Defining moments

The pensions and investment industry of the future

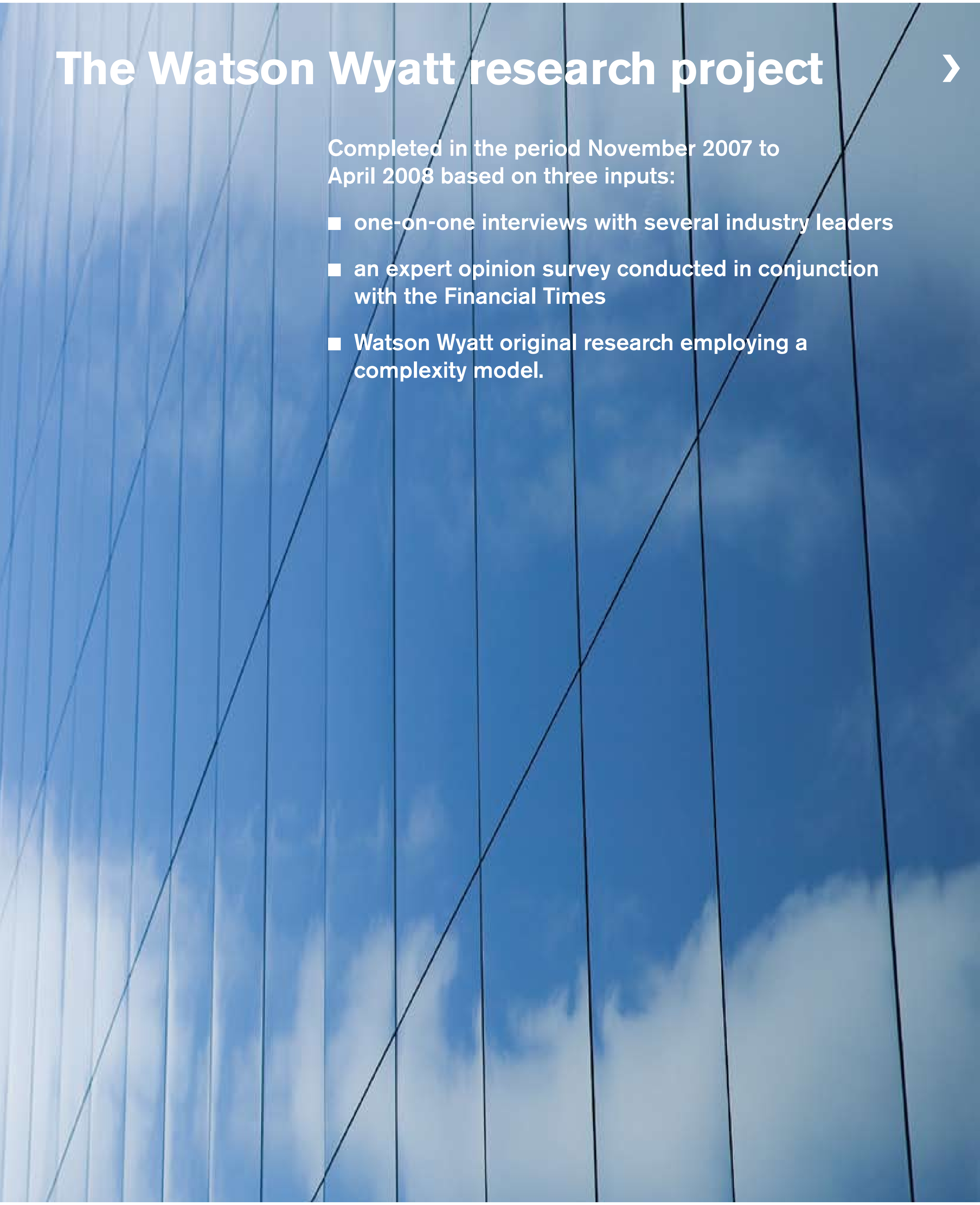
Watson Wyatt Worldwide

Contents

The Watson Wyatt research project ›

Completed in the period November 2007 to April 2008 based on three inputs:

- one-on-one interviews with several industry leaders
- an expert opinion survey conducted in conjunction with the Financial Times
- Watson Wyatt original research employing a complexity model.



Executive summary

The goal of the research was to drill deeply into the evolving forces in the industry and present a plausible picture of its future landscape, through both near-term and longer-term trends. Our time horizon looked out towards 2020. We, however, acknowledge the considerable difficulties with longer-range forecasting given the increasing pace of change.

There is one word that captures the flavour of the next few years in the financial industry – complexity. We believe we are seeing a different type of evolution because of this complexity:

- our ordered sequential way of anticipating change is challenged
- our future is being buffeted by unknowable extreme events – 'black swans'
- we are moving in jumps, not smooth transitions from one state of the landscape to another.

If complexity is now a dominant feature, we must examine the future with a model more adaptable to complexity. We have done this with the application of a complex adaptive system which works on the obvious linkages: individuals and organisations interact in markets and market-places; progress is advanced through technology such as theory and organisational design; there are many network effects at work; non-linear sequences and linkages dominate.

Last, but by no means least, we have to deal with the consequences of systems that mix highly measurable or 'hard' components (market prices, organisation's revenues, and so on) with components that are highly unmeasurable or 'soft' (governance, risk and so on). The complexity model can deal with all of the above.

With everything going on, at such pace and with such confusion, it is critical to stay with a clear big picture:

- that the pensions and investment industry has a core purpose: turning today's workplace savings into tomorrow's retirement income in which success is critical to nation states
- that there are a number of other significant and increasingly influential institutional investors – sovereign funds in particular – that are at the nexus of the globalisation and complexity trends.

The big picture contains some significant issues:

- we see considerable fault-lines with the investment management value proposition as it stands, in that the vast majority of investment products carry too much cost for the value they deliver
- there is little long-termism
- we are crisis prone because of poorly structured incentives and other excesses.

Change in the investment industry reflects the slow dawn of the idea of what needs to be done and what is possible; any changes or jumps are conditioned by significant but at times slow-acting moves in organisational design – the fiduciary/investment committee structure and other social technology.

There have been several areas where social technology change has occurred and is building up as a catalyst for further change in the system:

- the preference for absolute return products – created by the end of the last bear market in 2003
- fresh governance thinking – captured by the Philips Pension Fund's move to fiduciary management in 2005
- new framing of 'risk' – where the sub-prime crisis in 2007 is precipitating major changes in modelling and regard of risk
- new regulation – a future phase of significant regulation which will impact the financial industry on a scale similar to the Sarbanes-Oxley effect on US corporations.

Our analysis focused attention on six 'macro-trends' present in the near term (five years or so) as shown in Figure 1. These trends reflect small influences from the defining moments catalysts noted above.

Figure 1 | Near term macro-trends

Pressure for talent	Talent needs to stretch more in both breadth and depth with talent shortage normal; return on talent likely to increase
Improvements in governance	Improved recognition of return on governance feeds through in increased attention, and new models; more talent attracted to Chief Investment Officer role at funds
Product proliferation	Product specialisation leads to major proliferation, with risk, style and scope of mandates all getting broader; particular growth in absolute return and alternative assets
Extra-financial factors	Environmental, social, governance considerations grow in impact both as indirect sustainable performance influences and as desirable end attributes in their own right
Pensions design, towards a DC model	DC becomes the dominant global model with its attendant 'instividualisation' with risk transfer and new ownership versus control tension
Organisational change	Organisations address change in terms of scaling, specialisation, HR with expansion globally and in adjacent spaces putting leadership and survival on the line

The impact of our defining moments are more evident in what we see as the longer term macro-trends (10-15 years) as shown in Figure 2.

Figure 2 | Longer term macro-trends

Better multi-period investment design	A new success measure for funds will be employed looking more at the key steps in the journey; measurement fully adjusts for risk
Better DC	The improved member value proposition needs: platform strength, better investment design, glide-path design and a technology supported engagement model
New food chain	The big moves are away from reliance on fiduciaries/board/committee towards a Chief Investment Officer type role, which manages costs more aggressively than previously
New investment content	There is a growing list of innovations: porting alpha and beta, beta creep, structured products, solutions: all claim intellectual edge in principle, all subject to practice
Continued crisis contagion	Given the systemic flaws, excess complexity and compensation in particular, continued prolonged significant distress events are likely
New players and new organisational order	Under more performance pressure, organisations will need to develop new competencies

Drawing together some conclusions to this research, in summary:

- this is change on a grand scale
- we see the demise of old long-lasting models like relative return, current defined contribution (DC), governance, food chain, but we also see the union of the distinct investment building blocks – alpha and beta – with separate going rates for each
- this is a world of opportunity for those fit enough to change; where fitness is increasingly defined by the ability to be adaptable and apply new thinking and new theory.

Introduction

The goal of this research is to drill deeply into the many evolving forces in the pensions and investment industry and present a plausible picture of its future landscape.

We have drawn on a wide variety of expert inputs, based on interviews and detailed questionnaires.

This publication is divided into five main sections.

1. An overview of the current features of the industry.
2. Our view of how the industry is likely to evolve in the near term, say over five years.
3. An assessment of some major forces that we believe will shape longer-term outcomes – we refer to these as 'defining moments'.
4. Our view of possible industry outcomes beyond the immediate future, say over 10 years and beyond.
5. Consideration of the implications and opportunities for funds arising from these changes.

We write at a time of increased concern and anxiety about the effectiveness of our financial infrastructure. The contagion with which the sub-prime issue spread into a major dysfunction in the credit market and beyond needs explanation. How likely are we to encounter such difficulties again? How can we effectively deal with them?

We believe the answers to these questions hinge on the reactions of the industry's participants and policy-makers. We suggest the industry faces certain defining moments in framing these responses, with four factors in particular:

- The success or otherwise in the application of new investment content and solutions.
- The effect of changing forms of governance on fund decision-making.
- The extent of change to views about risk and forms of risk management.
- The impact of (likely) increased regulation responding to perceived weaknesses in the investment system.

Depending on what happens with regard to these defining moments, the future will be better or worse for institutional investors.

Given this picture of significant change, all organisations in our industry will need to consider their choices and make robust attempts to adapt and evolve. We hope that our research makes a productive contribution to the thinking required.

We note that the rewards to society of an effective pension and investment system are huge, and particularly critical as we face large-scale changes to the demographic balance.

Acknowledgements

We would like to express our thanks to those who have challenged and honed our thoughts. Inputs to the process have included discussions with colleagues, interviews with 28 senior industry figures, and an expert opinion survey conducted in association with the Financial Times to which 486 industry participants responded. We have also drawn upon what others have written concerning the future and reference some of these papers at the appropriate points.

"What we have is a series of great opportunities disguised as insoluble problems."

John Hennessy, President of Stanford University

The Watson Wyatt/Financial Times expert opinion survey

As part of our research project, we conducted a survey in conjunction with the Financial Times. The purpose was to gather views from industry participants on how the investment landscape is likely to evolve during the next decade or so. The survey focused on a number of industry aspects: talent, governance, product proliferation, extra-financial factors and pensions design.

Four hundred and eighty six responses were received, four-fifths of whom had at least 10 years industry experience. Nearly two-thirds of respondents were European based, with the rest coming from North America, the Far East and Australia. 57 per cent of respondents were asset managers, representing around US$37 trillion of assets. Institutional funds, 22 per cent of total respondents, represented around US$560 billion of assets.

The survey collected opinions on three types of questions: what will happen, what should happen and what do people fear most in the run up to 2020. The table below highlights the main findings of the survey.

	What will happen?	What should happen?	What do people fear?
1	Alpha appetite to grow	Increased long-termism	DC under-delivers
2	Talent shortages to stay	Stronger governance	Undue short-termism
3	Value of independent advice to rise	More independence in advice	Growth of regulation
4	Marketplace change will be substantial	Rise in ethical standards	Over-complexity in investment products
5	Growth of absolute return	Separate going rates for alpha and beta	Over-complexity in derivatives

The outcome that respondents feared the most was the under-delivery of DC plans, leaving members financially unprepared for retirement. There was, however, an expectation that financial literacy would, in general, improve in the coming years, but mixed views as to whether this would have a favourable outcome for individuals in DC-based retirement planning.

Fears also surfaced with respect to the consequences of short-termism, over-complexity in product proliferation and derivatives, and the likelihood of increased regulation.

The survey revealed a rising demand for alpha, stirred by a focus on absolute return investment, premised on greater investment product transparency. In the alternative investment area, however, 31 per cent said transparency would remain problematic.

Around 70 per cent of respondents said the talent shortage to deal with the industry's challenges was here to stay and agreed on its inevitable link to increased compensation.

In terms of fund governance, while nearly 75 per cent of respondents expected a significant expansion in fund resources, only 33 per cent thought fund governance would change quickly. There was strong consensus with respect to what should happen in terms of fund governance – more institutional fund governance resources combining to exert more collective influence, supported by more independent advice, but opinion was more divided on whether funds would be able to make significant strides towards better governance.

More than half of the respondents agreed that extra-financial factors such as sustainability would have an important part in institutional fund decision-taking over the coming decade.

Market change will be substantial, according to respondents. Large asset managers are, however, unlikely to consolidate into a handful of mega-managers, while specialist boutiques are expected to proliferate. In the same vein, respondents expect pension funds to have an increasing number of relationships with specialists rather than turning to one-stop shops.

Respondents thought that over the coming years the likelihood of financial crises would continue at or above our recent years' experience, consistent with three to four financial crises in the next 10 years.

1. Overview of the institutional investment industry

It is an adaptive world

Before we provide a commentary on today's institutional funds, we consider the defining elements of these funds. Our model looks at the industry under three headings:

- The **players**, the primary group being the funds themselves, but also to be considered are investment managers and other intermediaries who together make up the 'industry'.
- The **technologies**, which we simplify into two parts: investment theory (a 'physical' technology) and investment governance (a 'social' technology)[1].
- The players and technologies meet in **markets and marketplaces** where supply and demand set prices and quantities and encourage the development of new products. Here the fitness of players is tested.

The ever-shifting investment landscape requires that strategies and organisations (and portfolios) be constantly adaptable.

The faster pace of change suggests that there will be greater pressure for individuals and organisations to adapt more frequently and more quickly. There is no guarantee that this will be a smooth process. It is more likely that adaptation will occur only when pressure to change has built to some critical level (or 'tipping point'), making progress more jumpy than smooth. Consequently, any framework we use to guide our thoughts regarding the future must be compatible with both complex sequential developments ('1' causes '2', which then causes '3'…) and non-linear or multi-strand developments ('a' and 'b' happen causing 'c'). A complexity model has these features and more, and is explained further in the Appendix. It is capable of incorporating many moving parts, periodic jumps, evolutionary change and different rates of change. We believe using a complexity model gives us the best chance of being able to see what may emerge in the future.

For an instructive example of applying complexity in finance we recommend Andrew Lo's 'adaptive markets hypothesis'[2]. We note, however, that the application of complexity theory to finance is still in its infancy and various models are possible.

“If we don’t change our direction we’re likely to end up where we’re headed.”

Chinese proverb

Pension funds are in reasonable shape

Our overview starts by considering the biggest primary players – the pension funds. With pension funds holding around 35 per cent of global listed equities, these are the most influential of the institutional investor groups.

Data from the *Watson Wyatt 2008 Global Pension Assets Study* shows a picture of solid growth and comparative health:

- At the end of 2007, assets of the top 11 pensions markets amounted to US$24.9 trillion or 82 per cent of GDP, compared to US$12.5 trillion and 64 per cent of GDP 10 years ago.
- DC funds have been growing about 5 per cent per annum faster than defined benefit (DB) and now represent around 43 per cent of global pension assets.
- The global average asset allocation now stands at 56 per cent equities, 33 per cent bonds and cash, 11 per cent alternative assets.
- The global DB balance sheet, as far as it is possible to estimate its characteristics, appears healthy on many measures, but on stringent solvency (or ‘buyout’) measures most funds are in deficit.

This industry has connections

The pensions and investment industry strives to be effective in its core purpose: **efficiently turning today’s workplace savings into tomorrow’s retirement income.**

The current demographic context of this mission is crucial. As Alan Greenspan puts it, “almost all of the developed world is at the edge of a demographic abyss for which there is no precedent: a huge cohort of workers, the baby-boom generation, is about to move from productive work to retirement and there are too few younger workers to replace them”[3].

It is clear that pension funds can assist countries in addressing their demographic issues:

- Providing retirees with a robust income/ safety net.
- Bringing balance to the cash flows of savers/dissavers.
- Contributing to efficient wealth creation in the broader economy.

How effective they prove to be depends on how well the moving parts in the system work together. The connections are critical:

- Companies use pension funds to attract a competitive workforce, but how much advantage do they get from them?
- Workers use pension funds to build retirement income, but is this income adequate?
- Portfolio investment is a source of capital for companies, but is it cost effective?
- Pension funds can create wealth for their stakeholders through successful investment performance, but are they doing so?

We have some doubts about the effectiveness of these links, but draw some slightly more optimistic conclusions later in this publication about what could be the future state. What is certain, however, is that this system needs strong governance, innovation and good investment performance.

Globalisation

While globalisation has been evident in many industries, its success and perceived relevance in the investment industry is mixed.

Investment managers tend to deliver global investment products to their client base. Investment opportunities are also considered with a global perspective although home bias remains significant in some countries.

Asset owners, however, tend to focus more locally. There are inbuilt preferences to appointing agents who are local to the fund rather than establishing connections with a range of agents from around the world.

Non-profit and sovereign funds

Pension funds may be the largest of the institutional funds, but they are being challenged for influence by non-profit funds and sovereign funds:

- we estimate that endowments, foundations and other not-for-profit organisations comprised about US$4 trillion at the end of 2007[4]
- we estimate that sovereign funds, including sovereign wealth funds and sovereign pension funds, amounted to close to US$5 trillion at the end of 2007.

The faster growth of both the non-profit funds and sovereign funds marks them out as increasingly important players over the next few years.

Endowments have been distinguished by a few well-publicised and successful funds whose governance and performance has attracted attention and imitation.

The rapid growth in assets of sovereign funds has been inevitable in a world in which a number of Asian countries and oil-rich nation states command such economic power. It is obvious that these nations will want their accumulated reserves to have an ambitious economic goal. It is argued that many of these funds also have political goals, which may well be true, but we believe this point is generally overstated.

Sovereign Funds

Sovereign Funds (SFs) are government investment vehicles, engaging in foreign currency denominated investments. They sub-divide roughly into three generic types: those funds committed to pensions purposes; those that receive oil and other resource proceeds; and those wealth accumulation funds sourced from excess reserves that are not required for immediate fiscal reasons. The latter two categories are referred to as Sovereign Wealth Funds (SWFs).

These funds are large and growing fast, with assets of around $5 trillion (see table for the list of SWFs with assets estimated to exceed $100bn). They are likely to triple in size over the next seven or eight years. With considerable assets and escalating expansion, SWFs will have significant implications for financial asset prices. For example, a shift from low-risk mandate official reserves to SWFs with higher risk tolerance will exert plausible upward pressure on risky assets, and this pressure may even be magnified by the psychological effect – private funds trying to ‘front run’ the actions of SWFs. In addition, the emergence of the SWFs contributes an important macro-economic balance, helping secure the inter-generational goals of countries with respect to their changing demographies. SWFs are also important in the sense that they hold up a mirror on the globalisation issues of our day.

Largest Sovereign Wealth Funds

Country	Fund name	Assets $bn	Inception year
UAE	ADIA	875	1976
Singapore	GIC	330	1981
Saudi Arabia	Saudi Arabian Funds of various types	300	N/A
Norway	Government Pension fund - Global	300	1996
China	State FX Investment Corp. and Central Huijin Co.	300	2007
Kuwait	Reserve Fund for Future Generations	167	1953
Singapore	Temasek Holdings	100	1974

Source: Morgan Stanley

Important issues concerning these funds include transparency and governance. While some funds, such as Norway’s fund, provide exemplary disclosure standards, most of the SWFs do not disclose their investment objectives. Being more transparent about their strategy and investments could help to ease suspicion; however other issues such as financial protectionism cannot be ignored. With improved transparency and governance, these funds should become the role models of institutional funds worldwide, demonstrating best practice and addressing the systemic faults of our current industry: particularly cost structures, improved alignments and sustainability.

Sovereign funds are centre stage in the globalisation tussle. They hold up a mirror on globalisation issues: global win-wins, protectionism, inter-generational equity, sustainability, markets over governments. While their transparency does vary, they can easily become the future role models of institutional funds:

- exhibiting best practice in governance and strategy
- addressing some of the systemic faults of our industry
- providing some of the long-term capital needed by the banking and hedge fund industries.

Current themes on funds

Change is occurring across institutional funds in a number of areas:

- growing awareness of the crucial role that governance plays in achieving the aims of funds
- shifting emphasis in risk budgeting from the traditional two step approach – the strategic asset allocation process (the beta) and then the manager selection process (adding the alpha) – to targeting alpha and beta separately
- growing appetite for alpha despite the significance of the zero sum game argument
- increasing interest in alternative assets despite higher pricing and cost structures, with the weight of money reducing prospective returns.

We suggest that only some funds are sufficiently adaptable to cope easily with the new opportunities. Attention will focus on fitting investment strategies to governance budgets and improving governance in the future.

Investment managers

Total assets under management of the world's largest 500 managers reached US$63.7 trillion at the end of 2006, reflecting growth of around 11 per cent per annum from 1997[5]. These assets are spread mostly between pension funds, mutual funds and wealth management.

The top 20 managers control 39 per cent of the 500 managers' total assets, up from 31 per cent in 1997.

To be a top 20 firm, there are a number of assumed attributes: global brand, strong local delivery channels, strong employer brand, highly competitive compensation and flexible operational platform. These have always been necessary, but to the list we add specialisation and diversity of product which have become progressively more important with the passage of time.

While managers deliver global products to a worldwide client-base, they do so without yet achieving the strong global connections apparent in many global corporations. While investment firms now have greater diversification in their client-base, their talent concentration may have increased. London and New York are more dominant than before.

Consolidation, whether to fill product holes, add capability, address geographical diversification or augment manufacturing and distribution capabilities, has been a big factor in the industry, particularly among large firms. Growth through acquisition has been a business success formula, but, at times, it has failed to serve the interests of the clients.

Institutional funds have become increasingly concerned about costs. Apart from the highly competitive indexed products area, however, investment managers have been price-makers, particularly in alternatives mandates.

Alternatives are a significant issue for managers, and large firms have generally built meaningful diversification in these fields. This has increased profitability, but more complex servicing and intermediation have also resulted. The growth of alternatives-only firms is also an emergent factor.

Managing complexity, particularly wider diversity of products and asset classes, has increasingly become a necessity. Product specialisation is one of the biggest re-shaping forces. The number of products offered has generally doubled or tripled over the last five years. This raises many challenges in managing compliance, back office, front office, profitability, capacity and talent which adds up to a more complex business.

"Not everything that can be counted counts, and not everything that counts can be counted."

Albert Einstein

Consultants and other intermediaries

Consultants are being buffeted by the same crosswinds that managers and funds are battling with: performance pressure, often over unreasonably short time horizons; adoption of a set of more flexible but more complex strategies and fierce competition, particularly in attracting and retaining talent. In this environment, we suggest that the key current trends are:

- Growth in demand, arising from institutional funds' desire for knowledge about effective asset allocation and best-in-class investment managers.
- Increased requirement for deeper technical knowledge, whether more sophisticated asset liability models and risk budgeting techniques or more specialised manager selection advice.
- A greater breadth of services offered in terms of delegated responsibilities following increased demand for consultants to add value in explicit ways and be fully accountable for their performance. The main options in this regard are a 'manager of managers' approach or a 'fund of funds' approach.
- Growth in outsourcing or fiduciary management, in which a firm is engaged to take responsibility for the whole investment programme.
- Entrance of new players, particularly with respect to outsourcing.
- Competition for talent and a broadening of the skills employed, incorporating investment judgement alongside longer range asset planning skills.
- An evolving business model towards higher margins to secure talent going forward.
- Increase in innovation and new thinking, whether through consulting on governance best practice or change in investment content.

We believe the investment industry is at a crossroads. Change is fast and complex. Consulting looks like it will undergo some of the biggest changes of any of the participants in pension fund management. A thriving consulting sector is critical for funds to strengthen their governance, while more competition in consulting from adjacent organisations brings more choice and will be healthy. We suggest that success will belong to the firms that are flexible and innovative, and serve institutional funds with good listening skills, alignment of interests and investment talent.

Technology – moving at two speeds

Physical technology covers computing and communications as well as intellectual capital. New insights or theories lead to new products, which can give further new insights. The impact of technology, particularly knowledge in finance theory and best practice, is making change happen more quickly than in any prior period in the industry, requiring firms to have great organisational adaptability.

In technology we include **social technology** – the rules humans create to govern their interaction. Written rules include the law of the land, employment contracts, pension fund rules and government regulation. Unwritten rules tend to be embedded within a culture (country, firm, family).

Social technology is changing at a much slower pace than physical technology. There is, for example, recognition of the limitations of an under-qualified, over-involved trustee board structure. But change to this model is comparatively slow. That said, the effects tend to be significant once change is seen.

Markets and marketplaces – is there a problem?

How markets 'work' is often attributed to the 'invisible hand'. Several influential commentators have drawn attention to a concern that our investment markets and marketplaces are not such effective agents of progress as used to be the case.

At the time of writing, the 'sub-prime' (now credit/liquidity) crisis has been ongoing for close to a year. What started as news about an increase in defaults by sub-prime mortgage borrowers in the USA soon led to widespread solvency problems in financial institutions, which have been forced to raise additional capital. In short, the crisis has been contagious. This raises the question of whether this has been an unfortunate and unpredictable turn of events or whether it points to something systemically wrong. We argue that it is the latter.

Things to be worried about

We side with the body of opinion that believes there is a problem with the current industry configuration.

The problem resides in excessive competition, complexity and compensation. The industry's 'incentive structure' is flawed – the rewards and sanctions facing industry participants are not appropriate and so participants are incentivised to act in ways that will ensure the system remains prone to periodic crises. Much has been written about the role that the securitisation of mortgages played in this regard. The difference in the level of knowledge and understanding of the sellers and buyers undertaking these transactions led to significant agency issues. If the seller can earn a large fee from packaging mortgage loans, and carries no ongoing interest or risk, then they will only care about being able to source more loans to package and they will not care about the quality of those loans, which is important to the buyer.

Addressing the industry's incentive structure is outside the scope of this publication[6] but we note that unless and until it is resolved, we must expect further financial crises. This sentiment was echoed in the expert opinion survey, where the average expectation was for three to four more crises in the next 10 years[7].

The sub-prime crisis

We suggest that the sub-prime crisis has arisen from the confluence of some economic stresses – notably the building of excess credit and liquidity over a prolonged period with the manifestation of some deeply embedded fault-lines inside the financial markets:

- **Over-competition for 10 per cent + returns:** Driven by increased appetite for alpha and an ambition to achieve 10 per cent + returns, investors have needed to use leverage because the risk premia, either from alpha or beta, are insufficient for these types of returns. Leverage has become the master as opposed to the servant.
- **Over-complexity in the chain:** As a consequence of innovations of securitisation, we have observed an unprecedented high level of complexity associated with both evaluation and transaction stages of investments. Investors that lack strong capabilities find it difficult to price a wide range of securitised products, causing massive deviation from their fair value.
- **Over-compensation and/or over-incentivisation:** The short-term incentivisation built into the investment industry, coupled with an inappropriate compensation structure, fuels undue risk taking. Enjoying an option-like compensation system, bankers and financial intermediaries including asset managers are encouraged to make high-risk decisions, exacerbating agency issues.
- **Contagion:** The financial markets and market-places have become much more closely integrated, leading to higher correlations at times of stress.

A second reason to worry is the short-termism and lack of focus on sustainability prevalent in the industry. We believe that many of the value propositions in the industry are weak and that little investment is conducted on a genuinely long-term basis. Our analysis suggests that the pension fund 'food chain' – the annual payments a pension fund makes to the various agents it employs – has increased by 50 per cent over the last five years. Much of this increase reflects a shift in assets away from traditional long-only and towards more expensive alternative asset classes. While an individual pension fund may get value from paying a fee of 2 per cent plus 20 per cent of performance, it is clear to us that pension funds in aggregate will be worse off – there is not enough alpha to go round.

One of the challenges for the future, which we explore further below, will be to find ways to encourage more long-term investment.

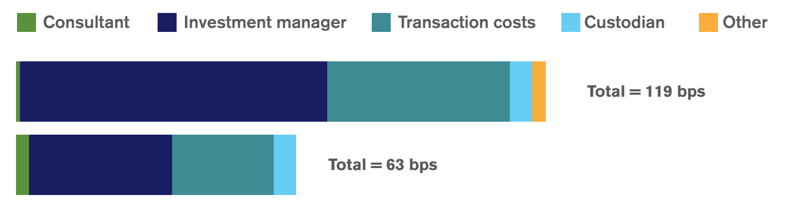
Short-termism and complexity were both in the top five fears identified by the survey. The biggest fear of the respondents, however, was of DC pension plans under-delivering, see Figure 1.

Pension fund food chain

The pension fund food chain refers to all the costs incurred by funds in managing their investments. These include fees to their investment managers, consultants, custodians and performance measurers, as well as transaction costs (broker, bid/offer spread, taxes and so on).

As the figure below shows, we estimate that the costs in this food chain have risen globally by more than 50 per cent between 2002 and 2007 to around 119 basis points. The increase can be largely attributed to higher investment management fees and transaction costs, as funds have raised their exposure to more expensive alternative asset classes.

Global pension fund food chain



Source: Watson Wyatt. Note that 2002 and 2007 calculations contain methodological differences

In contrast to this, funds typically tend to spend little on internal resources (we estimate this to be around 5 to 10 basis points). We believe that, as governance improves, funds will place greater emphasis on controlling their costs and ensuring value is optimally delivered from the chain.

Figure 1 | What do people fear?

1. DC under-delivers	21%
2. Undue short-termism	19%
3. Growth of regulation	12%
4. Over complexity in investment products	12%
5. Over complexity in derivatives	11%

Source: *Watson Wyatt/Financial Times survey*, December 2007

The historic and prospective growth rates of DC relative to DB make it a safe bet that DC will be a major component of the future investment landscape, amplifying the importance of this concern.

For the sake of completeness we note that regulation was the third greatest fear for the next decade or so. Opinion regarding the role of regulation tends to be both tightly held and divided, dependent on one's philosophical stance as to whether or not 'markets know best'. Others are better qualified to speak to this area than we are, and we refer interested readers to a recent essay by Woody Brock as a starting point[8].

The above list of issues is not a comprehensive catalogue of fears about, and faults with, the industry but is, we believe, sufficient to cause concern. The pensions/investment industry is currently delivering a doubtful value proposition. Given the huge societal and economic influence that saving and investment have, there is an opportunity to do something significant and worthwhile to correct this.

DC plans

In its current form, the expectation is that DC plans will deliver inadequate retirement income to large segments of the population. This typically arises from a combination of poor contribution rates, poor investment strategy and poor investment choice. Of 10 possible events, DC under-delivery was most feared by the respondents to the survey. In the same survey there was some expectation (55 per cent) that financial literacy will improve, but a mixed view on whether this would translate into more empowerment of the individual in relation to their DC decisions. (40 per cent thought individuals would be more empowered, while 51 per cent thought they would remain largely uninformed.)

If a DC pensions crisis is to be avoided in the coming decades, the shortfalls in the system need to be addressed. Central to an improved DC system will be better investment strategy and glide-path design. If individuals are unlikely to change their behaviour in terms of the attention they pay to retirement planning, better DC provision would rely on attributes such as auto-enrolment and implementation of auto-strategies being more widely accepted. Investment strategy should be adapted to take account of the member's changing circumstances, not just age but also financial status and other factors. Furthermore, investment choice would be enhanced through complex strategies being combined into simple packaged solutions, which may also include downside protection strategies.

The provision of better investment strategies would be supported by an improved platform, which incorporates white-labelling initiatives. Thus, investment products can always be maintained as best-in-class without requiring action from individual members.

Engagement also needs to adapt to be more customised to individual needs. Exploiting technology-based opportunities to proactively personalise and target key messages to members could, for instance, lead to more effective plan design.

Finally, the control of costs can have a significant impact over the life of a member's DC plan. Targeting cheap beta options rather than expensive alpha options should be a core part of the investment strategy followed in developing DC solutions.

DC needs a radical re-design. There are signs that improvements are in the pipeline, but there is much to be done.

1 Note that we use the word 'technology' in its broad definition of the innovation that generates knowledge and processes for solving problems. We are aware that we have over-simplified, and that the rise of social networks represents a social technology with a potentially revolutionary impact on working practices and organisation over the next decade or two.

2 *The adaptive markets hypothesis: market efficiency from an evolutionary perspective*, Andrew Lo, Journal of Portfolio Management 30 (2004).

3 See *The age of turbulence: Adventures in a new world*, Alan Greenspan, 2007.

4 See *Global pensions asset study*, Watson Wyatt, January 2008.

5 See *The world's largest managers*, Pensions & Investment, October 2007.

6 We recommend Woody Brock's essay *Four origins of today's financial crisis* in Chapter II of the *Strategic Economic Decisions February 2008* report for those interested in reading further into this area.

7 Source: *Watson Wyatt/Financial Times expert opinion survey*, December 2007.

8 Please see footnote 6 above.

2. Short-term trends reshaping the industry

So what will happen?

While it is impossible to predict with any precision how each of the moving parts will evolve, let alone the whole system, we do believe that by studying current trends and allowing for the step changes we believe to be likely, we can arrive at some reasonable description of the future landscape.

The reader should expect from this section only a near-term result, say five years. The third section includes more complex thinking that supports a look that is further out, say 10 years.

History teaches us that technology is always progressive (we tend not to make retrograde steps). It is also possible to argue that technology advances in waves – could it be that we are just at the start of major financial innovation? Or has the credit crisis put the brakes on innovation for the foreseeable future?

As noted, social structures change more slowly, but the effects tend to permeate strongly, making prediction difficult. However, it is likely that the anchoring of trust law, for example, will mean that pension funds will find it more difficult to adapt their organisational design as rapidly as the other players.

The current forces for change

We believe there are currently six major factors acting on the institutional investment industry. Admittedly, they are not strictly independent but they are distinct:

1. Pension fund investment governance.
2. Pensions design (DC).
3. Extra-financial factors.
4. The talent bubble.
5. Product proliferation.
6. Organisational change.

These are all significant developments which we believe will stay with us over the years ahead, largely because there are no obvious countervailing forces. Of these six, talent, product proliferation and organisational change are the strongest, while governance, extra-financial factors and pension design (the shift to DC) are slower because they are more premised on changes in social technology.

We explore each of these factors briefly below and sketch a few ideas of what could happen going forward.

1. Pension fund governance

To cope with the current change, let alone future change, we believe pension fund governance will have to adapt to uniquely complex circumstances in order to secure any competitive advantage. Such adaptation may include:

- A step change in organisational design – non-executive boards, delegated executives, fiduciary management.
- Funds gain leverage exercising increased control on providers, particularly in concert with others.
- Funds focus more on the management and curtailment of agency issues.

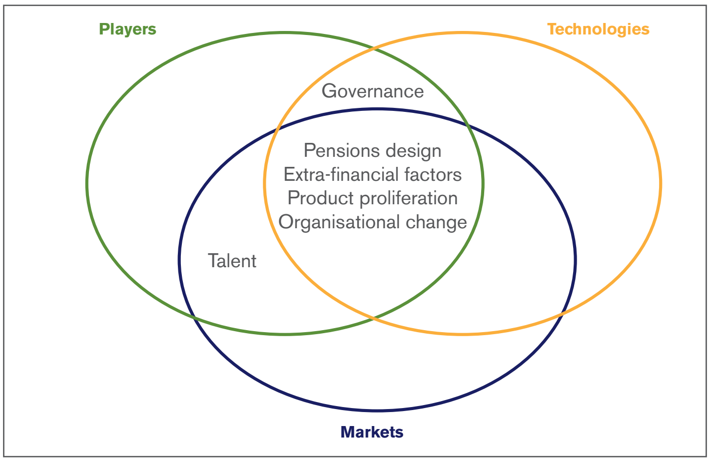
As illustrated in Figure 1, this force is active in the intersection between the pension fund players and the emergence of new knowledge (technology) concerning the importance of governance, the cost of 'governance shortfall' and the theory of organisational design. The impact of this force on the investment industry is partly dependent on how the talent force plays out.

Principal/agent relationships

Pension funds employ a number of agents and, from the survey results, this network is likely to become even more complex as specialisations increase. The challenge facing funds will be how best to manage the potential misalignments and conflicts that may arise. This will place additional demand on their governance arrangements which are already stretched.

There are a number of ways in which funds may be able to manage their agents more effectively, in particular through mandate design, fee arrangements and identification of managers that demonstrate a strong client-centric ethos.

Figure 1 | Forces for change and the complexity model



2. Pensions design

The change in pensions design has underlying drivers, the most obvious being demographics, the regulatory environment and a shift in social structures from paternalism towards individualism.

We suggest that the new pension design landscape will have some additional features:

- A significant proportion of DB moves into a settlement/bought out phase or in low risk run-off.
- DC matures in its 'instividual' part-democratised, part-institutionalised state, and new platforms emerge.
- New views of 'risk', 'value for money', 'responsible investing' and 'brand' arise in the DC market.

It is clear from the expert opinion survey that there is a high level of concern over the ability of DC, as currently configured, to deliver satisfactory pensions. This force for change affects, and is affected by, the players, the marketplace and technology. A particular factor here, however, is whether a market-based solution is possible or desirable. There has been and will continue to be significant government involvement in this area.

3. Extra-financial factors

This could be seen as a descriptor of how the invisible hand might change, in terms of what is deemed to be important in the future:

- demand for some big institutional funds to apply responsible investing principles
- sustainability as a mainstream and/or specialised proposition, with climate change the strongest element
- the impact of politically motivated activism
- influence of responsible investing applied through the DC democratisation process.

Significant change in this area would seem to be dependent on a change in social technology. However, the emergence of climate change as an issue of major societal importance could be the catalyst for change.

Pension fund activism

The scope of pension fund activism is defined along several dimensions. The first and most significant is intended to lead to better investment performance by seeking corporate reforms, through shareholder actions, to protect investments. Corporate governance teams challenge corporate management and boards on strategic policy by voting proxies and working with regulatory agencies to strengthen financial markets. The goal of these active engagement strategies is to unlock investment value by being a catalyst for change – operational, strategic, and so on. Through the voting exposure held by pension funds, companies exhibiting poor economic performance and corporate governance can be targeted for change in an attempt to improve shareholder wealth rather than just passively accepting sustained mediocrity.

A second area of expanded activism involves the use of fund assets as economically targeted investments (ETI). These are investments that have a collateral intent to improve economic well-being of a geographical region and its residents. The goal is to make good economic investments (for example, competitive risk-adjusted returns) that also stimulate business and job creation, development, saving, and improvement of the infrastructure.

The third and most controversial area of governance activism involves taking investment positions for social, moral or political reasons. ‘Betterment’ initiatives have been in existence for a long time, and typically involve divesting pension assets from companies doing business in the targeted offending country in an effort to bring pressure through the imposition of economic sanctions to provoke changes in the offences that exist. Supporters of this activism cite the success of actions against companies doing business in South Africa, Northern Ireland and the Darfur region of Sudan in achieving morally right reforms. Opponents argue that pension funds should not be meddling in international politics. Pension fiduciaries have a responsibility to act in the best interest of plan participants and beneficiaries, and there may be a significant cost to divestiture initiatives.

Prospectively, we can expect to see increasing levels of activism as a controversial complement to economic investment.

4. The talent bubble

The demand for talent has grown inexorably. There is particular competition for leadership talent, given the increasing complexity of the leadership challenge in which key adaptive skills such as motivation, vision and alignment are critical.

In Figure 1, we have placed talent in the intersection between players and markets as the issue is primarily about demand, supply and pricing. However, we acknowledge that it could be argued that there is a technology angle too, in that talent will both shape the development of technology and will itself be affected by changing social technology. An interesting question is how far this trend will persist – will it drain the rest of the economy of talent, hit a steady state or reverse?

Over the next five years or so, it is possible for there to be a bubble in the demand for talent to meet funds' ambitions for skill-based strategies. This is likely to present challenges to organisations building high competency investment businesses. Compensation will be a big driver of talent mobility, but there is an increasing place for non-compensation drivers such as culture and staff development.

5. Product proliferation

We see product proliferation as an emergent behaviour of the system, driven primarily by players seeking to secure an advantage in the marketplace, but crucially dependent on improvements in financial theories (technology):

- further growth in diversity of asset classes and skill-based approaches
- faster growth in derivatives which become more significant in products and strategies
- alpha and beta, conceptually separated, pragmatically integrated
- innovation in guarantee and option pay-off products
- growth in solutions that target more useful end results.

"In theory, there is no difference between theory and practice. But, in practice, there is."

Jan L.A. van de Snepscheut

"Here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!"

Lewis Carroll, *Through the Looking-Glass*

6. Organisational change

Within all this change, the current trends that we identify are:

- convergence between **mainstream firms** and **alternatives firms** as their competitive fields overlap
- categorisation of active products into one of two types – **relative return** mandates and **absolute return** mandates
- growth in absolute return offerings, driven by demand and higher fees
- increased use of shorting, with the current manifestation being the growth in 130/30 mandates
- increased specialisation, whether by asset class, risk level or investment style, resulting in product proliferation, with all its attendant complexity issues
- consolidation, whether to fill product holes, add capability, address geographical diversification, or to augment manufacturing and distribution capabilities
- demand for talent – individuals who can make a big difference, be it in investment decision-making or marketing
- particular competition for leadership talent, given the increasing complexity of the leadership challenge
- emphasis on culture – primarily as a recruitment and retention tool.

Whether organisational change is a force for change in its own right, or whether it is a consequence of the above forces, it is certainly a defining characteristic of the investment industry that we expect to continue:

- blurring of the boundaries between the service offerings of intermediaries
- innovative designs for remuneration and ownership
- tension between scale and focus
- rise of networks of loose affiliations and collaborators.

The competition to secure an investing edge is so intense that it can be likened to the Red Queen's races (*Through the Looking-Glass*) where organisations must run as fast as they can just to stay abreast of the competition.

What the survey said

The expert opinion survey asked for responses to the thoughts we have outlined above in two forms – what the respondents thought **would** happen, and what they thought **should** happen. A summary of their views is given in Figure 2.

In terms of what would happen, there was a clear view that institutional appetite for alpha (excess return from manager skill) would continue to grow. While not disagreeing with this view over the immediate future, we do have some concerns over whether this **can** happen. At a simplistic level, we are of the opinion that alpha is a competitive, adversarial activity – so more people wanting to play the game, or to play it more often, means there will be more losers (perhaps many more, if the pursuit of alpha is associated with higher costs). Furthermore, we believe that opportunities to add alpha do not increase when demand for alpha increases.

There is a paradox. While it is perfectly sensible for an individual investor to seek more alpha, it is not clear that it is desirable for the aggregate demand for alpha to go up. The caveat here is who pursues alpha, and how they do it. There is a link to the expected growth in absolute return investing, which is more relevant for funds seeking more optimal alpha-beta blends. We will return to these issues when we consider what **should** happen and what we think might happen.

Manager hiring/firing decisions

Hiring the managers with a good past track record and terminating their contracts following underperformance seems like a natural decision for most institutional investors. However it appears from the evidence that the institutional investors tend to subtract value when changing managers. In a recent empirical study investigating more than $6 trillion of institutional assets in the US[1], the managers who were fired in 1996 were found to outperform the managers who took over the assets by around 2.2 per cent per annum over the subsequent five years. Similar results have been found in the UK market[2].

Hiring and firing decisions are the responsibility of the fiduciaries and are consequently subject to their own constraint: fiduciaries will be concerned with whether others would judge their decisions to be prudent or not, which, to some extent, leads to an over-emphasis on past performance and 'brand' issues. In addition, an increasing appetite for alpha, a major trend identified by the *Watson Wyatt/Financial Times expert opinion survey*, typically overweights past performance and results in more impatient decisions.

To improve hiring and firing decisions, we suggest adopting longer time horizons. A long-term view on investment, as opposed to the widely feared short-termism in the survey, can both improve outcomes and save transition costs. We also suggest institutional investors should rely more on qualitative research rather than past performance, to gain a better understanding of the likely future outcome. We support adapting the governance arrangements in respect of manager oversight and selection. Best practice governance suggests that hiring decisions should be covered by clear mandates which are aligned to the goals of the fund. The assessment of managers and products should be on a fit-for-purpose basis, focusing on investment efficiency after costs and considering alignment of the organisation to the fund's goals to achieve sustainability of performance.

Figure 2 | Summary of expert opinion survey

	What will happen?	What should happen?
1	Alpha appetite to grow	Increased long-termism
2	Talent shortages to stay	Stronger governance
3	Value of independent advise to rise	More independence
4	Marketplace change will be substantial	Rise in ethical standards
5	Growth of absolute return	Separate going rate for alpha and beta

Source: *Watson Wyatt/Financial Times expert opinion survey,* December 2007

The second strongest opinion was that talent shortages are here to stay. As far as the immediate future is concerned, we are in agreement while recognising that there is always a cyclical element to staffing in the investment industry. We see the current difficulties evident in the investment banking industry, in particular, as likely to cause a temporary lightening of the imbalance elsewhere in the industry, but this is no more than a temporary breather in the battle for talent.

Given the increase in complexity, multi-discipline technical competency and leadership skills are (and will be) highly sought after. Complexity will also ensure that the return on talent will grow. Looking further out, we tend to believe that this issue will be resolved in some way – if only because market-based systems have a long history of finding solutions to chronic shortages.

Next on the list, it was thought that the value of independent advice would rise, an opinion that is likely to have been influenced by the fear of growing complexity. Agency issues get more problematic given complexity, so objectivity and low exposure to conflicts of interest should be valued more highly. For a provider of independent advice this is good news, provided that price follows value (a perennial issue in investment). Historically there has tended to be an inverse correlation between profit margin and client-centredness which has acted as a gravitational pull away from independence and objectivity[3]. It remains to be seen if the invisible hand will reward independence more highly.

We have already discussed our view that significant marketplace change is inevitable, and the expert opinion survey concurred. Organisations are ambitious to grow, and growth often implies expansion into adjacent territories which, in turn, raises issues about excessive competition and sustainability.

"There is a particular zest in making money quickly, and remoter gains are discounted by the average man at a very high rate."

John Maynard Keynes, ***General Theory***

What should happen in future?

The second section of the survey asked respondents about what should happen, see Figure 2. The strongest response was that institutional funds/the industry should exhibit increased long-termism. Our view is that short-termism is making the delivery of reliable alpha more difficult by increasing costs. This prevents funds attaining realistic long-term goals. We believe there are real opportunities for investors to exploit a longer time horizon, but are also cognisant of the challenges associated with it.

The agreement that institutional investors should spend more on internal governance resources suggests a recognition that the value chain is weak for institutional investors. Nevertheless, given that almost two-thirds of the respondents were managers who currently benefit from the unbalanced value chain, the strength of view is a little surprising. We can think of two possible explanations (we dismiss a third reason – that the agents simply did not understand that stronger principals would be bad for many of them). Either:

- the implications of having stronger institutional investors are felt to be more positive than negative (stronger investors are likely to be more discerning over their fee spend), or
- this is a moment of honesty that the system would be improved and made more sustainable by a shift in relative power.

The second point is the most important in our minds. We have already mentioned the importance of the industry's incentive structure in shaping behaviours. We believe a meaningful shift in incentive structure can only be accomplished with stronger asset owners as part of the process. We see some signs of change among pension funds in this direction, but believe the overall shift will be slow.

The belief that ethical standards should rise is also reflective, in our opinion, of a poor current incentive structure. Agency issues and organisational own goals need to be addressed but will only be so when there is sufficient incentive – presumably meaningful sanctions for non-compliance.

Another way to rebalance an incentive structure is to change prices. We would have put the need for separate going rates for alpha and beta higher up the list, but we are glad that it is there. We believe that they have not been fairly priced and that this is a market failure which is due for correction. This is not necessarily about reducing manager base rates, but it might be about reducing aggregate fees. Alpha, or skill, is rare and expensive – and should be expensive – but beta should be cheap.

To date, the single price for a combined alpha and beta offering has created confusion and mispricing. Again, we need to be conscious of the difference between 'should happen' and 'will happen', but watching the industry shift to the position where there are different rates for alpha and beta would be interesting. Could it happen? The technology increasingly exists to separate alpha and beta, to identify hidden betas within returns posing as alphas, and to construct semi-passive portfolios of exotic betas.

It probably requires a shift in governance to improve the bargaining position of the institutional investor. A future fee arrangement could be structured as a low base fee plus a performance fee calculated over, say, five years. If there was no aggregated alpha over the five years, the manager would only be paid for the beta. The ramifications for organisational design would appear gargantuan. For the avoidance of doubt, we are treating this only as a thought experiment and we are not suggesting this as a pricing mechanism. We are conscious that incentive structures in the investment industry need to include rewards for innovation in order to encourage research and development to continue. We are also aware that these incentive structures should support better alignment of interests. Changing the incentive structure radically is likely to have unintended as well as intended consequences, which need to be carefully considered.

New betas

Attention to beta has become squeezed in the governance budget. The survey shows that the appetite for alpha is growing and this commands the prime attention. There is no evidence, however, that either the availability or the affordability of that alpha is improving to meet this growing appetite. Beta is considered as dull, and limited by its strait-jacket of market capitalisation weighted indices.

Out of this low attention comes, we believe, new opportunity for new betas. There are actually many betas available if only funds, managers and advisers would start looking for them. Indeed, many of these betas have actually been used in active management. They have been mis-labelled alpha and hence they have been mis-priced as alpha. Beyond the market capitalisation weighted indices, we see betas extending into:

- systematic active management strategies (for example, value-investing, fundamental indices or risk weighted strategies)
- replicating the return patterns of a number of so-called 'alternatives' strategies
- exotic or hard-to-manage asset classes
- access to long-term macro trends.

Funds can realise three benefits by adopting these new betas:

- cost reduction (paying beta rather than alpha type investment management fees for these programmable investment strategies)
- potential for better diversification by harnessing a wider range of betas
- improved evaluation of the alpha component through recognising the hidden betas in active management, and hence focusing the alpha quest more precisely on a search for skill.

All of this will, of course, pose a challenge for existing industry players. For funds, this means remapping the allocation of governance to give a higher weight to beta with better research inputs to gain the most from these new betas. For managers, re-pricing beta dressed as alpha is overdue but will be painful for those with little skill. At the same time, the new betas will require a new breed of investment manager – sympathetic to the intellectual arguments for the new betas, and free of legacy conflicts in their businesses.

Fee design

The **Pension fund food chain panel** on page 12 highlighted current estimates of fees being paid by pension funds to managers. When viewed in the context of the alpha being generated by those managers, it would appear that well in excess of 50 per cent of any alpha is typically paid away by the fund, yet it takes all the risk. The mis-alignment is enhanced further if performance fees are calculated over short periods (such as annually), as the manager benefits from significant optionality (the upside is uncapped but the downside is limited to the base fee).

Fees paid to investment managers have increased, partly as a result of the move into alternative asset classes. These tend to be perceived as having capacity constraints, and hence higher fees are charged, with a base fee of 1-2 per cent and an additional performance fee of 20 per cent being common. Funds have, to date, been price takers and been limited in their ability to negotiate more reasonable fees.

In the survey, 75 per cent of respondents thought that separate 'going rates' should be established for beta and alpha. As fund governance also improves, funds would be better placed to negotiate an improved fee structure that focuses on appropriately sharing the alpha generated. Such a fee structure should not incentivise asset gathering and should reflect the likely capacity constraint of the product.

A better fee structure may have the following qualities:

- a base fee designed to cover manager costs plus a necessary margin for research and development
- a performance fee, triggered when a relevant hurdle rate (for example, cash+, CPI+, beta+) has been achieved, but also capped
- a longer measurement period, say rolling three or five years
- mandates that are locked-in and committed for these longer periods free of fear of termination for reasons of performance.

For funds to be better placed to understand and control their costs, they need to be more aware of the explicit and implicit costs being charged, and build stronger beliefs around the value for money they achieve through paying these costs relative to the performance achieved.

1 See *Destruction of Value: Analysis of the Wealth Impact of Re-Allocation Decisions by Institutional Plan Sponsors*, Jeffrey Heisler, Christopher R, Knittel, John J. Neumann, Scott D. Stewart, Boston University School of Management, Working paper, 2006

2 See *Does changing manager improve performance?* WM Company, July 1996

3 See *Sales, stewardship and agency issues* Watson Wyatt, September 2007 for more on this subject.

3. Defining moments

How the future may be different this time

So far, our consideration of the future has largely been about linear extrapolation over five years or so, from the present subject to the forces we currently see operating. Looking longer term, say over the next 10-15 years, involves considering what interplays are likely to happen and whether there will be any defining moments which send development down one path rather than another.

The defining moments we discuss in this section have three features in common:

- a seemingly insignificant moment or event which turns out later to be a surprisingly significant force for change or bell-weather for such a force
- the force for change directs us down a new path
- the full significance of the defining moment becomes clear with the passage of time.

Defining moment one

New absolute return solutions

The defining moment at the centre of this is the growth of absolute return investing and the corresponding decline of relative return investing. We have already traced a possible shift in buyer behaviour towards absolute return investing, but there is also the impact of technology to consider.

Innovation in the investment marketplace has been extraordinary in recent years. The continued development of new technology and the accretion of knowledge look set to spur innovation further. However, the complexity model would lead us to question the value of yet more disparate product proliferation. Rather, it would suggest that the invisible hand and fitness landscape will start to act to reward some innovations and to 'starve' others. We would therefore expect future innovation to become channelled into a relatively small number of areas. This begs the question of which areas.

Nobody buys a 5mm drill bit because they want to own a 5mm drill bit[1]. What the purchasers of 5mm drill bits actually want are 5mm holes. By some process they have concluded that the most efficient way to achieve their objective (create a 5mm hole) is to use a drill bit.

In our world, investors do not want a global equity portfolio that is designed to outperform the world index by 1 per cent per annum subject to specified risk parameters. They need to accumulate wealth that can be converted into an appropriate form (for example, cash sum or annual pension), usually at a specified time in the future. Investors are currently undertaking a process of discovery to identify the most efficient way to achieve this. It is our contention that relative return investing will not constitute the most efficient way.

The defining moment was the end of the 2000–2003 bear market. Investors had experienced prolonged and unrelenting bad news on their relative return mandates, which would not meet their absolute goals. The force for change was the view that absolute return was the way to go.

This also implies more effort will be spent attempting to reshape the return distribution. To exaggerate to make the point, the perfect investment solution would remove all negative returns (at zero cost, of course) leaving only the steady compounding of positive returns. While this extreme version is unachievable, the technology and marketplace tools already exist to make some attempt to reshape the return outcomes viable, albeit requiring considerable effort and some expense.

This suggests that, in the future, summarising return distributions just by their mean and variance (the first two 'moments') will fall far short of the mark. We will be in a world where we need to consider and, hopefully, exploit the higher moments of return distributions[2]. Not only that, but it must also be done in a dynamic manner through time. This has significant implications for governance and risk management.

Mandate design

We are moving into an era of new investment content for long-term funds, with the integration of alpha and beta bringing new possibilities for investors. New possibilities tend to come along with new challenges. A particularly thorny challenge for funds as complexity and product proliferation grow and governance struggles to keep pace, is ensuring that investment manager mandate design is appropriate for the new investment content.

Part of the challenge is in the framing of mandate objectives. Absolute rather than relative return mandates are increasingly the most relevant framing for a wide range of investors, including pension funds that have adopted liability driven investment (LDI) strategies. Absolute return mandates require careful use of the term 'benchmark'. Increasingly, performance benchmarks will reference LIBOR type cash yields rather than indices. These are also likely to give the yardstick for performance related fees. However, benchmarks to evaluate the skill component in investment performance will need to be a composite of various betas (both long and short) that attempt to define and set parameters for the investment approach. The new betas will become both a reference point for evaluating active managers and an investment proposition in their own right.

Mandates will also start to be defined by the 'solution' rather than the investment style. These solutions will specify outcomes (for example, a return of CPI plus 4 per cent per annum) rather than asset classes (for example, small cap UK equities). They will also reference specific time horizons, thereby more effectively delineating between investment styles that favour short-term or longer-term approaches.

Funds will need to sharpen their mandate definitions to harness the opportunities presented by product and instrument innovation. Absolute return mandates require clarity of performance targets, time horizon, reference betas and return on capital. Understanding these facets and employing them to gain advantage will be one of the hallmarks of a well-governed fund.

Defining moment two

Fitter fund players – new governance solutions

In section 2 we noted that we saw a slow movement towards stronger governance by institutional investors. As with the adoption of any new social technology, progress tends to start very slowly but can develop significant momentum depending on market forces and government influence (where better governance is seen as a public good). The shift in corporate governance is, perhaps, a reasonable example here.

The defining moment was the decision by the Philips Pension Fund to replace their governance structure with a single external firm. This change reduced board and management involvement and transferred it to a real-time investment governance structure. The force for change was the view and action that governance could jump to a management and fiduciary model.

Over the longer term, we see a step change in institutional governance taking place, driven by a number of forces:

- the growing possibilities from outsourced models of governance, in particular fiduciary management and its variants
- the influence of leading institutions, such as sovereign funds and large endowments, as best practice role models
- a growing recognition by institutional asset owners of the need to reduce shortfall and of the desire to secure a competitive advantage – spending more on the front of the food chain and less on the agents
- increasing amounts of research quantifying the cost of shortfall, and the size of potential gains
- continued regulatory pressure to enhance professional standards and address conflicts of interest
- for DB pension funds, the presence of buyout companies which will increase the governance of the funds they buy and pressure those they do not to raise their game.

We see the boosting of governance resources as a defining moment because it would have a significant number of wide-reaching implications for the system:

- support for adoption of various forms of new investment content and new investment mandates
- expanded risk management
- scale and consolidation among funds
- cost control and the end of the cost spiral through a new look to the food chain.

Pension fund governance

Recent research[3] has identified 12 key attributes of global best practice in governance. These can be divided into core factors, which should be within the reach of most funds, and exceptional factors, which differentiate the best-in-class funds from the rest.

Global best practice factors

Core best practice factors		Special best practice factors
Mission clarity		Highly competent investment executive
Effective focusing of time		High level board competencies
Leadership	+	Supportive compensation
Strong beliefs		Competitive positioning
Risk budget framework		Real-time decisions
Fit-for-purpose manager line-up		Learning organisation

In the past, a link has been established between performance and good governance[4], and yet funds find it difficult to adapt their governance to meet the challenges of their more complex investment arrangements. This could be regarded as a result of a general over-confidence in the status quo, but may also reflect impasse behaviours that, at times, arise in the relationship between the sponsor and fiduciary.

Investment is a complex competitive practice. For funds to succeed we suggest that they should seek to match their investment arrangements with their governance capabilities[5]. This suggests that some funds should look to improve their governance arrangements, probably through expanding the executive team responsible for investment decisions. For many, however, it may be more appropriate to simplify their investment strategy and focus on minimising costs.

An obvious implication of institutional investors increasing their governance and investment resources is a further increase in the demand for talent, and therefore further pressure on remuneration. As the investment skills required by institutional investors will necessarily be broad – covering all asset classes, strategies and geographies – it could be that the source for that talent could be investment consulting firms. This suggests that consulting firms will need to evolve and adapt to counter this trend.

The management of talent

It is all well and good suggesting that the demand for talent will increase – but how will this talent be managed?

Professor Gary Hamel argues that we need to find the next management 's-curve' as we have largely exhausted the efficiency gains from current approaches. Current institutions are rigid and not evolution-friendly. The new reality includes the fact that change is accelerating (12 per cent of what we know, we have discovered in the last five years), competition is intensifying, and knowledge is becoming a commodity. The challenge, therefore, is to build organisations that can change fast and not only in response to crisis. This will include getting innovation from everyone, every day, and require dramatically increasing the returns on human capital. So, the focus of management is on getting employees to volunteer initiative, creativity and passion – therefore, the future is likely to be about networks and more freedom[6].

In a similar vein, PriceWaterhouseCoopers' vision of the year 2020[7] suggests that business models will change dramatically, people management will present one of the greatest business challenges, and the role of HR will undergo fundamental change. This is under the influence of competing global forces: collectivism versus individualism, globalisation versus reverse globalisation, and corporate integration versus business fragmentation. Consequently they see three 'worlds' that are likely to coexist in some form: (1) the 'small is beautiful' world, where companies break down into collaborative networks and specialisation dominates; (2) the 'companies care' world, where social responsibility dominates the agenda and demographics, climate and sustainability become key drivers, and (3) the 'corporate is king' world where organisations grow bigger than countries, and individual preferences trump beliefs about social responsibility.

"It has become appallingly obvious that our technology has exceeded our humanity."

Albert Einstein

Defining moment three

Expanded view of risk and risk management

The defining moment was the black swan market turbulence in August 2007, which seriously impacted several active portfolios and drew comment from the Goldman Sachs CFO that "we are seeing things that were 25 standard deviation moves, several days in a row". The force for change was a fresh view of risk as something more unpredictable and less capable of being modelled and yet even more critical to funds' endeavours.

Perhaps the most important philosophical shift is to recognise that we can no longer derive comfort that we have managed risk simply by having some quantitative representation. When the future is unknowable, risk is impossible to quantify. So alongside our efforts on quantitative techniques we will need to improve our qualitative skills – essentially asking 'what could go wrong? How likely is it?' And 'what are the consequences if it does go wrong?'.

The current risk management mindset is built on a foundation of normal, or at least symmetrical, distributions and the basing of risk models on past data – witness the prevalence of VaR (value at risk) statistics as the leading of the risks being run. (Please note, we are not describing leading edge risk management, which is grappling seriously with the implied issues, but trying to describe normal practice.) The move to a complexity model as more representative of the real world means that we need to reassess our approach to risk management.

The fact that evolution and adaptation become part of the scene means that our reliance on past data is flawed[8]. The past was simply one version of history out of many different possible versions. It is likely that path-dependency is also important – the future evolution will necessarily be influenced by the present starting conditions. For this reason, we would argue that risk models based on past data, even when stress-tested (considering what could happen in extreme conditions), are potentially dangerous, as they will underestimate the probability of extreme outcomes. We should loosen our hold on symmetrical or normal distributions despite this making our lives considerably harder. We must develop tools and techniques that consider all the moments of the distribution and that place higher probabilities on extreme events[9].

The evolution of investment content and new mandates, and the embracing of higher moments of the return distribution will also require significant advance in risk management tools and techniques. There remains a doubt in our minds that innovation in risk sophistication will come ahead of product innovation.

Risk measures

The events of the 2007 credit crisis have tested the risk management systems of organisations across the financial sector and found many wanting. The big lesson is that extreme events do happen, perhaps more often and with greater potential severity than we generally expect. We do not live in a mean-variance world, so the risk models that many built on past data squeezed into a mean-variance framework have not dealt with 2007's reality. The right risk models (for surely organisations should be drawing risk data from a number of models) will, between them, be able to cope with:

- the whole of the distribution not just the most comfortable 95 per cent
- the fact that optionality in many investment decisions and pay-offs require the use of non-linear models
- the existence of so-called black swans[10] – occurrences that are outside of practitioners' experience but are not impossible.

For the quantitative measurement of risk, this means an extension beyond Value at Risk (VaR) measures to other risk measures that consider the shape of the distribution and the data in the tails. For qualitative risk assessments this means organisational intelligence and decision-making processes that recognise the possibility of outliers and are aware of the role of agency issues, incentive structures and collective action[11].

Defining moment four

Regulation – a public good to be welcomed or a spectre to be feared?

This comes down to whether our recent history supporting 'the market knows best' mantra is about to give way to a new period in which the prevailing regulator's attitude is 'the market can not be trusted'.

The defining moment we anticipate will be the passing of various bills, both national and global, that attempt to diminish the likelihood of another black swan created by unacceptable financial practices. The force for change will be the financial sector's equivalent of Sarbanes-Oxley.

Most industry players fear regulation because of the costs of compliance and the unintended consequences. While these are valid points, we wonder whether they are not outweighed by the systemic fault-lines that will not be addressed simply by market forces.

Turning back to the two central candidates for government action – incentives and leverage – what are the chances that we will see some government action and what will be the effect?

In many ways, regulation is one of the hardest areas to anticipate. Governments are prone to respond to issues in ways that secure the political ends of the time which are, in essence, ephemeral. The regulation talk following the sub-prime crisis is highly specific to that issue.

Effective regulation will not be easy. Both issues have global reach, requiring effective cooperation from key leading countries to secure their goals. This is a huge political challenge and at the very least will take a prolonged period to achieve. We expect improvements in incentives to be easier to achieve than limits on leverage. There is a clear difficulty with agreeing on the definition of leverage and preventing the growth of a whole new industry in exploiting loopholes.

What is clear is that the financial system will not escape from the sub-prime crisis without new regulations. But it is the banking sector that appears most likely to be most impacted by those changes.

The extent to which the pension and investment industry have major regulatory change ahead will be influenced strongly by what sorts of crisis lie ahead. Our expectation is for a period of significantly greater regulation.

1 We concede that there could be some drill bit collectors out there. We just don't know any.

2 For the interest of more technically-minded readers, the third moment of a distribution is called 'skew' and measures asymmetry – whether values are pushed towards more positive (or negative) outcomes. The fourth moment is called 'kurtosis' and measures the sharpness of the peak/fatness of the tails – are extreme outcomes 'surprisingly' common. The numbers of the higher moments keep increasing, but the names run out.

3 See *Best-practice investment management: lessons for asset owners from the Oxford-Watson Wyatt project on governance*, Gordon L. Clark and Roger Urwin, September 2007.

4 See, for instance, *Pension revolution: a solution to the pensions crisis* by Keith Ambachtsheer, 2007.

5 See *Flight Plan*, Watson Wyatt, November 2007, for a full explanation of the '123' governance model.

6 Summary of a presentation by Gary Hamel at London Business School's Global Leadership Summit 2007.

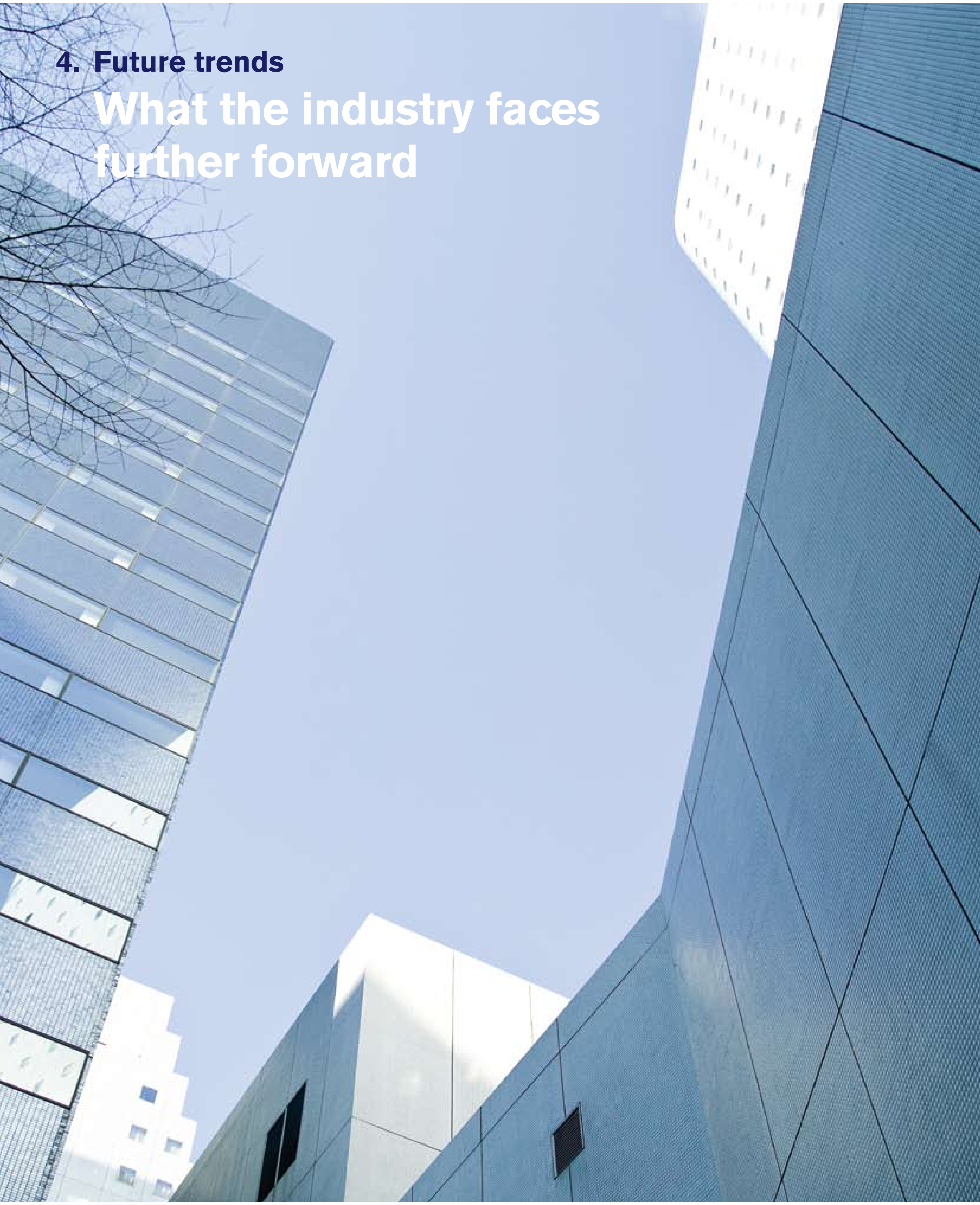
7 *Managing tomorrow's people – the future of work to 2020*, PriceWaterhouseCoopers 2007.

8 Technically, the assumption of 'stationarity' can no longer be made. We cannot assume that future returns will be drawn from the same distribution that past returns were drawn from.

9 Progress is already being made in this area. See, for example, the work of the Finance Development Corporation on the 'omega' function.

10 See *The black swan: the impact of the highly improbable* by Nassim Nicholas Taleb, 2007.

11 See *The sub-prime crisis as a 'predicable surprise': lessons to be learned* by Keith Ambachtsheer, 2008.



4. Future trends
What the industry faces further forward

In section 2 we outlined six forces for change currently at work. That section was focused on the next five years in our timeline.

In section 3 we identified four forces for change which will help to define the longer-term landscape.

This section discusses six future trends which seem likely as part of the longer-term evolution, given our view of the defining moments.

1. A better journey design for investors

We develop an idea of investment being a journey not a destination. DC pensions use the term 'lifecycle' to capture the idea of different phases of strategy leading to an end point. As all investors have a lifecycle of sorts, the current ideal risk exposure needs to adapt to market, wealth and covenant[1] circumstances. The true investment goal is therefore a whole-fund, whole-journey solution. Solution specification will become vastly more sophisticated.

Investing has always been about journeying, in the sense that the environment is evolving, and saving periods tend to precede spending periods. Maybe the length of the journey lulls us into believing that things are static rather than continually moving – DB funds start immature and move through maturity to eventual non-existence. As each stage takes decades, it can be easy to forget that long-range planning makes sense. Even perpetual endowments are not exempt from the necessity to worry about the journey – the investment world often provides periods of famine to follow the feasts, with implications for the management of the endowment's spending and planning. DC pensions are easy to see as a journey – one that is important to complete successfully in a single lifetime. Even retail investments for education or legacies have the same start-and-finish characteristics.

The problem with this framework is that performance measurement for a journey is much more complicated than for a discrete period. If we wait until the end of the journey before assessing the degree of success then it will typically be too late to influence the ultimate outcome. Consequently interim assessments are necessary, such as annual measurement. While this gives plenty of scope to adjust strategies, the downside is that annual scorekeeping can introduce shorter-term thinking and behaviours and deflect attention away from the longer journey[2]. The better governed institutional funds of the future will reconcile the tension between shorter-term scorekeeping and journey planning, but there will be no mechanistic formula to follow.

"You've got to be very careful if you don't know where you're going, because you might not get there."

Yogi Berra

2. Development of DC

We know that the DC pensions model will develop first a lead, and ultimately a dominance, over its rival the DB model. In what direction and at what pace sophistication develops is open to some doubt. We can look to some of the advanced DC countries such as Australia for clues, but even such an enlightened model has no answer as yet for strategy customisation and post-retirement solutions.

Any progress in the DC model must deal with the weak technology it utilises: the physical technology by which members' material circumstances are assembled and assimilated, and the weaker social technology by which the institution and member combine to determine the optimal strategy.

The four fronts of progress in this technology can be summarised as:

- **Stronger platforms:** by 'platforms' we mean the joint administration and investment offering to members that delivers the DC value proposition to members. The evolution of these platforms will need to encompass greater investment leadership and technical excellence, complemented by greater administration efficiency and flexibility. One issue is what type of organisation will run the platforms of the future: plan sponsor, investment firm or profit-for-member mutual.
- **Investment efficiency:** DC investment design currently appears to be the poor relation of DB. That can and should change. In particular, the use of strategies with greater exposure to alternative assets and with better cost structures can make a big difference. We also expect DC schemes to become pioneers in risk protection strategies.
- **Investment glide-path:** glide-path is the design of investment strategy, principally in asset allocation, that turns a member's age and other life circumstances into an optimal investment strategy. This must be made to evolve over the member's life, theoretically from the start of employment to death. Current lifecycle design makes the understandable shortcut of using age as the proxy to all life circumstances; with access to greater personal data and more sophisticated technology, the offering can resemble an automated process of independent investment advice.
- **Engagement:** while the channel in which members obtain professional advice may grow, it cannot be used for the majority of members. It will either be too expensive or too intrusive. Instead we have to build a technology-based engagement model in which the capture of key financial data and life circumstances is both technically streamlined and secure. This is beyond the realms of current technology, but we believe it will become possible and cost-effective at some stage in the future.

We have high hopes that the DC offering in 2020 will be a great value proposition to members and markedly better than today's problematic shape. But we recognise the size and term of this challenge.

"We didn't lose the game; we just ran out of time."

Vince Lombardi

3. New food chain

We anticipate that funds will create a more effective 'food chain' in which expense on various activities has a better value proposition than exists today.

We see the key change as being the introduction of full-time executive investment expertise, which may be out-sourced. This dual layer approach allows the governing board to concentrate its efforts on issues of strategic importance, while the investment executive translates the strategy into actions and oversees the implementation. While we believe this change would introduce significantly enhanced efficiencies we recognise that there are considerable issues to address in terms of implementation. A few of the most immediate questions would be: is the board capable of governing an investment executive? What is the board's incentive structure? To whom is the board accountable?

Our research has shown that the annual costs paid out by pension funds increased by over 50 per cent between 2002 and 2007. This was largely caused by a shift in asset mix towards higher cost areas (alternatives) but also reflects the increase in costs associated with higher turnover, which we attribute to short-termism. Cost increases are not a problem if value goes up faster, but this has not been the case, with many funds paying for alpha that they are not receiving.

Stronger asset owner governance will bring an end to this cost spiral, with funds holding managers to account in a more disciplined form. Funds will have a deeper understanding of agency issues and behavioural biases and will shape their interactions with asset managers and intermediaries accordingly. At a practical level, funds will renegotiate fees, seeking to improve alignments through a higher performance fee element and better fee design. In addition, we see downward pressure on costs coming from 'beta creep' – a process where investment insight (alpha) becomes embedded in relatively passive portfolios. Funds will be able to capture some alpha more cheaply through their semi-passive beta exposures. This leads us to consider how investment content would evolve under these circumstances.

A potential implication of better governed institutional funds would be a clear recognition of the advantages of economies of scale. A well-governed small fund ought to make it a strategic priority to achieve scale in order to secure greater efficiencies.

Economies of scale clearly apply to administration and other functions, but in our context we are primarily interested in the investment executive. Scale could be achieved in a number of ways:

- Consolidation of DB pension funds within buyout vehicles.
- The emergence of mutual, not-for-profit investment functions where the resource is shared across a number of member funds – for example, industry schemes or other collaborative groups.

There is another route for this food chain change to go. This is primarily based on a view that the preparedness of some asset owners to delegate more is increasing because of a variety of factors:

- The quality time available in their organisation for investment management activity is limited.
- The accurate specification of the fund's mission and goals is getting more complex.
- The organisation's comparative advantage in investment management is unlikely to be large.
- When all costs are added together in the food chain, it is recognised that the old arrangements reflect an extremely expensive programme.

While solutions can come in different forms, we believe that a full, partnered, outsourced solution will include:

- Access to investment and operational excellence.
- Working within cost limits to compound returns at a higher rate (some re-drawing of the food chain would be helpful here).
- Understanding the fund's unique context and helping to define what constitutes 'success'.

We would suggest that the latter point in particular will increasingly become a competitive edge for solutions providers.

Irrespective of the route chosen, we believe the future investment landscape will be characterised by fewer, larger institutional investors or more outsourcing.

4. New investment content

Part of the shift in the food chain will be supported by the emergence of new investment content offering higher efficiency. While 'revolutionary' may be an over-used word the step change in investment content may justify it.

The term 'portable alpha' has been in common use for some time. What the future will offer is close to a seamless integration of alpha and beta. Portfolios will be able to have the precise combination of each that investors desire. The coming of age of exotic betas will dramatically increase the options available to investors to secure cheap (and hopefully enhanced) market returns. The further encroaching of mark-to-market accounting will be another driver towards cash-plus and a new framing for absolute return mandates. Benchmarks are likely to see new life as their role as the neutral portfolio for a relative return mandate comes to an end. On top of this, there will be continued uptake of existing derivatives and the invention of new ones to help put to use various option-based strategies.

Long-term absolute return mandates

For many funds, investment mandates are increasingly framed in absolute return space. Thus, performance benchmarks are expressed as inflation plus or cash yield plus, rather than relative to a market capitalisation weighted index. We believe that absolute return defines the framing for performance targets but not necessarily the investment approach. In particular, we see growth in Long-Term Absolute Return (LTAR) mandates over the next few years.

Increasingly, we sense a barbell appearing in what defines success in active management. On one side we see managers who are able to employ skill (and plenty of technology) to exploit short-term mispricing opportunities in markets. This is a subset of the existing hedge fund universe who we might describe as Short-Term Absolute Return managers. These mispricing opportunities might occur across many asset classes and be identified through a number of methodologies, giving plenty of diversity amongst managers.

Short-termism was one of the top two fears expressed through the survey. In thinking of investment products and managers, LTAR mandates offer one antidote. The performance target looks much like that of a short-term absolute return fund (CPI+ or cash+), but the underlying investment process relies more on buying and holding sustainable value-creating investments through the application of research and disciplined corporate governance.

Managers who aspire to be successful in LTAR mandates need a clear investment philosophy allied to a strong commitment to research. They will also need talent retention structures closely aligned with the longer-term horizon implied by these mandates. This will be a struggle for the investment management industry to implement, but success could go a long way towards alleviating some of the structural concerns with the investment industry.

Current mandate trends are already established:

- increased use of short selling (for example, 130/30)
- more exotic securities including derivatives and synthetic securities
- use of leverage becoming increasingly common, in some areas overly so
- incorporating new beta sources.

The subsequent phase of transition in mandates will be the growth of solutions and outcome-specified mandates, which we divide between part-fund and whole-fund solutions. Part-fund solutions are essentially just more sophisticated products meeting relevant absolute return targets:

- multi-strategy hedge funds
- multi-asset portfolios
- diversified growth funds
- downside protection funds
- LDI funds
- target date funds/lifecycle products.

Success with whole-fund, whole-journey solution involves the deployment of:

- effective LDI (liability hedging)
- reliable alpha
- cheap + dynamic + efficient beta[3].

The LDI step may appear part of the complicated opportunity set, but in many respects it is a simplifying step. Theoretically at least, an investor can use the technology of swaps to match the future cash flows needed[4]. For a DB pension fund, the future cash flows it needs are the monthly pensions being paid to retired members. For an individual in DC it could be the best guess of when cash will be needed. The investor's task is therefore simplified to generating a return on the assets that is at least equal to the market rate of interest.

For a DB pension fund this simplifies the objective to generating a return equal to LIBOR. As many DB pension funds are underfunded and/or the sponsor is keen to minimise the future contributions it must pay into the fund, the return target for the assets is more likely to be higher, for example LIBOR plus 2 per cent per annum.

This also introduces a new paradigm for beta in which 'good' and 'bad' beta risk are a new component of the best practice model. It incorporates the notion of beta creep, but also implies that beta exposures must be actively managed through time. Asset owners may pursue these solutions themselves, and those that build sufficient governance resources are likely to do so, but they will also have opportunities to delegate to solution providers – either to investment managers with aggregation skills, or to intermediaries with solution skills.

While we believe in the re-engineering of investment portfolios as described above, it is useful to step back and remind ourselves of one inescapable reality. The warehouse from which we can build our portfolio has not changed its contents, with the exception of the derivatives section. In other words, when building a cash-plus portfolio we select from the same equities, bonds and real estate that were used to build relative return portfolios. At the aggregate level, therefore, we are talking more about a shift in measurement, incentives and costs rather than any dramatic shift in portfolio composition.

Winning product strategies[5]

Casey Quirk and Merrill Lynch undertook their own analysis of how investment managers should face up to the future. They identified several key environmental factors (demographic, macroeconomic, societal, regulatory and a normalised returns environment) as the primary drivers of change to which the industry must adapt. They assert that investors lack the products and tools required to meet their changing needs and therefore investment managers will develop four winning product strategies to address these unmet needs:

1. Eliminate all investment constraints for which there is little economic rationale (liquidity, style adherence, no shorting, no leverage and so on).
2. Packaged solutions combining strategy and execution. Small and mid-size institutional investors will increasingly outsource elements of decision-making to 'outsourced CIO' firms, causing aggressive competition for talent, as well as acquisitions and partnerships. "Consultants will require better investment acumen, and investment managers will require better consultative skills to compete".
3. Outcome-orientated products: strategies targeting investors' ultimate objectives (LDI, capital protection, annuities).
4. Creative funding solutions: 'collateralised pension obligation' and 'home pensionisation'. Skills that might need to be acquired include capital markets, structuring, actuarial and insurance.

They foresee the need for a widening of skill sets within an organisation. For investment managers, three new business models will emerge: (a) sophisticated manufacturers delivering a packaged product, (b) outsourcing platforms delivering customised solutions, and (c) private pension providers delivering outcomes (these do not replace the existing models – distribution specialists, single-platform managers, franchise conglomerates and financial holding companies).

5. Continuing crisis contagion

We expect that the '3-coms' issue of excess competition, complexity and compensation will continue to hover over the industry. Nothing has, as yet, altered to alleviate these pressures, but we anticipate a series of attempts by regulators to address some of the difficulties, with incentive structures most likely to be a target.

Complexity makes effective regulation increasingly difficult. The case for control of leverage may become stronger, but we doubt whether efforts here will be sufficiently coordinated to produce the required effect.

One solution lies within the market-based system. Strengthened governance can discipline market players who are not providing sufficient value propositions. We see this being a positive force, but have doubts about how quickly such disciplines can make a material difference.

Overall, we see the industry continuing to work with systemic flaws, with more financial crises and contagion ahead. How bad these are will condition the government response – we believe there is a significant chance that this will happen on a larger scale than industry participants would like.

6. Organisational change

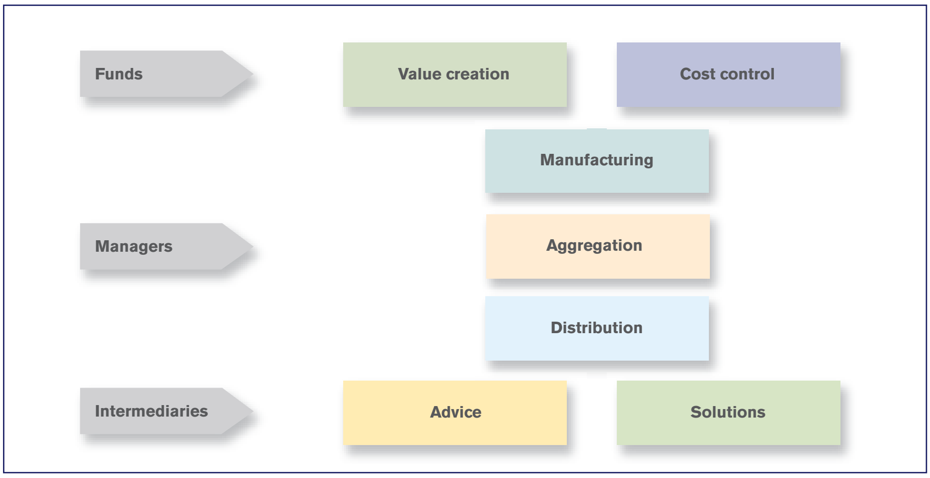
New managers, new intermediaries, new competencies

Our final future trend relates to how the players react and adapt to the forces we have discussed. Rather than attempt to forecast the specifics of how different organisational types will develop, we instead offer some thoughts as to the generic competencies that will be required (see Figure 1). Players can choose whether to concentrate on mastering a single competency, or whether to target a mix. Funds, for example, could choose to concentrate on 'value creation' competencies or 'cost control' competencies. We note that such a focused mission would seem to be common sense, but few funds emphasise the cost control approach.

The key competencies for investment managers are 'manufacturing' (managing portfolios), 'aggregation' (combining manufactured portfolios into products) and 'distribution' (being the interface between products and buyers). We believe there is plenty of scope here to mix competencies in different business models. For an alternative take on the forces affecting the future shape of asset managers, please see **The future of fund management** panel.

For intermediaries, the competencies required will be 'advice' and 'solutions'. Historically there has been a tension between these competencies, as 'solutions' tended to mean 'product' (for example, manager of managers) charged on a different fee basis, with a consequent conflict between the two. More recently, 'solutions' have included more at-risk, and therefore valuable, advice (for example, shortlist of one) and implementation elements that have stopped short of 'product'. We believe that a business model incorporating both competencies will be possible in future, subject to appropriate handling of conflicts of interest.

Figure 1 | Future competencies



The future of fund management[6]

Jefferies Putnam Lovell identify 10 trends that are "irreversibly changing asset management worldwide":

1. The waning influence of retirement-linked products (sovereign wealth funds are an answer, but the main new market for investment managers is wealthy individuals).
2. Globalisation and the rise of Asia (Asia and Australia will be the majority of net new business by 2012; merger of securities exchanges; all institutional investors move to global equity benchmark).
3. Increasing demand for outcome-orientated products (customised solutions; shift from accumulation to yield; local factors will defeat global service model).
4. The growing power of professional buyers and assemblers (distributors will outsource fund management to a wide range of houses of all sizes – completing the transition to a wholesale industry).
5. Recognition of the advantages pure-play fund managers seem to have (rise of boutiques, complex ownership structures, and negotiating greater autonomy from parents).
6. A renewed focus on core competencies (complex products will require an uneasy coalition between fund managers, investment banks and insurance companies).
7. The convergence of traditional and alternative products (future growth to come from products like long-short and concentrated portfolios).
8. Proliferation of cheaper beta products (portable alpha will also reshape beta end; ETFs to continue their rapid growth rates).
9. Mounting pressure on long-only retail fund complexes (growth in outsourcing to subadvisers).
10. Expanded use of performance fees (driven by client demand, but posing business management issues with regard to volatility of earnings).

They foresee the need to hunt harder for new clients, fierce competition and larger financial services firms that woo increasingly risk-intolerant investors with products that offer more certainty, if less alpha. This requires revamped product and corporate development.

1 By 'covenant' we refer to the investor's ability and willingness to make good any investment shortfall. For a corporate DB pension fund it is the strength of the corporate sponsor that matters; for a DC fund it is effectively the individual's own human capital.

2 See Short-termism in *Remapping our investment world,* Watson Wyatt October 2003.

3 A full exposition of effective LDI, reliable alpha and cheap beta can be found in *Flight Plan*, Watson Wyatt, November 2006. The development in this paper is the expansion of the beta term.

4 Practice will differ from theory to the extent that the supply of swaps may not keep up with demand. This is particularly the case for inflation-linked swap payments, where there are a limited number of counterparties willing to contract to pay an inflation-linked sum in future.

5 Summary of *The brave new world: winning product strategies for a changing global market*, Casey Quirk/ Merrill Lynch, September 2007.

6 Summary of *After the belle époque: the future of fund management*, Jefferies Putnam Lovell, December 2007.

5. Opportunities for funds

By understanding how the investment industry may evolve over the coming decade, funds can adapt to take advantage of these changes.

Each of the six future trends identified in section 4 have opportunities for funds to consider.

A better journey design

Successful funds of the future will recognise that their mission is a journey in which ideal risk exposure adapts to market, wealth and sponsor circumstances.

There are three characteristics that define this better journey and its accompanying plan. First, there will be more attention to the clarity of mission. A mission statement sets out what success looks like, and will often comprise a collection of desired future states. There are, at present, major limits to the mission statements being used. Second, there will be greater awareness concerning the factors that support risk-taking: sponsor covenant, relative wealth and investment opportunity. These are all constantly in flux, suggesting that the fund of the future will be a more dynamic institution when it comes to strategy and risk-taking. Third, there is demand for a more sophisticated performance measurement framework which encompasses risk-adjusted results. Typically, funds concentrate heavily on results without sufficient consideration for the inputs. An unbalanced picture is often the result.

The modern way of capturing key data on progress to goals is the management ‘dashboard’. For such complex institutions as pension funds, we are suprised that the dashboards we see are so basic in their data. We advocate a wholesale upgrading of the dashboard for investment committees to be primed on all aspects of the journey through risk and return, such that fiduciaries have strong insights on the fund’s circumstances and are well positioned by this information to take the actions necessary.

Better DC

Despite the growth of DC pension plans worldwide, there is widespread unease that the DC model is not working well. DC members struggle with either the aptitude or the appetite to work on their DC investments and sponsors are generally reluctant to devote sufficient effort to building a stronger framework.

Sponsors and providers can play a significant role in developing the mechanisms to improve the DC model. In particular, the use of technology could support integrated financial planning, more efficient investment vehicles and better engagement. Funds could aim to position themselves as a leading edge provider of such services or work with other participants to develop them.

Investment costs

As fund governance improves, we believe that there will be a greater awareness of the fees and costs being paid relative to the underlying value proposition. Funds will also be more aware of the misalignment of interests within current fee structures. The fund of the future will assume more influence over costs through negotiation and will seek a clearer value proposition from investment managers. Funds will make greater use of cheaper beta-based strategies and paying performance fees for true skill.

Investment content

There is general recognition that investment content is changing rapidly, with new tools and products making the opportunity set for funds more complex. This wider range of investment opportunities will bring fresh challenges to funds, which will need to ensure their governance structure is sufficient to meet these challenges or take the alternative route of keeping arrangements simple and costs low. We like the advice of Yoda (*Star Wars*) who said "Either do or do not – there is no 'try'". The key choice for funds is between raising their governance or simplifying their strategy.

Crisis preparation

There is an opportunity for funds to develop better risk management disciplines. These include a better governance and belief structure. Risk budgeting provides quantitative analysis, but qualitative risk reviews will also be desirable for the funds of the future. One of the ways that this reframing of risk can be expressed is through a risk dashboard. Funds currently lack good information on risk. A risk dashboard will not be a formulaic process, remembering that risk is not a single number, nor normally distributed, nor a repeat of history. A risk dashboard must integrate the different components of risk (hard and soft) and different time horizons. We regard the successful creation and use of a risk dashboard as one of the most critical steps for funds to take.

Organisational change and long-term investing

The pressure to perform has been steadily increasing in all parts of the financial system and shows little sign of easing at present. Funds and their providers will have to work on a fresh set of principles on how to thrive in these new conditions.

Short-termism is a major hurdle for funds to overcome, both in the way their investments are managed and how their agents are incentivised. Funds should look to adopt longer-term strategies. This will require better ways of operating – mission statements, belief structures and benchmarking as well as better mandates for managers in long-term absolute return, smarter beta and private markets.

6. Bringing the strands together

We have suggested that the investment world can only really be understood and analysed by using a complexity model. Unfortunately, complexity with many moving parts means there is considerable uncertainty about the future landscape. We therefore offer our subjective probabilities on the outcomes we have discussed in this publication (see Figure 1). In essence, we see product proliferation, organisational and governance change and a wholesale shift of pensions to the DC model as close-to-certain. The talent bubble and the development of new content/higher moments investing seem almost as likely. Looking further into the future, we would consider DC re-engineering and a new food chain as the least likely of the six trends we have discussed.

Figure 1 | Macro-trend probabilities

Near-term factors	Probability	Long-term factors	Probability
1. Talent bubble	75%	Better journey design	75%
2. Governance change	95%	New DC model	50%
3. Product proliferation	>95%	New food chain	50%
4. Extra-financial factors	75%	New investment content	75%
5. Organisational change	>95%	Organisational change	75%
6. Pension design	95%	Financial crisis contagion	75%

Source: Watson Wyatt

Besides these changes, which we believe are most likely to happen, we note that there are other possible forces to watch which, while less likely, need to be considered.

Possible forces to watch out for are:

- A backlash to excessive payments in the investment industry.
- A decline in prospects for mega-firms and a reduction in the importance of asset gathering.
- Better processing of information by markets leading to better predictions.
- Better understanding of human behaviours in an investment context and cognitive failures in particular.
- Growth in profit-for-member models in delivering better DC propositions.

At some stage in the future, we believe we will see the end of:

1. The current governance model (characterised by over-involved boards which are often under-competent).
2. The current DC model.
3. The cost spiral (increases in the expenses of the food chain will reverse).
4. Relative return investing (where alpha was captive to beta).

While this is a list of ‘funerals’, we also have one ‘marriage’: the union of the distinct investment building blocks – alpha and beta – with separate going rates for each.

This is change on a grand scale – a world in which the change that we have seen before was just a pale imitation of what we will experience.

But this is, more than anything else, a world of opportunity for those fit enough to change successfully; where fitness is increasingly defined by ability to be adaptable and apply new thinking and new theory.

We are heading from the comfortable and relatively simple world of linear, sequential decisions to a world of integrated, multi-strand and non-linear decisions.

We believe the investment landscape is getting tougher and there are a number of critical moments facing us ahead.

Appendix

Complexity model

How do you think about the future?

At the risk of over-generalising, change is driven by the interplay of various macro forces and new thinking. If either the forces or the thinking change, then behaviours will change. For example, new knowledge suggests new pay-offs from different actions and behaviours change as a result. The changed behaviours lead to a shift in marketplace dynamics, which in turn create a new set of pay-offs from actions and, in time, new knowledge. What is striking about the investment industry at present is the increase in the pace of change. We see the speed of knowledge transfer being the primary driver behind this acceleration.

It is a complex world

Before introducing the complexity model in more detail, it is useful to introduce some contrast by considering current thinking. To the extent that the investment industry has a theoretical foundation, the equilibrium-heavy concepts of traditional economics and finance are it. In this traditional framework 'agents' or 'players' (people and organisations) are assumed to be 'rational' and know all there is to know. Macro-level results follow in a deterministic manner – we know how the parts behave and so we can predict how the system behaves. In this framework markets produce an optimised mix of price and quantity, hence the supposed difficulty with outperforming the market. A strapline for this system could be **'incredibly smart people in unbelievably simple situations'**.

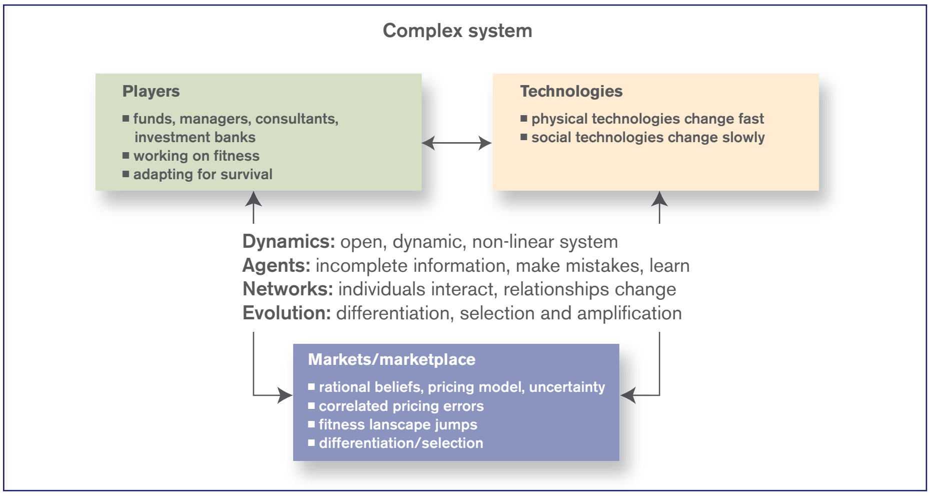
The inadequacy of the foundation is obvious when we consider the extent to which active management is employed (the theory predicts the dominance of passive management) and the overwhelming evidence that people do not behave in the rational manner expected.

This contrasts significantly with the new thinking based on the field of complexity economics. Here, agents know much less. Their interactions produce complex behaviours which are non-linear and cannot be explained by summing the parts. Because the system now exhibits non-linear behaviour, the idea of markets finding an equilibrium goes away. Instead markets act as 'search engines' looking for the next profitable opportunity. Anticipating what the market will decide is the next new opportunity, or what is 'so yesterday', becomes a potential source of outperformance. We can characterise such a system as **'believably simple people in incredibly complex situations'**.

We see this as a better description of the investment world and we find its application more valuable (see Figure 1).

One other aspect of a good framework is that it needs to deal holistically with the consequences of systems that mix highly measurable or 'hard' components (market prices, organisation's revenues, and so on) with components that are highly inexact or 'soft' (governance, risk, and so on). The issue in investment is that this is inevitable but introduces cognitive errors to players' actions; in its most common form individuals prefer working with the hard inputs and reaching sharp conclusions, but rarely pay sufficient attention to the soft elements.

Figure 1 | Modelling the investment industry as a complex adaptive system



From ants to investment behemoths

To illustrate the concept we are using we can dip into the insect and corporate worlds for analogies[1]. Ants are simple creatures and yet, with no central or master plan, they are able to interact with each other to build nests, forage for food and defend against attacks. The ant colony displays complex, co-ordinated behaviour that could not be guessed at by simply understanding the capabilities of a single ant. We think this is a fitting analogy for the aggregate behaviour of financial markets comprised of the interactions of thousands of small (relative to the market) investors.

An example derived more directly from the investment world considers the size of investment firms. We have seen the growth of the 'mega-firm' when seen in terms of assets under management. There appears, however, to be a slowing of this trend. The complexity economics interpretation of this would go roughly as follows:

- as you grow an investment firm, you grow its possibilities for innovation and value creation into wider strategies and roles
- you grow the odds of attractive pay-offs from a diverse range of possibly successful ideas, recognising there are no certainties
- you also multiply the connections the firm must have (its network) to function well and increase the problems of unintended damage
- marketplace change (appetite for new product) is increasing both the density of these networks and the speed with which decisions need to be implemented
- there is a size 'sweet spot' for the firm's success and a different sweet spot for their clients' success.

Complexity example in the investment industry

If this model is a good one, it should be able to explain the past as well as assist with predicting the future. The trouble is we have been brought up with a linear view of history, whereas the model we have described has been specifically designed to include non-linearities. However, as a rough sketch, we can see that the shift in players from large balanced (multi-asset) managers to specialist managers (whether small boutique or large multi-specialist) was assisted by the technologies of asset liability models, market capitalisation weighted indices and passive investing. It could be argued that the demise of balanced management reflected a decisive shift by the invisible hand and the fitness landscape. Further advances in technology included short-selling and leverage[2], which changed the mix of players as hedge funds now entered the institutional arena. This in turn caused established asset managers to experiment with their organisational design in order to compete. The marketplace set a new, higher price for these products, ensuring intense competition for resources.

While this is occurring, the traditional boundaries between organisations become increasingly blurred – so private equity firms start to run hedge funds and vice versa; traditional long-only managers set up hedge funds and provide advice, while some consultants drift towards asset management.

Complexity examples in technology

The regulatory background (social technology) also shifted. In some countries, this encouraged a greater focus on asset allocation and a move towards the new players. In others, there was a debate over the regulation of hedge funds (prompting the self-publication of a best practice code). The role and tax treatment of private equity funds has also been under the microscope, further changing the playing field.

More recently we have seen some signs of pension funds addressing their governance (a social technology). We believe that, although likely to be slow-moving, this change could have far-reaching effects. However, we suggest that it is the dramatic increase in the speed of knowledge transfer that is having the most profound effect at the current time. New insights and theories are quickly adopted, leading to new products, which are replicated but which also throw up new insights.

In Figure 3 we refer to Gary Hamel's estimate that the speed of evolution in intellectual capital is down to days and weeks.

Some conclusions

Models need to be tested and we concede that complexity models have not been around long enough to have established a track record. That said, we see two compelling reasons to take this innovation seriously:

- Greater connectivity (globalisation) and technology advancement (knowledge transfer and networks) make complexity inevitable.
- There are traps in our conventional linear thought processes. Unpredictability and jumps are highly likely in practice, but not allowed for in such thinking.

Figure 2 | Complexity terminology

Emergence	The display of characteristics or properties of a complex adaptive system that arise endogenously from the interactions within the system. For example, a symphony is a pattern of sound created by the interaction of many instruments
Evolution	A creative process combining differentiation (experimentation), selection (reward) and amplification (repetition of what works)
Fitness landscape	A representation of what combinations of factors increase 'fitness' that is rewards, and therefore what is likely to be selected and amplified
Invisible hand	An unseen arbiter of what constitutes fitness. For example, male birds often have exotic plumage as the invisible hand has 'decided' that is how to be selected
Physical technology	Anything that increases the efficiency of turning inputs into valuable outputs. Can be usefully simplified to 'knowledge' (how to do something). Tends to change fast
Players	A generic term for the components of a complex system that will interact for example, 'economic agents' or 'prey' and 'predators' in an ecosystem
Social technology	The rules humans create to govern their interaction – can be written (law of the land, employment contracts and so on) or unwritten (embedded in culture – national, corporate, family). Tends to change very slowly

Figure 3 | Evolutionary clock speed

Geological	13 billion years
Biological	4 billion years
Social	20 years
Technological	18-24 months
Intellectual	days and weeks

1 The illustrations are drawn from *The Origin of Wealth* by Eric Beinhocker, Harvard Business School Press 2006.

2 This is from an institutional perspective – both had been around for a long time before they became widely adopted as part of an institution's feasible technology set.

Watson Wyatt Limited Investment Consulting Thinking Ahead

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