

Agenda

Welcome and Introduction

Introducing the Project Presentation of initial findings -

Open discussion

Next Steps

Close

Ronnie Bowie Charles Cowling - -

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Chinu Patel, Chris Daykin

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Introducing the Project

- · Establish cross-practice team
- Analyse current practice on discount rates
- Describe how and why risk is included in discount rates
- Develop a common language and framework to describe current practice
- Consider options for reducing diversity of practice and introducing a transparent framework
- Consider impact and management of change

Introducing the Project

Charles Cowling, Chairman Robert Hails Andrew Smith Alastair Clarkson James Tuley James Orr Malcolm Kemp

Ruth Loseby Maria Lyons (Pensions) (Management Board)

(Life assurance) (Life assurance) (General insurance) (Investment and ERM)

(Research Manager) (Research Assistant)

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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 $% \left({{\rm UK}} \right)$

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:

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- What is the rationale?
- What are the similarities and differences?

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

Impact

Consider impact of any proposed changes:

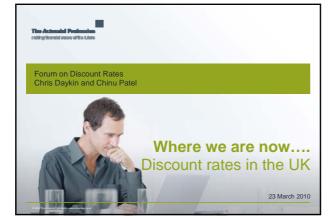
- How they would be presented
- How they would aid communication of different liabilities to different stakeholders
- What are the views of all the stakeholders?
- To include:
 - Political consequences
 - Impact of transparency on regulation
 - Impact of transparency on behaviour
 - International consequences

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Welcome and Introduction-Introducing the Project-Presentation of initial findings-Open discussion-Next Steps-Close-

- Ronnie Bowie Charles Cowling
- Chinu Patel, Chris Daykin

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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

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

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Market value of liabilities without regard to assets held

- Use of discount rates by others
- Government use of discount rates
- Social time preference rate
- how society values the present compared to the futureDiscount 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 riskLong-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

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
 97%% 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 Manageme
 - Market-consistent valuation of options and guarantees

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

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
 - $-\ensuremath{\mathsf{having}}$ regard to constraints of regulations on emergence
- Trend is towards market-consistent embedded value (MCEV)

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although extent of true market-consistency varies

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

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 IASP 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

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 asse
 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

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

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- Expected cost to scheme
 Expected return on scheme assets
- Can cut back if scheme in deficit (subject to)

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

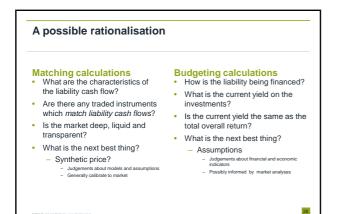
- New IAS19: No corridor, no deferred recognition, no credit for assumed outperformance in P&L
- Work on discount rate to begin in 2011. 'AA' bond yield not a foregone conclusion.
 IAA asked by IASB to help with ideas on measurement of liabilities.
- Trends towards buy-out
 - Pension transfer market: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

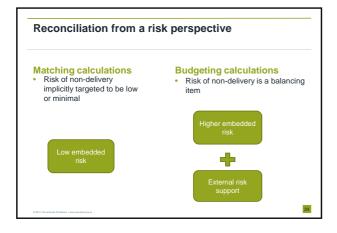
Some preliminary observations

- 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

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May be possible to view calculations under two broad categories.







Building blocks for discount rates

Matching calculations Build up to the matching asset

- Reference market rates
 - Term structure
 - Default risk

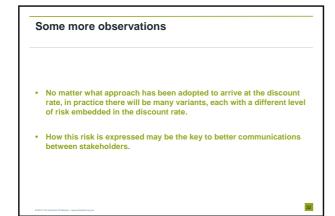
 - Illiquidity premium
- Diversification premium
- Result is a yield structure to apply to cash flows
- Budgeting calculations Establish reference asset portfolio Risk appette and affordability Nature of lability ; discretions; guarantees Available market instruments Prudence margins
- · Adjust current 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

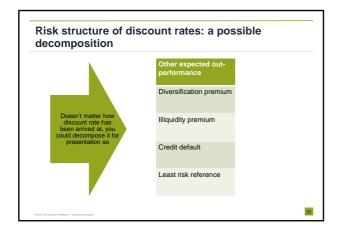
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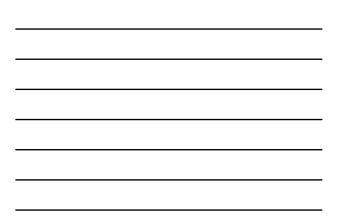
Who uses which? Matching Budgeting Accounting

 Current IAS19 (pen)
 Future IFRS4 (ins)

 Accounting Current (ins) Director's pensions Statutory reserves Statutory reserves - Future (SII) Curr · Capital requirements (ins) . Funding (pens) Current ICA Future (SII) Technical provis Recovery plans cal provisions Shareholder (ins) Shareholder (ins) MCE Traditional E Risk transfer Transfer values (pen) Section75 (Pen) • Govt STPR Hedging (banks, ins, pens) . Fundamental value 31







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)

 Image: Insurers' annuity books v own pension liabilities

 Managing own credit risk: FSA (regulatory capital) v TPR (covenant management)

 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