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Pension Accounting Rules Must Reflect the Uncertainties in the Pension Promise

Current pension accounting rules, which require a single number to represent the funded status of a defined benefit pension plan, can mislead users of accounts, according to a report published by the Pensions Institute at Cass Business School, London.

'An Unreal Number: How Company Pension Accounting Fosters an Illusion of Certainty', suggests that because pension accounting rules report a single number for the pension liabilities and the pension deficit or surplus, they do not allow for the potentially wide range of possible future outcomes for key variables, such as future life expectancy. Consequently, users of accounts, such as shareholders and investment analysts, can in many circumstances, be misled about the true value of the pension promise being made by companies to their employees. The report, based on research funded by the Institute of Chartered Accountants in England and Wales (ICAEW) Charitable Trusts, recommends that priority should be given to developing new tools – such as fan charts (see diagram 1) – that can measure and communicate the uncertainties inherent in the pension promise.

Professor David Blake, Director of the Pensions Institute at Cass said: "Forecasts are only helpful if we understand the uncertainty around them: a single number cannot convey useful information about the distribution of future outcomes."

In order for companies to account for their defined benefit pension plans they have to:

1. Forecast the stream of future payments required to fulfil their pension promise
2. Discount those future payments back to a present value
3. Net off that value against that of the pension fund assets.

The resulting number is reported as a pension deficit or surplus on the company's balance sheet. However, the Pensions Institute report claims this number is unreal. Professor Blake adds: "The single number which is required on balance sheets is a hypothetical construct reliant on forecasting and discounting. It creates an aura of precision but, in reality, the ability of the assets to fund the future payments is highly uncertain."

Many authorities consider it too difficult to attribute single numbers to some of the key variables they have to forecast. For example, the Bank of England doesn't put a single number on its inflation forecasts¹, and the UK Actuarial Profession now considers it impossible to rely on a single projection of life expectancy. Instead, it recommends that actuaries should consider the full range of variables of life expectancy.²

These forecasting difficulties are exacerbated by a lack of consensus as to the discount rate that should be used to calculate the present value of the forecast pension payments. Some prefer to use the yield on risk-free government bonds, others the yield on high-quality corporate bonds. Some recommend the expected return on the pension fund assets, others the cost of capital of the sponsoring employer.

¹As Mervyn King, Governor of the Bank of England, explains: "We do not say that in our view inflation will be 2%, or any other number. Such a statement is incoherent because a forecast is inherently probabilistic."

²The range can be huge - recent Pensions Institute research predicts that English and Welsh males born in 1985 can expect to live to age 91 on average, but 90% of them could live anywhere between 86 and 97.

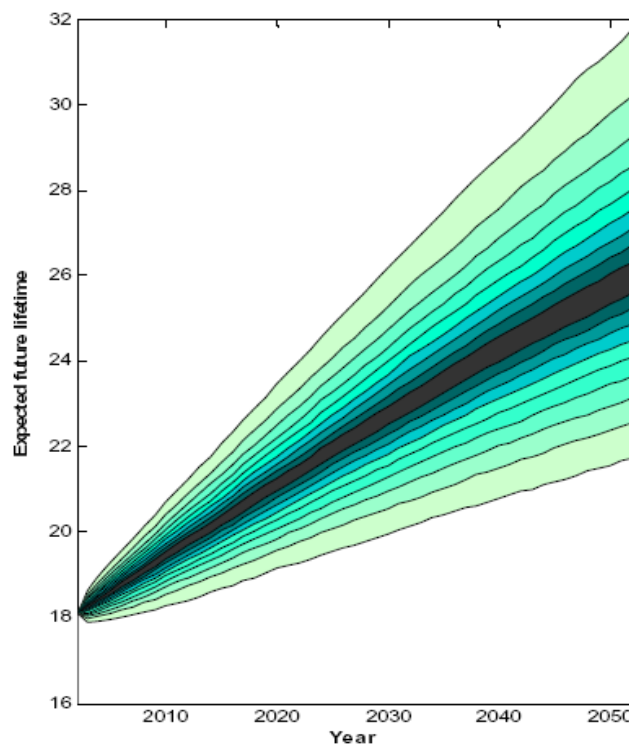
Professor David Blake adds: “Given this range of views, we should not be surprised to learn from the Pensions Regulator that an overwhelming majority of its respondents think that a single-figure measure of defined benefit pension liabilities is meaningless.

“The current pension accounting standards are better than their predecessors because they seek to provide information about the amounts and timing of the projected pension payments and the value of the pension fund assets. But, as our research shows, they over-reach themselves by allowing this useful information to be reduced to a single number.”

Accounting standard setters now advocate disclosure of the risks and rewards of pension plans, thereby implicitly acknowledging the limitations of a single number. The UK Accounting Standards Board has taken the lead by recommending the use of sensitivity analysis which is a first step towards developing valuation methods that can measure and communicate the uncertainties inherent in the defined benefit pension obligation. Sensitivity analysis tells us by how much a number will change if we change its underlying assumptions, but it still doesn’t state how much confidence we can have in the number.

An alternative presentation method advocated by Professor Blake is the fan chart - a diagram showing the probabilities of particular outcomes over a range of time horizons. These charts can be adapted to illustrate the uncertainties of the defined benefit pension promise, and have recently been used to illustrate the uncertainty attached to longevity and survivorship.³

Diagram 1: Longevity Fan Chart for 65-year old English and Welsh Males



Source: Kevin Dowd, David Blake and Andrew J.G. Cairns, ‘Facing Up to the Uncertainty of Life: The Longevity Fan Charts’ (2007)

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³Kevin Dowd, David Blake and Andrew J.G. Cairns (November 2007), ‘Facing Up to the Uncertainty of Life: The Longevity Fan Charts’, and ‘Longevity Risk and the Grim Reaper’s Toxic Tail: The Survivor Fan Charts’, www.pensions-institute.org/workingpapers/wp0703.pdf, www.pensions-institute.org/workingpapers/wp0705.pdf

For further information please contact:

**Nicole Haroutunian, Nicole.Haroutunian@city.ac.uk, 0207 040 5210 or
Amanda Chick, Amanda.chick@city.ac.uk, 0207 040 5274**

Notes to editors

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About the authors of the report

Dr David Blake is Professor of Pension Economics and Director of the Pensions Institute at Cass Business School, London. He is a consultant to many organisations in the financial services and public sectors, including JPMorgan (he is Co-Founder with them of the LifeMetrics Index), Office of Fair Trading, Office for National Statistics, Government Actuary's Department, National Audit Office, Department for Work and Pensions, HM Treasury, Bank of England, Prime Minister's Policy Directorate, World Bank and IMF. His recent books include *Pension Schemes and Pension Funds in the United Kingdom* published by Oxford University Press in 2003, and *Pension Economics* and *Pension Finance*, both published by Wiley in 2006.

Dr Zaki Khorasane is a Senior Lecturer in Actuarial Science at Cass, a Fellow of the Institute of Actuaries and former editor of *The Actuary*.

John Pickles is a Research Fellow of the Pensions Institute at Cass Business School. He is a Fellow of the Institute of Chartered Accountants in England and Wales.

David Tyrrall is a Senior Lecturer in accounting and finance at Cass, and a Fellow of the Chartered Institute of Management Accountants (FCMA) and of the Chartered Certified Accountants (FCCA). Prior to his academic career Dr Tyrrall was an accountant and finance manager in multinational companies for 15 years.

The Pensions Institute at Cass Business School was founded by Professor David Blake in 1996. As the first and only UK academic research centre focused entirely on pensions, the Institute brings together a broad range of disciplines from economics, finance, insurance, and actuarial science through to accounting, corporate governance, law, and regulation. The objectives of the Pensions Institute are to undertake high quality research in all fields related to pensions, to communicate the results of that research to the academic and practitioner community, and to employers and trustees. Visit www.pensions-institute.org

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