

Introducing the Project

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Current Practice

Survey of different discount rates currently used for different purposes in the UK, *to include*

- Historical perspective
- Legislative framework
- Nature of promise
- Impact of government actions on nature of promise

UK focus, with only passing reference to international developments

- where they have a particular bearing on UK practice

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Existing Research and Debate

- Summary of existing research and debate on discount rates
- Recent public debate on matters related to discount rates
- Future developments in discount rates already under way, *and key dates*

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Developing a common language

A common language for communicating current practice on discount rates

- Describe current practices and rationale behind different discount rates
- Improve communication of discount rates
 - To users of actuarial services
 - To external stakeholders
- How and why risk is included in discount rates in different circumstances:
 - What is the rationale?
 - What are the similarities and differences?

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Developing a common framework for the future

Using the common language to:

- Develop/propose additional material for informing and influencing debate with regulators and standard setters
- Support actuaries to communicate impartially and effectively
- Consider options for reducing diversity of practice
- Consider extent to which risk might be included more explicitly and transparently in discount rates, recognising there are different purposes
 - Capital requirements
 - Accounting requirements
 - Shareholders
 - Management
- But still allowing for diversity of practice at a detailed level

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Impact

Consider impact of any proposed changes:

- How they would be presented
- How they would aid communication of different liabilities to different stakeholders
- What are the views of all the stakeholders?

To include:

- Political consequences
- Impact of transparency on regulation
- Impact of transparency on behaviour
- International consequences

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Agenda

Welcome and Introduction - Ronnie Bowie
Introducing the Project - Charles Cowling
Presentation of initial findings - Chinu Patel, Chris Daykin
Open discussion
Next Steps
Close

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realising the potential of the future

Forum on Discount Rates
Chris Daykin and Chinu Patel



Where we are now....
Discount rates in the UK

23 March 2010

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Our purpose: A reminder

- **Codify current practice**
 - initially restricted to principal areas of actuarial practice
 - some work outstanding
- **Take stock of existing research and debate on discount rates**
- **Develop common language**
 - Rationale
 - Communication
 - Risk content

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Historical context

A lightning review of 400 years

- Concepts of compound interest – Witt (1613)
- Application to annuities – de Wit (1671) and Halley (1693)
- Artificially low rates of interest and book value of assets
- Yield on fund and expected yield on future assets
- Discounted cash flow of both assets and liabilities
- Market value of assets and market-related discount rates
- Prudent valuation v realistic valuation
- Market value of liabilities without regard to assets held

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Use of discount rates by others

Government use of discount rates

- Social time preference rate
 - how society values the present compared to the future
- Discount rate of 3.5% (real rate)
 - used to determine whether government action is justified
 - based on comparisons of utility by time and generation
- Cost-benefit analysis may use higher rate to allow for risk
- Long-term sustainability of public finances
- Contracting-out rebate assumptions

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Some discount rate concepts

A selection of issues from current practice

- What is the purpose of discounting?
- Return on particular assets or a theoretical concept?
- Price or value?
- Long-term or short-term considerations?
- Is a transaction to take place in the market?
- Risk-free rate
- Liquidity premium
- Equity risk premium / Diversification premium

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Life insurance

Current regulatory requirements set by FSA

- Twin peaks approach
- Peak 1
 - Market value of assets
 - Gross redemption yields in the market
 - eliminating credit risk
 - but not any premium arising from lack of marketability
 - 97½% of observed 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

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Life insurance

Current regulatory requirements set by FSA

- Peak 2 (applies to larger with profits funds only)
 - Firms must determine Enhanced Capital Requirement
 - Market value of assets
 - Market consistent allowance for future returns on investment
 - Running yield, no allowance for capital growth
 - Stochastic approaches preferred
 - Demonstrate ability to treat customers fairly
 - In line with Principles and Policies of Financial Management
 - Market-consistent valuation of options and guarantees

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Life insurance

Accounting requirements – SORP

- 2008 regulations under the Companies Act
- Actuarial principles in EU Accounts Directive of 2002
- SORP developed by ABI
- Supports accounting treatment under Peak 1
 - although not subject to admissibility regulations
- Peak 2 assessment used if available (FRS27)
- IFRS 4 does not have additional constraints
 - permits most existing practices

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Life insurance

Embedded value

- Traditional embedded value used in M and A transactions
- Increasingly forms part of disclosure in accounts
- Value of future profits from existing business
 - on the basis of best estimate assumptions
 - having regard to constraints of regulations on emergence
- Trend is towards market-consistent embedded value (MCEV)
 - although extent of true market-consistency varies

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General insurance

Current regulatory requirements set by FSA

- In accordance with generally accepted accounting principles
- Historically, technical provisions were not discounted
 - except perhaps some long-tailed business
- Now discounting is permitted if average terms is >4years
 - but still not widely practised
- IFRS 4 permits continuation of this situation

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Current developments – where we might be going

Solvency II

- Technical provisions to be best estimate plus a risk margin
- This can be interpreted as being an exit value
- 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
- Industry arguing for illiquidity premium

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Current developments – where we might be going

Revision of IFRS 4

- Long and twisting road to a standard for insurance contracts
- Latest draft of IFRS (revised) proposes settlement value
- Expected PV is probability weighted average of PVs of outflows for possible outcomes
- Current market yields
- No guidance intended on discount rates beyond this
- Possibility of IASB being developed by IAA
 - which might give guidance on how to arrive at discount rate

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Historical perspective on pensions

Last 15 years

- Compulsory indexation; removal of dividend tax credits
- Market based accounting standards without smoothing
- MFR gave way to scheme specific approach
- Proactive management of sponsor' credit risk
- Sponsor commitment strengthened by 'debt on employer' regulations
- Closure of pension schemes and greater focus on risk management
- Debate on funding v solvency; use of tools and techniques from financial economics

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Where we are on pensions

Funding requirements set by legislation and tPR

- Technical provisions (TPs)
 - Discount rate to be prudent and can be either or both of
 - Expected return from scheme's assets
 - Yield on gilts or high quality bonds
 - Credit risk management
 - When sponsor covenant weakens TPs expected to strengthen
- Recovery plan
 - Discount rate more likely to be based on actual asset strategy, and no prudence requirement

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Where we are on pensions

Employer debt (S75)

- Exit price required to bring scheme's funding level to cost of insurance buy-out

Transfer values

- Defined by legislation to preserve equity between transferring and remaining members
 - Expected cost to scheme
 - Expected return on scheme assets
 - Can cut back if scheme in deficit (subject to)

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Where we are on pensions

Accounting requirements set by IASB/ASB

- Obligation in sponsor's accounts
 - Yield on high quality bonds
 - AA, if deep market
 - No adjustment for credit defaults/downgrades
 - Broad term matching, but not full term structure

Director's remuneration (Listing Requirements)

- Measure of accrued pensions = transfer values
 - Expected return on scheme assets.

Pension ALMs

- Risk reward scenarios over future timeframes
 - Best estimate return from scheme's assets

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Where we might be heading

Pension accounting

- New IAS19: No corridor, no deferred recognition, no credit for assumed out-performance in P&L
- Work on discount rate to begin in 2011. 'AA' bond yield not a foregone conclusion. IAA asked by IASB to help with ideas on measurement of liabilities.

Trends towards buy-out

- Pension transfer market: managing the long and short simultaneously
- TPs being gradually ratcheted upwards
- Financial firms' own pension liabilities have higher capital requirements
- European debate on an SII type standard for pensions

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Some preliminary observations

- Different methodologies used by different stakeholders
- Purpose and context usually determine nature of calculation
- Additional rules and guidance by relevant authorities often provide a further steer
- Nature and degree of risk embedded in the discount rate is a key characteristic
- May be possible to view calculations under two broad categories.

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A possible rationalisation

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?
- What is the next best thing?
 - Synthetic price?
 - Judgements about models and assumptions
 - Generally calibrate to market

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?
- What is the next best thing?
 - Assumptions
 - Judgements about financial and economic indicators
 - Possibly informed by market analyses

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Reconciliation from a risk perspective

Matching calculations

- Risk of non-delivery implicitly targeted to be low or minimal

Budgeting calculations

- Risk of non-delivery is a balancing item

Low embedded risk

+

Higher embedded risk

External risk support

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Building blocks for discount rates

Matching calculations

- Build up to the matching asset
 - Reference market rates
 - Term structure
 - Default risk
 - Illiquidity premium
 - Diversification premium
- Result is a yield structure to apply to cash flows

Budgeting calculations

- Establish reference asset portfolio
 - Risk appetite and affordability
 - Nature of liability ; discretions; guarantees
 - Available market instruments
 - Prudence margins
- Adjust current yield on asset portfolio (eg for credit defaults) and make judgements about future expectations (eg equity growth)
- Result is (usually) a single 'expected return' (arithmetic or geometric) to apply to cash flows

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Who uses which?

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, pens)

Budgeting

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

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Some more observations

- No matter what approach has been adopted to arrive at the discount rate, in practice there will be many variants, each with a different level of risk embedded in the discount rate.
- How this risk is expressed may be the key to better communications between stakeholders.

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Risk structure of discount rates: a possible decomposition

Doesn't matter how discount rate has been arrived at, you could decompose it for presentation as

Other expected out-performance
Diversification premium
Illiquidity premium
Credit default
Least risk reference

Some further observations

- **Confusing language and terminology**
 - a barrier to communication
- **Market consistent valuations also require judgements**
 - Many variants, depending on how requisite levels of objectivity and consistency are attained
- **Some differences in how different stakeholders address different risks (and hence discount rates):**
 - Equity returns: FSA v TPR
 - Accounting of insurers' annuity books v own pension liabilities
 - Managing own credit risk: FSA (regulatory capital) v TPR (covenant management)
 - IASB (uniform credit risk for all) v TPR (strong TPs if weak covenant)
 - Management of volatility: Pension (nuisance/denial) v Insurance (capital management)
 - Social element and inter-generational cross subsidies: government v insurance v pensions
 - Addressing riskiness of cash flows: through discount rates (economists, corporate finance, possibly IFRS4) v more explicit allowance (actuaries)

Next Steps

- Complete Research on Initial Findings**
 - Targeting end April
- Refine work on developing a common framework**
- Develop proposals**
- Consider impact / consult stakeholders**
- Publish proposals**
 - Targeting end 2010
