The pension liability

Managing the corporate risk
Can you afford not to answer these five key questions?
1. What do I really need to know about the current regulatory framework for defined benefit pensions?

2. What are the risks to implementing a chosen business strategy arising from the pension liability?

3. How can I better understand these risks?

4. What actions can I take to manage the risks once they are understood?

5. How should I report to the Board and shareholders on how the risks are being managed?
The pension liability
Managing the corporate risk
Foreword

How did we get here?

CIMA identifies strongly with business and the challenges faced by management teams in today’s fast moving environment. It has a strong focus on supporting its members and other professional accountants in business. One of the challenges currently high on many finance directors’ agendas is how to alert the board to, and help them manage, the risks arising from defined benefit pension schemes. CIMA’s approach, therefore, aligns with the perspective of a sponsoring company and addresses the risks presented to the implementation of the company’s chosen business strategy by its pension obligations.

Such risks are likely to be evidenced by volatility in contributions required, impacts on debt covenants/credit ratings, funding issues or dividend distribution constraints together with the possible scrutiny of the Pensions Regulator (‘the Regulator’) over certain events or proposed courses of action.

A Pensions Advisory Group (PAG) was established by CIMA in May 2006 and its members are as follows:

- Mike Samuel (Chair) Chairman/Trustee, Rank Group/Unilever pension funds
- Professor David Blake Director, Pensions Institute at Cass Business School
- Ian Bull Finance Director, Greene King
- Harry Byrne Chairman, CIMA pension fund and former Chairman of Guinness Ireland Pension Fund
- Andrew Carr-Locke Former Group Finance Director, George Wimpey Plc
- John Coghlan Past President, CIMA
- Charles Cowling Managing Director, Pension Capital Strategies
- Dr Rebecca Driver Chief Economist and Director of Research, ABI
- Douglas Flint, CBE Group Finance Director, HSBC Holdings plc
- Professor Steven Haberman Deputy Dean, Cass Business School
- Richard Mallett Director of Technical Development, CIMA
- John Pickles Research Fellow, Pensions Institute at Cass Business School
- Charles Tilley Chief Executive, CIMA
- Kate Wilcox (Secretary) Project and Relationship Management Specialist, CIMA.

This high level guidance on how a finance director might set about tackling the issues is available in Adobe PDF www.cimaglobal.com/pensions The original copy was published in November 2006 with this copy being updated for developments through to January 2008.

These documents are for general guidance and are intended to be a useful starting point to be adapted to the individual circumstances of a company for circulation to directors and others to consider. They should not be relied upon in any respect without seeking specialist pensions advice. Please note that CIMA and the Pensions Advisory Group do not accept any responsibility or liability to any individual or company who relies on the guidance set out in these documents.

For more information on pensions work by CIMA’s Pensions Advisory Group, please contact CIMA via email: innovation.development@cimaglobal.com or telephone +44 (0)20 8849 2275.
Contents

Key questions .......................................................... 4

Context ................................................................. 5

The need for guidance .................................................. 6

1 The current regulatory framework .................................. 8
   1.1 General information .............................................. 8
   1.2 Notification and clearance ....................................... 9
   1.3 Funding defined benefits ........................................ 10
   1.4 The Pension Protection Fund (PPF) .......................... 11
   1.5 Additional exposure from financial reporting standards ...... 11
       Also refer to Appendix 1 ........................................... 37

2 The risks from the pension liability ................................ 13
   2.1 Longevity risk .................................................... 13
       Also refer to Appendix 2 ........................................... 51
   2.2 Investment/Interest rate risk .................................... 15
   2.3 Inflation risk ..................................................... 16
       2.3.1 Inflation in salaries .......................................... 16
       2.3.2 Inflation in pensions ........................................ 17
   2.4 Other risks ...................................................... 17
       2.4.1 Pension scheme operation risk ............................. 17
       2.4.2 Pension funding risk ........................................ 17
       2.4.3 Regulatory risk ............................................. 18
       2.4.4 Financial reporting risk ..................................... 18

3 Understanding the risks .............................................. 19
   3.1 Valuation of the liabilities – the discount rate ................. 20
       3.1.1 Accounting valuation ....................................... 20
       3.1.2 ‘Buy out’ valuation .......................................... 21
       3.1.3 Pension Protection Fund valuation ......................... 21
       3.1.4 Scheme specific valuation ................................... 21
   3.2 Analysis – tools and techniques ................................ 23
       3.2.1 Cash flow modelling ......................................... 23
       3.2.2 Value at risk (VaR) .......................................... 23
       Also refer to Appendix 3 ........................................... 54
### Managing the risks

4.1 The liabilities

4.1.1 Pay an insurance company to take on the risk

4.1.2 Liability management

4.1.3 Scheme closure

4.1.4 Change in scheme benefits and/or employer costs

4.2 Investment strategies

4.2.1 General

4.2.2 The equity/bond/property/allocation

4.2.3 Diversification approach

4.2.4 Liability Driven Investment (LDI)

4.3 Conflicts of interest

### Reporting on the management of the risks

5.1 Internal reporting

5.2 External reporting

### References and further information

### Appendices

Appendix 1 The current regulatory framework in more detail

A.1.1 General information

A.1.2 Notification and clearance

A.1.3 Funding defined benefits

A.1.4 The Pension Protection Fund (PPF)

A.1.5 Additional exposure from financial reporting standards

Appendix 2 Questions to ask regarding mortality assumptions

Appendix 3 Modelling techniques

A.3.1 Value at risk (VaR)

A.3.1.1 VaR – a simple example
Key questions

This guidance aims to provide a framework to help you, with support from your advisers, to find the answers to the following questions:

1. What do I really need to know about the current regulatory framework for defined benefit pensions?

2. What are the risks to implementing a chosen business strategy arising from the pension liability?

3. How can I better understand these risks?

4. What actions can I take to manage the risks once they are understood?

5. How should I report to the Board and shareholders on how the risks are being managed?
Context

This guidance is directed at UK companies and UK branches of overseas employers with defined benefit pension schemes and refers, primarily, to UK pension regulations. UK companies with pension plans in other jurisdictions will, additionally, need to familiarise themselves with the regulations of those jurisdictions. Companies outside the UK will need to address their own national regulatory requirements but other aspects of this document should be of relevance.

Defined benefit schemes have been used by UK companies to help achieve effective long term relationships with their employees. They have not only provided financial security in retirement for the employees but have also influenced recruitment, retention, work effort, training and the timing of retirement. However, in accepting responsibility for funding defined benefit pensions, companies have assumed the risks inherent in such schemes.

The long term liability resulting from an open or closed defined benefit scheme represents deferred payment to employees for activity that has already taken place. Nevertheless, because the determinants of the value of the liability (such as length of service, level of future inflation, eventual average or final salary and the number of years over which pensions will be paid) are unknown at the time that the pension benefits are earned by employees, the value of the liability can only be estimated.

UK defined benefit schemes are generally funded and the great majority that are tax approved are subject to minimum funding requirements. This is mainly to give security to members for future benefits but it can also be for reasons relating to tax, regulation and corporate cash management. The assets are typically held in trust and are invested so that the proceeds can be used to pay pensions as they become due. However, the company remains responsible for providing the defined benefits regardless of the investment performance, even though company management may not have direct influence over how precisely the assets are selected and managed.

February 2008
The need for guidance

Defined benefit pension schemes grew enormously in popularity during the second half of the 20th century. By the early 1990s the investment performance of many funded schemes had been so successful that significant surpluses existed resulting in many companies taking pension holidays.

Unfortunately, this beneficial state of affairs proved temporary and a combination of increased life expectancy, falling interest rates, the removal of the tax credit on dividends and dismal equity performance at the end of the 1990s simultaneously increased pension liabilities and decreased scheme asset values causing the surpluses to reverse dramatically into deficits at the beginning of the 21st century. As a result, many companies closed or restricted their schemes. The Pensions Regulator estimates that 56% of private defined benefit memberships remain open schemes as recorded on the Regulator’s pension scheme database as at 31 March 2007 with the remainder closed, paid up or winding up (The Pensions Regulator Annual Report and Accounts 2006-2007).

In early December 2007, the Deloitte FTSE 100 Monitor showed a pensions surplus of £33 billion whereas 12 months previously Deloitte estimated a deficit of over £50 billion. This demonstrates the extreme volatility that can be experienced.

The pensions’ regulatory regime in the UK has also become much more demanding for sponsors of defined benefit schemes, as explained in Section 1 (pages 8-12).

For quoted companies, it is essential that they understand and manage the pension risk in the context of the Turnbull Guidance on Internal Control. This also sets best practice for other organisations.
Paragraph 16 of the Turnbull Guidance states that:

In determining its policies with regard to internal control, and thereby assessing what constitutes a sound system of internal control in the particular circumstances of the company, the board’s deliberations should include consideration of the following factors:

- the nature and extent of the risks facing the company
- the extent and categories of risk which it regards as acceptable for the company to bear
- the likelihood of the risks concerned materialising
- the company’s ability to reduce the incidence and impact on the business of risks that do materialise
- the costs of operating particular controls relative to the benefit thereby obtained in managing the related risks.’

Source: Turnbull Guidance, Financial Reporting Council

It is recognised that pension issues have implications across many functions of an organisation including, for example, human resources, legal and compliance. For these reasons it is essential that the board as a whole is aware of the corporate risk aspects of the pension liability and is proactive in managing them. This guidance aims to assist finance directors in helping the board achieve these goals.

The checklist published alongside this guidance should alert finance directors to where they may need to derive an action plan on pension risk which they can share and discuss with other board members. This could then form the basis of a regular report to the board and could possibly benefit from independent assurance.
The pension liability

1 The current regulatory framework

More detail of the regulatory framework is set out for reference in Appendix 1 (page 37).

1.1 General information

There has been a sea change in the regulation of pensions since a number of companies ‘walked away’ from their pension commitments – one notable example being Allied Steel and Wire in 2002.

Since 11 June 2003, changes in the legislation have meant that no solvent company can walk away from a defined benefit pension scheme. Should a solvent company wind up a scheme then there is debt on the employer equal to any shortfall of assets against the full buy out cost. In addition, the Pensions Act 2004 moved the regulatory framework from a focus on Minimum Funding Requirements to one of scheme specific funding. The full buy out cost is otherwise known as a ‘section 75 valuation’ of liabilities (Pensions Act 1995, as amended), being the funding estimated by the actuary as the amount needed to secure the pensions promised with annuities from an insurance company.

Care also needs to be taken under multi-employer schemes where a section 75 debt could be triggered by the sale of a business or a restructuring if one of the employing companies leaves the scheme, i.e. an ‘employer cessation event’. The Regulator has issued specific guidance on ‘multi-employer withdrawal arrangements’.

From an economic perspective, pension obligations now have similar characteristics to corporate debt such as bank borrowing. A company’s obligation to pay £1,000 in ten years’ time to a creditor is (on an economic basis) now little different from its obligation to pay £1,000 (via the pension scheme) to a pensioner in ten years’ time albeit the latter is dependent on inflation and mortality assumptions.

The Pensions Act 2004 has provided a further legislative framework including the establishment of the Pensions Regulator and the Pension Protection Fund (PPF). The Regulator has the following statutory objectives:
Managing the corporate risk

- to protect the benefits of members of work-based pension schemes
- to promote good administration of work-based pension schemes
- to reduce the risk of situations arising that may lead to claims for compensation from the PPF.

In pursuing these objectives, the Regulator has published guidance which has a significant impact on corporate risk management and the ability of a company to implement its chosen strategy. The guidance on ‘notification and clearance’ and ‘funding defined benefits’ are particularly relevant and are summarised below with further detail in Appendix 1 (page 37). The full guidance is published on the Regulator’s website at www.thepensionsregulator.gov.uk

1.2 Notification and clearance

The purpose of ‘notifiable events’ is to give the Regulator early warning of a possible call on the Pensions Protection Fund (PPF) so reducing the risk of compensation becoming payable. In extreme circumstances, the Regulator can intervene to reduce the chance of the PPF being involved and improve the security of future benefits for members. It can do so by issuing ‘contribution notices’ and ‘financial support directions’ (FSD) against the employer to pay sums into the scheme or make other suitable arrangements. A recent example of this was the FSD issued to Sea Containers Ltd in respect of Sea Containers Services Ltd, the principal employer for its UK pension schemes. The Regulator has also used its powers to appoint three independent Trustees to the GEC 1972 Plan in the context of a bid for its employer, Telent plc, by Pensions Corporation LLP.

There is a clearance procedure so that those companies with a deficit in their pension fund can gain assurance via a clearance statement that the action they plan would not result in the Regulator imposing an order that required them to put more money into the fund. It should be noted, however, that clearance is a voluntary procedure. The Regulator states that clearance might be appropriate for a ‘specified event’. This is defined as ‘an event which is financially detrimental to the ability of a defined benefit scheme to meet its pension liabilities’.

The guidance published in April 2005 distinguished between ‘Type A’, ‘Type B’ and ‘Type C’ events. Revised clearance guidance issued for consultation in September 2007 removed ‘Type B’ and ‘Type C’ events leaving only ‘Type A’ with the objective of a less prescriptive and more principles based approach. An example of a ‘Type A’ event would be a return of funds to the shareholders which would reduce the overall strength of the employer covenant. See Appendix 1 A1.2 (page 38) for more detail on ‘Type A’ events. For more information, please refer to the Pensions Regulator’s Clearance statements (April 2005 and September 2007).

Furthermore, in May 2007, the Regulator issued a reminder on clearance guidance, particularly relating to corporate transactions, as a result of the high level of merger and acquisition activity. At the same time, it also reinforced guidance for trustees on abandonment i.e. where the sponsoring employer severs its link with the scheme without providing the scheme with sufficient
The pension liability funds or assets to compensate for losing the ongoing support of its employer. The Regulator underlined the importance of understanding changes to the employer covenant and the potential impact on the pension scheme where the link with an employer of substance is removed. The Regulator again made its position clear that, in cases where there is an employer of substance, abandonment is unlikely to be in the members’ best interests.

1.3 Funding defined benefits

In February 2006, the Regulator published a Regulatory Code of Practice on ‘Funding Defined Benefits’ and in May 2006 it published a statement on ‘How the Pensions Regulator will regulate the funding of defined benefits’. In addition, the Regulator issued some Frequently Asked Questions on scheme funding in June 2007 which were based on actual queries.

The code is directed at the trustees of all occupational pension schemes providing defined benefits but it will also have an impact on sponsoring companies. Combined with the Regulator’s code of practice on ‘Trustee knowledge and understanding’ it has increased the robustness of challenge and negotiation from trustees. This has significant relevance to finance directors as they are often involved in what needs to be a professionally managed ‘arm’s-length’ relationship with the trustees. Some relevant quotes made by the Regulator demonstrate how it is encouraging trustees to act:

- a pension scheme in deficit should be treated in the same way as any other material unsecured creditor
- the pension scheme is a key company stakeholder. Trustees should be given access to information and decision makers; in return they should accept confidentiality responsibilities
- trustees should learn from the way a bank with a large unsecured loan would look to negotiate with a company
- trustees should monitor corporate activity and seek the employer’s agreement to be given information at an early stage subject to the usual restrictions such as those on handling price-sensitive information.

The Pensions Regulator, April 2005.

At the same time as giving more ‘backbone’ to the trustees, the Regulator’s guidance does offer a framework within which the sponsoring company and the trustees can agree, as a partnership, a funding strategy going forward.

While the Regulator does have powers to intervene, its aim is for employers and trustees to work together effectively without its intervention. The Regulator’s position is that trustees should come to an agreement which takes full account of affordability for employers. In particular, the Regulator recognises that a healthy, viable, ongoing business will be in the best position to ensure its pension obligations are met in the long term.

The importance of a good relationship between the sponsoring company and the trustees cannot be emphasised enough. This requires effective communication in which the finance director will play an important role.
the sponsoring company and the trustees cannot be emphasised enough. This requires effective communication in which the finance director will play an important role. In particular, the finance director will need to ensure that trustees are made aware of possible Type A events on a timely basis as well as seek clearance from the Regulator if this is deemed appropriate.

The Regulator flags the circumstances where a recovery plan for scheme funding is likely to trigger intervention. These will include when:

- the funding objective is less than the FRS17/IAS19 or PPF buy out liabilities
- the recovery plan is longer than ten years
- the recovery plan appears to be significantly back-end loaded (higher contributions towards the end)
- assumptions underlying the recovery plan, especially investment assumptions, appear inappropriate.

1.4 The Pension Protection Fund (PPF)

The purpose of the PPF is to pay compensation to members of eligible defined benefit pension schemes, when there is a qualifying insolvency event in relation to the employer and where there are insufficient assets in the pension scheme to cover PPF levels of compensation. The compensation is aimed at protecting pensioners over normal retirement age: the benefits accrued by other members are only partly protected.

One of the sources of funding for compensation payments is the pension protection levy charged on all schemes largely in proportion to the size of their pension deficit and the insolvency risk of the sponsoring company. In calculating the levy, the PPF makes allowance for ‘deficit repair’ contributions in excess of the cost of accrual of benefits. It also recognises contingent assets such as group company guarantees; security over cash, real estate or securities; and letters of credit and bank guarantees.

There are therefore ways that companies can reduce the levy cost which should be incorporated into any review of how the pension fund liabilities are funded. In addition, the insolvency risk of the sponsoring employer is based on a Dun & Bradstreet failure score and management can take action to reduce the perceived risk in future years.

1.5 Additional exposure from financial reporting standards

Financial reporting standards do not change the fundamental nature of the underlying economic exposure but they can add, reduce, compound risk and/or result in actions needing to be taken. Hedging the accounting risk is an option if reported balance sheet volatility is deemed to be important. However, to the extent that the FRS17/IAS19 valuation of the liability is by no means a complete proxy for the economic exposure, then some of the latter is likely to remain unhedged.
Finance directors and their teams should be well versed in the accounting issues so these are not covered in detail here. If required, the relevant standards can be obtained from the UK Accounting Standards Board (ASB: www.frc.org.uk/asb) or the International Accounting Standards Board (IASB: www.iasb.org.uk). The standards are also covered in detail in accounting manuals such as those published by the ‘big four’ audit firms.

In essence, under the ASB’s Financial Reporting Standard 17 ‘Retirement benefits’ (FRS17) the balance sheet incorporates the pension surplus (to the extent it is recoverable by the company) or deficit as a one line item with more detailed analysis in the notes. This is derived from fair values of the assets, being their market value at the balance sheet date, and of the pension fund liabilities – being the committed cash flows discounted by the interest rate on a corporate bond with an AA rating. The ASB released a Discussion Paper at the end of January 2008 with comments requested by 14 July 2008. 
www.frc.org.uk/asb/technical/projects/project0065.html

This use of fair values in pensions accounting can create substantial volatility in the sponsor’s balance sheet. The IASB’s International Accounting Standard ‘Employee benefits’ (IAS19) provides an option to account in a similar manner to FRS17 but also offers a ‘corridor’ approach (adopted from the US pension accounting standard, Financial Accounting Standard 87 ‘Employer’s accounting for pensions’ (FAS87)) to smooth actuarial gains and losses in the income statement.

More recently the International Financial Reporting Interpretations Committee (IFRIC) Statement D14 has introduced the possibility that a company may have to recognise more liabilities on its balance sheet if it commits to a funding target higher than IAS 19, which has implications for strategies such as buy out.

There is more coverage of external reporting in Section 5.2 (page 33).

There is an important area which lies outside of the pensions’ legislation itself. In the UK, dividend distribution is determined by ‘distributable reserves’ rather than by a ‘solvency test’. Therefore, a FRS17 pension deficit could potentially restrict dividend payments by a sponsoring company even if it has a strong cash flow. This can seem counter-intuitive given the often very long duration of pension liabilities.

Directors must be convinced they have adequate distributable reserves before paying a dividend or they risk committing an offence.

A more detailed explanation of the regulatory framework is set out in Appendix 1 on (page 37).
2 The risks from the pension liability

Sections 2.1 to 2.3 are derived from a brochure published in October 2005 by Mercer Investment Consulting entitled ‘Interest rate hedging for defined benefit pension plans – A primer’.

The risks and their linkages need to be clearly identified and care needs to be taken to understand the impact on real and nominal cash flows. These risks can have significant subsequent impacts on the sponsoring company. For example, poor investment performance and/or a decline in real interest rates could hit funding levels and generate unexpected calls on future cash flows which could in turn compromise capital expenditure and/or research and development spend. Or, perhaps, balance sheet volatility may affect the share price and credit ratings.

2.1 Longevity risk

Longevity risk can have a very significant effect and this is the risk least susceptible to hedging. There is a high gearing impact from changes in longevity given the time in retirement relative to length of life. In the past only the larger funds could typically use something other than the average mortality tables from the life companies or variations thereof. The latter take no account of the actual location or occupation which can have a significant impact on life expectancy. The average mortality tables may also suffer from a sampling bias as they are based on persons receiving pensions from insured pension schemes. However, much more data is now available including information from self administered pension schemes which can help smaller schemes to benchmark their assumptions.

In addition, mortality assumptions in use can vary substantially across different countries. There has been a tendency to underestimate length of life due to medical, lifestyle and other improvements. As financial assumptions (and risks) are arguably now much better understood (and disclosed), attention will increasingly shift to the mortality assumptions.
In February 2008, the Regulator issued a consultation document, *Good practice when choosing assumptions for defined benefit pension schemes with a special focus on mortality*. This sets out a new approach to looking at mortality. The modified approach, which has been developed in the light of emerging evidence, states that in the context of recovery plans submitted to the Regulator:

- mortality assumptions that appear to be weaker than the long cohort assumption will attract further scrutiny and dialogue with the trustees where appropriate
- assumptions which assume that the rate of improvement tends towards zero, and do not have some form of underpin, will also attract further scrutiny.

The Regulator notes that the Board of the PPF have chosen to assume mortality improvements in line with the long cohort projection with an underpin (1.5% pa for men, 1% pa for women).

These assumptions are important as an extra two years of life could add 5% to pensioner liabilities.

Finance directors should quiz their actuaries on issues such as:

- Which specific mortality assumptions are being used for current mortality?
- Why have these been chosen?
- Are there characteristics of the workforce that could result in higher or lower mortality rates?
- What assumptions are being made about future improvements in mortality rates?

As this is such a critical assumption, a framework of questions a finance director might ask of an actuary are set out in Appendix 2 on (page 51), including an illustration of the recent trend in actual mortality experience. CIMA has also commissioned further research by Cass Business School into the fundamental issue of longevity. This will be published in April 2008 and available for download from [www.cimaglobal.com/pensions](http://www.cimaglobal.com/pensions)
2.2 Investment/Interest rate risk

All investments carry a default risk and, over the long term, this is typically correlated with the level of return. However, as the assets are effectively held as collateral against the liabilities there are also more complex underlying exposures.

A key risk is any mismatch between the actual investment portfolio and a notional investment portfolio in gilts and index linked gilts that could replicate most of the cash flows of the accrued benefits. The actual fund has typically had a significant equity component aimed at providing increased returns and improving the funding level over time.

The fund’s asset allocation strategy affects the sponsoring company’s pension cost, cash flow and balance sheet movements. Equity allocation tends to increase both the expected return and the volatility whereas bonds tend to reduce them.

A high allocation to equities provides little direct short term protection against changes in long term interest rates. For example, a deep recession may reduce the value of equity whilst at the same time lowering interest rates which can lead to a higher present valuation of future liabilities. These kind of scenarios need to be covered in the cash flow forecasting, ‘value at risk’ (VaR), and other analyses, see Section 3.2 (page 23) and Appendix 3 (page 54).

A key component of interest rate risk relates to the short duration of bonds typically held by a pension fund compared to the long duration of the pension liabilities. This may, in part, be due to a negative yield curve existing at the time and the perception (not necessarily correct) that long bonds are ‘expensive’. There is also typically a rather thin market at the long end of bond maturities. Because the proceeds from the maturing bonds with relatively short duration need to be reinvested, possibly at unfavourable rates, this risk is also known as reinvestment risk.

A further source of interest rate risk is the pension deficit itself, if there is one. The deficit has characteristics very similar to those of debt on the sponsor’s balance sheet.
The pension liability

Duration of scheme liabilities

Duration is a very useful measure of the interest rate risk attached to assets and liabilities, since it measures the responsiveness of asset and liability values to changes in interest rates.

It is most succinctly conveyed as the impact of a one percentage change in the discount rate on the percentage movement in gross liabilities which is typically ‘double digit’.

In more detail:

‘The duration of the scheme liabilities is a measure of how long on average it is until the benefits of the scheme fall due. This is the weighted average time to payment of the cash flows, weighted by the present value of the cash flows (i.e. on a discounted basis).

Duration is calculated by adding the results of multiplying the present value of each cash flow by the time it is received (paid) and then dividing by the total present value of all cash flows’.

Source: Accounting Standards Board.
All ASB material is reproduced by the kind permission of the Accounting Standards Board.
For further information, please visit www.frc.org.uk/asb

2.3 Inflation risk

2.3.1 Inflation in salaries

There is some risk arising from management action impacting the scheme through salary increases and early retirement, particularly for final salary schemes. To a large extent, these should be controllable. The effects, in aggregate, would become evident at each triennial valuation as variances against the actuarial assumptions. However, the specific financial impact of a salary increase on the pension commitment is rarely explicitly incorporated in decision making on matters such as individual salary increases and promotions. As an example, a £5,000 increase in salary might result in excess of a £100,000 increase in the present value of future pension commitments. This gearing can be reduced with a career average salary pension and these schemes are gaining in popularity.
2.3.2 Inflation in pensions
This applies both to pensions in payment and to those currently deferred. Increases may be guaranteed and/or discretionary. Inflation risk is largely unrewarded but can be difficult to hedge with precise symmetry as the pension indexing is often ‘limited price indexation’ (LPI) which may, for example, have a floor of 0% and a cap of 5% per annum. These affect the real and nominal value of future pension payments.

2.4 Other risks
As well as the investment/liability risks there are several other risks that the company is exposed to either directly or indirectly. Each company should review its own risks carefully. Some of the more notable are as follows:

2.4.1 Pension scheme operational risk
As suggested in ‘The need for guidance’ (page 6), the sponsoring company – quoted or otherwise – would be well advised to review the risks and controls in the context of the Turnbull Guidance. The company is exposed to operational risk within the scheme and the associated fund which could result, for example, in monetary loss, damage to brand and/or reputation, and adverse impacts on employee relations. The Regulator published a code for internal control to provide trustees with guidance on their duty to establish and operate adequate internal controls. The code aims to ensure that schemes are administered and managed in accordance with both the scheme rules and the relevant legislation and to assist trustees in developing a risk management framework. The company needs to do likewise, but with a focus on risks and controls which are relevant to the company rather than the trustee.

2.4.2 Pension funding risk
If the relationship between the sponsoring company and the pension fund is not well managed, there are risks that the trustees will choose to exercise their powers – which are now strongly backed by the Regulator.

A substantial minority of schemes have contributions set solely by the trustees and finance directors must look at the detail of the Trust Deed and other documents to understand the worst case scenarios.
In a good relationship, trustees will work with the company on a basis of shared interests – which is also the ambition of the Regulator. However, trustees are generally far more risk averse than the company. Therefore, if their confidence in the company deteriorates, then they would probably want to target a funding level closer to the buy out valuation with the assets largely invested in bonds.

2.4.3 Regulatory risk
The PPF payouts are capped in absolute and percentage terms, real and nominal, with different levels for pensions in payment, active and deferred members. Over time it may be that political pressure results in stricter regulation and improved payouts. Different scenarios may need to be taken into account, in particular the possibility of funds being required to equalise Guaranteed Minimum Pensions for male and female members.

2.4.4 Financial reporting risk
This is particularly relevant at the moment as the ASB and the IASB have both instigated research projects on accounting for post retirement benefits. There is more information on financial reporting in Sections 1.5 and 5.2 (pages 11 and 33) and in Appendix 1 A1.5 (page 48).
As an example, Pensions Capital Strategies estimated that at the end of September 2007 there were four companies in the FTSE100 with FRS17/IAS19 pension liabilities in excess of their equity value:

<table>
<thead>
<tr>
<th>Company</th>
<th>Market capitalisation (£m)</th>
<th>Pension liability (£m)</th>
<th>Pension deficit (£m)</th>
<th>Liability (%)</th>
<th>Deficit (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Airways</td>
<td>4,416</td>
<td>14,610</td>
<td>(1,294)</td>
<td>331</td>
<td>(29)</td>
</tr>
<tr>
<td>BT</td>
<td>24,828</td>
<td>38,779</td>
<td>(389)</td>
<td>156</td>
<td>(2)</td>
</tr>
<tr>
<td>ICI</td>
<td>7,796</td>
<td>9,198</td>
<td>(1,159)</td>
<td>118</td>
<td>(15)</td>
</tr>
<tr>
<td>BAE Systems</td>
<td>17,310</td>
<td>17,456</td>
<td>(3,167)</td>
<td>101</td>
<td>(18)</td>
</tr>
</tbody>
</table>

Much attention focuses on the surplus or deficit of a pension scheme. However, to sensibly understand the underlying exposures, the assets and liabilities need to be analysed on a gross basis, before being offset. There is often only a very low or even inverse correlation between movements in the values of the assets and liabilities, so an emphasis on the surplus or deficit can be misleading. Although current UK GAAP and US GAAP do not allow the gross assets and liabilities to be incorporated in the sponsoring company’s balance sheet except in the notes, this, and a comparison against the market capitalisation and/or the enterprise value of the company, does put the risks in context, particularly for a non-financial audience.

As an example, Pensions Capital Strategies estimated that at the end of September 2007 there were four companies in the FTSE100 with FRS17/IAS19 pension liabilities in excess of their equity value:
3.1 Valuation of the liabilities – the discount rate

There are several different bases for estimating the present day value of the pension fund liabilities. Each has a role to play in evaluating the position of the pension fund. The most important, of a multitude of approaches, are as follows:

3.1.1 Accounting valuation

The UK Financial Reporting Standard 17 (FRS17) and International Accounting Standard 19 (IAS19) are the accounting treatments whereby the liabilities are discounted at the interest rate on a corporate bond of AA quality (FRS17) or of a high quality corporate bond (IAS19).
Managing the corporate risk

3.1.2 ‘Buy out’ valuation
The buy out/solvency approach is where the value of the liabilities is based on what an insurance company would require to be paid to take on the liability. The effective discount rate will be below the gilt rate, reflecting low investment risk, prudent mortality assumptions and the cost of the additional capital reserves required by the FSA. The resulting liabilities are also known as a ‘section 75 valuation’ (Pensions Act 1995, as amended).

3.1.3 Pension Protection Fund valuation
The Pension Protection Fund valuation is otherwise known as a ‘section 179 valuation’ (Pensions Act 2004). This allows for the reduced pension benefits available to members if the scheme is under the regime of the PPF but, typically, discounted using an index-linked gilt yield less one half of a percentage point. This is a proxy for what would have to be paid to an insurance company to meet this lower future stream of benefits.

3.1.4 Scheme specific valuation
Each scheme is now required to assess their liabilities, also known as ‘Technical Provisions’, on a prudent basis that reflects the underlying strength of the sponsoring company’s covenant. Although the discount rate used for this purpose can anticipate some outperformance of the assets over gilt rates, it must nonetheless be prudent. Typical rates for an ongoing valuation would be gilts plus 0.5% for post retirement benefits and perhaps gilts plus 1.5% for pre-retirement benefits.

These various methods can give rise to quite significant differences in values.

Generally it is accepted that the liabilities have characteristics like bonds with a similar interest rate profile. Some, however, would still argue that the liabilities are more like equities on the grounds that the shares of national income going to labour and capital are fairly stable in the long run, implying that wages (the return to labour) and dividends (the return to capital) will be highly correlated with each other over the long term. Counter to this, prudence would suggest using a risk-free return (such as that on long term government bonds) on the grounds that this is the only return that can be prudently anticipated in advance.

Whilst there remains an ongoing debate over which discount rate should be used to value the liabilities, a change in the discount rate does not mean there is a change in the long term liability in terms of future cash flows but only in their present day valuation. This is an important point to understand in the context of risk management. The most valid measure of the liability is the expected undiscounted cash outflows.
A deficit may be of less concern to both the board and trustees if the sponsoring company has a strong covenant and/or collateral backing, and where the plan is for the deficit to be closed by higher returns from the assets held.

Although there has been a move away from using the best estimate/expected return on assets to discount the liabilities because this is now widely recognised not to be sufficiently prudent for calculating the technical provisions, there is a logic to anticipating the expected return from certain assets when constructing deficit recovery plans or calculating the financing credit in the income statement. However, it is essential that recognition is given to the risk that the returns on assets may not be achieved for whatever reason.

There are instances when the present day valuations do become of economic significance, for example, in a merger or acquisition. In these cases, defined benefit liabilities can be under priced and risk leading to flawed corporate decision making. Indeed, there is a view that the buy out cost, which is essentially a ‘risk free’ valuation, is the true measure of the economic cost of the liabilities and trustees will often insist on a cash contribution to increase the funding level if they consider the covenant of the sponsoring company will be weakened by the merger or acquisition, e.g. the Qatari-backed Delta (Two) bid for Sainsbury’s.

A deficit may be of less concern to both the board and trustees if the sponsoring company has a strong covenant and/or collateral backing, and where the plan is for the deficit to be closed by higher returns from the assets held. In this case, the ‘deficit’ calculated under FRS17/IAS19 is in part the valuation of the future out-performance required over the AA corporate or high quality bond rate used to discount the liabilities. However, in such circumstances, the company may be missing out on an opportunity to enhance shareholder value by deploying a more tax efficient capital structure that could result from a reduction in the pension deficit and an increase in other corporate debt, see Section 4.2.1 (page 27).

Standard & Poor’s uses the FRS17/IAS19 measure of the deficit and treats unfunded pension liabilities as debt-like in nature. In theory, this would mean that swapping debt for a pensions deficit would have no implication for the credit rating and this appeared to be borne out by experience at General Motors in the US and Marks & Spencer in the UK. However, whether this would apply to all companies is a moot point.

PricewaterhouseCoopers LLP undertook some research for the Regulator and in November 2005 published ‘Paying off Pension Fund Deficits – Impact on company behaviour, share prices and the macro-economy’. They used a regression analysis with changes in equity beta linked with pension fund deficits for the 245 companies with occupational pension schemes in the FTSE350 (for which they had data). This analysis produced an estimate that around 75% of the average deficit was already factored in. The standard error on the coefficient was large, but on their model they were 96% confident that the effect of pension fund deficits is at least half factored into the share prices of these companies. An alternative analysis, based on net-of-tax deficit, suggested that the deficit may already have been factored in.
3.2 Analysis – tools and techniques

3.2.1 Cash flow modelling
Cash flow modelling is particularly useful where it is intended that cash flow liabilities are matched by assets.

Insight can be obtained by detailing year-by-year forecasts of future cash outflows for payment of pensions and setting these against expected cash flows derived from the return on assets held, realisation of assets, and employer and employee contributions. This provides a framework to identify funding gaps and enable some risks to be modelled. Organisations need to meet the cash flow commitments whether or not the present value can be calculated accurately. For schemes with a long duration of liabilities there are limitations in that the important (and often costly) cash flows are those which may not occur until over 30 years in the future and it is these cash flows that are most subject to uncertainty.

The finance director may need to use such modelling – or ask the adviser to do so – so as to understand the sensitivity of the cash flows to the assumptions. Slight variations can have disproportionate impacts. Much of the traditional analysis has tended to be undertaken using averages and point estimates and there is now a requirement for more sophistication.

3.2.2 Value at risk (VaR)
If there is any significant mismatch of assets and liabilities where risk is being taken on to try and achieve higher returns, then VaR is a very useful approach. A finance director of any company where there is a significant risk associated with a defined benefit pension scheme needs to understand the basics of VaR.

These techniques were originally developed by the major banks and insurance companies for assessing the risks in their own books of assets and liabilities, beginning with the banks’ trading book exposure to interest rate and currency risks. In applying these techniques to the risk in the banks’ own pension funds there have been cases where the pensions risk has been found to be a multiple of those in their own dealing rooms worldwide. The techniques are also used by financial regulators to determine the level of regulatory capital for banks and insurers.

Actuaries, investment banks and other advisers can undertake the modelling but the finance director and, in turn, the board and pension fund trustees, need to understand and act on the outcomes. Ideally the pension fund risk should be analysed alongside similar corporate risks which the sponsoring company is exposed to, such as default risk, currency risk and interest rate risk.

A finance director can and should set out a framework in conjunction with the actuary to better understand these risks. An example of such a framework is set out in Appendix 3 on (page 54) along with some of the potential shortfalls.
4 Managing the risks

4.1 The liabilities

4.1.1 Pay an insurance company to take on the risk

A ‘buy out’ effectively removes the problem (subject to any reputational or contingent risk should the transferee fail) but at a high cost. The level of cost is indicated by the section 75 valuation and the difference between this and the IAS19/FRS17 valuation will have to be recognised in the accounts if and when a buy out decision is taken, just like a restructuring decision. Until recently there have only been two major players in this market – Prudential and Legal & General. Many others are now in, or entering, the market including Paternoster, Aviva, Aegon, American International Group, Pensions Insurance Corporation, Synesis Life and Goldman Sachs. Goldman was quoted by the Financial Times (Felsted and Larsen, 26 September 2006) as saying that ‘companies will face growing pressures from regulators and trustees to find a permanent solution to their pension fund deficits – especially if they are the subject of a leveraged takeover’. The costs can appear to be relatively high as the acquirers’ focus is on covering risks, particularly longevity, prudently as well as building in a profit margin.

This increase in activity in the market caused David Norgrove, chair of the Pensions Regulator, to issue a statement on 9 October 2006 (entitled ‘Abandonment of pension liabilities’), within which he said:

‘While we generally welcome innovation that helps employers and trustees manage risks better, we do not consider that abandonment of a scheme by its employers is usually in the best interests of scheme members unless the full section 75 debt is paid. Our position remains that the best means of delivering pension scheme members’ benefits is for the scheme to have the continued support of a viable employer.’
There are alternatives to a full buy out such as a phased approach where the Scheme buys a series of bulk annuity contracts to match out first the pensioner liabilities, then the deferreds and finally the active member benefits. Once this has been completed, the contracts can be assigned to the individual members and the Scheme wound up.

There has still been little activity regarding larger schemes. However, the Financial Times (19 October 2007) recently cited: ‘... PwC’s (PricewaterhouseCooper’s) regular survey of 193 companies, 45 of them from the FTSE 100, showed in July that a quarter now say they are considering a buy out of some or all of their pension liabilities – funding the benefits in full and selling the liability off, usually to an insurance company. The move guarantees members their accrued rights, while removing the possibility that they could get more or less if the scheme stayed open.’

4.1.2 Liability management
Perhaps a more controversial way of reducing risk associated with past service benefits is a liability management exercise. The Pensions Regulator (2007) defines these as ‘... where an employer offers scheme members a financial inducement to transfer out of a defined benefit occupational pension scheme or to accept a reduction in benefits’. In January 2007, the Pensions Regulator published guidance on the inducement offers for employers, trustees and scheme members and this has provided a framework for a number of large funds to carry out a successful exercise. The Pensions Regulator has, however, expressed concern that some transfers are being proposed to avoid an employer’s full pension liability. Tony Hobman, Chief Executive of the Pensions Regulator, stated that ‘trustees, in particular, have a duty to scheme members to take whatever steps they can to help ensure that members recognise the full impact of what is being asked of them. This should include encouraging members to take independent financial advice and to consider carefully the current and prospective funding position of the scheme.’

4.1.3 Scheme closure
One way to limit future exposure to increasing liabilities of defined benefit (DB) schemes is to close the scheme. For example, many companies have now closed their schemes to new entrants. An alternative option, which some companies have taken, is to go further and close schemes for any future accrual of benefits by existing members. Typically, a company will then offer a defined contribution (DC) scheme which reduces the risk to the employer.

In theory, negotiations with the trustees to close a scheme should be relatively straightforward since the trustees’ responsibilities are with regard to the existing accrued benefits rather than to those accruing in the future. However, in practice, there are likely to be a range of different interests in the trustee group, such as those concerned over future benefits, which may need to be addressed.
Closure of a scheme to new entrants can present a challenge to management as it can result in two ‘groups’ of employees. Two employees may be paid the same cash compensation for a job but one is a member of a DB scheme and the other is a member of a DC scheme. Typically, a DB scheme is more rewarding for the employee and more costly for the employer.

The closure of a scheme focuses attention on the funding issues as there are no new entrants. Where total closure arrests any future accrual of benefit, no further regular contributions will be made unless there is a deficit. In effect, the pension fund then becomes what is known as a ‘closed’ fund. Typically it will lead to a more restricted asset allocation, with an emphasis towards bonds and away from equities.

4.1.4 Change in scheme benefits and/or employee costs

An alternative to the two options for closure is to change the level and type of benefit. It must not be forgotten that a DB scheme is often a major benefit to employees. One way forward might be to use a ‘menu’ or ‘total reward’ package approach to employee benefits. For example, an employer could offer a package of £50,000 and the employee could choose how the remuneration is distributed between salary, pension, health and other benefits. This could still include a defined benefit scheme but, perhaps, with a higher rate of employee contribution – the choice of the weighting in the overall package would therefore be down to the employee.

Set out below are some examples of schemes which have changed benefits:

- **BAE Systems** has come to an agreement that employees will share funding of any increased liability arising from longevity, with staff funding 40% of any increase.
- **EDF Energy** has opened a new final salary scheme after having closed four existing schemes. In the new scheme, benefits are based on one-eightieth accrual rates per annum but employees can change the benefit level by increased contributions. They offer options of accrual rates of one-seventieth, one-sixtieth and one-fiftieth.
- **Scottish & Newcastle** has replaced its previously non-contributory final salary scheme with one requiring employees to contribute 6% of pay.
- **Sainsbury’s** introduced a career average option in 2001. Further changes were introduced in 2006 with the choice to increase contributions by an average of three percentage points of pay to retain benefits. The alternatives on offer were to maintain or reduce contributions and move to reduced benefit scales.
- **The Co-Operative Group** merged its three final salary schemes into one which now offers a career average scheme.

Different solutions will obviously suit different companies depending on characteristics and circumstances such as salary levels, staff turnover, age profiles and the competitive environment.
4.2 Investment strategies

4.2.1 General
The government has tended to encourage investment in pension funds by providing tax benefits for both individuals and companies (albeit reversed by the abolition of the tax credit). For tax reasons, borrowing to invest in the pension fund can have a favourable impact on the sponsoring company’s post tax profit. The tax benefit arises from the interest payment on corporate debt being tax deductible whereas interest earned in the pension scheme is tax free. As a simple example, if a company can borrow funds at 6% (and get, say, a 30% deduction on the interest) its net cost will be 4.2%. If the money is invested in the pension scheme and earns 4.5% gross then there is value generated to the extent of 0.3% of assets per annum. There may also be savings in the pension protection levy payable. This tax arbitrage is relevant to a one-off contribution as well as to regular contributions.

The pension fund can be viewed as a hedge by the company of its liabilities as well as security for the members of the scheme. However, as demonstrated in Section 2 (pages 13-18), it is difficult to match the financial risks exactly and longevity is less susceptible to hedging. The board of the sponsoring company (as well as the trustees) need to determine their ‘risk appetite’ or ‘risk budget’ to give a context within which the risks of different asset allocations can be reviewed.

As shown in the example in Appendix 3 A3.1.1 on (page 56) the process will inevitably be iterative.

There are three key connected questions that need answering. What level of funding should there be and what type of assets should be held over what time period? Inevitably this has to be seen in the context of the factors set out in Section 1 (pages 8-12) – particularly the requirements of the Pensions Regulator.

4.2.2 The equity/bond/property allocation
Traditionally, funds have had a mix of mainly equities, bonds and property. The nature and extent of existing and future liabilities is a critical consideration in determining the asset level and type. In a mature scheme which will have no new members and is unlikely to have many employer contributions going forward, the objective will be higher funding and less risky assets. Most reasonable sized funds still have an element of more risky assets in their portfolio.

The National Association of Pension Funds published its Annual Survey in January 2008. The survey found that 55% of defined benefit assets in the sample are invested in equities, down from almost 60% in 2006 with 29% in fixed interest assets, up 3%, and 16% in alternatives and cash up, 2%. www.napf.co.uk/publications/researchreports.cfm
To an extent, the proliferation of deficits will mean that company management might want a high equity mix because to move significantly into bonds would reduce the opportunity for out-performance in the future and deficit recovery will rely more heavily on additional contributions from the company. This must, however, be judged against the inherent risks as set out in Section 2 (pages 13-18). There is also an accounting issue in that financial reporting standards currently tend to use the expected return rather than the actual return experienced in the income statement. Other things being equal, a higher return can be reflected in accounting for pensions if there is a higher level of equity investment.

In the more sizeable funds there needs to be an analysis based on the tools and techniques featured in Section 3.2 (page 23) and Appendix 3 (page 54) along with sensible and well informed discussions with the trustees. Once a funding objective has been agreed, the sponsoring company and the trustees need to agree a risk framework for managing the deficit recovery which provides clear limits outside of which both parties agree to take corrective action, such as a change in the contribution schedule. The funding strategy should be clearly set out and documented, not least for the purposes of the Regulator.

4.2.3 Diversification approach

Funds are now often looking to diversify their growth asset allocation rather than relying just on equity and property. A wide range of asset classes are being considered including commodities, hedge funds, currency management, private equity and infrastructure. Often the target is now an absolute return expressed as a range of basis points over LIBOR, rather than the more traditional out-performance against an index.

As an example, in September 2006, BT’s pension scheme, which is managed by Hermes, was reported to be switching about a third of its equity holdings – about £3 billion – into alternative assets. This will result in the scheme’s holdings in private equity, hedge funds, infrastructure projects and commodities rising from 7% to 15% of the portfolio.

4.2.4 Liability Driven Investment (LDI)

The larger and more sophisticated funds are also looking to Liability Driven Investment (LDI) as an option. This is much more explicit in linking the mix of assets to the cash and risk profile of the liabilities and thereby acting as a more effective hedge.

The LDI analysis would build on the liability cash flow analysis and VaR set out in Section 3.2 (page 23) and Appendix 3 on (page 54). The cash flows would be separated to the extent they have different characteristics – such as index linking or Limited Price Inflation (LPI). The cash flows can be modelled for different scenarios and a matching asset portfolio constructed to track the behaviour of the liabilities.
Managing the corporate risk

Whilst the gilt market offers one form of asset that will help matching, there is currently a shortage of long term gilts to match, to the extent possible, the long duration of the pension liabilities. The UK Debt Management Office has responded to this shortage by issuing ultra-long 50-year nominal and index-linked gilts which has helped, in part, to meet the demand. Most LDI strategies therefore also include an element of hedging through the interest rate and inflation swaps markets. These can be used to match liability cash flows, adjust exposures and overlay asset portfolios. There will still remain credit risks relating to counterparties which need to be taken into account.

The LDI will require specialist active management not least to monitor and adjust for demographic factors which are difficult to hedge, but also where a funding gap needs to be reduced by a, hoped for, element of out-performance.

An example of the use of LDI is WHSmith which in 2005 moved to an LDI structure for 94% of its pension fund.

As summarised in WHSmith’s preliminary results announcement (12 October 2006):

‘In September 2005, the Company and the Trustees of the WHSmith Pension Trust agreed that they would adopt a new investment policy in order to substantially reduce the volatility in the underlying investment performance and the risk of a significant increase in the deficit in the defined benefit fund. The assets in the investment fund were restructured in order to adopt this policy. This involved the assets being invested such that they are expected to alter in value in line with changes in the pension liability caused by changes in interest and inflation.

The key features of this fund restructuring are as follows:

• 94% of the fund’s assets are invested in an LDI structure with a leading international institutional fund manager.
• 6% of the fund’s assets are invested in a portfolio of long-dated equity call options. These represent a notional exposure to underlying equities of some £350m.

The impact of this change in investment policy is to substantially reduce the volatility in the fund and the resultant risk of a significant increase in the overall deficit whilst enabling the fund to continue to benefit from any potential higher returns in the equity markets.’
The use of such complex LDI structures is increasing, with the main providers including Axa, IM, Barclays Global Investors, State Street Global Advisers (who manage the WHSmith scheme) and Merrill Lynch. Smaller fund managers are also entering the field and pooled funds are being made available to smaller clients. However, it is important to note that if the investment strategy is ‘least risk’, then the only way to improve the funding level is through additional contributions.

It is a sophisticated area that inevitably requires specialist advice along with good relationships between the sponsoring company, trustees, actuaries, fund managers and others. An appropriate governance structure will need to be established to ensure effective monitoring and oversight.

In October 2006, the Pension Protection Fund published its 2006 statement of its own investment principles. This employed a liability driven approach with 70% invested in cash and bonds and 30% in equities, property and currency.

The PPF was going to use derivatives to adjust assets to:

- better match the Fund’s liability profile
- reduce the impact of unrewarded risks, such as interest rate and inflation risk
- provide some protection against a fall in equities.

Whilst some may view this as a blueprint for how pension schemes should invest their own assets, the chief executive of the PPF, Partha Dasgupta, was reported in the Financial Times (Cohen, 9 October 2006) saying that because the PPF is more like an insurer than the pension scheme of an employer with a strong covenant, he did not expect the strategy to be widely replicated by pension funds.

It should also be noted that timing is a key point – there is a risk in adopting an LDI strategy that the ‘lock-in’ might preclude any improvement that could have been generated by return seeking assets.

4.3 Conflicts of interest

It might seem that the relationship between the sponsoring company and the trustees could be enhanced if the finance director or the corporate treasurer also acts as a trustee so bringing their knowledge of financial management to the discussion. It is likely that the finance director and/or corporate treasurer will play a pivotal role in the relationship but there are potential conflicts of interest in having a fiduciary duty to both the sponsoring company and the trust company/members. This would be a particular issue should there be negotiations between the company and the trust over, say, a Type A event. The Pensions Regulator recognises this and recommends that employers and trustees should plan in advance for when a conflict arises.
Reading into other comments from the Regulator suggests that it is nearly impossible in most circumstances for the finance director to be a trustee – particularly if there is a deficit – and it is probably undesirable for all concerned. For example, the Regulator states that ‘trustees should learn from the way a bank with a large unsecured loan would look to negotiate with a company’. It is difficult to see how a finance director could negotiate the terms of a commercial loan with him/herself, and even if this were possible, which it is not, it is also important to avoid any perception that there is a conflict of interest. Perceptions can be as damaging to the reputation of an organisation as an actual conflict itself.

Real problems also arise in disclosure of information held. For example, where the finance director has knowledge in his capacity as a Board member which is relevant to his role as a trustee but he is unable or unwilling to share this information with his trustee colleagues. There is a clear conflict of interest and the finance director could well be open to criticism from members for not sharing this information if this resulted in the trustees not being able to act in the best interests of members.

CIMA’s view is that no director of a company should be a trustee of the sponsored scheme as the risk of potential conflicts of interest is just too high.

In general, most employee trustees are still drawn from the active members. Retired senior management may be in a good position to act as trustees since they are less likely to face conflicts of interest.

There are also potential conflicts of interest regarding restrictions and limitations of the advice that the scheme’s actuary can provide. It seems likely that professional guidance will soon be issued, making it increasingly difficult for the scheme actuary to advise the sponsoring company.

For smaller companies this could result in a disproportionate increase in costs. Whilst the actuary advises the scheme, one pragmatic solution might be to also give advice to the sponsoring company. All parties would have to agree, however, that if a conflict arose then the actuary would advise the trustees alone with the sponsoring company having to seek alternative adviser(s).

In February 2008, the Regulator published a consultation document on guidance relating to conflicts of interest. This is designed to help trustees of occupational pension schemes assess the adequacy of governance arrangements they put in place to manage conflicts of interest.
5 Reporting on the management of the risks

5.1 Internal reporting
Historically, there has typically been a full actuarial valuation of a scheme every three years. This is now the minimum specified by the Regulator. Between these formal valuations, the actuaries can readily update scheme funding reports by rolling forward the calculations to take into account changes in inflation, interest rates and even mortality assumptions. Provided there has not been a major change in the structure of the membership, this can provide a reasonably accurate update of the value of the liabilities. Where undertaken for the scheme, the summary results of stress testing and stochastic analysis such as ‘value at risk’ (VaR) should be reported to the sponsoring company’s board as well as the trustees.

Thus, real-time reporting now exists for changes in the financial parameters but there is a need to determine the key issues that the sponsoring company should track. It is important to remember that measurement is not the full picture, and organisations need to act on information and analysis – this, in turn, will determine how organisations report.

As identified in Section 3.1 (page 20), a company will need to monitor and understand a number of different measures – FRS17/IAS19, section 75, section 179, ongoing valuation as well as the cash flows and risk analysis underlying the funding strategy. This also needs to be set in the context of the Regulator’s focus on scheme specific funding.

One of the key things which companies will have to monitor is progress towards the agreed funding objective, i.e. the deficit recovery plan which will have been negotiated as part of the actuarial valuation exercise. As discussed earlier, a good risk based approach should have set an acceptable ‘corridor’ for the development of the funding level over the recovery period and if the funding level tracks outside of this corridor for more than, say, four consecutive quarters, it will trigger a review of contributions. If it drops below the corridor, contributions would be increased. Conversely, if the funding level tracks above the corridor, contributions would be reduced.
5.2 External reporting
The financial reporting for pensions in the sponsor’s financial statements is briefly summarised in Section 1.5 (page 11) and Appendix 1 (page 37). Companies that aspire to progressive best practice reporting should consider reporting more fully on their management of the risks inherent in their pension scheme(s). This would summarise the material issues arising from the more comprehensive disclosure now being suggested by the Accounting Standards Board (ASB), much of which would be included in the notes to the financial statements. More information on material matters could also be included in the required Business Review or in a voluntary Operating and Financial Review.

As well as the more comprehensive disclosures proposed under FRS17, which will include mortality rate assumptions, the ASB recommend the following further disclosures:

- Information that enables users of the financial statements to understand the relationship between the entity and the trustees (managers) of the defined benefit scheme. This information would allow users to understand how an entity is able to manage its affairs with the scheme including any constraints placed on the entity through powers delegated to trustees (managers).
- Information about the principal assumptions such that users of financial statements can understand the inherent uncertainties affecting the measurement of scheme liabilities.
- A sensitivity analysis for each of the principal assumptions used to measure the scheme liabilities.
- Information about the method of measurement used to measure scheme liabilities.
- Information that enables the users of the financial statements to evaluate the funding obligations an entity has for defined benefit scheme liabilities.
- Information that enables users of financial statements to evaluate the nature and extent of the risks and rewards arising from the assets held by the defined benefit scheme.

CIMA is a member of a Report Leadership group along with PricewaterhouseCoopers and Radley Yeldar. The group has published some examples of improved disclosure, including that of pensions. The report is available at www.reportleadership.com
The UK Financial Reporting Review Panel (FRRP) recently undertook a review of existing pensions’ disclosure in 2005 under IFRS and UK GAAP. This covered 20 listed groups and ten large private companies. The FRRP was encouraged by the high level of compliance with the detailed requirements although it noted some omissions. In particular, it reported that the quality of pensions’ reporting could be improved by:

- better disclosure of the uncertainties surrounding accounting estimates
- more consistent interpretation of what is meant by principal assumptions
- a focus on more accessible and less technical explanations
- more information about the non-standard types of assets held
- avoiding detailed disclosure of immaterial amounts.

The Financial Reporting Review Panel undertook a follow up review looking at the same 20 listed groups and comparing their disclosures to those made in 2005 (FFRP Press Notice 105). It concluded that there were improvements in disclosures about mortality assumptions and in the provision of sensitivity analysis. There was, however, limited improvement in disclosures about maturity of funds and no evidence of expanded information about assets held within the funds or about how expected returns were calculated.

Pensions accounting will continue to evolve particularly in response to the ASB’s publication in January 2008 of a Discussion Paper, *The Financial Reporting of Pensions*. In October 2006, the IASB also announced the formation of an international working group to advise on accounting for employee benefits.
References and further information

Accounting Standards Board: www.frc.org.uk/asb
CIMA: www.cimaglobal.com/pensions
Financial Reporting Council: www.frc.org.uk
International Accounting Standards Board: www.iasb.org.uk
National Association of Pension Funds: www.napf.co.uk
Pension Protection Fund: www.pensionprotectionfund.gov.uk
Report Leadership: www.reportleadership.com
The Pensions Regulator: www.thepensionsregulator.gov.uk

Felsted, Andrea and Larsen, Peter Thal (26 Sept 2006), Goldman seeks move into corporate pension schemes, Financial Times.
Financial Reporting Council (Oct 2005), The Turnbull Guidance on Internal Control.
Mercer Investment Consulting (Oct 2005), Interest rate hedging for defined benefit pension plans – A primer.
National Association of Pension Funds (Jan 2008), The NAPF Annual Survey 2007.
Pension Capital Strategies (Oct 2007), The FTSE100 and their pension disclosures, A quarterly report.
PricewaterhouseCoopers (Sept 2006), Deficits remain acute issue for pension schemes a year into the new funding regime.
PricewaterhouseCoopers (Nov 2005), Paying off pension deficits – impact on company behaviour, share prices and the macro-economy.
The pension liability

The Pensions Regulator (Apr 2005, Sept 2007), Clearance statements, 
Guidance from the Pensions Regulator.

The Pensions Regulator (2006), Trustee knowledge and understanding.

The Pensions Regulator (Feb 2006), Funding defined benefits.

The Pensions Regulator (Apr 2006), Medium term strategy.

The Pensions Regulator (May 2006), The regulator’s statement, How the Pensions Regulator will 
regulate the funding of defined benefits.

The Pensions Regulator (Oct 2006), Abandonment of pension liabilities.


The Pensions Regulator (2007), Regulatory guidance, scheme specific funding, technical queries.

The Pensions Regulator (Jan 2007), Inducement offers.

The Pensions Regulator (3 May 2007), Regulator reinforces guidance for trustees on abandonment 
(press release)

The Pensions Regulator (3 May 2007), Regulator issues reminder on clearance guidance 
(press release)

The Pensions Regulator (10 Sept 2007), Pensions Regulator publishes revised clearance guidance 
(press release)

The Pensions Regulator (26 Sept 2007), Regulator publishes first analysis of recovery plan data 
(press release)

The Pensions Regulator (2008), Good practice when choosing assumptions for defined benefit 
pension schemes with a special focus on mortality, consultation document.

The Pensions Regulator (2008), Conflicts of interest.

Timmins, Nicholas (19 Oct 2007), Employers want rid of pension liabilities, Financial Times.

WHSmith PLC (12 Oct 2006), Preliminary Results Announcement for the twelve months ended 
31 August 2006.
Appendix 1
The current regulatory framework in more detail

A1.1 General information
There has been a sea change in the regulation of pension schemes and their funding since a number of companies ‘walked away’ from their pension commitments – one notable example being Allied Steel and Wire in 2002.

Since 11 June 2003, changes in legislation have meant that no solvent company can walk away from a defined benefit pension scheme. Should a solvent company wind up a scheme then there is debt on the employer equal to any shortfall of assets against the full buy out cost. In addition, the Pensions Act 2004 moved the regulatory framework from a focus on Minimum Funding Requirements to one of scheme specific funding. The full buy out cost is otherwise now known as a ‘section 75 valuation’ of liabilities (Pensions Act 1995, as amended), being the funding estimated by the actuary as the amount needed to secure the pensions promised with annuities from an insurance company.

Care also needs to be taken under multi-employer schemes where a section 75 debt could be triggered by the sale of a business or a restructuring if one of the employing companies leaves the scheme, i.e. an ‘employer cessation event’. The Regulator has issued specific guidance on ‘multi-employer withdrawal arrangements’.

From an economic perspective, pension obligations now have similar characteristics to corporate debt such as bank borrowing. A company’s obligation to pay £1,000 in ten years’ time to a creditor is (on an economic basis) now little different from its obligation to pay £1,000 (via the pension scheme) to a pensioner in ten years’ time albeit the latter is dependent on inflation and mortality assumptions.

The Pensions Regulator (‘the Regulator’) was established by the Pensions Act 2004 which set the following statutory objectives:

• to protect the benefits of members of work-based pension schemes
• to promote good administration of work-based pension schemes
• to reduce the risk of situations arising that may lead to claims for compensation from the Pension Protection Fund (PPF).

In pursuing these objectives, the Regulator has published guidance on two key aspects which have a significant impact on corporate risk management and the ability of a company to implement its chosen strategy. The guidance on ‘notification and clearance’ and ‘funding defined benefits’ are particularly relevant and are summarised below. These are covered in more detail in guidance published on the Regulator’s website at www.thepensionsregulator.gov.uk
A1.2 Notification and clearance

Section 69 of the Pensions Act 2004 introduced the concept of ‘notifiable events’. These are defined in The Pensions Regulator (Notifiable Events) Regulations 2005. Some are for the trustees to report and these are not covered here.

The employer must report:
- employer trading wrongfully
- conviction of senior personnel
- decision not to pay debt to scheme
- decision to cease business in the UK.

Subject to certain conditions, the employer may be required to report:
- breach of banking covenant
- change in credit rating
- change in senior personnel
- decision to relinquish control of employer.

The purpose is to give the Regulator early warning of a possible call on the PPF so reducing the risk of compensation becoming payable. In extreme circumstances, the Regulator can intervene to reduce the chance of the PPF being involved and improve the security of future benefits for members. It can do so by issuing ‘contribution notices’ and ‘financial support directions’ (FSD) against the employer to pay sums into the scheme or make other suitable arrangements. A recent example of this was the FSD issued to Sea Containers Ltd in respect of Sea Containers Services Ltd, the principal employer for its UK pension schemes. The Regulator has also used its powers to appoint three independent Trustees to the GEC 1972 Plan in the context of a bid for its employer, Telent plc, by Pensions Corporation LLP.

After feedback from consultation, a statutory clearance procedure was introduced which is set out in Guidance on Clearance Statements published in April 2005. The intention is that those concerned could gain assurance via a clearance statement that the action they plan would not result in the Regulator imposing an order that required them to put more money into the fund. It should be noted, however, that clearance is a voluntary procedure. There is no compulsion on companies to obtain clearance before entering into a transaction.

The Regulator states that clearance might be appropriate for a ‘specified event’. This is defined as ‘an event which is financially detrimental to the ability of a defined benefit scheme to meet its pension liabilities’.
To be ‘financially’ detrimental there must be a deficit. The Regulator deems the relevant basis to
determine the deficit for clearance purposes as the level measured in accordance with Financial
Reporting Standard 17 (FRS17) set by the UK Accounting Standards Board (ASB) or International
Accounting Standard 19 (IAS19) set by the International Accounting Standards Board (IASB),
unless:

- the trustees have fixed a higher funding level
- there is no relevant FRS17/IAS19 valuation
- there is a question over the continuation of the employer as a going concern.

Specified events are also categorised by the Regulator as ‘Type A’ events where it may be
appropriate to seek clearance.

The Regulator’s guidance gives some examples including:

- change in priority with a change in the level of security given to creditors such as granting a
  fixed or floating charge
- return of capital which would result in a reduction in the overall assets of the company which
  could be used to fund a pension deficit
- change in control structure which could reduce the overall employer covenant.

Application for clearance should ‘contain concise, relevant and accurate information to enable the
Regulator to reach a properly informed decision’.

‘Type B’ events are not generally financially detrimental to the defined benefit scheme and
clearance is not necessary unless they also include a Type A event. These include commercial
transactions taken at arm’s-length, mergers and acquisitions, fundraising and other contractual
negotiations such as lease negotiations.

‘Type C’ events are those which point towards a deterioration in the employer’s covenant and
which may or may not be within the control of the employer. These include all Type A events plus
some of the notifiable events set out above but otherwise they do not have to be drawn to the
Regulator’s attention although it may itself monitor such events for schemes considered most at
risk.

In 2006/07, the Regulator granted clearance or approved withdrawal of 175 cases and only refused
one clearance.
On 10 September 2007, the Regulator published revised clearance guidance for consultation through to 2 November 2007. This updated the guidance published in April 2005 and reflected the changes seen in the marketplace since that time. The Regulator emphasised that the guidance sets out its expectations of how professional advisers will work with trustees and employees in considering corporate events that may have a detrimental effect upon the pension scheme.

The main changes contained in the draft guidance:

• to encourage a move away from reliance on prescriptive tests in deciding which events should be considered for clearance, to a more principles based approach
• greater clarity in respect to the level of mitigation that trustees should be looking for
• simplification of the classification of corporate events, with removal of ‘type B’ and ‘type C’ events
• a fuller description of scheme related events (such as compromises and apportionment) that could be ‘type A’ events
• extension of the list of employer related events which could be ‘type A’ events
• further guidance on assessing the materiality of corporate events
• updating of the basis for assessing the relevant deficit to include a section 179 and explicit reference to technical provisions.

Paragraph 14 of the consultation draft states that:

‘Clearance applications are appropriate for all type A events. These are events that are materially detrimental to the ability of a scheme to meet its liabilities. Type A events are either employer-related events or scheme related events. Employer-related events are only type A events if the scheme has a relevant deficit. Trustees and employers therefore need to recognise and understand type A events.’

Paragraph 15 sets out guiding principles that trustees and employers should apply when dealing with events that may impact on the pension scheme, and when applying for clearance, and these are set out below.
Trustees and employers

- Trustees and employers should recognise and understand that a pension scheme in deficit should be treated in the same way as any other material creditor.
- Trustees should recognise and understand their powers and duties and act appropriately, including managing any conflicts.
- Trustees should consider taking independent professional advice where appropriate.
- Trustees and employers should work together in relation to events that may be detrimental to the ability of the scheme to meet its liabilities or to the benefits of the scheme members, communicating and sharing appropriate information.
- Trustees and employers should understand the nature and the impact of the potentially detrimental event and the appropriate mitigation for the event.
- Trustees and employers should recognise that the Regulator will wish to know about all events that have a materially detrimental effect on the ability of a scheme to meet its liabilities.

Earlier in the year, in May 2007, the Regulator published a reminder to parties considering corporate transactions that the underlying principle for considering clearance is whether the event is financially detrimental to the ability of the pension scheme to meet its pension liabilities.

The reminder published on the Regulator’s website stated that:

- Where there is a significant weakening of employer covenant as a result of a corporate transaction, for example where a highly leveraged transaction occurs and/or the assets for which the scheme currently has recourse are being removed from the employer group, then clearance is an appropriate consideration irrespective of the funding position of the scheme involved.
- In addition trustees in these sorts of circumstances should consider whether to seek a materially enhanced level of mitigation in excess of FRS17/IAS19.

Also in May 2007, the Regulator reinforced guidance for trustees on abandonment i.e. where the sponsoring employer severs its link with the scheme without providing the scheme with sufficient funds or assets to compensate for losing the ongoing support of its employer. The Regulator underlined the importance of understanding changes to the employer covenant and the potential impact on the pension scheme where the link with an employer of substance is removed. The Regulator again made its position clear that, in cases where there is an employer of substance, abandonment is unlikely to be in the members’ best interests.
A1.3 Funding defined benefits

In February 2006, the Regulator published a Regulatory Code of Practice on ‘Funding Defined Benefits’ and in May 2006 it published a statement on ‘How the Pensions Regulator will regulate the funding of defined benefits’. In addition, the Regulator issued some Frequently Asked Questions on scheme funding in June 2007 which were based on actual queries.

The code is directed at the trustees of all occupational pension schemes providing defined benefits but it will obviously have an impact on sponsoring companies. Combined with the Regulator’s code of practice on ‘Trustee knowledge and understanding’ it has increased the robustness of challenge and negotiation from trustees. This has a strong relevance to finance directors as they are often involved in what needs to be a professionally managed ‘arm’s-length’ relationship with the trustees. Some relevant quotes made by the Regulator demonstrate how it is encouraging trustees to act:

• a pension scheme in deficit should be treated in the same way as any other material unsecured creditor
• the pension scheme is a key company stakeholder. Trustees should be given access to information and decision makers; in return they should accept confidentiality responsibilities
• trustees should learn from the way a bank with a large unsecured loan would look to negotiate with a company
• trustees should monitor corporate activity and seek the employer’s agreement to be given information at an early stage subject to the usual restrictions such as those on handling price-sensitive information.

The Pensions Regulator, April 2005

At the same time as giving more ‘backbone’ to the trustees, the Regulator’s guidance does offer a framework within which the sponsoring company and the trustees can agree, as a partnership, a funding strategy going forward.
Managing the corporate risk

The finance director of a sponsoring company needs to be highly aware of trustees’ responsibilities to manage the relationship with the trustees. The Code of Practice on ‘Funding Defined Benefits’ has a ‘requirements at a glance’ section which details the following:

**Key elements**
- a statement of the funding principles specific to the circumstances of each scheme setting out how the statutory funding objective will be met
- periodic actuarial valuations and actuarial reports
- a schedule of contributions
- a recovery plan where the statutory funding objective is met.

**To whom do the requirements apply?**
- trustees of most private sector funded occupational schemes providing defined benefits.

**Who else needs to be involved?**
- The sponsoring employer whose agreement is generally required to:
  - the statement of funding principles
  - any recovery plan
  - the schedule of contributions.
- The actuary who will, following the trustees’ instructions:
  - prepare the periodic actuarial valuation and intermediate actuarial reports
  - provide advice about the statement of funding principles, the schedule of contributions, any recovery plan and any modification of the future accrual of benefits
  - certify certain valuation calculations and the adequacy of the schedule of contributions, or advise the Pensions Regulator of failure to do so.’

Source: The Pensions Regulator

The statutory funding objective requires a scheme to be funded to at least the level of its technical provisions. Within the Code the Regulator defines the term ‘technical provisions’ as follows:

‘The ‘technical provisions’ are an estimate, made on actuarial principles, of the assets needed at any particular time to make provision for benefits already accrued under the scheme. These include pensions in payment (including those payable to survivors of former members) and benefits accrued by other members which will become payable in the future’.
The term ‘technical provisions’ appears somewhat ambiguous. In the paper ‘Implementing the European Directive on the Activities and Supervision of Institutions for Occupational Retirement Provision: Government Response to Consultation’ published by the DTI under ‘Government response to comments’ (section 5.21), it is recognised as follows:

‘The term ‘technical provisions’ is used (but not defined) in the Directive. The Government considers that technical provisions means the amount that the trustees, on actuarial advice, judge that their scheme needs to have in its fund now to be able to meet its accrued pensions commitments as they fall due to be paid in the future as far as can be reasonably foreseen according to sufficiently prudent assumptions on factors such as investment returns, life expectancy etc’.

Regular valuations must be obtained by the trustees to check whether the statutory funding objective of funding at least to the level of the technical provisions is met. It is a legislative requirement that trustees must follow the principles set out in legislation with regard to ‘prudence’ when choosing actuarial assumptions to be used in the calculation.

However, the Regulator does state that ‘in particular, legislation does not require technical provisions to be set at the level needed to buy out the accrued liabilities with an insurance company’.

The Regulator’s long term objective is to strengthen scheme funding through the effective implementation of the scheme funding framework. It therefore expects that schemes will become progressively better funded over time. This in turn should have the effect of reducing the total risk to members’ benefits and the Pension Protection Fund (PPF). This should also reduce the PPF’s estimation of total risk used to calculate the annual levy and reduce costs to levy payers and reduce calls on the PPF.

By the end of 2009, all defined benefit schemes will have completed scheme funding valuations on the new basis, and those with a shortfall should have agreed a recovery plan which takes into account:

- prudent assumptions for estimating the value of the assets needed to cover the liabilities as they fall due
- an appropriate recognition of risks to members taking account of what is reasonably affordable for employers.
While the Regulator does have powers to intervene, its aim is for employers and trustees to work together effectively without its intervention. The Regulator’s position is that trustees should come to an agreement which takes full account of affordability for employers. In particular, the Regulator recognises that a healthy, viable, ongoing business will be in the best position to ensure its pension obligations are met in the long term. The importance of a good relationship between the sponsoring company and the trustees cannot be emphasised enough. This requires effective communication in which the finance director will play an important role. In particular, the finance director will need to ensure that trustees are made aware of possible Type A events on a timely basis as well as seek clearance from the Regulator if this is deemed appropriate.

Therefore, when considering the reasonable affordability of a recovery plan, the Regulator will pay particular attention to the future viability of the sponsoring employer, recognising the balance between paying down the pension fund deficit now and an employer investing in its business.

The Regulator portrays itself as a referee rather than a player. It sees the responsibility for ensuring that schemes are fully funded resting with trustees and employers with the help of their advisers. The Regulator will not interfere with this responsibility where it is properly discharged.

To ensure that appropriate scheme funding arrangements are put in place, the Regulator will focus on the technical provisions and recovery plans agreed by trustees and employers along with the cases where no agreement has been reached. It will consider challenging those arrangements where the technical provisions are not prudent or the recovery plan is inappropriate. In particular, it will consider the specific circumstances of the scheme, especially:

- the strength of the employer and its ability to pay off the shortfall
- the scheme’s maturity.

The Regulator defines the technical provision trigger as a range between section 179 and FRS17/IAS19 liability values, but stresses that this does not mean that either of these values is to be used as a funding target. Nor does it mean that schemes have to change their investment strategy. The use of a prudent discount rate for technical provisions does not necessarily require trustees to adopt the same assumptions for their investment strategy, so long as they are comfortable with the employer’s covenant and have allowed for the risk that the employer may not be able to cope with any adverse experience.
The Regulator states explicitly that, in setting the trigger for the assumptions underlying the elimination of the shortfall (shown in the recovery plan), it will recognise that the assumptions for the likely investment returns on scheme assets might, depending on the specific circumstances of the scheme, involve a higher allowance for equity investment than that implied by the prudent assumptions underlying the technical provisions. However, the Regulator will be on the alert for any recovery plans which do not appear to be appropriate, as well as those that appear either unrealistic or too optimistic. This will obviously put the trustees themselves on guard as they will not want the Regulator to intervene.

The Regulator flags the circumstances where a recovery plan for scheme funding is likely to trigger intervention. These will include when:

- the recovery plan is longer than ten years
- the recovery plan appears to be significantly back-end loaded (higher contributions towards the end)
- assumptions underlying the recovery plan, especially investment assumptions, appear inappropriate.

The Regulator states that it may also look at pension schemes where it believes that the employer can reasonably afford to pay off the shortfall more quickly, but in such cases it will focus its resources on schemes with weak or weakening employers.

In September 2007, the Regulator published an analysis (Recovery Plans: an initial analysis) based on a dataset of 1,292 recovery plans submitted to them by the end of July 2007. Some of the key findings were:

- The majority of trustees and employers submitted recovery plans recognising the need to make prudent assumptions for the calculation of their technical provisions - with average technical provisions coming out close to the FRS17 accounting standard and above s179.
- In only a small percentage of cases (10%) had action been escalated to a point where regulatory intervention may be required, reflecting the degree of concern about the plan submitted to the Regulator. The Regulator expected many of these to be resolved by agreements.
- Over 80% of schemes were producing plans no longer than ten years in length, with an average plan length of 7.5 years.
- The post-retirement mortality assumptions observed were predominantly based around the medium cohort adjustments to the '92' series Continuous Mortality Investigation pensioner tables.
A1.4 The Pension Protection Fund (PPF)

The PPF is a statutory fund established under the Pensions Act 2004 which became operational on 6 April 2005. Further detail is available from the PPF website at www.pensionprotectionfund.org.uk

Its purpose is to pay compensation to members of eligible defined benefit pension schemes, when there is a qualifying insolvency event in relation to the employer and where there are insufficient assets in the pension scheme to cover PPF levels of compensation.

One of the sources of funding for compensation payments is the pension protection levy. For 2008-2009 to 2010-2011, this consists of two parts:

- scheme based levy (20%) – based on the level of a scheme’s PPF liabilities
- risk based levy (80%) – based on a scheme’s under funding risk, and the insolvency risk of the sponsoring employer(s).

The overall levy is capped at 1.25% of a scheme’s PPF liabilities.

The ‘under funding risk’ is the difference between the value of the scheme’s assets and the value of its PPF liabilities. The latter is calculated on a section 179 basis which broadly approximates the cost of buying out the PPF liabilities from an insurance company.

The PPF will make allowance for ‘deficit repair’ contributions in excess of the cost of accrual of benefits. It will also recognise contingent assets such as group company guarantees; security over cash, real estate or securities; and letters of credit and bank guarantees.

There are therefore ways that companies can reduce the levy cost and this should be incorporated into any review of how the pension fund liabilities are funded. In fact, in 2005/06, no risk based levy was payable for schemes that were more than 140% funded on a PPF basis.

In addition, the insolvency risk of the sponsoring employer is based on a Dun & Bradstreet failure score and it is worth management understanding how this is compiled and how they might wish to reduce the perceived risk in future years.
Factors taken into account by Dun & Bradstreet include:

- financials – key ratios and trends, solvency, profitability, late filing
- trade payments – payment score (Paydex), volatility of payments
- principals – number, age and experience, associated failures
- demographics – age and size of business, primary industry sector, number of employees, geographic region
- public negative data – County Court Judgements, mortgages and charges, recovery and debt claims.

A1.5 Additional exposure from financial reporting standards

Financial reporting standards do not change the fundamental nature of the underlying economic exposure but they can add, reduce, compound risk and/or result in actions needing to be taken. Hedging the accounting risk is an option if reported balance sheet volatility is deemed to be important. However, to the extent that the FRS17/IAS19 valuation of the liability is by no means a complete proxy for the economic exposure, then some of the latter is likely to remain unhedged.

Finance directors and their teams should be well versed in the accounting issues so these are not covered in detail here. The relevant standards can be obtained from the UK Accounting Standards Board (ASB: www.frc.org.uk/asb) or the International Accounting Standards Board (IASB: www.iiasb.org.uk) and the standards are also covered in detail in accounting manuals such as those published by the ‘big four’ audit firms.

In essence, under the ASB’s Financial Reporting Standard 17 ‘Retirement benefits’ (FRS17) the balance sheet incorporates the pension surplus (to the extent recoverable) or deficit as a one line item with more detailed analysis in the notes. This is derived from fair values of the assets being their market value at the balance sheet date and of the pension fund liabilities being the committed cash flows discounted by the rate on a corporate bond with an AA rating.

The profit and loss account reflects the following charges and credits:

- current service and past service cost charged against operating profit
- expected return on pension scheme assets
- interest on pension scheme liabilities.
The statement of other recognised gains and losses includes the actuarial gains and losses:

- actual return less expected return on pension scheme assets
- experience gains and losses arising on the scheme liabilities
- changes in assumptions underlying the present value of the scheme assets.

This use of fair values in pensions accounting can create substantial volatility in the sponsor's balance sheet. The IASB's International Accounting Standard 'Employee benefits' (IAS19) provides an option to account in a similar manner to FRS17 but also offers a 'corridor' approach (adopted from the US pension accounting standard, Financial Accounting Standard 87 'Employer's accounting for pensions' (FASB7)) to smooth actuarial gains and losses. More recently the International Financial Reporting Interpretations Committee (IFRIC) Statement D14 has introduced the possibility that a company may have to recognise more liabilities on its balance sheet if it commits to a funding target higher than IAS 19, which has implications for strategies such as buy out.

The UK Accounting Standards Board (ASB) has:

- added more disclosure requirements to FRS17 to align with IAS19 disclosures and, significantly, this includes mortality rates where material
- detailed further disclosures in a Reporting Statement which has persuasive rather than mandatory force. These include disclosures of the buy out cost and duration.


'The paper aims to stimulate debate and to influence the International Accounting Standards Board as it reviews the current standard (IAS 19) governing pensions.

Drawing on principles applied to other accounting issues, it suggests that changes in pension assets and liabilities should be reported in the period in which they arise, rather than being spread forward. It also proposes that the financial statements should reflect the actual return on assets, rather than the expected value as is currently required. Both would reflect the underlying economic reality rather than allowing smoothing mechanisms.
On the measurement of liabilities, the paper argues for the use of a risk-free rate rather than the high quality corporate bond rate required by current accounting standards. A reduced discount rate would increase the size of liabilities.

The paper also notes that arguments are finely balanced on whether the liability should include the effect of future increases in salaries, as happens under current standards. If this measure were changed – to reflect the employer’s discretion over salary increases – it would reduce the size of liabilities.

As well as financial reporting by the employer, the paper addresses financial reporting by pension plans to their members. It recommends that plans should be required to include the liability to pay future benefits. At present, if a liability is reported, it tends to be the amount required by regulation. The paper recommends that the measurement method should be the same as that required of the employer. The relationship between the plan and the employer should be transparently reported, including the effect of the employer’s covenant on the plan’s financial position.

There is an important area which lies outside of the pensions’ legislation itself. Under the UK Companies Act 1985 and in line with European directives, dividend distribution is determined by ‘distributable reserves’ rather than by a ‘solvency test’. Therefore, a FRS17 pension deficit could potentially restrict dividend payments by a sponsoring company even if it has a strong cash flow. This can seem counter-intuitive given the often very long duration of pension liabilities.

However, the move to pension liabilities becoming similar to corporate debt since 11 June 2003 does reinforce the current regime. It could be that the Regulator and the PPF lobby for an even tougher test whereby the ‘pension debt’ for dividend distribution purposes would consider the greater of the IAS19/FRS17 and section 179 valuations. Directors must be convinced they have adequate distributable reserves before paying a dividend or they risk committing an offence.
Appendix 2
Questions to ask regarding mortality assumptions

(From April 2008, a more extensive checklist developed by Cass Business School and CIMA will be available at www.cimaglobal.com/pensions)

There are many reasons to expect the current trend in mortality improvement to continue.

• The UK is still some way behind average longevity in many other European countries (seemingly due to a heavier incidence of heart disease in the UK).
• Current medical advances, particularly in the treatment of strokes, heart disease and lung conditions, are expected to result in continued improvements in longevity for many years.
• The reduction in smoking amongst younger people will take several decades to flow fully through to the pensioner population mortality statistics.
• Predictions of an ultimate maximum life expectancy have been repeatedly made (and proved wrong) for most of the last 200 years. If life expectancy were close to a maximum, then the increase in the record expectation of life should be slowing. It is not. For 160 years, best performance life expectancy has steadily improved by a quarter of a year per year, an extraordinary constancy of human achievement. (Oeppen, Jim and Vaupel, James W, May 2002.)

In the face of the ever-increasing burden of improving longevity on pension liabilities, it is vitally important that finance directors understand the impact of the mortality assumptions used in their pension scheme. The following questions are a guide to the sort of information that the finance director should seek.

• What mortality table are you currently using?
• When was the mortality table last updated?
  Anything more than three years should be a cause for concern.
• Is your pension scheme population large enough to carry out a meaningful study of mortality?
  Normally you need a population of at least 5,000 to get meaningful statistics.
• In the absence of scheme specific mortality information, do you have information on the nature of your workforce/pensioner population which would be useful in assessing whether adjustments to the standard mortality tables might be made?
  The sort of information that is necessary includes nature of work, place of work, and size of pension – there is a wide variation in the mortality statistics between heavy duty manual workers and light duty clerical workers, and also between different locations and different pension sizes.
• Do you know how your pension liabilities split between different workforce groups – manual, clerical, management, executive?

Whilst manual workers, for whom lower longevity assumptions can be used, often outnumber other workers, it can be that the greater pension liabilities are for management/executive members.

• Does the mortality table you use make allowance for future improvements in longevity? If so, how much?

Current estimates are that longevity is improving by around two years every decade, which would suggest that the life expectancy at age 60 for the non-retired population should be at least two years greater than the life expectancy of the current pensioner population at age 60.

• Is the nature of your workforce changing? How might this affect the mortality assumptions?

In many companies there has been a significant shift from manual workers to skilled clerical workers as industrial processes have been mechanised – where this has occurred it would suggest that pensioner longevity improvement will be greater than the population average.

• Do you know how your mortality tables compare with what other companies (particularly your competitors) are using?

• Do you know how your mortality tables compare against the range of mortality tables that your actuaries/auditors believe to be reasonable?

Most actuaries and auditors will have a preferred position on mortality assumptions and also a position on the weakest assumptions they would be prepared to sign off as acceptable.

• Do you disclose your mortality assumptions to shareholders and is this done in a clear and understandable way? Are you clear on the justification for your assumptions?

• Do you know what difference it would make to your total pension liabilities if you changed your mortality tables to the PA92 Medium Cohort generational tables?

The medium cohort table is increasingly seen as the current benchmark table for mortality assumptions – however this table does assume that the current pace of longevity improvement starts to reduce dramatically in around ten years. See Mortality analysis, (page 53).

• Do you know what difference it would make to your total pension liabilities if you changed your mortality tables to the PA92 Long Cohort generational tables?

The long cohort tables are typically used by insurance companies for assessing how much they need to charge to take on the liabilities of a pension scheme – these tables assume that the current pace of longevity improvement tails off in around 20 years.
Mortality analysis

Males born in the period 1930-1934 have experienced mortality rate improvements which have averaged 4% per annum over the last decade. The projected rate of improvement for this group over the next ten years, implied by the medium cohort basis, is less than 2% per annum and over the following ten years it is just over 0.5% per annum.

Notes:
1. The mortality rate gives the probability of a person dying in the next year and the chart maps improvements (i.e. reductions) in this probability. As an example, if the probability of death at age 60 is 0.01, then a 2% improvement will reduce the probability of death to 0.0098.
2. The smoothing uses the 'p-spline model' published by the Continuous Mortality Investigation (a research group of the UK Actuarial Profession).
3. The medium cohort projection is one basis for calculating how quickly mortality rates might improve in future years. It is the most widely used method that actuaries use in the UK.
Appendix 3
Modelling techniques

A3.1 Value at risk (VaR)
The following is a process whereby finance directors (FDs) can analyse, measure and manage the pension risk.

Step 1 – Sensitivity analysis
What is the impact of the following events?

- Change of one percentage point in nominal rate of interest.
- Change of one percentage point in real rate of interest.
- 10% fall in equities.
- One year change in life expectancy.

on the following valuations:

- FRS17/IAS19 basis
- solvency buy out basis
- PPF basis
- ongoing funding basis.

Step 2 – Implications of sensitivity analysis
How would the outcomes of the events tested in Step 1 affect some or all of the following:

- strength of employer’s covenant
- trustees’ funding plan
- pensions protection levy (including Dun & Bradstreet rating)
- company free cash flow
- balance sheet
- reserves
- income statement
- earnings per share
- credit rating/banking covenants/headroom on loan agreements
- share price
- impact versus competitors
- any other financial metric which is important to the FD (what financial targets must be hit in order that the long term Incentive Programmes will pay out?).

Step 3 – Tolerance testing
- How much tolerance has the FD got for the impacts described above?
- Can more or less volatility be tolerated?
- What are the key financial metrics that the FD wants to focus on?
Step 4 – Risk analysis

Scenario analysis

• Consider a range of economic (and other) scenarios, e.g. recession, high inflation, high growth etc. Consider attaching a likelihood to the different scenarios and consider which scenarios would give rise to outcomes which would be outside the FD’s tolerances.

• What has to be done to the pension scheme (e.g. to the investment strategy) to bring the volatility within the FD’s level of tolerance? What is the cost/impact of this action?

• If cost/impact of risk mitigation is too great, what lesser actions might be considered?

The process should be repeated until an acceptable balance of risk mitigation, costs and volatility is achieved.

Value at risk analysis

VaR analysis sounds complicated but is really very straightforward. Put simply, the value at risk is what you might lose if things go wrong:

• To carry out the analysis, first you need to consider what likelihood events should be protected against. Companies are likely to want protection against high probability events but may be prepared to accept the possibility of low probability events (e.g. an event that is only expected to occur once in every one hundred years).

• Given an acceptable level of risk (e.g. prepared to ignore events that are likely to occur less than once in every 20 years) you can then apply a model of investment markets to see what this means in terms of possible movements in bonds/equities etc.

• The VaR test then takes the above market movements and using the earlier sensitivity analysis, demonstrates what ‘value’ is lost if such an event were to occur.

• The FD needs to consider whether this loss of value can be tolerated.

• If the answer is no, what action must be taken to bring the VaR down to a level which can be tolerated? What is the cost/impact of this action?

• If cost/impact of risk mitigation is too great, what lesser actions might be considered and/or change to the acceptable level of risk?

The process should be repeated until an acceptable balance of risk mitigation, costs and volatility is achieved.

Step 5 – Decisions and communication

• Inform the board of the issues.

• Assist the board in its deliberations and decision making process.

• Inform stakeholders over the risk management of pensions.
A3.1.1 VaR – a simple example

The FD's main concern is balance sheet impact (due to headroom on loan agreements) and therefore cannot afford the possibility that the balance sheet might be hit by a £30 million loss arising from the pension scheme. The FD is prepared to ignore events that occur less frequently than once in 40 years but wants protection against the impact of more likely events (although only wants to consider the impact of investment risk).

VaR analysis shows that based on the current investment strategy (70% equities, 30% bonds), a 1 year in 40 event could cause a balance sheet impact of £43 million. Options:

- Adjust pension scheme investment strategy to 30% equities, 70% bonds to produce a VaR of £30 million, but this has knock-on consequences for P&L, cash funding etc which would need to be quantified.
- Adjust pension scheme investment strategy to 50% equities, 50% bonds and accept a lower level of risk mitigation by ignoring events that occur less frequently than 1 year in 20. On this basis the VaR is £30 million and there are knock-on consequences for P&L, cash funding etc that need to be quantified.
- Decide that all risk mitigation actions are 'too expensive' (in terms of impact to P&L and cash funding) and no change will be made. VaR analysis shows that a one year in eight event will cause a balance sheet impact of £30 million.

The FD considers options and concludes that some risk mitigation is necessary (a one in eight likelihood of a breach in the headroom limit is just too great a risk) but mindful of the impact to the P&L and cash flow opts for the switch to a 50:50 investment strategy. The FD informs the board and trustees of (and gets their agreement to) the agreed level of risk. The position is monitored regularly and adjustments made as appropriate.

NB: In any analysis such as that described above, it must be recognised that the attaching of probabilities to movements in investment markets is open to different approaches, which can produce quite different answers. The FD will want to understand and agree to the approach being adopted before the analysis is carried out.

The Pensions Regulator covers a number of these techniques in its Regulatory Code of practice for Funding defined benefits and an extract (paragraphs 88 to 91) is reproduced overleaf. Whilst the Regulator's guidance is directed at trustees, it is highly relevant to a finance director’s understanding of the issues. In many of the paragraphs one could substitute ‘finance director’ for ‘trustee’.
One problem inherent in the conventional actuarial valuation which carries over to the calculation of technical provisions is that only a single answer emerges, which is the fund required if all assumptions are precisely borne out by experience. Most assumptions can be regarded as one point in a range of possibilities.

To illustrate this, stochastic modelling techniques have been developed, often seen in the form of ‘asset-liability’ models, which might assist trustees when assessing the prudence of either individual assumptions or the overall calculation of technical provisions. The main characteristics of these techniques are:

• they attempt to model the course of events as they might emerge based on randomly generated simulations of the future in line with an economic model
• they result in a range of outcomes with probabilities attached
• they thereby allow a view to be formed, based on the economic model underlying the valuation, of what the likelihood is of any particular level of technical provisions being sufficient to meet benefits as they fall due.

However, if trustees use these techniques, they should be aware of their limitations, including the following:

• the results, whilst generated by a random process, nevertheless depend on how the many variables underlying the model are associated with each other, their mean values and their assumed probability distributions
• models are usually calibrated to past events so their ability to generate outcomes not experienced in the past may be limited
• there is a danger that results may take on a credibility in the eyes of trustees and others which is unwarranted
• they are not meant as a predictive tool, rather they are illustrative of possible outcomes.

Scenario analysis

The use of stochastic modelling techniques may not be appropriate for all schemes, and trustees should discuss with their actuary possible approaches to illustrating variability. A simpler and less costly analysis could take the form of carrying out the valuation on a few different sets of assumptions simply to illustrate the width of the potential outcome range and the sensitivity of results to particular assumptions. Discussions with the actuary would centre on the choice of appropriate sets of assumptions to be used and interpretation of the results’.

Source: The Pensions Regulator
Notes