Thought-leadership Forum

talkingtreasury

Amsterdam

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Conference co-organised with

DACT

TREASURY, RISK AND FINANCE PROFESSIONALS

ACT

An update on:

- Defining best practice in risk
- Governance and accountability
- Pension management

www.treasurers.org

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Contents

Frits Hensel

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Introduction

The second *talkingtreasury* discussion day, organised solely for treasury professionals working in corporates, was held in Amsterdam in January 2007 and proved just as popular as the initial gathering in Prague, in 2006. Using the resources of the national treasury associations of the United Kingdom and the Netherlands, treasurers from 13 countries were able to gather to reflect on the key issues of the moment.

From the outset the format of *talkingtreasury* has been designed as much more than a passive conference but rather a thought leadership forum. During the day we held three main sessions each devoted to different topics. The initial briefings and scene setting were provided by the invited panellists and this naturally led into questions and answers involving the audience as well. The format meant there was ample opportunity to hear what other corporates were doing and for treasurers to draw on the experience and knowledge of their peers. We firmly believe that this chance to compare notes across companies and across countries is the unique strength of *talkingtreasury*.

The wider view of risk across the whole of an organisation was clearly taking hold in the majority of businesses with the treasurer very much involved in that process. Pension risk, the subject for one of the sessions, was found to have come well up the agenda with treasurers taking a leading role. Meshing well with risk and pensions was the subject of treasury governance and accountability which we heard could come in a variety of forms reflecting the history and culture of the organisation.

In the spirit of fostering an exchange of views on these topics we are publishing this report to form a record of the debates and to help all readers develop their thinking, with additional cross references to further information.

We are grateful to JPMorgan for the sponsorship of, and participation in, the day and are already looking forward to holding the next *talkingtreasury* event in Düsseldorf on Tuesday 3 July.

Richard Raeburn
Chief Executive
The Association of Corporate Treasurers

Albert Hollema
Chairman
The Dutch Association of Corporate Treasurers

Pierre Poncet
Chairman
The European Associations of Corporate Treasurers

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EUROPEAN ASSOCIATIONS OF CORPORATE TREASURERS

Defining best practice in treasury: managing treasury and wider business risks

Chairman
Frits Hensel, Former Senior Vice President Finance of AKZO Nobel

Panelists
Kevan Greene, Head of International Funding and Bank Relations, Unilever
Zdenek Radil, Chief International Audit and Risk Management Officer, Telefonica O2 Czech Republic
Graham Wood, Senior Vice President, Head of Capital Markets, E.ON

Reported by: Martin O'Donovan, Assistant Director, Policy & Technical, ACT

Risk management, in one sense or another, seems to be talked about everywhere you care to look these days and treasury departments are no exception. The difference is that risk management is not a new concept in treasuries although even here the approach is evolving. The current buzz words are 'Enterprise Risk Management' (ERM) or an 'holistic approach' with perhaps a more rigorous analytical assessment. Certainly the gathering at *talkingtreasury* in Amsterdam saw risk management as a core topic for treasurers and their companies.

Attitudes to risk

Starting from the big picture a company may want to set its attitude to risk to meet its own shareholders attitude to risk, but it is notoriously difficult to get a concerted view or even any view from the shareholders of publicly listed companies. Shareholders invest in a given business in order to benefit from the risks and rewards that come with that business, although some feel that shareholders have a tendency to be less tolerant of the risks while still wanting the upside. Nonetheless there are risks that are not intrinsic to the core business which could be minimised, and currencies are a key risk here. The geography or currency base of investors could be used to direct the nature and extent of currency hedging undertaken.

The counter view from Graham Wood of E.ON was that geography was less critical for shareholder expectations. Shareholder type was more likely to influence risk attitudes, so that hedge funds would be more interested in short-term capital gains while the traditional long-only investor might be there for the longer term and be prepared to tolerate short-term volatility, but then again some hedge funds actually like short-term volatility. The conclusion seemed to be that there was work to be done with one's investor relations section. Ultimately the company must decide on its risk policies and make these very clear to investors via its annual reporting, so that investors can in turn make their own judgements and react accordingly.

Frits Hensel had experience of the ultimate solution for reconciling divergent shareholder attitudes and aspirations. In the case of AKZO Nobel the solution was to split the company into two, with each business having its own very different characteristics. The 'Value investors' will prefer the Chemicals and Coatings activities which remain in AKZO Nobel while the 'Growth investors' will prefer the Health Care operations.

So while the shareholders' attitude should drive the company's attitude to risk, the conference heard that, rightly or wrongly, other considerations could intervene. Risks to the continuity of the company were paramount, but if management bonuses are driven by certain target ratios then minimising risk to those may become a target in itself. What competitors are doing may influence a company to align its stance to the competition, and there is always the vexed problem of setting objectives by reference to accounting risk or some assessment of real risk.

ERM

At Unilever an holistic view of risk is high on the agenda, taking in reputation risk, marketing risk and the like. Risk is an integral part of the business planning process co-ordinated by the Controllers department. A dual top down/bottom up process is undertaken each year to identify risks, impacts, safeguards, responsibility and mitigation. A quick show of hands from the treasurers assembled from 67 companies in 13 countries indicated that, for some 40%, the wider approach to risk was taken with processes built around this view.

At Telefonica O2 Czech Republic an ERM process had been implemented with Audit & Risk in the driving seat, but with treasury contributing. The treasury FX risks were measured at the 95% confidence level, using a one-month Value at Risk (VaR) calculation, and for interest rates the risk was quantified as that arising from a 100bp movement in rates. These treasury-related risks were not major compared to

Kevan Greene and Frits Hensel

the key business risk which arose from regulation in the telecoms sector.

Likewise at E.ON some of the biggest risks lay outside treasury control within the core business – in areas of energy, gas and carbon. All these came together at a risk committee at a very senior level. Treasury risks were evaluated with a Profit at Risk measure. For both commodity risks and other risks, split into structural, physical, legal and brand, a traffic light system was in use largely based on a value judgement

Pensions have in recent years been recognised as creating a very material risk. As interest rates go down the discounted value of the liabilities gets larger and many funds offset this in part by investing in bonds. But how many treasurers integrate these risks with the management of their group debt portfolio? Many will still be managing their group interest expense separately by borrowing at fixed rates. On such a borrowing portfolio if rates go down the company loses out (an opportunity cost or mark to market loss), which in fact compounds with the position in the pension fund. Additionally, the company's main business will have an interest rate dependency or relationship with inflation. Is this factored into the equation?

Treasurer's role

Risks affect all areas of a company's business and therefore do not naturally fall neatly into the responsibility of one department. There are risks in the main operational areas, e.g. purchasing, manufacturing, selling and in political environment and reputation. There are personnel issues and insurable risks like fire and theft. There are financial risks. Given that treasurers are familiar with risk management for certain financial risks one might expect that they were in a good position to assume responsibility for organising the groupwide analysis of risk and its management. This was certainly the argument in a report by Mercer Oliver Wyman which followed an ACT/ Mercer Oliver Wyman survey of ERM practices across Europe (see below). The results found that ERM was an accepted concept and that treasurers were involved but generally not the lead managers for this initiative. At *talkingtreasury* in Amsterdam, the impression was that Risk Committees were a common feature in the governance structures for most companies and often the treasurer would be a member of that group. Kevan Greene warned, "It would be a big mistake for treasurers to think that risk was their sole preserve."

Quantifying risk

The consensus nowadays seems to be that an intelligent approach to risk management must involve looking right across the group to identify all the important risks. If this is to be done properly then there must be some methodology for comparing the severity of possible risks and their probability of occurrence between very different types of risk.

There are a range of degrees of sophistication for measuring risk and the conference heard that many variations are in use, often with companies using several different techniques in tandem. One approach is to do a complete risk register across the group, using a qualitative approach to categorise risks as low/medium/high risk and low/medium/ high impact based on guessing and estimating.

VaR: Value at risk

VaR attempts to measure the magnitude of a risk at a certain probability level, the 95% level meaning that the VaR would only be exceeded once in every 20 periods. It is clearly useful to a financial trader who has a portfolio that can be readily valued and where positions can be altered easily and where volatilities can be calculated from past history. VaR is normally applied in a financial firm managing a stock of assets but less so for a corporate treasurer managing a flow of funds.[1]

There is always a danger that VaR gives a false sense of accuracy. For example VAR tends not to cater for the extreme movements in parameters, which are deemed as very unlikely. Experience tells us that the theoretically remote occurrences in fact happen more often than predicted. The hedge fund Amaranth was destroyed in 2006 by extreme movements in natural gas futures that had not been allowed for. Despite sophisticated modelling Long Term Capital Management had to be bailed out in 1998. The LTCM collapse was caused by increasing correlation between positions that removed the diversification of risk. The problem is that VaR measures the risk based on the past patterns – it does not measure the risk that the model itself is wrong. Maybe as treasurers we should abandon the management of movements which are close to the mean and which by and large will over time offset one another and instead make it a priority to manage the disaster scenario?

A full VaR analysis can be complicated and may in fact give a spurious appearance of accuracy. A simpler technique is to model a couple of best-case and worst-case sensitivities or just a sensitivity to a set movement in interest rates, FX rates, sales volumes or whatever other factor is relevant. In this latter case it makes no assumption about what movements in parameters are likely but does, in a very simple way, give a feel for what variations in outcomes might arise.

The fact that any accounting number can be vulnerable to changes in business and market conditions is something that the International Accounting Standards Board (IASB) has recognised. This lies behind much of their current thinking that, for users of accounts, knowing the sensitivity of accounting results is critically important in interpreting a set of single point-in-time numbers. Giving specific sensitivity numbers is now a requirement of IFRS 7: Financial Instruments Disclosures and we can expect this to be the start of a trend.

1 "Firms managing risks may be either *value risk managers* or *cash flow risk managers*. A value risk manager is concerned with the firm's total value at a particular point in time. This concern may arise from a desire to avoid bankruptcy, mitigate problems associated with informational asymmetries, or reduce expected tax liabilities. A cash flow risk manager, by contrast, uses risk management to reduce cash flow volatility and thereby increase debt capacity. Value risk managers thus typically manage the risks of a stock of assets, whereas cash flow managers manage the risks of a *flow of funds*. A risk measure that is appropriate for one type of firm may not be appropriate for others."

From *Value at Risk, Uses and Abuses*, by Christopher L. Culp, Merton H. Miller and Andrea M. P. Neves, as reprinted in Janette Rutterford, Martin Upton and Devendra Kodwani (Eds) *Financial Strategy*, 2nd edn (2006).

At E.ON a full Asset and Liability Modelling (ALM) study had been carried out, building all the variables into the business plan and then, with the help of a US investment bank, performing a Monte Carlo simulation of all possible outcomes to find the group's sensitivity to the various factors and their impact on key performance indicators. The conclusions were sufficiently unexpected to mean that the risk management guidelines needed relaunching. The conclusion that Pension Risk was huge was therefore unsurprising.

For Unilever the metric that they wished to control was financial flexibility – meaning the group's ability to fund and take on board a large acquisition or share buyback. This could be measured, for example, by the ratio of Retained Cash Flow to Adjusted Net Debt. Primarily this was looked at on a one-year VaR basis and to a lesser extent on a three-year VaR. This was supplemented with scenario stress testing to cover extremes.

The correlation effects between risks should not be forgotten. For example one Treasurer made the point that their pension risk was dependent on interest rates (the liabilities shrink with higher interest rates) but that this pension risk provided a good offsetting effect to hedge the risk of rising interest rates on his group's floating rate borrowings. Obviously this was a simplistic view and in reality there were complications since the pension fund was still a separate legal entity, there were tax asymmetries and ultimately, for a hedge to work, one must look to the cash flows balancing rather than the accounting matching. AKZO had been able to acquire Nobel Industries partly because of problems they had had with deals done by the parent to hedge the currency risk on overseas assets. When the Swedish Krone weakened, AKZO Nobel suffered cash losses in the holding company but could not realise the gains in subsidiaries assets.

Managing risk

The ERM processes and the measurement of risk will usually lead on to decisions on risk management and hedging. At Unilever the treasury is not responsible for all risk hedging but has, three years ago, taken over the pensions risk management and monitoring that previously was in HR. Likewise at E.ON the risks to earnings are left to the business managers to manage, even FX and commodity risks. However balance sheet risks – namely FX effects on the balance sheet – pensions and credit fall to treasury as does interest rate risk.

From the lively discussions from the floor of the conference it was clearly apparent that hedging practices were widely divergent although FX risk was usually hedged to various extents. Richemont, whose business is in luxury goods, had identified that their sales did correlate to fears or uncertainties in world events and in particular to falls in the equity markets, but had taken the decision not to hedge this relationship.

Hedging of foreign currency sales seemed typically to be done for six months' worth of sales to provide a short-term protection, even though many treasurers were conscious that there were longer-term ongoing exposures. Philips aimed to hedge sufficiently far forward to buy time to re-adjust the business flows, in the sense of finding new ways to adjust the sourcing of materials and alter the actual business sensitivities. Ultimately treasurers should be trying to identify good economic hedges and making them work for the business.

In a survey of FX corporate risk management practices by Citibank, they found that FX hedge tenors were surprisingly short term and another academic study found that companies were hedging less than 10% of the amount that they should be doing if they were to stabilise long-term value. This is sometimes explained as using hedge contracts sufficient to buy time if there is a major adverse movement in rates in order to be able fundamentally to alter the business structure to the extent of relocating factories and changing product or market strategy.

Risk in all its many guises is definitely the flavour of the moment and quite properly is getting the attention it deserves at treasurer level and in the boardrooms of companies. It features high in the reporting requirements of the IASB and the moves within Europe towards better narrative reporting of risk. Having heard how important risk management is to shareholders, including that their risk attitudes are not all identical, the treasurer seems to be left to decide on a prudent and appropriate course of action and make absolutely sure that the policy adopted is clearly explained in the company's annual report.

ACT/Mercer Oliver Wyman study
The role of the treasurer in enterprise risk management (2006)
http://www.treasurers.org/technical/enterpriserisk.cfm

Designing hedging polices using asset and liability management techniques
http://www.treasurers.org/thetreasurer/resources/2005/03/mar05tthennebry30-33.pdf

Treasury governance and accountability

Chairman
Frits Hensel, Former Senior Vice President Finance of AKZO Nobel

Panelists
John McAnulty, Treasurer, Richemont SA
Kimberley Ross, SVP, Chief Treasury & Tax Officer, Ahold
Gabriel van de Luitgaarden, SVP, Corporate Treasury Control, Philips

Reported by: Peter Matza, Policy & Technical Officer, ACT

Until the late 1990's, corporate governance in treasury had been considered to be something of an 'ugly sister' in the treasury world. It existed, we had to listen to it, even respect it, but it wouldn't get taken to the ball. Treasurers did pay attention to operational matters, from separating front and back offices to making sure electronic payments were secured via PINs and so on. However governance as management rather than process rarely made the headlines. It was more often considered an extension of those inward-focused operational tasks rather than an essential element of risk management. Even occasional 'dealing' scandals with disastrous outcomes – such as Allied-Lyons, Metallgeselschaft or (stretching the point) Barings Bank – rarely stirred the treasury governance world. However all that has changed and today, rather than too little attention, we have a much greater focus on the structure, governance and management of treasury and treasury risks.

The initial difficulty with taking a strategic view is to decide exactly what the subject entails. A traditional or 'core' reading of the piece might exclude critical areas of modern risk and financial management which frequently fall to treasurers, such as physical insurances, purchase creditor management or investor relations. An holistic approach such as enterprise risk management may be a solution, but is there a risk of too much form and not enough substance?

Corporates need to address themselves to some elemental questions about treasury which, in turn, will reflect the DNA of the company and its approach to business and risk.

- What constitutes the essence of treasury?
- Who is the treasurer?
- What or who defines their area of expertise and areas of responsibility?

The answers to these questions may provide clues as to what is at stake in terms of detail but we then have to decide to whom treasurers are responsible. There may be cultural differences involved in this evaluation perhaps, between what is often known as the Anglo-American value approach and the northern European consensus based view of commercial activity. Is this strictly a shareholder value exercise or are other stakeholder groups integral to the process? Once that question is decided, reporting, standard-setting and performance measurement become significant elements in a treasurer's life.

Organisations of course are as different as chalk and cheese and the structure that suits any given organisation may only be locally appropriate. This makes it difficult to conceive of any 'best' or 'better' practice in many aspects of governance or management.

talkingtreasury offered the opportunity for three different organisations to recount their approach and experiences and generate some lively debate.

The corporate perspective

The Treasurer of the Swiss luxury goods company, Richemont SA, John McAnulty, provided a view of their treasury and financial management processes, which are built on pragmatic principles. They derive from the particular operational exposure of a discretionary-spend business with multiple brands and a conservative financial policy which at least partially reflects their Swiss heritage and closely held ownership. They are highlighted in the panel below. Critical to this treasury vision is a clear statement of responsibilities which can often be forgotten in the hurly-burly of the day job.

Figure 1 *To optimise the finance supply chain*

■ Having the right amount of cash	CASH MANAGEMENT
■ In the right currency	FX MANAGEMENT
■ In the right place and at the right time	SYSTEM OPTIMISATION
■ At the right price	SUPPLIER LEVERAGE
■ With minimum risk	RISK MANAGEMENT

Source: Richemont

The involvement of external 'stakeholders' – equity analysts, internal and external auditors, the Board et al. – and the interplay of treasury responsibility with a external audience was a recurrent theme of the overall discussions and particularly drew much comment – not all complimentary – on the capability of external auditors. The

relationship with Richemont's equity analysts was shown to have a direct impact on the currency hedging process, given their focus on the currency mix on the Group's gross margins.

The clarity in the treasury mission should also be reflected in the information flows and reporting processes that are put in place. It may be easy enough to say but there is no reason why any treasury information flow should be constrained – although there is an argument (elitist perhaps?) that care needs to be taken that technical review does not overshadow commercial value.

Whilst Richemont might be said to represent a more classical treasury operation – albeit for a discrete group of businesses – a somewhat different perspective on treasury events was provided by Kimberley Ross, SVP, Chief Treasury & Tax Officer, Ahold.

Catalyst for change

The catalyst for treasury change can often be a traumatic corporate event such as a financial threat to the existence of the corporate itself. The changes can involve not only operational processes but also, more significantly, cultural changes in attitude towards risk management in its fullest sense. Treasurers are frequently found at the centre of the rebuilding that follows these events, not solely because of technical skills or knowledge but at least partly because, relative to their corporate financial colleagues, treasurers have acquired personal relationship skills in interaction with both the inside and outside worlds as part of the 'day-job'. The hours spent representing the organisation to analysts, bankers and other external financial service professionals will certainly be drawn upon during a financial crisis. However the internal contacts generated through interaction with colleagues, both in central functions and in line operations, will also be in demand.

Ahold's financial crisis in 2003 and the need to respond to its external stakeholders – regulators in both the Netherlands and the US, ratings agencies, lenders and investors – have been well documented elsewhere. The company has subsequently recovered its operational stability. Its impact on treasury however has been less explored and the intensity of its re-engineered structures for review and reporting gave cause for serious reflection.

In essence, the restructuring of Ahold's financial controls concentrated on giving more teeth to a structure of review, reporting and individual responsibility. A Finance committee has become the focal point of treasury strategy formulation and debate prior to reporting to the Executive/Supervisory Board. The treasury has taken on the role of an outsourced processing factory. The treasury accounting function reports both to the Treasurer and Chief Accounting Officer (who is based in a different country). Treasury is responsible for the processing and generation of accounting entries but individuals in line management sign off these accounting entries and other targets and reports via Letters of Representation.

Separation of powers

This concept of transforming an accounting entry into a personal responsibility goes to the heart of a 'separation of powers' exercise designed to ensure all group managers recognise risk as having a real, tangible effect on the health of a business. It is arguable of course whether this is a treasury function or one of general management practice but unarguable as to its impact on the management structure at Ahold. However, the question of the effectiveness of much of the reporting flows in corporates – whether financial or not – is not directly answered merely because individuals take more direct responsibility. There is considerable debate for example on the effectiveness of cashflow reporting or, rather, whether its true purpose is revealed as a management discipline as opposed to a practical tool for managing cash and working capital. Within Ahold's treasury, its own performance is closely monitored across a range of activities as shown in the chart.

Figure 2 *Ahold targets and performance measures*

- Progress towards investment grade
  – Interest expense reduction
  – Debt reduction
- Counter party risk limits
- Fix-floating mix
- Bank fees
- FX P&L impact
- Audit findings
- Accounting score card

Source: Ahold

In a wider context there appears to be general agreement that the centralisation of treasury functions for management purposes is both an increasing trend and carries considerable positive benefits for corporates. In part, this has been a response to the increasing sophistication of treasury systems and even the concentration of product ownership. In addition the costs for substantial companies of running multiple treasuries have been reduced to reflect an overall corporate drive for value and efficiency in central management costs. There is however a need to see these changes as part of an evolving corporate culture and not one driven by perceived treasury 'empire-building'.

A further fascinating case study was provided by Gabriel van de Luitgaarden, SVP, Corporate Treasury Control at Philips. Like Richemont and Ahold, Philips's particular circumstances dictate its treasury activity. As a business Philips has changed its focus towards higher value, higher margin goods, especially in medical equipment and software. Philips has removed itself from the manufacturing process for its consumer electronics brand and exited completely from the electronic chip business. Treasury has responded flexibly to the changes in the business mix. For example, this has included helping the business to offer vendor financing to medical equipment buyers as well as managing the associated credit risk exposure. In a brief tour d'horizon, Gabriel picked out the essential elements of Philips' current treasury operations, shown in the chart below.

Figure 3 *Philips corporate treasury*

- Highly centralised (in Amsterdam), 55 full-time earners
- Corporate Treasury is the provider of financial services to the Philips Group and focuses on:

Value creation and preservation:
- Financial Risk and Insurance Policies
- Balance sheet structure
- Managment equity stakes
- Bank relationship management
- Rating agencies

Support the growth of the business:
- Sales financing
- Financing of group companies
- Credit management
- M&A support

Excellent execution and efficiency:
- Hedging
- Cash/liquidity management
- Dealing and transaction settlement
- Commercial payments and In-House banking
- Control
- Financial accounting and reporting

Source: Philips

The most interesting aspect of the governance structure employed by Philips is that it has been built from three deceptively simple and flexible elements:

- The right people in the right functions.
- The appropriate technology.
- The right processes and execution.

The principles are designed to address what Philips felt are the inherent risks in Treasury operations, namely: fraud; errors in systems & processes; and accounting & reporting. Gabriel provided a working example of the implementation of these principles with respect to a payments project conducted over the past three years. In essence the project was designed to dramatically reduce the huge volume and value of predominantly internal payments (800,000 transfers, €120bn nominal value). The risks inherent in system failure or human error had become too material to mitigate, so a migration to fewer platforms, intercompany netting and invoice management was made, based on the above principles. Gabriel split the success of the project into two main areas:

- the principal operational benefits have been greatly enhanced treasury control of corporate payments and cash balances; and
- the benefits to treasury governance have been a vastly streamlined reporting cycle, reduced opportunity for error and greatly enhanced audit processes, which include its regulatory filings in the US, especially under Sarbanes-Oxley.

Conclusion

The process of corporate evolution – whether driven by necessity or choice – will require treasuries to restructure their governance and control policies. The clarity of the treasury message whether in a clean, classical structure or one that is more intensively managed will become increasingly important. A move to reduce the time spent on processes (via automation and/or outsourcing) will focus attention on the value generated by treasury operations and the most effective means of managing corporate risks. There may also be increasing focus on the role treasurers have in developing corporate financial strategy within the business.

These changes will mean that performance management for treasury will have developed beyond mechanistic targets to less tangible but still critical areas such as regulatory management or the investor interface. There was widespread comment from the audience on where the responsibility for treasury overview would lie in the future. There was some support for an increasing role for a specialist non-executive director although, albeit, this reflects an Anglo-American approach to Board matters. How this would sit with the continental European approach of Executive/Supervisory Boards remains a thorny issue.

Treasury organisation – some case studies:
www.treasurers.org/training/cpd/reslist.cfm?st=214

Trends in pension risk management across Europe

Chairman

Kevin Carter, Managing Director, JPMorgan

Panelists

Matthew Hurn, Treasurer DSG International Plc

Robin P Hoytema van Konijnenburg, Group Finance Director, Heineken International

Vincent Lantin, Senior Investment Officer, Belgacom Pensions Funds

Reported by: James Lockyer, Technical Officer, ACT

The importance of pension risk management to the European treasurer had already been noted in earlier sessions on "Defining best practice in treasury" and "Treasury governance and accountability" and had already prompted lively discussion. So delegates were looking forward to the dedicated session, as a further opportunity to examine the issues in more detail and to share their experiences.

Management and regulatory developments

Clearly pension risk management is at or near the top of many European corporate treasury agendas. A number of factors seem to be keeping it there, despite (and arguably due to) a greater awareness and understanding of the issues. The changing regulatory goalposts, driven in part by implementation of EU Directive 41/CE of 2003 on the activities, supervision and control of pension schemes, and in part by recent European Court of Justice (ECJ) rulings, were likely to have a material impact on member states' demands for central pension support, such as the UK's Pension Protection Fund. There still appears to be a variety of perceptions regarding and uncertainties over major factors, such as schemes' legal obligations, the true cost of meeting these obligations (both for pension scheme and sponsor), who should own a pension scheme surplus, and the value of the sponsor covenant. The consequence of these uncertainties was an almost inevitable friction between pension schemes and shareholders in the sponsoring firm.

The Belgian authorities have responded to the challenges by creating an entirely new fiscal and legal framework for pension schemes. Schemes are now restructured into a new dedicated type of entity called the OFP (Organime voor de Financiering van Pensionen), with a flexible, principles-based governance framework. The prudential rules governing the schemes have been made substantially more qualitative rather than quantitative. These allow a great deal of flexibility in how the scheme goes about meeting its obligations and managing risks, against an overlaying concept of the 'prudent person'. For instance OFPs are permitted (indeed encouraged) to use hedging instruments, both to manage risk and to optimise their portfolios. And rather than specifying detailed mechanisms, the legislation permits a combination of Value at Risk (VaR), sensitivity analysis and stress testing techniques to be used to quantify risk, and hence to indicate potential changes to the pension asset allocation.

In Belgacom's case this has enabled the scheme to set up a bespoke infrastructure to identify the main risks to the scheme and their correlations. As a result not only is the scheme able to fine tune its asset allocation, but the process can be repeated as necessary to check the actual outturn and to make further adjustments.

OFPs are substantially exempt from Belgian tax, including VAT, and the Belgian tax treaty network is being overhauled to minimise OFPs' tax burden. This initiative compares favourably with other jurisdictions which may take a substantially more regulated approach to risk and portfolio management, and which are by no means as tax-friendly to pension schemes. The State commitment behind the tax treatment of OFPs is especially interesting.

The role of the treasurer

In Belgacom's case, the pension scheme and the sponsor were clearly prepared to work together to create value for the main stakeholders in the pension scheme, that is the employees and the sponsor. For employees, value creation meant maximising the probability that the pension 'promise' would be met; whereas for the sponsor, minimising its pension cost ultimately resulted in a stronger firm, better able to meet its funding obligations in the long term.

The role of the treasurer in managing pension risk was a major issue, and there still seem some fundamental issues to address. The first and seemingly most straightforward was, given that funding a pension deficit by additional borrowing in the sponsor should improve shareholder value by the present value of the tax shield from the borrowing, why did so few firms simply gear up and fund the deficit? This was difficult to resolve or explain, but at the root of the problem might be the irreversibility of such funding. Although a deficit can be quantified theoretically, we have no means of knowing the actual outturn for many years; and more risk is perceived from overfunding the scheme (on the basis that funds are then trapped within it), than in managing the position on a continuing basis. And in addition, in order to make use of the tax shield, the sponsoring company had to have taxable profits consistently available for the medium to long term. This was by no means certain and indeed might not be possible at all in some group structures.

Conflict of interest

Another fundamental issue which had arisen in other contexts during the day, was that of the potential conflict of the sponsor's treasurer also acting for the pension scheme. This prompted active discussion and a variety of views, particularly given the skills that the treasurer is able to bring to the problem. Some delegates were comfortable that any conflict could be managed, particularly if the treasurer had no executive capacity for either party; but others were less happy. The issue seems to be very much a personal one for each sponsor and pension scheme. The conference agreed that, by and large, trustees had minimal experience or training in managing financial risks; but delegates were reasonably evenly divided as to whether the sponsor's treasurer should undertake the role, or whether external advisors should be brought in to do so. Both the working relationship between sponsor and trustees, and the regulatory overlay were important factors. If the sponsor had to bargain with trustees, then the treasurer could be put in a difficult position if he or she was forced to recommend in favour of one party over another. But it was felt that trustees often had difficulty in seeing the sponsor's point of view – so the treasurer has a potential role as a bridge beween the parties, especially as a point of contact to discuss market sentiment; but a poor working relationship between them might limit its usefulness. And even if there were a good working relationship between trustees and sponsor, the treasurer might not be sufficiently distant to satisfy regulatory requirements for trustees to obtain 'independent' advice.

Another aspect of conflict was the potential for differences in culture between treasurer and trustee. The former is familiar with looking to maximise economic value over the medium to long term, and with managing risk and reward in a similar time frame. Trustees however were measured by regulators on much shorter time scales, often annually. This might lead them to favour similarly short-term investments, and encourage an overly conservative attitude to risk. Such a philosophy could encourage trustees to focus on risk elimination, even in the short term, losing sight of the inevitable reduction in long-term return.

Notwithstanding the problems, the sentiment of the conference was that undoubtedly the pension fund posed the biggest risk to a sponsor's balance sheet, and that the treasurer was best placed and qualified to assist in its risk assessment and management. Treasury skills such as knowledge of capital markets, hedging strategies and the evaluation of risk and reward were vital to effective pension

Outsourcing – Collective Defined Contribution Schemes in the Netherlands

Defined Benefit (DB) schemes in the Netherlands have been subject to similar pressures as those in the UK, but the path taken to remedy things is somewhat different. Initially there was a widespread movement away from the traditional final salary basis to career average basis. The fraction of active participants in average pay schemes has moved from 25% to 74% between 1998 and 2005. Now a new trend has started to move from DB to so-called collective defined contribution (DC) schemes.

This new product is aiming to offer the employee an inflation-indexed average salary set of benefits, but the final outcome will be based on the individual accumulated invested amount at the moment of retirement.

The sponsoring company and the participant pay regular monthly premiums into an individualised blocked account with the pension fund. The participant decides on the investment mix either through partications in the investment portfolio of the fund or through approved fund managers. The growth of the individualised accumulated investment amount is the risk of the participant. At retirement the pension fund collectively takes over the responsibility for the future pension payments which are at that moment calculated on basis of the individualised accumulated investment amount.

Reflecting the transfer of risk away from the sponsor, the contribution rates are tending to be substantially higher than in a DB scheme. Total contribution (employer and employee) tends to be around 20% of the annual wages, as compared to levels nearer 12% under the DB schemes.

The crucial point is that the company does not undertake to be responsible for underwriting the solvency of the scheme and therefore the pension fund is 'off balance sheet'. This was achieved by AKZO Nobel, which started such a collective DC scheme in 2005 for pension rights that were built up as from that date. Old rights were grandfathered.

By contrast the diversified manufacturing company DSM still accounts for their collective defined contribution scheme as if it were a DB scheme as the responsibility of the sponser was not sufficiently eliminated. In this case the scheme has been structured so that the company is entitled to receive part of the surplus in the event of out performance in return for a certain guarantee.

management. And, unless the sponsor's treasurer was fully au fait with the scheme, he would be unable to explain the issues to funders, analysts and the rating agencies. Furthermore, involvement with the pension scheme offered the treasurer the opportunity to work with a variety of people and expand his or her horizons beyond finance.

In the case of DSG International for instance, treasury had taken an active role in an asset and liability review of the scheme, together with an analysis of the sensitivities. This work was combined with an overall review of the Group's risks, and enabled efficiencies, not only by enabling the scheme to reallocate its asset portfolio to match its commitments better, but also by enabling the sponsor to tailor its funding. Treasury also assisted by evaluating the portfolio effects of the fund's asset allocation, developing criteria for bond investments, such as duration and ratings thresholds, and by designing selective hedging of 'unrewarded' risks. However, the problem in the general case still remained, as to how such a contribution might be finessed to make best use of the treasury resource and limit the risk to all parties, including the treasurer.

The management of risk and funding levels within Pensions schemes was in the past subject to relatively light supervision. That has now changed. The EU's Pensions Directive means that every scheme will be subject to a statutory funding objective that it has sufficient and appropriate assets to cover its "technical provisions". As a result, in the UK, the Pensions Act 2004 allows the Regulator to review scheme funding and, if need be, to demand a recovery plan. In the Netherlands as from 1 January 2007 the FTK regulations have been introduced to provide a risk-based set of funding and solvency rules and supervision for pensions and insurance. These include some very specific financial tests and thresholds to be complied with.

Discussion during and after the session looked at the treasurer's role in some detail. Various suggestions were aired, looking at how the treasurer could best support the scheme as well as the sponsor, and how trustees could become better informed. Sentiment indicated that the treasurer had a variety of potential conflicts to manage, possibly the biggest in practice being with the sponsor's CFO. There was probably no single solution to managing them, and the issues probably had to be resolved on a 'per case' basis. However it was felt that trustees by and large were substantially ill-equipped, either by resource or training, to deal with the financial risk aspects of pension schemes, and that the treasury had an opportunity and, indeed, an ethical obligation to build strong, informative and impartial relationships between sponsors and trustees. The issue of trustee training was raised, and whether regulation should seek to increase the standard of trustee performance by insisting on at least some trustees being suitably qualified, by a qualification such as the ACT's Certificate in Risk Management for Pensions. Both Holland and Belgium demand some degree of qualification in trustees, backed by regulatory checks; although this is an issue that the UK regulator has so far failed to address. Schemes could upgrade their trustee resource by recruiting high quality trustees as the opportunity arose.

Conclusions

Pensions are now firmly established as a major risk in Europe. With better understanding of longstanding issues the pensions debate has become more sophisticated, and in turn fresh issues have been raised. A variety of regulatory approaches are developing in response to EU directives, some apparently more pragmatic and tax-friendly than others; but all demanding increased rigour from trustees. The treasury profession in Europe has a wealth of expertise in the management of long term risks and rewards and of the capital markets. It has already demonstrated its ability to contribute to the debate and to develop effective solutions, both for schemes and their sponsor firms. And although no single model exactly describes the degree of involvement, the profession's pragmatic approach provides it with the flexibility to continue its contribution in the future, designed not only to protect the expectations of employees and pensioners, but also the interests of the sponsoring firm and its shareholders.

Collective DC schemes in the Netherlands:
Swinkels, Laurens A.P., *Have Pension Plans Changed after the Introduction of IFRS?* (October 24, 2006). Available at SSRN:
http://ssrn.com/abstract=917795

The true cost of FTK. Research from SEI:
http://www.seic.com/netherlands/documents/ftk.pdf

The changes to UK scheme funding and investment requirements:
http://www.treasurers.org/purchase/customcf/download.cfm?resid=2116

Pension management and corporate finance

Guy Coughlan, Managing Director and Global Head of Pension ALM Advisory JPMorgan

The management of corporate defined benefit pension plans raises a number of questions that can have important implications for the solvency of the plan and the valuation of the company. Is liability-driven investment the most appropriate strategy? What should the allocation to alternative assets be? Should a large contribution be made to reduce the deficit? Should the pension be externalised via a buyout? When does a pension buyout add value? Why does funding a pension sometimes destroy value?

Until recently, senior management, analysts and shareholders paid very little attention to pensions. Throughout the 1990s the equity bull market led people to believe that pension funding was nothing to worry about and the idea that pensions might have implications for capital structure, corporate risk management and company valuation was not taken seriously. Even in 2000 and 2001 our attempts to introduce pensions into the capital structure and risk management agenda of non-financial corporations were not met with any enthusiasm on either side of the Atlantic.

However, the sustained downturn in the equity market, along with changes in accounting and regulation, have raised the profile of pensions and highlighted their impact on shareholder value, corporate risk profiles and credit ratings. Increasingly over the past six years companies have acknowledged this and have started to measure and manage the impact of their pensions on an holistic basis. Even asset managers are beginning to appreciate the importance of this for pension management.

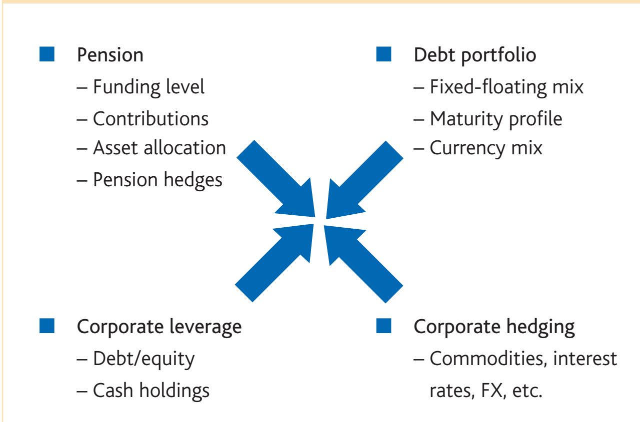
This article describes a framework for managing pensions that truly integrates corporate finance and pension management. Only such a framework can answer the questions posed above. By taking an integrated approach, the broader sponsor-related implications of pension decisions can be evaluated and balanced against the beneficiary-related issues. In this way the framework can provide economic answers to the questions of whether a buyout adds value, whether liability-driven investment (LDI) is value creating and whether making a contribution actually destroys shareholder value.

A framework for pension management and corporate finance

The framework for pension management alluded to above was originally developed over the period 2001–2002 and has been implemented in different guises in a number of companies. The name coined for the framework is CALM, an acronym for Corporate-wide Asset Liability Management, which emphasises the holistic basis of the approach.

The motivation for CALM was to enable corporate sponsors to evaluate various pension-related decisions in the context of both shareholder value and the value to beneficiaries. The essence of the framework is that sponsors and beneficiaries alike need to look beyond the pension in order to manage the pension. As such CALM addresses the interrelationships between the management of the pension and the management of corporate risk, capital structure, credit quality and company valuation. See Coughlan and Ong (2003). These interrelationships are illustrated in Figure 1.

Figure 1 *CALM captures the linkages between capital structure, corporate risk management and pensions*



The relevance of pensions for capital structure and corporate risk management originates, in large part, from the significant mismatch between assets and liabilities in most corporate pension plans. Pension liabilities (the benefits they must pay to members) are fixed income-like in character, but pension assets typically include large amounts of equities. This mismatch leads to shareholders, as well as the pension beneficiaries, being exposed to considerable risks which are unrelated to the mainstream business. Moreover, this pension risk can in some cases completely dominate the corporate risk profile, dwarfing the risks associated with the operating business and financing.

The pension risk mismatch also increases the effective gearing, or leverage, of the company and so alters its effective capital structure. For example, a company with a pension plan invested heavily in equities has a much higher leverage in economic terms than that implied by its simple debt/equity ratio: its sensitivity to economic conditions is magnified and its weighted average cost of capital (WACC) can be significantly altered.

Furthermore, there is a close interrelationship between the pension and the company's debt portfolio through their exposures to interest rate risk. Defined benefit pension liabilities expose the sponsor to significant interest rate risk that should be managed in a co-ordinated way with the interest rate risk associated with the company's debt portfolio.

The conclusion from these interrelationships is that to effectively measure and manage the impact of pension risk on the corporation requires an holistic framework to unify risk management, capital structure and corporate finance.

Aligning sponsor and beneficiary perspectives

What emerges from the CALM approach is that beneficiaries and plan sponsors really have a symbiotic relationship. Far from being in competition, their interests are actually quite closely aligned. What is good for the sponsor is, more often than not, also good for the beneficiary and vice versa. For example, a pension plan that is excessively risky often places both the sponsor and the beneficiaries in a similar suboptimal situation.

By contrast, a rational approach to corporate risk management and capital structure that takes account of the pension plan is not only good for shareholders it is also good for beneficiaries. This is because it makes it less likely that the sponsor will freeze or terminate the pension plan, reduce future benefits, or be unable to pay benefits because of bankruptcy. The key corporate finance concept behind this is the fact that a corporation's equity provides the economic capital to support the pension plan. This equity must be protected (by optimising the corporate risk profile and capital structure), otherwise the value of the pension to beneficiaries will be eroded.

In particular, all other things being equal, the true economic value of a pension to a beneficiary will be higher:

- the smaller the pension asset-liability mismatch;
- the higher the credit rating of the sponsor; and
- the lower the risks faced by the sponsor.

This is because each of these reduces the likelihood of adverse scenarios in which the sponsor cannot pay pension benefits, and therefore increases the economic value of the pension to beneficiaries.

Unfortunately this alignment of sponsor and beneficiary interests is not widely recognised by either side because neither sees the complete picture. In particular, both sponsors and beneficiaries generally suffer one or more of the following forms of myopia:

- an excessive focus on assets without fully addressing liabilities;
- failure to appreciate the full set of risks associated with the pension plan; and
- an inability to evaluate the true underlying economics.

This myopia has not been helped by what has historically been misleading accounting, opaque actuarial practices and regulatory environments that have not been market-oriented. Fortunately for shareholders and beneficiaries, the changes to pension accounting and funding rules, either planned or already implemented in many countries, are putting pension plans under greater scrutiny and encouraging sponsors and trustees to address these shortcomings.

How a pension plan impacts shareholder value

A defined benefit pension plan impacts shareholder value because it changes the capital structure of the company by altering the effective corporate leverage (gearing). This is not as simple as subtracting the after-tax value of the reported deficit, as many analysts would have you believe. In fact, a defined benefit pension plan impacts shareholder value via four different elements:

- net deficit;
- adjustment for realistic mortality rates;
- optionality value; and
- economic capital charge.

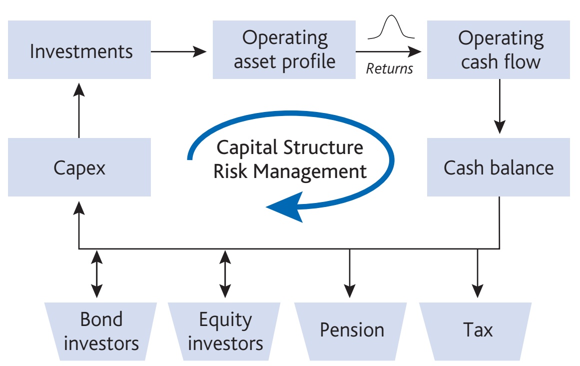
Each of these elements changes the effective leverage of the company by altering the effective levels of debt and equity supporting the business. This in turn changes shareholder value through a number of different effects:

(i) by changing the size of the effective tax shield benefit on debt;
(ii) by changing the probability of financial distress; and
(iii) by changing the likelihood that a cash shortfall will lead to investment plans being curtailed or cancelled.

For example, an increase in the effective level of debt increases the probability of default, which has a negative impact on shareholder value, but it also increases the value of the tax shield on interest cost, which has a positive impact on shareholder value. See Coughlan and Calil (2006).

This is illustrated by Figure 2. The firm's operating assets generate returns, which are used to pay tax, fund the pension, pay dividends, pay interest and make new investments. Debt financing and pension contributions reduce the amount of cash diverted to pay tax, but in difficult times can limit the amount of cash available for investment, which in turn, reduces future operating cash flow.

Figure 2 *Framework for integrating corporate finance and pensions*

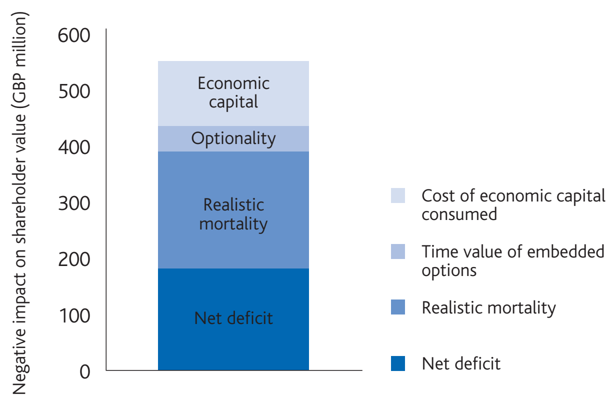


The following discussion explains how each of the four elements listed above changes the effective leverage of a company. The explanation is illustrated with values from a case study based on a UK corporation, and shown graphically in Figure 3.

- **Net deficit.** The reported deficit of a pension plan is a net corporate liability measured in accounting terms. It is given by the market value of assets less the accounting value of liabilities, based on an assumption for the future mortality of pension members. The deficit is a debt-like obligation that changes the capital structure by increasing the effective leverage of the company. This change in leverage has an impact on shareholder value that we can explicitly evaluate. In the case study the reported (pre-tax) deficit was £421 million and the impact on shareholder value was a reduction of £191 million.
- **Adjustment for realistic mortality.** Reported deficits are often based on unrealistic assumptions about the mortality of beneficiaries, with longevity generally being underestimated. By moving to a more realistic mortality basis the corporate liability can grow by a significant amount. In the case study realistic mortality assumptions increased the deficit by £318 million and thereby reduced shareholder value by further £207 million.
- **Optionality.** Pension plans contain options whose value is not reflected in actuarial or accounting valuations. For many sponsors the most important source of optionality comes from the fact that, while they are fully accountable for the value of any deficit, they have only a limited share in the value of any surplus. In fact the ability of a sponsor to participate in any surplus depends on whether it can either (i) remove funds out of the pension trust, or (ii) use the surplus to cover future contributions for active members. The ability to remove funds is often constrained by the trust deeds and rules, the potential opposition of trustees and/or taxation (e.g. the 50% excise tax for US plans). The net result is that the sponsor only shares in a fraction of any surplus, while being liable for 100% of any deficit. For more information see Jurin and Margrabe (2005) and Jurin and Coughlan (2005).
  This optionality is equivalent to a short (i.e. written) option position which has negative time value. This negative time value increases the effective size of the deficit. In the case study the time value of the option increased the economic deficit by £60 million, further reducing shareholder value by £39 million.
- **Economic capital charge.** Economic capital refers to the capital required to run a business, which serves as a buffer to protect the firm against future potential losses. For a non-financial corporation, economic capital is essentially composed of the company's 'equity-like' capital that supports all the risks facing the firm, including the risks associated with its pension plan. The economic capital consumed by the pension plan reduces the amount of economic capital (equity) available to support the operating business, and therefore increases the effective leverage of the business. In the case study the economic capital consumed by pension risk was £183 million and this reduced shareholder value by a further £121 million.

The combined effect of these four elements on the shareholder value of the case study company was a reduction of £558 million as shown in Figure 3. This is to be compared with the reported deficit of £421 million.

Figure 3 *Illustration of negative impact on shareholder value*



Application to pension decision-making

The framework described above can be applied to evaluate the shareholder value added or destroyed by different pension-related decisions.

For example, Figure 4 shows the impact on shareholder value of funding the pension, i.e. making a contribution to bring the reported funded status up to 100% without changing the asset allocation. In this case, as can be seen from Figure 4, funding destroys shareholder value, because of the optionality associated with the plan. This is an important and general result. Funding the plan takes the option from being out-of-the-money to being at-the-money, so increasing its negative time value. Funding the pension only increases shareholder value if there is a concomitant reduction in risk.

Another example, shown in Figure 5, evaluates the pension buyout decision. The cost of buyout is compared with the impact on shareholder value if the pension plan is retained. In this case, shareholder value is created by the buyout because the buyout payment is less than the negative impact of the pension on shareholder value. Note that the 'buyout adjustment' in Figure 5 reflects the direct cost savings accruing to the sponsor by eliminating the pension.

Conclusions

In order to accurately evaluate the decisions facing corporate pension plans, it is essential to have a framework that combines pension management and corporate finance. Such a framework must combine a corporate-wide view of risks with a comprehensive approach to corporate capital structure. The result is a robust toolkit for pension decision-making that captures the impact on shareholder value and reconciles this with the value to beneficiaries.

Coughlan, G.D. and Ong, A. (2003). *CALM: Holistic Corporate Risk Management Including Pensions*, JPMorgan publication, November 28.

Jurin, B. and Coughlan, G.D. (2005). *The True Economic Value of Defined-Benefit Pension Plans: A New Model for Valuation and Risk Management*. JPMorgan publication, November 30.

Jurin, B. and Margrabe, W. (2005). *The JPMorgan Framework for Measuring – and Managing the Risk of – Overfunding and Underfunding in a Defined Benefit Pension Plan*. Working paper, October 25.

Coughlan, G.D. and Calil, C. (2006). *Dump the silo - the convergence of risk management, funding and capital structure The Treasurer*, September 2006.

Figure 4 *Effect of funding the pension on shareholder value*

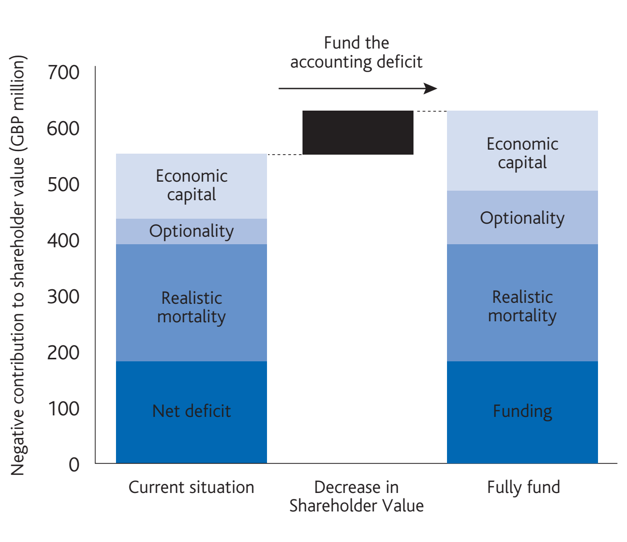
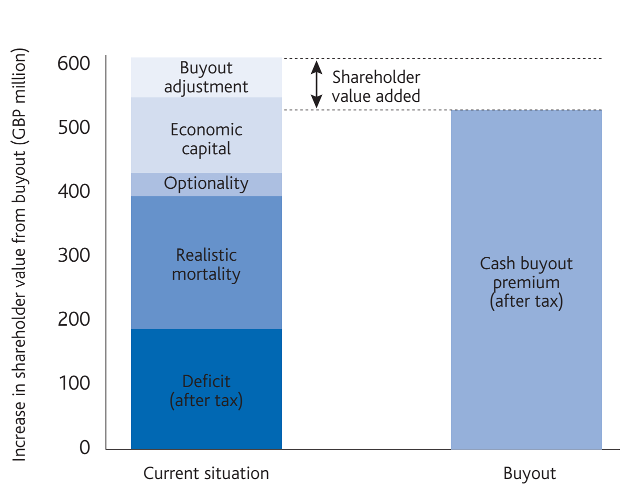


Figure 5 *Effect of pension buyout on shareholder value*



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