

# **The trouble with final salary pension schemes**

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## The trouble with final salary pension schemes

Nick Silver<sup>1</sup>

*The decline in final salary pension schemes (FSS) is a result of increasing costs caused in part by legislative interference. In this paper it is argued that FSS have always been detrimental to the economy. In a misguided attempt to save FSS, the government risks bankrupting large sections of the British corporate sector. Other policy measures could allow greater flexibility for trustees of pension schemes and remove counter-productive legislation and encourage innovative market based solutions to pensions problems.*

### Death by a thousand cuts

The demise of the final salary scheme in the private sector has been well documented in the media<sup>2</sup>: 68% of schemes are closed to new entrants, with 10% closed to the accrual of new pension (Association of Consulting Actuaries (2005)). Experts are predicting their disappearance altogether within 5 years (Wolf (2005)).

The most convincing narrative of why this is happening can be likened to a death by a thousand cuts (Pensions Commission (2004)). Final salary schemes grew rapidly in the 1960s and 1970s. This was a time of high marginal tax rates, so there was a high incentive to remunerate employees through pension provision<sup>3</sup>. It was also a time of high inflation and high interest rates, and because there was no statutory indexation, pension promises were often inflated away, reducing the risk to employers of promising pensions. There was a large degree of cross-subsidy from leavers to active members, as leavers were generally not entitled to indexed benefits.

Through the 1980s and 1990s, the underlying cost of schemes rose, due to increasing longevity, reducing inflation and real interest rates, and new legislation<sup>4</sup>. However, the increasing cost was masked by the stock market bubble of the late 1990s. The bursting of the bubble coincided with the introduction of the new accounting standard, FRS17 in 2003<sup>5</sup>; finance directors were suddenly faced with a dramatically large and unforeseen debt.

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<sup>2</sup> This paper only deals with private sector pension schemes; the public sector final salary pension schemes are still alive (Record (2006))

<sup>3</sup> In the UK, pension schemes have favourable tax status; employees receive full national insurance and tax relief at their marginal rate, employers pay no tax on contributions, the schemes themselves are tax exempt and pensioners can receive a tax free lump sum on retirement

<sup>4</sup> Notably statutory equalisation of retirement ages, indexation for pensions and early leaver benefits

<sup>5</sup> Which meant that deficits had to be shown in company accounts, calculated at market rates of interest, which led to unfavourable figures compared with earlier methods of calculating deficits.

Companies' reaction has been swift, with 68% closing schemes to new entrants. Whilst numbers within existing schemes are still large, it is clear that over time the numbers will decline significantly.

### **Why final salary schemes are not good for the economy's health**

Final salary schemes are often described as the gold standard of pension provision. Rather than a gold standard, they were an alchemist's (or actuary's) trick whereby large pensions could be promised without anyone appearing to pay for them – or take on the underlying risks. In this section I argue that they were never good for the economy and their passing should be greeted with relief. This would not matter in itself, but in a misguided attempt to save them, the government risks rendering large sections of British business uncompetitive, undermining the security of benefits already accrued and relied upon by scheme members, and costing the taxpayer vast sums of money.

The desirability of FSS can be examined from the point of view of an individual or the economy. Dealing with the former first, it is often argued that FSS are good because they provide a high level of benefits with a high level of security<sup>6</sup>. Let us compare them with the alternative; money purchase schemes (MPS)<sup>7</sup>. The level of benefits in all types of scheme depends on the money paid into the scheme and the returns on the fund. The difference is that under an FSS, the benefits are determined by formulae<sup>8</sup>; if a scheme has a deficit, this will have to be made up by the employer; if this cannot be done, in extremis the scheme will wind up. The point is that even though the benefits are guaranteed under the FSS, the cost still has to be paid, the MPS can also provide higher benefits if the employer and employee pay more into the scheme: the level of benefits is not a function of the scheme.

Turning now to security, a pension under a FSS arrangement is obviously more "secure" than that under a MPS arrangement – or is it? If we define security as predictability of benefits, the opposite can be argued. Under an MPS, the member will receive a pot of money at retirement which is entirely determined by the amount he and the employer contribute and investment returns. If he wants a higher pension, he and/or the employer must contribute more. If he wants a guaranteed amount, the MPS can be invested in cash or gilts, alternatively he can take more of a risk and invest in equities or other investment classes. There is also a risk of annuity rates changing when he retires. However, this can be mitigated as an annuitant can take a quarter as

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<sup>6</sup> For example in TUC(2002)

<sup>7</sup> A MPS is based on contributions that are invested on behalf of the employee. At retirement the pension will depend on the accumulated fund and the annuity rates available at that time. The employer makes no guarantees regarding the level of benefits that the accumulated fund will provide – as investment returns or annuity rates worsen the resultant pension reduces; conversely if they improve the pension will be higher.

<sup>8</sup> A FSS will provide a pension that is expressed as a proportion of earnings – for example 1/60<sup>th</sup> – for each year of membership. Earnings are usually based on an individual's salary at, or close to, retirement.

a lump sum and defer buying an annuity<sup>9</sup> until age 75 (Inland Revenue (2003)).

Compare that situation with an FSS. With an FSS the benefit at retirement will depend on salary at retirement, when the scheme member left the company (which might not be the employee's decision), inflation between this date and retirement, and possibly changes in scheme rules and legislation over the period. The security of the benefit will also depend upon the funding level of the scheme, the action and the financial security of the employer, the wind up rules of the scheme and, again, possibly legislation. The solvency of the company, and hence security of the employee's job, can also be affected by the existence of the FSS. Most of these factors are very complex and incalculable by most scheme members (or anyone else).

Although the benefits of a FSS to a scheme member are debatable, to the economy as a whole, they are detrimental. For an economy to run efficiently, factor mobility is important. Capital should go to the most efficient user and similarly labour should be free to move to the user with the highest marginal gain from labour, signalled by the price of capital (interest) and labour (wages) respectively. If this does not happen, inefficiencies arise within the economy, leading to negative consequences such as lower than optimal output and higher than necessary unemployment.

Final salary schemes clearly hinder labour mobility. If a scheme member leaves, they immediately lose a large proportion of the value of the pension<sup>10</sup>. This encourages workers to remain with an employer where wages may be higher elsewhere (Blake and Orszag (1997)).

More subtly, final salary schemes encourage capital inefficiencies. Pension schemes assets have been estimated as £747bn<sup>11</sup> (UBS (2006)), so their capital allocation decision is importance. The regulatory structure provides perverse incentives: trustees have a fiduciary duty to invest "as a prudent man." For efficient capital allocation decision makers must act as rational agents. That is, if they take a risk, they are rewarded: this is the essence of market discipline. However, in the world of pensions, trustees gain no reward from taking risk - they are mostly unremunerated and face severe penalties for making a mistake - so a rational trustee will take the least "risk" possible. However, the risk as perceived by the trustee is, in reality, the risk of doing "something different from everyone else and being caught out". This is different from the risk to the scheme and its sponsoring employer which is the risk of not meeting liabilities. Schemes' investment policies derive from a mistaken understanding of risk and cost (Exley et al (1997)).

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<sup>9</sup> Or "alternatively secured pension" (Punter Southall (2006))

<sup>10</sup> For example approximately 30% for a 35 year old; because the pension is revalued with inflation in deferment compared to in line with salary growth (which is usually higher) whilst active.

<sup>11</sup> That is for Occupational self-administered defined benefit schemes at the end of 2005 (UBS(2006))

The result of this is the concentration of assets with a small group of fund managers and the investment of those assets mainly along market capitalisation weighted lines. This has contributed to herd-behaviour and the chasing of short-term returns.

An example of herd-behaviour is the recent trends in scheme investment. The idea of matching assets to liabilities is not new, yet up to 1999 over 70% of funds were invested in “balanced” vehicles (asset allocation set by reference to peer group). Since then however, this has fallen to 40% (UBS(2005)) as schemes suffered from poor equity returns and switched into bonds. These were found (unsurprisingly) not to be a good match for their liabilities, so schemes moved to Liability Driven Investment (LDI), but again this is limited in terms of the extent to which it leads to an investment policy which is a good match for liabilities (Chambers et al (2005)). One of the effects of this has been increased demand for long dated index linked gilts<sup>12</sup>, reducing returns to schemes, for no reason other than herd-behaviour within the pensions industry (Jagger (2005)).

The concentration of pension scheme assets gives rise to systemic risk to the financial system as a whole. The large proportion of equity investment means that a shock causing a fall in particular companies’ equity prices will lead to increased deficits across most pension schemes, which will feedback into companies’ balance sheets and hence share prices. As liabilities are debt-like, the effect is leveraged, the result being that the effect of a shock will be magnified (Trivedi and Young (2006)).

The fiscal cost of FSS through tax rebates is largely misunderstood. The cost on a cash flow basis<sup>13</sup> has been estimated by the Inland Revenue (Table 1) to be £19.1bn per annum (1.6% GDP)<sup>14</sup>. However, the cash flow basis does not reflect the actual current cost and benefit of FSS pensions<sup>15</sup>, if these are taken into account, the cost to the Treasury is actually £28.9bn (2.4% GDP). This compares with about £43 billion spent on Basic State Pensions<sup>16</sup> (PPI (2005)).

A justification for the tax incentives on pensions is to boost savings. There is practically no evidence that it does so (Curry and O’Connell (2004)). The tax incentives also prejudice people to save in the form of a pension as opposed to other forms of savings. Again, this distorts the savings market: people are

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<sup>12</sup> From 5% in February 2004 to 4% now (Jagger (2005))

<sup>13</sup> the tax relief attained on employer and employee contributions less tax received on pensions plus other rebates.

<sup>14</sup> For the year 2004/05. This includes other forms of pensions, but is largely dominated by FSS.

<sup>15</sup> Because the actuarial calculation of employer contributions is usually out of date (valuations are only every three years) and the basis allows for an “equity risk premium.” This reflects the expected return on investments will be greater than the zero risk return. However, in calculating the actual cost or value of benefits, the risk neutral rate should be used (Record (2005)).

<sup>16</sup> For 2004/05, based on 2005/06 prices

more likely to save in a pension rather another form of saving, which may have otherwise been more efficient (Attanasio et al (2004)).

Not only is this cost high and ineffective, it is also highly regressive: over a quarter of the tax relief goes to the 800,000 FSS scheme members who earn more than £40,000 per annum<sup>17</sup>.

**Table 1 Fiscal cost of FSS (£bn)<sup>18</sup>**

	Inland Revenue basis	Benefit-in-kind basis
Employer contribution	12.2	22.0
Other tax relief	8.7	8.7
National Insurance relief	6.8	6.8
Less Tax received	8.6	8.6
<b>Net Cost</b>	<b>19.1 (1.6% of GDP)</b>	<b>28.9 (2.4% of GDP)</b>

To summarise, final salary schemes as they have evolved give rise to inefficiencies within the economy and inherent systemic risk to the financial system. They are a large and highly regressive burden on the tax payer. Added to this they are opaque and complicated giving rise to, on the one hand, unreasonable expectations of security of savings, and, on the other hand, high profile failures which have undermined confidence in the saving system as a whole.

### **Poisoned chalice**

Possibly the most lasting negative effect of FSS is the legacy they are leaving us with. Table 2 estimates the total deficits in UK final salary schemes. The first and second columns estimates the total deficits disclosed in company accounts to be £55bn (4% of GDP) for the FTSE100 companies (LCP, 2006) and £124bn (11% of GDP) for all UK companies combined. However, the underlying deficit is potentially £487bn (39% of GDP) – that is the deficit if all the schemes were to wind up and to buy out their benefits with an insurance company.

<sup>17</sup> Author's approximate calculation.

<sup>18</sup> The Inland Revenue basis is taken from Pensions Commission (2005). To calculate the Benefit-in-kind basis, I have used the mid point estimate of cost of a Final Salary Scheme of 23% (Pensions Commission (2004)) and adjusted to reflect current actual real interest rates on a zero risk return basis (Currently index linked bond yields are 1% (Over 15 year Real yields with 5% inflation (from FTSE UK Gilt Indices [www.ft.com](http://www.ft.com) 25 August 2006)), this increases the total cost by 40%. To calculate employer contributions, the average employee contribution rate (5% (Pensions Commission (2004)) is deducted, so the employer rate should be 27% of salary, considerably higher than the actual rate of 15% (Pensions Commission (2004))

**Table 2: FSS funding levels (£bn)**

	FTSE 100 – FRS17 basis <sup>19</sup>	UK Total – FRS17 basis <sup>20</sup>	UK Total – buy out basis
Assets	329	747	747
Liabilities	383	871	1,234 <sup>21</sup>
<b>Deficit</b>	<b>55 (4% of GDP<sup>22</sup>)</b>	<b>124 (10% of GDP)</b>	<b>487 (39% of GDP)</b>

This basis is important, because one of the reforms introduced in the Pensions Act 2004 (PA04)<sup>23</sup> was that, when a scheme is shut down, the pension becomes an immediate debt on the employer on a buy-out basis (Freshfields (2005)). In reality the figure could be considerably larger; if an event forced a number of large schemes to close down, the insurance market would not have enough capacity and hence the cost of buy-out is likely to increase.

The effect of this rule is to “lock in” a company to its FSS, otherwise the company will face a large immediate debt. The implications of this rule are obvious: if a company has a considerable pension deficit, it will have a strong incentive to reduce this deficit, either by increasing the asset values of the scheme (which is not possible without taking a risk) or by reducing the liabilities. The only way a company can achieve the latter is to control pensionable salaries or to make active members deferred: i.e. either by paying them to leave the scheme or by making them redundant.

The Appendix compares the scheme deficits from companies in the FTSE100 index with the companies’ market capitalisation. The average deficit on an FRS17 as a proportion of company market capitalisation is 5.3%, with the highest being BAE Systems at 43.6%. However, on a wind up basis, the average increases to 20%, with the highest being British Airways at 185%.

If companies do not reduce their liabilities, they are in danger of becoming uncompetitive compared with companies that do not have a FSS burden. In extremis there would be an incentive for companies shutting production in the UK and moving abroad. I now turn to look at another major reform of PA04, the Pensions Protection Fund.

<sup>19</sup> For accounts year ending 2005 LCP(2006).

<sup>20</sup> The asset figure is from UBS (2006). The liability figure proportions up the liabilities from the 1<sup>st</sup> column using the relative size of assets

<sup>21</sup> The liability figure is higher on the buy-out basis than the FRS17 basis, because the former uses very conservative actuarial assumptions as the insurance company has to take on the financial risk of paying benefits and the risk that the pensioners will all live longer than expected. A more detailed explanation of how I have calculated buy-out liabilities is given in the Appendix.

<sup>22</sup> Using GDP of £1,239,261 million from [http://www.hm-treasury.gov.uk/media/255/F4/gdpdeflators\\_300606.xls](http://www.hm-treasury.gov.uk/media/255/F4/gdpdeflators_300606.xls) for tax year 2005-06

<sup>23</sup> a change to Section 75 of the Pensions Act 1995

## **Pensions Protection Fund**

In the 1970s, the Pension Benefit Guaranty Corporation (PBGC) was introduced in the USA. Soon afterwards, many schemes were closed due to increased compliance costs. The PBGC introduced a moral hazard: companies facing financial problems or that were in administration have agreed to larger pension benefits in return for salary concessions knowing that the PBGC and ultimately the tax payer would pay, or have even filed for bankruptcy ((Harris and John (2004)).

The sharp drop in interest rates and the fall in equity markets left the PBGC with a deficit as of 30<sup>th</sup> September 2005 of \$22.8bn (PBGC(2005)), including four of the largest bankruptcies in US history - Delta, Northwest and United Airways, along with that of auto parts supplier Delphi – possibly precipitated by the existence of the PBGC (Brown (2004)).

In an effort to protect scheme members' benefits, the UK government has introduced<sup>24</sup> the Pension Protection Fund (PPF), which is essentially the same as the PBGC. When a sponsoring employer becomes insolvent, and there are not enough assets to cover the PPF level of compensation, the PPF will compensate eligible scheme members. The PPF is funded by levies collected from eligible schemes. The levies are calculated in relation to the scheme size and "risk", which relates to the funding level and the risk of employer becoming insolvent, the risk element representing at least 80% of the levy. The PPF does not cover all benefits.

Predictions and the US experience are that the PPF will be expensive – the levy could be volatile and/or high (Brown (2004)). Research shows that companies will file for bankruptcy and will have to be bailed out by the government, as has happened in the USA under the PBGC.

In an effort to prevent moral hazard, there is a high level of risk based premium within the levy: if a scheme has a high deficit or the sponsoring company has a low credit rating, the levy will be higher. However, this is unlikely to be workable: high risk employers will not be able to afford the premium, so low risk employers will have to subsidise poor risks (Chacko (2005). Spiralling costs will encourage schemes to close and increase bankruptcies (Budden (2005))<sup>25</sup>.

## **Blocks on reform**

The main block on proper reform is a perception amongst government and unions that FSS are beneficial and should be saved at all costs, and this has been done by improving and strengthening benefits through legislation within existing FSS. There has been a continual lack of insight into the consequence of this action: legislating improved benefits (for example inflation-linked

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<sup>24</sup> From 6 April 2005

<sup>25</sup> Initial findings indicate that the levy collected in its first year will be £50m to £100m, a long way short of the £575m which the PPF expected to collect (LCP(2006))



pensions) means that employers are forced into providing either increasingly expensive FSS benefits or choosing to provide no FSS benefits at all, and employers therefore have more incentive to reduce the coverage of FSS. The result is a two-tiered system with an elite having a high guaranteed benefit (including most of the tax benefits) and everyone else with poor or no pensions savings.

So what should a credible policy look like? FSS are overregulated – at almost every stage the regulation has done more harm than good. Good principles to follow would be to reduce legislation, increase flexibility and encourage market-based innovation.

I have argued that FSS cause economic inefficiencies, systemic risk and are a large fiscal burden and it is in the country's interest to allow them to decline naturally. However members of pension schemes have been promised benefits and many of them rely on their final salary pensions for most of their retirement income. At the same time, many companies are faced with large debts. One solution is for the government to help companies unwind the debt without harming members' benefits. The government could facilitate companies trading out of the current position and allow them to gradually close schemes down, whilst looking to reduce the problems within the system. Improving the efficiency of the system as a whole would ultimately lower the costs and improve security for the majority of scheme members.

In summary credible policy measures would aim to achieve the following goals:

1. Protect existing accrued benefits.
2. Reduce fiscal cost.
3. Reduce the burden and expense on employers.
4. Improve scheme efficiencies and address systemic risks.

The introduction of the PPF addresses the first goal. It is self evident that it will increase the burden and expense on business. It will increase the fiscal cost as it is likely that the government will at some point have to bail out the PPF, as has happened in the USA. It will also increase the system's inefficiencies and systemic risk, introducing more layers of complexity. Whether existing benefits will be better protected remains to be seen. One effect is certain, employers are less likely to want an FSS, and therefore put at risk the salary linkage within FSS schemes, thus worsening member's benefits and in the extreme making employment less secure. The Pensions Act 2004 denies trustees the flexibility of winding down schemes, crystallising deficits at the date of wind up, to be paid by the PPF, thus introducing extra systemic risks.

The ultimate effect of the legislation will be to speed the demise of the FSS. I have argued above that FSS are inherently inefficient and a fiscal burden, so this is ironically a beneficial unintended consequence. However, this benefit must not be overstated - the demise will be unplanned and unmanaged and

as there are £747bn (UBS(2006)) and 14.9<sup>26</sup> million (Pensions Regulator (2005)) people involved, the potential for lasting damage is great.

### **A genuine solution**

Left to their own devices, most of the troubles with FSS would solve themselves. With low inflation and interest rates, increasing longevity and current working practices, they are unattractive to employers and would gradually close down. This has only been prevented by government intervention.

The government could start by reforming certain aspects of legislation, with the aim being to give greater flexibility to trustees and employers. Originally pension schemes were more akin to with-profits insurance policies, with fewer guarantees and with trustees having the ability to invest long term and achieve higher returns. With the imposition of guarantees through legislation, this effectively imposes stricter solvency requirements on the schemes, making their liabilities more akin to debt<sup>27</sup>. Any attempts at investing to achieve higher long-term returns risks greater volatility of investment performance. Removing or reforming certain aspects of legislation would help redress this imbalance:

1. PPF: as described this is likely to bring in more perverse incentives, increase costs and systemic risk. The PPF should not be part of the UK pensions' scene.
2. Section 75 of the Pensions Act 1995 forces trustees to wind up schemes and therefore penalises employers who happen to have a FSS. At the moment, buy-out prices are high due to a lack of competition in the market and historically low interest rates. It is impractical for very large schemes to wind-up as there is not enough capacity in the market. Without Section 75 it would be rational and desirable for schemes to gradually nurse themselves back to health and buy-out at a more opportune time. This would be a job for skilled trustees, discussed below.
3. Indexation of pensions: this was introduced in 1997 adding an extra 25% to the cost of pensions<sup>28</sup>. Previously, in many schemes pension increases were discretionary. When a scheme's asset returns were high, members were awarded a higher pension - allowing greater flexibility, stability and diversity of investments. In the extreme, would it really be better to force a company into bankruptcy just to pay indexation on pensions? The reality is that pension increases should be a bonus which can be achieved more cheaply and consistently provided that trustees are skilled and incentives are aligned well with scheme members' interests.

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<sup>26</sup> Approximately 4.1m of these are active

<sup>27</sup> Although pension liabilities have debt-like characteristics inherently (Exley et al (1997)), enshrining this in law takes away schemes' flexibility and potential for innovation

<sup>28</sup> However, this only applied to post April 1997 accrued pension, and some schemes already gave guaranteed increases, so the increase in value of liabilities from this legislation alone was less than 25%.

Together, 2 and 3 would reduce much of the deficit of FSS, and therefore increase beneficiaries' benefit security whilst reducing the burden on business.

The only way to improve security and reduce costs further is to make the system more efficient by aligning incentives of trustees with those of employees who fund the schemes and also by encouraging innovation. The following measures might help to achieve these aims:

1. Change the structure of schemes: I have argued above that trustees' incentives are not aligned with those of the employer sponsoring the schemes' or the scheme members themselves. Furthermore it is ridiculous to have amateur trustees who are responsible for investing billions of pounds and navigating incredibly complex legislation. As a result they end up overly reliant on advisors (Chambers et al (2005)), whose rewards are not necessarily in the schemes' best interest. The solution would be to structure schemes similarly to a limited company with scheme members akin to shareholders with voting rights and a board of professional trustees, who can be hired and fired by the members<sup>29</sup>. Good trustees will be rewarded and will therefore act in line with the scheme's interest, leading to innovation and diversity, reducing the over-concentration of assets, which has increased systemic risk.
2. Encourage tradable pension debt so that the most efficient financier can take on the cost. For example a higher credit rating company could be allowed to buy pension debt from another company.
3. Allowing debt/equity swap: in cases of large deficit, the trustees should be able to swap pension debt for equity in the sponsoring company. This will reduce the financial burden to employers but will alter the power relationship between scheme and company. Active members of a scheme who are also employees will be then have to trade off job and pension security but the members will benefit from good company performance.
4. Innovation in the supply of assets: Government could take a lead on the introduction of suitable bonds to match pension liabilities, for example marketing bonds with longer redemption dates and bonds with returns linked to earnings, or longevity bonds. The government would benefit by diversifying and increasing liquidity on its debt.

Finally, addressing the fiscal burden will be politically difficult especially with generous public sector pensions (especially MP's Pensions), so reform of these is vital. In some ways it could be argued reducing tax relief on contributions and investment<sup>30</sup> rebates would be unfair at a time when schemes are distressed. But there is also an argument for reducing obvious inequities, for example the tax-free cash sum, at no loss to schemes' security.

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<sup>29</sup> Under PA04, members elect or appoint 50% of trustees, and trustees can be removed by other trustees, the Pensions Regulator or court (Business Link (2005))

<sup>30</sup> The latter has already been attempted with the abolition of tax exemption on ACT

## Appendix

### Leading Companies' Pension Fund Deficits

Company	Disclosed deficit £m	Deficit / market capitalisation	Buy-out basis Deficit £m	Deficit/ market capitalisation
3i Group	23	3.4%	175	25.9%
Alliance & Leicester	84	1.9%	442	10.0%
Alliance UniChem	69	2.4%	152	5.4%
Amvescap	47	1.2%	65	1.6%
Anglo American Associated	259	0.9%	1,461	5.0%
British Foods	-79	-1.2%	533	8.0%
AstraZeneca	974	2.2%	3,032	6.9%
Aviva	1471	8.4%	3,634	20.8%
BAA	192	2.8%	1,034	15.2%
BAE Systems	5306	43.6%	11,930	98.1%
Barclays	2697	6.8%	8,043	20.3%
BG Group	247	1.2%	353	1.7%
BHP Billiton	149	0.7%	413	1.8%
The BOC Group	280	4.7%	1,054	17.8%
Boots Group	83	1.9%	1,385	31.5%
BP	1444	1.1%	7,583	5.9%
Brambles Industries	121	4.2%	245	8.5%
British Airways	1531	40.4%	7,002	184.8%
British American Tobacco	670	2.5%	1,185	4.4%
The British Land Company	4	0.1%	18	0.3%
BT	4781	25.3%	24,925	131.9%
Cable & Wireless	151	5.4%	1,564	56.2%
Cadbury				
Schweppes	331	2.9%	1,095	9.7%
Capita Group	43	1.6%	219	8.1%
Carnival	23	0.3%	66	0.9%
Centrica	820	9.0%	1,760	19.3%
Compass Group	532	11.3%	1,441	30.7%
Daily Mail and General Trust	209	7.1%	768	26.3%
Diageo	1069	4.4%	3,216	13.3%
Dixons Group	187	6.2%	517	17.2%

Enterprise Inns Friends	0	0.0%	6	0.2%
Provident	67	1.7%	510	12.6%
Gallaher Group	-36	-0.6%	347	6.0%
GlaxoSmithKline	1749	2.1%	5,032	5.9%
GUS	101	1.1%	485	5.4%
Hammerson	17	0.5%	45	1.3%
Hanson	21	0.5%	603	13.3%
HBOS	1792	4.7%	5,324	14.1%
Hilton Group	144	2.5%	182	3.1%
HSBC Holdings	2287	2.2%	10,204	9.6%
ICI	1491	37.4%	4,444	111.6%
Imperial Tobacco Group	166	1.4%	1,349	11.1%
InterContinental Hotels Group	65	1.8%	159	4.4%
International Power	42	1.0%	96	2.3%
ITV	532	12.4%	1,489	34.7%
Johnson Matthey	-34	-1.1%	277	9.1%
Kelda Group	102	3.5%	482	16.7%
Kingfisher	298	5.3%	808	14.5%
Land Securities	11	0.1%	72	0.9%
Legal & General Liberty	215	2.7%	813	10.3%
International Lloyds TSB	2	0.1%	10	0.3%
Group	3294	12.0%	9,307	33.9%
Man Group	33	0.6%	71	1.2%
Marks & Spencer Group	657	7.9%	3,449	41.7%
Wm Morrison Supermarkets	376	7.4%	854	16.8%
National Grid	1553	10.2%	9,791	64.1%
Next	93	2.5%	231	6.2%
Northern Rock	54	1.4%	126	3.2%
O2	101	0.6%	301	1.7%
Old Mutual	-11	-0.2%	167	2.5%
Pearson	303	5.5%	762	13.9%
Persimmon	74	2.0%	174	4.7%
Prudential	796	6.1%	1,833	14.1%
Reckitt Benckiser	147	1.1%	329	2.4%
Reed Elsevier	405	5.9%	1,494	21.7%
Rentokil Initial	182	6.2%	590	20.0%
Reuters Group	297	5.1%	731	12.5%
Rexam	514	18.3%	1,310	46.6%
Rio Tinto	187	0.7%	781	2.8%

Rolls-Royce Group	1394	18.7%	2,949	39.5%
Royal & Sun Alliance Insurance	425	11.7%	2,224	61.0%
Royal Bank Of Scotland Group	3735	6.6%	10,986	19.4%
Royal Dutch Shell	595	0.8%	11,766	16.6%
SABMiller	56	0.4%	254	1.7%
J Sainsbury	494	9.2%	3,486	64.6%
Schroders	-9	-0.4%	132	6.2%
Scottish & Newcastle	313	7.3%	1,289	29.9%
Scottish & Southern Energy	205	2.4%	1,043	12.0%
Scottish Power	502	4.9%	1,836	18.1%
Severn Trent	309	8.3%	1,000	27.0%
Smith & Nephew	96	1.9%	194	3.9%
Smiths Group	140	2.4%	1,842	31.6%
Standard Chartered	264	1.6%	446	2.7%
Tate & Lyle	128	4.7%	596	21.9%
Tesco	735	2.9%	2,663	10.4%
Unilever	2848	17.1%	6,681	40.2%
United Utilities	80	1.4%	1,205	20.6%
Vodafone Group	136	0.2%	490	0.6%
Wolseley	191	2.6%	584	7.9%
WPP	231	3.0%	402	5.1%
Xstrata	12	0.1%	30	0.4%
Yell Group	99	2.7%	204	5.5%
<b>Total</b>	<b>54,784</b>		<b>202,655</b>	
<b>Average</b>	<b>595</b>	<b>5.3%</b>	<b>2,203</b>	<b>19.9%</b>

The disclosed deficits are taken from LCP(2006), and market capitalisation are as at 23 December 2005, from [www.ft.com](http://www.ft.com).

The buy-out basis deficits have been calculated by increasing the liabilities quoted in LCP(2006):

1. To allow for the lower interest rate used in a buy-out basis compared with the basis quoted in the accounts<sup>31</sup>.

<sup>31</sup> Pensions Regulator (2005) suggests that the rate to use for a buy-out is gilt yields less 0.5%. Currently index linked bond yields are 1% (over 15 years/5% inflation (from FTSE UK Gilt Indices [www.ft.com](http://www.ft.com) 25 August 2006)). The interest rate quoted in company accounts has

2. To allow for the increased life expectancy assumed in a buy-out basis.<sup>32</sup>
3. An expense allowance of 4% was then made.

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been taken from LCP(2006),. For companies where this was not available, the average for the FTSE100 was used.

<sup>32</sup> The average disclosed life table used was a PMA92base (LCP(2006), compared with PMA92 medium cohort typically used in a buy-out basis.

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