the mid 1990s he co-authored a number of influential actuarial papers on pension fund investment and financial theory which heavily influenced the development of LDI.

He began his career with Mercer in traditional pension actuarial work but moved into investment consulting in 1990 to specialise in investment strategy and asset allocation. Whilst at Barclays Capital he was directly involved in some of the largest risk management trades undertaken by UK pension funds.

At Mercer FSG and now KPMG Jon has continued to advise many large UK pension funds and their sponsors on investment strategy and financial risk management in addition to advising a range of non pension fund clients on wider aspects of financial management.

PAUL HAINES

Chief Investment Officer – Trafalgar House Pensions Administration

Paul obtained an honours degree in Mathematics from Cambridge in 1979 and qualified as an actuary in 1987. He worked for Duncan C Fraser before moving to Noble Lowndes, where he took charge of the investment consulting department. He subsequently became head of European Investment Consulting at PricewaterhouseCoopers, and his final job in investment consulting was as an Investment Partner at Lane Clark and Peacock. Prior to joining Trafalgar House, he worked for the Daily Mail.

During his career, Paul has advised companies and trustees on all aspects of the investment process. He has focused on the importance of trustees setting clear objectives, and putting in place investment strategies to reflect those objectives.

Paul has been a member of the Investment Council of the National Association of Pension Funds, and a member of the Investment Committees of the Association of Consulting Actuaries and the Society of Pension Consultants. He has spoken at numerous conferences and contributed many articles to the pensions press.

FOR TODAY'S INVESTOR

We start by really listening to our clients, to understand their investment aspirations and concerns. Knowing what's important to them enables us to provide strategies and funds that focus on meeting their real needs and build relationships for the long term.

We are a global business managing over £265 billion in assets with offices spanning 15 countries (as at 30 September 2015). We take a collaborative approach, acting as a single team to bring together the breadth and depth of our resources around the world with our local expertise for the benefit of our clients. We value creativity and empower our investment teams to find and execute great ideas. In-depth research and robust risk management underpin every investment decision we make.

At Aviva Investors, our entire organisation is united behind one common goal – to deliver the specific outcomes that matter most to today's investor.

AVIVA INVESTORS SPEAKERS

EUAN MUNRO, FIA

Chief Executive Officer

Euan is Chief Executive Officer of Aviva Investors with responsibility for capitalising on our expertise in managing Aviva's own funds, becoming a stronger third party manager and increasing our profit contribution to the Group.

Prior to joining us, Euan was global head of multi-asset investing and fixed income teams at Standard Life Investments with responsibility for managing their fixed income and multi-asset investment funds. He was also a member of their board and Standard Life plc's executive leadership team.

Euan holds a BEng degree in Physics and Electronics from Edinburgh University. In addition, he holds a post-graduate diploma in actuarial sciences from Herriot Watt University and is a fellow of the Institute of Actuaries.

MARK VERSEY, MA FIA

Chief Investment Officer, Global Investment Solutions

Mark is a member of our Executive Team and is responsible for leading and developing Aviva Investors' Global Investment Solutions team. The team manages bespoke mandates for institutional clients designed to provide the outcome of meeting liabilities. The team also originates and manages alternative income portfolios including real estate finance, infrastructure and structured finance.

Mark has diverse experience in the financial industry, which includes investment banking across fixed income, equity and advisory roles; he has extensive risk management and derivatives experience.

Mark joined us from the Friends Life Group where he was Chief Investment Officer of the Group and Managing Director of their in-house asset manager, Friends Life Investments. Previously he was the Chief Investment Officer of AXA UK.

Mark has a Mathematics degree from Cambridge University.

MATTHEW WILLIAMS

Head of Portfolio Management Group

As Head of the Portfolio Management Group, Matthew's responsibilities are to deliver full investment solutions incorporating multiple asset classes and multiple specialist managers. These solutions include strategy design, mandate construction and oversight, and portfolio construction to ensure a good outcome for liability driven requirements.

Before joining Aviva Investors in April 2015, Matthew spent 23 years at Prudential/M&G. Initially a member of the bond team, he moved to the multi-asset team with specific responsibilities for managing and overseeing the outcomes for Prudential's insurance funds. This involved building up a detailed knowledge of the underlying asset classes, understanding how specialist fund management teams go about their day-to-day work, understanding the objectives and constraints of investing to meet liabilities, and understanding and presenting consolidated investment management reports. In addition, he has worked to encapsulate relevant and meaningful governance touch-points into a partnership approach between client and investment manager.

Matthew graduated from the University of York with BA (Hons) in Mathematics.

NEIL SNYMAN, FIA

Head of Liability-Driven Investment

Neil has primary responsibility for multi-asset liability managed portfolios working with pension and insurance clients.

As well as portfolio management, Neil oversees portfolio analysis, structuring and reporting for the insurance and pensions LDI portfolios. His most recent focus has been on developing and managing risk constrained absolute return portfolios.

Prior to assuming his current role, Neil was the head of insurance portfolio management group at Aviva Investors. Before joining Aviva Investors, Neil worked at Santander Global Banking and Markets, structuring derivatives solutions for Life companies and Pension funds to enhance their risk and capital management. Before that, Neil worked as a consulting actuary with Tillinghast Towers Perrin and PricewaterhouseCoopers.

Neil holds a master's degree in applied mathematics from Christchurch College, Oxford and is a Fellow of the Institute of Actuaries.

TED JENNINGS, CFA

Portfolio Manager, Global Investment Solutions

Ted is a portfolio manager on the Alternative Income Multi-Strategy Fund. The team manages portfolios of alternative income assets including real estate finance, infrastructure and structured finance.

Prior to joining Aviva Investors, Ted worked for Friends Life where as an existing mandates manager he was responsible for the management of portfolios and overseeing external investment managers. Previously he was an analyst in Knight Frank's corporate advisory team and Petchey Holdings, a private fund. Ted began his career with internships for the Unit Trust Corporation and the Royal Bank of Trinidad and Tobago, progressing to a full time role with the latter.

Ted read Economics at the University of West Indies and holds a Master's in Financial Analysis and Fund Management from Exeter University. He is also a CFA Charterholder.

DAVID SKINNER

Global Head of Strategy and Portfolio Management, Real Estate

David manages the Real Estate Investment Strategy and Research team. He has overall accountability for the formulation of fund level strategy and asset allocation decisions for mandates managed within the Real Estate business. David is also responsible for the implementation and enhancement of the Real Estate investment process and in this capacity chairs the Investment Transactions Committee. He also has a remit to further enhance the global real estate strategy and research capability within Aviva Investors.

Prior to assuming his current role, David was Head of Research in the Global Real Estate team and was appointed to the Real Estate Executive Committee as Investment Strategy and Research Director in July 2008. Before joining Aviva Investors, David was head of European research and a member of the European investment committee at Pramerica Real Estate Investors. Previously, he was head of investment research at DTZ, responsible for the analysis of European real estate capital markets. David started his career as a lecturer in economics and a research fellow at the University of Salford.

David holds a PhD and MSc in Economics and an IPF Diploma in Real Estate Investment and Finance.

MAHMOUD EL-SHAER, CFA

Head of Liability-Driven Credit

Mahmoud is responsible for managing and developing the Liability Driven Credit team, which is responsible for managing the fixed income portfolios covering liabilities from Aviva's UK, Irish and French businesses' annuity, with-profit, non-profit and general insurance policies as well as the Aviva Staff Pension Scheme.

Prior to joining Aviva Investors, Mahmoud was a portfolio manager at Swiss Re, managing the firm's sterling corporate credit book. He previously worked as a senior investment manager for European Investment Grade at State Street Global Advisors and as a portfolio manager for Global Fixed Income at Salomon Brothers KAG and Citigroup Asset Management.

Mahmoud earned a Certificate in Banking from the Chamber of Commerce and Industry in Düsseldorf. He holds an MBA from London Business School and studied Business Administration (Diplom-Kaufmann) with a focus on finance, econometrics, and operations research at Wolfgang Goethe-University of Frankfurt. Mahmoud is a CFA Charterholder and a member of both the CFA Institute and the CFA Society of the UK.

PETER FITZGERALD, CFA

Head of Multi-Asset

Peter heads our multi-asset investment team overseeing fund managers, strategists and researchers. He is responsible for the company's outcome-oriented multi-strategy range of funds and manages a number of risk-targeted, unit-linked and pension portfolios.

Peter began his career at Old Mutual in 1995 before joining BNP Wealth Management's multi-asset team. He has extensive international experience having worked in Asia, Latin America and Europe. He joined us in 2011.

Peter holds a postgraduate diploma in Education from Trinity College Dublin and a degree in European studies from the University of Cork. He is a CFA Charterholder.

LOUISE KAY

Global Head of Client Solutions

Louise is responsible for delivering client solutions globally, covering all sectors. She manages teams who focus on financial institutions, insurance, corporate and government-sponsored pension schemes and other areas of the institutional market. Additionally, she has responsibility for Aviva Investors' consultant and client relationship management teams.

Prior to joining Aviva Investors, Louise was Head of UK Institutional Business Development and Global Consultants at Standard Life Investments. During her tenure she became Managing Director of Global Liquidity Funds until the business was sold. She also led a number of strategic initiatives for the firm, including the development of SLI's DC proposition and running the graduate programme for the distribution function.

Before that, she worked for AEGON Asset Management where she was Head of Institutional Business after being promoted from business development manager.

Louise began her career with The WM Company as an account controller. She held a number of positions in this company, in the latter years as a performance measurement consultant to a broad range of clients across Europe.

LIABILITY-DRIVEN INVESTMENT: AN EVOLVED APPROACH

MARK VERSEY
Chief Investment Officer
Global Investment Solutions

The natural extension of our outcome-oriented investment approach is to help institutional investors such as pension schemes and insurance companies to invest in a way that will enable them to meet their long-term liabilities. We think treating such liabilities as the benchmark for a multi-asset portfolio and eschewing market indices represents the next stage of evolution for liability-driven investment (LDI) and it's a concept that is already attracting support from UK consultants.

As individuals, we're all working towards meeting different financial goals. Our recognition of this is what underpins our commitment to being a global leader in outcome-oriented solutions. In just the same way, pension schemes and insurance companies have their own financial goals, namely meeting their liabilities. As these represent the aggregation of the financial goals of what might be tens of thousands of individual scheme members or policyholders, we see an outcome-oriented approach as the natural 'next step' for LDI.

A DECADE OF CHANGE

Partly in response to the numerous pension scheme failures that followed the crash in stock prices at the start of this century, the 2004 Pensions Act set out to protect scheme members and make the management of pension scheme assets more robust. It introduced mark-to-market valuation frameworks for both scheme assets and liabilities and required scheme sponsors (companies) to list deficits on their balance sheets for the first time. It also compelled underfunded schemes to regularly submit plans to their regulator for returning schemes to a 'fully-funded' status.

In doing so, it sparked secular changes in how pension schemes approached asset allocation and laid the foundation for the rapid growth of LDI. According to the latest survey from KPMG[1], by the end of 2013 the value of liabilities hedged via LDI by UK defined benefit pensions schemes had sailed past £500 billion – roughly a quarter of the £2 trillion in assets that such schemes oversee on behalf of their members.

Until very recently, liability-driven investment has focused mainly on reducing the mismatch between the interest rate and inflation exposure which exists between scheme assets and liabilities. Because scheme liabilities are measured using a present value calculation of future liability cash flows, the substantial fall in nominal and real interest rates that has occurred over the course of the last decade has significantly increased the size of scheme liabilities.

Although falling interest rates have simultaneously boosted the value of scheme assets and especially LDI assets, the net effect has nevertheless been a painful increase in deficits. At the end of March 2015, the aggregate deficits of the 6,000 or so schemes whose funding position is tracked by the PPF (Pensions Protection Fund) 7800 Index was just under £293 billion. This has forced many scheme sponsors to dig deep and agree to make additional contributions.

TOUGH CHOICES

At last count, there were some 825 LDI mandates in the UK[2] with schemes of all sizes making use of either segregated or pooled LDI solutions to better match their liabilities. Those that have done so have been well rewarded so far, thanks to a continuing decline in bond yields. However, we estimate that, in aggregate, only around one third of UK scheme risks are currently hedged[3]. Many UK schemes may wish to increase their hedge ratio but are facing a quandary in forming a supportive market view.

The Bank of England base rate has now been at a record low of 0.5 per cent since March of 2009 with scheme advisers and investment managers alike predicting that it would rise pretty much throughout this period. With UK inflation having touched a record low of 0.0 per cent in the first quarter of this year, UK interest rates look set to remain low for a considerable time. Part of the problem is that with interest rates at historic lows it seems difficult to

contemplate them falling once more. Indeed, it could be argued that the current value of scheme liabilities already reflects rates staying low for the long term, which suggests that the 'pain' has already been taken to some degree through larger market-valued deficits and increased sponsor contributions. Unfortunately, for many sponsors, the risk to pension schemes of meeting liabilities if rates stay even lower than predicted outweighs the sponsor's opportunity if rates go up.

Scheme trustees need to find an intelligent way to consider increasing the level of hedging within their portfolios which can incorporate 'expert' guidance on the likely future direction of interest rates and inflation, and which can take into account the relative benefits of remaining unhedged versus taking on other market risks.

THE HEDGING DECISION

One of the problems currently facing pension schemes and their advisers is the gulf between today's interest rate and inflation expectations. For example, we think it makes sense to hedge against higher inflation out to about 15 years, despite its current low levels, as we expect it to be back up towards two per cent by the end of the year and to be even higher by the first quarter of 2016. This means that at current levels, hedging UK RPI for 12 years – at around 3.0 per cent – is likely to be money well spent[4].

However, we think there will be better opportunities for hedging longer-dated inflation than currently, with inflation expected to be over 3.4 per cent in 20 years' time.

It's a different picture when it comes to hedging nominal interest-rate risk. A scheme could choose to lock in today's nominal gilt yields for the next 30 years at 2.65 per cent. To us, this makes sense as long as inflation is un-hedged as if both are hedged this would lock-in a negative real yield in the region of 0.85 per cent a year. While this would reduce the scheme's value at risk (VaR[5]) in meeting future liabilities as it would reduce the risk of further falls in real interest rates, it would also leave the non-hedged or 'growth' elements of the scheme's portfolio facing a greatly increased investment target going forward.

It's worth remembering that even those schemes that have already undertaken LDI face a similar problem in that while those assets in LDI portfolios already offer a hedge from interest and inflation risks, they will typically now deliver the risk-free rate during their lifetime, which will inevitably increase the rate of return required from their unhedged assets.

THE KEY DRIVERS WHEN CONSTRUCTING AN OUTCOME-ORIENTED STRATEGY TO MEET AN INDIVIDUAL SCHEME'S LIABILITIES:

Liability cash flows –

How much the scheme needs to pay out in the future, including the risk to inflation, will dictate both the maturity profile of our investment strategy and the inflation risks we need to manage. It's just as important to ensure that a scheme's short-term cash flow needs are met and that the scheme's assets generate sufficient cash to meet its short-term liabilities.

Agreed contributions –

We can treat the regular contributions to be received from the corporate sponsor as an income-only corporate bond when modelling our portfolios The level of funding The current value of the assets in the portfolio will naturally affect the target return and therefore the required investment risk in the investment strategy.

Risk budget –

This is ultimately decided by the trustees based on the existing level of funding, the covenant of the sponsor and the desired return required on the assets.

FRESH THINKING

Rather than looking at LDI separately from 'growth' portfolios, we think it's time for trustees to consider an outcome-oriented approach to their investment needs and some of the UK's largest consultants already agree with our thinking.

At its core, this replaces the two portfolio model and the extensive use of individual market indices to measure the performance of the underlying assets that this entails. Instead, we approach investment strategy in a single portfolio model with a much more meaningful benchmark, namely the scheme's actual liabilities.

This enables trustees to consider the risks taken on interest rates and inflation in the same context as the risk taken on equities, real estate, alternatives and, in fact, all market risks in meeting the future liabilities.

The key drivers when designing an investment strategy to meet the specific outcomes a pension scheme will require are listed in the box below.

CREATING BETTER BENCHMARKS

The use of market indices and the calculation of 'alpha' relative to such benchmarks is entirely artificial when considering the outcome for a pension scheme. The relative price movements of the companies in the FTSE All-Share Index, for example, have little or no bearing on whether a scheme will be able to pay its members' pensions 30 years down the line. Indeed, in the case of market-capitalised equity indices, investors are effectively placing their biggest bets on those companies that have already grown the most. Likewise, market-weighted bond indices are dominated by the most indebted companies. These strategies may not be optimal were we to enter a new (rising) rate cycle.

Benchmark-based investment strategies also inevitably suffer from index turnover. Market indices are dynamic and as companies enter and leave their ranks, those managers whose portfolios are tied to a given benchmark are forced to follow. With index turnover running as high as 20 per cent per annum in many cases, this can generate millions in transaction charges over time.

By contrast, an outcome-oriented approach takes a holistic view of all the market risks that will impact on a scheme's ability to meet its future liabilities from interest rates and inflation to reinvestment, equity, real estate, credit and currency risk. Inherent in this is the opportunity to take a more meaningful approach to diversification. It allows us to move away from a model where managers of individual asset class components diversify their portfolios relative to the market benchmarks they are measured against and towards managing a portfolio's aggregate exposure across all of its components. This means that we can greatly reduce the prevalence of unrewarded risks in the portfolio, helping schemes to get more 'bang for their buck' from their risk budgets.

In doing so, it subtly changes LDI from an exercise in interest rate and inflation hedging to an outcome-oriented one of ensuring that all the cash flows generated by the scheme's assets are appropriately risk managed relative to the liabilities and that unrewarded risks are kept out of the portfolio.

It also allows decisions on hedging to be taken strategically across the future expected-rates curves and enables such hedges to be implemented in an intelligent and cost effective way which is married to the cash flows generated by the scheme's existing assets and any new assets it might acquire along the way. Because hedging can be implemented either where we have strong convictions or where the liability and asset cash flows are most mismatched, we're able to deliver any specific hedge
ratio target.

NEW LDI – NEW LABELS

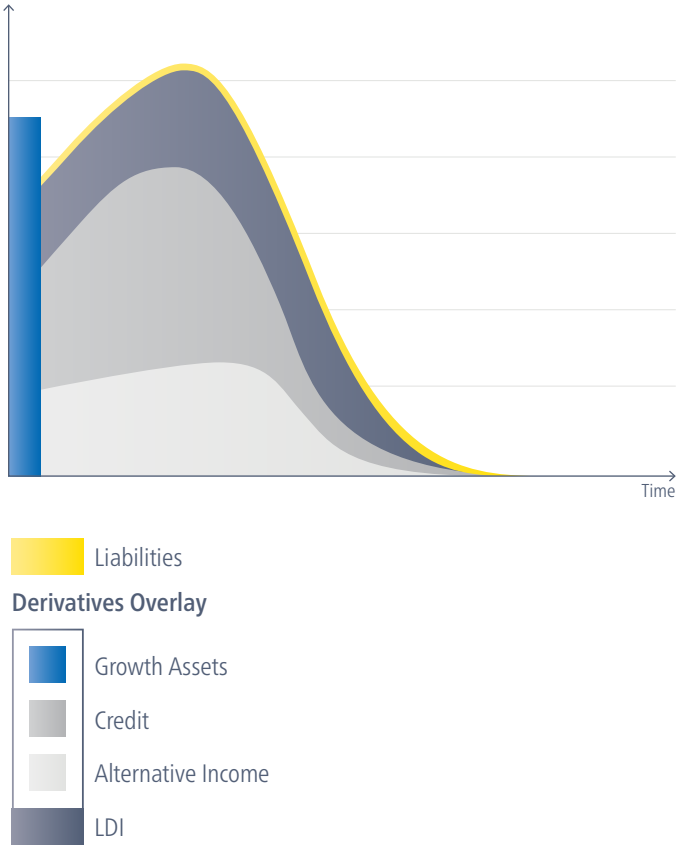
Another key strength of an outcome-oriented approach is that it enables us to consider a far wider range of assets than most LDI portfolios currently encompass. Although income-generating assets naturally tend to dominate the mix, because we can directly match the cash flow from the assets to the liability cash flows, our outcome-oriented strategies aren't constrained solely to income-producing assets.

AN OUTCOME-ORIENTED APPROACH: LDI IS ONLY PART OF THE BIGGER PICTURE

It helps to discard old-world labels such as 'income','growth' or 'matching'. After all, the ability to meet liabilities is based on total returns and the liquidity of assets when they need to be realised.

Assets such as equities or real estate – that might be labelled 'growth' – offer attractive levels of long-term income and varying degrees of inflation proofing.

Our outcome-oriented solutions for pension schemes can incorporate a range of outcome-focused asset classes and investment strategies, as well as more traditional global fixed income and equity mandates.



READY TO IMPLEMENT

Adopting an outcome-oriented approach requires a multi-asset mind-set and the ability to size and manage all the market risks in a portfolio relative both to a scheme's future liability stream and to one another. The ability to do so means we can implement changes across the portfolio far more quickly and meaningfully than a scheme whose assets are invested across a range of different alpha-chasing 'best of breed' managers, each of whom might be managing relative to a different market index. We want to be measured relative to meeting the liabilities, the true outcome that a scheme is pursuing.

There are no shortcuts, however. To deliver on this sort of undertaking takes significant investment into the latest risk-management tools and into building investment teams with the necessary expertise to make an outcome-oriented approach a reality.

A number of major UK consultants and pension schemes have already expressed their support for this approach. Like us, they can see the benefit of making a scheme's liabilities the outcome-oriented benchmark. And, like us, they understand the need to provide pension schemes support and advice when it comes to deciding on the appropriate split between hedged and unhedged assets or implementing the scheme oversight that must go hand in hand with this sort of approach.

[1] Source: 2014 KPMG LDI Survey Navigating the UK LDI Market
[2] Source: 2014 KPMG LDI Survey Navigating the UK LDI Market
[3] Source: Based on AI analysis of the Pension Protection Fund (PPF) Purple Book 2014 data which indicates approximate UK scheme risk hedging of around 30 per cent
[4] As at 7 May 2015
[5] VaR is a common measure of the tail risk of meeting liability cash flows

TIME FOR PENSION SCHEMES TO SPREAD THEIR WINGS

YANG SONG
Portfolio Mangager,
Alternative Income
Solutions Team

For pension schemes with long-dated liabilities, sacrificing some liquidity in exchange for the additional yields that assets such as real estate debt and infrastructure offer over conventional credit can be a wise move. For schemes where this is an appropriate solution, Aviva Investors is uniquely positioned to extend our expertise to successfully investing in the more specialist alternative asset classes that form part of this market.

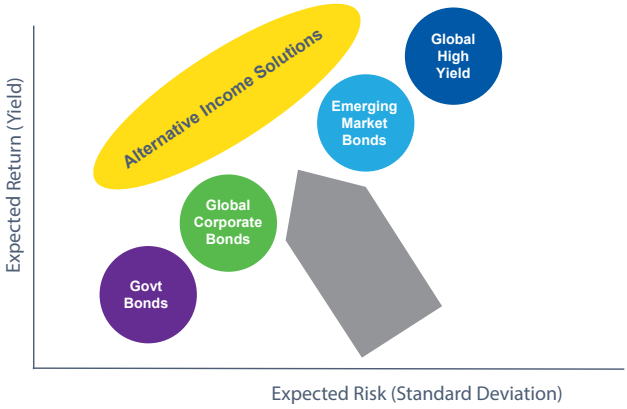
With over £20 billion of alternative income assets under management, and over 380 dedicated investment professionals around the world[1], we also possess substantial trading, deal structuring and project finance expertise required to operate successfully in this very specialist market.

We have used our strengths in these areas to create a suite of Alternative Income Solutions which offer our institutional clients of all sizes a unique opportunity to participate alongside Aviva plc in a range of bespoke and stable income-generating portfolios.

COMPLEMENTARY APPROACH

Our Alternative Income Solutions Team takes a multi-asset approach that harnesses our existing global expertise in four main alternative asset classes: infrastructure, which includes both equity and debt, commercial real estate debt, structured finance, and private placements. This is because portfolios constructed from these assets benefit from the additional 'illiquidity premium' that accompanies them. Long-term institutional investors who can afford to sacrifice some liquidity can expect superior returns to those available from comparable investment-grade fixed income assets. This makes our approach highly complementary to both the long-term income needs of our institutional clients and to their existing mainstream fixed income investments.

Alternative income: enhancing yield



ORIGINAL THINKING

Our Alternative Income Solutions Team combines a number of our core business strengths as we have well established origination platforms and deal pipelines in infrastructure investment, real estate debt, structured finance and private placements.

We employ a fundamentally credit-driven approach which combines our rigorous and ongoing analysis of credit risk with the expertise we've amassed as one of the UK's largest providers of liability-driven investments. Our deals are subject to review and challenge at various stages of the deal-making process by an independent credit team. The process is underpinned by a demonstrable track record of excellence in all aspects of due diligence and internal governance.

In one shape or another, we have over three hundred years of experience in managing insurance assets against liability-constrained mandates. And thanks to our role helping to manage the balance sheet of our parent, we're able to offer our institutional clients the added security of investing alongside Aviva plc.

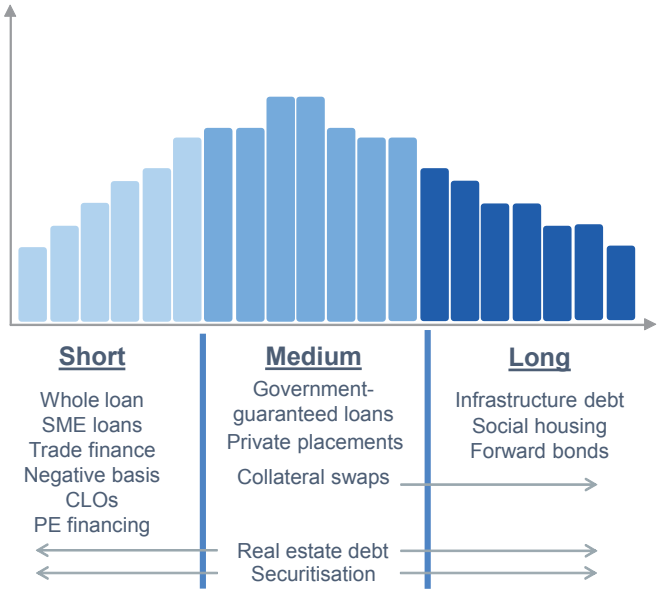
These core strengths enable us to deliver a broad range of alternative credit solutions that are individually tailored to each client's own investment and engagement requirements.

UTILISING ILLIQUIDITY AND COMPLEXITY

Our aim is to help each of our clients to increase the risk - adjusted return on their portfolios by investing in assets that might otherwise be difficult to access and monitor. By doing so, we can offer clients a diversified range of fixed income opportunities that offer enhanced yields without a meaningful increase in volatility. Thanks to the strong covenants and collateral that tend to be incorporated into such assets, they also have the potential to contain losses in the event of a default more effectively than a conventional bond.

In order to manage this process, we've developed a transparent due diligence and allocation mechanism that ensures our clients receive the same level of consideration on every deal.

A range of interest and amortising cashflows



The chart above is for illustrative purposes only

OUR ALTERNATIVE INCOME SOLUTIONS OFFER INVESTORS ACCESS TO THE FOLLOWING ASSET CLASSES:

- **Real estate debt financing**
- **Trade finance**
- **ABS / CLOs**
- **Private placements**
- **Private corporate / bank loans**
- **Collateral swaps**
- **Infrastructure (debt and equity)**
- **Mezzanine financing**
- **Aviation finance**
- **Government-guaranteed loans**

ENHANCED APPEAL

Although complex, alternative income assets have great appeal as, due to their illiquidity, they tend to offer substantially increased yields over traditional corporate bonds but for a very similar level of risk. This makes them especially attractive to longer-term investors such as pension schemes that can afford to sacrifice some liquidity. In essence, these assets are a credit proposition that can either be engineered to compliment any traditional fixed income holdings or integrated directly into an existing liability-driven strategy.

However, accessing the sustainable cash flows offered by such assets and the opportunity to diversify counterparty risks away from traditional senior unsecured bonds requires a range of specialist skills and expertise. This means that for pension schemes and other liability-driven investors it all comes down to finding the right partner.

[1] Source: Aviva Investors as at 30 September 2015.

INNOVATION IN LDI: HOW TO MAKE PROPERTY ASSETS 'LDI FRIENDLY'

Boris Mikhailov
Client Solutions Director

The last decade has seen unprecedented and irrevocable changes in the pension scheme industry. These changes stimulated and led the way for innovation in investment strategy development and design – one of the key areas being Liability Driven Investment ("LDI").

There are a wide range of LDI products and bespoke solutions at schemes' disposal, with continuing innovation in LDI strategies.

In particular, given historically low gilt yields, there is increased focus on exploring higher-yielding illiquid assets that lend themselves to LDI strategies. Generally speaking, for illiquid assets to be 'LDI- friendly', they need to produce predictable and secure cash flows. The higher the degree of predictability around the amount and timings of the cash flows the 'friendlier' the asset will be from an LDI perspective.

There are a wide range of illiquid assets that could potentially be LDI friendly, but it is beyond the scope of this article to cover them all. Instead, we focus on property assets and see how they can be more effectively used in an LDI portfolio. We look at how property assets can be restructured and reshaped into effective LDI-friendly investments.

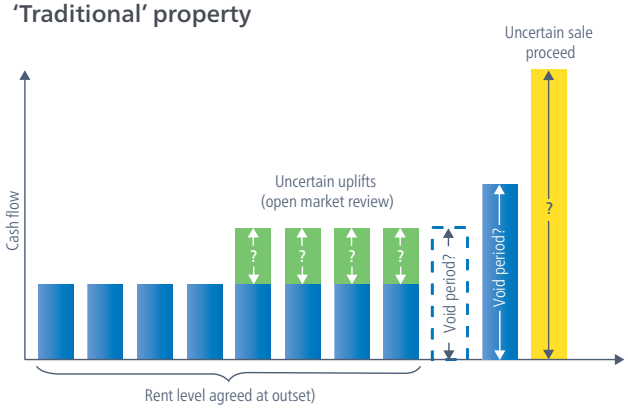
Many pension schemes have an existing allocation to property assets. The usual features of these assets include a relatively short average lease term of around eight years, open market reviews of rent levels and active management of the buildings and its tenants.

In order to make property LDI-friendly the predictability and security around cash flows (rents and sale proceeds) need to be increased.

A fund manager could look to do one or more of the following three key actions:

1. Pre-agree rental uplifts with tenants in advance (e.g. fixed uplifts and/or how these are linked to inflation). This will result in a predictable income stream during the term of the lease.
2. Lengthen the term of the lease and hence extend contracted cash flows that will be received. This will greatly reduce the risk inherent in the property investment such that the majority of the value will be in the rental income stream, as opposed to relying on the capital value of the property.
3. Target tenants with higher credit quality to reduce the risk of default.

'Traditional' property



The chart above is for illustrative purposes only

– The expected cash flows from a traditional property investment are shown above.

– Typically the rent received is subject to open market reviews and could also could be affected by void periods

– (e.g. due to lease ending or tenant defaulting).

– The sale proceeds are uncertain and subject to significant variation.

– There is much uncertainty around the amount and timing of the cash flows.

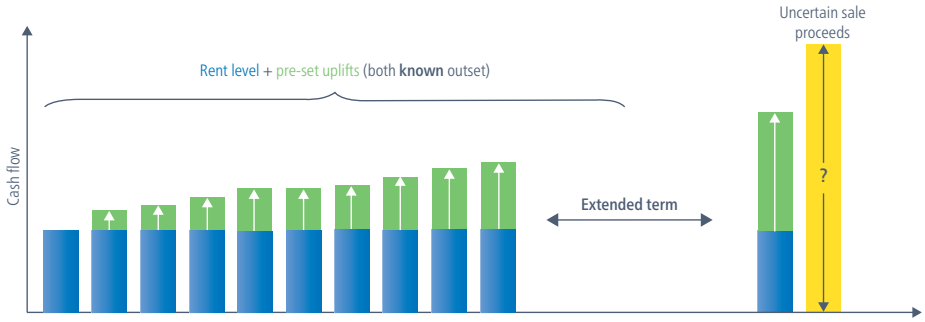
As a result of the uncertainty surrounding the amount and timing of the cash flows an investor typically receives, traditional property assets cannot be considered LDI friendly. So, it is usually labelled a 'growth' asset (as opposed to a 'defensive' asset) for setting investment strategy and investment decisions.

Taking the combination of the three steps can greatly reduce the volatility of investments and make them LDI friendly.

A fund manager could further enhance the LDI features of property assets by structuring the leases to ensure all returns are generated through income distribution, so capital appreciation/depreciation has no impact on the return (if held to maturity). This in effect means that the rental payments cover both the lease and the repayment of capital, which is like a repayment mortgage on a house.

In summary, in order to make property LDI friendly the predictability and security around the cash flows need to be increased. This could be done by investing into the high-lease-to-value assets and/or fully amortising leases. In practice, a blended approach could be adopted with clients putting in place frameworks for restructuring their property portfolios to move into LDI friendly assets over time. This can be done via a segregated route or through readily available 'off-the- shelf' funds.

Pre-agreed long-term rent reviews and reduced reliance on capital appreciation



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The expected cash flows from a property investment where the leases are restructured to improve cash flow predictability is shown above.

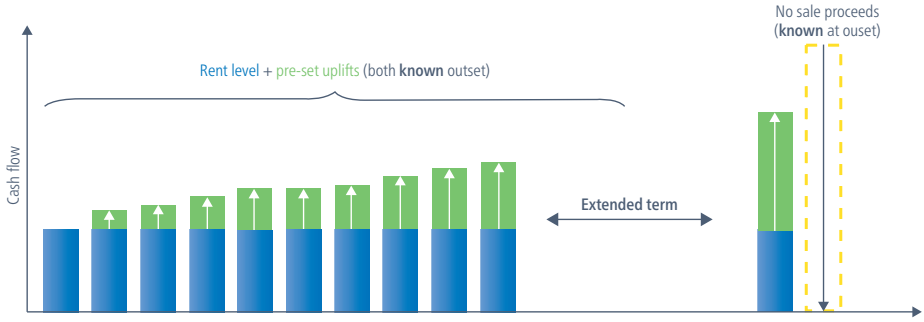
The rent levels and the rent uplifts are pre-agreed at outset (with a high quality tenant).

The impact of the sale proceeds on return is greatly reduced by extending the term of the lease.

This property asset can now be considered to be a high-lease-to-value investment, or one where most return is generated from the value of the lease, not the property value at the point of sale.

Pre-agreeing the rent reviews (i.e. moving away from open market reviews) and ensuring most of the return is generated from income distribution makes the property allocation LDI friendly.

Pre-agreed rent reviews and no reliance on capital appreciation



The chart above is for illustrative purposes only

The expected cash flows from a property investment where the leases are restructured in such a way as to ensure all return is generated from income distribution is shown above.

The rent levels and the rent uplifts are pre-agreed and pre-set at outset (with a high quality tenant).

Under the agreed lease, at the end of the term the property is passed back to the tenant (for a nominal amount). As a result there is no impact of the sale proceeds on return if held to maturity.

This type of property investments are commonly referred to as fully amortising lease investments, i.e. where the value of the property is fully amortised over the lease term.

Pre-agreeing the rent reviews and fully amortising the capital across the term of the lease makes property investments a very effective LDI asset.

MOVING BEYOND BENCHMARKS: ANNUITY-STYLE BUY-AND-MAINTAIN CREDIT

Mahmoud El-Shaer
Head of Liability-Driven Credit

As UK pension schemes continue to mature and de-risk, their investment needs are converging with those of annuities. By adopting a buy-and-maintain annuity-style approach, pension schemes and other liability-aware investors can better align their assets and liabilities, reduce reinvestment risks and transaction costs and potentially increase expected returns.

MOVING THE GOAL POSTS

One of the key differences between a buy-and-maintain approach and a more typical institutional income portfolio is that the former eschew market indices as performance benchmarks. This has a number of notable benefits. The first is that it allows pension schemes to set a real return benchmark that's in keeping with the actual needs of the scheme. As liability-aware investors know only too well, this is far preferable to adopting an arbitrary market index as a benchmark as such measures have little or nothing in common with the investment needs of a major pension scheme.

By moving away from a benchmark-driven approach, buy-and-maintain portfolios also enable schemes to enjoy significant savings in transactions charges. This is because the level of turnover prevalent in bond market indices – sometimes up to 20 per cent p.a. or more – means that following a benchmark-driven strategy quickly becomes an expensive pursuit.

The construction of a benchmark index – which will be dominated by the most indebted companies i.e. those with the largest bond issues – also exerts a strong influence on the duration of the benchmark. This is another attraction of moving to a buy-and-maintain strategy. Namely that it allows pension schemes to discard the arbitrary duration of a benchmark index and instead set a level of duration that's more in keeping with its liabilities. By increasing credit duration pension schemes can also markedly reduce their reinvestment risk – in some cases by as much as 50 per cent – and, based on current market conditions, secure higher spreads. By maintaining a flexible approach to duration management, we can also look to optimise portfolio efficiency by increasing the duration of assets in the early years and then reducing it later as the duration of its liabilities naturally declines.

In combining all these attributes, a buy-and-maintain investment approach enables liability-aware investors to set their own hurdle rates. This may sound complex, but well-established buy-and-maintain managers will take this as an opportunity to work more closely with their clients to agree a higher hurdle rate that's more in line with their funding requirement and which takes advantage of the increased expected returns that buy-and-maintain can deliver.

TAKING OUT COSTS

A buy-and-maintain approach is, by design, a low turnover strategy. As the UK's largest manager of annuities (we currently manage over £17 billion in buy-and-maintain credit strategies for UK-based clients)[1], we can confidently say that the low turnover rate that comes with such a strategy can represent annual savings of many millions of pounds in transaction charges compared to a benchmark-driven approach.

The other great boon that comes from dispensing with index benchmarks is that it also enables our pension scheme clients to tailor their portfolios to their own risk preferences. The best strategy, by far, for long-term investors is to create a portfolio that's well diversified across both market sectors and names – not to bind your investment outcomes to the fortunes of an index which could be heavily over-exposed to any one sector or name.

A NEW UNIVERSE

Of course, removing market indices from the equation means that we inevitably create a smaller investment universe for buy-and-maintain portfolios, but it's one that still provides more than adequate room for diversification.

Our approach is to focus on defensive, developed market investment grade credit taking a long-term, fundamentally-driven view on the chance of default. This allows us to ignore short-term price fluctuations and to concentrate on securing the long-run cash flows our clients require. We generally target a portfolio of around 150 to 200 credits of about equal weight.

Every investment we make is made with the intention of holding the asset to maturity and only those credits that can deliver the client-specific hurdle rate are considered. Disposals are only made to protect the credit quality of the portfolio from sharply deteriorating credit trends or to maintain key characteristics such as duration. In each case, the hurdle rate specifies the net (risk-adjusted) spread the mandate aims to earn after accounting for expected credit losses. The portfolio manager then performs a relative value analysis, to determine the best investment approach given the opportunities available.

CONSTRUCTING PORTFOLIOS

To ensure that issuer and sector diversification is sufficiently broad, our buy-and-maintain portfolios also include private debt i.e. private placements and private placement bonds and non-sterling credit investments. The former allow for broader diversification and, thanks to the covenants they possess, are likely to exhibit better credit experience.

For clients with sterling liabilities, we tend to prefer sterling-denominated investments as overseas exposure adds additional layers of complexity (and costs). We only invest in non-sterling-denominated assets if there is a clear benefit to the client in terms of diversification, valuation or liquidity. As sectors such as basic industry, capital goods, consumer cyclicals, technology and media, tend to be under-represented in the sterling-denominated markets we can add such exposure through overseas holdings. To achieve the diversification we seek, we might invest around a third of the portfolio in such names. This is quite a contrast from the 60-70 per cent in US dollar-denominated credits that would result from a typical global credit mandate.

To hedge non-sterling currency and interest-rate risks we employ cross-currency swaps for long-term hedges and FX forwards and futures for short-term hedging strategies. Meanwhile, to protect capital, we can also employ credit default swaps if extreme market illiquidity becomes a concern.

Throughout the process, our portfolio managers, credit analysts and dealers continuously monitor each portfolio and its investment universe for macro and issuer-specific news, rating changes, analyst updates and new investment opportunities.

CHARTING A COURSE

With interest rates still at record lows, the cost of meeting pension scheme liabilities has risen, leaving many schemes with even greater deficits. By focusing on the absolute credit risk of a client's portfolio, a buy-and-maintain approach can avoid much of the cost and the downside risk that comes from following an arbitrary market index and markedly increase the return per unit of risk.

Importantly, by increasing credit duration to be closer to the duration of a scheme's liabilities, the liquidity and credit spread risks that come with reinvestment are also much reduced. It means that a buy-and-maintain portfolio might be turned over just once during the lifetime of the liabilities rather than the two or three times that is more likely with a benchmark-driven approach. These factors help to explain why today's pension schemes are increasingly drawn towards an annuity-style buy-and-maintain-style of investing.

[1] Source: Aviva Investors as at 30 September 2015.

FROM MULTI-ASSET TO MULTI-STRATEGY

David Lis,
CIO, Equities and Multi-Asset

Multi-strategy and multi-asset funds invest across a diverse range of asset classes, including equities, fixed income, property and alternatives such as commodities. By spreading their risk, both types of fund seek to offer investors more attractive risk-adjusted returns than are available by investing in single asset classes alone. Although they differ in important respects, we believe they should be seen as complementary strategies with both having a role to play in meeting investors' needs.

The managers of both multi-asset and multi-strategy funds take a view on how financial markets are likely to perform and allocate investors' money accordingly. Multi-asset funds achieve this goal by varying the mix of asset classes in which they invest, raising exposure to one asset class, such as US equities, at the expense of another, for example, US treasuries.

Multi-strategy funds are a natural evolution from multi-asset funds. However, while the managers of these funds also take a view on where the world is going, they focus on identifying the investment ideas that will benefit best from their forecasts. They are inevitably more complex than multi-asset funds but they also offer important advantages.

By definition, multi-strategy funds deploy multiple interactive investment strategies across and within asset classes, and in order to do this they often use financial instruments that are inaccessible to managers of multi-asset funds. The ability to hold both long and short positions means multi-strategy funds can perform well in all kinds of market conditions. Furthermore, returns tend to be relatively uncorrelated to equities, bonds and other traditional asset classes.

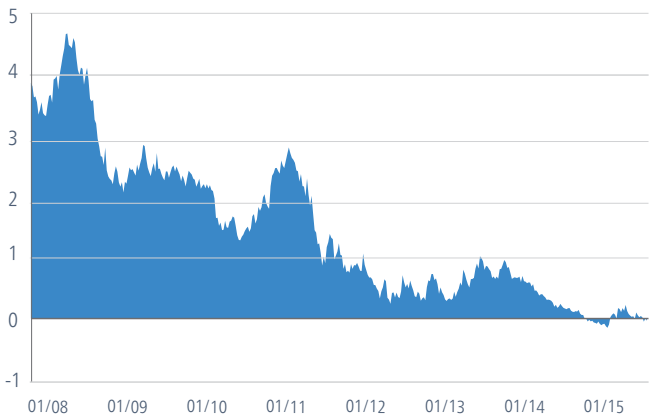
This is an important factor given that in recent years swings in asset prices have been far more correlated than was previously the case. Historically, rising equity prices, for example, were associated with falling bond prices and vice versa. Stronger economic growth would boost corporate earnings and hence share prices, whilst causing interest rates to rise, undermining the appeal of bonds. Thus, the risk of investing in equities could be offset to some degree by allocating part of the fund to bonds.

A NEW WORLD ORDER?

However, the aggressive monetary policy adopted by central banks around the world in response to the global financial crisis of 2008 has boosted asset prices simultaneously in recent years. Equity and bond prices have soared in tandem, while commercial property has also risen strongly in many markets. Thus, investing in a mix of assets will reduce a fund's risk by less than doing so had done in the past.

Consequently, the traditional approach of targeting equities for capital growth, bonds for income and as a safe haven in times of trouble, and alternatives for extra diversification, no longer appears as valid. Furthermore, it is difficult to rely on equities for long-term capital growth given that valuations look expensive on most long-term measures. Meanwhile, the income generated by bonds is very low. There are also doubts as to the amount of protection bonds will afford in the event of an equity market downturn given that prices are already so high.

German five-year bonds



Past performance is not a guide to future returns.
Source: Bloomberg as at 16 October 2015

A FRESH APPROACH

Multi-strategy funds offer a solution to investors concerned about the growing correlation of asset classes. They also offer hope to those wanting to grow their capital or generate income in a world of low yields.

These funds look to achieve their targets by combining a diverse range of strategies with different drivers of performance. The Aviva Investors Multi-Strategy range of funds is very flexible. They are not constrained by a benchmark, are not wholly dependent on ideas that are linked to the economic cycle and they can deploy tools that exploit falling and volatile markets to generate positive returns for investors. All of these factors underpin our confidence that our multi-strategy funds can meet their objectives.

When constructing funds we assess how much we expect each individual strategy will add to the total return and its impact on overall risk. We also assess the anticipated ease of exiting the position and whether it will be of benefit should the fund grow substantially. Derivatives are often employed in order to be able to alter asset exposures quickly, especially in illiquid markets, and manage risk efficiently. Due to the fact they usually employ leverage, they can also allow managers to get more exposure to the underlying asset than is available by investing directly in the asset itself.

THE NUTS AND BOLTS OF MULTI-STRATEGY FUNDS

Markets react quickly to events, often in an illogical manner. The fear that the market herd will thunder away into the distance leads many investors to panic. Sentiment can thus shift suddenly and sharply. However, this creates opportunities for patient investors who are willing to take a longer-term view.

In our multi-strategy funds, we ignore short-term, headline-grabbing developments and focus instead on spotting mispriced investments with attractive risk-adjusted prospective returns over a three-year investment horizon. For example, one strategy is to go long of the Indian rupee against the euro. We expected this strategy to be profitable should structural reforms boost the Indian economy by more than the market anticipated, or were euro zone monetary policy to be looser than the market expected. In January 2015, the European Central Bank did indeed ease monetary policy by more than expected and the euro fell sharply as a result.

The way the strategies in a multi-strategy fund are expected to interact across a range of market conditions is crucial to managing a fund's risk exposure and delivering the performance investors expect. Our multi-strategy funds consist of three types of strategies: we call them 'market', 'opportunistic' and 'risk-reducing'.

The first looks to generate returns when markets perform as we expect. This group of strategies essentially performs the role that equities have traditionally played in multi-asset funds. The second seeks to exploit opportunities where one asset appears mispriced relative to another. We look for these strategies to generate positive returns irrespective of how markets perform. This group can be thought of as playing the role of alternatives within a multi-asset fund. Their returns have in the past been relatively uncorrelated with those of equities and fixed income. The last group is designed to cushion performance when markets behave unexpectedly. It can be thought of as playing a similar role to fixed income in a multi-asset fund, providing protection against market turbulence.

We aim to combine these strategies in such a way that we can deliver equity-like returns for less than half the risk of equities. Strategies can be added or removed from the funds to refine risk exposures and ensure the fund is appropriately positioned as the outlook for economies and markets changes.

All of these factors – diverse and interactive strategies, flexibility and the use of strategies that benefit from falling markets – give us confidence that our multi-strategy funds can be successful in their pursuit of specific targets, whether it be capital appreciation or consistent, sustainable income – for today's investor.

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NOTES

IMPORTANT INFORMATION

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