Spotlight Quiz Pensions III

Question 1
Pension risks

The risks for UK companies arising from their Defined Benefit pension obligations are an ongoing issue. Periodically deficit increases hit the headlines and there is a public outcry that companies are being swamped by these future liabilities. Commentators ask why the same problem keeps resurfacing: 'Have we not solved this problem yet?'

The deficit for a pension scheme is the difference between the value of the assets held in order to provide for future pensions and the present value of those future pension obligations. Assets can be valued reasonably readily but pension liabilities are more complex. Regardless of that complexity, a major factor in the valuation of future liabilities is the discount rate used. Over recent years those rates have consistently fallen – and falls in the discount rate results in the present value of the liabilities rising.

There has been much talk, and some action, about matching the value sensitivity of the pension assets to the value sensitivity of pension obligations. Assuming that this can be done to eliminate the risk of these two values moving out of line due to changes in interest rates or discount rates, but even then residual risks would remain.

If the risk of increasing deficits due to changing interest or discount rates could be entirely eliminated, which are the biggest risks that would remain?

(a) Inflation risk
(b) longevity risk
(c) regulatory risk
(d) operational risk
(e) don't know

Answer
The right answer is (b) longevity risk

It has been estimated that longevity risk adds about 3% – 4% to the total value of liabilities for each extra year of life expectancy. Longevity has continued to increase inexorably over the last fifty years. This is despite speculation in the last few years that life expectancy might fall due to rising obesity and other "lifestyle" issues.

Inflation risk can be significant, but it is likely that changes in inflation will be reflected in interest rates in the longer term. Over the short term, though, this can produce big swings in value.

Question 2
Longevity

The issue of longevity has been discussed extensively in the press over recent months and years. While it has been known for a while that life expectancy is increasing, it was the 1930s cohort (those people born in the 1930s) that began to raise more concern. This group were exhibiting much lower mortality than previous generations. There has been much speculation that this is due to better healthcare, a better diet, greater prosperity generally plus a host of other features. Many UK

companies preferred to ignore this data for some years following the introduction of FRS17 and IAS19 by using mortality tables that we now regard as outdated.

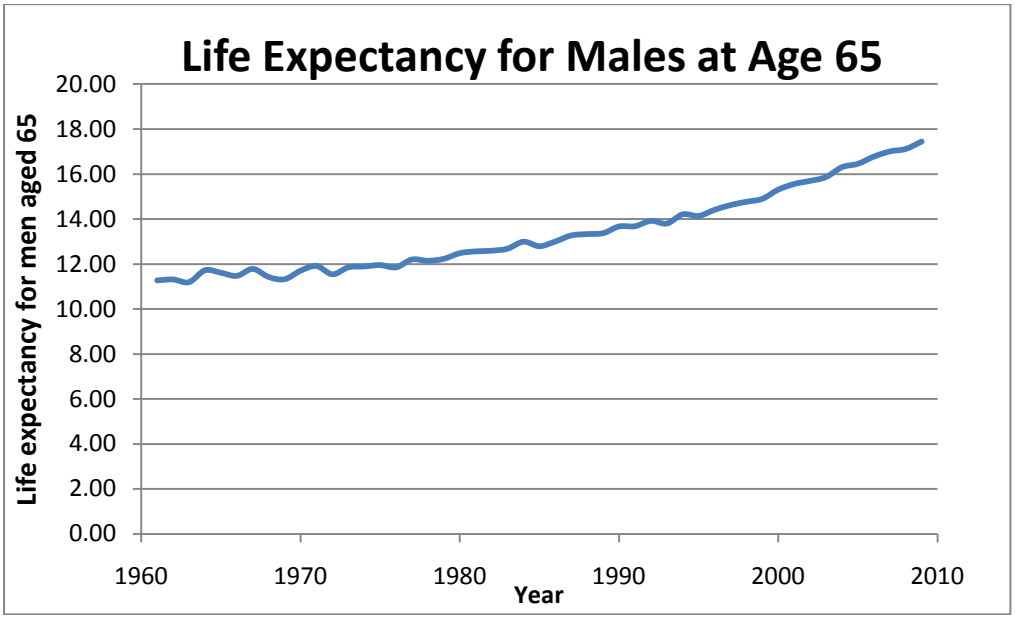
While overall life expectancy may seem a little academic, pension providers must be concerned primarily by the numbers of years that their pensioners will survive after retirement.

In the 20-year period between 1989 and 2009, the last year for which data is available, by how much has the remaining life expectancy of a 65 year-old male increased?

(a) 15%
(b) 20%
(c) 35%
(d) 30%
(e) Don't know

Answer
The right answer is (d) 30%

In fact the life expectancy of a 65-year-old male has increased from 13.37 years in 1989 to 17.45 years in 2009, an increase of 30.5%, according to Lifemetrics data. (Lifemetrics is a toolkit developed by JP Morgan).



The chart shows how life expectancy for males aged 65 has increased since 1961. The data is for the whole population of England and Wales. Within these numbers there are many other factors that may determine the actual life expectancy of an individual group of retirees.

Question 3
The cost of longevity
How can we calculate the cost of a single extra year of life for pensioners? If we begin by assuming that we are in 2009 and we are sure that the England and Wales data is representative of our pensioners and all of our pensioners retire at age 65, then the average male pensioner will be

drawing his pension for 17.45 years. Of course this ignores the problem of surviving dependents who will have a residual claim on the pension fund.

The present value of the pension liability for the average pensioner is given by the annuity formula:

$PV = \frac{1}{r} \times \left(1 - \frac{1}{(1+r)^n}\right)$ where r is the discount rate and n is the number of years the annuity lasts for.

If we make the assumption that the discount rate should be the AA-grade corporate bond rate at, say, 4%, we can then calculate the liability represented by this pension as a multiple of the annual pension paid. We could, if we wished, refine this to incorporate future inflation – but let's leave that for the moment.

If we perform this calculation based on the 2009 data (assuming no surviving dependants) and then increase life expectancy by one year, what increase in pension liability would we find?

(a) 3.1%
(b) 3.9%
(c) 4.3%
(d) 4.9%
(e) Don't know

Answer
The right answer is (b) 3.9%

As a multiple of annual pension the annuity factor for a pension lasting 17.45 years assuming a 4% discount rate, is 12.39. In other words, the present value of the total liability for that pension provision is 12.39 times the value of the annual pension. If we rework the figures for the same discount rate but an increase in the length of time, the annuity factor increases to12.875 – in other words the present value of the pension liability has increased by 3.9%.

While this is a simple(perhaps simplistic) example because there often are other factors such as inflation and surviving dependents to include into the calculations – the key fact here is that most estimates of the impact of each extra year of increased longevity on the average pension scheme is between 3.5% and 4% of total liabilities.

Question 4
IAS 19 and the corridor method

IAS19 is currently under review following an Exposure Draft issued last year. As it currently stands the standard allows a choice of accounting for actuarial gains and losses. If these gains and losses are less than 10% of the discounted pension liability or less than 10% of the plan assets they need not be recognised at all. If the actuarial gains and losses exceed the 10% limit they are recognised by amortising the excess over the remaining life of the employee participants (or faster) with the balance being deferred.

It is expected that this 'corridor' method for smoothing the impact of remeasurement of asset and liability values will be abandoned. What is the treatment that is expected to become mandatory when the review is published?

(a) A minimum of 20% of any change in deficit will be recognised in a special reserve, the remainder will be unrecognised
(b) Any change in deficit will be held in a special reserve that can be recognised in any period within the subsequent five years
(c) All of the change in deficit must be recognised in operating expenses
(d) All of the change in deficit must be recognised in other comprehensive income
(e) Don't know

Answer
The right answer is (d) all of the change in deficit must be recognised in other comprehensive income.

The issue that the change in the accounting standard is intended to address is that a clear picture must be given of the impact of the pension scheme on the financial position of the company. The corridor method fails to achieve that.

Of course the 'real situation' can be viewed either way: if the pension scheme is in deficit that may be a temporary situation due solely to a sudden reduction in discount rates – an unrealised temporary situation that is of no immediate consequence; or it could be argued that shareholders and other stakeholders need to be aware that the pension scheme deficit is becoming unmanageable, and they need to be informed in good time while the situation is remediable rather than after a potential catastrophe. There is danger in both approaches of giving misleading information, but the argument has clearly come down on the side of recognition and disclosure.

Question 5
Measuring the present value of pension liabilities
In recent years there have been several methods for determining the present value of pension liabilities that may not become due for a very long time. Essentially these methods concern what discount rate should be used. Because of the long time scales the discount rate makes a big difference.
One potential method is to determine the discount rate with reference to the assets intended to fund those future liabilities. Clearly, if the assets comprise mainly equities then these will, over the long term, generate a higher return than if the investment was solely in cash. Therefore, the liabilities should be discounted at the rate of return expected for the assets, then when the liabilities become due the assets will have grown to match the liability.
Another potential method for determining the discount rate is to use the yield of investment grade corporate bonds. The argument for this is that the rate sensitivity of the liabilities is similar to the rate sensitivity of long term bonds, therefore the low-risk choice is to invest the majority of pension assets in such bonds. If we want to know whether the assets are sufficient to cover future liabilities, this return should be the discount rate used.
Another argument suggests that we should use the principles of risk and return embedded in corporate finance and look at how likely it is that the company will have to meet the pension liability, rather in the sense that a bank might decide its credit spread for a particular customer by considering the likelihood of its debt being repaid. On that basis, we can say that the probability of the future liability being called upon is very likely, the closest similarity would be the likelihood of the UK government repaying its debt. On this basis, the rate for discounting should be the gilt rate. This is closest to the logic that insurance companies use when negotiating to assume pension liabilities in a scheme buy-out.

Which of the following is the discount rate recommended for valuing future liabilities by IAS19?

(a) The average expected return rate for the asset portfolio
(b) The AA investment grade corporate bond yield
(c) The UK gilt rate
(d) The rate recommended by the scheme investment advisor
(e) Don't know

Answer
The right answer is (b) the AA investment grade corporate bond yield

This was reviewed relatively recently. Historically, it was not unusual for future pension liabilities to be valued by discounting at the average expected return for the asset portfolio. That methodology has largely fallen into disrepute because it inherently attributes a higher value to £1 of equities (by current value) than it does to £1 of bonds or gilts (again by current value). The real debate was between the use of the corporate bond rate and the gilt rate. While many believed that the gilt rate was the 'correct' rate to use, the standard re-affirmed the use of the AA corporate bond rate. Many corporates breathed a sigh of relief as it avoided having to show a higher value for liabilities and therefore a higher deficit than would have been the case if the gilt rate had been chosen.

Question 6
The sponsor covenant
One of the important features of the company's 'pension promise' is that the company will stand behind its liabilities and support the pension scheme when the need arises. Unfortunately, less scrupulous companies have fallen short of this promise – so arose the need for The Pensions Regulator.
Trustees should be vigilant regarding not only the willingness but also its ability of the company sponsor to stand behind its promise. Any event or transaction that might compromise this willingness or ability should set alarm bells ringing. Such an event might be a potential acquisition of the sponsor, particularly via a leveraged bid. In such circumstances a trustee board might well see the prospect of a benign, cautiously financed sponsor being replaced by a less benign and highly geared sponsor. In such circumstances, it might be appropriate to find a way to be less reliant on the good will of the sponsor.

As a vigilant trustee, what action might you take to prepare for an impending leveraged bid for your scheme sponsor?

(a) Request a revaluation of the assets to current market values
(b) Request a revaluation of the liabilities on an IAS19 basis.
(c) Request a revaluation of the liabilities on a gilts-rate basis
(d) Request a buy-out valuation for the entire scheme
(e) Don't know

Answer
The right answer is (d) request a buy-out valuation for the entire scheme.

At present, the assurance that liabilities will be met as they fall due is given mostly by the assets in place, but also by the assurance of the company's willingness to stand behind its promise. A highly leveraged bidder, even if they are willing, may not have the means to make good any shortfall. The risk from the pension scheme's perspective is significantly changed by this potential transaction. Before, the company effectively provided the scheme with an option that if the assets were insufficient, they would step in. Now that this 'underwriting' has been removed the value of the

option must be determined, and this is the difference between the previous situation and the value on a buy-out basis – in other words, the value without the company's guarantee.
The Pensions Regulator is very likely to provide help and support to trustees threatened by such circumstances.

Of course there are many other actions a vigilant trustee may need to consider such as requiring a cash contribution or additional security for the sponsor covenant, but in this question we are trying to bring out the different bases for valuations.