

Society of Actuaries in Ireland

CURRENT TOPICS 2007

10th December 2007



Scope of Current Topics 2007

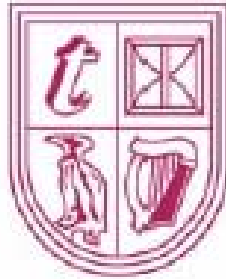
- Updating actuaries on recent, key developments in areas outside of their specialist practice areas.
- Areas covered:

Investment	Life Insurance
Pensions	General Insurance
- Current Topics 2007 Paper – available for download at www.actuaries.ie.
- Presentation will focus on the main issues in each practice area.



Agenda

- Practice Area Presentations (4)
- Questions and Answers
- Drinks!



Investments

Mairead Coleman, Mercer

Paul Kenny, Mercer



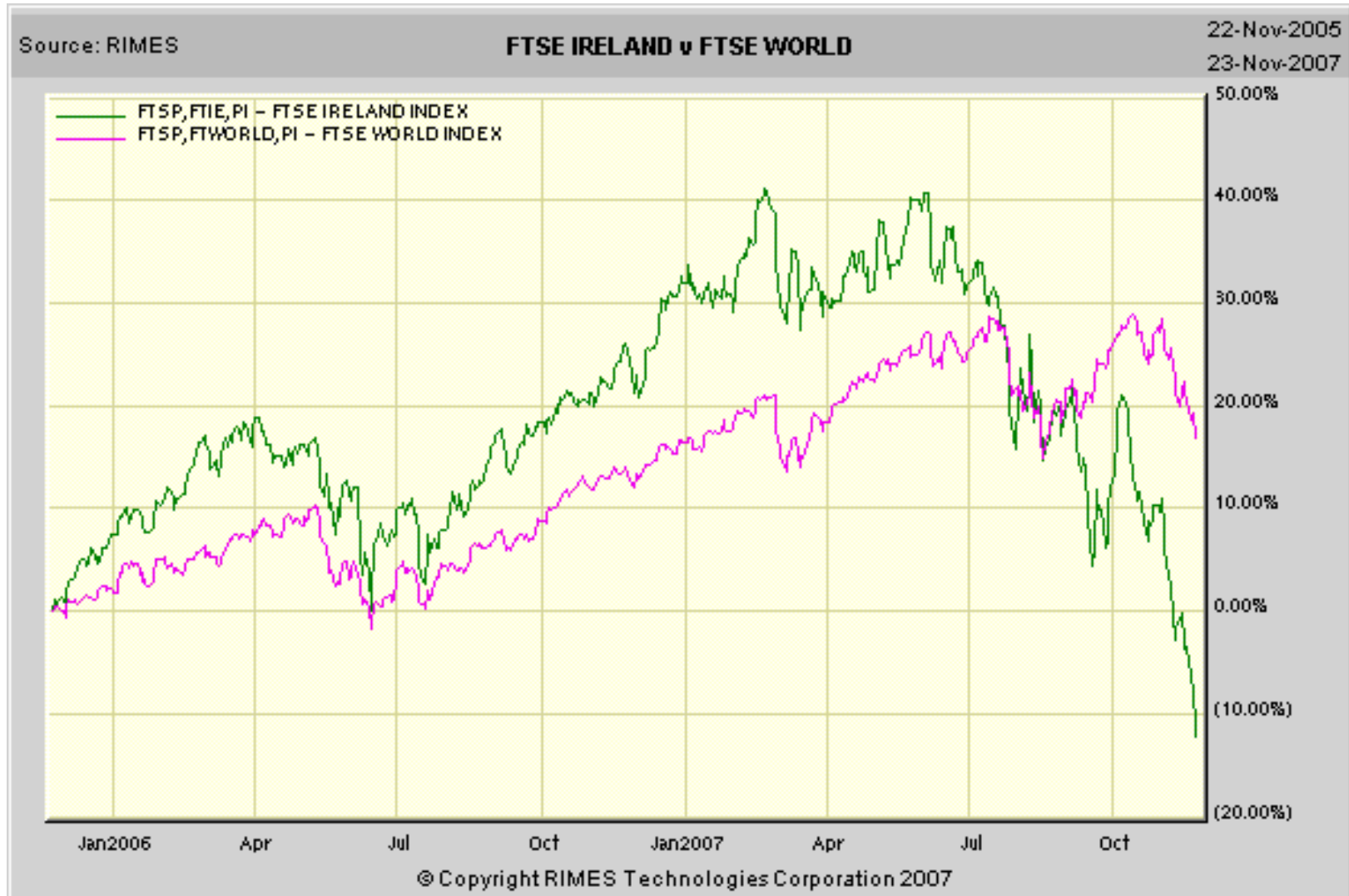
Investment Agenda

- Market Update – Focus on the ISEQ
- Climate Change
- Liability Driven Investment
- Diversifying the assets
 - Focus on Global Tactical Asset Allocation



Market Update

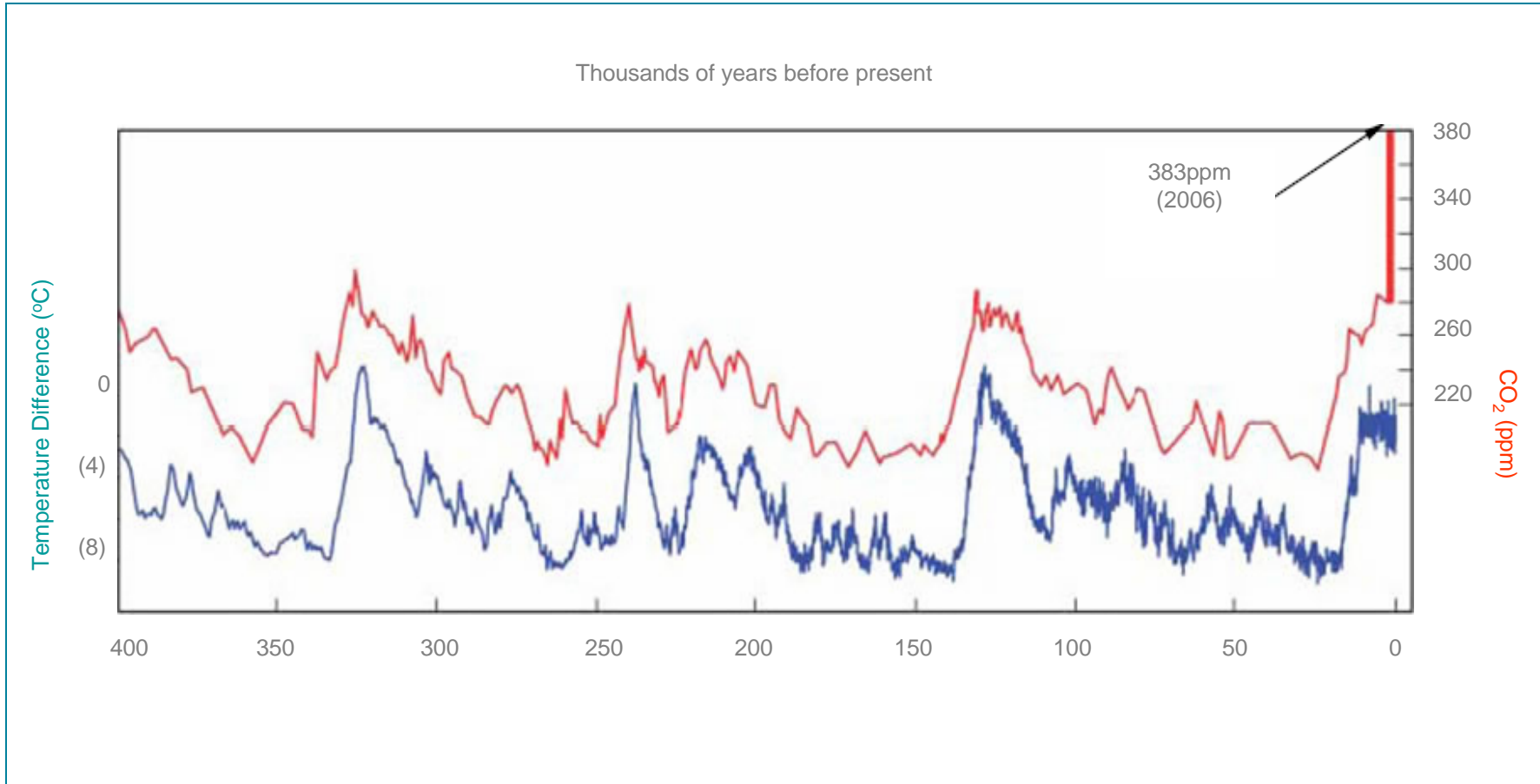
Focus on Irish Equities





Climate Change

Global average concentrations of CO₂ versus temperature difference from present global mean



CO₂ concentrations at a 400,000 year high—Slide provided by The Carbon Trust

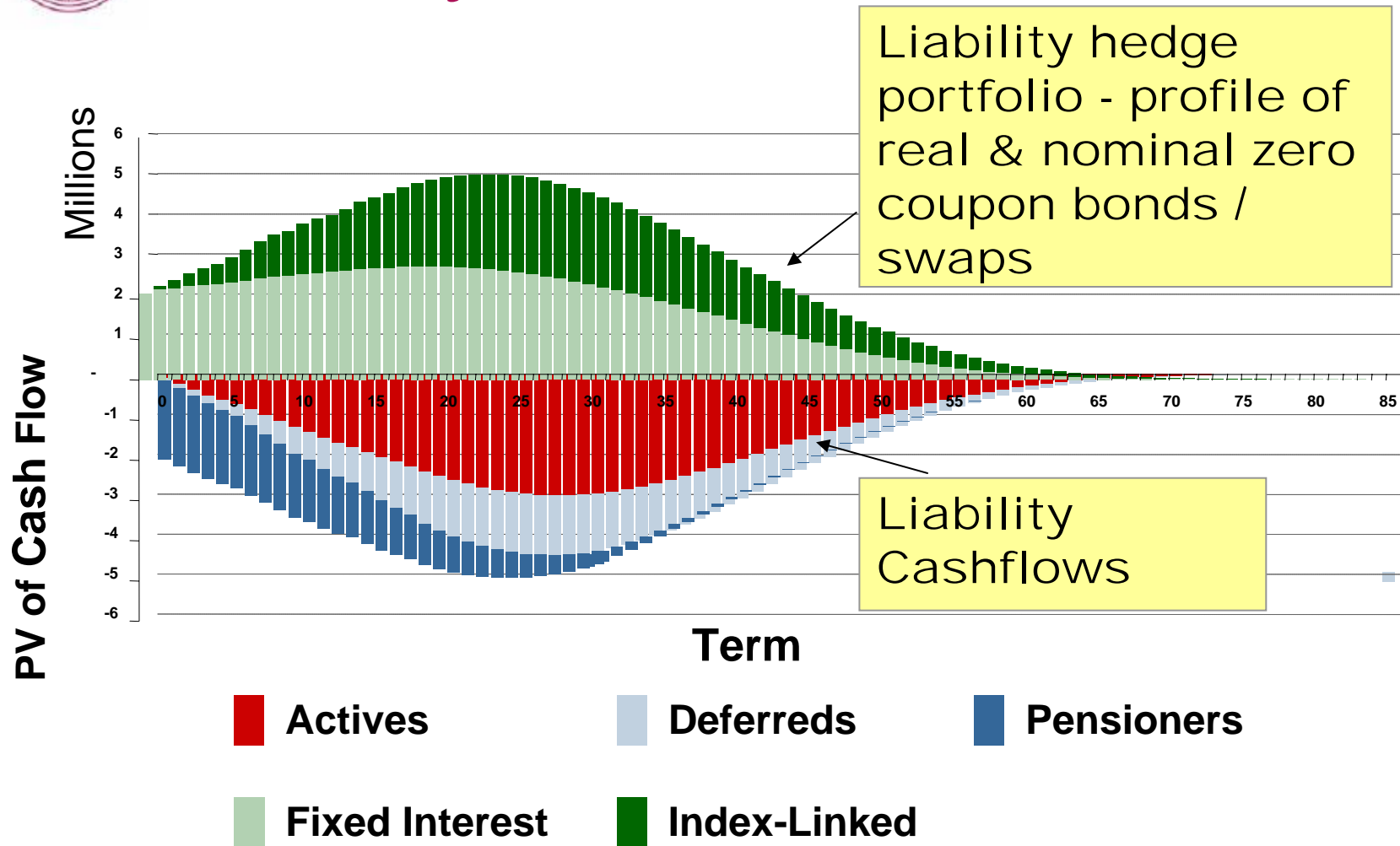


Climate Change – so what?

- Possibility of reduced expected return on assets in the future:
 - Equity Markets (winners and losers)
 - Property Markets (physical damage)
 - Bond Markets (public borrowing)
- Development of alternative assets, such as:
 - Weather derivatives
 - Global warming indices
 - Alternative energy funds



Liability Driven Investment

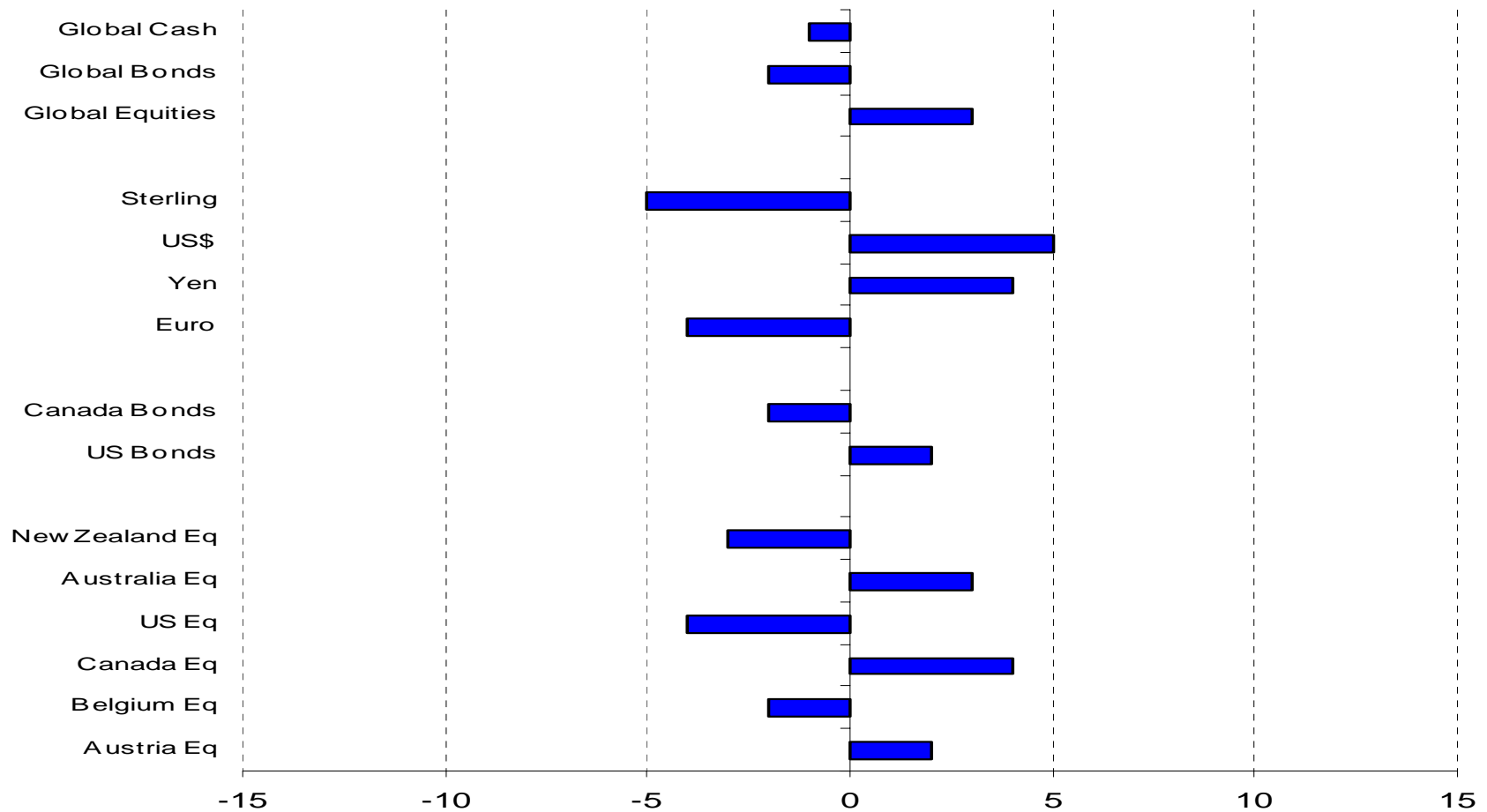




Diversifying The Assets

Global Tactical Asset Allocation

Specialist "Stand-Alone" Global TAA Approach

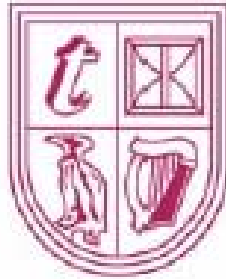




Further Info

See Current Topics paper for further details on:

- Equity, bond and property markets
- Irish asset allocation trends
- Alternative risk diversification strategies
- Legislation update



Life Insurance

Maria McLaughlin, Watson Wyatt
Karl Murray, Life Strategies



Agenda

- Role of Appointed Actuary
- Product Development
 - Variable Annuities / GMXBs
- Solvency II
- IFRS



Role of Appointed Actuary

- Changes to Professional Guidance
- Actuarial Standards of Practice (ASPs)
- ASP LA-1 and ASP LA-3
 - Decision making role of the Board of Directors
 - Advisory role of the Appointed Actuary
- ASP LA-4
 - Reserving impact of PRE
- Duties of the Appointed Actuary

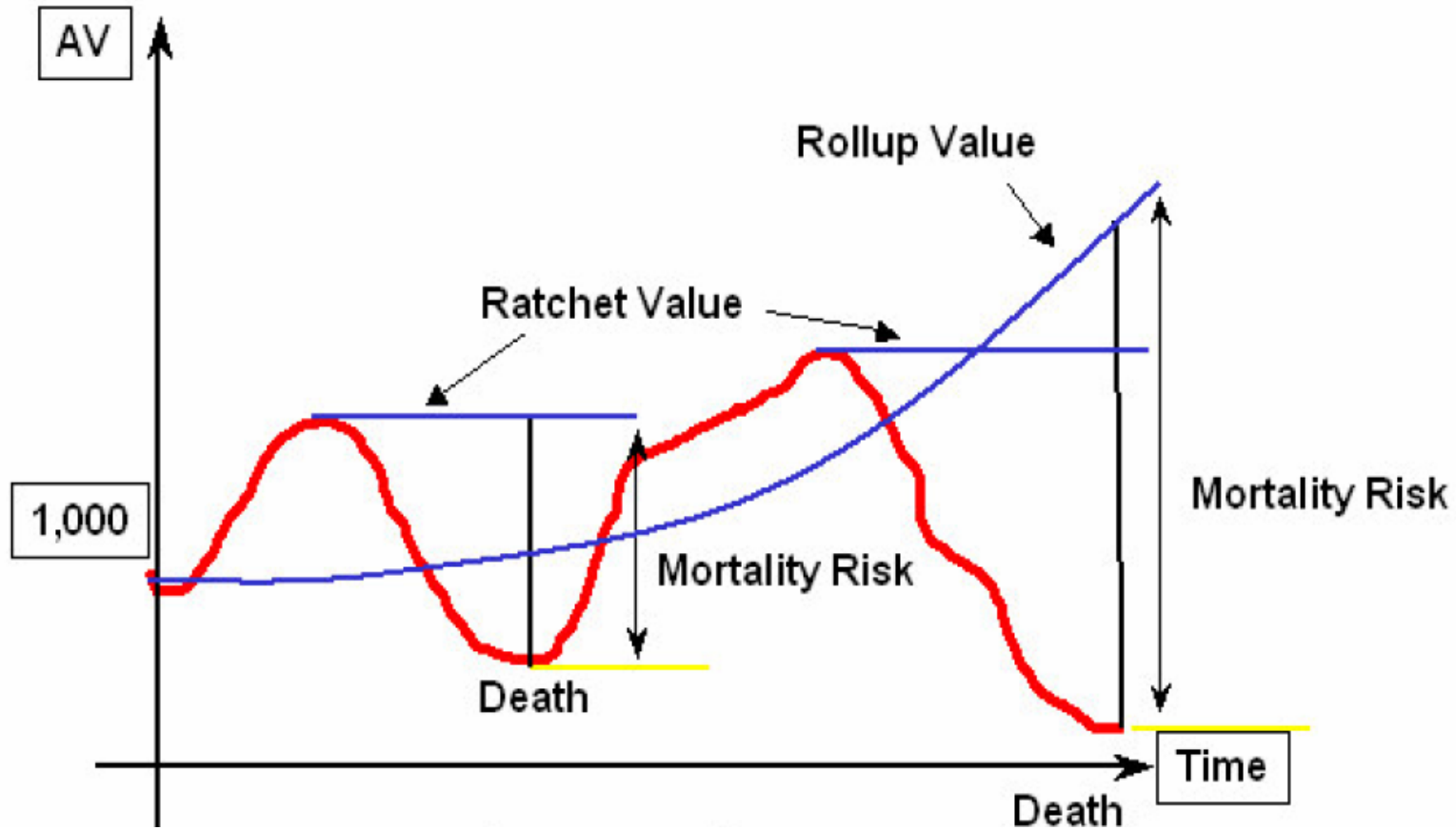


Product Development Variable Annuities & GMXB's

- What are they?
- Typical product
- GMXB
- Attractions to consumers
- Management of the risks
- Reserving approach
- Market size



View of a GMDB and GMAB



Source: What you need to know about managing VA risks, Annuity Systems Inc, June 2004

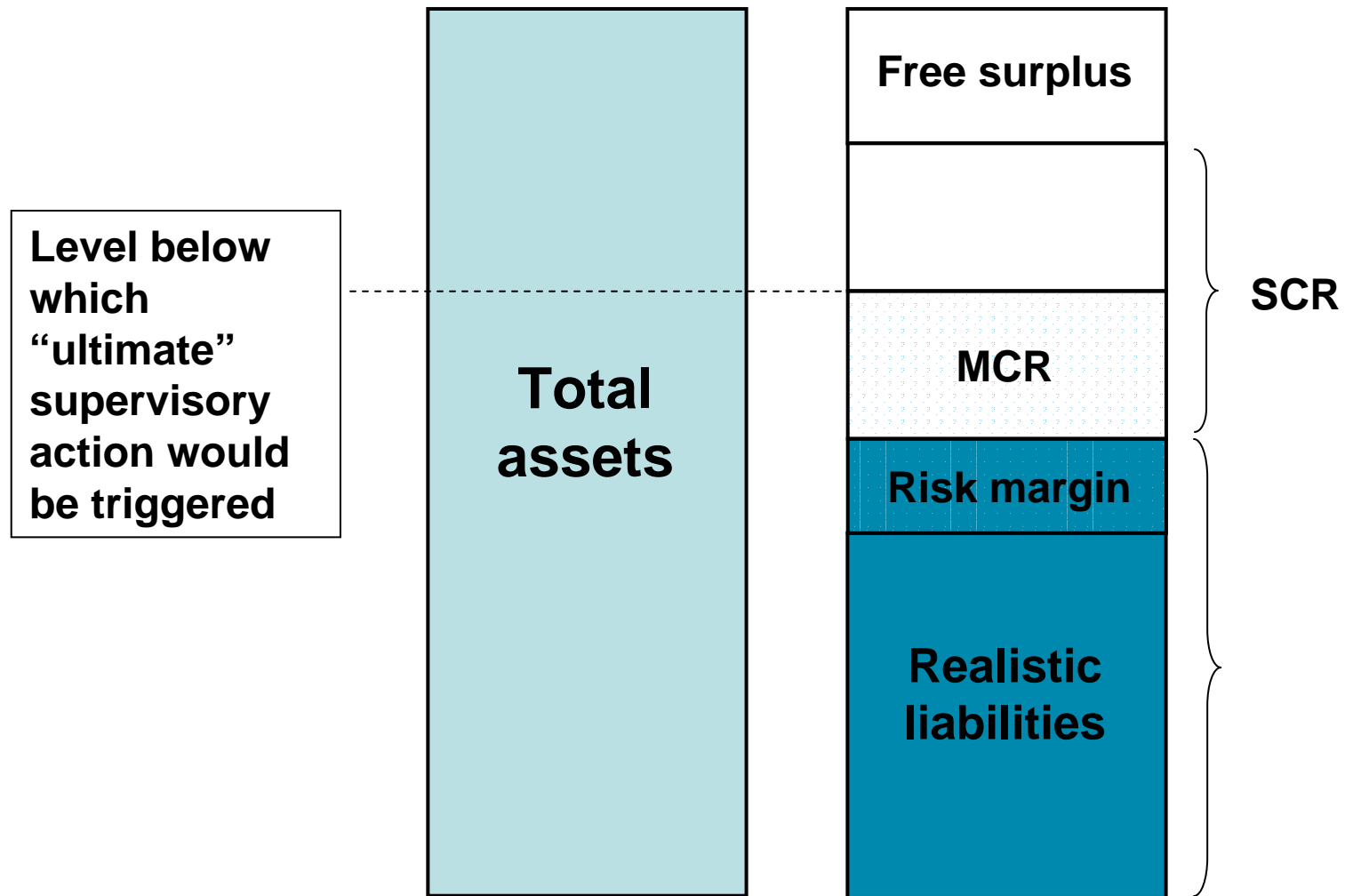


Solvency II

- Aim of Solvency II – link required capital more closely to risk profile
- Three Pillar Approach
- Impact on solvency balance sheet
- Benefits
- Challenges
- Quantitative Impact Studies (QIS)
 - QIS3
 - http://www.gcactuaries.org/documents/ceiops_qis3_report.pdf
 - QIS4
- Timetable



How will the balance sheet look?





Financial Reporting - IFRS

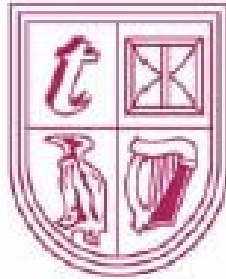
- IFRS4 Phase I
 - Insurance contracts – local GAAP
 - Investment contracts – IAS 32 and 39
- IFRS4 Phase II
 - Current exit value
 - Best estimate + Time value + Margin
- IFRS7
- US GAAP convergence
- FRS26



Further Info

See Current Topics Paper for further details on:

- Consumer Protection Code
- Product Development
 - structured products, CPPI, SSIAAs
- Legislation Update
- Mergers and Acquisitions activity
- Update on Irish Health Insurance Market
- Update on UK Actuarial Issues
 - Changes in Valuation Rules, TCF, PPFM



General Insurance

Niamh Gaudin, Finaref Insurance

Julia Moore, The Imagine Group



Agenda

- Market Update: 2004 to date
- EU Gender Directive
- Reinsurance Regulation
- Professional Issues
 - Update on ASP's



Irish Market Update

- Between 2004 and 2006 the Irish General industry experienced:
 - Record profits AND
 - Falling premium rates
- Motor industry benefiting from:
 - Peaking of underwriting cycle
 - Reduction in accident rates due to introduction of:
 - penalty points
 - random breath testing
 - legislative changes
 - Road Safety Council



Irish Market Update Cont.

- Personal Injuries Assessment Board (PIAB)
 - Established 2003
 - Lower settlement costs
 - Reduced settlement times
 - Level of compensation maintained
- Other industry developments
 - IFSRA as Financial Regulator
 - Implementation of Reinsurance Directive
 - Full implementation of the need for SAOs for non life undertakings
 - Introduction of new solvency and capital adequacy guidelines relating to EU Non-Life Directives
 - QIS & Solvency II



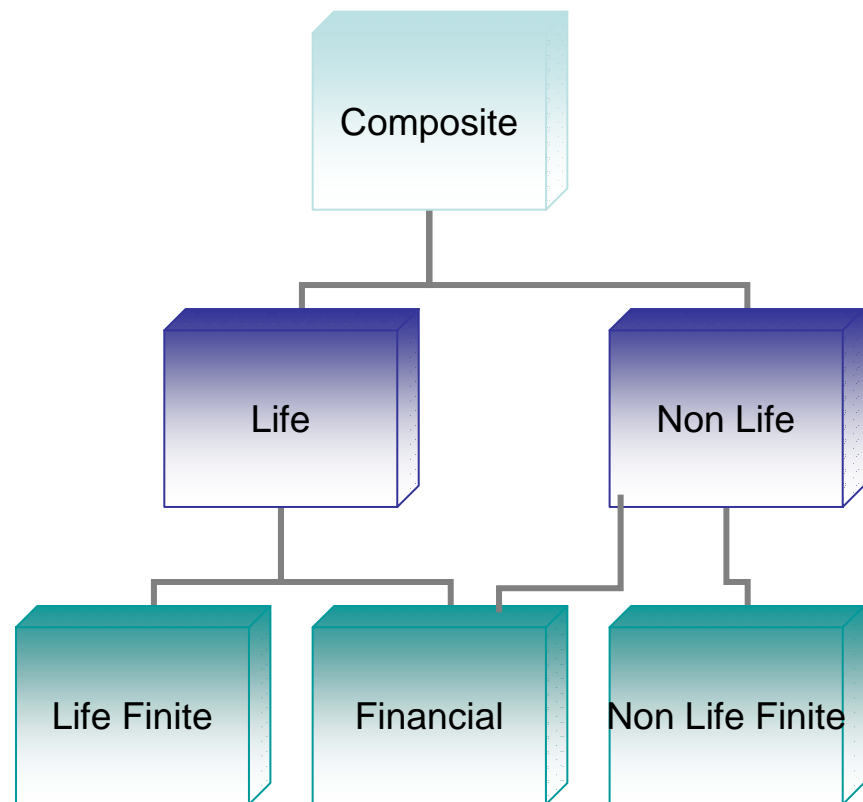
EU Gender Directive

- Adopted by the EU in 2004 – compliance by Dec 2007
- Prohibits the use of gender as a factor in the calculation of insurance premiums and benefits **except** where it can be justified by accurate actuarial and statistical data
- Ireland will continue to rate insurance contracts based on gender for products based on :
 - mortality risk,
 - morbidity risk and
 - the risk of road traffic accidents
- Possible future impact on:
 - Critical Illness
 - Travel Insurance/pregnancy & maternity issues



Reinsurance Regulation

- EU Reinsurance Directive transposed into Irish law in 2007. YE 2006 Compliance
- Life, Non Life, Finite, Financial
- Reserving, Solvency & Additional Disclosures
- Non Life Statement of Actuarial Opinion (“SAO”)
- Life SAO from year end 2007





Impact of Regulation

- Solvency I regime for “traditional” reinsurance
- Augmented Solvency Test for finite and financial business
 - previously no solvency margin required for financial
- Net Present Value Rate on Line/Scenario Testing
- Internal capital model
 - Discounting permitted for finite business, subject to regulatory approval
- Classification, separate solvency calcs, internal models



Professional Issues

- ASP GI 1: General Insurance Business:
Actuarial Reports
Reports by UK GI ROC in 2007:
 - Quantification and reporting of uncertainty in reserves
 - Best estimates and reserving uncertainty
- ASP GI 3: Statement of Actuarial Opinion on Non Life Reinsurance



ASP GI-1 – Quantification and Reporting of Uncertainty in Reserves

- Under ASP GI 1 the actuary should, in nearly all cases, illustrate the uncertainty in the eventual outcome of the ultimate claims.
- Actuary should:
 - describe the causes of Uncertainty and
 - clearly communicate the quantification of this Uncertainty
- Methods used to quantify uncertainty:
 - Judgmental/Indicative Volatility
 - Scenario/Stress Testing
 - Statistical Methods



ASP GI-1 – Best Estimates and Reserving Uncertainty

- Paper prepared for GIRO to deal specifically with
 - What we mean by Best Estimates
 - What methods we are using to investigate reserving uncertainty
 - Applying methods to real data
 - Numerical Simulation Testing of Stochastic Methods
- The last area showed some interesting results which are now being further investigated following comments at GIRO.
- Use of this paper:

Will become essential for all actuaries to quantify uncertainty within its reserves meaning greater knowledge and understanding of the methods tested in the paper (and others) need to be achieved by the Profession



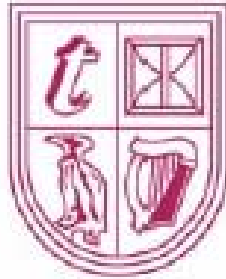
ASP GI-3: SAO on Non Life Reinsurance

- Formal guidance relating to the requirement for a non life reinsurance SAO. Also covers finite/financial
- Status = Mandatory
- First published 30/12/2006 and covers:
 - gross and net reserves of the company
 - the calculation of the Statutory Minimum Solvency Margin
 - but does not specifically address the asset side of the balance sheet
 - the retrocession programme



ASP GI-3 Cont.

- Refers to ASP GI 1 for the calculation of technical reserves
- Provides a template
 - Statement of Actuarial Opinion and
 - Data Accuracy Statement
- Discounting on application to the regulator
- Acknowledges reinsurers data issues



Pensions

Donal Keating, Watson Wyatt

Patrick Needham, Irish Life

Joanne Roche, PWC



Pensions Update

- **DB'** Continued closure to new and existing members/ redesigned to reduce risks
- **'DC'** Continued growth. Virtually all new schemes being set up are DC. Increased focus on the quality of the ultimate benefit arising and hence the need for reasonable contributions
- **Hybrid** – Much discussed but few have been implemented other than in financial sector – Industry standard now
- **State Pension** - €10,884 –target 33% of Gross Average Industrial Earnings. Many DB schemes are integrated with the state pension so where this is higher the scheme itself has less to provide

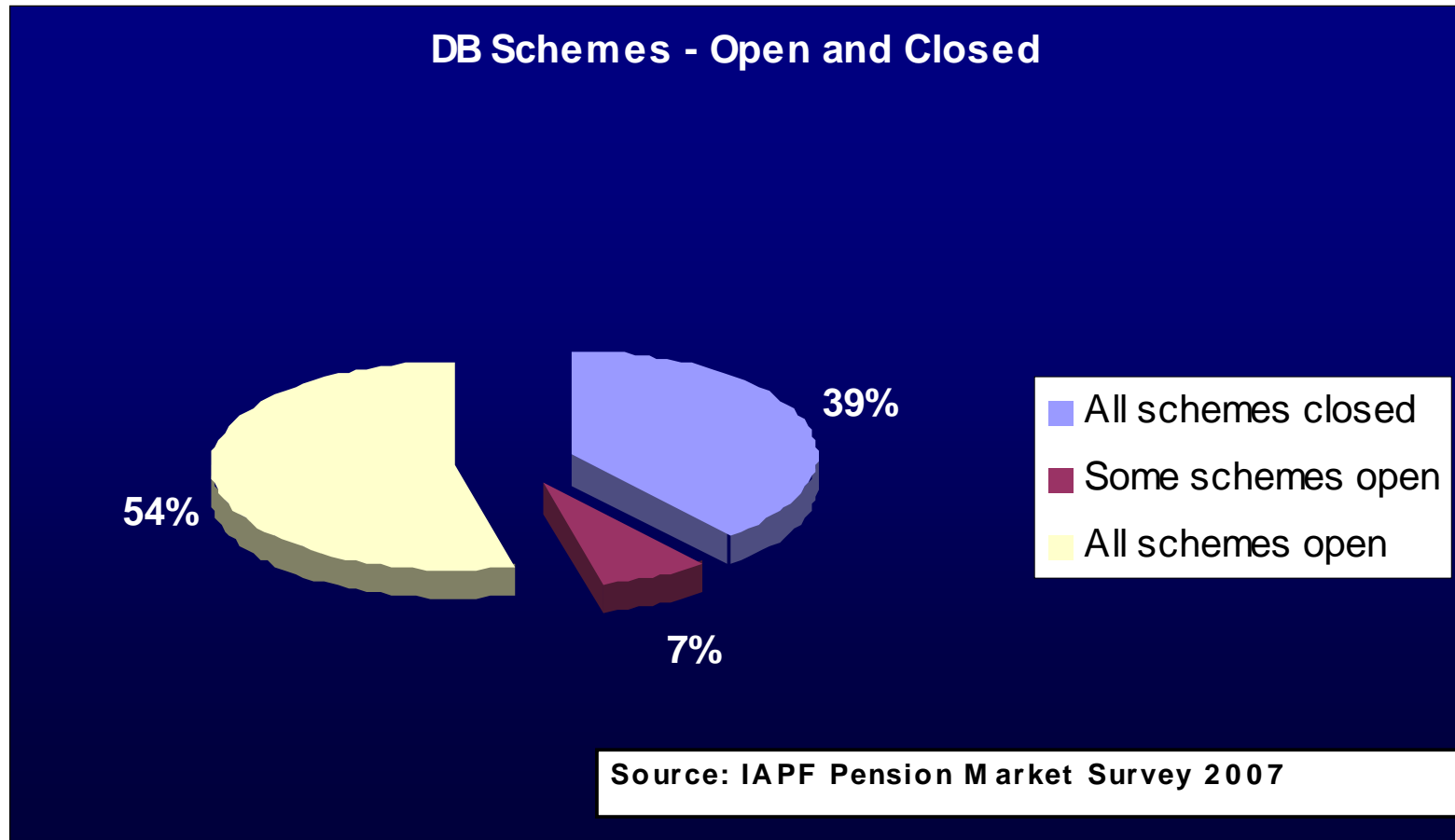


Pensions Statistics

- Coverage of working population between 30 and 65 from 2013:
 - Target = 70%
 - Currently = 62% (Green Paper on Pensions)
- Demographic challenge persists as Pensioner Support ratio projected to decline from 5.6 in 2006 to 1.8 in 2061
- DB Scheme members outnumber DC Scheme members by approx 2:1 , although the ratio falls to 1:1 if public sector is disregarded



Statistics Cont.





Green Paper on Pensions

- State pension 33% of gross average industrial earnings
- Ongoing efforts at increasing:
 - coverage - (NPPI/NPR target 70% of working population)
 - adequacy (50% Replacement Income) – pension board campaigns
- Current debate on:
 - Extension of ARFs and abolishing requirement to purchase an annuity for DC members
 - Mandatory Pensions / Soft Compulsion
 - Flexibility of retirement at older ages



Green Paper on Pensions Cont.

- Issues:
 - Review of annuity market called for given lack of competition and perception of poor value
 - Public sector – review for future recruits
 - Recognition that priority order of funding standard can give unfair weighting to existing retirees

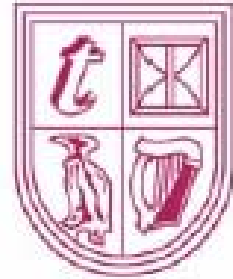


Other Developments

- Compliance Monitoring for Pension Scheme Actuaries
- Additional Disclosure Requirements . Statements of reasonable Projections for all DC members from 1 January 2009
- Proposal to extend Solvency 2 to IORPS

Finance Act 2006

- Cap on Pensions Savings: €5m or value of the fund if greater at December 2005
- Max Tax free lump sum restricted to €1.25m (regardless of the level of the fund)



Questions



ETH Zurich (P. Embrechts, P. Blum, J. Neslehova)

Some topics of concern to actuaries worldwide:

- Risk management
- Regulation (e.g. Solvency 2)
- Asset-Liability Management (ALM)
- Dynamic Financial Analysis, Dynamic Solvency Testing
- Catastrophes
- Demographic changes, ageing
- Accounting rules (US/local GAAP, IFRS, IAS, ...)
- Valuation (embedded, fair, market-consistent, ...)
- Embedded options, guarantees
- Business profitability
- The appointed actuary (UK Morris Report)



www.actuaries.org.uk says...

Actuaries are respected professionals whose **innovative** approach to making business **successful** is matched by a responsibility to the **public interest**. Actuaries **identify solutions to financial problems**. They manage **assets** and **liabilities** by analysing past events, assessing the present risk involved and modelling what could happen in the future.