

# **JAGGER & ASSOCIATES**

## **Pausing FRS17 – Developing An Investment Perspective** **Global Money Management, August / September 2002**

### **Introduction**

Only a pensions professional marooned in the Outer Hebrides with no laptop would have stood a chance of not being aware of the new accounting standard, FRS17, which until recently was gradually coming into force for UK pension schemes – as of early July 2002 it has been postponed, with a view to its international cousin taking its place from 2005. Although FRS17 applied to defined contribution schemes as well, it was defined benefit schemes for which it had most relevance, and these have contributed to several sensational headlines in the financial press over recent months.

In this article, I want to explain what FRS17 meant as a reporting standard, comment on how comparable the resulting figures were across companies, and contrast FRS17 with the Minimum Funding Requirement (MFR) as a funding test. In order to cover the investment aspects of the standard, I will also outline the development of the UK's Corporate Bond market, and I will then highlight the investment issues needing consideration in the light of FRS17.

You might reasonably ask why we should do this, when the standard has just been postponed. The short answer is “because Pandora's Box has been opened” – when the international standard comes in, I expect it to be very similar from an investment perspective, even if some of the technical aspects of the reporting may differ slightly, such as not recognizing surplus or deficit immediately.

### **FRS17 – Outline**

FRS17 was to be a reporting standard that introduced pension funds onto the employer's balance sheet (and profit & loss account) on a market value basis, and its international replacement will probably come at us from a very similar angle. FRS17 replaced SSAP24, under which there was simply an entry in the profit & loss account, with no assessment of a scheme's impact on the overall employer balance sheet. FRS17 assessed pension fund liabilities using AA corporate bond yields – where AA refers to a particular level of credit rating (AAA being the highest, and BBB the lowest, just ahead of “sub-investment grade” or “junk bond” status). Critically, unlike SSAP24 which was only concerned with the profit & loss (P&L) account, under FRS17 the surplus / deficit attributable to the employer would have been reported within the company's balance sheet. I expect this to continue under the international replacement, and whilst there will be pressure to change it (for example, by applying some form of rolling averaging or smoothing), the underlying point will remain.

So, the crucial question under FRS17 and its likely replacement is what do the company's owners make of the data reported? If the scheme is small relative to the sponsoring employer, or if it is associated with a privately listed company, the answer may well be “not much”, but if the scheme is significant, and/or there is active trading in the company's shares, the situation could be completely different. Note that this is in stark contrast with the MFR, where companies' schemes have to meet certain funding level requirements over prescribed timescales, regardless of the views of the company's owners.

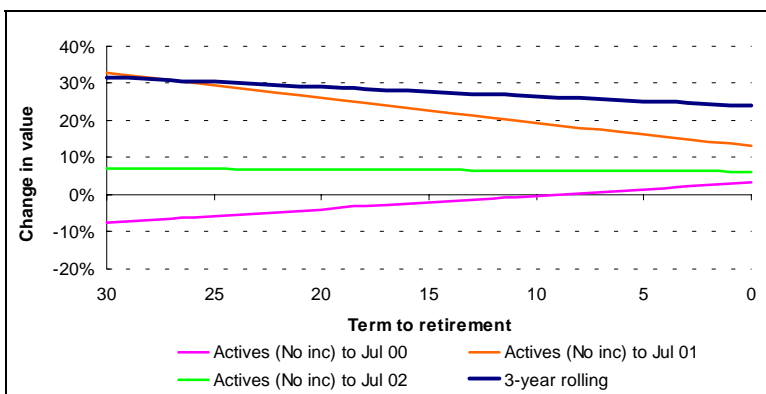
For reference, there was to have been a phased introduction for the FRS17 standard: initially just a note of the balance sheet result was to be required alongside the accounts, then in the 2<sup>nd</sup> year a note of the P&L as well, moving finally in the 3<sup>rd</sup> year to actual inclusion rather than just notes. However, at the time of its postponement, companies were clearly already being influenced in their decision making by the additional information being provided as a result of FRS17 calculations, even though these were not yet part of the formal accounts – and the requirement to report in Notes to the accounts remains.

Critically, the P&L reporting element of either FRS17 or the new standard would not drive the *investment* features of FRS17, as these are encapsulated in the balance sheet. In most cases where schemes are material relative to their sponsoring employers, we expect financial analysts to move towards using “actual” or total P&L, rather than focusing on only the above-the-line figures. However, it is worth noting that the above/below the line aspects of FRS17’s replacement will still matter in some circumstances, for example in assessing earnings per share or executive share option trigger points.

Now, a scheme’s liabilities were valued using corporate bond yields under FRS17, and given the desire for transparent accounting, a similar approach is to be expected from its replacement – “traditional” UK actuarial methods are unlikely to be allowed. It follows that if Trustees want to have their scheme assets moving broadly in line with their liabilities, to reduce the risk of the employer reporting poor pension-related accounts numbers to shareholders, then they are going to have to consider using corporate bonds as a (broadly) matching investment. What has not generally been recognized is just how volatile these liability values can be (thus possibly increasing the desire to match off by holding suitable assets and hence reduce the net volatility of the scheme), and how dependent the changes in liability values are on the scheme’s age profile.

Figure 1 shows the change in the value of pre-retirement liabilities over three consecutive 12 month periods, plotted according to the (weighted) average term to retirement. For example, for a scheme with about 15 years to retirement, the reserve rose by about 7% over the 12 months to 31 July 2002. Over the 3 year period as a whole, the increase was 28%. These figures are not as dramatic as those which applied in the Autumn of 2001, but at least they convey the point.

**Figure 1: Changes in FRS17 pre-retirement liability values**



Source: Jagger & Associates

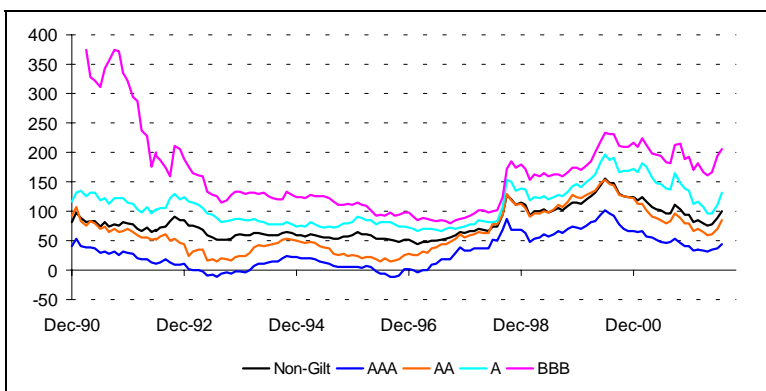
Now, most UK schemes still use equity-based investment strategies, and these have not fared well over the past couple of years. The typical pooled pension fund over the 3 year period to the end of June 2002 has been  $-3.6\%$  pa (source: CAPS), which coupled with the increase in the liability value implies a worsening of the funding level by some 40% or so. For many schemes (and finance directors) this may prompt at least a re-examination of the merits of adopting an equity-based strategy.

### The UK Corporate Bond market

Most Trustees are already used to investing some of their scheme assets in bonds (usually gilts), so it is worth considering what distinguishes corporate debt from government debt, which is already widely used for matching off pensioner liabilities.

For corporate bonds, unlike gilts, there is an element of default risk. Because of this risk, an investor will pay less for the bond, which equates to demanding a higher future return. The excess of this return above the return available on a comparable gilt is called yield margin. It varies over time according to how the market perceives not only the specific company, but the economic conditions in general. Figure 2 shows the additional return subdivided by credit ratings.

**Figure 2: Yield Margins**



Source: Barclays Capital

Note: The vertical scale is in basis points – a basis point is 0.01%.

Clearly, since the current expected gain from going for AA corporate rather than government debt is only about 0.9%pa, it is not very large, but it is still more than applied for example in the early to mid 1990s, and as a proportion of the total return it is much more material. When gilts yielded 9%, going for a bit more on corporates may not have seemed appealing or worth the effort, but with gilt yields at 5% or below, the situation appears rather different, as Trustees and employers are seeking to squeeze as much added value from their investment strategy as they can.

Another thing to realize from this chart is that even if the gilt market stays relatively still, the gains or losses from corporates can be material – for example the “credit crunch” in 1998 when spreads widened dramatically (and prices fell sharply accordingly). It is also worth noting for reference the slightly lower marketability of corporate debt – principally because they have a smaller issue size than gilts – and the larger trading spreads.

## Practicalities

To a naïve non-accountancy-trained eye such as mine, one of the most breathtaking aspects of FRS17 and its likely replacement is the way in which they seem likely to adopt a valuation system where it is simply impossible for the vast majority of pension funds to match their assets and liabilities (therefore protecting their funding levels), other than via tailored derivatives products.

The first key deficiency is the shortage of Index-Linked corporate issues – Trustees would (theoretically) require these if they were to try to match most active and deferred liabilities under FRS17 or its international cousin, but there are very few such stocks, from a narrow range of issuers, and the likelihood of many other companies issuing long-dated index-linked debt appears small. To be fair, if you regard inflation as a much more tamed beast than it was 20 years ago, then it is feasible to work with inflation modeled as being within a relatively narrow range of values, thus allowing fixed interest corporate issues to act as a reasonable proxy for the desired index-linked format.

However, worse still is the shortage of issues of relevant term – again presenting problems for pension funds, in that many could not match even if they wanted to – the weighted average term (or duration) of their liabilities would be far longer than those of the available corporate stocks. Schemes could construct portfolios which were as close as practically possible, but they would still be several years short in duration terms, and thus could experience short term volatility of the sort shown for the 12-month data in Figure 1.

As if that was not bad enough, consider the following two Tables, showing the breakdown of the Gilt and Corporate Bond markets by size and by credit rating. The small figures show the £bn breakdowns 12 months earlier.

**Table 1a: Gilts and Corporate Bonds Market Size Comparison**

Category	Market Value (£bn @ 31 July 02 & 01)	Weight (%)
Gilts	216 <sup>213</sup>	46.7
Non Gilts	247 <sup>215</sup>	53.3
AAA	95 <sup>88</sup>	20.5
AA	43 <sup>41</sup>	9.2
A	65 <sup>55</sup>	14.0
BBB	36 <sup>21</sup>	7.9
Not rated	8 <sup>10</sup>	1.7

**Table 1b: Gilts and Corporate Bonds Market Maturity Comparison**

Category	Market Value (£bn @ 31 July 02 & 01)	Weight (%)
Gilts	216 <sup>213</sup>	46.7
< 5 Yrs	66	14.2
5 – 15 Yrs	81	17.5
> 15 Yrs	69	15.0
Non Gilts	247 <sup>215</sup>	53.3
< 5 Yrs	58 <sup>54</sup>	12.5
5 – 15 Yrs	88 <sup>78</sup>	18.9
> 15 Yrs	101 <sup>83</sup>	21.9

Source: Barclays Capital

What follows from these and their subdivisions is a set of fairly damning (but by no means original) observations:

- Within the AA rated stocks, a “trifling” £9bn or so of long-dated stock, issued across a limited range of companies and sectors, is now likely to drive the accounting valuation of some £750bn or so of UK defined benefit pension fund liabilities.
- Further, the combined bond markets are completely the wrong size and shape to meet the needs of UK pension funds under the likely accounting-standard approach (not to mention the enormous section of bond-like liabilities of the UK’s insurance industry), and this is even before you introduce the complication of wanting but not having index-linked corporate debt.
- Most of the long-dated debt is already held by investors to match their liabilities (and they won’t sell it at any price), so the available stock for those not yet matched off is far less than the above figures at first suggest.

The imbalance in the UK between long-dated assets and liabilities is very stark indeed. Wholesale conversion of equity to debt is unlikely, indeed the reverse is far more common since companies tend to regard debt mountains as bad things. Going for overseas debt and hedging out the currency risk is a possible solution, but here too there are supply issues, and Trustees would need to consider carefully what residual (or new) risks this approach would entail – for example, trying to protect UK inflation by investing in a US index-linked bond involves taking a view on UK and US inflation.

### **Areas where FRS17 could have been manipulated**

You might have thought the mini-rant in the previous section would be as negative as it could get, but more depression follows when you consider the actual mechanics of FRS17 calculations, and it will be interesting to see how these are covered in its replacement. To suggest the calculations can be manipulated is a little emotive, not least because it carries negative connotations, but I believe it has to be pointed out that FRS17 was not a totally prescriptive standard, and it is by no means clear that its replacement will be either. Hence results from two separate companies are not automatically comparable, even if they have very similar pension schemes.

There are two key areas to flag up where careful instruction of the scheme actuary could have helped an employer achieve the “right” reported results (which is clearly a type of manipulation), and in particular can produce funding level results closer to parity (ie 100%), rather than disclosing deficits which may upset shareholders or surpluses which may generate pressure from members for benefit improvements.

The first is in the assumption for future salary growth. There is no obligation on the employer to use the “inflation +2%” so beloved of many pensions actuaries, and indeed a company may ask to have an assumption of “inflation –½%” if they so choose – all they have to do is get their auditor to accept that it is a reasonable assumption for their company. Since shifting the margin over inflation between “+2%” and “+1%” can change the reported funding level by typically 10%-15% for active liabilities (but obviously not for deferreds or pensioners), clearly there are potential benefits to an employer in ensuring their scheme actuary does as they would like. Inter-company comparisons become much trickier as a result.

There is a possibility that the replacement standard will drop this allowance for future salary growth and simply require treatment of pre-retirement increases as if actives had in fact just left. That would “solve” this first area, but not the second that is worthy of comment.

This is rather more subtle, and hinges on the way that market future returns data is used in calculations – please bear with your intrepid author as he now breaks the rule of never using algebra or formulae in a pensions article, for it really is not going to be as bad as you may at first fear! If you must, you can jump to the last paragraph of this section.

Start with the “simple” equation linking fixed interest and index-linked bond yields:

$$\text{Fixed interest yield} = \text{Index-linked yield} + \text{expected inflation} + \text{inflation uncertainty premium}$$

This follows from the notion that investors should be indifferent between fixed interest and index-linked stocks of comparable terms, other than in respect of their view of how predictable expected inflation is (since fixed interest stocks offer no protection against unexpected inflation). At 31 July 2002, the long-dated yields for fixed interest and index-linked gilts were 4.84% and 2.43% respectively, apparently implying that the combined value for “expected inflation + inflation uncertainty premium” is 2.41%.

Now, this equation is made slightly less simple because the two bond yields involved are not quoted in a pure annualized rate, rather they are quoted as converted half yearly. The annualized equivalents are 4.90% and 2.44% respectively (only look at the footnote if you want to be upset by the arithmetic!).<sup>1</sup>

So, the combined value for “expected inflation + inflation uncertainty premium” has started to move, initially to 2.46%. Now, how much you knock off for the inflation uncertainty premium to leave the “expected inflation” value is anyone’s guess (but in this case you have to trust the guess to an actuary). So I believe it is perfectly possible and acceptable to auditors for a scheme actuary to come up with anything between 2% and 2.5% as the value to use for expected inflation on 31 July 2002, and for benefit values to be affected accordingly.<sup>2</sup>

Now, the 0.5% difference may not sound much to you, but multiply it by the average future lifetime of the pension scheme, and you then get a crude indication of the associated change in the scheme’s liabilities that are inflation-linked – this is because the overall discount rate is fixed as the AA corporate yield (although even this is not as well defined as you might think). For example, the value placed on pensions in excess of GMP, revaluing at capped inflation in deferment and in payment could vary by say 10% or so, and the value of deferred pensions revaluing statutorily to retirement and then at a fixed rate in payment could vary by roughly 5%, so both of these make inter-company comparisons harder. [Here endeth the technical digression.]

---

<sup>1</sup> For a convertible half-yearly yield of x%pa, the effective annual rate is  $(1+x/2\%)^2 - 1$ , ie you halve the reported yield, add it as a percentage to 1, square this number, and then take 1 off again to give the effective annual rate.

<sup>2</sup> True pedants would go on to consider the index-linked gilt yield itself being a function of the inflation assumption (because of the short period at the end of an index-linked gilt’s life where the inflation-linking stops), but I think this is a much smaller effect than the “uncertainty premium” argument.

## **Concluding Summary of the key investment issues**

So where has this survey of FRS17, its likely replacement and the UK's corporate bond market in action got us to? There are essentially four key current investment issues for defined benefit schemes.

First, the materiality of FRS17 or any comparable reporting standard – how large is the pension fund relative to the company's distributable balance sheet (not market capitalisation)? How sensitive are the company's shareholders to news of surplus or deficit in the pension scheme?

Next, even though it is expected to be replaced, the MFR is still with us, and Trustees cannot ignore it just because they thought FRS17 was coming, although with a bit of luck MFR might go before the international replacement for FRS17 comes along. Given that no investment strategy can directly match both MFR and a corporate bond based accounting standard, how far towards matching one or the other of these measures do pension fund Trustees wish to go? Do they want to switch wholesale from one to the other when the MFR finally goes?

Beyond that, the Trustees need to be sure they can live with the resulting volatility from their chosen strategy. And finally, the Trustees need to consider exactly what are the associated sponsoring company's wishes. How far are the Trustees willing to accommodate these? If they focus on the pension scheme in isolation, they may end up winning the battle for their pension scheme members, but those same members may find they have lost a wider war when other company factors are considered.

What should be clear from the foregoing article is that those responsible for implementing the next standard should take a step back and think about the wider effects and features of it, before it is given the chance to drive pensions professionals to yet more distraction.

Simon Jagger  
Director & Actuary, Jagger & Associates Ltd