The Actuarial Profession
making financial sense of the future

Pension Conference 2010
Gary Hibbard & Cliff Speed

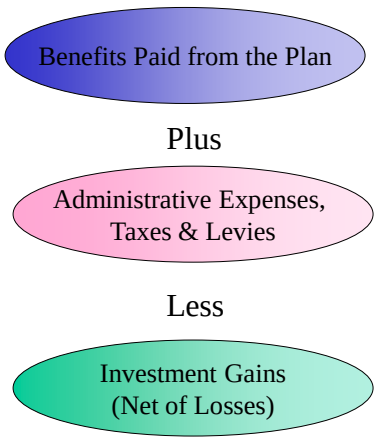
# Discounting pension cashflows for accounting valuations



## Overview

- Some fundamental (pension) accounting questions
- Some themes from IASB discussions to date
- Comparisons with insurance accounting
- Thoughts on different measurement approaches
- The Profession's discount rate research project
- Should different discount rates be used for different purposes?

## Ultimate cost of any pension plan




## Conceptual framework

- The objective and purpose of accounts
  - financial reporting should provide information that is useful in making business and resource allocation decisions
  - information must be timely and complete for it to be relevant and reliable
- Disclosures convey additional information on quality of decisions and risk considerations

## Some fundamental (pension) accounting questions

- Are IAS19 figures decision useful?
  - Useful to whom and for what purpose?
    - To provide best possible quantification or to facilitate comparison?
    - Show economic or legal obligation? Is it decision useful if the IAS19 figures result in higher liabilities than an entity's obligations under local law?
    - Should we show the entity's cashflow to the plan, or the plan's cashflow to the beneficiaries?
  - How do pension figures compare with other company obligations recorded in the accounts? Are all obligations measured consistently?
  - Which risks to quantify, which to disclose, and which neither?
  - What do accounts they tell us about risk?
- Technical approach?
  - Project cashflows against what measurement objective?
    - What does 'settlement' mean?
  - Build risk into cashflows and then apply a nil risk discount rate?
    - Should a "neutral" discount rate be used?
    - Should a liquidity premium be taken into account?
    - Should credit risk be taken into account?
    - Should non-performance risk be taken into account?
- Are the projected cashflows more decision useful than NPV figures?
  - 90% (?) of the volatility in pension values comes from volatility in discount rates not the cashflows?

## IASB's fundamental review of IAS19

- In April 2009, Sir David Tweedie asked the IAA to assist the IASB in setting discount rates used in the measurement of defined benefit obligations
  - Views on the current objective of a high quality corporate bond?
  - Would a fair value objective provide more relevant information? What discount rates would this point to?
  - What other objectives could be used?
  - How much guidance should the IASB provide on implementing the proposed objectives for the discount rate?
- This would inform the IASB's fundamental review of IAS19 planned for earliest mid 2011
  - Definition of a liability
  - Measurement
  - Consolidation

## Some themes from IASB discussions to date

- Not possible, or misleading to users of accounts, to measure all risks?
  - Obligations and risks can be measured, disclosed, both or neither
  - Do cashflows provide more decision useful information than measurements
- What measurement objective to they wish to apply?
  - Fulfillment/settlement/exit price etc
- Which obligations do the IASB want to measure / disclose?
  - ABO or PBO
  - Should contractual, constructive & discretionary benefits be separately disclosed?
    - [Obligations brought forward from use of uniform accrual]
- Are constructive benefits really constructive?
  - Non performance risk
- Comparison of pension accounting with that for other corporate obligations

## Accounting treatment of different corporate obligations

| | Mark to market | Impact recorded in P&L | Allowance for credit risk | Sensitivity to interest rate changes |
|---|---|---|---|---|
| Current IAS 19 | Yes (with option to amortise) | An option (which few adopt) | Yes – independent of entity risk | Yes, if material |
| ASB proposal | Yes | Yes | No – risk free | Yes – even if not material |
| Debt issued by entity | No (disclosure only) | No | Yes – as at issue | No (because impact is nil if not marked to market) |
| Lease arrangements (asset and lease payments) | No (not all on balance sheet; amortised cost even if on) | No | Yes – implicitly – as at issue | No (because impact is nil if not marked to market) |
| Bank fixed rate loans/deposits | No | No | Yes – implicitly (interest rate reflects risk) | No (because impact is nil if not marked to market) |
| Framework | No preference for one measurement model over others | No stated preference for P&L vs SoRIE | Not addressed | Not addressed |
| Conceptual framework (draft) | Not addressed yet | Not addressed yet | Not addressed yet | Not addressed yet |

Why?

- A function of history
- Pension is in respect of a service rather than a fee
- Pension cashflows are uncertain

## IAA work programme

- The IAA pensions committee and the IASB meet twice a year
- IAA has started work on
  - Similarities and differences between insurance and pensions
  - Should actuaries promote focused cashflow related information?
  - Implications of different approaches to measurement
    - Economic
    - Solvency
    - Legal / delivery vehicle specific
    - Enterprise risk management
- A UK Pensions PEC working party has been established to focus on UK aspects of these and other questions also
  - Volunteers always welcome

## Some similarities and differences between insurance and pensions

- Non-participating insurance is contract driven : *security* is an external feature factored into the price of the product
- Historically, pensions were a best endeavour by the employer dependent on affordability. With changing (UK) legislation, s*ecurity* of past service benefits has become a harder feature of (UK) pensions. Employers are managing the "cost" of pension in various ways.

  There remains a social policy element to pensions
- Participating insurance : Policyholders have paid a 'bonus loading' and are entitled to certain expectations (subject to investment performance/affordability)
  - cf deferred pay concept
  - cf contractual/constructive/discretionary benefits
- Insurance accounting follows insurance regulation
  - It is primarily focused on explicit solvency capital requirements
  - pensions include non-cash capital (covenant, disclosures)

**Should accounting recognise the different context between pensions and insurance?**

**Should accounting of pensions be more aligned with accounting of with-profits business?**

**Should accounting reflect different management of 'own' credit risk?**

# Insurance accounting: Current

**Accounting requirements same as FSA statutory reporting requirements**

- Technical provisions
  - Gross redemption yields on assets
    - eliminating credit risk but not any premium arising from lack of marketability
    - 97½% of adjusted yields
  - Running yield on equities and property
    - Average of current dividend and earnings yield, but no allowance for future growth
  - No liability for future awards of bonus

**In addition, for larger with profits funds,**

- Enhanced Capital Requirement to demonstrate ability to treat customers fairly
  - Market-consistent valuation of options and guarantees
  - Market consistent allowance for future returns on investment
    - Running yield, no allowance for capital growth
  - Stochastic approaches preferred





# Insurance regulation - where we might be going

**Solvency II**

- Technical provisions to be best estimate plus a risk margin
  - Can be interpreted as the amount another undertaking would require to take over the obligations
- Risk-free term structure of interest rates to be used
  - In general no regard to assets actually held
- Discussion over how risk-free rates should be determined
  - Reference rates
  - Term structure / re-investment risk
  - Default/downgrade risks
  - Strong argument from industry for an Illiquidity premium

## Will measurement of insurance contracts follow SII?

### Revision of IFRS 4

- Exposure Draft published 30th July 2010 based on "fulfilment" objective, an entity generally expects to fulfil its liabilities over time
- Measurement (proposed)
  - Allow for probability weighted cash flows, and time value of money
  - Discount rate consistent with cash flows whose characteristics reflect the liability. Independent of assets , reflect yield curve for instruments with negligible risk adjusted for differences in illiquidity of liability (not expected return on assets)
  - Risk adjustment reflects the maximum amount the entity would rationally pay to be relieved of the risk ultimate CFs exceed those expected
  - Residual margin to recognise excess CFs over life of contract (immediate recogniton of losses)
- Seems aligned with SII technical provisions (assuming fulfilment value embraces an illiquidity premium).





## IAA work programme
## Economic approach?

- Analyse cashflows according to those that are

| | Collateralised / priority creditor status | Non-collateralised / low priority |
|---|---|---|
| Vested | | |
| Unvested | | |

- Apply different discount rates reflecting nature of cashflows
  - Vested/collateralised : use "nil risk" rate?
  - Other : Higher rate allowing for non-performance or credit risk ?
- Accounting liability cannot be less than local funding law liability?

## IAA work programme
## Solvency approach?

- Start with insurance pricing ('buy-out')
- Strip out factors not consistent with the nature of pension cashflows
  - Profit
  - solvency margins
  - other margins/re-spread front end loadings for commercial risks
  - (stronger credit of insurer?)
  - etc
- Add in any solvency/funding margins from local pensions law

- *Alternatively*
  - *Start with insurance reserve before adding solvency, expense etc margins*
  - *Adjust for any solvency/funding margins from local pensions law*

## IAA work programme
## Legal & Enterprise Risk Management approaches?

- Legal
  - Accounting measurement looks through the vehicle used to deliver the benefits as if there is a direct obligation from the employer
    - *DBO accounting assumes future events that may not happen*
    - *NB consolidation rules may look at the vehicle*
  - But the vehicle used can change the nature of the obligation and hence the cashflows the employer is obligated to provide in law
    - Credit & non-performance risks are key considerations
  - Should the accounting reflect the economic or the legal obligation?

- ERM
  - Look at the pension scheme as part of the employer
  - Should accounting factor in cashflows that assume a greater obligation by the company than that required under local law and funding rules etc

## Research project on discount rates

- Why commissioned?
  - Discount rates are the heart of many models and therefore of significant public interest
  - Ensure a clear and common understanding of the issues surrounding different rates used today
  - Support the development of future framework for discount rates
- Phase 1
  - Packet 1: Survey of current practices
  - Packet 2: Survey of existing research and debate
  - Packet 3: Develop a common language for communicating current practice on discount rates and risk
- Phase 2
  - Packet 4: developing a common framework
  - Packet 5 : the impact of change

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## Packet 1: Current Practice

Survey of different discount rates currently used for different purposes in each practice area in the UK

| *To include* | *To understand who liabilities are in respect of* | *Covering following areas of actuarial work:* |
|---|---|---|
| ▪Historical perspective | • Shareholders | • Life assurance |
| ▪Legislative framework | • Policyholders | • General insurance |
| •Nature of promise | • Management | • Pensions |
| • Impact of government actions on nature of promise | • Regulators | • Finance & Investment |
| | • Trustees | • Enterprise Risk Management |
| | • Pension scheme members | |

UK focus with only a passing reference to international developments where they have a particular bearing on UK practice

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## Initial findings: Discount Rate project

- Number of different methodologies for setting discount rates
- Principle Drivers
  - Purpose of the calculation and the context (practice area)
- Calculations fall into two broad categories:

**Matching calculations**

- What are the characteristics of the liability cash flow?
- Are there any traded instruments which *match liability cash flows*?
- Is the market deep, liquid and transparent?

**Budgeting calculations**

- How is the liability being financed?
- What is the current yield on the investments?
- Is the current yield the same as the total overall return?

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## Initial findings: Discount Rate project

### Matching

- Accounting
  - Current IAS19 (pen)
  - Future IFRS4 (ins)
- Statutory reserves
  - Future (SII)
- Capital requirements (ins)
  - Current ICA
  - Future (SII)
- Shareholder (ins)
  - MCEV
- Risk transfer
  - Section75 (Pen)
  - Hedging (banks, ins)

### Budgeting

- Accounting
  - Current (ins)
  - Director's pensions
- Statutory reserves
  - Current (ins)
- Funding (pens)
  - Technical provisions
  - Recovery plans
- Shareholder (ins)
  - **Traditional EV**
- Risk transfer
  - Transfer values (pen)
- Govt STPR
- Fundamental value

Calculations differ in the nature and degree of risk embedded in the discount rate

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## Initial findings: common language

- Improved language
  - Glossary of terms?
- Disclosure of risk
  - How risk is accommodated in calculations
  - How communicated
  - Are consequences understood?
- Education
  - Long term financing and regular measurement
  - Behavioural consequences
- Should discount rates state a specific purpose?

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## Should discount rates differ?

- Do different purposes justify different approaches
  - Market consistent (portfolio replication) or expected return (projected budgeting)?
- Funding (budgeting exercise)
  - Enable different views on future uncertain events
  - New benefits vs deficit correction
- Valuation /Assessing capital (matching)
  - Is this a least risk assessment?
  - Should own credit risk or a fulfilment approach be used?
- Accounting:
  - Is the purpose to provide best possible quantification or to facilitate comparison?
  - Who are the end users and what are their purposes?

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## Differing discount rates: security

- **Does security justify different discount rates**
  - "Budgeting" = reduced financing, but risk that future outcome adverse
  - "Matching" = higher financing, risk of downside priced (but non-tradeable risks)
- If use own credit risk (cf fulfilment) how should this be measured?
  - Security depends on collateral, amount and quality; should identical pension funds with same funding level but different assets (including contingent assets) have different discount rates?
  - Difficulties with uncollateralised assets (Sponsor covenant), scope or parent or group impact of national boundaries etc?
- Should external protection be considered, PPF, FSCS, other?
- Should future actions be considered, investment policy, or regulatory, for example removal of Tax advantages on commutation?
- Does the legal vehicle for delivering the benefits matter? Should insured benefits be discounted differently?
- **Should this be recast as a discussion on capital?**
  - Extra risk = lower security; an expression of capital

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## Discount Rates: the actuarial profession

- Should the profession address the diversity of approaches to discount rates?
- Should the IAA be leading the work for the IASB, what role should the UK profession play?
- What are the risks to the profession if it:
  i) does not provide direction on discount rates
  ii) advocates a change in approach?
- Can this debate and work be structured to enhance the standing of the profession?

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