



Society of Actuaries in Ireland

Current Topics 2012

2012

The Authors



- Teresa Bradley
 - Alan Canny
 - Graham Crowley
 - Mary de Burca
 - Mary Dillon
 - Thomas Donegan
 - Peter Gray
 - Kevin Humphreys
 - Ciarain Kelly
 - Emmet Leahy
 - Majella McDonnell
 - Dave O'Shea
 - Alan Tiernan
 - Paul Torsney
-

Thank you!!!!



- Maeve Fleming
 - Eamonn Phelan
 - Michael Byrne
 - Colm Fitzgerald
 - Mark McCormick
 - Ger Bradley
 - Brendan McCarthy
 - Mary Hall
 - Cathal Fleming
 - Martin Gilbert
-

Current Topics

- Sovereign Debt Crisis
 - Life Insurance
 - General Insurance
 - Pensions
 - Investment
 - Cross-practice
-



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Current Topics
Sovereign Debt Crisis

2012

Contents

- Overview of events over last two years
- Implications for insurers

LOTS!!

Sovereign Debt – Last 2 Years:

- Two Greek Bailouts
 - €110bn in 2010
 - €130bn in 2011
- Greek debt restructuring
- Irish bailout (€85bn)
- Portuguese bailout (€78bn)
- New EU treaty on budgetary rules
- Three new European agencies
 - EFSF
 - EFSM
 - ESM

Sovereign Debt – Last 2 Years:

- Inconclusive Greek Elections
- Direct EU recapitalisation of Spanish banks
- Wildly fluctuating yields on sovereign debt
- Successful Irish return to capital markets
- Introduction of ECB bond buying plan
- EU/IMF bickering
 - Irish bank debt relief
 - Payment of latest Greek relief funds

Implications for Companies

- Investor confidence remains low
 - Consumers remain risk averse; low confidence
 - Seek guarantees – expensive to provide
 - Reduced new business volumes
- Capital Management
 - Protecting a companies capital more difficult
 - Valuation interest rates – how determine?
- Other issues discussed in paper
 - Case study on potential Eurozone member exit
 - Outlook for Eurozone



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Current Topics
Life Insurance

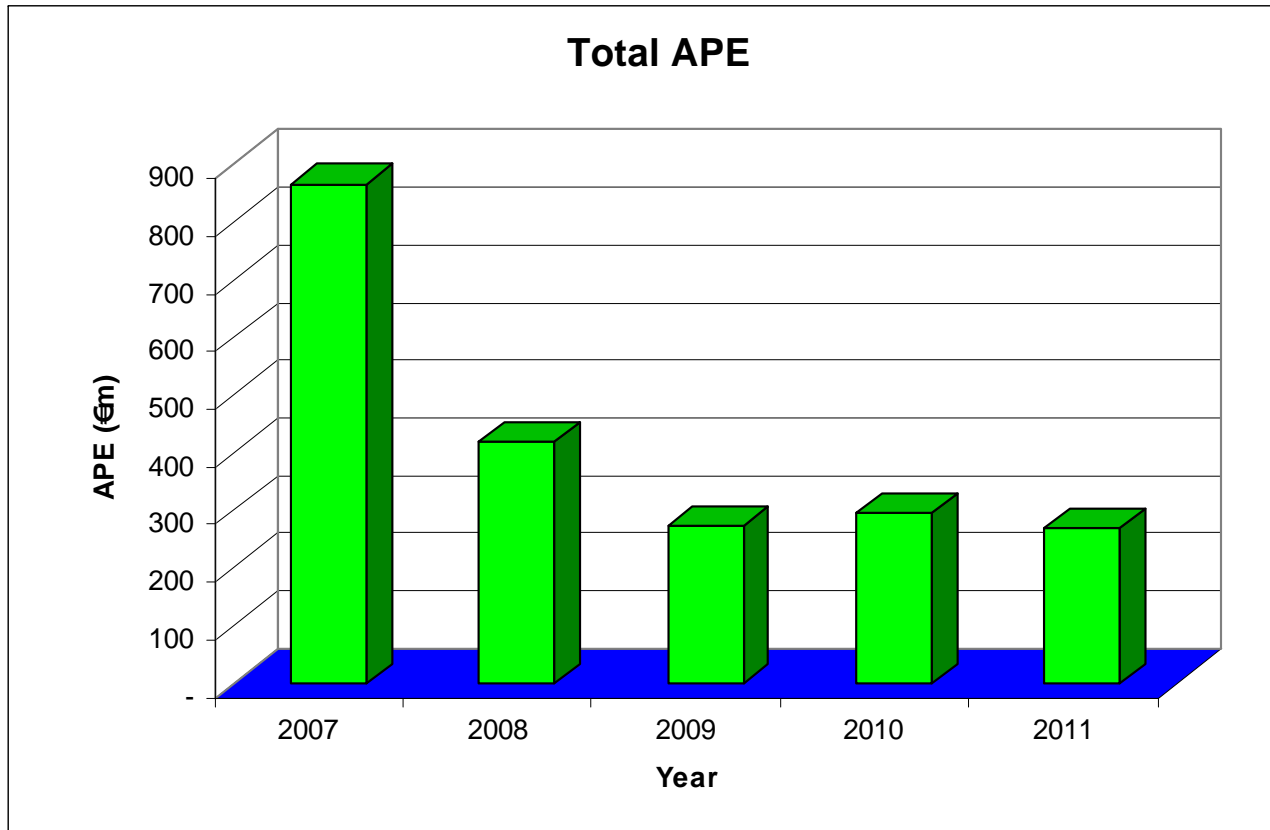
2012

Life Insurance - Contents

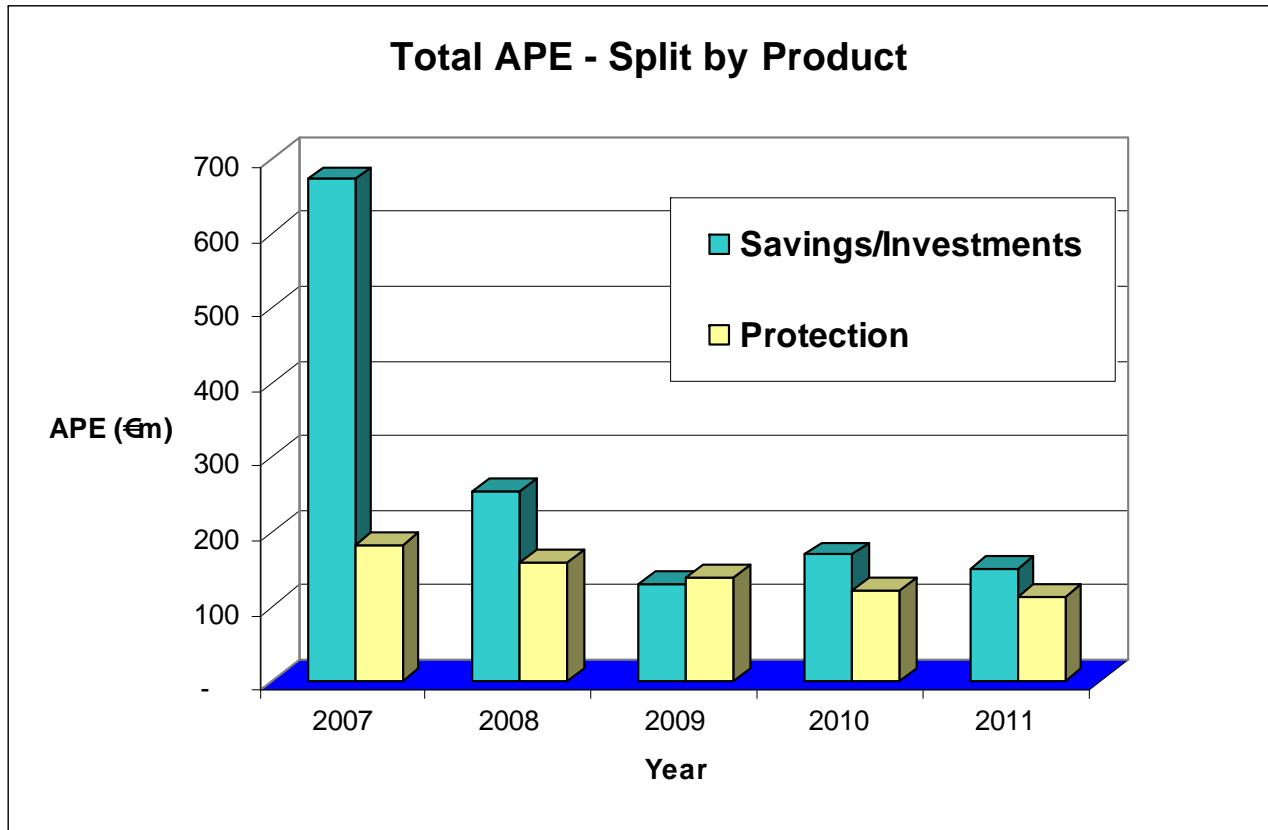
- Market Update
- Longevity & Mortality Update
- Sovereign Annuities



Market Update – Environment



Market Update – Environment



Market Update – Regulation

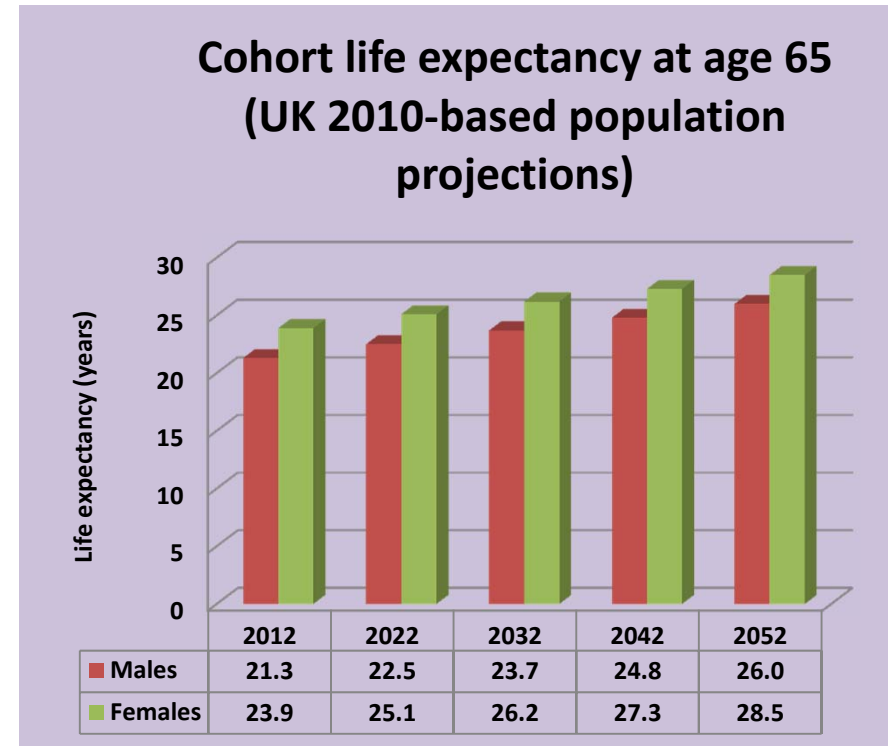
- **Central Bank Reform Act 2010**
 - “Controlled Functions” and “Pre-Approved Controlled Functions”
 - Standards to be met by holders of those functions
 - Standards fully implemented by 1st December 2012
- **Consumer Protection Code**
 - Revised Code, in effect since 1st January 2012
 - Influences interaction with consumers
- **Corporate Governance Code**
 - In effect since 1st January 2011
 - Responsibilities of and requirements for Board of Company

Market Update – Potential Growth

- Micro-insurance
 - Basic, low cost insurance
 - Considerable growth in Africa and Asia
 - 2009 Lloyds report:
 - 135m people,
 - 10% growth p.a.
 - Market potentially 1.5 - 3 billion policies
- Takaful
 - Consistent with Islamic law
 - Conventional insurance is not
 - Similar to a mutual

Longevity and Mortality Update

- Current demographic analysis show a pattern in most developed countries over recent history which reveals that **people today are expected to live longer than ever.**
- The assumed long-term **annual rate of mortality improvement** has increased from **1% to 1.2%** (ONS 2012a projections).



(Source: Longevity Bulletin May 2012)

Mortality Update

Gender Gap

- A recent report from the European Commission (White et al. 2011) showed marked differences in life expectancy for men compared to women across Europe.
- However the gender gap is reducing.

Irish Mortality

- Ireland experienced significant improvements in mortality relative to England and Wales in the early years of the 21st Century.
- This is mainly due to the drop in deaths from circulatory diseases.

Sovereign Annuities

- Long term viability of many defined benefit schemes is under threat
- Credit risk shifted from life company to the pension scheme/annuitant
- Default => payments under the Sovereign Annuities may be reduced (even to zero!)
- NTMA have issued new amortising bonds

Sovereign Annuities

- Additional risks
 - life company – reputational risk if payments to annuitants are stopped
- Total annuity market c. €650m in 2011
 - some of this will move from traditional to sovereign
 - increased demand from schemes in deficit?
- Only one company has achieved certification so far



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Current Topics
General Insurance

2012

General Insurance - Contents

- Telematics
- Periodic Payment Orders
- Asbestos & Emerging Risks
- Climate Change & Resource Depletion

Telematics and Usage Based Insurance

- Usage-based insurance = “Pay-as-you-drive”
- Telematics => Technology in cars
 1. Black Box Solution: Professionally-installed / Self-installed
 2. Smartphones: Freely available. No installation. Easiest solution going forward.



Telematics and Usage Based Insurance

Advantages

- Pricing Accuracy
- Improved Customer Base
- Claims Benefits
- Customer Relationship
- Societal Benefits

Disadvantages

- Big Brother
- Cost to Insurers
- Accuracy of Data
- Dual Maintenance of Rates
- Uninsured driving



Telematics and Usage Based Insurance

- State of Play in Great Britain and Northern Ireland

Road Safe Reward App



Rewarding safe drivers.
Save up to **20%*** on your car insurance with Aviva Drive

Download Aviva Drive for free



iPhone version coming soon!



Periodic Payment Orders (PPOs)

- Lump Sum Approach
 - **Advantages:** Flexibility for claimants, certainty for insurers
 - **Disadvantages:** May live longer or die earlier than expected
- Periodic Payments
 - Insurers take on inflation, mortality, investment risk
 - Have to reserve throughout claimant's lifetime, hold more capital
 - Limited annuity market + reinsurers may leave market
- Observations from the UK
 - 300 with private insurers, > 1000 with NHS
 - Bigger uptake in financial crisis

Asbestos & Other Emerging Risks

Emerging Risks – Background

- Risks whose full nature and effects are not yet known or understood
- Risk landscape constantly changing;
 - new technological developments
 - changes to the legal and regulatory environment
- Difficult to quantify potential exposure to emerging risks
- Represent potential downsides as well as business opportunities for the GI industry



Asbestos & Other Emerging Risks

Asbestos Update – 2012 developments

UK developments:

- Court ruling giving clarity on when liability triggered
- Support scheme funded by a levy on EL insurance

Other Emerging Risks

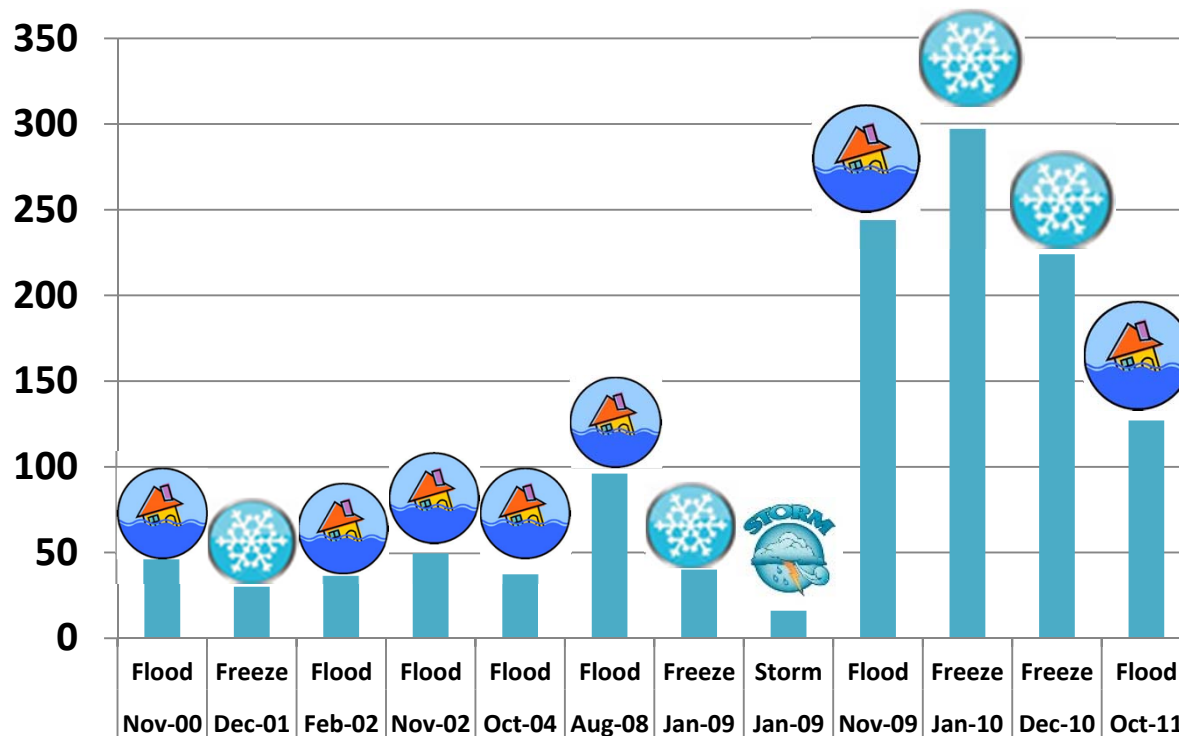
- **Silica** – Future uncertain. Could Silica be the new asbestos?
- **Mobile Phones** – Research into health effects on-going
- Driverless cars, sunbeds, nanotechnology ...



Climate Change and Resource Depletion – Irish Market

Within the Irish market, high volume of insured losses from weather events in recent years

Irish General Insurance Insured Losses (€m)



Source: data from IIF

Some of forecasted increases in insured losses are due to projected growth in income and population ... but large proportion attributable to climate change.

Climate Change and Resource Depletion – Irish Market

- A changing environment will require decisive action from actuaries and others
...

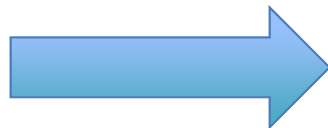
Water damage: Dundrum centre flooded as emergency declared in Dublin



The scene last night in Dundrum Shopping Centre, which was evacuated at 8pm due to flooding of 15cm on the ground floor of the centre causing damage to stock. Photograph: Inez Mahony

Climate Change and Resource Depletion – Threats to GI Industry

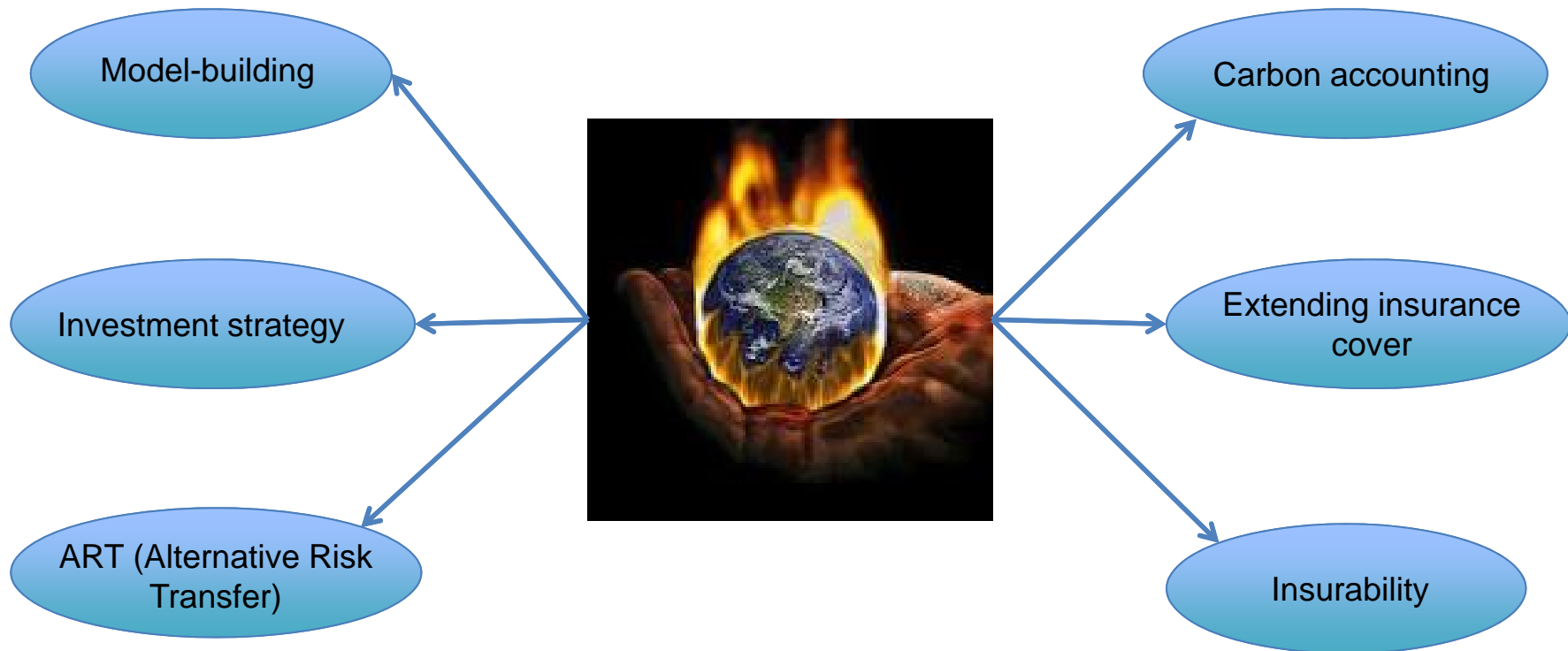
- **Uncertainty** in statistical projections based on past experience
- **Reputational risk**, as society depends more on insurance
- **Systemic risk**, if insolvencies erode confidence in industry
- **Currency risk** due to disputes over natural resources
- **Litigation and regulation costs**
- **Impacts** on asset & liabilities side of balance sheet
- Resource depletion may lead to an oil supply crunch



Global Recession

Climate Change and Resource Depletion – Opportunities for Actuaries

- So how can actuaries help combat the risks relating to climate change and resource depletion?





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Current Topics Pensions

2012

Contents



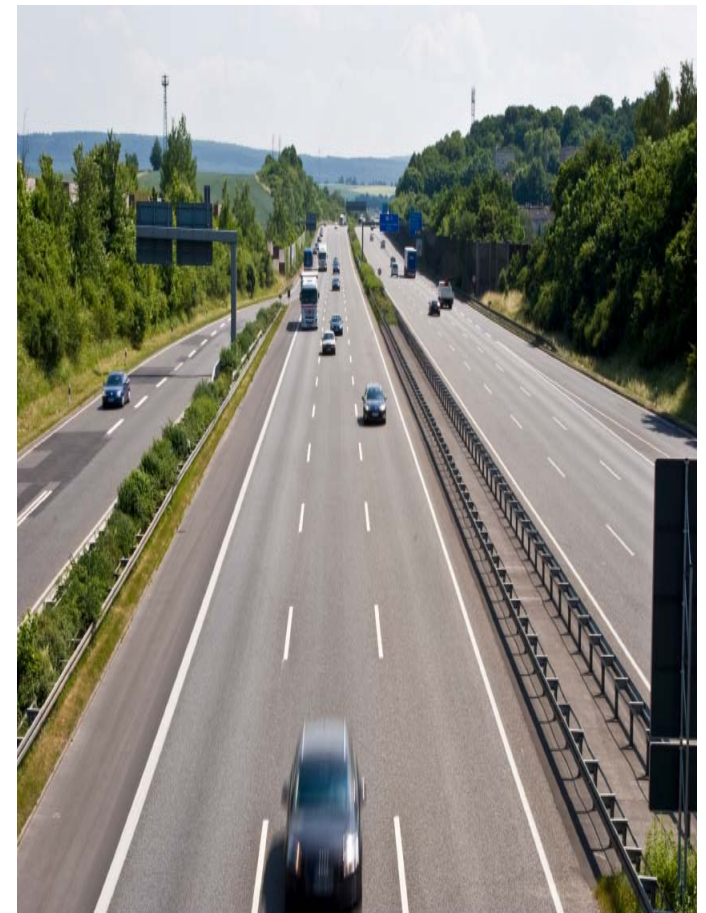
- Recent Changes to Minimum Funding Standard (MFS)
 - Review of Priority order
 - Budget 2013
-

Pensions Environment

- Approx **80%** of DB schemes in Ireland fail to meet the MFS
- In 2008 Pensions Board suspended the requirement to submit a funding proposal
- DB schemes effectively left in limbo since then
- Pensions Board reactivated requirement to submit funding proposal with effect from 30th June 2013
- New MFS is a more arduous test than the previous version

Legislation of Pension Schemes

- Prior to the Pensions Act 1990 there was no pension specific regulation of pension schemes in Ireland
- Since 2005 there has been almost annual changes to legislation for pension schemes
- Recently introduced significant changes to the MFS



Changes to MFS

- Introduction of a Risk Reserve effective from 1st January 2016
- Sovereign annuities & sovereign bonds can be taken into account
- Allowance for contingent assets and employer undertakings
- Funding period extended to 31st December 2023 (subject to Pensions Board approval)

Risk Reserve

15% of
Funding
Standard
Liabilities

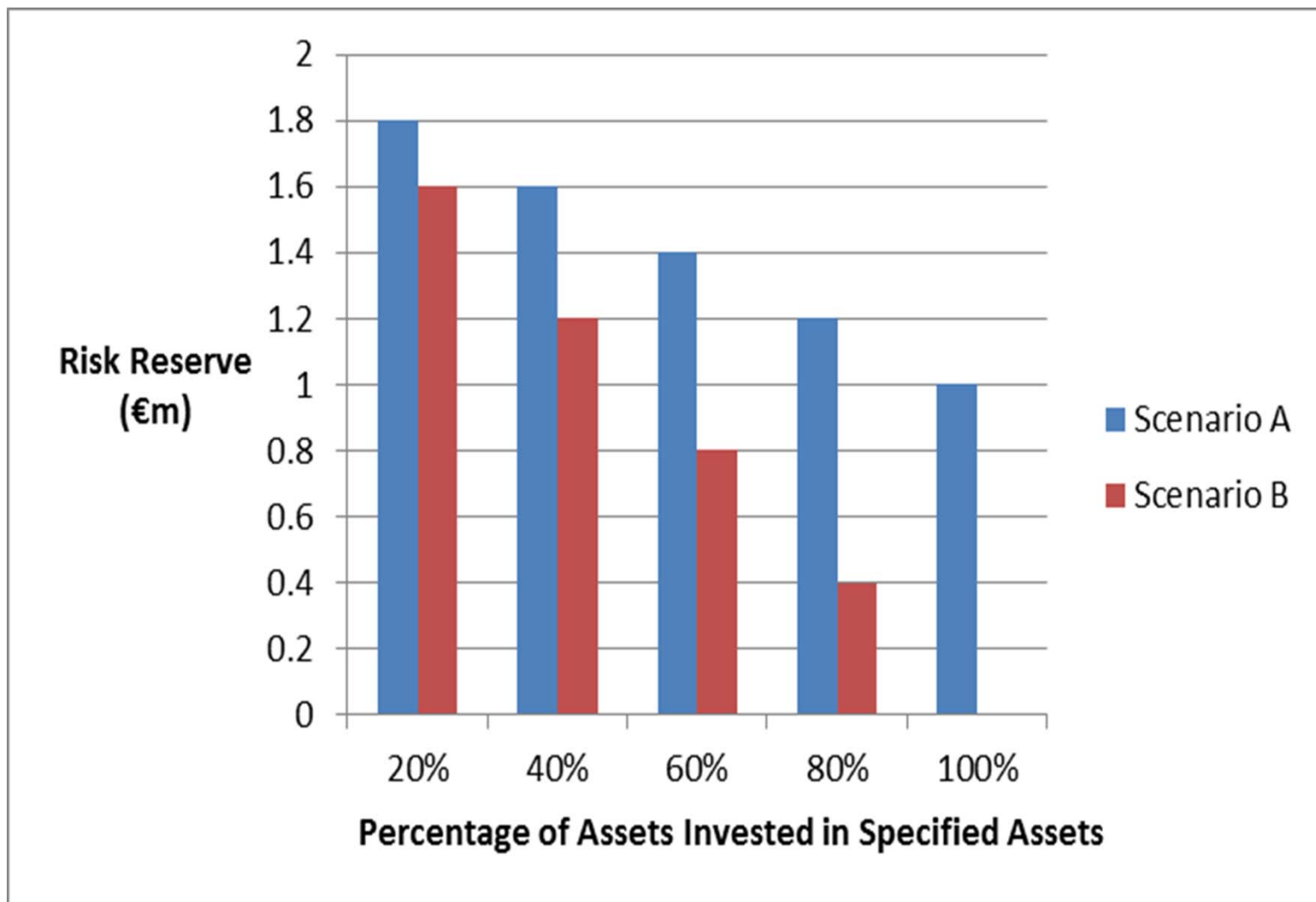
Less

15% of EU
government
bonds/cash
deposits

Plus

0.5%
reduction in
long dated
interest
rates

Impact of Risk Reserve



Sovereign Annuities



Traditional Annuity

- Default risk is very low
- Backed by highly rated government bonds - typically German bonds
- In the event of the default of the underlying assets the insurer is still required to meet the pension payments

Sovereign Annuity

- Can be backed by any EU sovereign but insurance companies have indicated the use of Irish sovereign debt
- In the event of the default of the underlying assets the pension payments will be reduced in line with the default
- Trustees have the choice to “Buy out” or “Buy in”

Review of Priority Order

- Under review by Departments of Finance & Social Protection
- Currently, high level of protection for pensions in payment – means active and deferred members at disadvantage
- Society proposal to:
 - protect a minimum level of “core benefit” for pensioners, and
 - Trustees should be empowered to avail of a capitalisation settlement option
- Attempts to address the inequality between pensioners and non-pensioners

Report on Fiscal Incentives

- SAI commissioned a study funded by the Irish Fiscal Policy Research Centre (publicpolicy.ie)
- The state pension system found to be redistributive
- Current Irish pension system is progressive
- Not overly generous by international standards
- Reducing tax relief could lead to pensions crisis in future years



Budget 2013

- Reduction in Standard Fund Threshold (SFT)
- No change to tax relief
- Cessation of Pension Levy after 2014
- Access to 30% of AVCs up to 2016



Reduction in SFT

- SFT is currently equivalent to a pension of €115k p.a.
- Reduced to a pension of €60k p.a. from 2014
 - Estimated to save c. €380m each budgetary year going forward
 - Impacts c. 27,000 taxpayers (primarily private sector) earning > €125k p.a.
 - Considered the “least worst option” by IAPF

Other Budget Measures



- Good News
- Pension levy not to be continued beyond 2014
- Tax relief on employee contributions to pensions remain at marginal rates
- Access to 30% of AVCs up to 2016



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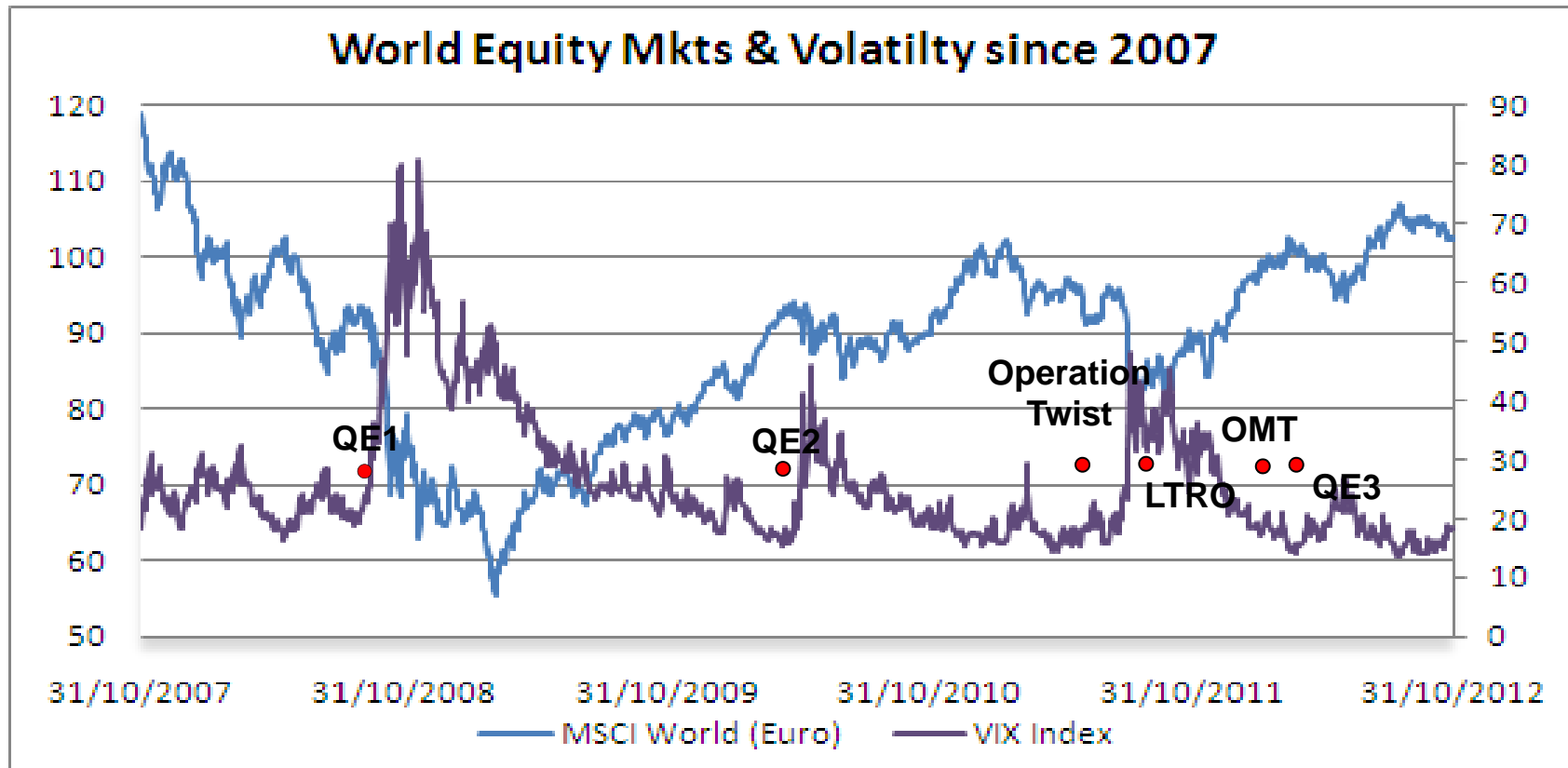
Current Topics Investments

2012

Investments - Contents

- Market Update
- Investment issues facing pension scheme investors
- Least-risk portfolio in the current climate?
- Return-seeking portfolio in the current climate?
- Market Outlook

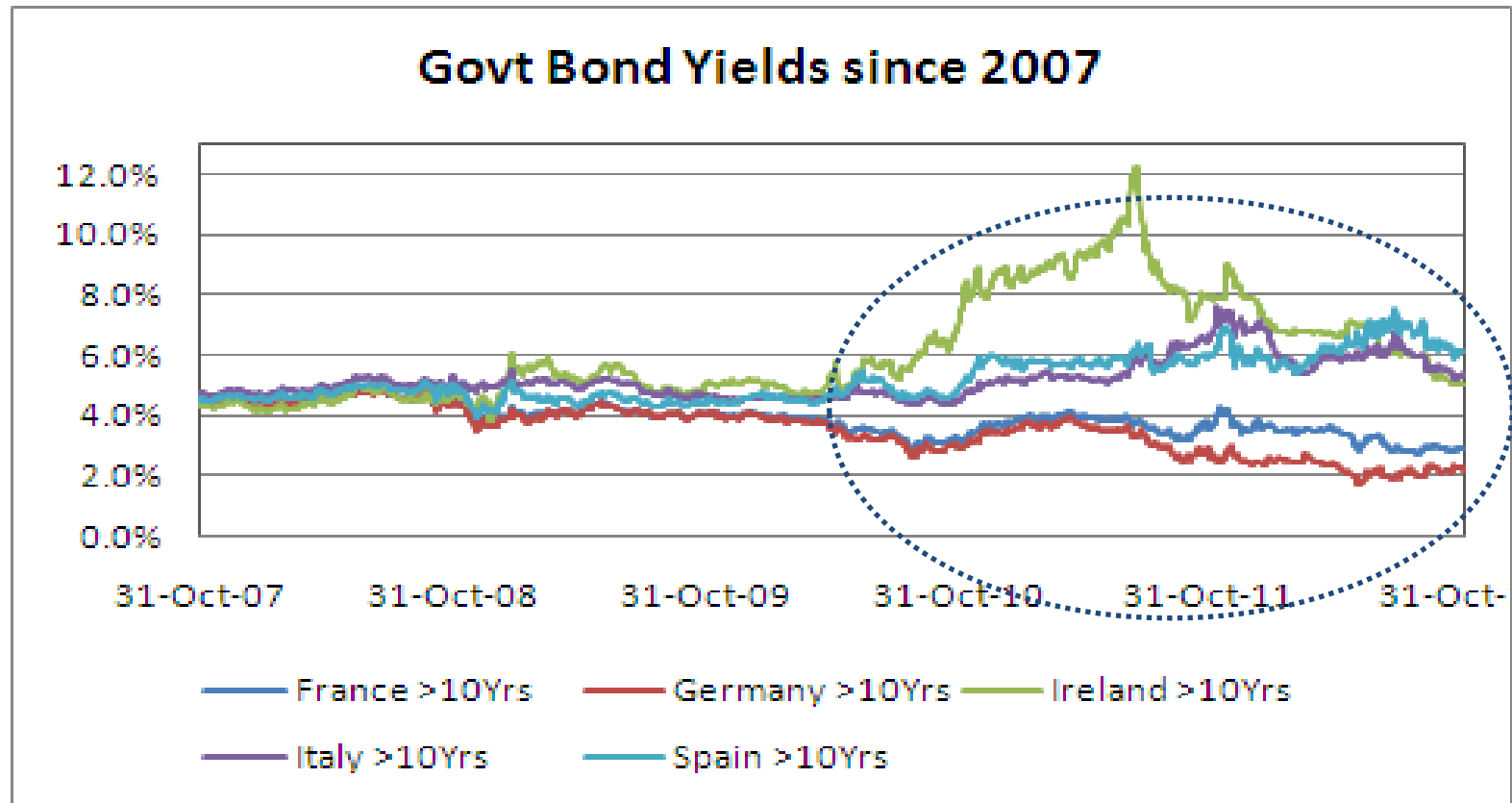
Market Update: Equity Markets



Source: Bloomberg

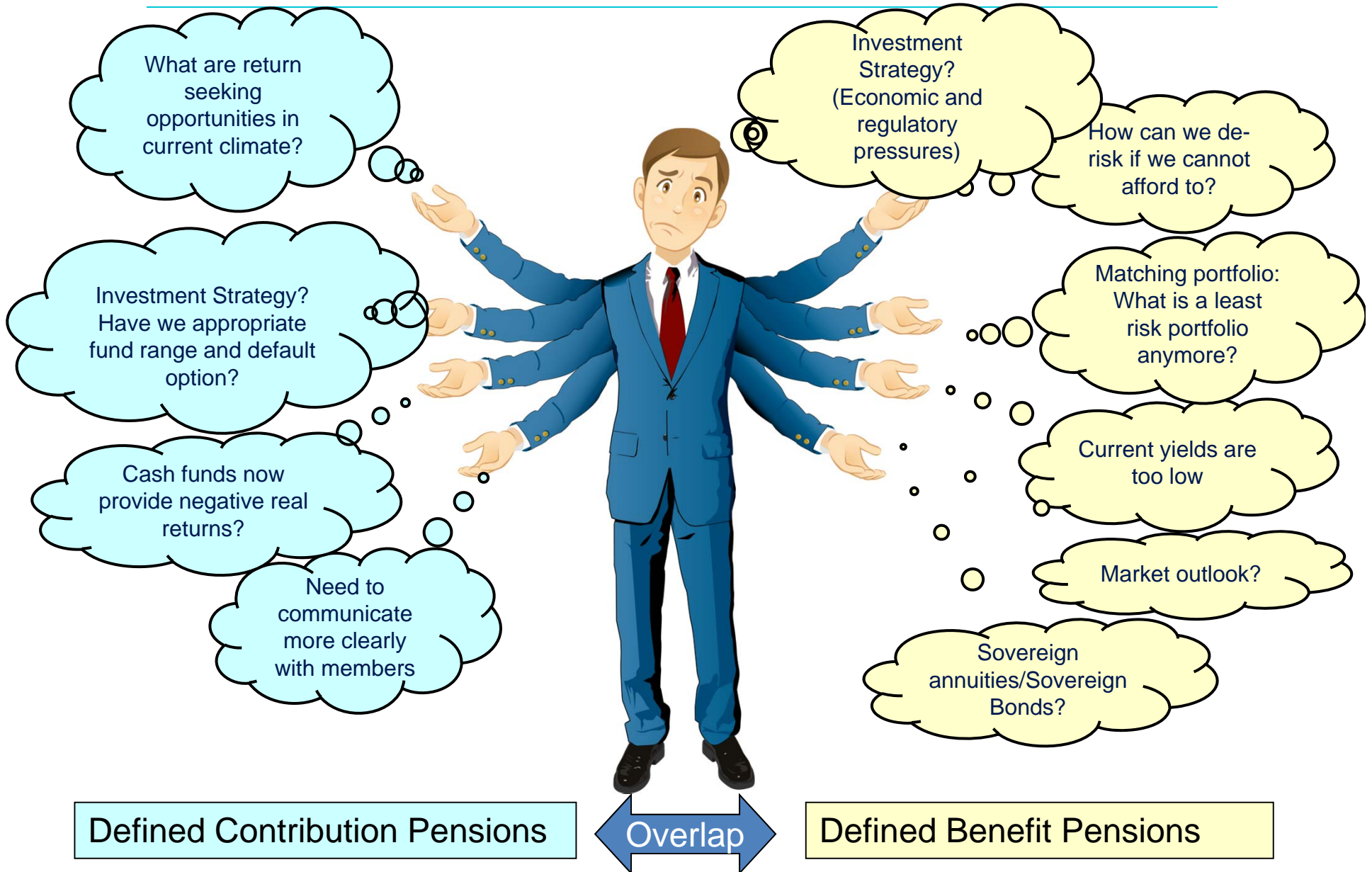
- Markets up over 50% since 1/1/2009, still not back to end 2007 levels
- Volatile as expected over period
- Huge central bank intervention has been evident and received well by markets

Market Update: Bond Markets



- Historically, sovereign yields have been close together
- Divergence emerged as peripheral Vs core theme unravelled
- Core countries seen as safe havens for investors but have also come under scrutiny

Investment Issues facing pension schemes



Least-risk Portfolio in the current climate?

Traditionally – core bonds and swaps to match liabilities

Uncertainty within Eurozone

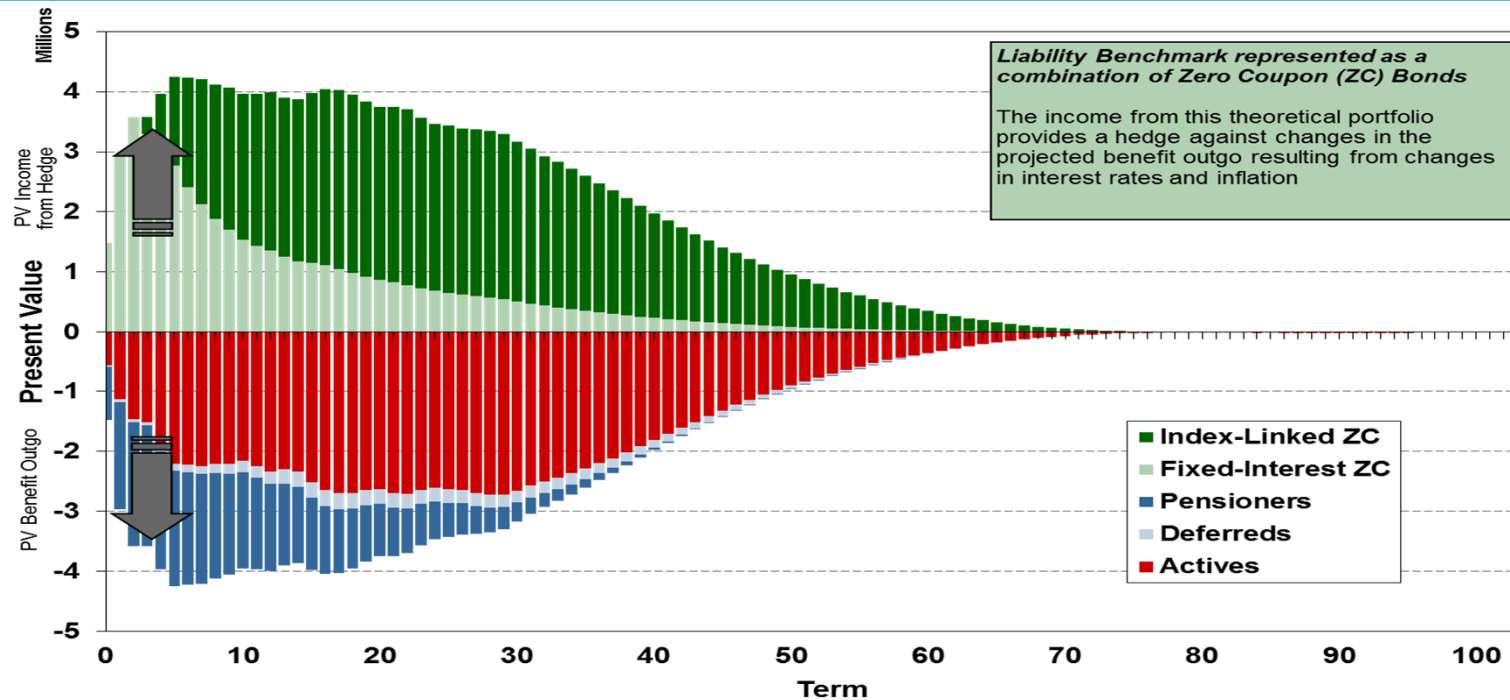
Historically low yields

?



?

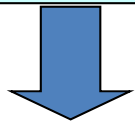
Least-risk Portfolio in the current climate?



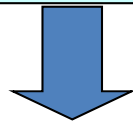
- Liability matching remains priority for least-risk portfolio
- Consists of core Eurozone country bonds & swaps
- Issuer diversification is important given current situation
- Flexibility (peripherals, duration mismatch) becoming more common, once risks understood
- Sovereign bonds/annuities treated separately

Sovereign Bonds/Annuities: Investment Considerations

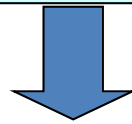
Likely to be invested mainly in Irish amortising bonds



Default Risk



Concentration Risk



Discount offered good value?

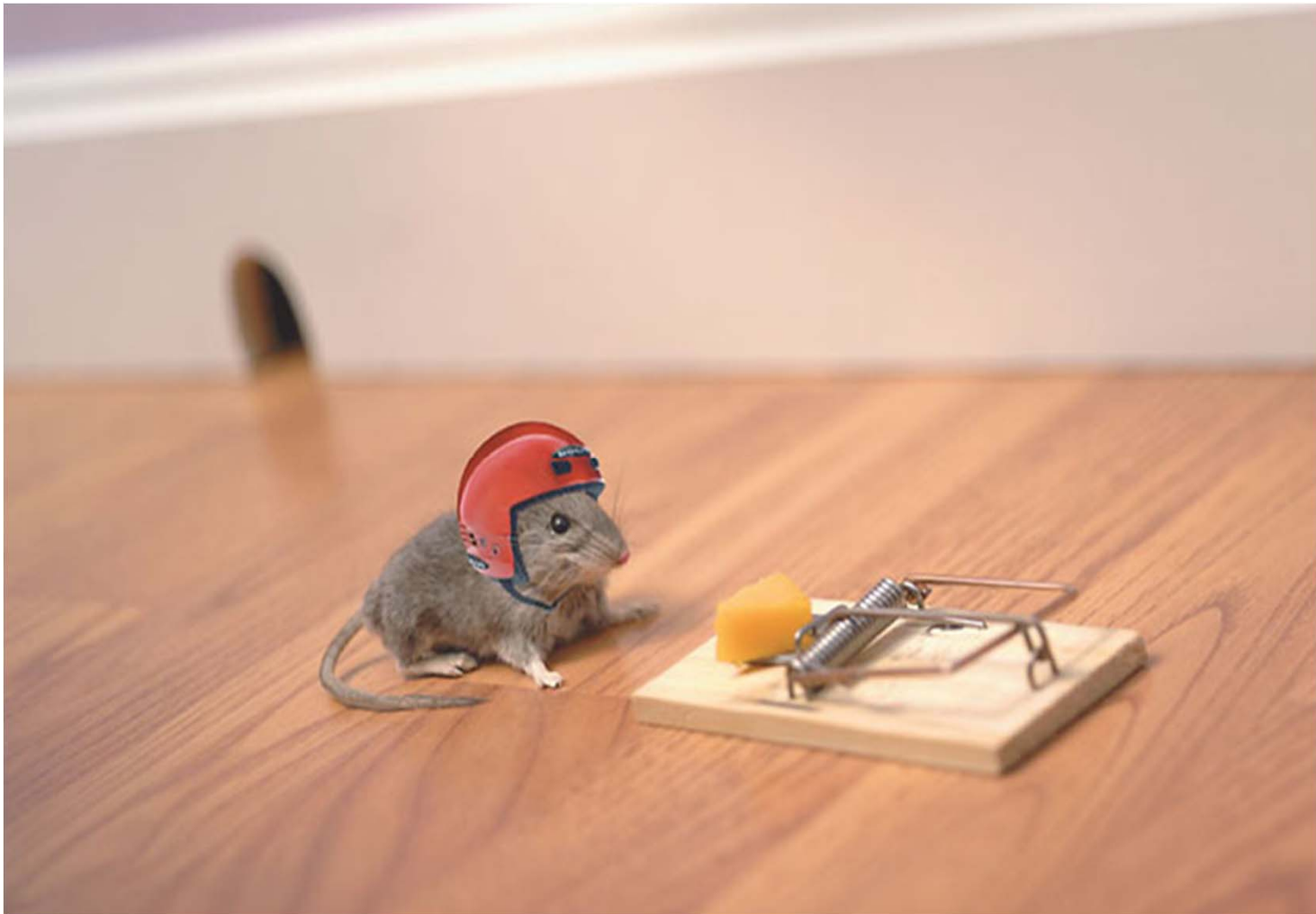
Availability?

Liquidity?

Are market yields still attractive?

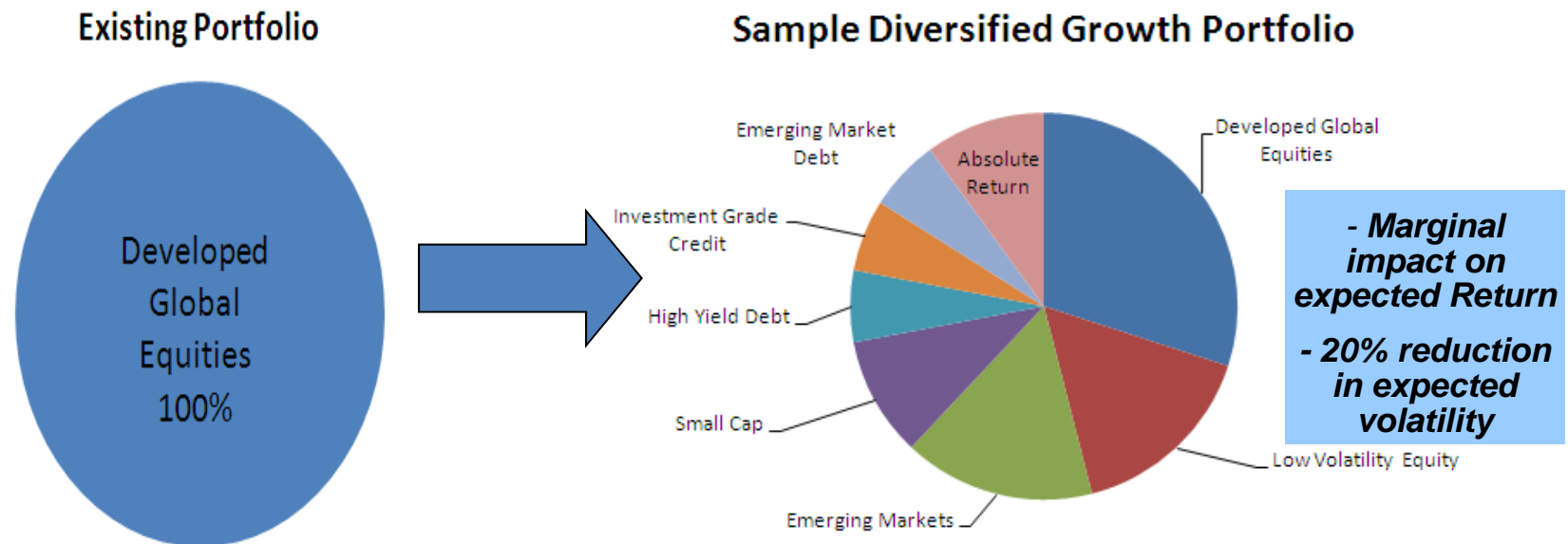
May be a viable option for some schemes but risks must be carefully considered

Return-seeking Portfolio : Opportunities in the current climate?

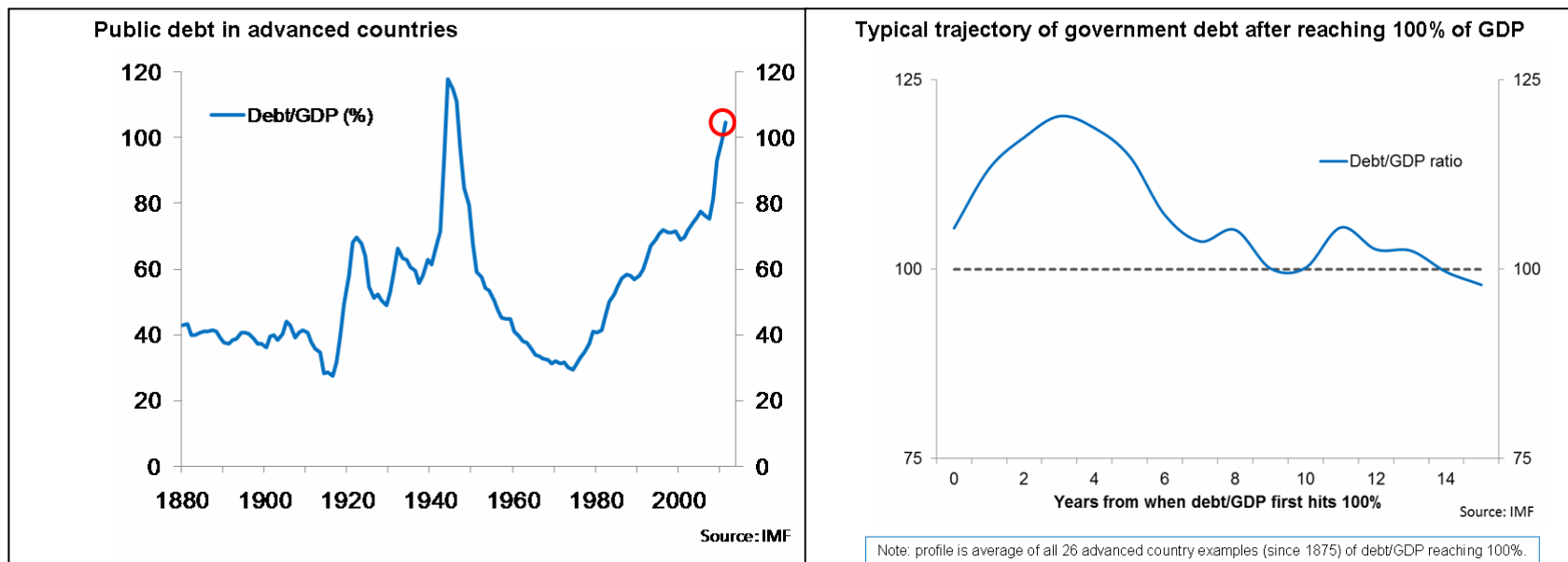


Return-seeking Portfolio : Opportunities in the current climate?

- Schemes & private investors seeking protection from future “shocks”
- Popular asset classes in 2012:
 - Emerging Market Debt/Equity, Low Volatility Equity, High Yield Bonds



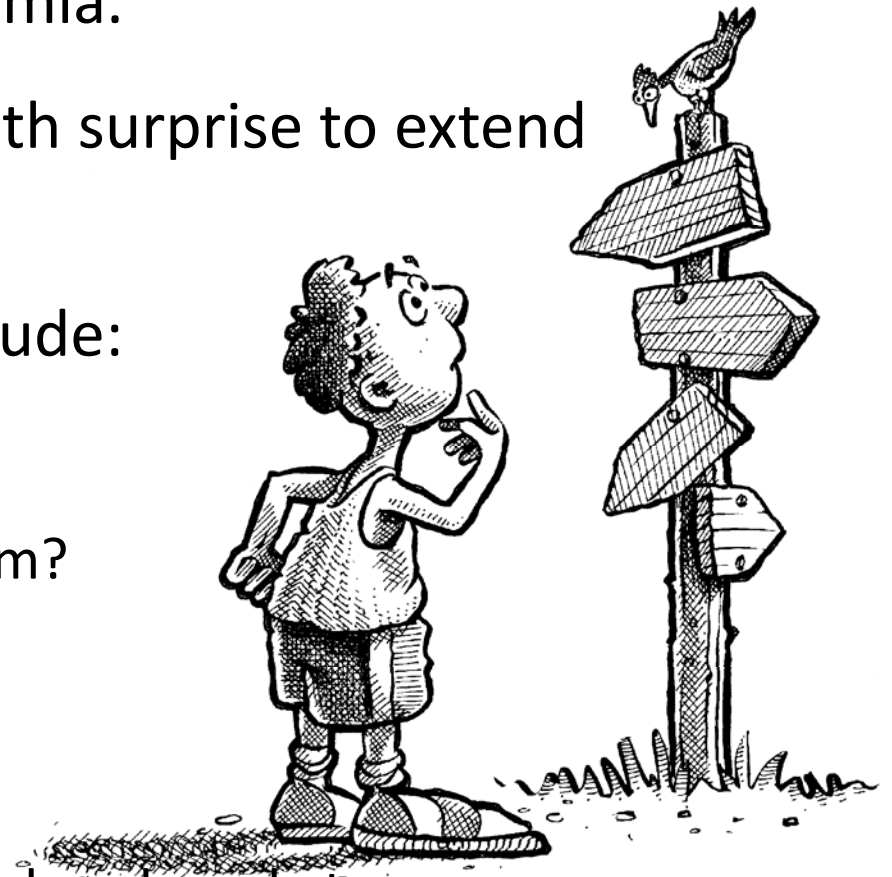
Market Outlook: History lesson



- Public debt at all time high, back to post WW2 levels
- Long slog if we go by historic evidence
- Exceptions helped by currency devaluation and/or strong global growth
- Environment of sluggish growth, periodic financial flare-ups and exceptionally accommodative monetary conditions expected.

Market Outlook: Key events to look out for

- Uncertain times & ever-changing
- Risks are high - so are risk premia.
- Markets need a positive growth surprise to extend recent gains.
- Key events to look out for include:
 - Resolution of US Fiscal Cliff
 - Spain applying for OMT program?
 - Greece
 - China growth story
 - Closer to home, Ireland back to bond markets





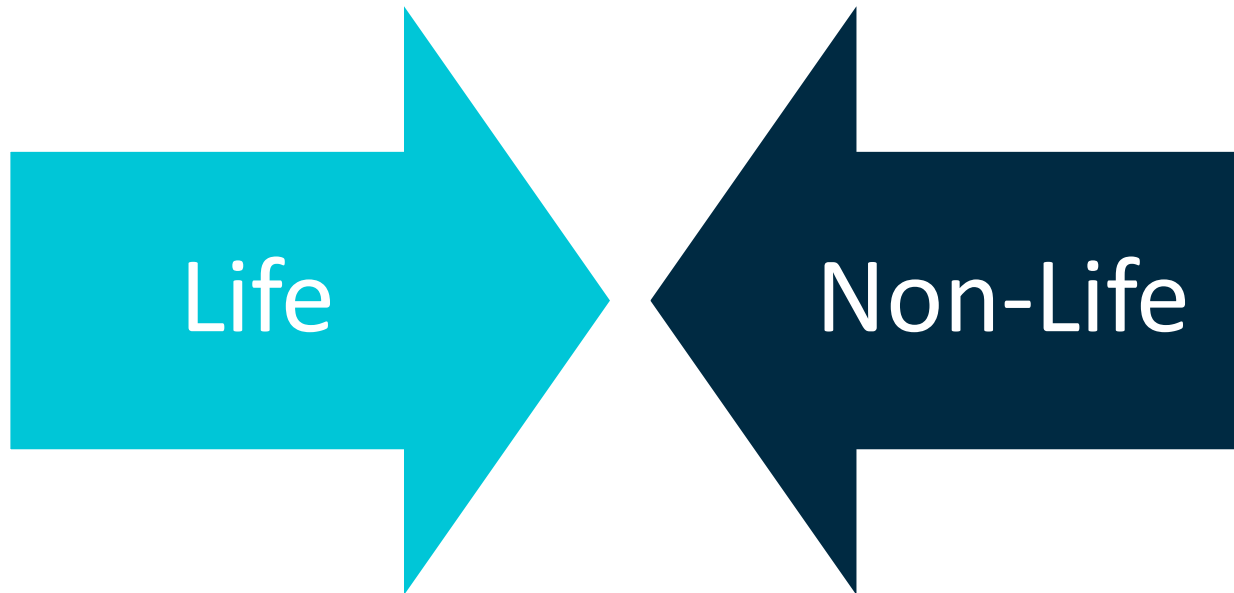
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**Current Topics
Cross-Practice**

2012

Cross-Practice - Contents

- An Update on Solvency II
- Gender Directive
- Enterprise Risk Management (ERM)



Flight	Status
Solvency II	Delayed

Outlook
October 2011

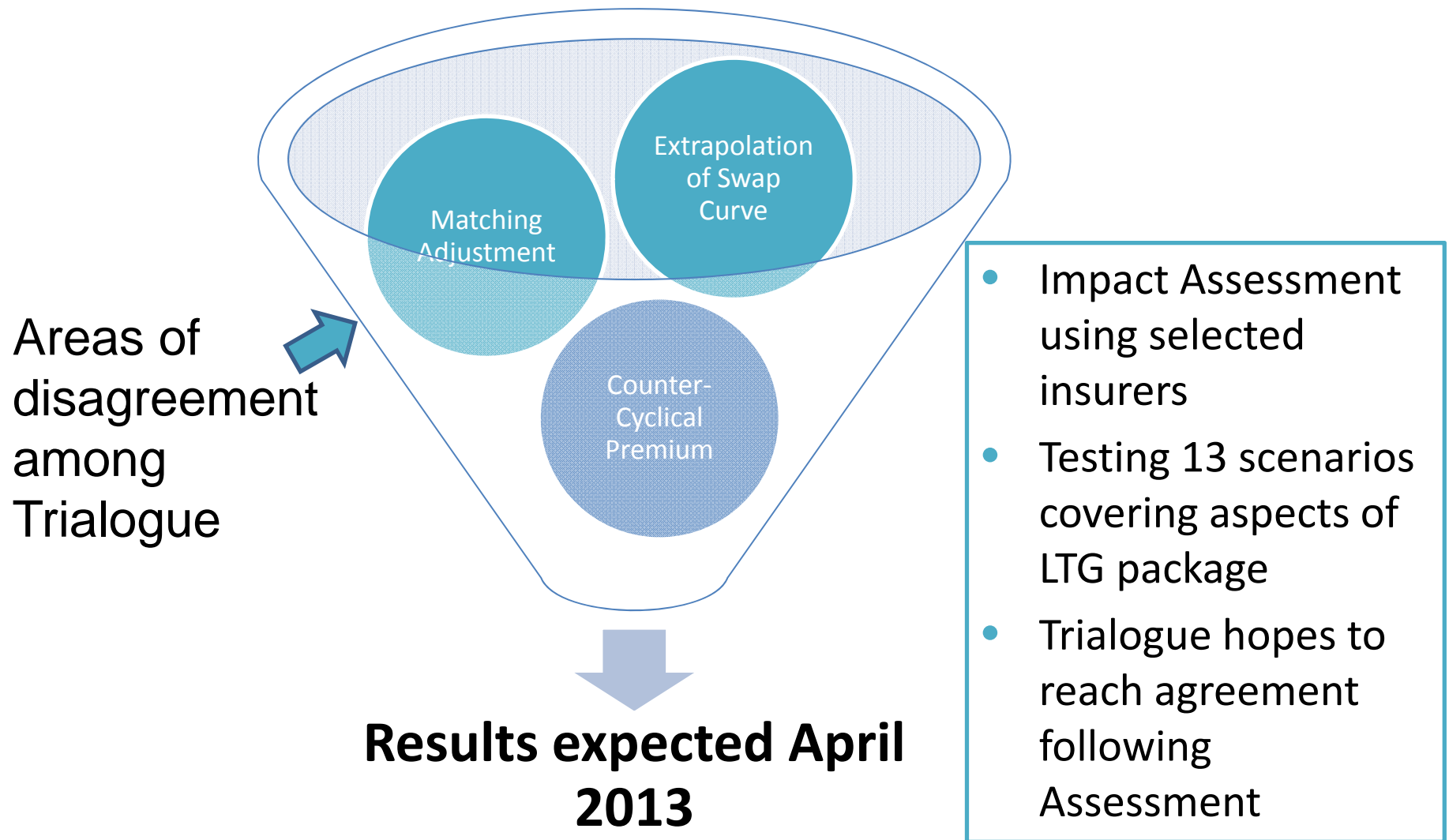
Outlook
today

Level 1	Final Omnibus II due end 2011	Omnibus II still not agreed
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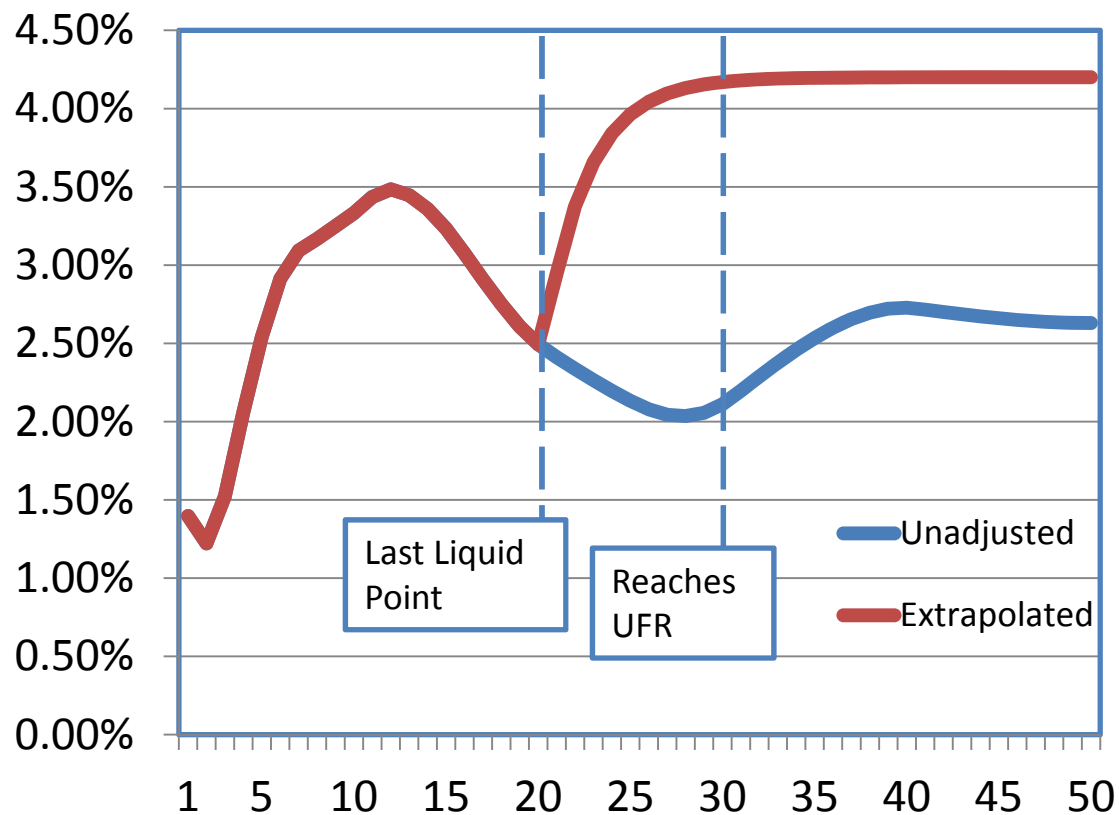
Level 2	Final Level 2 text due April 2012	Level 2 must wait for Omnibus II agreement
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Level 3	Pre-Consultation in progress	Pre-Consultation still on-going
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Assessment of Long Term Guarantees



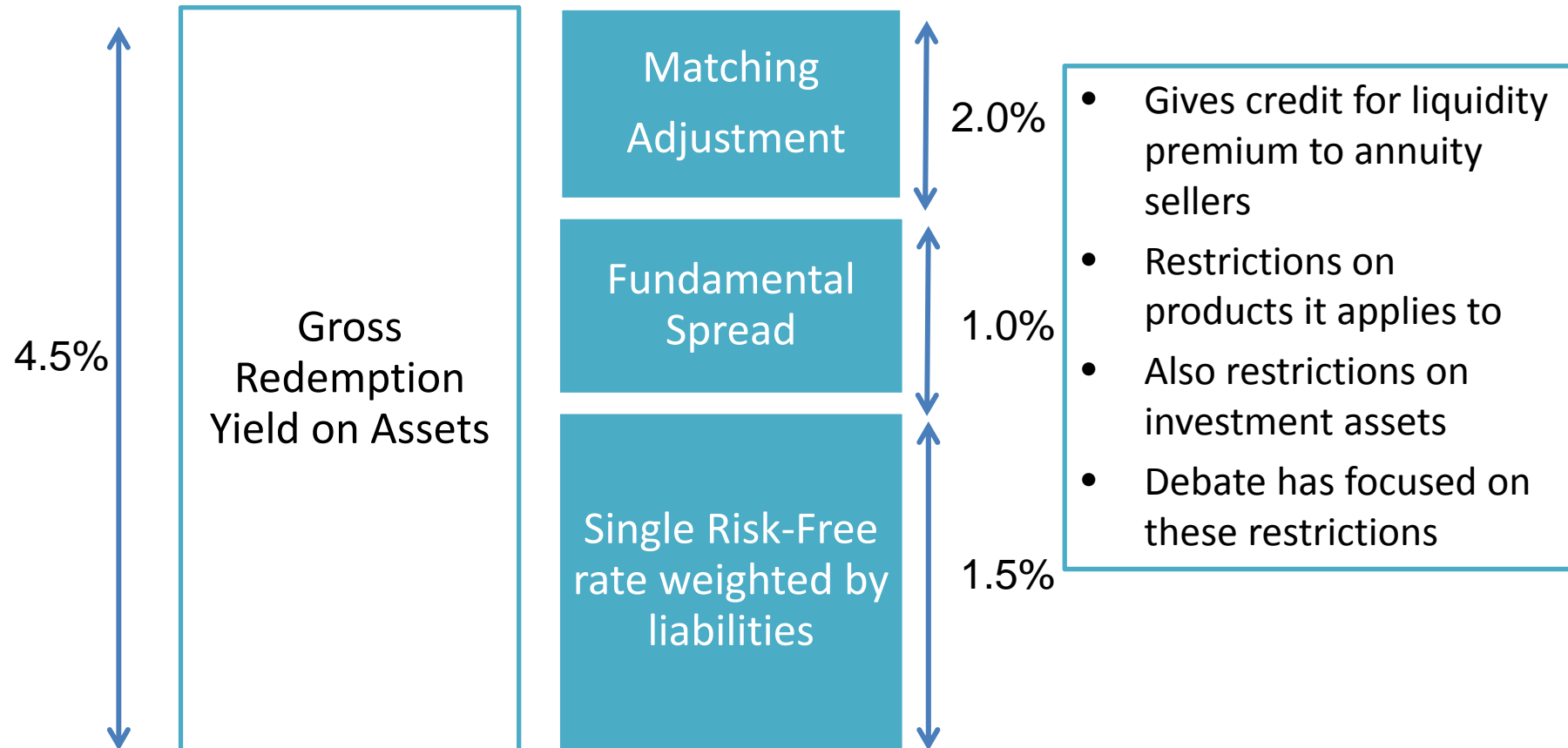
Extrapolation of the Swap Curve



**Based on Euro Swap Rates 31 Dec 2011*

- Extrapolation starts after 20 years
- Reaches Ultimate Forward Rate after 30 years
- Significant impact on Long-Term products
- Debate over Ultimate Forward Rate and period of extrapolation

Matching Adjustment



**Sample figures based on 9th November 2012 Swap Curve*

EU Gender Directive



- Gender Directive – 2004
 - Prohibited discrimination on basis of gender
 - Exemption available for insurance premiums/benefits
- Test Achat Case
 - Belgian consumer group
 - Took a case to European Court of Justice – challenged exemption
 - Case was successful

Gender Directive - Implications for Insurance Industry

- Currently in implementation period – ends 21st December 2012
- Post 21st December 2012, individual business must be priced on gender neutral basis
- Employer related business exempt

Gender Directive – Future Developments

- EU Age and Disability Directive
 - Currently being drafted
- Ideally would continue to permit life insurers to use age/health status as rating factors
- Exclusion
 - Equivalent to community rating
 - May lead to severe premium increases, reducing economic benefits of cover offered.

Enterprise Risk Management – Introduction (ERM)

- Traditional risk management often uses silo-based approach with risks management within each business unit.
- ERM encourages a holistic approach to managing risks, based on **interdependencies**.
- ERM focuses on upside risks, as well as downside risks.



ERM

Enterprise Risk Management - ERM as a Rating Tool

- Since 2005, rating agency Standard and Poor's (S&P) has used ERM as a rating tool, alongside
 - ... competitive position, strategy, operating performance, capitalisation, liquidity, investments and financial flexibility.
- ERM evaluation criteria used in assessment
- Insurers with more complex risks will, as a rule, require a more sophisticated approach to ERM than firms that have simpler risk exposures.



Enterprise Risk Management – ERM and Solvency II

- Solvency II (**ORSA process** in particular) has much in common with ERM, including the objectives below:
 - holding capital to protect against market, credit and operational risk;
 - risk-based solvency requirements across all EU member states;
 - prospective approach to risk management;
 - adaptation of capital requirements to needs of group entities;
 - allowing for asset as well as liability side of balance sheet; and
 - embedding risk culture across organisation.

Enterprise Risk Management – ERM and Solvency II

- **Risk appetite statements** highly topical in Solvency II world
 - set out level / types of risk firm willing to accept;
 - defined at Board level;
 - can be expressed in terms of credit rating, solvency level, earnings, etc.;
 - must be translated into more detailed and easy-to-measure risk tolerances and limits.

Enterprise Risk Management – ERM and the Actuary

- Chartered Enterprise Risk Analyst (CERA) credential is highly sought-after among risk management professionals:
 - 1000th CERA qualification recently awarded globally;
 - approx. 20 CERAs in Ireland at present;
- Some alternative qualifications exist

CERA
Chartered Enterprise Risk Analyst
CREDENTIAL



Any Questions?