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Actuaries



**Accounting for
Pensions
8th Annual Survey
2001**

Accounting for Pensions

Eighth Annual Survey

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* Words in *italics* in the text are either company names or are mentioned in the glossary of terms.

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1. Summary

- The FTSE 100 companies employ between them some 3.5 million people in the UK. They have pension assets worth about £220 billion. Their annual pension cost of over £3 billion equates to a little less than £1,000 pa for each employee.
- This is Lane Clark & Peacock's eighth publication of "Accounting for Pensions", an authoritative survey of practice under SSAP24, the standard that currently regulates pension cost accounting and disclosure of pension information in UK company accounts.
- Whether or not it is in response to our previous surveys, we are pleased to see significant improvements in disclosure again this year. During 2000 eighteen companies improved their disclosure, and now twenty-five score the maximum in our ranking compared to thirteen last year. This contrasts with just three when we first began to prepare this survey. However, a small minority continue to disclose inadequate information.
- With FRS17 affecting disclosures in Company accounts for accounting periods ending after 22nd June 2001, we look at the potentially huge impact the new accounting standard will have on companies' balance sheets and reported profits.
- Traditional actuarial valuation methods are in retreat, for accounting purposes at least, with the majority of new valuations being carried out on a market-based approach. It is no coincidence that this is happening at a time when the outlook for future *investment returns* is perhaps less optimistic than only a few years ago. We look in detail at this trend and the contrasting *actuarial assumptions* being made.
- The trend to defined contribution continues. Many of the newer entrants to the FTSE 100 only have defined contribution pension arrangements, and a few of the older companies have closed their long-standing final salary schemes to selected groups of new entrants. A new breed of hybrid pension plans, which can offer some of the advantages of both traditional defined benefit and defined contribution plans, is also emerging.

2. Introduction and main findings

This is our eighth annual survey in which we analyse the pension cost disclosures in the companies comprising the FTSE 100 index as at 1st January 2001, looking at accounting periods ending in 2000.

The companies making up the FTSE 100 index change over time - sixteen companies were new in 2000. Comparisons must, therefore, be handled with care, but general trends are still evident.

The aim of SSAP24

SSAP24 has been in existence for thirteen years. It is supposed to ensure accounting for pension costs on a systematic and rational basis over the employees' careers with sufficient disclosure of the assumptions used to allow informed readers of the accounts to understand the accounting treatment.

The assumptions used should in all cases be a "best estimate" by an actuary. However, a number of scenarios may be considered reasonable, and our surveys have shown that in practice actuaries have used a wide range of assumptions to determine cost. Different assumptions can dramatically affect pension cost. For example a 1% reduction in the assumed *investment return* on its own could increase the pension cost by typically 20-30%, yet our survey shows a range of over 2½% for the assumed *investment return*!

It follows that full disclosure of the assumptions used to calculate the pension cost is essential if accounts are to be of any help to the users. Our survey reveals the extent to which this has happened.

FRS17

A new accounting standard, FRS17, will gradually replace SSAP24 over the period 2001 to 2003.

FRS17 is expected to:

- fundamentally change the way pension assets are represented on the company balance sheet;
- greatly improve the level and consistency of disclosure regarding company sponsored retirement benefits;
- significantly reduce the operating profits of some FTSE 100 companies by charging a potential overstatement of the pension cost; and
- severely reduce the opportunity for companies to use pension *surplus* to pay for benefit improvements.

Market value methods

Typically, very different sets of assumptions are used under a market value method, relative to a traditional valuation. Our examples, shown in section 4, show that the discount rate is generally lower for a market-based valuation. One consequence of this is an increase in the value of the regular cost - the value placed on benefits currently being earned by employees.

Moving to a market value method also brings with it an increase in the volatility of the pension scheme *surplus* (or *deficit*) from one valuation date to the next. Whilst this volatility is currently tempered by the smoothing mechanisms inherent in SSAP24, it will flow directly through to the accounts under FRS17.

Twenty seven companies now use a “market value” method to determine their pension cost under SSAP24. This is an increase over previous years, and might be taken to reflect the move towards market values inherent in the new accounting standard, FRS17. However, there is a wide variety of market value approaches, and many are not consistent with FRS17 in the way they measure the liabilities.

Significance of pension cost

The average pension cost for all companies was 5% of pre-tax profit. However, the pension cost as a proportion of pre-tax profit can be very high for those companies declaring a low level of profit; relatively small changes in terms of the pension scheme can then severely impact on profitability. In some cases pension costs can be very low, or even an addition to profits; for example *BG (British Gas)* and *Exel* showed pension credits (additions to profits) of over 5% of total profits.

Continued improvements

Our eighth survey shows another significant improvement in disclosure, which is encouraging. Whereas a year ago thirteen companies disclosed every item we believe to be necessary (up from nine the year before that), this year twenty five companies did so.

Abbey National, Royal & Sun Alliance and *Scottish Power* all improved their scores from 11 last year to the maximum of 20 this year.

We are pleased to see these continued improvements, even in the dying days of SSAP24, but this level of disclosure has come too late to save it.

Some persistent poor disclosures

Nevertheless, a small number of FTSE 100 companies continue to make inadequate disclosure of pension cost assumptions. We believe that a minimum disclosure level is that represented by a score of “16” on our ranking. Eight of the relevant companies scored lower rankings than this: *BAT, Celltech, ICI, Land Securities, Marconi, Powergen, Spirent* and *Vodafone*. Whilst mitigating circumstances apply for some of these companies, we look forward to finding out more about these pension arrangements under the extensive new disclosure requirements of FRS17.

Balance sheet entries

The pension cost under SSAP24 and the actual company contributions to the pension arrangement can differ considerably. Any excess of cost over contributions accumulates to form a provision in the balance sheet; conversely, any excess of contributions over cost gives rise to a prepayment. Most companies disclosed some provision or prepayment; in a few cases they were very substantial.

Prepayments

Large prepayments, ie an asset in the balance sheet, appear for *Lloyds TSB* (£768 million) and *ICI* (£475 million).

Provisions

Large provisions in respect of retirement benefits were held by *Unilever* (£678 million), *GlaxoSmithKline* (£896 million), *HSBC* (\$832 million) and *BT* (£629 million). These provisions can move in either direction under the new standard. For example, a comparable FRS17 figure for *BT* might be a larger provision of over £1bn, whereas *GlaxoSmithKline* might have switched to an asset of over £300m. The source of these figures, and discussion of their limitations, is provided in section 3 of this report.

3. FRS17 to replace SSAP24

Over the coming three years, SSAP24 will be progressively replaced by the new accounting standard FRS17. The initial requirement, to include a specific balance sheet related disclosure in the notes to the company accounts, is compulsory for the next set of accounts to be published.

No FTSE 100 company has adopted FRS17 for its 2000 accounts, which is hardly unexpected. However, *Lattice* have provided some FRS17 results. Subsequently, *Boots* and *BAA* (with year ends of 31st March) have published their 2001 accounts and these included some details of the impact of the new standard. Each of these disclosures is discussed below.

The initial FRS17 disclosures, which are required for any company year end from June 2001, will be analysed in next year's survey. This will be a key change, not least because a fuller disclosure is anticipated under FRS17 than was ever envisaged under SSAP24.

Lattice

Lattice provided a separate note to their accounts regarding FRS17. It states that a discount rate of 5.4% has been adopted and that the *surplus* would be "in the range of £1.2bn to £1.4bn". Whilst such a range appears vague, it highlights the fact that actuarial results are only point estimates in a spectrum of possible figures and no one figure should be given credence to the exclusion of all others. Whilst actual FRS17 disclosures may not be expressed in such ranges, perhaps a sensitivity analysis would be beneficial - for example, reporting the effect on the balance sheet of a small change in discount rate.

BAA

Even the initial requirements of FRS17 did not have to be implemented for an accounting year end before 23rd June 2001. *BAA*, however, have chosen to take a slightly accelerated approach for their 31st March 2001 accounts. They are adopting the three-year phased implementation of the new rules, but one year earlier than required. For *BAA*, the balance sheet figure under SSAP24 was nil, but it would have been almost £400m under FRS17. Whilst this improvement in the disclosed position would have been known at the time the decision to early adopt was taken, who knows where the stock markets, and hence the balance sheet, will be next year?

Boots

Boots have provided some details in their 31st March 2001 accounts. They state in the main section of their report that the balance sheet *surplus* would have been £250m under FRS17 and we note that this is almost identical to the existing balance sheet figure elsewhere in their accounts. However, *Boots* gave no details of the *actuarial assumptions* used to arrive at either this figure or the pension cost. We note that the impact of FRS17,

based on their figures, would have been to reduce operating profit by £65m. We wonder whether the market would have reacted to the publication of *Boots*' results in the same way if the FRS17 pension cost had been included in the headline totals, rather than simply disclosed.

As typically applies for UK funds, under FRS17 there would be a moderate credit for net *investment returns* further down the Profit and Loss account. This amounts to £20m to mitigate the £65m hit to operating profit. Therefore, in aggregate, total disclosed profit would decrease by £45m and yet, fundamentally, there is no change to the profitability of the company. Opinions will vary as to which figure is closer to the true cost - however, whilst few actuaries endorse all of FRS17, the extensive disclosures will allow them to better understand the pension commitments of a company from their published accounts.

Impact of FRS17

We expect that the pattern of results illustrated by *Boots* will be mirrored in many other FTSE 100 companies. General observations include:

- operating profits will be hit hard - as they are charged a potential overstatement of the true cost of pensions;
- these will be mitigated by credits in the interest line of the Profit and Loss account;
- large items will appear in the Statement of Total Recognised Gains and Losses ("STRGL");
- balance sheet figures will be volatile from year to year and, depending on market conditions on the balance sheet date, may be similar to or wildly different from the previous SSAP24 item.

The importance of this balance sheet item must not be underestimated. A sufficiently large FRS17 *deficit* could lead to a company being unable to distribute a dividend. In such circumstances the directors may well feel that the final salary pension scheme was simply too much of a thorn in the side. We discuss in section 5 the steps already being taken to find alternatives to the traditional pension scheme and FRS17 will only accelerate that trend.

Below we have estimated the potential impact of FRS17 for two companies based on the figures published under the US accounting standard, FAS132. There are limitations to this approach, outlined in Appendix 3 along with a comparison of FAS132 and FRS17, but we believe the figures give insight into the magnitude of the figures to come.

BT

At 31st March 2000, under SSAP24, *BT* held a balance sheet provision of £629m in respect of pensions. This represented an accumulation of SSAP24 pension costs over actual contributions to the pension scheme.

Under FRS17, the balance sheet item is a snapshot of the *surplus* at the balance sheet measured under prevailing market conditions. Many actuaries argue that the market value of the scheme's assets on a particular day is not an appropriate measure for comparison with the long term liabilities. However, in these particular circumstances, the FRS17 *deficit* implied by *BT's* disclosure would be a provision of around £1bn, which for a company the size of *BT* is not a significantly larger balance sheet provision than the corresponding SSAP24 figure.

BT's reported pension cost under SSAP24 was £167m in 2000. Under FRS17, the corresponding pension cost might comprise an annual service cost of around £500m plus costs of termination benefits of around £260m, mitigated by around £140m of net investment income; a total charge to profit of £620m, which is over three times the SSAP24 cost.

GlaxoSmithKline

The story for *GlaxoSmithKline* starts similarly. They showed a balance sheet liability of approximately £900m at 31st December 2000. However, the effect is very different. Under FRS17, this could become a *surplus* of more than £300m! This would be directly represented as a balance sheet asset and hence a balance sheet movement of well over £1bn.

4. Market value methods

Increased use

Some 27 companies, or a third of those analysed, now use what we interpret as a market value method to determine their pension cost under SSAP24. This is a large increase over the 11 who used such a method last year and reflects the fact that newer valuations are tending to be carried out on a market value basis rather than on a traditional long term basis.

Traditional methods use long-term expected rates of return to discount liabilities and then apply these discount rates to the expected income from the Scheme's assets, giving a consistent valuation of assets and liabilities. The difficulty with such methods is that they depend heavily on an assumption for *dividend growth* and the UK equity market has seen some fundamental changes in recent years which have pushed dividend levels to an historic low. The challenge for actuaries is judging just what an appropriate assumption for *dividend growth* should be.

As a result of these issues, and because of the international use of market values in accounting, market value methods have increased in popularity. Under a market value method, assets are taken at market value and liabilities are discounted using interest rates derived from market conditions.

To the extent that equities are held and are expected to give higher returns than gilts, it is necessary to make an assumption about the future return from those equities. This is often taken to be the yield available on gilts at the time of the valuation plus a margin (the "*Equity Premium*") to reflect the extra return expected.

Equity premium

Analysis of the disclosures where a market value method has been used shows a wide variation in the *Equity Premium* assumption. Some use an *Equity Premium* of nil, effectively valuing all the liabilities by reference to gilts. For others, the *Equity Premium* could be 3% pa or more.

Imperial Tobacco have disclosed extremely prudent assumptions - an assumed *investment return* of only 5.4% pa at a time when the yield on conventional gilts was just under 6% pa. Quite why this assumption is so prudent is not clear.

Impact on results

There are a number of consequences for the accounts when a market value method is adopted. Typically, the regular cost of benefits being earned is higher than under a traditional basis and also the *surplus* figure is more volatile due to market movements. The way in which these currently come through to the accounting figures will vary from case to case, depending on the smoothing mechanisms employed under SSAP24. However, as no such smoothing is permitted under FRS17, the full volatility of market value methods will be felt going forwards.

Prudence

On average, in the cases we analysed, pre-retirement liabilities were discounted at around 1.5% pa over gilt yields. This appears low, and hence prudent, when compared with the historical outperformance of equities over long periods. Whilst under SSAP24 such conservatism will merely delay the recognition of company profit, prudence under the new standard, FRS17, will produce credits in the STRGL which never come through the Profit and Loss account. It remains to be seen whether all *actuarial assumptions* that are prudent under SSAP24 will be changed to become less prudent on adoption of FRS17.

The market value methods used are very different to the method that will be required under FRS17. Under FRS17, liabilities are discounted by reference to bond yields; any additional return expected from the *Equity Premium* comes through after operating profit as an offset to the pension cost.

5. The continued defined contribution trend

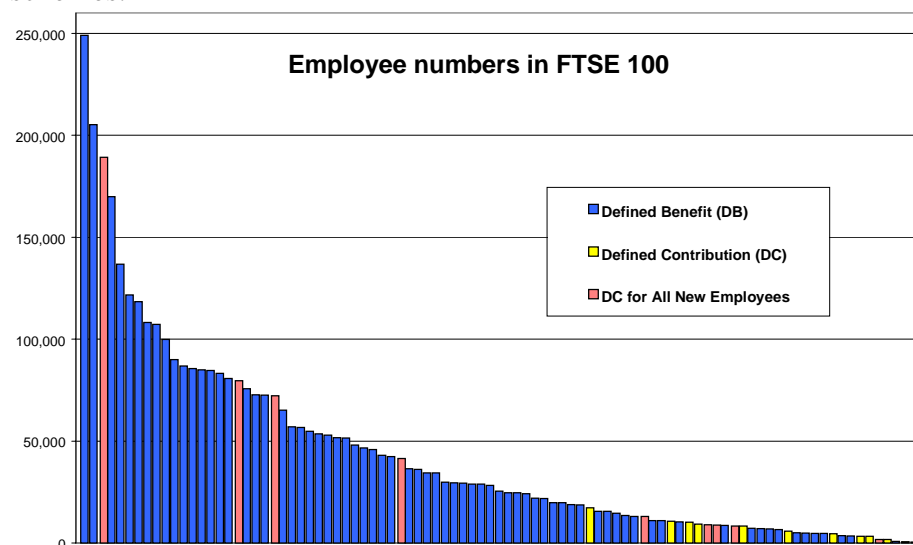
In recent years our surveys have indicated an increasing move away from final salary, or defined benefit, provision towards defined contribution provision. Of the 94 FTSE 100 companies who are UK based and account under UK accounting standards, there are now 14 (10 last year) that disclose that they offer only defined contribution arrangements and another 11 (7 last year) where new employees can only join a defined contribution arrangement.

Over a third of UK based FTSE 100 companies now offer some form of defined contribution arrangement to at least some UK employees. With the Government's new Stakeholder Pension legislation coming into force in 2001, an increase in this proportion seems inevitable, albeit with relatively low, or nil, employer contributions.

Last year we showed how, although many companies have introduced defined contribution arrangements, the vast majority of UK employees are employed by companies that offer primarily defined benefit pensions.

This year's chart shows this is still the case, but there is a growing body of evidence in support of the trend to defined contribution.

The chart shows the employee numbers in each of the companies analysed, where possible using the employee numbers in the UK only. It highlights, based on the information disclosed in the accounts, where only defined contribution schemes are offered and where new employees can join only defined contribution schemes.



Three companies with over 50,000 employees offer defined contribution benefits for all new staff: *Sainsbury*, *Lloyds TSB* and

Barclays. Furthermore, we understand there are others, including *BT*, who either did not mention this in their 2000 accounts or made the switch after their 2000 accounts were published.

Directors

Whilst there is evidence that employees are increasingly being offered defined contribution pensions, there is less evidence of this at director level. Perhaps this is because the most effective way to deliver the maximum tax-approved benefit is to do so on a final salary defined benefit basis.

However, the effect of the *Earnings Cap* means that often the defined benefit promise can fall some way short of what a director may be expecting - since the pension is not based on the director's full salary. To accommodate this, it is increasingly common for unapproved benefits in excess of the *Earnings Cap* to be provided on a defined contribution basis.

Innovations

The indications are that the move away from traditional final salary provision is continuing. But some companies have been quite imaginative with the replacement for their final salary scheme.

We understand that *AstraZeneca* has introduced a "cash balance" plan and that *Tesco* now have a "career average" plan. These are effectively hybrids between final salary and defined contribution arrangements. In the case of a career average plan, the pension is based on the employee's earnings in every year of membership rather than just the final years. The advantage of this to *Tesco* is that the cost of funding the arrangement should be less volatile than a traditional final salary plan.

Designs of this type allow employers to explore the middle ground between the extremes of pure final salary and pure defined contribution arrangements. In addition to improving flexibility for members, we believe that such plans can achieve a balance between risk and cost for employers and employees alike.

Sainsbury runs a defined contribution scheme for its new employees, who can join the traditional final salary arrangement at a later date. We understand that *Boots* are introducing a similar arrangement.

We welcome the innovations made by these and other companies. Final salary provision works well for people who stay with one employer for a long time; for a mobile workforce, defined contribution is seen by many as more attractive. However, it must be recognised that if employers take the opportunity to reduce cost by moving to defined contribution arrangements, the necessary effect is lower average benefits for their employees. Clearly defined contribution arrangements are

currently being well marketed. But the popularity of defined contributions will not last if they fail to meet expectations and delivers inadequate pensions at retirement.

This is exacerbated by the fact that, under a defined contribution scheme, the employee generally takes the investment decision and bears the associated risk. Whilst this is seen as an advantage, all too frequently employees are overly cautious with their investment choice and end up with lower benefits as a result. Innovative scheme designs help to pool the investment risk, enabling a more appropriate investment strategy. Ultimately, this can deliver a greater employee benefit for the same employer spend.

Mobile staff

Whilst the debate as to whether working patterns have changed continues, it is unclear whether employees are switching jobs more frequently. However, we can be sure that defined benefit schemes are protecting early leavers better than ever before.

“The last straw...”

Compliance costs have been piled ever higher on defined benefit schemes in recent years. The cost of providing a pension seems to be ever-increasing; but there is more to come.

The Government’s proposals to replace the Minimum Funding Requirement could be the last straw for beleaguered finance directors. Proposals could prevent companies from winding up defined benefit schemes unless they were prepared to buyout all the liabilities with an insurance company, which would be a far more expensive commitment than the much-criticised Minimum Funding Requirement.

In this and previous surveys, we have advocated better disclosure of pension costs and we have been delighted to see the substantial improvements made. That said, in the eight years that we have produced this survey, we have seen some stunningly confusing disclosures. The disclosure requirements of FRS17 are far more extensive and we cannot help but anticipate more confusion. Whether users of accounts will be able make head or tail of FRS17 disclosures remains to be seen. This will undoubtedly make interesting reading in future surveys!

Aside from disclosure, FRS17 has many features that may give finance directors a few sleepless nights. As an example, the way the volatile pension cost can hit the accounts (as described in section 3 of this report) could leave a profitable company unable to pay a dividend.

Let us not forget, also, that increased disclosure almost certainly means increased cost of disclosure.

6. Detailed analysis of Reports and Accounts

6.1 Disclosures

We analysed and ranked the disclosures of 79 companies, as listed in Appendix 2.

For this purpose, we excluded 14 companies who had no evidence of significant defined benefit provision and 3 companies which did not report pension costs under UK generally accepted accounting principles (*Anglo American, BP Amoco* and *Shell*).

We also excluded *Billiton, Old Mutual* and *South African Breweries*, which are essentially overseas companies who have chosen to be quoted on the London Stock Exchange.

We had to exclude *Compass*, whose report was not available.

We have analysed the disclosures in a very similar way to previous years. Virtually all companies disclose certain basic items. For example, although not all companies disclosed the assumed rate of *investment return*, all disclosed enough to know the return relative to *salary growth*.

We have made one modification to the scoring system this year, reflecting the increased use of market value methods. In order to score full marks, companies whom we suspected of using a market value method needed to make it absolutely clear that assets were indeed taken into account at market value. Where it was ambiguous as to whether this was the case, they were marked down slightly.

We believe that there are four key additional items that have to be disclosed for a full understanding. We set these out below, with an explanation of an attaching “score”. All companies have earned a starting score of 10 for the basic items.

Dividend growth rate or actuarial asset value

Disclosure	Score
Asset valuations are generally based on the discounted income method, and therefore the <i>dividend growth</i> assumption has a very important impact on the results. We accepted either the absolute <i>dividend growth</i> rate or the rate relative to the <i>investment return</i> .	5 or 3

Seventeen companies did even better than this and quoted the actuarial value used. This is better because the *dividend growth* assumption is the main, but not the only, assumption in the asset valuation process.

For some companies it was clear that assets were taken at full market value. These and companies quoting the actuarial value of assets were all awarded a score of 5, as for companies disclosing the *dividend growth* rate.

As illustrated in section 6.2, a market value basis looks quite different to a traditional basis. As such, in some cases, we had strong suspicions that market values were used, but we were unable to draw a firm conclusion. These companies were awarded a score of 3.

90% of companies achieved a score of 5 for disclosure of the assumption used to value assets, compared to 75% last year.

Pension increases

The assumed rate of *pension increases* is necessary for a full understanding, but there is less variability of cost from this assumption. 94% of companies disclosed this item, which is up slightly on last year's survey (92%).

1

Split of regular cost and variation

The regular cost is the ongoing cost to the company of providing the benefits of the pension scheme ignoring *surplus* or *deficit*. Disclosure of this item is, therefore, very helpful. 47% of companies separately included this compared with 36% who did so last year. This again is a great improvement, even though it remains disappointingly low.

2

Method of spreading

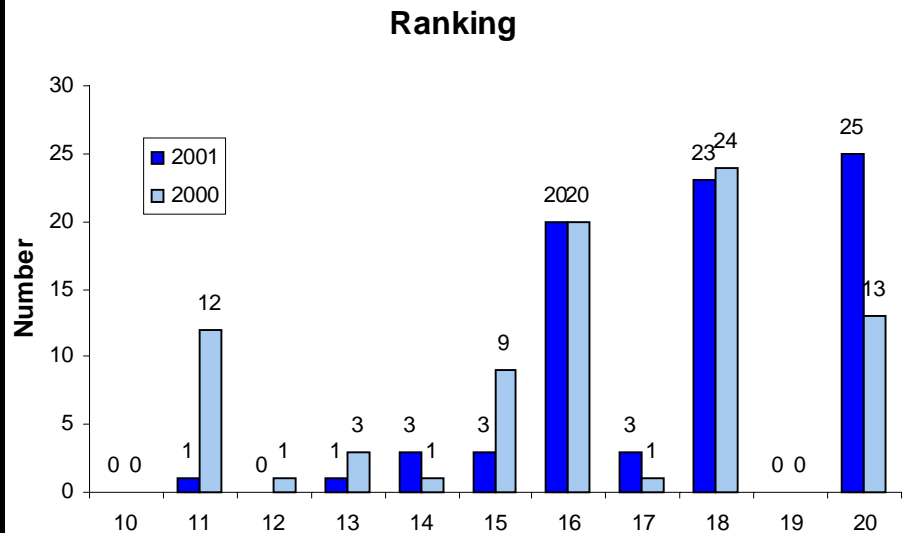
The actual pension cost will be lower or higher than the regular cost, on account of spreading the *surplus* or *deficit*. There are a number of ways this can be done, and each *spreading method* gives a different pattern for future pension costs.

2

57% of companies disclosed the *spreading method* compared to 45% last year.

This gives an aggregate ranking from 10 to 20. A full list of each company's ranking is set out in Appendix 2. The spread of ranking scores is set out below.

Ranking



The top ranking (20) was achieved by an impressive twenty five companies this year; their details are listed in Appendix 2.

No companies scored the minimum ranking of 10 this year.

The average ranking this year was 1.4 higher than last year (and 2.3 higher than the year before that). We are pleased to see these continued improvements, even in the dying days of SSAP24, and hope it will have prepared companies for the rather more extensive disclosure requirements of FRS17.

Celltech

Celltech are the only company to score less than 13 this year. That said, their pension cost is small relative to the size of the company and does not have a big impact on their reported profits. The transition to FRS17 will undoubtedly cause them to look more closely at pension cost disclosure.

Scottish Power

Scottish Power gave a concise breakdown of disclosures for its five different defined benefit schemes to gain a maximum score of 20. It can be done!

WPP

Last year we had to exclude *WPP* from our analysis as they quoted ranges of assumptions that were too wide to be meaningful. Perhaps as a result, this year, like *Scottish Power*, they have adopted a tabular format for the disclosure of their many schemes and suddenly all has become clear. As one would expect, the assumptions used for their Japanese schemes reflect very different financial conditions from those in the UK and the US.

Marconi

Marconi's score has fallen from 16 last year to 14 this year. The pension cost is based on a revised actuarial valuation - no assumption for *dividend growth* is given and although the liability assumptions could well be market-related it is not stated whether assets have been taken into account at market value. In addition to quoting two discount rates for past service and a different rate for determining future contributions (to which we have no objection) they have quoted a fourth, "average" discount rate and it is not at all clear what this represents.

Reed Elsevier

Reed Elsevier's disclosure looks very similar to their disclosure in the previous year, but their score has fallen from 20 to 18. Last year they disclosed full details of a traditional actuarial valuation with long-term assumptions and included a *dividend growth* assumption - all easily understood.

This year they disclose details of a new valuation and an *investment return* assumption that certainly looks market-related - and there is no *dividend growth* assumption. This suggests that assets have been taken into account at market value. Why then, do they talk about "actuarial" values of assets?

Spirent

Spirent's disclosure initially looks good - the assumptions are set out fully and appear market-related. In addition, they state that a *dividend growth* assumption is "n/a", as we would expect for a market value method.

Unfortunately, their methodology is thrown into doubt when they say that "the level of funding represents the "actuarial" value of the assets expressed as a percentage of the value of the liabilities on the statutory MFR (minimum funding requirement)". This leaves the reader somewhat confused, as there is no concept of an actuarial value of assets in an MFR valuation and the MFR is of no relevance to pension scheme accounting..

6.2 Actuarial assumptions

SSAP24 does not specify what assumptions should be disclosed referring only to “a brief description of the main *actuarial assumptions*”. It is widely accepted that full disclosure should include the rates of:

- *investment return*
- *salary growth*
- *pension increases*
- *dividend growth* (where this is used to value assets)

A typical set of assumptions used under the traditional actuarial method are shown below. (In brackets we have also shown a typical figure for a market-based valuation.)

Assumptions can either be disclosed as absolute amounts, for example:

- *investment return* 7½% (6½%)
- *salary growth* 5% (4½%)
- *pension increases* 3% (3%)
- *dividend growth* 3½% (not applicable)

or else as differences, for example:

- *salary growth* 2½% (2%) below *investment return*
- *pension increases* 4½% (3½%) below *investment return*
- *dividend growth* 4% below *investment return*

or a combination of the two.

For the 79 companies who were analysed in detail the assumptions were disclosed as follows:

- | | |
|--------------------------------|----|
| • absolute amounts | 60 |
| • differences (or combination) | 19 |

Although the differences are the key element, we generally find disclosures where assumptions are expressed in absolute terms easier to follow. FRS17 requires the absolute amounts to be disclosed.

Investment return

The level of *investment return* assumed depends to some extent on the actuarial method employed. Where a traditional method is used, under which assets are valued by discounting the income they are expected to produce, the *investment return* is the long-term expected return.

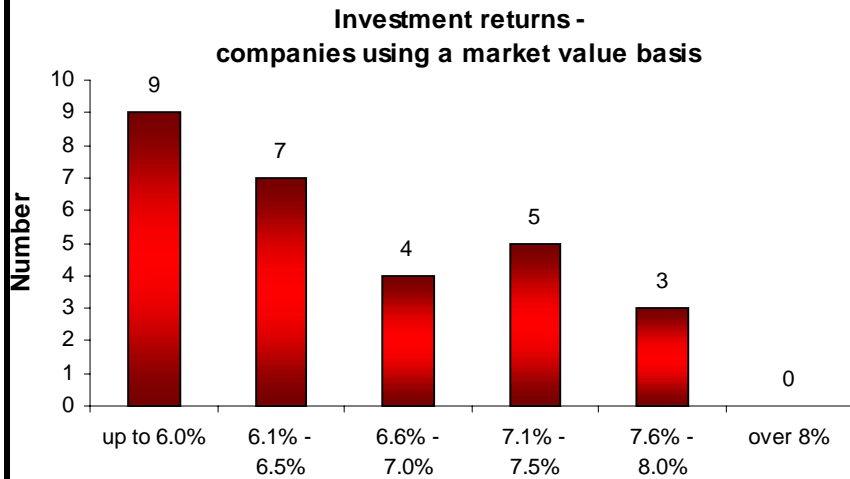
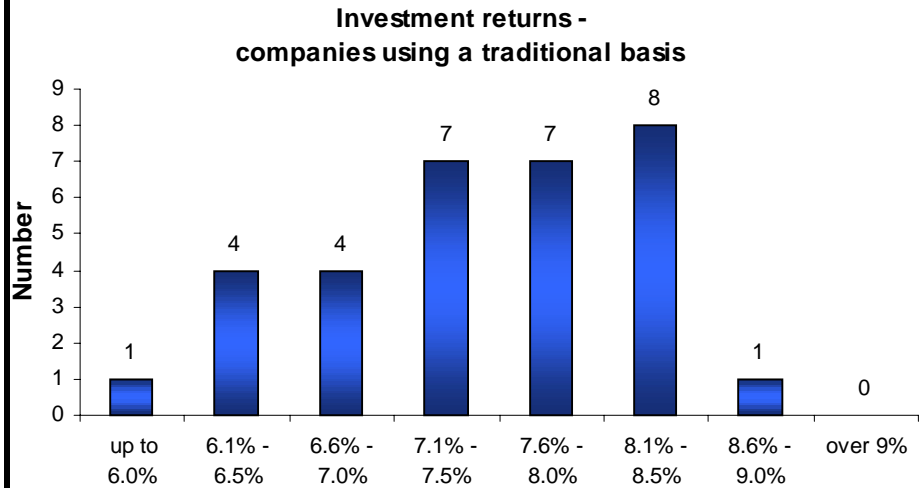
Split investment returns

Where a market value basis is used for the assets, the *investment return* should be determined from market conditions at the valuation date and will very often differ from the assumed long-term return used in discounted income valuations.

We have therefore separated the two types of valuation in our analysis.

Sometimes the long-term *investment return* is divided between one return before retirement and another after retirement, reflecting a prudent view that as the liability for pensions in payment increases it will be matched by investment in bonds instead of equities. In such cases we have used the pre-retirement *investment return*. This was also used to determine the gap between *investment return* and *salary growth*, whereas the post-retirement return was used in assessing the gap between *investment return* and *pension increases*.

The range of *investment returns* assumed is shown in the charts below.

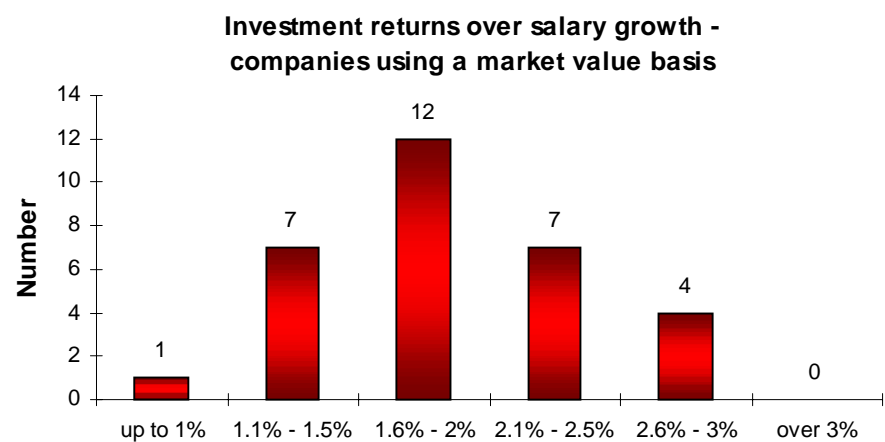
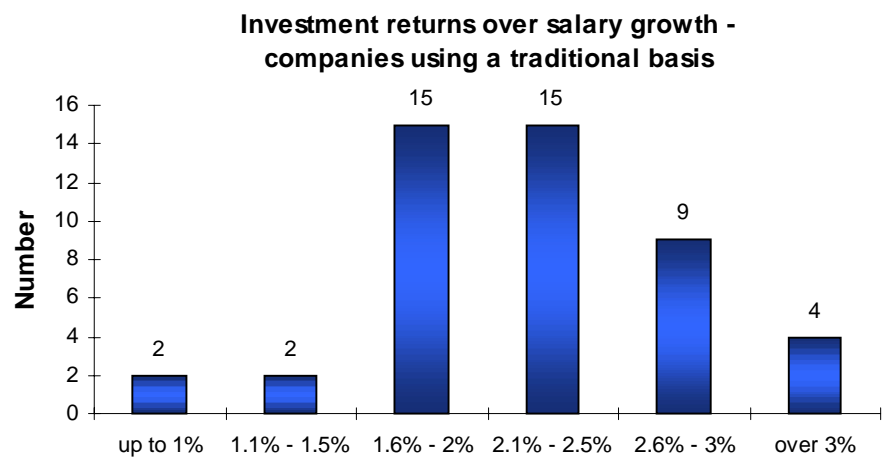


Investment return over salary growth

One cannot help but notice the marked shift downwards in assumed *investment returns* from the traditional to the market value methods. The average assumption is some 1% pa lower for market value methods. Some of this fall is to be expected, as in recent years actuaries using traditional methods would almost invariably assume that market values were above their long-term trend. It also reflects just how much market conditions have changed; gilt yields have fallen from over 8% pa to around 5% pa in only five years, with the results that pensions have generally become more expensive to provide, a fact that companies are now recognising.

The rate of *salary growth* assumed can, and does, have a significant effect on the eventual pension cost. The smaller the “gap” between the assumed rates of *investment return* and *salary growth*, the more conservative the assumptions.

The difference between the *investment return* and assumed *salary growth* could be analysed for 78 companies. The difference varied from 1% to over 3%.



If *investment returns* and *salary growth* were considered to be unrelated, then the full 1% fall in assumed *investment returns* would also impact on this difference. However, this has not

occurred. The average difference was only 0.4% lower for valuations carried out on a market value basis (1.9%) than for traditional valuations (2.3%) - in isolation this change helps to mitigate the fact that defined benefit pensions have become more expensive to provide.

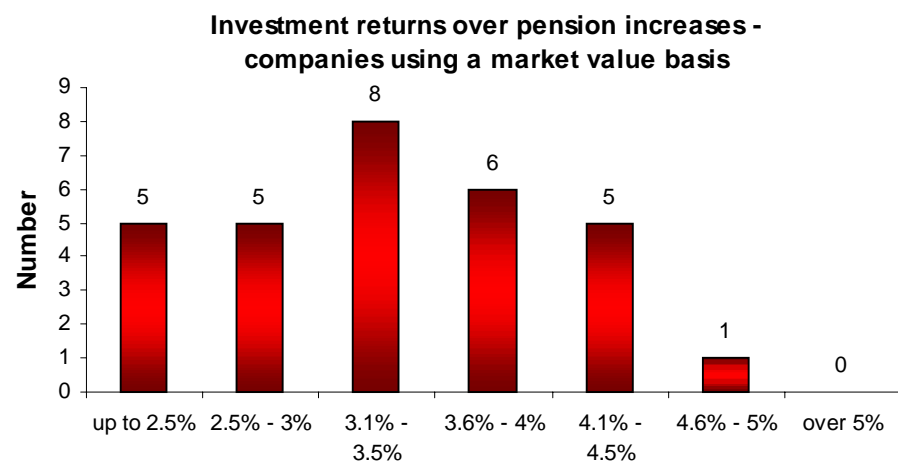
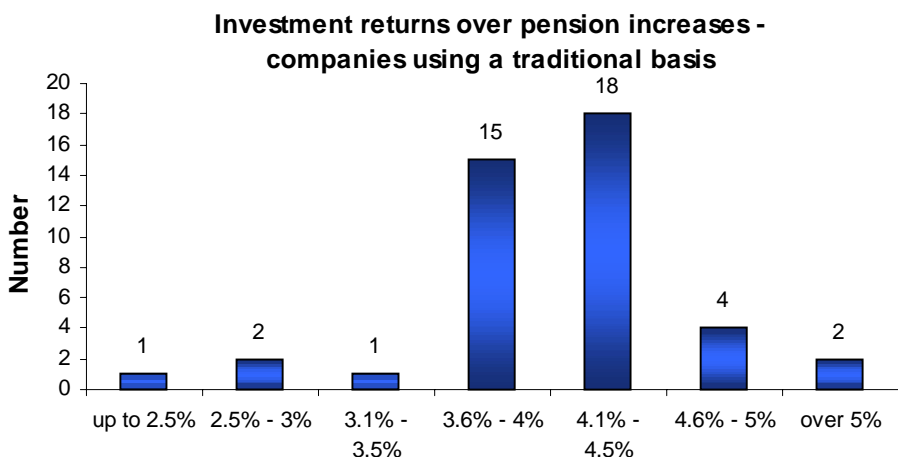
Halifax

Halifax state that they have used a market-related basis for their valuations at 31st March 1999 and 31st March 2000. The difference between the assumed rate of *investment return* and *salary growth* was 2.25% pa in the 1999 valuation but this was increased to 2.75% pa for the 2000 valuation. The disclosed funding level improved from 108% in 1999 to 119% a year later.

It should be noted that some companies will have allowed for promotional *salary growth* in addition to the general increases to which their disclosures relate. Few companies disclose details of promotional salary scales and this makes comparison more difficult.

Investment return over pension increase

73 companies disclosed sufficient information to enable the difference between the assumed rates of *investment return* and *pension increase* to be determined.



Assumptions used to value assets

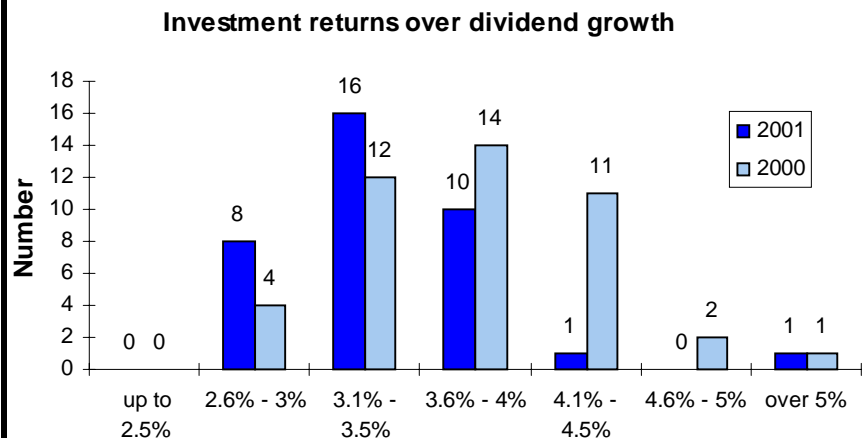
These graphs clearly indicate the downward shift in the gap between assumed rates of *investment return* and *pension increases*, reflecting lower real *investment returns*, for more recent market-based valuations. This is consistent with the fact that assets are no longer being taken into account at below market value (as has typically been the case under traditional methods).

It is important to note that the assumption made for *pension increases* will reflect the increases actually awarded under the scheme. Falling yields have particularly hit schemes where pensions do not increase or increase at a fixed rate.

Under a traditional valuation method, the value of the assets is highly sensitive to the difference between the *investment return* and the *dividend growth* rate.

36 companies using the discounted income method gave sufficient information for us to determine the difference between the assumed rates of *investment return* and *dividend growth*.

The chart also shows the same figures from our 2000 survey. The assumptions show a marked decrease from last year. The reduction in this "gap" from around 4% to a little over 3.5% would increase the equity part of the asset value by about 15%.



It is clear that the *dividend growth* assumption has increased (and hence the gap has reduced) to reflect the current economic environment.

This change represents some stripping away of a margin for prudence. This may well be justified as SSAP24 calls for assumptions to be best estimates, but it further illustrates how the traditional methods are coming under pressure.

What does it all mean?

With the marked changes in financial conditions seen in recent years, we would have been surprised if we had not seen equally marked changes in *actuarial assumptions*. However, it must always be borne in mind that the underlying cost of a pension scheme is not determined by the method and assumptions adopted by the actuary; the cost is equal to the contributions paid to meet the benefits paid out to members (and the expenses of administration).

In addition, this underlying cost is being pushed ever upwards by improving mortality.

This contrasts with the future nature of pension costs in company accounts which will fundamentally change with the introduction of FRS17. In particular, for the first time, the *actuarial assumptions* adopted will determine once and for all the company pension charge against profits. To the extent that these crucial assumptions are not borne out in practice, adjustments will subsequently be recognised outside the Profit and Loss account, in the STRGL.

Another impact of FRS17 will be the unprecedented access to pension scheme information from the improved disclosure. The most apparent consequence of FRS17, however, will be the increase in costs recognised against operating profit, including the capitalised costs of any improvements to benefits.

What remains to be seen is how much of an increase in pension costs - both in underlying terms and for accounting purposes - companies will put up with before throwing in the towel on defined benefit schemes altogether.

Appendix 1 - Glossary of terms

Actuarial assumptions

In order to carry out an actuarial valuation it is necessary to make a number of assumptions about the future. The most important assumptions are the financial assumptions and these should all be disclosed under SSAP24. They are the rates of: *investment return*, *salary growth*, *pension increases* and *dividend growth*.

Earnings Cap

The *Earnings Cap*, currently £95,400 pa, is the limitation introduced by the Finance Act 1989 on the amount of remuneration on which pension benefits and contributions may be based. It generally applies to members who joined a pension scheme since June 1989.

Equity Premium

The *Equity Premium* refers to the extra return that may be expected from equities above other assets classes such as bonds. The *Equity Premium* is regarded by some commentators as a reward for risk. Others believe it emerges as pension scheme trustees are rarely "forced sellers" in a market - their exceptionally long investment time horizon means that they can avoid selling equities during a down turn in the market, even if it lasts many years. Although controversial in some quarters, historical analysis supports the view that such a premium exists.

Investment return

The rate of *investment return* (ie the rate of interest expected to be earned in the future) is, typically, 6% to 8% pa.

In looking at the other financial assumptions it is the difference between the rate of *investment return* and the relevant assumption that is more important than its absolute value.

Pension increases

The difference between the rate of *investment return* and the rate of *pension increases* is, typically, 2½% to 4½% pa but this will depend on the level of increases actually provided under the scheme.

Salary growth

The difference between the rate of *investment return* and the rate of *salary growth* is, typically, 1½% or 3% pa.

Dividend growth

The difference between the rate of *investment return* and the rate of *dividend growth* is, typically, 2½% to 4% pa.

To gauge whether a particular assumption is less cautious (that is it would tend to lead to a lower cost than average) or more cautious (that is it would lead to a higher cost), the general rule is: the lower the difference between the *investment return* and either *salary growth* or *pension increases*, the more cautious. For example an assumed difference of 1½% pa between *investment return* and *salary growth* is more conservative than 2½% pa.

For *dividend growth*, the higher the difference between the rate of *investment return* and the rate of *dividend growth* the more conservative the assumption. For example a difference of 4% between the assumed rate of *investment return* and *dividend growth* is much more conservative than an assumption of 2½% pa.

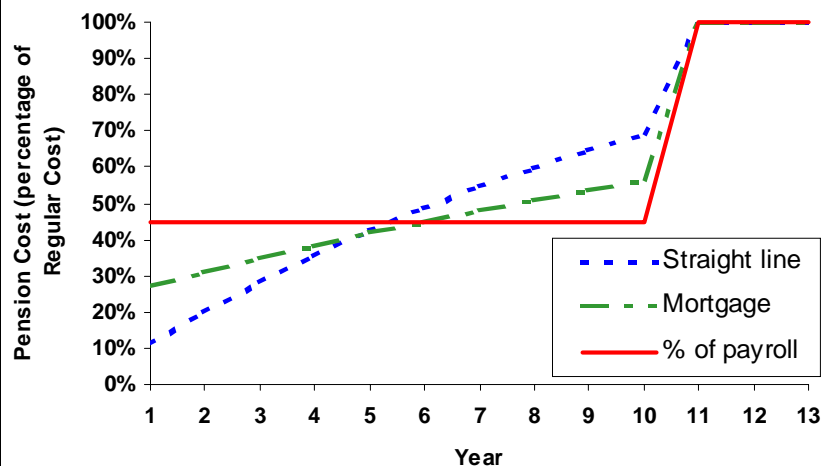
Spreading method

There are three main *spreading methods* used ie:

percentage of payroll
mortgage
straight line

Their effect on the pattern of pension costs for a scheme with a significant *surplus* can vary considerably as the chart shows.

The effect of using different spreading methods for a surplus



The straight-line method leads to the greatest initial variation, ie the biggest reduction in pension cost, for a scheme that has a *surplus*.

Surplus/Deficiency or Deficit

The difference between the value of the assets and the value of the accrued liabilities is termed *surplus*. If the value of liabilities exceeds the value of assets there is a *deficiency* or *deficit*.

Appendix 2 - Detailed disclosure listing

This table shows the disclosures made by the companies surveyed and the corresponding ranking score as explained in section 5.

Where sufficient information was given to show the actuarial value used for assets, for example, if an unsmoothed market value is used, this is counted as being the same as disclosing the *dividend growth* rate on the more common discounted income model.

Where the assumptions appear to represent a market basis but have not been stated as such the company has been awarded three out of five points for the asset valuation, shown as YES* in the Asset valuation column below.

Company	Asset valuation	Pension increases	Spreading method	Split of regular cost and variation	Total
3i	YES	YES	NO	NO	16
Abbey National	YES	YES	YES	YES	20
Alliance & Leicester	YES	YES	YES	YES	20
Allied Domecq	YES	YES	NO	NO	16
Associated British Foods	YES	YES	NO	NO	16
AstraZeneca	YES	YES	YES	NO	18
BAA	YES	YES	YES	YES	20
BAE Systems	YES	YES	YES	NO	18
Bank of Scotland	YES	YES	YES	YES	20
Barclays	YES	YES	YES	YES	20
Bass	YES*	YES	NO	YES	16
BAT	NO	YES	YES	YES	15
BG	YES	YES	NO	YES	18
Blue Circle	YES	YES	YES	NO	18
BOC	YES	YES	YES	YES	20
Boots	YES	YES	NO	NO	16
British Airways	YES	YES	NO	NO	16
BT	YES	YES	NO	NO	16
Cable & Wireless	YES	YES	NO	YES	18
Cadbury Schweppes	YES	YES	YES	NO	18
Capita Group	YES	NO	YES	NO	17
Carlton	YES	YES	YES	NO	18
Celltech	NO	YES	NO	NO	11

Company	Asset valuation	Pension increases	Spreading method	Split of regular cost and variation	Total
Centrica	YES	YES	YES	YES	20
CGNU	YES	YES	YES	NO	18
CMG	YES	YES	NO	NO	16
Daily Mail	YES	YES	YES	YES	20
Diageo	YES	YES	YES	NO	18
Dixons	YES	YES	YES	YES	20
Electrocomponents	YES	YES	NO	NO	16
EMI	YES	YES	NO	NO	16
Exel	YES	YES	YES	YES	20
GKN	YES	YES	NO	YES	18
GlaxoSmithKline	YES	YES	YES	YES	20
Granada Media	YES	YES	NO	NO	16
GUS	YES	YES	NO	NO	16
Halifax	YES	YES	YES	NO	18
Hanson	YES	YES	YES	NO	18
Hays	YES	YES	YES	YES	20
Hilton	YES	YES	YES	YES	20
HSBC	YES	YES	NO	NO	16
ICI	NO	NO	YES	YES	14
Imperial Tobacco	YES	YES	NO	NO	16
Invensys	YES	YES	YES	YES	20
Kingfisher	YES	YES	NO	NO	16
Land Securities	YES	NO	NO	NO	15
Lattice	YES	YES	NO	YES	18
Legal & General	YES	YES	YES	YES	20
Lloyds TSB	YES	YES	YES	NO	18
Marconi	YES*	YES	NO	NO	14
Marks & Spencer	YES	YES	NO	YES	18
National Grid	YES	YES	NO	YES	18
National Power	YES	YES	NO	NO	16
Nycomed Amersham	YES	YES	YES	NO	18
Pearson	YES	YES	YES	YES	20
Powergen	NO	YES	NO	YES	13
Prudential	YES	YES	YES	YES	20

Company	Asset valuation	Pension increases	Spreading method	Split of regular cost and variation	Total
Railtrack	YES	NO	YES	NO	17
Reckitt Benckiser	YES	YES	YES	YES	20
Reed Elsevier	YES*	YES	YES	YES	18
Rentokil Initial	YES	YES	NO	NO	16
Rio Tinto	YES	YES	YES	NO	18
Rolls Royce	YES	YES	YES	NO	18
Royal & Sun Alliance	YES	YES	YES	YES	20
Royal Bank of Scotland	YES	YES	NO	YES	18
Safeway	YES	YES	YES	YES	20
Sainsbury	YES	YES	NO	YES	18
Schroders	YES	YES	YES	YES	20
Scottish & Southern Energy	YES	YES	NO	NO	16
Scottish Power	YES	YES	YES	YES	20
Smiths Industries	YES	YES	NO	NO	16
Spirent	YES*	YES	NO	NO	14
Standard Chartered	YES	YES	YES	YES	20
Tesco	YES	YES	NO	NO	16
Unilever	YES	YES	YES	YES	20
United Business Media	YES	YES	YES	YES	20
United Utilities	YES	YES	NO	NO	17
Vodafone	YES	NO	NO	NO	15
WPP	YES	YES	YES	NO	18

The 79 companies listed above were analysed in depth. Those not analysed were: *Amvescap, ARM Holdings, Autonomy, BSkyB, Canary Wharf Group, COLT, Dimension Data, Energis, Logica, Misys, Reuters, Sage, Shire Pharmaceuticals* and *Telewest* (no evidence of significant defined benefit provision); *BP Amoco, Anglo American* and *Shell* (do not report under UK generally accepted accounting principles), *Billiton, Old Mutual* and *South African Breweries* (wholly overseas); *Compass* (report not available).

Appendix 3 - Summary of Financial Reporting Standard 17: Retirement Benefits

The new UK pension accounting standard "FRS17" has at its heart the same financial economic theory as that underlying the US pension accounting standard, FAS132. However, whereas pragmatists tempered this theory to implement a smoothed and profit-focused standard in the US, the UK's Accounting Standards Board ("ASB") has been much bolder in its implementation.

Below we have set out an introduction to FRS17, highlighting the treatment of benefit improvements, along with a brief comparison of the new UK standard with the US standard. With many commentators fully expecting the international pension accounting standard (called IAS19) to come into line with the UK's new rules, the FRS17/FAS132 comparison will no doubt become critical to any companies with a listing on both sides of the Atlantic.

1. Introduction to FRS17

The main intention of the new standard is that pension *surpluses* or *deficits* for defined benefit schemes should be directly reflected in the company balance sheet at market value. The pension cost element of a company's operating profit is the regular cost ignoring any *surplus* or *deficit*. Liabilities will be valued on a nearly "risk-free" discount rate, being that on AA-rated corporate bonds. This is currently a lower rate than many actuaries use and will increase cost. In the financing lines of the Profit and Loss account an offsetting allowance can be made for the expected return on assets, including an expected return on equities.

The new standard will be implemented over a period of three years. It will commence with only balance sheet disclosure being required as at 31st December 2001, add Profit and Loss disclosure for 2002 and require full adoption subsequently. (For companies with a financial year end other than 31st December, the 3-year period starts with the first financial year ending after 22nd June 2001.)

Other very important features of FRS17 include:

- actuarial gains and losses on the market value basis will go through the Statement of Total Recognised Gains and Losses ("STRGL") and so will not affect reported profits;
- the value of one-off improvements to past service benefits will be charged to the Profit and Loss account in the year they are granted, even if financed by *surplus*; and
- greatly increased disclosure requirements relative to the existing standard SSAP24.

During the implementation period the level of disclosure required will be further augmented as, essentially, both a SSAP24 and an FRS17 disclosure will be required.

2. Treatment of benefit improvements

Employers and pension scheme trustees occasionally make benefit improvements by allocating part of the *surplus* to the members.

Under SSAP24, the cost of a benefit improvement is allowed as a first charge on *surplus* and so is, effectively, spread over the remaining service of the current employees. However,

under FRS17, such a cost will have to be recognised immediately in the Profit and Loss account.

Despite the fact that benefit improvements may only be provided because a *surplus* exists, *surplus* (unless non-recoverable) cannot be offset from the cost of the improvement - the entire cost is recognised immediately in the Profit and Loss account.

When the full cost is a direct hit to company profit, employers are bound to be deterred from making improvements. The ASB explain that if the employer uses *surplus* for members' benefits when he could alternatively use it to reduce contributions, the full cost of that decision should be reflected in that year's profits. We believe this is an unfair approach because the ASB are at the same time not allowing *surpluses* to affect profits.

In our view the changes will certainly reduce the likelihood of future benefit improvements.

3. Comparison of FRS17 and FAS132

Whilst there are many differences between FAS132 and FRS17, the basic building blocks are similar in many ways. For example, the assets and liabilities can be similar under the two sets of rules, although there is more scope to be prudent under FAS132. Similarly, the key components of the FRS17 Profit and Loss charge (Service Cost, Interest Cost and Expected Return on Assets) are taken, broadly, from FAS132.

The treatment of benefit improvements under FAS132 will vary from case to case. Taking the example mentioned above, the FAS132 impact would be to charge the cost of the improvement against profits over, say, 15 years. This is consistent with the treatment of *surpluses* and *deficits* in FAS132, discussed below, but in stark contrast to the immediate hit to profit generally required under FRS17.

Each of the above figures is brought into the accounts in a very different way under FRS17, compared to FAS132. Essentially this is because FRS17 is a move towards focusing on balance sheet values, whereas FAS132 was driven by the Profit and Loss account.

As an example, consider a decrease in the pension scheme *surplus*. This hit would be recognised immediately under FRS17 (although it would never impact on company profit). In contrast, none of the poor experience would be recognised in the year it occurred under FAS132, but in due course all of the impact would be expected to flow through against profit.

Under both FAS132 and FRS17, all of the components and underlying assumptions must be disclosed. As such, it is possible to approximate the accounting impact of FRS17 on a company, based on their FAS132 disclosure. The numbers provided for the assets and liabilities under FAS132 are not identical to those which would be produced under FRS17, for example the FAS132 asset figure is based on bid-values, not mid-market values and may be smoothed or offset by up to three months. However, the figures are generally sufficiently close to be applied as a reasonable proxy.