The Alpha *behind* Alpha:
Rebooting the pension business models

create

Amundi
ASSET MANAGEMENT

Author: Prof. Amin Rajan

First published in 2014 by:
CREATE-Research
Vauxhall Lane
Tunbridge Wells TN4 0XD
United Kingdom

Telephone: +44 1892 526 757
Email: amin.rajan@create-research.co.uk

Foreword

Amundi is pleased to partner with CREATE-Research in this study on the reaction of pension plans to the uncertainty that has prevailed in the global investment landscape. Professor Amin Rajan gives valuable insights into the links between pension plans, their consultants and asset managers.

These last years have seen a concentration of several elements: very low interest rates triggering a quest for yields, high levels of liquidity as a result of measures taken by central banks, strong risk aversion and a very tough regulatory environment. Investors were somewhat perturbed by this uncertainty and increasingly sought advice. In our opinion, the asset management industry is undergoing great change and must affirm its role as a provider of advice and services within the scope of a long-term relationship, particularly for long-term investors such as pension plans.

The study constitutes an important assessment of how market upheavals and ageing demographics have led a growing number of pension plans to revamp their business models by turning the spotlight on three key areas: asset allocation, governance practices and strategy execution. Prof. Rajan's report highlights some of the ways in which pension consultants and asset managers can add more value to the changing pension value chain.

Pascal Blanqué
Chief Investment Officer
and Head of Institutional Clients and Third-Party Distributors
Amundi

Acknowledgements

"When facts change, I change my views. What do you do?" observed John Maynard Keynes after the Great Depression of 1929-32.

This lesson has been duly taken on board by pension plans after the Great Financial Crisis of 2008-09.

For them, the old ways of investing no longer appear relevant in a world where politics more than economics drives financial markets.

This report turns the spotlight on the changes that pension plans have implemented in order to deliver decent pensions to their members.

These changes have also been forced by ageing demographics. The first and the largest cohort of post-War Baby Boomers is now entering their golden years, forcing pension plans into negative cash flow territory.

This report provides an initial assessment of the changes now in progress.

I am deeply grateful to 190 pension plans across Europe who participated in our survey. I am struck by their candour and desire to do better at a time when markets are stalked by all manner of macro risks that have not been experienced in living memory.

I am grateful to IPE for their excellent support in the survey phase and especially to Liam Kennedy for his helpful guidance and comments thorough out the project.

My grateful thanks also go to Amundi Asset Management for supporting the publication of this report without influencing its findings in any way. This arms-length relationship has enabled us to present an impartial assessment.

Finally, I would like to thank Lisa Terrett for co-ordinating the survey and running the interview programme, and to Dr Elizabeth Goodhew for her excellent editorial support.

After all the help I have had, if there are any errors and omissions in this report, I'm solely responsible.

Amin Rajan
Project Leader
CREATE-Research

CONTENTS

1 Executive Summary

"The 4 standard deviation events have been too frequent lately. Tectonic plates are shifting. The biggest risk we carry is to do nothing and rely on the self-healing power of markets."

An interview quote

Introduction and aims

Two of the four worst bear markets of the last 100 years rocked the world of investing over a short span of just seven years in the last decade. They sidelined the conventional wisdom on risk premia and diversification.

The ensuing monetary easing by central banks on both sides of the Atlantic have further served to weaken the link between market prices and their fundamental value drivers.

Now, Europe is yet again stalked by the shadow of secular stagnation. Neither growth nor inflation are anywhere near their desired trajectories. Monetary and fiscal policies are now testing their outer bounds with a fresh round of quantitative easing by the European Central Bank.

The upshot is clear. Investors no longer manage risk, they manage uncertainty: the first relies on known probabilities of future returns, the other on guesswork.

Hence, pension plans have been enjoined to explore new investment horizons in the belief that markets are unlikely to normalise any time soon. Rates will remain low for a long time.

At the same time, plan liabilities have been maturing rapidly as the first – and the largest - cohort of post-War Baby Boomers are entering retirement.

The lethal combination of market upheavals and ageing demographics has led a growing number of pension plans to revamp their business models by turning the spotlight on three key areas: asset allocation, governance practices and strategy execution.

Little is documented on the changes now in progress in these areas, their holistic linkages and their impacts so far.

This report provides an early indication of how pension plans are responding to the fog of uncertainty that has descended on the global investment landscape.

Focusing on plans across Europe, the report addresses three issues:

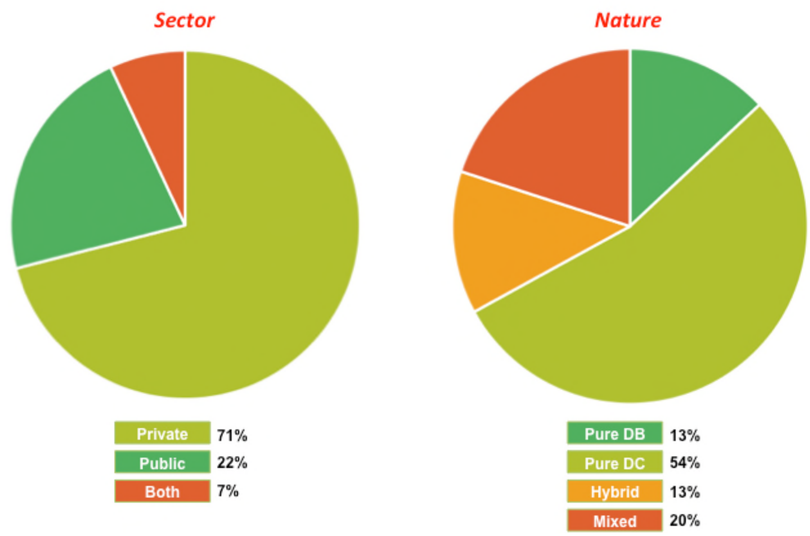
- what business model changes have been implemented since the crisis sparked by the Lehman collapse in 2008 and what goals do they target?
- what have the outcomes of these changes been so far and what lessons have been learnt?
- how can pension consultants and asset managers add more value to the changing pension value chain?

These questions were pursued in a pan-European survey bolstered by structured interviews with senior executives.

A cross-section of around 190 pension plans across Europe participated in our research, with combined assets under management of €1.9 trillion. More details on them are given in Figure 1.0.

The next page presents our headline findings. It is followed by eight themes that expand on them.

Figure 1.0 **What sector does your pension plan cover? What is the nature of your plan?** (% of survey respondents)



Source: Amundi Asset Management / CREATE-Research Survey 2014

Headline findings

New business models for a new age

The Lehman Brothers' collapse was a tipping point. The unprecedented scale and speed of sell-off then killed the old dictum *"fix asset allocation and the numbers will follow".*

The new wisdom is that good performance depends on a symbiotic interaction between asset allocation, governance and execution.

Prior to the two bear markets of the last decade, 80% of portfolio returns came from intelligent asset allocation. Now, the figure has reportedly fallen to 50%. The rest is attributed to implementation.

Accordingly, just under 90% of pension plans have refined their asset allocation approaches to a *'large' or 'medium'* extent; mainly the former.

Just under 85% have upgraded their governance to a *'large'* or *'medium'* extent; mainly the former.

Just under 80% have refined their execution capabilities to a *'large'* or *'medium'* extent; mainly the former.

As for their outcomes so far, the majority cite them as *'good'* or *'very good'* in all three areas. However, around a third of plans remain '*unsure'* for two reasons.

First, business model changes require new skills and new mindsets that can only evolve over time. Only time will tell whether the changes are as durable as the crisis that provoked them.

Second, the changes have had strong tailwinds from the market rally since 2011. The real test will come with the next headwinds. Most of the changes have not had their mid-life crisis yet.

Themes 1-3 give details (pp.4-6).

As liabilities mature, high returns are no longer the be-all and end-all

Currently, around a third of plans have a funding ratio over 100%, a further third between 80 and 100%, and the remaining third under 80%.

To meet their liabilities, 51% of plans are currently targeting an up to 5% return on their portfolios (net of fees). The rest target over 5%.

These numbers look aggressive alongside the outcomes in the infamous "lost decade" and the return forecasts for this decade.

They also look ambitious because around 45% of plans are now in cash flow *'negative'* or cash flow *'neutral*' territory, mostly the former, owing to ageing demographics.

This, in turn, has dampened their risk appetite: 8% cite it as *'high'*, 61% as *'medium'*, 29% as *'low'* and 2% as *'minimal'*.

Accordingly, the one-size-fits-all approach to asset allocation is history. Three approaches are evident, each with distinct aims.

The first one is *product focused*, adopted by around 40% of plans. It relies on a hybrid blend of single strategies – on a stand-alone basis – to achieve good risk-adjusted returns consistent with the overall policy benchmark. Some deploy risk parity in the overall portfolio; some use specific long/short funds.

The second approach is *time focused*, adopted by around 30% of plans that are already in the run-off phase with a significant and rising number of retirees. Their asset choices target regular income, steady cash flow and inflation protection, favouring real estate, infrastructure, alternative credit and deep value equities.

The third approach is *LDI focused,* adopted by around 30% of plans that are aiming to immunise risks via an overt glide path that straddles both the accumulation and decumulation phases. Their return-seeking and risk-hedging assets are augmented by surrogate assets that have equity-like returns and bond-like features.

Themes 4-7 give details (pp. 7-10).

Minimising the 'implementation leakage' is the top priority

The key lesson from the two bear markets of the last decade is that there is the world of theory and the world of practice. The *ex post* returns rarely match the *ex ante* promises.

The gap is explained by implementation leakage caused by untoward external and internal factors. They work in a mutually reinforcing manner to the extent that career risk and reputation risk take precedence over investment risk in the pension value chain.

Concerted attempts are being made to tackle them head on. One key element is the steady rise of passive funds. They are likely to rise from 20% of total portfolio allocations currently to 40% by the end of this decade. In order to understand their risk drivers at the most granular level, passive funds and multi-asset class funds are now treated as special vehicles for reducing the leakage.

Another element enjoins asset managers to decouple marketing from thought leadership and pension consultants to walk the fine line between value investing and value traps. The time has come for a new implicit contract that minimises the time-honoured principal–agency problem and leverages the collective wisdom of all the players in the value chain.

Theme 8 gives details (p.11).

"A world-class strategy is worthless without world-class implementation."

An interview quote

Theme 1 Eclectic asset allocation models are the new normal

Pragmatism is the name of the game: seemingly contrary approaches now exist in the European pension landscape

The excess liquidity flooding the global markets since 2000 has sidelined the three tenets of conventional wisdom: risk generates returns, risk premia of most asset classes are relatively stable and diversification delivers a free lunch.

The traditional diversification, based on a 60:40 equity/bond mix, came unhinged when most needed during the credit crisis. The iconic Yale model favouring alternatives fared just as badly as the long-only model favouring equities and bonds. It was a defining moment that sparked changes in the business models of pension plans. Outwardly, the changes are most evident in both the principles guiding asset allocation and their associated asset choices (Figure 1.1).

The old approach began to morph in the face of the appalling reality of funding numbers. Liability matching is in ascendancy over asset growth.

Henceforth, pragmatism is the name of the game. It has not only shaped the guiding principles. It also enhanced the asset choices. Around 55% of our respondents have implemented one or more of the changes given in Figure 1.2 to a *"large extent"*. For them, the world of investing is reverting to its pre-1982 days when high volatility and time varying risk premia were the norm. The raging bull market of 1982-2000 was an historical aberration on this argument, caused by the US Federal Reserve's over-eagerness to pump fresh liquidity at every whiff of a market correction. Quantitative easing is the latest in the series of tools to fuel the markets artificially.

However, for every early adopter of the new approach in Europe, there is at least another one proceeding ultra cautiously. The reasons are: some do not have the necessary governance and expertise; some do not have the necessary support from plan sponsors; some see new approaches as overly complex with uncertain pay-offs; some think that the new approaches have not been tested by time or events; and some see themselves as long-term value investors believing in the power of mean reversion.

Thus, seemingly contrary approaches co-exist in the European pension landscape: blending caution and opportunism, strategic and dynamic allocation and asset growth and liability matching.

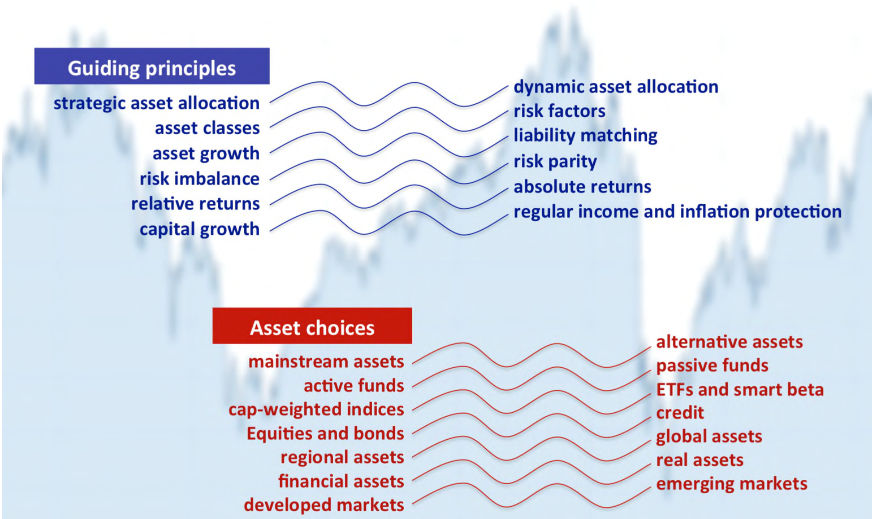
What may appear like intellectual disarray is indicative of a "wait and see" attitude below the surface level.

Interview quotes

"Asset allocation is about combining the best of old and new within an eclectic framework required by the new reality."

"If the new approaches deliver benefits to early adopters, the rest may follow suit."

Figure 1.1 **How diversity now characterises the asset allocation models**



Source: Amundi Asset Management / CREATE-Research Survey 2014

Theme 2 Alpha returns now rely on a symbiotic interaction between governance practices, asset allocation and strategy execution

The dividing line between asset classes and investment vehicles is as clear as between black and white.

Prior to the two bear markets of the last decade, 80% of portfolio returns came from intelligent asset allocation. Since then, that figure has reportedly fallen to 50%. The rest is attributed to implementation. Hence, notable improvements have been made in each of the areas, shown in Figure 1.2 – driven by risk-on/risk-off cycles, the scarcity of alpha and outsized macro risks. Thus, pension plans are switching to new areas like absolute return investing, dynamic investing and risk-based diversification.

In the process, governance is acquiring a pivotal role. Greater clarity on “soft” issues like mission, goals, beliefs and time horizon of pension plans is regarded as vital in making more intelligent asset allocation decisions. Such clarity is also backed by structural improvements – like enhanced investment expertise on the board, delegated authority to full-time executives and an in-house CIO – to secure nimbleness in today’s real-time markets driven by 24-hour news cycles.

To complete the circle, improvements are also evident in the execution capabilities. They include value-for-money fee structure, improved risk management, better manager selection, the right choice of investment vehicles, and judicious use of derivatives, shorting and leverage.

The biggest change centres on risk management. Its causes are being separated from its consequences; its management from its measurement; its time dependency from its randomness. Crucially, volatility is no longer the key measure of risk; instead, risk is defined by the maximum drawdown that trustees are willing to tolerate in a given year.

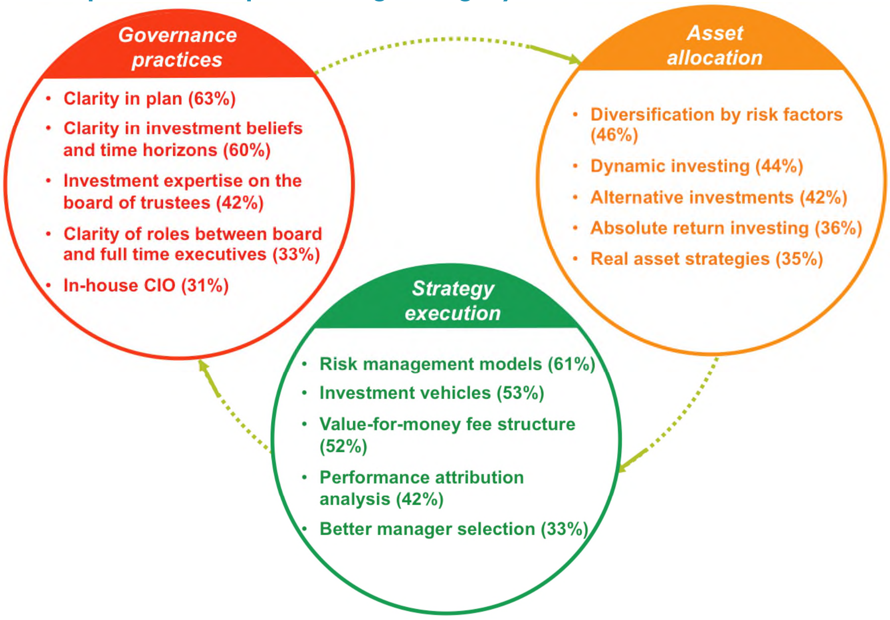
The second biggest change centres on what are now referred to as *vehicles,* like cap-weighted indices, ETFs and smart beta, to obtain low cost exposures to markets. Similarly, in the DC space, advice-embedded products like life-cycle funds have gained traction in pursuit of outcome-based goals. Such vehicles are increasingly used as customised beta that displace active management. As a result, the dividing line between asset classes and investment vehicles is as clear as that between black and white: one is about *what* to invest in, the other about *how* to do it.

Interview quotes

“Any strategy is only as good as its implementation.”

“Risk within the investment period is more important than the one at the end of it. That’s why we do dynamic investing.”

Figure 1.2 **The emerging business model in the pension landscape**
(% of respondents implementing changes)



Source: Amundi Asset Management / CREATE-Research Survey 2014

Theme 3 The overall scorecard implies work in progress

When assessing the changes to the business models, our survey has separated their *extent* from their *outcomes*.

The extent of changes in each of the three areas of business models has been both pervasive and significant (Figure 1.3, upper panel).

In asset allocation, 56% describe changes as being *"large extent"* and 32% as *"medium extent"*.

The respective figures for governance practices are: 57% and 26%; and for strategy execution 46% and 33%.

Thus, nearly four in every five respondents have implemented changes on a large or medium scale - mostly the former. Larger and medium-sized plans have been more innovative.

Turning to their overall outcomes (lower panel in Figure 1.3), the majority cite them as *"good"* or *"very good"* - mostly the former in all three areas.

Notably though, around a third of respondents are *"unsure"* about the outcomes at this point in time. This is unsurprising. As we shall see in Section 2, many of these changes imply mindset shifts that take time to nurture.

For individual pension plans, new ways of investing require new skills and new mindsets –especially in governance practices. For example, national regulations enjoin trustees to exercise the highest level of diligence in all aspects of plan operation, while remaining nimble in today's markets where "noise" far exceeds "signals".

This is a high-wire act: how to delegate authority to full-time executives without losing control. Trustees, thus, have to walk the fine line between their fiduciary role and executive empowerment. On their part, these executives also have to walk the fine line between personal accountability and career risk.

Such balancing acts require new ways of thinking as well as new ways of working. These take time to develop, especially when peer risk and career risk are always lurking in the background.

Time will tell whether the new changes will be as durable as the crisis that provoked them.

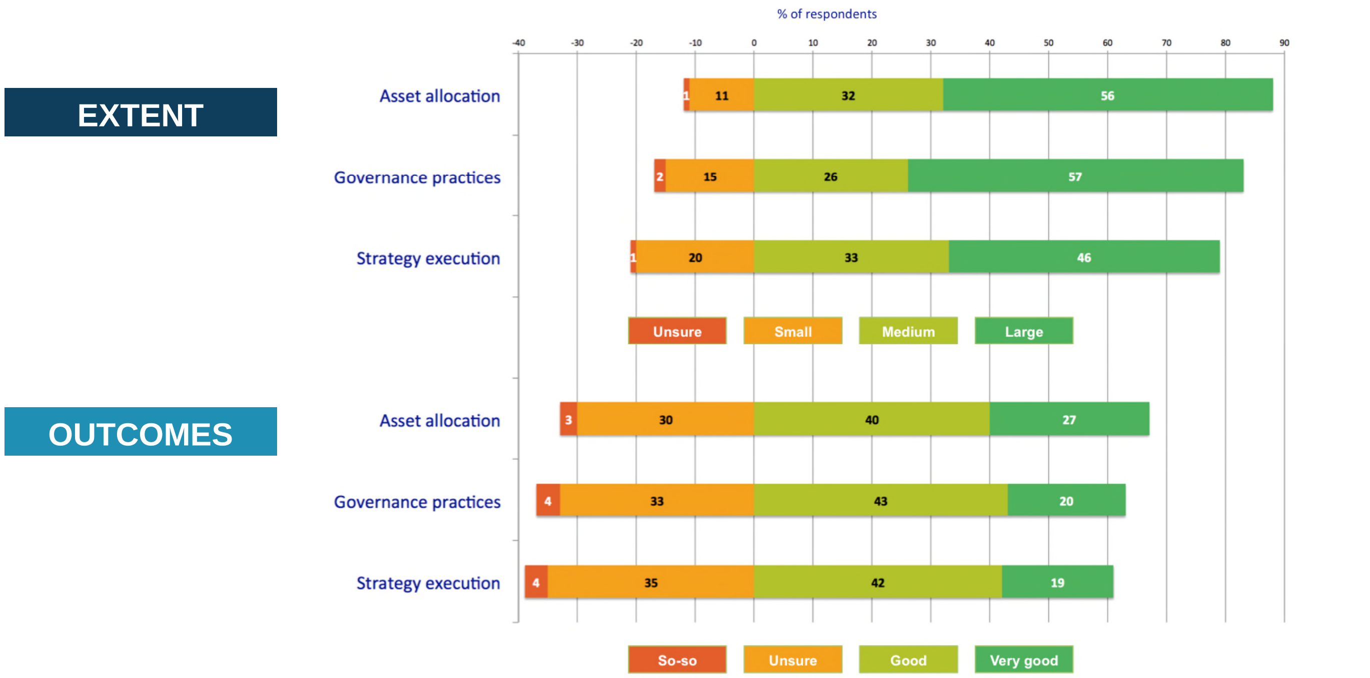
Time will tell whether the new changes will be as durable as the crisis that provoked them.

Interview quotes

"The market rally since 2011 has provided a fair wind. The real test will come when markets face strong headwinds.

"Peer and career risks are a big impediment to much-needed change in pension governance."

Figure 1.3 **Overall, what is the scorecard on the extent of changes and their outcomes?**



Source: Amundi Asset Management / CREATE-Research Survey 2014

Theme 4 Plan deficits require aggressive return targets

For every critic who thinks central bank action has been too little, there's one who worries that it is too much.

Since the 2008 crisis, funding ratios have suffered a double squeeze: falling values on the asset side, and a falling discount rate on the liability side.

On the accounting basis, just over 35% of European pension plans now have a ratio in excess of 100%; just under 50% have it below 90% (Figure 1.4, left chart). Thanks to the market rally in 2013, these numbers mark a decided improvement on what prevailed in the period 2009-11.

However, these numbers are overstated: they are simple, not weighted, averages and they are not risk adjusted. On a buy-out basis, a more realistic measure, the ratios typically hover around 65%, calling for aggressive annual return targets.

Currently, 51% target up to 5% net of fees; and 49% target over 5% (Figure 1.5, right chart). Although reasonable on paper, they are ambitious in practice.

First, using the last 10 years as benchmarks, consensus forecasts envisage a notable reduction on a 10-year forward look in annual returns. Illustrative reductions envisage global equities going from 9% to 5%, global sovereign bonds from 4% to 2%, emerging market equities from 13% to 8% and EM bonds from 9% to 4%.

Second, many plans have lately been reducing the inflation mismatch between their assets and liabilities by loading up on long duration index-linked bonds. This has been done in the belief that the crisis has sparked a *balance sheet recession* in Europe, where governments are relying on low real yields to vaporise their debts. Unlike the normal business cycle, which sees a temporary contraction in output and employment, a balance sheet recession is proving far more damaging.

It catches countries in a debt trap. Stimulating growth encourages even more debt, thus adding to the problem they set out to solve. The banking system becomes over-exposed to "zombie" borrowers who survive at the mercy of low rates. It causes a permanent loss in output and reduces its long-term potential. Worst of all, it creates prolonged uncertainty until substantive deleveraging occurs.

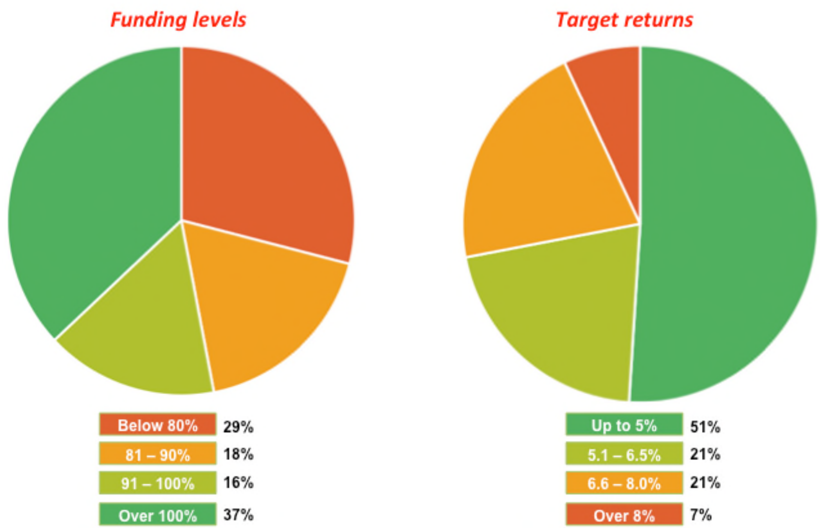
For every one respondent who now thinks the global economic recovery will get better, there are two who think it will remain tepid. For every critic who thinks central bank action has been too little, there is one who worries that it is too much. Thus, return targets presented in the chart are indicative, not definitive.

Interview quotes

"Despite strong austerity, the combined public sector debt of the G7 economies has grown by 40 percentage points since the crisis."

"It's difficult to get returns in excess of 5% without aggressive risk-taking via shorting and leverage."

Figure 1.4 **If you're a DB plan, what is your current funding level and what annual return (net of fees) do you target for improving it?**



Source: Amundi Asset Management / CREATE-Research Survey 2014

Theme 5 The cash flow status is constraining risk taking

Ageing demographics are a game changer, driving up cash flow needs of pension plans while reducing their risk appetites.

Macro factors aside, ageing demographics are a game changer, driving up the cash flow needs of pension plans while reducing their risk appetites, according to some 50% of pension plans.

Taking them in turn, currently, 26% of plans are in cash flow *negative* territory, 17% in *neutral* territory and 57% in *positive* territory (Figure 1.5, left chart).

In fact, most plans in Europe are already in their run-off phase with the first cohort of Baby Boomers entering retirement. Yet, some are still in cash flow positive territory either because the number of their retirees is still small or their portfolios are delivering good income. As we shall see under Theme 6, this has made it essential to have an asset mix that delivers multiple goals: return-enhancing assets to boost the funding levels, income assets to provide capital protection, cash flow assets to honour contractual liabilities, and real assets to provide inflation protection.

This eclectic mix is further reflected in the fee structure. As we shall see in Section 3, nearly 90% of plans use market-based benchmarks, since 60-80% of their assets are allocated to long-only funds. Yet, around 50% also use cash flow-based benchmarks and 40% use absolute return benchmarks. Despite the variety of goals, the beat-the-market mentality remains ever present.

Turning to risk appetite, 90% of plans have either a *medium* or a *low* appetite (Figure 1.5, right chart). A variety of instruments are used to hedge portfolio risks either implicitly or explicitly.

As we shall see in Section 4, the implicit ones rely on greater asset class diversification (cited by 78%), risk factor-based diversification (49%), duration management (48%) and liability driven investing (41%).

The explicit ones rely on inflation, interest rate and mortality hedges (30%), tail risk hedges (18%) and option contracts with asymmetric bets (9%). This lower popularity of explicit hedges is attributed to their cost, which can be a drag on performance. In contrast, there is a strong preference for discretionary hedges around equity and credit portfolios to capture or avoid short-term momentum, sentiment and macro events.

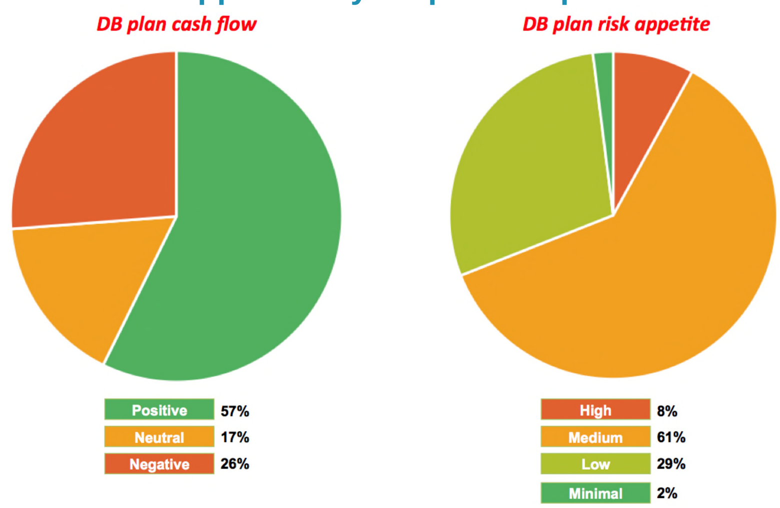
The emerging risk culture relies on an open dialogue between trustees and their full-time executives. It also marks a shift from an asset-based measure of risk (volatility) to a liability-based measure (cash flow).

Interview quotes

"We're transitioning to liability management, which is a whole new ball game. You can't wait for markets to normalise when you're cash flow negative."

"Fear and uncertainty can be toxic. But over-caution carries its own risks. Implicit hedges are a good halfway house."

Figure 1.5 **What is the net cash flow position of your pension plan currently? What is the overall risk appetite of your pension plan?**



Source: Amundi Asset Management / CREATE-Research Survey 2014

Theme 6 The end of the one-size-fits-all approach

High returns are no longer the be-all and end-all, as liabilities mature.

At surface level, the asset choices presented in Section 3 conceal more than they reveal. Behind them lie three clear approaches, each with its own imperative. The first two are described here and the third one is on the next page.

The first approach is *product focused.* It invests in equities and bonds via a hybrid blend of single strategies. Some also use risk parity; others use long-short funds. The main users are plans with positive cash flows and/or assets less than €10 billion, with limited governance expertise and skills sets. This approach does not clearly discriminate between the accumulation and decumulation phases.

In contrast, the second approach is *time focused* and covers three distinct stages of the decumulation phase (Figure 1.6). It is being implemented by plans already in the run-off phase, with negative or neutral cash flows. Their asset choices vary by three stages. High returns are no longer the be-all and end-all, as liabilities mature. Hence, in the early stage, they target *inflation protection* via real estate and infrastructure; *capital protection* via long treasuries and index-linked bonds; *high income* via alternative credit; and *capital growth* via deep value or high dividend equities.

This mix is indicative, not definitive: it varies between plans. Overall, it aims to strike a balance between asset growth and liability matching; between risky assets and less risky assets; between high returns and capital buffers; between financial repression resulting from low real yield and sequence of returns risk resulting from the inordinate time taken to recoup the loses after big market events.

These balancing acts are essential. In none of the European countries, have the average funding levels yet reverted to their pre-crisis highs.

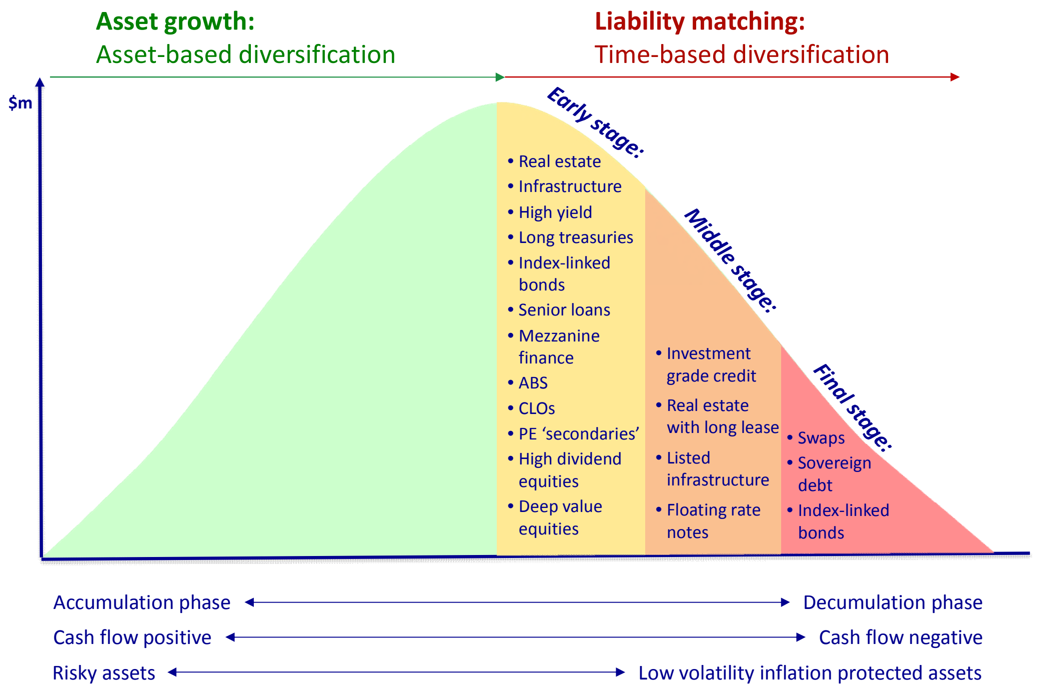
Indeed, there are growing worries that the adoption of Solvency II regime will hamper plans' abilities to harness risk premia as and when they emerge.

Interview quotes

"Even in the decumulation phase, you have to capture the full potential of money in motion."

"Real assets provide all-weather protection. They are ideal in the run-off phase."

Figure 1.6 **How is time-based diversification linked to aging demographics?**



Source: Amundi Asset Management / CREATE-Research Survey 2014

Theme 7 The rise and rise of cross-over assets

Concerns have intensified the search for cross-over assets with equity-like returns and bond-like features.

The *time focused* approach described on the previous page centres on the decumulation phase.

In contrast, the third approach that is *LDI focused* straddles both accumulation and decumulation phases of the DB plans. It progressively immunises the risks inherent in their portfolios, as and when the funding levels improve.

With the adoption of mark-to-market accounting rules in the middle of last decade, the majority of DB plans across Europe have separated their risk-hedging assets from their return-seeking assets (Figure 1.7, assets at two extremes).

Hedging assets aim to mimic a plan's liability profile. While correlating with liabilities, they provide credit spread, liquidity and duration.

Return-seeking assets, on the other hand, aim to plug the deficits. They target liability-plus returns, low asset class correlation and broad diversification. Some plans use leverage to spice up returns in both groups.

Notably, the interaction between them follows a specially crafted glide path that triggers gradual asset shifts from risky to less risky assets, as plan deficits decline over time. However, since the 2008 crisis, three problems have emerged.

First, in the return-seeking group, equities have proved ultra volatile and alternatives have delivered sub-par returns.

Second, in the hedging category, there has been a 70% contraction in AAA-rated bonds since 2011. The quantitative easing programmes have also vacuum cleaned the stock of sovereign debt held by the public.

For example, the Bank of England now holds 75% of index-linked gilts. Reportedly, the resulting excess demand will not be met till 2035. Besides, today's valuations are distorted by central bank action: nobody knows the fair price of the bonds of indebted nations.

Third, many plans have been obliged to raise their funding targets at every trigger point in their glide path, so as to protect against sovereign default or other counterparty risks inherent in their hedging assets.

Many worry that rates may fall again or remain low for a long time, wrecking their well-crafted glide paths.

These concerns have intensified the search for the cross-over assets with equity-like returns and bond-like features (Figure 1.8, two asset groups in between).

As surrogates, they complement other asset classes chosen along the glide paths.

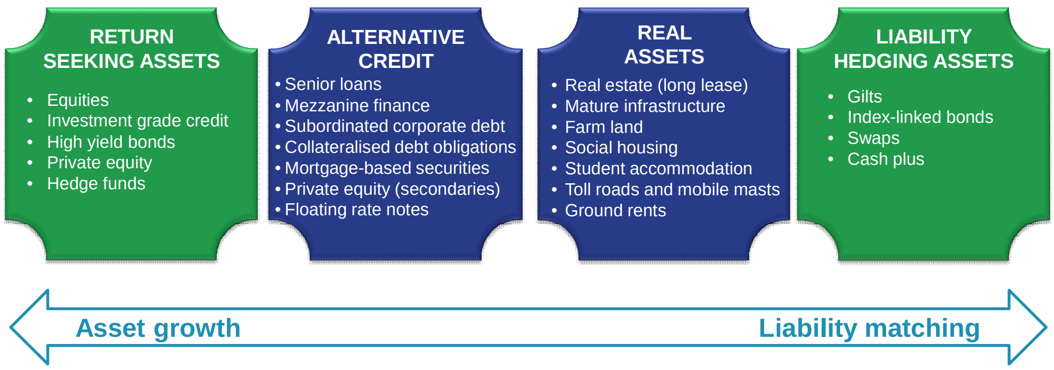
Their demand will grow as the search for yield intensifies and fears of sovereign debt crises lurk in the background.

Interview quotes

"We can't afford another 'lost decade'. Our maturing liabilities do not leave us with many options other than surrogate assets. "

"We will not do 100% LDI because we want to earn money with money."

Figure 1.7 **Cross-over assets now provide a bridge between return-seeking assets and liability-hedging assets**



Source: Amundi Asset Management / CREATE-Research Survey 2014

Theme 8 Savvy execution is the new silver bullet

Back-tested performance has tended to ignore the market impact of implementation. The past may be the best guide to the future, but it is a very imperfect one.

Since the 2002 bear market, pension plans have learnt an enduring lesson: seeing how a given asset allocation might work on paper is one thing, what it delivers in practice is quite another. The gap is due to *implementation leakage*, caused by untoward external and internal factors that undermine optimal execution.

The external ones have included fees, commissions, spreads, market impact, portfolio drift and opportunity cost of trading. Additionally, simulation models in use have overly influenced asset choices, without taking into account the fact that investors' own actions and reactions introduce new risks, as do the reactions of other investors as they weigh up every situation. Back-tested performance has tended to ignore the market impact of implementation. The past may be the best guide to the future but it is a very imperfect one.

Engagement on these and other issues has been reportedly sub-optimal between three key sets of actors in the pension value chain – pension plans, asset managers and consultants. An entrenched blame culture has been evident in which career risk and reputation risk has taken precedence over investment risk. Such shortcomings have been reinforced by internal factors like governance weaknesses, inadequate investment expertise and herd instinct.

To their credit, pension plans have been taking action to minimise leakage while rebooting their business models (Figure 1.8) – in the belief that plans are nothing, but planning is everything.

As well as improving their governance practices to develop strong investment beliefs and the necessary prime mover advantages, pension plans are making more judicious use of investment vehicles to get the best out of passive investing covering cap-weighted indices, ETFs, smart beta and life-cycle products. Their quest for a value-for-money fee structure has intensified. The aversion to financial engineering tools like shorting, leverage and derivatives has been weakening, too.

Thus, since the Lehman collapse, European pension plans find themselves in uncharted territory where no single constituency has a monopoly of wisdom, and where a world-class strategy requires world-class execution.

Success rests on a new form of *implicit contract* between plans, their consultants and asset managers that minimises the time-honoured principal–agency problem and leverage collective wisdom.

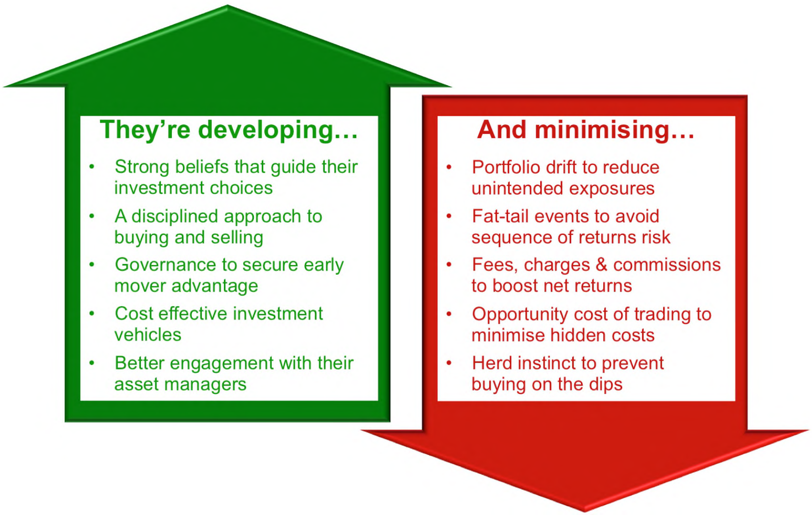
Winds of change are evident.

Interview quotes

"Before 2008, most of alpha was leveraged beta. Why couldn't our advisors see that?"

"Will today's new approaches prove to be just another costly phase in our industry's history?"

Figure 1.8 **How are pension plans minimising the implementation leakage?**



Source: Amundi Asset Management / CREATE-Research Survey 2014

2 Business models

What have been the key changes since the 2008 crisis?

Headlines

- The reincarnation of diversification
- Governance playing a pivotal role
- Strategy implementation becoming as important as design
- Dynamic investing alongside conventional investing

Overview

Aims

This section has two aims.

- to highlight the changes implemented by European pension plans in three core areas of their business models since the 2008 crisis: namely, asset allocation, plan governance and strategy execution
- going forward, to highlight the goals that these plans aim to achieve over the next three years.

"Asset allocation is no longer the main driver of returns. The world of formulaic allocations has long gone."

An interview quote

Key findings

A. Asset allocation

The speed and scale of sell-off after the Leman collapse forced huge introspection. As a result, in descending order of importance, six approaches saw the most widespread adoption:

- risk-based diversification
- dynamic investing
- alternative investing
- absolute return investing
- real estate strategies
- smart beta strategies.

B. Governance practices

The following areas attracted more widespread action:

- a plan's mission and its goals
- investment beliefs and time horizon
- investment expertise on the board
- in-house investment expertise
- delegated authority to full-time executives.

C. Strategy Execution

The following aspects of implementation have received the most attention:

- risk management
- choice of investment vehicles
- value-for-money fee structures
- performance attribution analysis
- manager selection
- financial engineering.

It is now widely accepted that, while market prices remain disconnected from their underlying value drivers, asset allocation is no longer the key driver of returns.

Any investment strategy is only as good as its implementation, which relies on nimble governance and savvy execution.

D. Future goals

Over the next three years, pension plans target two key goals:

- consistent investment returns and capital protection
- a good funding ratio.

The principal tools for achieving these goals will be:

- dynamic investing
- enhanced investment expertise
- effective risk controls
- lower costs.

The tools seek to:

- capitalise on periodic market dislocations
- get more alpha without further beta risks
- get existing returns at lower costs
- do periodic rebalancing to get the free lunch usually associated with diversification
- minimise the sequence of returns risk.

All the above changes seek physical as well as mindset shifts in the existing business models of pension plans.

Mindset shifts inevitably take time. So, progress is incremental.

46%
identify risk factor-based diversification

44%
identify dynamic investing

42%
identify alternative investing

The reincarnation of diversification

Since 2000, as the global economy became awash with liquidity, the key tenets of the modern portfolio theory have been increasingly sidelined. The correlation between historically lowly correlated asset classes has been rising. The bar belling approach, too, has come under stress, as actual returns have diverged markedly from expected returns. Worse of all, risk premia have become time varying.

The speed and scale of the sell-off in 2008 after the Lehman collapse was unprecedented. It was a cathartic moment that forced huge introspection in the three key areas of pension plan business models. Here, we focus on the first one: asset allocation.

In response, five investment approaches were adopted by at least three in every ten European pension plans (Figure 2.1):

- diversification by risk factors (46%)
- dynamic investing (44%)
- alternative investments (42%)
- absolute return investing (36%)
- real asset strategies (35%)
- smart beta strategies (30%).

Rather than supplanting the old approach based on strategic asset allocation and long-only investing, these changes have complemented them gradually.

Their early adopters have relatively better governance structures and skills sets. They have also had lower funding ratios after the crisis with a correspondingly higher urgency for action.

On the whole, larger and medium-sized plans have been more innovative in the way they have changed their business models. Their funding levels have required aggressive returns by the standards of today's environment, as seen in Figure 1.5 in the Executive Summary.

Their change programmes have been based on the premise that the world of investing is reverting to its pre-1982 days when high volatility was the norm.

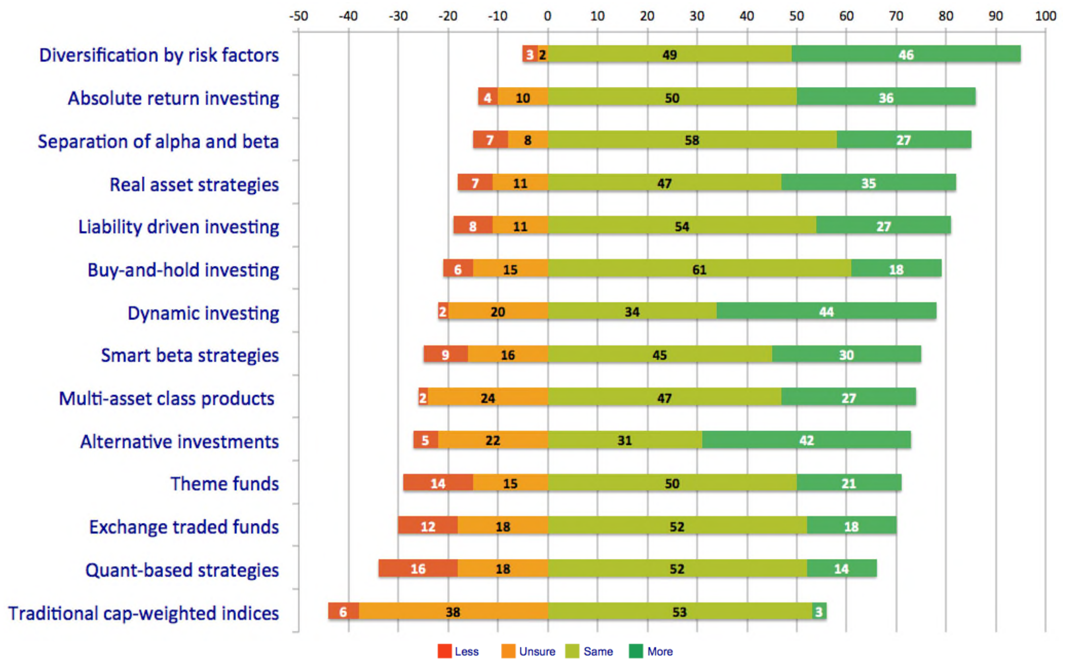
By this argument, the prolonged bull market in the period 1982-2000 was largely fuelled by the eagerness of the US Federal Reserve to pump liquidity

Interview quotes

"In the 2008 crisis, old style diversification hit a brick wall when it was most needed."

"Constructing ex ante portfolios based on risk factor requires new skills associated with rebalancing and forecasting."

Figure 2.1 **How has the importance of various aspects of your pension plan's asset allocation changed since the 2008 crisis?**



Source: Amundi Asset Management / CREATE-Research Survey 2014

into the markets at every whiff of market correction. Quantitative easing is the latest in the series of tools used by the Fed to fuel the markets artificially and disconnect them from their fundamentals. The normalisation of policy and its effects will be a long drawn-out process that will favour dynamic investing.

However, for every adopter, there is at least another pension plan that has been slow to weaken the role of static strategic asset allocation and traditional equity:bond diversification. There are many reasons.

Some do not have the necessary governance and expertise.

Some do not enjoy the necessary support from their sponsors for anything radical.

Some see new approaches as overly complex with an uncertain pay-off.

Some think that these new approaches have not been tested by either time or events.

Hence, diversity now characterises the European pension landscape (as shown in Figure 1.2 in the Executive Summary). Seemingly contrary goals and tools exist side by side: strategic and dynamic asset allocation, asset growth and liability matching, relative returns and absolute returns, active funds and passive funds.

Notably, among the early adopters, some two-thirds are satisfied with the outcomes so far and the rest are unsure (Figure 1.4 in the Executive Summary).

However, many early adopters also recognise that their changes also benefited from powerful tail winds from a near doubling in the key market indices from their post-crisis lows in March 2009.

Some see themselves as long-term value investors who believe in mean reversion. For them, unlike in physics, there are no paradigm shifts in finance. Markets are cyclical and self-correcting. True value always triumphs in the end.

Interview quotes

"Most of the new approaches have not yet had a mid-life crisis. Till then, the old ones will exist alongside the new ones."

"The market rally since March 2009 has provided a fair wind for our change programme."

INSIGHTS

"The conventional wisdom on diversification came unhinged when it was needed most: namely, in the global financial crisis of 2008. The Yale model favouring alternatives did just as badly as the long-only model, favouring mainstream assets. It was a cathartic moment. We now look at the world of investing through a new lens.

Our starting position was that seemingly different asset classes can have unusually high correlations due to their common exposure to their underlying risk factors. These are the smallest systematic units that influence investment return and its associated risk. So we have started down the road of risk-factor investing.

Factors come in many flavours. First, there are the macro factors such as GDP growth, inflation, volatility, real interest rates. Then there are equity-specific ones like size, value, momentum, variance and currency. Then there are bond-specific ones like capital structure, duration, credit spread and default risks. However, gaining exposure to factors is somewhat challenging.

There is no natural way to invest in them directly. There is no consensus about the link between, say, GDP growth and equity returns. The factor risk and return can be time sensitive. Predicting the future path of the factors is also fraught with assumptions.

At this early stage, therefore, we are using risk factors in two respects. First we analyse the behaviour of all asset classes under various macro economic scenarios, involving GDP growth and inflation; and identify the right assets for each scenario. For example, for the high growth/low inflation scenario, we choose equities and corporate debt. At the other end, for the low growth/rising inflation scenario we choose commodities, infrastructure and inflation-linked bonds. This kind of analysis is also applied to create two distinct buckets used in our liability driven investing: return seeking and risk hedging.

Additionally, in equity investing, we use smart beta strategies with distinct tilts towards value, momentum and low variance. They have delivered good returns over the past three years.

Early experience suggests that the returns have been more sensitive to rebalancing than the choice of risk factors. Over time, we aim to extend this approach to fixed income investing by using fundamental indices. Our ultimate goal is to deploy risk factors to minimise the correlation between our return-seeking assets and the liability hedges we use.

For now, we see this risk factor approach as a significant advance. It enables us to understand the sources of risk and return at a more granular level, the time-varying nature of risk premia, and the key drivers of correlation between all asset classes."

~ A Swedish plan

Governance is playing a pivotal role

63%

cite clarity in mission and goals

60%

cite clarity in investment beliefs and time horizons

42%

cite better investment expertise on the trustee board

It is now widely recognised that asset allocation is not the predominant driver of portfolio returns.

That was probably true before the 2000-02 equity bear market when most plans had a formulaic approach (typically 60/40 equity:bond) to asset allocation.

Since then, investors have discovered painfully that they no longer manage risk, they manage uncertainty: one relies on known probabilities of expected returns on different asset classes, the other on guesswork.

Hence, pension plans are paying as much attention to two other areas of their business models in order to improve their investment performance: plan governance and execution capabilities.

As we saw earlier, asset allocation approaches are changing. As a corollary, governance practices, too, are being upgraded by at least a quarter of our respondents (Figure 2.2):

- more clarity in plan mission and goals (63%)
- more clarity in investment beliefs and time horizons (60%)
- more investment expertise on the board (42%)
- more clarity in the roles of the board and full-time executives (33%)
- a dedicated in-house CIO (31%)
- more in-house investing (27%)
- more delegated authority to full-time executives (25%).

Behind these numbers lie three salient points that emerged in our post-survey interviews.

First, pension plans that saw rapid improvements in their funding ratios after the crisis attribute them to a holistic set covering one or more of six factors:

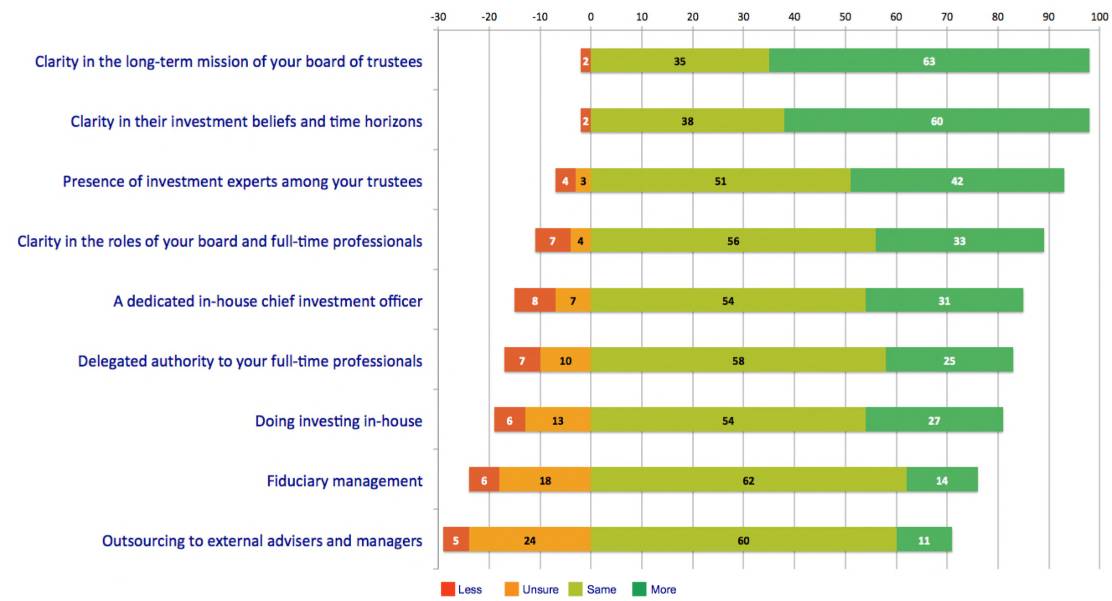
- a nimble governance structure that enabled them to exploit an early mover advantage

Interview quotes

"Contrarian investing is essential while markets are full of noise and fury. But it does not work in a blame culture."

"Behavioural change is often as durable as the crisis that provokes it. It requires passion and persistence."

Figure 2.2 **How has the importance of various aspects of your pension plan's governance changed since the 2008 crisis?**



Source: Amundi Asset Management / CREATE-Research Survey 2014

- a clear set of investment beliefs that guided their investment choices and their time horizons
- a clear exit strategy in their dynamic investing along with a robust early warning system
- judicious use of shorting, leverage and derivatives to extract extra value and downside protection
- avoidance of herd mentality, in the belief that to be lonely is often a precursor to being right
- regular engagement with their asset managers to get fresh insights into the evolving market regimes and cutting-edge investment ideas.

The second point to emerge from our interviews was that two of the four worst bear markets of the last 100 years occurred over a span of seven years in the last decade.

Reportedly, before then, up to 80% of portfolio returns came from intelligent asset allocation. Now, that figure is at most 50%. The rest is attributed to implementation of the selected strategy, which relies on sound governance and savvy execution.

This shift is an enduring legacy of what was a traumatic decade, when the conventional investment wisdom was decisively sidelined.

Finally, the changes in governance practices can best be described as work in progress. They need mindset shifts that take time to nurture.

For trustees, the challenge is how to delegate authority to investment professionals without losing control.

Thus, they have to walk the fine line between their fiduciary role and executive empowerment. On their part, full-time executives need to walk the fine line between personal accountability and career risk.

There are no easy answers – only difficult questions. These balancing acts require behavioural changes that take time. Yet, outcomes thus far appear to be positive on the whole, as highlighted in the Executive Summary (Figure 1.4).

Interview quotes

"Peer and career risks create conflicts of interest in the value chain and slow down progress."

"New ways of investing require new skills and new mindsets. These are hard to develop."

INSIGHTS

"Externally, the financial crisis exposed the weaknesses in our asset allocation. Internally, it exposed the deep fault lines in our governance practices, which had long been a taboo subject.

Hitherto, our trustees were a group of well-meaning people with little experience of investing or governance. Largely relying on external advice, they were prone to herd instinct and overly conscious of their career risk. Few knew how to manage the principal–agency risk that proliferates through the pension food chain. Micro management was the norm. Our solvency ratio plunged by 26 percentage points during 2008-11. Our sponsor would only make an additional recovery contribution if we had a root-and-branch look at all our operations.

To gain insights into best practices, we visited some of the Canadian plans and also some sovereign wealth funds that weathered the crisis better than most. The biggest lesson we learnt was that, contrary to conventional wisdom, asset allocation is not the biggest driver of returns. A world-class strategy requires world-class execution.

In the raging bull market of 1982-2000, asset allocation had more weight. Now no more, thanks to today's risk-on/risk-off cycles, scarcity of alpha, persistent valuation anomalies and super-sized macro risks. The old 'set-it/forget-it' approach to asset allocation only works in a prolonged bull market.

We have started a change programme that has turned the spotlight on governance. We have had special learning programmes for trustees to bring them up to speed about our plan's long-term mission, our investment beliefs, our time horizons and our liabilities. There is a lot more clarity on these 'soft' issues.

On the structural side, there is more delegated authority to full-time executives to reflect the real-time nature of today's investing. We have recruited two new trustees onto the board with significant investing experience.

However, change has been easier on paper than in practice. First, the UK law enjoins trustees to exercise the highest level of diligence in all aspects of plan operation. This stringent fiduciary role sits uncomfortably alongside the notion of delegated authority. Second, the mindset changes essential for minimising our culture of micro management are proving slow to develop. The level of trust needed to make delegation work is also proving hard to achieve.

It will take time to deliver the necessary behavioural change."

~ A UK pension plan

Execution is becoming as important as design

61%

cite risk management

52%

cite value-for-money fee structure

42%

cite attribution analysis

If governance is about setting goals, and asset allocation is about the strategy needed to achieve them, execution is about its delivery. Together, they are like a three-legged stool, each needing the other to work.

In the long bull market of 1982-2000, doing asset allocation was like waging a war with a feeble enemy. Success was assured. Since then, rickety markets have ensured that poor execution delivers poor results.

At least three in every ten respondents have been paying special emphasis to six aspects of execution (Figure 2.3):

- risk management models (61%)
- investment vehicles (53%)
- a value-for-money fee structure (52%)
- performance attribution analysis (42%)
- manager selection (33%)
- financial engineering tools (28%).

Far and away, the biggest change relates to risk management models. With time varying risk premia, risk is seen as a dynamic concept.

Its causes need to be separated from its consequences. Its management needs to be separated from its measurement. Its impact within a period needs to be separated from the one at the end of the period. Its time dependency needs to be separated from its cross-sectional one. Its new focus on maximum tolerance for a drawdown is being separated from the old focus on volatility. At best, therefore, the emerging risk models are used to frame the questions, not deliver the answers. They necessarily have a strong overlay of human judgement.

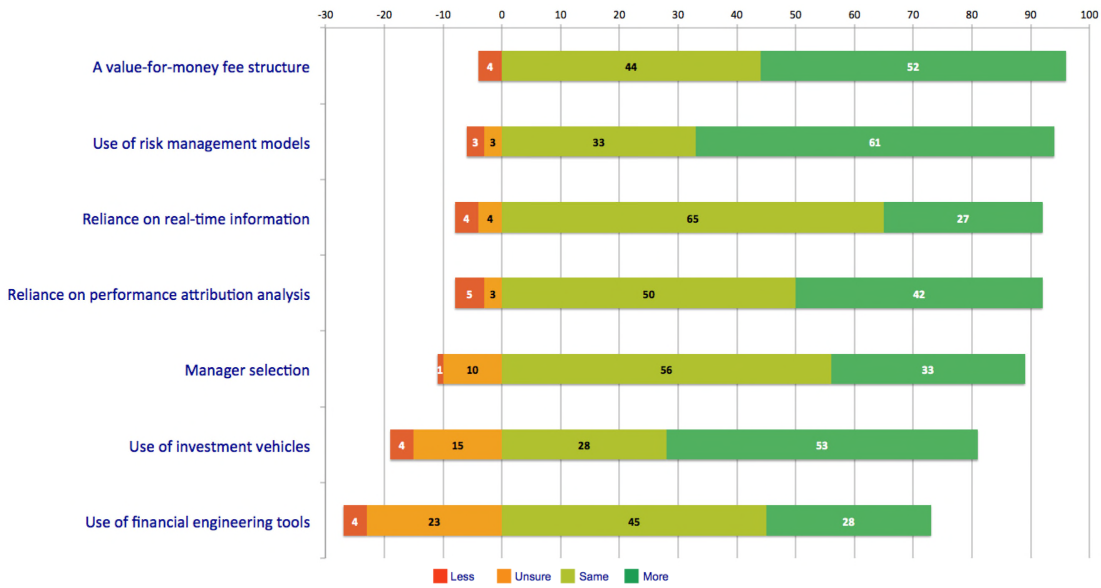
Indeed, many pension plans now see investing as *a loser's game*, like tennis: a game in which success goes not to the player with the best strategy, but to the one making the fewest mistakes. Hence apart from risk management, three other areas have attracted significant attention.

Interview quotes

"The genius of strategy is in the execution as much as the design. A good strategy is as good as its execution."

"Outcome-based investing relies heavily on various investment vehicles, rather than asset classes per se."

Figure 2.3 **How has the importance of various aspects of your pension plan's strategy execution changed since the 2008 crisis?**



Source: Amundi Asset Management / CREATE-Research Survey 2014

One of them is a value-for-money fee structure. There is strong resistance to paying alpha fees for beta performance. Fees are seen as a key source of outperformance when compounded over time. For mediocre asset managers, fee compression has been real. Once just a mirage, fee claw-backs are on the agenda. The heads-I-win-tails-you-lose fee structure is gradually withering on the vine (we return to this point on pp.33-34).

Investment vehicles are another area attracting a lot of attention. Having done their asset allocations, pension plans used to invest directly into their chosen asset classes via active management. Now, the trend is to seek advice-embedded vehicles that are cost effective, liquid and transparent. In the DB space, for example, cap-weighted indices, ETFs, smart beta and multi-asset class products have been the most popular vehicles. In the DC space, life-cycle funds and diversified growth funds have led the line up. This distinction between asset classes and their vehicles is driven partly by cost and partly by the rising interest in outcome-oriented investing. They have had special appeal among small- and medium-sized plans with limited governance budgets.

The final area attracting interest is financial engineering. There is much less resistance to using devices such as shorting, leverage and derivatives in order to extract extra value and/or downside protection. Interest in long-short funds, risk parity, CDS and credit and equity derivatives has ballooned over the past three years.

Interview quotes

"The rise of passive investing means that the distinction between asset classes and their vehicles is becoming sharper."

"Derivatives are no longer weapons of mass destruction. It all depends upon how they are used."

INSIGHTS

"In the past, our risk models relied on the notions of risk-free assets, static correlations between asset classes, stable risk premia and predictable risk-return trade-offs. Volatility was the key measure of risk, backed by VAR.

Since the Lehman collapse, markets have been influenced more by noise than signal. The last five years have been the most volatile in the history of markets. Price fluctuations of 4% or more in intra-day sessions have occurred six times more than they did in the previous forty years. Extreme spikes in volatility and asset class correlations have been common. Dominated by the Euro crisis, 2011 was a nerve-shredding year. In that year, the pool of AAA-rated government paper contracted by 65% on account of sovereign downgrades on both sides of the Atlantic.

Consequently, the old risk models are obsolete. They also relied heavily on technology only to realise that it improves the measurement of risk, but not our understanding of it.

They measured risk as the probability of a given loss or the amount that can be lost with a given probability at the end of our investment horizon. Yet, given that our pension plan is already in negative cash flow territory with ever more members retiring each year, losses within the horizon have become more important than losses at the end of it.

Our previous models put more emphasis on returns than risk, on the normal distribution of returns than their fat tails, and on mark-to-market measures than fundamental valuations. Hence, we have implemented four changes.

First, our key measure of risk is the maximum drawdown our board is willing to tolerate, taking into account our sponsors' willingness to make additional recovery contributions. The limits are reviewed annually.

Second, we allow for path dependency. We look at risk in a multi-period context, to allow for the fact that returns in any one period can be heavily influenced by returns in previous periods – especially when momentum is working.

Third, we don't rely on simulation models to influence our asset choices. We recognise that our own actions and reactions introduce new risks, as do the reactions of other investors as they weigh up every new situation. The past is an imperfect guide to the future. Back-tested performance ignores the market impact of implementation.

Finally, our diversification is increasingly based on risk factors that allow us to understand the changing asset class correlations in different market regimes and the real sources of risk for all asset classes.

We're not there yet. The new approach is constantly modified and fine tuned as we move forward. Without a more robust risk approach, our risk-based asset allocation will be ineffective."

~ A Swiss pension plan

Dynamic investing will be alongside conventional investing

51%
target consistent returns

50%
expect to rely on dynamic investing

49%
expect to improve their investment expertise

As we saw in Figure 1.4 of the Executive Summary, the changes implemented since the 2008 crisis in asset allocation, governance practice and strategy execution can best be described as *work in progress* at this stage of their evolution.

For many pension plans, they mark a decisive shift, the impacts of which will only be felt over a long period. The changes are not in the form of a one-shot exercise. Instead, they are iterative: they have entailed either course corrections or further reinforcements over time.

Having highlighted the nature of these changes in the recent past, our survey sought to ascertain the goals that pension plans aim to achieve going forward. Six goals were identified by at least two in every five respondents – four about the inputs and two about their outcomes.

The two *outcome-oriented* goals are:

- consistent returns and capital protection (51%) and
- a good funding ratio (41%).

The four *input-related* goals are:

- dynamic investing (50%)
- better governance (50%)
- better investment expertise (49%)
- cost minimisation (40%).

Behind this list is a rather complex narrative. The debt crisis has pushed the funding levels into uncharted territory via forces that have made investing erratic in this decade. In particular, average correlations now mask the more complex reality of 'regime-based' correlations.

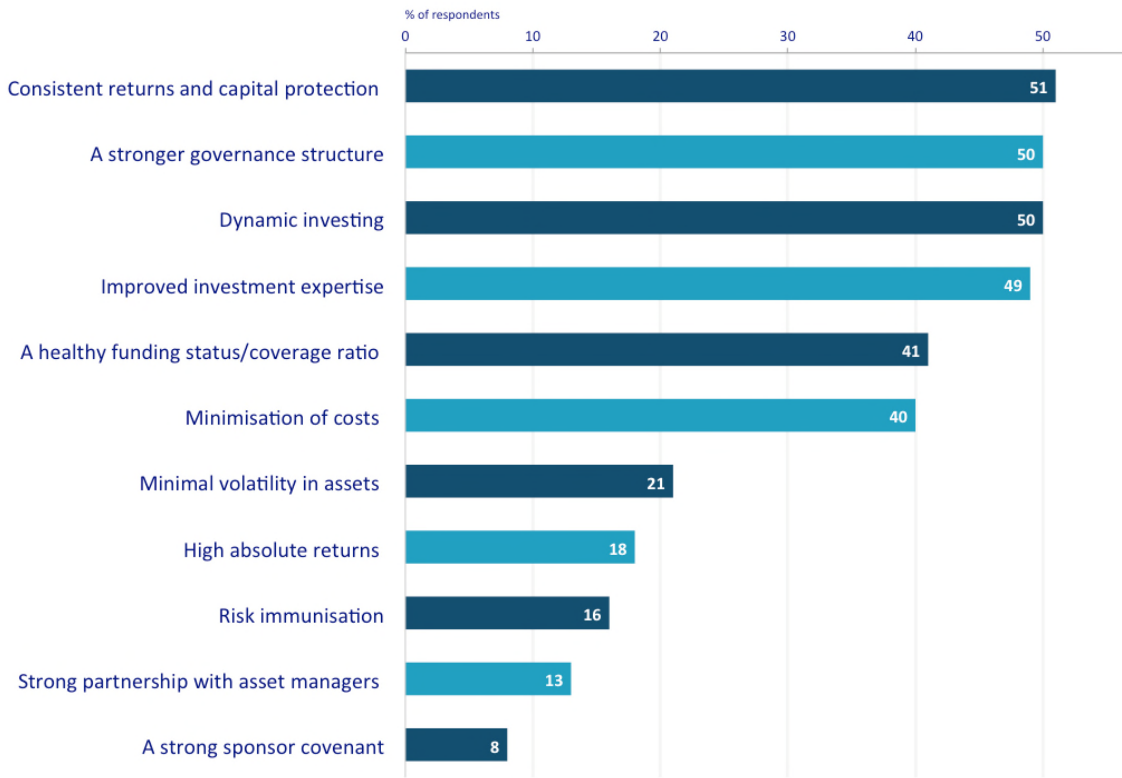
As a result, pension plans are following one of two approaches.

Interview quotes

"History shows that it is vital to have flexibility to be a buyer when markets are in turmoil."

"With interest rates at 2%, it makes no sense to have a big allocation to bonds. We hold dry powder to buy on the dip."

Figure 2.4 **What goals does your pension plan aim to achieve over the next three years?**



Source: Amundi Asset Management / CREATE-Research Survey 2014

Those plans with nimble governance structures and the necessary skills sets are pursuing three options. The first of these is dynamic investing that aims to capitalise on periodic market dislocations and investing enough capital in mispriced assets (see case study below). The second is to squeeze more juice out of existing assets by targeting additional alpha without taking on further beta risks via smart beta-type vehicles. The third is to squeeze costs to get existing returns at a lower fee. For this group, overall, dynamic investing is in the ascendancy.

In contrast, those plans with limited governance expertise and skills sets are sticking to knitting. They have stuck to their strategic asset allocation but with two refinements.

First, they have relied on traditional diversification to minimise idiosyncratic risks. Their exposure to extreme events is moderated by avoiding risky assets. They have also resorted to portfolio rebalancing in order to stick to their strategic benchmarks. Rebalancing is thus seen as the main source of the free lunch associated with diversification.

Second, their risk control relies overwhelmingly on simplicity, transparency and adequate liquidity to survive major disruptions. Their guiding philosophy is 'buy what you understand, and understand what you buy'.

The two groups, however, have some common attributes.

Both are highly fee conscious, as they see costs as one of the sources of outperformance when compounded over time.

Both are also acutely aware of the sequence of returns risk: the time it takes for the portfolio to recover after a big drawdown. With ageing demographics, there is ultra low tolerance for losses as they move towards a cash flow negative situation.

Both have reduced the inflation mismatch between their assets and liabilities via the opportunistic purchase of index-linked securities, with a significant increase in the size and duration of index-linked portfolios.

Interview quotes

"Business model changes are hard because their benefits take time to materialise. There is no gain without pain."

"Our aims are simple. But the means to deliver them are complicated while markets are driven by central bank liquidity."

INSIGHTS

"While the global economic outlook remains uncertain, we have revised downwards our annual return expectations for the next ten years for all asset classes. For example, using the last ten years as a benchmark, we envisage global equities going from 9% to 5%, sovereign bonds from 4% to 2%, EM equities from 13% to 8% and EM bonds from 9% to 4%.

As a result, our policy portfolio targets consistent returns that improve our solvency ratio. But this is easier said than done, while markets are overly influenced by central bank action.

Before the crisis, our funding ratio was 112%. By 2012, it dropped to 74% due to a double whammy. On the asset side, there was a 40% drop in our equity holdings in 2008. On the liability side, there was a near halving in our discount rate. The extreme volatility in the aftermath of the crisis obliged us to implement two changes to our traditional approach.

First, we augmented our strategic asset allocation with a dose of dynamic investing. Having seen more pronounced intra-day volatility in the past four years than in the previous forty, we decided to capture price anomalies from periodic market dislocations by buying on the dip. Investor herding and over-reaction have amplified the mispricing caused by macro events like the banking crisis and sovereign downgrades.

Our dynamic investing adopts a top-down global cross-asset perspective and covers certain asset classes and categories in them (e.g. countries, sectors, styles, credit exposure and duration). The emphasis on global markets is dictated by the fact that they are far from efficient due to regulatory constraints and home country bias. The key asset classes we target are global equities, regional equities, high-yield debt, EM debt and senior loans. They are liquid, and have lower transaction costs and a clear beta component. Our selection model generates buy-sell signals and relies on a common sense overlay.

The second change to our old approach has focused on diversification. We still believe that it delivers a free lunch so long as we resort to periodic rebalancing around our long-term strategic benchmark. For us, the greatest benefits came in the aftermath of the crisis when there were wild movements in market valuations. It also ensured that we were willing buyers while others were forced sellers. At the same time, we have reduced the amount of diversification, as potential benefits appear to diminish geometrically as the number of asset classes increase.

Early results are encouraging. Our governance and execution capabilities have been improved but we still have a long way to go before the changes are fully embedded in the cultural fabric of our business model."

~ A Finnish pension plan

3 Investment approaches:
What will be the key changes over the next three years?

Headlines

- Markets appear to bet on indefinite austerity
- The end of the one-size-fits-all approach to asset choices
- Implementation leakage minimised via investment vehicles
- Market benchmarks will dominate others

"Managing a negative cash flow is very tough when all hedging assets are overpriced."

An interview quote

Overview

Aims

Taking a three-year forward look, this section highlights:

- the key drivers of investment returns over the next three years
- the asset classes that will be favoured in the process
- the ways in which their 'implementation leakage' will be minimised
- the benchmarks that will be used to assess investment performance.

Key findings

A. Return drivers

The main ones will be:

- state of the global economy
- central bank action.

Our survey respondents harbour contradictory views on both of them.

Some think growth in the global economy will accelerate; others think it will remain tepid. Some think that the central bank action will normalise interest rates before long; others think that policy rates will have to remain low for a long time, since the West is caught in a balance sheet recession in which austerity is proving self-defeating.

B. Favoured asset classes

In the light of the identified return drivers, the most favoured asset classes over the next three years will be:

- global equities
- real estate
- investment grade corporate bonds
- high yield bonds
- emerging market equities
- infrastructure

As plans advance in their run-off phase, these asset classes will be pursued via one of three distinct approaches:

- product-focused
- time-focused
- LDI-focused.

These approaches, in turn, will aim to strike a balance between:

- regular cash flow and the illiquidity of the underlying assets
- capital protection and the associated risk of financial repression
- a rising funding ratio and the volatility of underlying assets.

C. Implementation Leakage

How a portfolio works on paper is one thing, what it actually delivers in reality is quite another. The difference is caused by implementation leakage. To minimise it, pension plans will deploy a number of investment vehicles:

- multi-asset class funds
- life-cycle funds
- liability driven investing,
- smart beta funds
- cap-weighted index funds
- ETFs.

D. Performance benchmarks

The key ones now in use are:

- market-based benchmarks
- cash flow-based benchmarks
- absolute return benchmarks
- liability-based benchmarks.

These will continue to be used in the near future, with growing emphasis on cash flow-based benchmarks.

Overall, with ageing member demographics, liability matching will gain precedence over returns enhancing. Beta will attract more attention than alpha. Passives will gain at the expense of actives.

Markets appear to bet on indefinite austerity

78%
cite global economic outlook

50%
cite central bank action

47%
cite ageing demographics

Our survey encountered two schools of thought about forces driving market returns over the next three years.

The *majority* view is that both the developed and emerging economies will have sub-par growth rates, despite the current gradual recovery.

The main driver in the developed economies will be deleveraging, which can reduce the debt overhang and kick-start growth by channelling credit to its most optimum use. The main driver in emerging economies will be reforms that can reboot their growth engines, which have faltered lately as the long era of stellar growth in China has come to an end.

However, being structural in their orientation, both deleveraging and reforms are likely to remain slow burn issues, according to this school. Hence, the policy rates will remain very low for the foreseeable future and central banks will continue to have a decisive influence on markets. Their room for manoeuvre will be very limited after pushing monetary policy beyond its natural limits.

The *minority* view, on the other hand, holds that the current recovery in the global economy will, before long, normalise interest rates and fiscal policies. This relative optimism is based on the fact that the US Federal Reserve has been able to implement its exit strategy from quantitative easing without exceptional turbulence so far. Also, the Chinese economy has thus far had robust growth at 7.5% and avoided a 'hard landing' in its shadow banking system. On both counts, the worst predictions have yet to materialise. Moreover, the European Central Bank has reduced rates to an all time low to boost growth. Hence, market prices will likely reconnect with their underlying value drivers when growth resumes.

Against this backdrop, when asked to identify the factors that will drive their pension plans' investment returns, four were singled out by at least two in every five survey respondents:

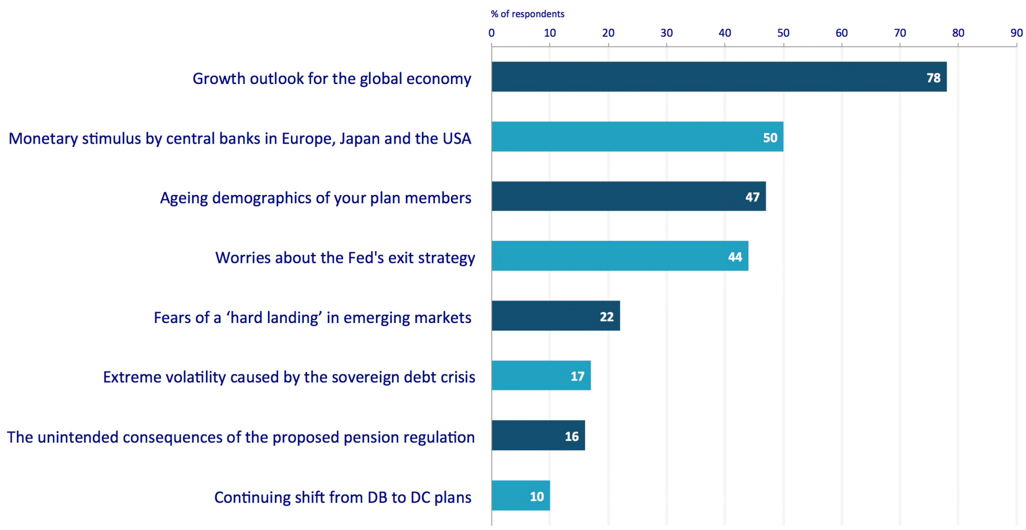
- growth outlook in the global economy (cited by 78%)
- central bank action (50%)
- ageing demographics of their plan members (47%)
- worries about the Fed's exit strategy (44%).

Interview quotes

"Real interest rates will remain low for a long time to allow governments and households to vaporise their debts."

"In 2014, the strength of sovereign bonds in the West and the static credit spreads are defying economic logic."

Figure 3.1 **What factors will drive your plan's investment returns over the next three years?**



Source: Amundi Asset Management / CREATE-Research Survey 2014

Interestingly, the top two return drivers cited above attract mixed reactions.

Those who cite global economic outlook encompass the views of the two schools of thought mentioned above: for every two critics who think the global economic recovery is too tepid, there is one who thinks it is getting stronger.

Similarly with central bank action: for every critic who thinks central bank action has been too little, there is one who worries that they have done too much.

Either way, we are in a unique period of 'controlled monetary chaos'. Central banks are playing a massive confidence game with the markets. The scope for policy error remains wide, not to speak of a possible credit crunch in China.

For both drivers, outcomes can range between extremes: booming markets where fundamentals drive valuations at one end, and prolonged turmoil where fear triggers periodic volatility spikes at the other. Pension plans have no precedent to guide them.

This is all the more worrying at a time when their liabilities are maturing fast due to ageing demographics. As we saw in the Executive Summary (Figure 1.6), 26% of plans are now in cash flow negative territory and a further 39% have cash flow neutral status. 61% have a *medium* risk appetite.

These considerations will influence their asset choices over the next three years.

Interview quotes

"China has a lot going for it and a lot going against it. China is where the 'unknown unknowns' in the global economy currently reside."

"If Japan is to repay its debt, consumption taxes need to rise to 25%, not 10%."

INSIGHTS

"It is unwise to get euphoric about the recent economic recovery on either side of the Atlantic. The 2008 crisis sparked a balance sheet recession, when the long-running credit bubble burst. It'll be over only when significant deleveraging occurs.

This has yet to happen. Despite significant austerity, the combined public sector debt of the G7 economies has grown by 40 percentage points to some 120% of GDP in the post-crisis period.

Unlike the normal business cycle, which sees a temporary contraction in output and employment, a balance sheet recession is often characterised by a number of other damaging features.

To start with, countries suffering it are caught in a debt trap: their monetary and fiscal policies are testing their outer limits, with policy rates at or close to zero bound. By seeking to stimulate growth, such policies are encouraging even more debt, thus adding to the problem that they set out to solve. The solution to one problem begets another one.

Furthermore, banks in the affected countries continue to have lingering weaknesses in their balance sheets, despite improvements in their overall profitability. This applies especially to European banks exposed to over-indebted borrowers. Not only does this debt overhang act as a drag on the economic recovery, but it also ties up capital in unproductive activities that only survive because of cheap credit. A lot of 'zombie' borrowers now survive at the mercy of low interest rates, diverting capital from more productive activities.

Governments are understandably reluctant to see rates rise at a time when their own deficits are getting worse. Additionally, for every 1% increase in interest rates, household debt repayments have to rise by 7% in the US and 19% in the UK. Politically, this is not palatable. Hence, policy rates will remain low for a long time until the debt overhang eases.

Finally, balance sheet recessions result in a permanent loss of output. It may return to its previous long-term growth rate but not to its growth trajectory. For workers, prolonged periods of unemployment cause loss of skills and motivation. For example, it is highly likely that the productive potential of the US economy has dropped from 3.5% in the pre-crisis period to around 2% now. It is 17% below its long-term trajectory. Hence, the asset to GDP ratio in the G7 shows a positive deviation of 9 percentage points. Without higher growth, asset price correction is inevitable.

Arguably, the recent all-time highs recorded by stock markets on either side of the Atlantic owe more to the central bank action than underlying improvements in the economic fundamentals. The normalisation of interest rates is in sight with the end of the monthly bond purchases by the US Federal Reserve. But it would be a long drawn-out process.

The worst of the crisis is over but the debt overhang casts a worrying shadow over our asset allocation approaches. Big macro risks are lurking in the background and have to be factored into everything we do."

~ A Dutch pension plan

The end of the one-size-fits-all approach to asset choices

65%
favour global equities

48%
favour real estate

41%
favour corporate bonds

Prior to 2000, when risk premia were more predictable, pension plans followed a formulaic approach such as 60:40 equity:bond. Since then, as time-honoured investment assumptions have been sidelined, asset allocation has become more heterogeneous.

Looking ahead, therefore, in the light of the identified return drivers, at least one in every three respondents identified six asset classes as being more suited to their goals over the next three years (Figure 3.2):

- global equities (65%)
- real estate (48%)
- investment grade bonds (41%)
- high-yield bonds (35%)
- emerging market equities (34%)
- infrastructure (33%).

Behind these numbers lie three separate approaches that have gained traction since the crisis, according to our interviews.

Mainly implemented by plans with assets less than €10 billion, the first approach is *product focused*. It invests in equities and bonds via a hybrid blend of single strategies – on a stand-alone basis or via mutual funds. Some deploy risk parity in their portfolios. Some use long-short funds. Their asset choices are limited by their governance expertise, skills sets and articles of memorandum.

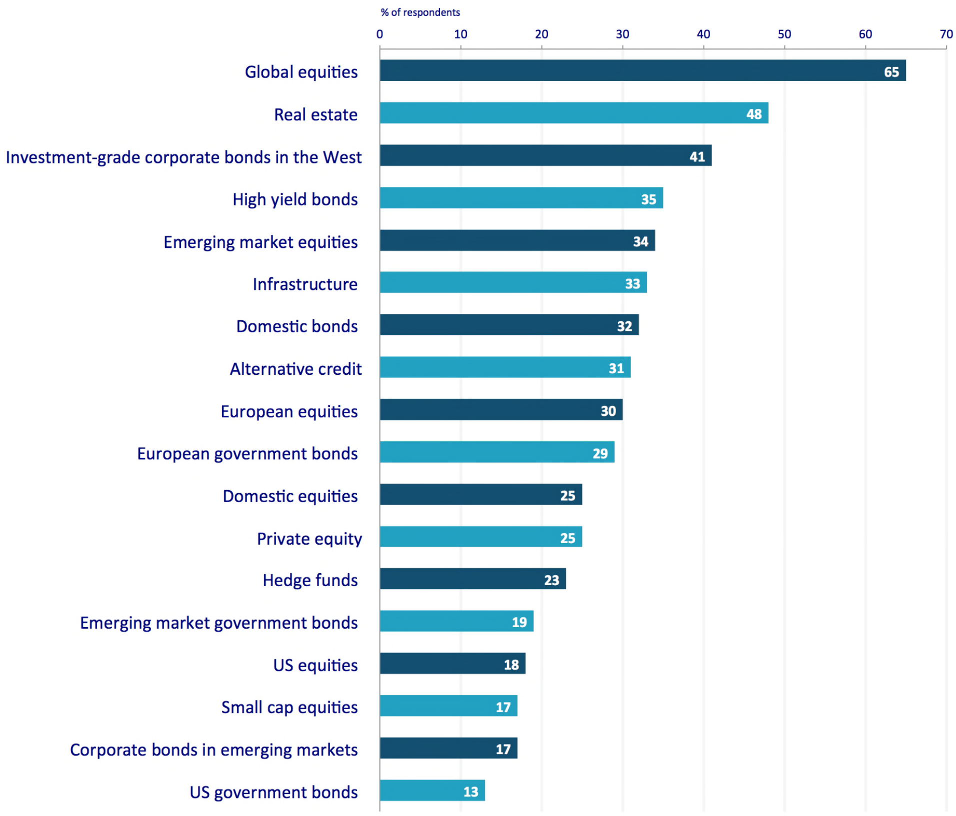
Mainly implemented by plans already in the run-off phase, the second approach is *time focused.* As plans advance into their negative cash flow territory, their asset choices target regular cash flow and inflation protection, favouring real

Interview quotes

"The view that 'time heals all wounds' is less true when it comes to today's investing."

"The transition from capital growth to cash flow management is not easy. It requires new disciplines and skills."

Figure 3.2 **As a result of these drivers, which asset classes will be most suited to meet your plan's goal over the next three years?**



Source: Amundi Asset Management / CREATE-Research Survey 2014

estate, infrastructure, alternative credit and high dividend/deep value equities, as we saw in Figure 1.7 in the Executive Summary (and the case study below). Some have ventured into long treasuries as these now have a correlation of negative 0.68 to the S&P500, making them an attractive diversification play.

Finally, mainly implemented by plans adopting progressive risk immunisation, the final approach is *LDI focused*. In the aftermath of the adoption of mark-to-market accounting rules in the middle of the last decade, many plans have embarked on LDI by separating their return-seeking assets from hedging-assets.

However, after the 2008 crisis, they were hit by two problems: high volatility in equities and poor returns in alternatives in the returns assets; and the 70% contraction in AAA-rated bonds in hedging assets. As a result, they have adopted *substitute assets*: alternative credit to boost their return-seeking portfolio and real assets to boost their hedging portfolio, as we saw in Figure 1.8 in the Executive Summary. For example, both senior loans and mezzanine finance have delivered the best return in the fixed income space in the past two years. These and other substitute assets are now viewed as *cross-over* assets: with equity-like returns and bond-like features.

These three approaches speak to a simple imperative: in the run-off phase, pension plans pay more attention to their immediate needs rather than peer herding.

Interview quotes

"LDI has been beset by unusual volatility and ultra-low rates. The rise of substitute assets was inevitable."

"Managing a negative cash flow is tough when all hedging assets are so over-priced."

INSIGHTS

"As they transition from managing assets to managing liabilities, German Pensionskassen need a 4% return to meet their so-called Garantiezins (return guarantees). This is hard when 10-year Bund yield is around 1.5% and equity allocations are well below 20%. While the current guaranteed rate for new pension contracts has fallen to 1.75%, the legacy contracts still attract 4%.

However, as a 'Versorgungswerke' (occupational pension scheme), guarantees don't apply to us. But our investments still target a return above the actuarial interest rate of 4%. Out of some 40,000 members, a third of our members are retired. By 2020, that will rise to 50%, as the largest cohort of Baby Boomers hits the retirement age.

Our asset allocation, thus, seeks to future-proof our portfolio by tracking our liability profile, which has three clear phases: early, middle and late. Currently, we're in the early phase, in which investments are channelled into assets that offer long-term cash flow and capital protection, together accounting for nearly 70% of our portfolio. They include real estate, infrastructure, ship and aircraft leasing, and Nordic covered bonds, which have delivered stable returns with zero defaults so far. We also provide direct loans, as banks retreat from lending,

Today's capital markets are too volatile, so our allocation to risky assets is restricted to 20%, most of it is invested in emerging market bonds and equities. We recognise that we need to take some risks because we are obliged to have a 100% funding ratio by BaFin, our regulator. As a result, we seek to build up capital reserves (the difference between market value and book value) in good times to provide buffers in bad times.

We would like to increase our holding of high-yield bonds but BaFin has set a limit of 5%. Besides, the HY space is overpriced and overcrowded. So, in this early stage, our asset allocation is pursuing three objectives that appear seemingly contradictory.

We need regular cash flow, which means going for illiquid assets like infrastructure and real assets. But we worry about whether anyone will be a buyer of these assets when we decide to offload them. Currently we have big investments in real estate, which also include residential care homes for the elderly.

We also need stability in our investments, which favours bonds. But we worry about the associated financial repression while real interest rates remain low for a long time. Also, with banks reducing proprietary trading, who will be the market makers when bond investors want their money back?

Finally, we need high returns to generate capital buffers, which favours equities. But we worry about their volatility. In 2008, our equity portfolio lost nearly 35%. With maturing liabilities, we cannot tolerate heavy losses that are inevitable from a big market correction when quantitative easing ends.

When cash flow management is your main goal, it is hard to strike a balance between these objectives, especially if real rates remain low for a long time."

~ A German Pension Plan

Implementation leakage minimised via investment vehicles

37%
cite multi-asset class funds

34%
cite life-cycle funds

34%
cite liability driven investing

Since the 2000-02 bear market, pension investors have learnt an enduring lesson: seeing how a given asset allocation might work on paper is one thing, what it actually delivers in practice is quite another.

The difference is mainly accounted for by implementation leakage – caused by commissions, spreads, fees, market impact, portfolio drift and opportunity costs of trading – among a myriad of factors.

Actual or simulated performance data rarely emphasise the important role played by portfolio execution. Nor do they recognise that plans are nothing, planning is everything.

As we saw in Section 2 (Figure 2.3), since the crisis, just over half of our respondents have turned the spotlight on investment vehicles when executing their strategy.

Looking ahead, when asked to identify the vehicles they plan to use over the next three years, six were identified by the majority who use various vehicles (Figure 3.3):

- multi-asset class funds (37%)
- life-cycle funds (34%)
- liability driven investing (34%)
- smart beta funds (32%)
- cap-weighted index funds (31%)
- ETFs (31%).

Allocations to each of these areas have been rising rapidly, albeit from a small base.

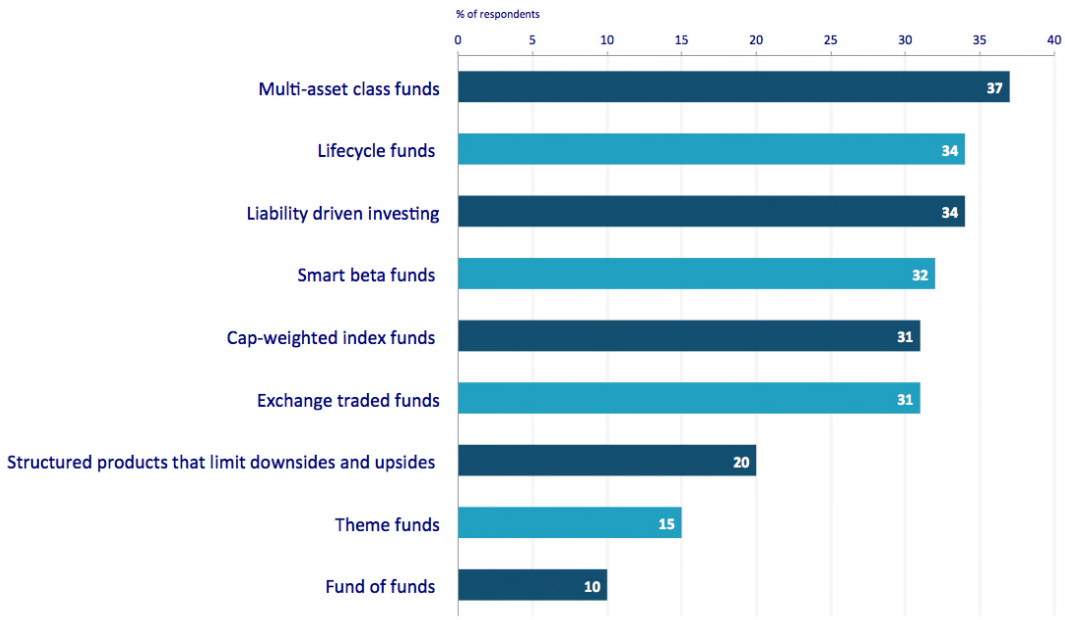
Starting with multi-asset class funds, in a typical pension portfolio in our sample, their share has risen from 10% to 15% since 2008. Unlike old style balanced mandates, these funds deploy a broad palate of assets, rely on dynamic investing and have lower risk limits. Thus, they aim to manage risks more than returns, conserve capital rather than grow it, and blend top-down and bottom-up strategies rather than see them as rivals.

Interview quotes

“Recommended stock picks deliver superior performance on paper but mostly underperform when implemented.”

“Alpha is illusory, expensive and ephemeral. We see low-cost high-quality beta as the key source of wealth creation.”

Figure 3.3 **As a result of these drivers, which investment vehicles will be most suited to meet your plan’s goal over the next three years?**



Source: Amundi Asset Management / CREATE-Research Survey 2014

Indeed for many small and medium-sized pension plans, they have been the principal route to dynamic investing.

The interest in life-cycle investing, on the other hand, stems from the need to offer greater choice to DC plan members, as conventional investing has delivered sub-optimal returns. Plan trustees are also increasingly keen to reduce their fiduciary risk by adopting funds with embedded advice. In Denmark, closures of DB plans have intensified innovation in the DC space via life-cycle funds (see INSIGHTS). In Germany, a new pillar has been created within the Riester system to offer life-cycle investing. In the UK, the new national DC system has life-cycle funds as a default option.

As for LDI, this has become the end-game for most DB plans. As a vehicle, it provides a framework for immunising risks progressively, as DB plans advance in their run-off phase. As we saw in Figure 1.6 in the Executive Summary, 26% of plans now have cash flow negative status and a further 39% have cash flow neutral status. That said, a majority of plans have reservations about LDI while rates remain low. Some also see it as a way of locking in substantial equity losses and foregoing future upsides.

Most of all, the interest in passive funds such as cap-weighted indices, smart beta and ETFs is driven by three considerations: the failure of many active managers to beat the markets, lower costs associated with passive investing and the demand for solutions-based investing. Such funds are increasingly tailored to deliver the specific needs of investors. Ever more pension plans are expected to turn to passive funds.

Smart beta is seen as a device for extracting alpha returns at beta risk. ETFs are seen as a device to engage in dynamic investing or pursue specific themes, especially when momentum is working. Thus, passive investing is moving from the periphery to the mainstream. It will hold nearly 50% of equity investing in Europe by 2020, from a base of 22% currently.

Interview quotes

"Poor implementation not only raises costs but also creates unintended asset exposure via portfolio allocation drift."

"Vehicles make for less governance demands and nimbler execution. They also facilitate in-house investing that is a lot cheaper."

INSIGHTS

"Like DB plans in all countries, we had to switch to DC plans. Rather than resort to active equity–bond investing, we wanted to do something innovative that mitigates the negative effects of DB plans. So we opted for life-cycle funds as a key vehicle.

However, we decided not to adopt their traditional static age-based glide path for various reasons. Its asset allocation is too mechanical and age-dependent, irrespective of market conditions. It takes you only 'to retirement', not 'through retirement'. It does not have a clear retirement income benchmark. It offers no protection against fat-tail events. It offers no stability in retirement income.

Hence we decided to design a new vehicle around life-cycle funds. First, we were able to boost plan members' account balances by over 20% by redistributing our scheme's collective reserves. This permitted members – especially the older ones – to take more risk. Most of them are expected to enjoy retirement benefits for around 20 years, so they need significant plan balances to fund them.

Second, in order to minimise the downsides from risky assets, we also introduced a smoothing mechanism that ensured stability in retirement income. In good times we set aside a part of returns as a reserve for rainy days, when markets are down.

Third, with an implicit retirement benchmark, the glide path relies on dynamic investing with an LDI-lite structure. This approach guards plan balances against big market drawdowns. It also capitalises on good buying and selling opportunities, as and when they arise.

Finally, the new design features offer safeguards to members both in the accumulation and the decumulation phase. We did not want them to make all investment decisions at every stage in their retirement journey, as done by most DC plans in the UK and US. Instead, we have a vehicle with embedded advice and market safeguards. It also avoids annuities in the retirement phase, as these are too expensive in today's low-yield environment.

In our legacy DB plan, similarly, we are gradually moving away from stand-alone specialist strategies and going into multi-asset class funds. Not only does this shift reduce the time and expense of manager selection, it also gives us a cost-effective vehicle for engaging in dynamic investing with specialist managers. Like most pension plans, we do not have the expertise to do dynamic investing with single asset classes. Hence, our overall asset allocation is moving from strategies to vehicles, from limited to broad diversification, and from static to dynamic allocations."

~ A Danish pension plan

Market benchmarks will dominate others

88%
use relative return benchmarks

48%
use cash flow-based benchmarks

41%
use absolute return benchmarks

With static or formulaic asset allocation, returns relative to markets were the key benchmark used in assessing a portfolio's performance.

However, as new approaches and new asset classes have populated their portfolios in recent years, our survey respondents have embraced other benchmarks as well.

When asked to identify the benchmarks now in use, five were identified (Figure 3.4):

- market-based (88%)
- cash flow-based (48%)
- absolute return (41%)
- liability-based (28%)
- peer-based (26%).

Our post-survey interviews suggest that most plans use more than one benchmark, depending on their asset allocation. Also, the use of these benchmarks is not mutually exclusive. A number of other specific points are also noteworthy.

To start with, market-based benchmarks predominate because between 60% and 80% of assets remain allocated to long-only funds where such benchmarks are the norm. They are a lot easier to understand. Besides, today's 24-hour news cycle has reinforced the time-honoured beat-the-market mentality amongst trustees.

This mentality remains deeply entrenched in the investment community and the wider media, even though the pension industry has moved away progressively from asset maximisation to liability matching in the face of ageing populations.

As for cash flow-based benchmarks, these are largely used by plans that are more advanced in their run-off phase, with rising negative cash flows. Their typical investments include real estate, infrastructure, investment-grade credit,

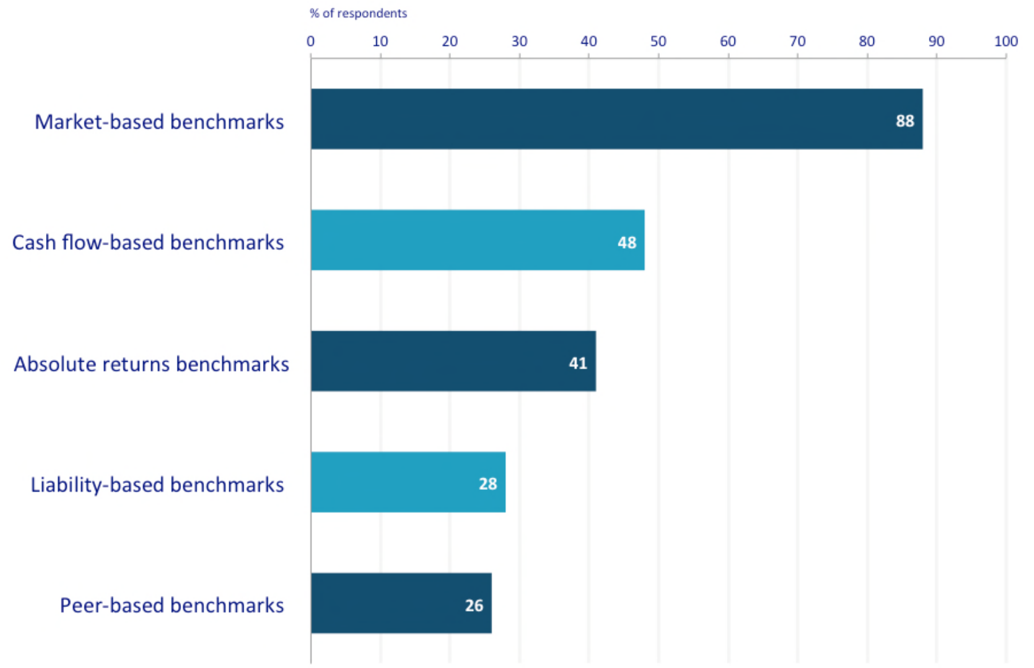
Interview quotes

"For long, investing has been about beating the markets. Relative returns are deeply ingrained in investor psyche."

"Cash flow-based benchmarks are essential as liabilities mature in this decade."

Figure 3.4

Which performance measures does your pension plan currently use?



Source: Amundi Asset Management / CREATE-Research Survey 2014

high yield, sovereign bonds and high dividend equities. Many still do not have healthy funding ratios and are thus obliged to invest in equities. As such, they use different benchmarks for different assets. However, the importance of cash flow benchmarks will rise with ageing demographics.

In contrast, the focus of absolute return benchmarks has tended to vary with time horizons. For short-term investing, they use LIBOR or high watermarks for assets such as bonds, credit and hedge funds. For longer-term investing, they use CPI, LIBOR, GDP or peer benchmarks for assets such as deep value equities and multi-asset funds.

Absolute return investing has had its own challenges (see INSIGHTS). They are often augmented by peer benchmarks, in rising markets when trustees worry about missing all the upsides.

On their part, liability driven benchmarks are used by plans with clear glide paths for risk immunisation. They focus on the overall policy target return that can meet the expected liability, whereas the target also uses relative, absolute and peer benchmarks for different asset classes in the portfolio. Indeed, peer returns are largely used to complement (not substitute) other benchmarks.

The relative importance of these benchmarks is unlikely to change dramatically in near future. However, over the rest of this decade, the use of cash flow benchmarks will be more widespread.

Interview quotes

"Trustees talk in the language of absolute returns but think in terms of relative returns or peer benchmarks."

"We use peer benchmarks when our chosen benchmarks are not delivering. They tell us if others are in the same boat."

INSIGHTS

"After a three-decade bull market in bonds, there is bound to be a correction before long. In any case, at today's ultra-low yield, we now have a big pool of assets not generating the returns or income that we need. Hence we have made allocations to absolute return unconstrained strategies.

Our aim is to obtain positive returns over time, regardless of prevailing market conditions. We want returns that have a lower correlation with other asset classes, offer a lower risk profile relative to traditional long-only portfolios, and are benchmark agnostic. First and foremost, we recognise that absolute return investing is entirely skills-based. Its ability to deliver uncorrelated absolute returns is a big attraction; the other is its low volatility. It enhances diversification in our portfolio and reduces its overall volatility.

However, these benefits are far from guaranteed. Absolute returns funds display a narrow range of returns in all market conditions. That means a higher likelihood of delivering positive outperformance when markets are falling and underperformance when markets are rising. Unlike relative returns, they do not deliver superior return potential when markets are in a strong growth phase. Thus, we had to be mindful about the choice of investment techniques when targeting absolute returns.

We considered the following options: portable alpha (which strips out the beta risk via derivatives), pair trading (which reduces the importance of predicting in which direction the shares will move), cash enhancement (using a portfolio of short-dated bonds as collateral for derivative trades in long and short positions), multi-asset class strategy (with flexibility to move across different asset classes and markets), and long-only strategies (with a deep value bent).

The bulk of our absolute return allocations are made to long-only funds. Cost has been a major consideration. The other one is a paradox that our trustees constantly grapple with.

On the one hand, they know that relative returns come with high volatility. On the other hand, they do not like to miss out on beta when markets are rising, especially in this age of time-varying premia. So, even though they see themselves as long-term investors, they have a short-term memory.

This paradox is accentuated by our experience of absolute return investing via hedge funds and pair trades in the last decade. We discovered that their returns were neither absolute nor uncorrelated. In fact, they had a high correlation with market indices.

Even so, absolute return investing is here to stay, while equity markets are stalked by continuing fears. The current calm in the Vix index (Wall Street's fear gauge) is eerie. The economic situation in Europe remains worrying. Italy is the latest country to tip over into another recession. Will ECB have its own version of QE and its attendant uncertainty? Will QE work when Europe's problems are structural more than cyclical, unlike the US? Will the German constitutional court allow it? There are many market-moving unknowns that currently favour absolute return investing."

~ An Italian pension plan

4 Value creation:
Which areas need improvements in the pension value chain?

Headlines

- Fee models will reflect alpha–beta separation
- Implicit hedges will dominate risk management
- Asset managers must decouple marketing from thought leadership
- Pension consultants must break out of their Catch-22

"It's time for a new implicit contract between pension plans, their asset managers and their consultants, so as to minimise implementation leakage."

An interview quote

Overview

Aims

Focusing on ways to improve the pension value chain, this section aims to highlight:

- the European pension plans' current approaches to risk management and fee structures
- the areas where they would like their asset managers and consultants to make most improvements.

Key findings

Risk management

The 2008 crisis has forced a clear separation between three aspects of risk: its understanding, its measurement and its management. Risk is no longer equated with volatility, but with failure to meet contractual liabilities.

Hence, a distinction is made between hedging the risk implicitly or explicitly. The first relies on the choice of assets; the other on option contracts and stop loss mechanisms. The use of implicit hedges is more widespread than explicit ones. The latter are perceived to be too costly and exposed to counter party risk. The success of all these approaches rests on judgement calls. As such, it is predicated on sound governance and a strong risk culture within individual pension plans.

Fee models

These are becoming more diverse. A simple AuM-based fee is still the most preferred choice – partly because the bulk of the assets are still locked into long-only funds and partly because of negative experiences with absolute return benchmarks in the last decade.

Performance-based fees are becoming popular, as are high watermark fees. To minimise their downsides, 3-year rolling fees are becoming the norm, in order to prevent undue risk-taking on the part of asset managers. High watermark fees, too, are becoming popular.

Both versions are consistent with new asset allocation approaches. They also seek to avoid the mistakes of the last decade when beta returns were charged alpha fees.

Against the backdrop of these newly emerging approaches, pension plans want to see specific improvements from their two key sets of service providers that can add more value.

Improvements from asset managers

The first one is a value-for-money fee structure. Faced with the prospect of a prolonged era of low yield, fees have become ever more critical to overall fund performance. Fee compression has been the norm and it will intensify.

The second area is greater engagement that results in better fund outcomes. Without greater engagement, many of the changes in the pension business models may not work.

The third area is 'duty of care', which promotes greater non-financial alignment of interests to deliver better outcomes.

Improvements from pension consultants

First, consultants need to develop a deeper understanding of their clients' long-term goals and their risk tolerances.

Second, they need to engage more intensively with their clients and asset managers, as part of a new implicit contract that leverages the combined capabilities of all three parties.

Third, their fee structure has to offer value for money and ignore career risks.

Overall, the changes in the pension business models have created new needs and new urgencies from their service providers.

Fee models will reflect alpha–beta separation

81%
use a fixed fee related to AuM

40%
use performance-based fees

25%
use high watermark fees

As we saw at the end of Section 3, 88% per cent of pension plans use market-based benchmarks to assess their investment performance. For them, beta investing is the principal source of capital growth.

Hence when asked which fee structures are used in the process, three were singled out (Figure 4.1).

The main one is a fixed fee linked to assets under management, as cited by 81% of survey respondents. This reflects the fact that between 55% and 80% of their funds are in long-only equities or bonds. However, it also reflects past experience.

Specifically, after the 2000-02 bear market, a growing proportion of plans were attracted by the promise of uncorrelated absolute returns offered by the alternatives. However, in the ensuing 2008 crisis, all assets were hit indiscriminately: the benefits of wider diversification were unavailable just when they were most needed.

Having learnt that uncorrelated absolute returns were hard to obtain, pension plans came to see market-driven returns as a more credible way of meeting their overall return target.

This awareness was further reinforced by the recognition that only a small minority of asset managers could beat the markets in the last decade. Those who did beat them had low persistency. Their performance deteriorated after two years. Success invited fresh inflows that, in turn, diluted the returns. But even where funds were closed after maxing out, only a few managers could maintain a distinct run of outperformance.

In retrospect, most pension plans were paying alpha fees for beta performance. This has resulted in a clear separation of alpha and beta assets with a corresponding fee structure. Asset managers are now enjoined to eat their own cooking.

Thus, 40% of respondents have embraced performance-based fees, so as to achieve a better alignment of interests. However, they are duly mindful that such fees are a double-edged sword. On the upside, they encourage managers to share the pain and gain. On the downside, they distribute risk asymmetrically between investors and their managers.

In particular, they encourage managers to take undue risks to earn higher performance fees, especially if they are underperforming and have nothing to lose by buying more risky assets.

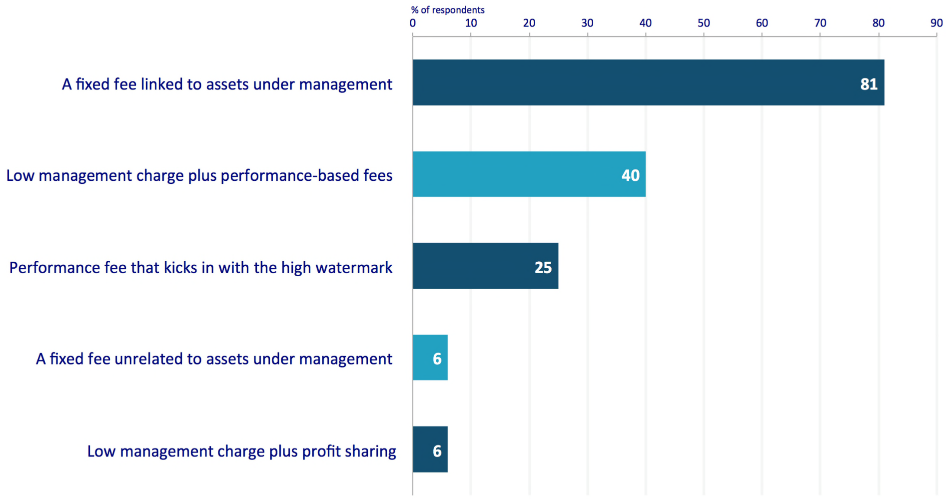
Interview quotes

"The heads-I-win-tails-you-lose fee structure is withering on the vine. But the new one has its own problems."

"A clear separation of alpha and beta is injecting sanity into fee structures. But we still have a long way to go."

Figure 4.1

Which fee structure does your pension plan use for its asset managers currently?



Source: Amundi Asset Management / CREATE-Research Survey 2014

Similarly, on the flip side, when a manager has earned a fee that is capped, s/he has little to lose by artificially de-risking a portfolio. Fee claw-backs in the event of big performance reversals are still rare.

To overcome these limitations, many pension plans are demanding a rolling three-year fee that takes into account performance over a longer period. The aim is to curtail undue risk taking and reduce the implied inherent option value associated with single period fees (see INSIGHTS).

As an extension of this approach, around 25% of respondents have also embraced a performance fee that kicks in with a high watermark. This aims to ensure that no performance fees are paid until a fund reaches its highest previous value helped by its cumulative past returns.

Thus, the current generation of fee models aims to encourage a better alignment of interests by seeking value-for-money.

At best, they reflect the changes in the asset allocation approaches highlighted in Sections 2 and 3.

At worst, they seek to avoid the mistakes of the past that delivered beta performance for alpha fees.

Either way, the models aim to achieve more meritocratic incentives and a more transparent inter-industry comparison of costs. There will be no return to business as usual if and when markets normalise.

This is yet another enduring legacy of the 2008 crisis.

Interview quotes

"Performance fees only work if you adopt a three-year rolling period with claw-backs when performance deteriorates."

"Asset managers are not keen on high watermark fees, since these can introduce huge volatility into their gross earnings."

INSIGHTS

"Our faith in active management was shaken in the last decade when over 70% of asset managers failed to beat their chosen market benchmarks. Many active managers appeared to be no more than closet trackers. Their fees were akin to an option whose value goes up when fee income becomes volatile. However, as our coverage ratio dropped by a near 25 percentage points over the period 2008-11, the fee structure came under scrutiny.

We discovered that we were paying alpha fees for beta returns, creating a big performance drag. Our portfolio had 80% exposure to active bonds and equities, the majority of which failed to meet their benchmarks.

On closer scrutiny, we also discovered that our managers had a high portfolio turnover each year in pursuit of better returns but the benefits from higher returns in many cases were offset by the execution costs. Finally, where we had performance fees, they were poorly structured. They encouraged managers to ramp up risk. The time period was too short, increasing the option value inherent in any asymmetric pay-off.

A large part of realised alpha was taken up by fees – as much as 50% in the case of hedge funds. The number of instances where the performance fees were refunded when the fund value plunged from one year to the next were few and far between. In real estate, matters were even more onerous when fees were charged on gross exposure rather than committed capital.

As a result, our portfolio now has a clear separation between alpha and beta assets. Beta plays are easy to monitor and do not carry manager selection risk. Fees are 5 to 8 times lower than a typical active mandate. Most of our beta funds have an ad valorem *fee, linked to AuM. It is easy to understand. They still suffer from asymmetric payoffs, though.*

Where we pay a performance fee – in areas like alternatives and EM equities – we have introduced two new elements to the fee structure.

One involves having a rolling three-year fee in order to reduce their inherent option value. More generally, we are pressing for rolling multi-year performance fees to discourage excessive risk taking to meet a given year's target. The other element involves the adoption of high watermark fees that ensure that a performance fee is paid only when a fund exceeds the highest previous value reached by its cumulative returns. Such fees are implemented for absolute returns mandates where they are more relevant.

Our current challenge is to have a realistic fee structure for unconstrained mandates in a fixed income space. In search of yield, we are moving up the risk curve. But it's hard to know what a realistic fee structure is while the overall yield remains depressed, and the returns profile so uncertain."

~ A Norwegian Pension Plan

Implicit hedges will dominate risk management

78%
rely on diversification

49%
rely on risk factors

48%
rely on duration management

Since the 2008 crisis, the distinction between the three aspects of risk is a lot clearer for pension investors in terms of its:

- understanding
- measurement
- management.

As we saw in Section 2 (pp.17-18), the new generation of risk models go well beyond the familiar VAR analytics and seek to identify the causes and consequences of risk. Risk is no longer equated with volatility. Instead, it is expressed as failure to achieve a given objective – be it capital preservation or financial solvency.

For most pension plans, risk now relates to the chance that they will be unable to honour their contractual obligations to their members. To manage it, our respondents have drawn a distinction between *implicit hedges* and *explicit hedges*: one indirectly relies on the choice of assets to hedge out their inherent risk; the other relies directly on overt mechanisms to control it.

Four tools are now being deployed by at least two in every five respondents to hedge out their risks *implicitly*:

- greater asset class diversification (78%)
- asset allocation based on risk factors (49%)
- duration management (48%)
- liability driven investing (41%).

In contrast, five tools are being used to hedge them *explicitly*:

- inflation, interest rate and mortality swaps (30%)
- tails-risk hedges (18%)
- option contracts with asymmetric bets (9%)
- stop-loss mechanisms (6%)
- full or partial insurance buy-out (2%).

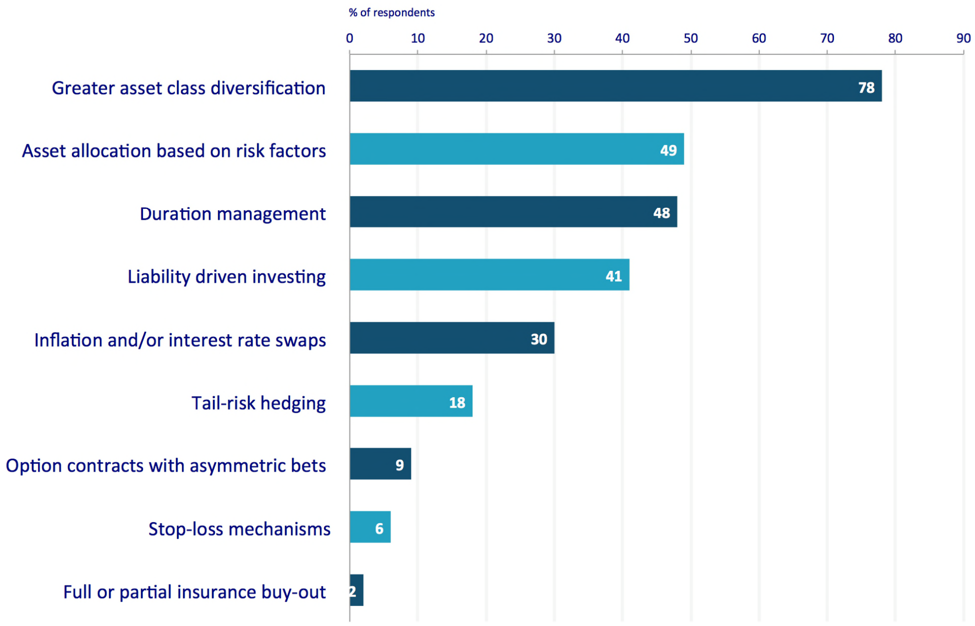
The proportion using implicit hedges far exceeds that using explicit ones. Also, within the implicit camp, the use of simple diversification far exceeds that of risk-based diversification.

Interview quotes

"On a buy-out basis, most pension plans have a funding ratio around 65%, thus ruling out large-scale buy-out activities."

"We face a dilemma: when de-risking is desirable, it is not affordable; when it is affordable, it is not desirable."

Figure 4.2 **What tools and approaches does your pension plan currently use in order to manage risks in your portfolio?**



Source: Amundi Asset Management / CREATE-Research Survey 2014

Taking these two points in turn, the less widespread use of explicit hedges is attributed to their cost, which can be a big drag on performance. They also add complexity to the portfolio: some are single-period, some multi-period; some cover individual securities, some cover the whole portfolio. Worst of all, they are exposed to counter-party risks that can be very real, if many investors are forced to activate their hedges at the same time. On the positive side, they provide the more precise targeting of risks, as provided by CPPI (constant proportion of portfolio insurance). But after the AGI failure in 2008, the fear of counter-party risk has deterred their use. The 'flash crash' in May 2010 also exposed the weakness of some of these hedges (see INSIGHTS). Hence, there is a strong preference for discretionary hedges around equity and credit portfolios to capture or avoid short-term momentum, sentiment and macro events. They rely on a colour-coded matrix that flashes buy/sell signals on daily basis.

Finally, asset diversification remains the most widely used tool for implicit hedging (78%). As we saw in Section 2 (p.20), many pension plans are still seeking a free lunch from diversification via periodic rebalancing. For them, rebalancing also provides a hedging tool, as and when new risks emerge. Some plans also go a step further and base their asset allocation on risk factors, using the concept of risk budgets (49%). This approach is in its infancy and likely to grow over time.

However, all these approaches are predicated on sound governance. As the distinction between the measurement of risk and its management has crystallised, the role of human judgement has come to the fore. A strong risk culture has demanded high quality dialogue between trustees and full time officials, backed by good execution capabilities. It has also demanded a clear shift from asset-based measures of risk (e.g. volatility) to liability-based measures (e.g. cash flow).

Interview quotes

"80% of changes in our coverage ratio come from interest rate changes."

"What risks are being stoked up by this prolonged period of low interest rates and excess liquidity? Nobody knows."

INSIGHTS

"The world of investing is essentially cyclical and self-correcting. Today, there is a widespread tendency to over-simplify the past, over-exaggerate the present, and over-complicate the future. Instead, it is better to think of investing in terms of 10-20 year cycles. There is no 'old' normal and 'new' normal, just 'different' normals.

The current normal is dominated by the Fed action. It has overwhelmed all our fundamental analysis of corporate balance sheets and national economies. When you have a player like the US Federal Reserve throwing trillions of dollars in the markets, you have to join the game. Equity markets will remain frothy till interest rates start to rise. When they do – as they will some day – both equity and bond markets will be heading for big corrections. In the bond markets, the problem will be aggravated by lack of liquidity as banks have reduced their proprietary trading activities. When the Federal Reserve starts raising its policy rates, outflows from high yield and other less liquid debt will lead to a freefall in prices. The Fed is reportedly studying exit fees to reduce the chances of a run on the corporate bond markets.

To protect our portfolio against big drawdowns, we considered adopting stop loss mechanisms with clear thresholds or option contracts with asymmetric bets. But we decided against them when we discovered that these instruments inflicted big losses in the May 2010 'flash crash', when the Dow plunged by 900 points only to recover most of that within minutes.

When markets are driven by central bank actions, herding becomes a major factor. We assess its impact regularly by looking at the returns of our peers. If they have a similar profile, that tells us about the size of systemic risk building up under the surface.

On our part, we have adopted four key tools to manage the risks inherent in our portfolio. The most obvious one is dynamic asset allocation. It enables us to separate out by-and-hold investing from opportunistic investing. We do regular rebalancing when momentum is working or when value opportunities arise. We carry some 'dry powder' to buy assets in periods of big dislocation, as we did during the sovereign debt crisis in 2011. We were net buyers during the panic selling in the summer of that year. For certain equities, we adopt an asymmetric return profile: using listed derivatives to capture two thirds of market upside and only one third of the downside.

The second tool is duration management. We have reduced the duration of most of our fixed income portfolio and reduced its credit exposure to risky bonds.

The third tool is diversification into finance for long-term development. We are fully funded and our membership profile is relatively young. So, with no funding pressures, we take a long-term view in areas such as real estate and convertible bonds with an SRI flavour.

Thus, our risk management approach relies on implicit hedges gained from investing in assets that carry some downside protection and time premia."

~ A French Pension Plan

Asset managers must decouple marketing from thought leadership

55%
cite a value-for-money fee structure

48%
cite deeper understanding of clients' goals

47%
cite greater client engagement

As we saw in Section 2 (pp.19-20), consistent returns and capital protection are the top priorities of European pension plans currently.

In highlighting them, pension plans also realise that, no matter how good an investment product is, it can still fare badly unless its buyers have the relevant governance structures, skills sets and execution capabilities.

Thus, while recognising their own role in delivering good investment outcomes, at least one in every three respondents has also identified five areas in which they want their asset managers to make significant improvements if they are to earn mandates in the future:

- a value-for-money fee structure (55%)
- deeper understanding of their clients' goals and risk tolerances (48%)
- greater engagement through superior service (47%)
- dynamic investing (47%)
- an improved track record for active management (34%).

These identified improvements, in turn, are influenced by three aspects that reflect the reality of today's market environment.

The first one relates to fees. Prior to the 2008 crisis, they were less of an issue, especially when markets were booming. Now, faced with the prospect of a prolonged low-return environment, fees have shot up on the agenda.

The heightened demand for a value-for-money fee structure also stems from the realisation that, in the last decade, the food chain in the pension industry operated in reverse, with service providers at the top and clients at the bottom. Hence, fee pressures have intensified and fee compression will remain the norm.

Interview quotes

"Plan sponsors with frayed nerves have been strained to breaking point by the losses in 2008-11."

"Asset managers must seek to rebuild trust. They must have an eye for things to come, instead of relying on the rear-view mirror."

Figure 4.3 **In which areas do your asset managers need to make significant improvements, if they are to receive mandates from you in the future?**

Source: Amundi Asset Management / CREATE-Research Survey 2014

The second aspect is engagement. As investing has become more nuanced, pension plans want: greater engagement via pulse surveys and face-to-face contacts with asset managers in order to solicit new ideas; to manage return expectations across different market regimes; to minimise 'wrong time' risks and 'regret' risks associated with panic selling and panic buying; to communicate bespoke research; and to highlight proactive buying opportunities.

Such engagement should aim to develop common investment beliefs and time horizons and convey 'health warnings' that are usually lost in the fine print of legal agreements.

Without greater engagement, many of the new approaches are unlikely to fare any better than the previous ones.

The third aspect is 'duty of care'. While risk premia will remain time varying, pension plans want their asset managers to target 'best endeavour' outcomes by developing capabilities that can capitalise on the current debt dynamic; creating products that are fit for purpose; seeking new opportunity sets in credit and emerging markets; delivering proactive investment ideas and buying opportunities; avoiding unrealistic claims about returns; and above all understanding their clients' needs, liabilities and risk tolerances.

Interview quotes

"This alpha thing is overdone. We need consistent returns that match our long-run liabilities."

"Success in today's investing requires a new form of engagement that is free of dogmas, fads and clichés."

INSIGHTS

"The aftershocks of the 2008 financial earthquake have left pension plans on shaky ground. They need a better deal from their asset managers. The lethal combination of market losses, low discount rates and an ageing population has hit our funding ratio and not left enough time to recoup our losses. 25% of our members have retired while our funding ratio is around 85%.

We need to be assured that our asset managers understand the changing nuances of today's markets as much as the heartbeat of their clients.

In the last decade, we invested in products that were not fit for purpose. Managers sold products that they had rather than the ones that their clients needed. Markets were flooded with new ones offering uncorrelated absolute returns. Most were neither tried nor tested, by time or events.

Quite often, the difference between product prospectus and outcomes was big. Communication was sub-par: even basic information on asset values and performance was neither timely nor accurate. Fund reviews were infrequent.

We want our asset managers to exercise a greater 'duty of care'. Under it, they need to develop investment capabilities that give a deeper understanding of today's debt dynamic, its hidden traps and its hidden opportunities. They need to develop common investment beliefs and time horizons with us and help us counter behavioural biases that have cost us dearly in the past. They need to stop selling products that are not fit for purpose and adopt meritocratic incentives in which gain and pain are shared more equitably. They need to avoid peer herding to reduce their peer risks.

We need less communication and more engagement. Our asset managers need to understand our needs and risk appetites. They also need to avoid unrealistic claims about returns and manage our expectations of what can and can't be delivered in today's unusual environment. They should solicit our feedback regularly and act on it.

Part of the problem lies in the way asset managers are disintermediated by pension consultants in the UK. It has forced asset managers to provide products, not solutions. Not knowing their clients' overall goals, managers are forced to exaggerate the virtues of their products and create unrealistic expectations.

On their part, consultants are assumed to know more about asset classes than their clients or managers. The result is an entrenched blame culture in which career risk and reputation risk take precedence over investment risk. Across the pension value chain, the principal–agency problem is as acute now as ever. Everyone's scared to stick their necks out, while hoping that investor inertia and market recovery will bail them out.

Consultants' current role as gatekeepers pigeonholes asset managers and prevents them from a regular exchange of ideas, portfolios reviews and course correction when needed. It retards innovation when it is most needed."

~ A UK pension plan

Pension consultants must overcome the Catch-22

53%
cite deeper understanding of clients' goals

48%
cite greater engagement

38%
cite strategic asset allocation

Pension plans want predictability; markets deliver uncertainty. Good returns need early mover advantage; pension funds require track record.

Pension consultants, thus, have to walk a fine line between value opportunities and value traps; between dynamic investing and blind faith; between hard evidence and personal convictions. As a result, human judgement has to play a big role in all that they do.

In so far as they have come in for criticism since the crisis, like asset managers, it is indicative of the emergence of new urgencies as much as the prevalence of inherent weaknesses in their approaches.

Thus, when asked to suggest the areas where consultants need to make significant improvements if they are to receive mandates in the future, five areas were singled out by at least three in every ten respondents:

- deeper understanding of their clients' long-term goals and risk tolerances (53%)
- greater engagement with clients (48%)
- strategic asset allocation (38%)
- value-for-money fee structure (35%)
- manager selection (31%).

The emphasis on deeper understanding stems from the fact that most plans are now transitioning from asset maximisation to liability matching due to ageing demographics. If the Solvency II directive is implemented, plans will have to come to terms with what a 'holistic balance sheet' means, and its practicalities when implemented. Even if the directive is not adopted, maturing liabilities and the associated negative cash flows are changing the central thrust of the pension business model.

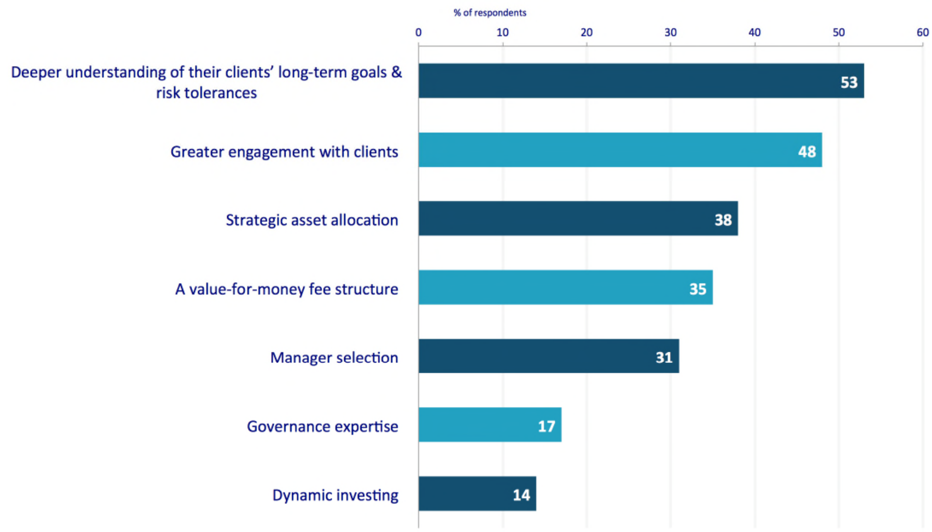
Greater engagement is the most effective way of developing the necessary understanding. There is a body of opinion that holds that it is time for a new implicit contract involving pension plans, their consultants and asset managers. Via discussion and dialogue around asset liability modelling, asset allocation and market dynamics, such a tripartite group can work towards minimising the implementation leakage. Through greater collaboration, the entrenched blame culture can be minimised, too.

Interview quotes

"Our surplus of €3 billion in 2007 turned into a deficit of €1 billion in 2011 due to falling asset values and discount rates."

"No single party in the pension value chain has the monopoly of wisdom. Each has a lot to contribute."

Figure 4.4 **In which areas do your asset managers need to make significant improvements if they are to receive mandates from you in the future?**



Source: Amundi Asset Management / CREATE-Research Survey 2014

The third area identified for improvement is the fee structure. In so far as consultants have to make judgement calls when giving advice, they reportedly err on the side of caution. And fees do not always reflect value for money. Similarly with manager selection, the tendency is to select those with a good track record. Hence, there is the perception that career risk takes precedence over sound advice.

Accordingly, consultants need to orient their professionalism towards fresh ideas and insights that create an edge at a time when new opportunity sets are desperately needed. Their recommendations on manager selection and asset diversification need to be driven by high conviction logic rather than past performance and vendor hype. They need to be trusted advisors, rather than gatekeepers who create clear blue water between asset managers and their clients.

These imperatives enjoin pension consultants to do old things better: things like strategic asset allocation, liability hedging and manager selection. It also enjoins them to do new things to ensure that their clients are able to capitalise on opportunities that arise from the dynamics of deleveraging.

Together, these actions can go a long way towards restoring the trust that has been a major casualty since the 2008 crisis.

Interview quotes

"All ALM studies and SAA studies tell the same story. There's no out-of-box thinking."

"Consultants are conflicted: they make money mostly when their clients do new things. Many don't have incentives for forward thinking."

INSIGHTS

"By 2011, pension deficits across the world were eye popping. Naturally, asset managers and pension consultants were cast as villains.

Few of them saw the two bear markets of the last decade coming; few of them detected the time bomb concealed in cheap money; few of them understood the unintended consequences of the mark-to-market rules; and few of them expected the asset class correlation to rise so fast. The 2000s were a 'lost decade' for us.

We're now in an era where correlations between asset classes are asymmetrical – low in the upturn and high in the downturn; risk premia are time varying, and fat-tail events are always lurking in the background. We need fresh insights from our consultants.

To start with, it is essential to know how we tweak our strategic asset allocation while markets are overshadowed by macro risks. There are a number of associated questions. What market regimes are likely to evolve and what is the scale of rebalancing that they will require? How much 'dry powder' should we hold? How do we maximise our illiquidity premia and what are the key downsides of illiquid assets when we decide to offload them eventually?

Furthermore, on consultants' advice, we seem to have drifted into passive investing because active investing has not worked for us. But this is a default option. Is it enough that the actives have failed so we go into passives? What about the momentum risk and concentration risk associated with passives? What should be the optimal mix between actives and passives? Are smart beta strategies likely to work as and when they attract a new wall of money? By focusing on specific themes, are ETFs exposed to concentration risk in the event of a downturn? Are their dollar-weighted returns as impressive as the time-weighted returns? Does the widespread use of index tracking create systemic risk as a large proportion of the market marches in lockstep?

Finally, our manager selection process remains overly influenced by past performance. The past may be the best guide to the future, but it is a very imperfect one at that – as shown by the two bear markets in the last decade.

What is the performance persistency of asset managers? Are we ending up selecting managers just when their best performance is history? How scalable are their underlying investment strategies?

Of course, today's investing has to be different from the past. But does it have to be so complicated? The false rigour and spurious accuracy of many things our advisors do is fabulously effective in managing their own career risks. But inadvertently they also raise our expectations only to dash them over time.

We need a new social contract that involves an open honest dialogue with our advisors and asset managers on what are our long-term needs and risk tolerances, and what are the best means of delivering them along with error margins. Everybody needs to sing from the same hymn sheet."

~ An Irish Pension Plan

Other publications from CREATE-Research

The following reports and numerous articles and papers on the emerging trends in global investments are available free at *www.create-research.co.uk*

- *Not All Emerging Markets Are Created Equal (2014)*
- *Investing in a High Frequency Trading Environment (2014)*
- *Upping the Innovation Game in a Winner Takes All World (2013)*
- *A 360-Degree Approach to Preparing for Retirement (2013)*
- *Investing in a Debt-Fuelled World (2013)*
- *Market Volatility: Friend or Foe? (2012)*
- *Innovations in the Age of Volatility (2012)*
- *The Death of Common Sense: How Elegant Theories Contributed to the 2008 Market Collapse? (2012)*
- *Investment Innovations: Raising the Bar (2011)*
- *Investment Innovations: Raising the bar (2011)*
- *Exploiting Uncertainty in Investment Markets (2010)*
- *Future of Investments: the next move? (2009)*
- *DB & DC plans: Strengthening their delivery (2008)*
- *Global fund distribution: Bridging new frontiers (2008)*
- *Globalisation of Funds: Challenges and Opportunities (2007)*
- *Convergence and divergence between alternatives and long only funds (2007)*
- *Towards enhanced business governance (2006)*
- *Tomorrow's products for tomorrow's clients (2006)*
- *Comply and prosper: A risk-based approach to regulation (2006)*
- *Hedge funds: a catalyst reshaping global investment (2005)*
- *Raising the performance bar (2004)*
- *Revolutionary shifts, evolutionary responses (2003)*
- *Harnessing creativity to improve the bottom line (2001)*
- *Tomorrow's organisation: new mindsets, new skills (2001)*
- *Fund management: new skills for a new age (2000)*
- *Good practices in knowledge creation and exchange (1999)*
- *Competing through skills (1999)*
- *Leading People (1996)*

Prof. Amin Rajan

amin.rajan@create-research.co.uk

Telephone: +44 (0) 1892 52 67 57

Mobile/Cell: +44 (0) 7703 44 47 70

Amundi ranks first in Europe and in the Top 10 worldwide in the asset management industry with AUM of more than €800 billion worldwide[1]. Located at the heart of the main investment regions in more than 30 countries, Amundi offers a comprehensive range of products covering all asset classes and major currencies. Amundi has developed savings solutions to meet the needs of more than 100 million retail clients worldwide and designs innovative, high-performing products for institutional clients which are tailored specifically to their requirements and risk profile. The Group contributes to funding the economy by orienting savings towards company development. Amundi has become a leading European player in asset management, recognised for:

- Product performance and transparency;
- Quality of client relationships based on a long-term advisory approach;
- Efficiency in its organisation and teams' promise to serving its clients;
- Commitment to sustainable development and socially responsible investment policies.

1. Amundi Group figures as of 30 June 2014.

Issued by Amundi - Société anonyme with a share capital of €596 262 615 - Portfolio manager regulated by the AMF under number GP04000036 - Head office: 90 boulevard Pasteur – 75015 Paris – France – 437 574 452 RCS Paris

CREATE-Research is an independent think tank specializing in strategic change and the newly emerging business models in global asset management. It undertakes major research assignments from prominent financial institutions and global companies. It works closely with senior decision makers in reputable organizations across Europe and the U.S. Its work is disseminated through high profile reports and events which attract wide attention in the media. Further information can be found at www.create-research.co.uk.