UK Pension Fund Management

How is Asset Allocation Influenced by the Valuation of Liabilities?

David Blake

Pensions Institute
Birkbeck College
Gresse St
London
W1T 1LL
UK

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David Blake is Professor of Financial Economics at Birkbeck College in the University of London and Director of the Pensions Institute also at Birkbeck College. The author is extremely grateful to Merrill Lynch for sponsoring this paper.

The Economic Problem

How should we value the assets and liabilities of a defined benefit pension fund when the assets are liquid and subject to market value fluctuations, while the liabilities are less liquid and potentially less volatile? How can we ensure that there are always sufficient cash flows from the assets to meet the promised pension payments when they fall due? And how can we deliver pensions at the lowest economic cost to the sponsor? These questions are currently being asked by actuaries, accountants and economists.

The Actuaries' Answer – The Minimum Funding Requirement

When Maxwell stole the assets in his companies' pension funds in 1991, the immediate regulatory issue was the custodial security of the assets in pension funds. However, the Department of Social Security's response to the Maxwell scandal was the 1995 Pensions Act which introduced a completely different concept of 'security', the Minimum Funding Requirement, designed by the Faculty and Institute of Actuaries. The issue of fraud was dealt with in the Act through a compensation scheme run by a new Pensions Compensation Board.

The MFR came into effect in 1997 and specifies a minimum level of funding for an occupational DB pension scheme and an associated schedule of contributions necessary to meet this minimum level of funding. If the pension scheme is showing a 'serious deficiency', whereby the value of the assets is less than 90% of the value of the liabilities, contributions have to be increased so that the 90% funding level is reached within one year. A deficiency of between 90 and 100% has to be corrected within 5 years. A pension fund with a funding level of 100% has to have an annual certificate from the appointed actuary confirming that the schedule of contributions remains satisfactory.

Assets are measured at market value, while the discount rate for valuing liabilities is based on the actuaries' assessment of long-run returns on the assets in the pension fund. The liabilities are measured using the current unit method (which takes into account accrued service but not future pay rises) and then rescaled by various Market Value Adjustments (MVAs) to reflect current market conditions. For young active members (and for pensioners in large schemes on payments over 12 years), the relevant MVA is the equity MVA; for older active members (within 10 years of the MFR pension age), the relevant MVA is a mixture of the equity and gilt MVAs; while for pensioners, the gilt MVA is used. The 'equity MVA' is the ratio of the long-run dividend yield (currently set at 3.25%) to the current dividend yield on the FT-SE Actuaries All-Share Index. The 'gilt MVA' is equal to the fair price of a notional 15-year gilt with an annual coupon of 8%.

Assessing the MFR

The MFR does not guarantee that the pension will be paid in full: it provides only a 'reasonable expectation' that members would get their full pension, not 'absolute security'. A pension fund that fully meets the MFR might only have funds sufficient to purchase around 70% of the pensions due to active members if the sponsor becomes insolvent. As many as one in six pension funds are currently either at, or below, the MFR borderline of 90% funding. The MFR is also highly sensitive to changes in the MVAs as well as restricting pension funds from investing in an optimal mix of assets. Many of the assumptions underlying the MFR are out of date.

Further, the MFR valuation can differ from the statutory valuation. Statutory surpluses must be calculated on the basis of assumptions and methods prescribed by the Government Actuary's Department (GAD) and specified in schedule 22 of the Income and Corporation Taxes Act 1988. Schedule 22 valuations rely on conservative assumptions which tend to generate low asset

values and high liability values, thereby providing a lower-bound estimate for the surplus. If a statutory surplus of more than 5% of liabilities arises, action to reduce it must be taken within six months or partial tax relief is lost.

A scheme actuary also has almost no discretion when performing an MFR valuation, but the assumptions now tend to underestimate the liabilities in comparison with the statutory formula. To illustrate, in February 2001, the British Airways Pension Scheme had an MFR surplus of 20% (£1.2bn) and a statutory surplus of less than 5% (£250m). The fact that MFR and statutory valuation bases differ (and by such a wide margin) is somewhat surprising. Clearly one method and possibly both would not correspond with an economic valuation of pension scheme liabilities.

Some of these weaknesses were recognised in the 2000 MFR Review, which proposed giving pension funds a longer time horizon to meet the MFR. Another crucial proposal is to change the discount rate for valuing liabilities to equal the market yield on an index of UK gilts and corporate bonds. The actuaries recognise that this might encourage pension funds to switch their asset allocations away from equities towards bonds to reduce the probability of failing the MFR test.

- **The Accountants' Answer – FRS17**

The accountants' answer is Financial Reporting Standard 17 issued in November 2000 and coming into full effect in 2003. Assets and liabilities will be valued by reference to current market conditions. Yet FRS17 values liabilities on a completely different basis from the MFR, using the projected unit method (which takes into account anticipated pay rises up to the retirement date) and a discount rate equal to the market yield on AA corporate bonds, the same yield used in the corresponding US and international accounting standards FAS87 and IAS19.

The P&L charge will be split between operating costs (which includes current service costs and past service costs) and financing costs (which includes interest costs (the pension liability discount) and the expected return on assets). The net defined benefit pension asset or liability, after attributable deferred tax, will be shown after other net assets in the balance sheet. FRS17 limits the surplus recognised by the employer to the amount that the employer could recover through reduced contributions and agreed refunds.

Actuarial gains and losses will be recognised fully and immediately in a new statement of recognised gains and losses or STRGL, not in the P&L. The asset returns in the pension fund are divided into two parts which are recognised separately in the P&L and STRGL. The financing item in the P&L will show an expected asset return, which is designed to be reasonably stable over time. The differences between realised and expected asset returns are shown in the STRGL, as are changes in actuarial assumptions and differences between these assumptions and actual experience in respect of the liabilities. A five-year history of these differences is required to enable users of the accounts to assess the accuracy of the forecast returns.

The intention is to insulate the P&L from the volatility in asset values. This contrasts with FAS87 and IAS19 which allow differences between actual and expected outcomes to be spread in the P&L over a number of years and to defer a hard core (the 10% corridor) indefinitely.

- **Assessing FRS17**

FRS17 will have three major impacts. First, it will reduce the volatility of the P&L but cannot eliminate it, since changes in realised market rates eventually flow through to the P&L via consequential changes in the long-term expected returns on both assets and AA corporate bonds. Second, it will increase the volatility of the balance sheet due to the inclusion of the net pension asset or liability and this may trigger loan covenants or borrowing limits. This is likely to

reinforce the shift of pension fund portfolios into bonds that was started by the MFR. Third, there will be increased complexity of the financial statements arising from non-cash pension items, e.g. current service cost and amortisation of past service costs within operating cost, and the unwinding of the pension liability discount and the expected return on assets within financing costs.

The Economists' Answer

Economists argue that assets should be valued at market prices and that liabilities should be valued consistently using the market returns on appropriate assets. The optimal asset allocation would be determined using 'horizon matching'. This uses bonds with their reliable cash flows to meet current and near-maturing pension obligations (using a strategy called cash flow matching) and equity and property with their growth potential to match long-maturing liabilities that grow in line with earnings (using a strategy called surplus management). This second strategy is justified because of the long-run constancy of factor shares in national income (which make capital and land ideal long-term matching assets for a liability linked to the return on labour) and because of the positive long-run equity risk premium and mean reversion in equity returns (which implies that long-run equity returns are more stable than short-run returns).

What Happens in the Event of Insolvency?

A Central Discontinuance Fund has recently been proposed as a way of dealing with insolvent pension schemes. The Pension Benefit Guaranty Corporation is a CDF that has been operating in the US since 1974. There is a potential moral hazard problem with a CDF and the premiums charged by the PBGC had to be altered from the original flat-rate fee across all schemes to reflect the degree of underfunding in different schemes in order to deal with this problem. **Compulsory private insurance might enable premiums to reflect insolvency risk better.**

Conclusion

Few people would now justify valuing assets on anything other than a market basis. Yet there are currently three official valuation bases for pension liabilities in the UK: statutory, MFR and FRS17. **Moves should be made to develop a single valuation basis for pension liabilities.** Even more significantly, the discount rates that are being currently used or proposed by actuaries and accountants, based as they are on bond yields, are likely to push pension fund asset allocations towards bonds in an attempt to lower the short-term volatility mismatch between assets and liabilities, at the cost of lower long-term portfolio returns. **Moves should be made to ensure that the valuation basis for pension liabilities does not distort pension fund asset allocations.** Otherwise we are likely to find that the simplest solution to the economic problem is a further switch away from defined benefit towards defined contribution schemes.