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**GOVERNMENT ACTUARY
UNITED KINGDOM**

May 2012





ABOUT ME

MORTALITY

SOLVENCY II

CURRENT ISSUES FOR UK ACTUARIES

NEW STRATEGY FOR UK ACTUARIAL PROFESSION



ABOUT ME

UK Government Actuary since 2008

UK Focus



WHAT TYPE OF WORK DO WE DO?

UK Social Security

Policy Advice – Social Welfare/Finance

Overseas

Other UK including Modelling/Assurance

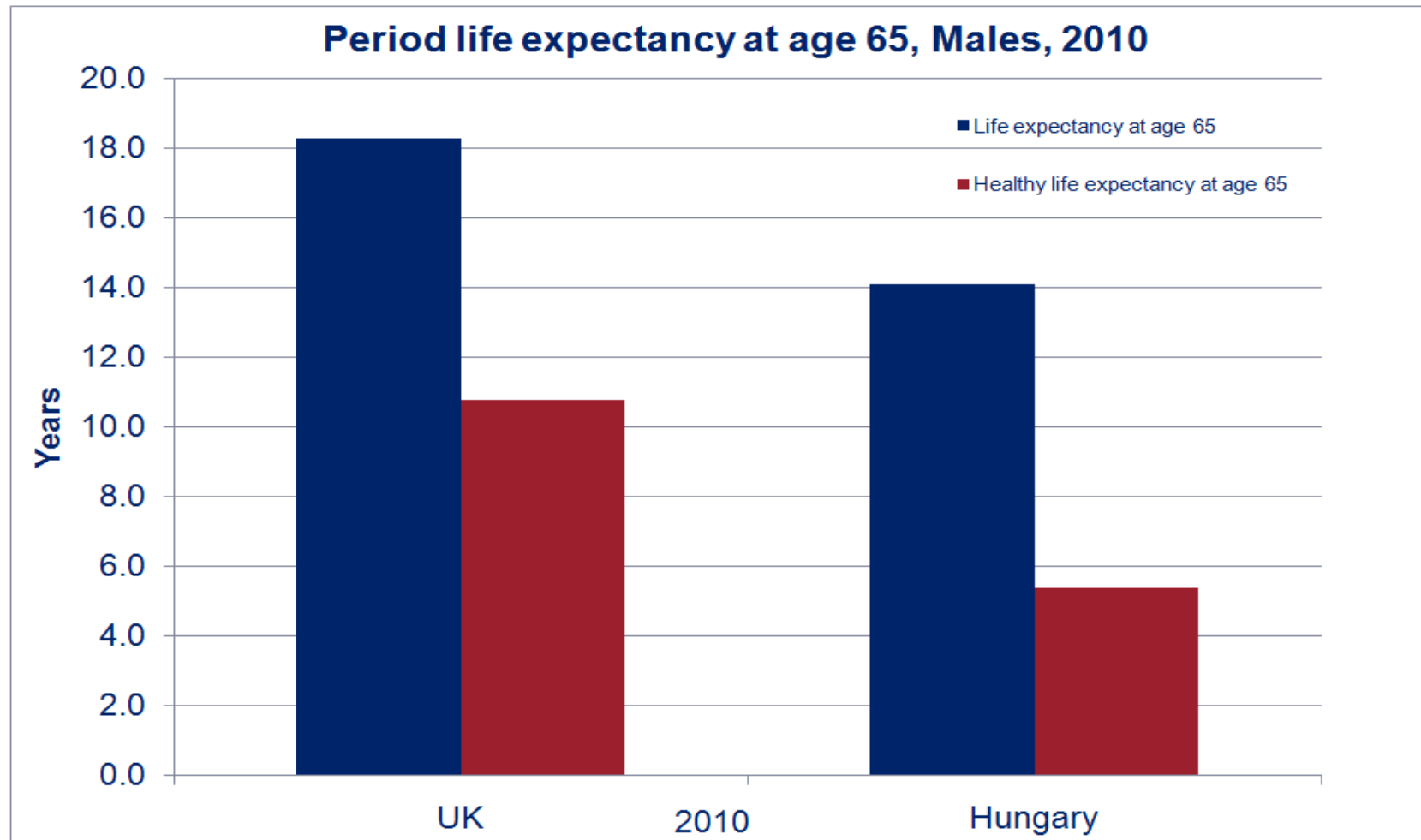




MORTALITY



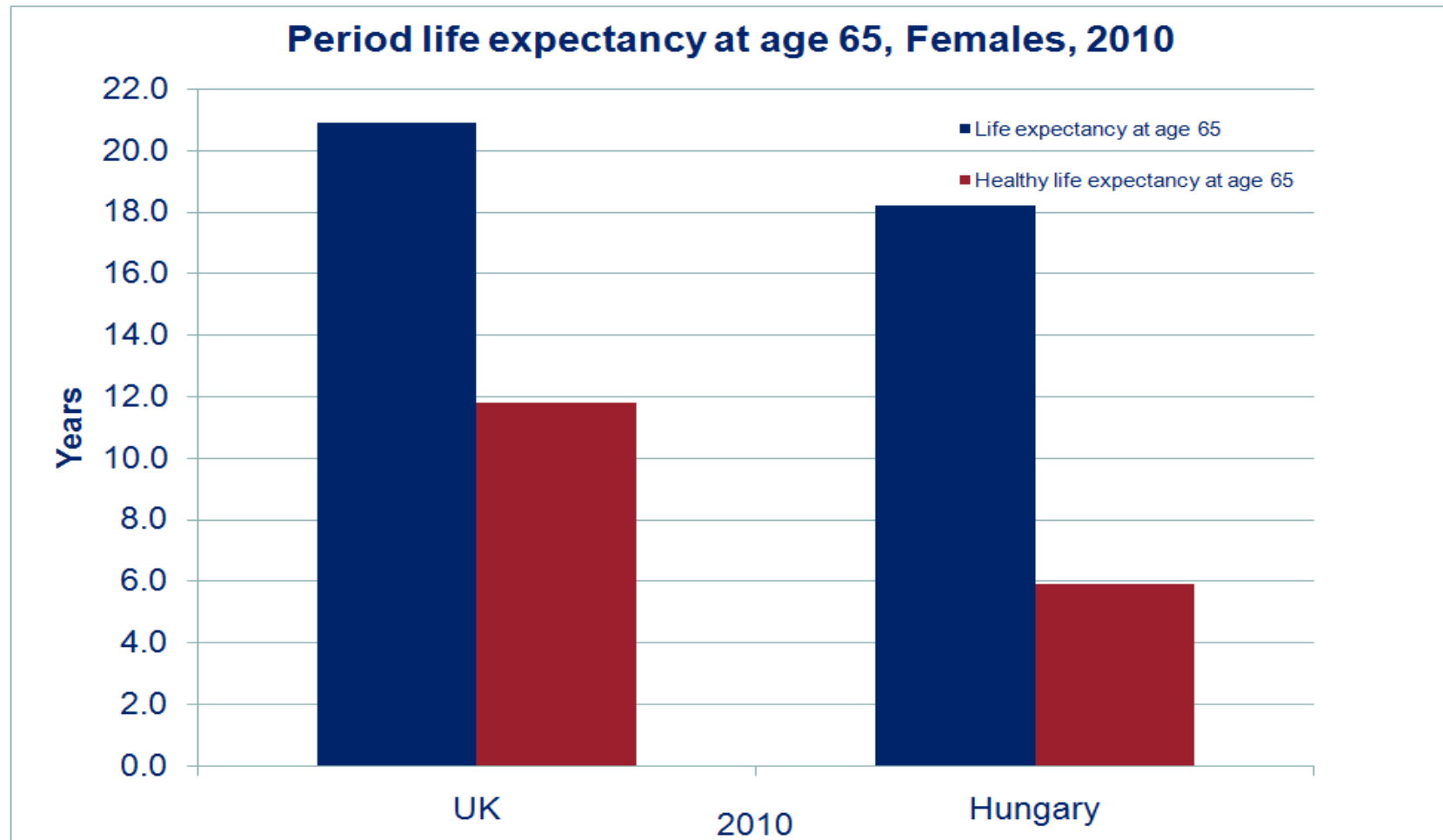
Period life expectancy at age 65, Males



Source: Eurostat



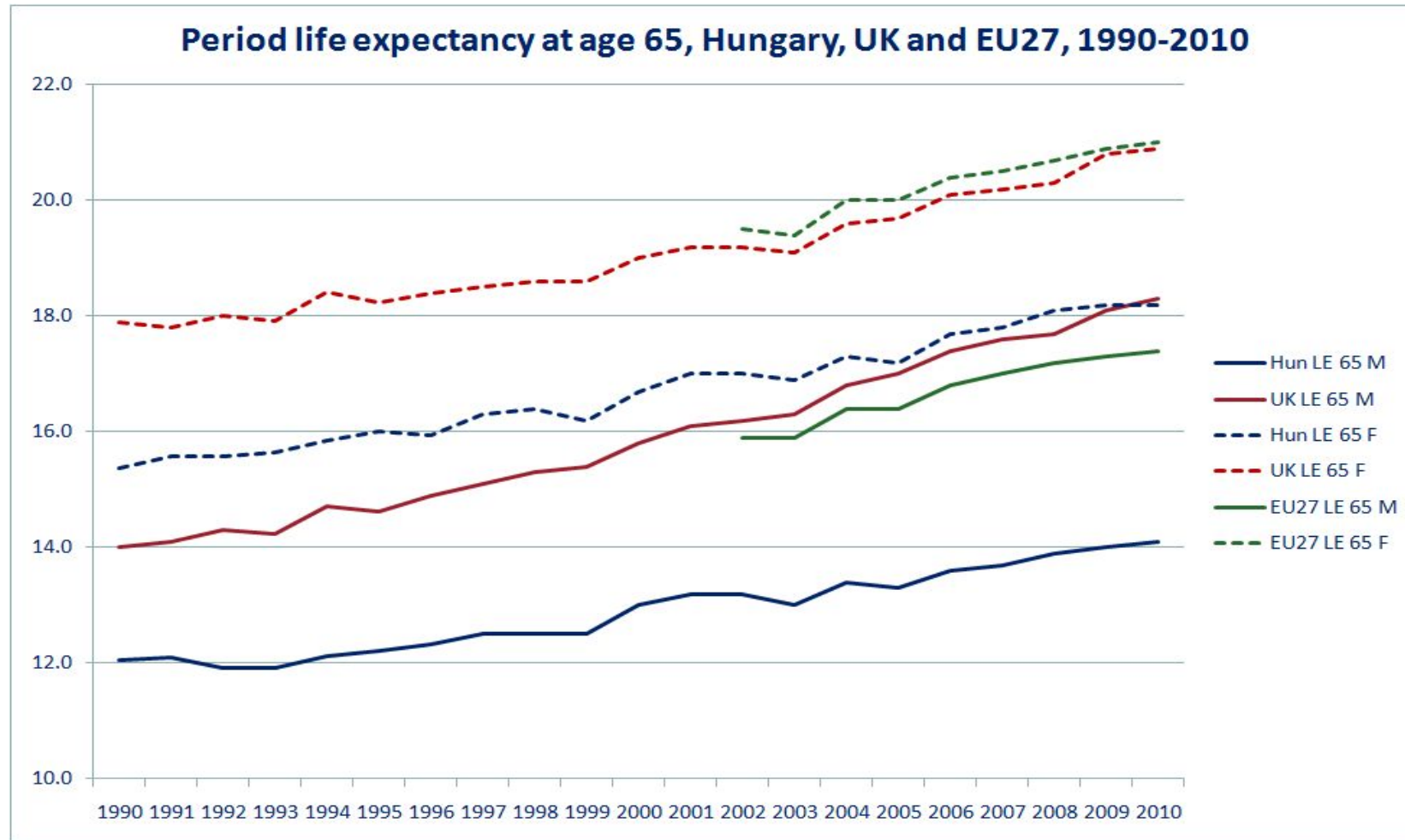
Period life expectancy at age 65, Females



Source: Eurostat



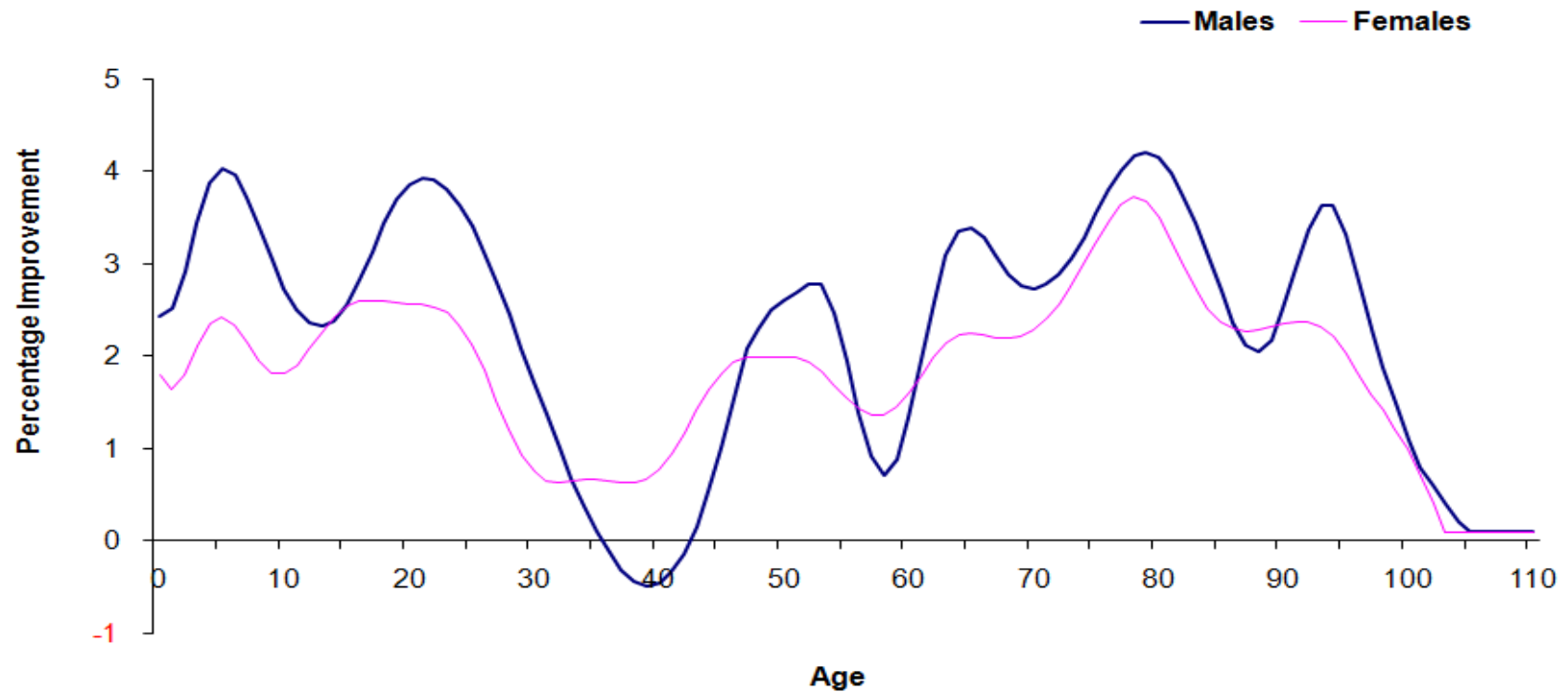
Period life expectancy at age 65



Source: Eurostat



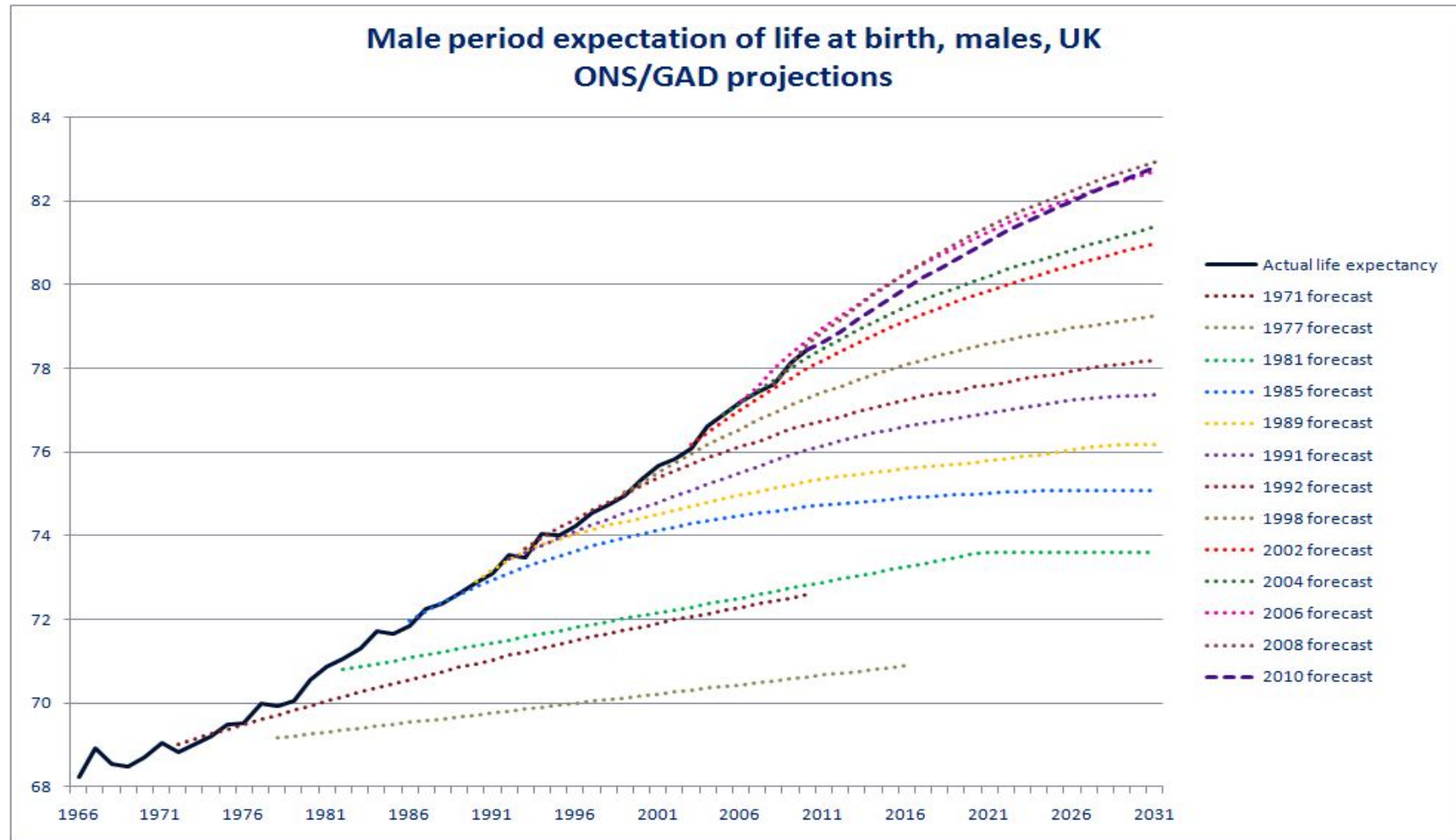
Projected smooth percentage changes in death rates between 2009 and 2010 by age, UK



Source: Office for National Statistics, UK



Longevity projections, Males, UK



Source: IMF



Actual and projected period expectations of life at birth, Males, 2009 and 2060

Country	2009	2060
UK	78.1	86.8
The Netherlands	78.5	84.5
Sweden	78.9	84.7
France (2010)	78.1	86.0
Switzerland (2050)	79.8	85.0
Canada (2005/07, 2056)	78.3	85.0
USA (2007, 2050)	75.4	80.9
Australia (2007)	79.3	85.0
Japan	79.3	83.4

Source: Published life expectancy and projections from country's national statistics website March 2011
 UK 2008-2010 Interim life table
 UK 2010-based projections published October 2011



Actual and projected period expectations of life at birth, Females, 2009 and 2060

Country	2009	2060
UK	82.1	90.1
The Netherlands	81.9	87.4
Sweden	83.1	86.9
France (2010)	84.8	91.1
Switzerland (2050)	84.4	89.5
Canada (2005/7, 2056)	83.0	88.6
USA (2007, 2050)	80.4	85.3
Australia (2007)	83.9	88.0
Japan	86.1	90.1

Source: Published life expectancy and projections from country's national statistics website March 2011
UK 2008-2010 Interim life table
UK 2010-based projections published October 2011



Longevity risk and fiscal challenges in selected countries (in percent of 2010 nominal GDP)

Country	Household total financial assets (2010)	Present discounted value of needed retirement income	General Government Gross Debt (2010)	Gap Col(1) – Col(2)	Increase in NPV given 3-year increase in longevity
US	339	272-363	94	67 to -24	40 to 53
UK	296	293-391	76	3 to -95	44 to 59
France	197	295-393	82	-97 to -196	40 to 54
Germany	189	375-500	84	-186 to -311	55 to 74
Hungary	108	190-254	80	-82 to -146	34 to 45

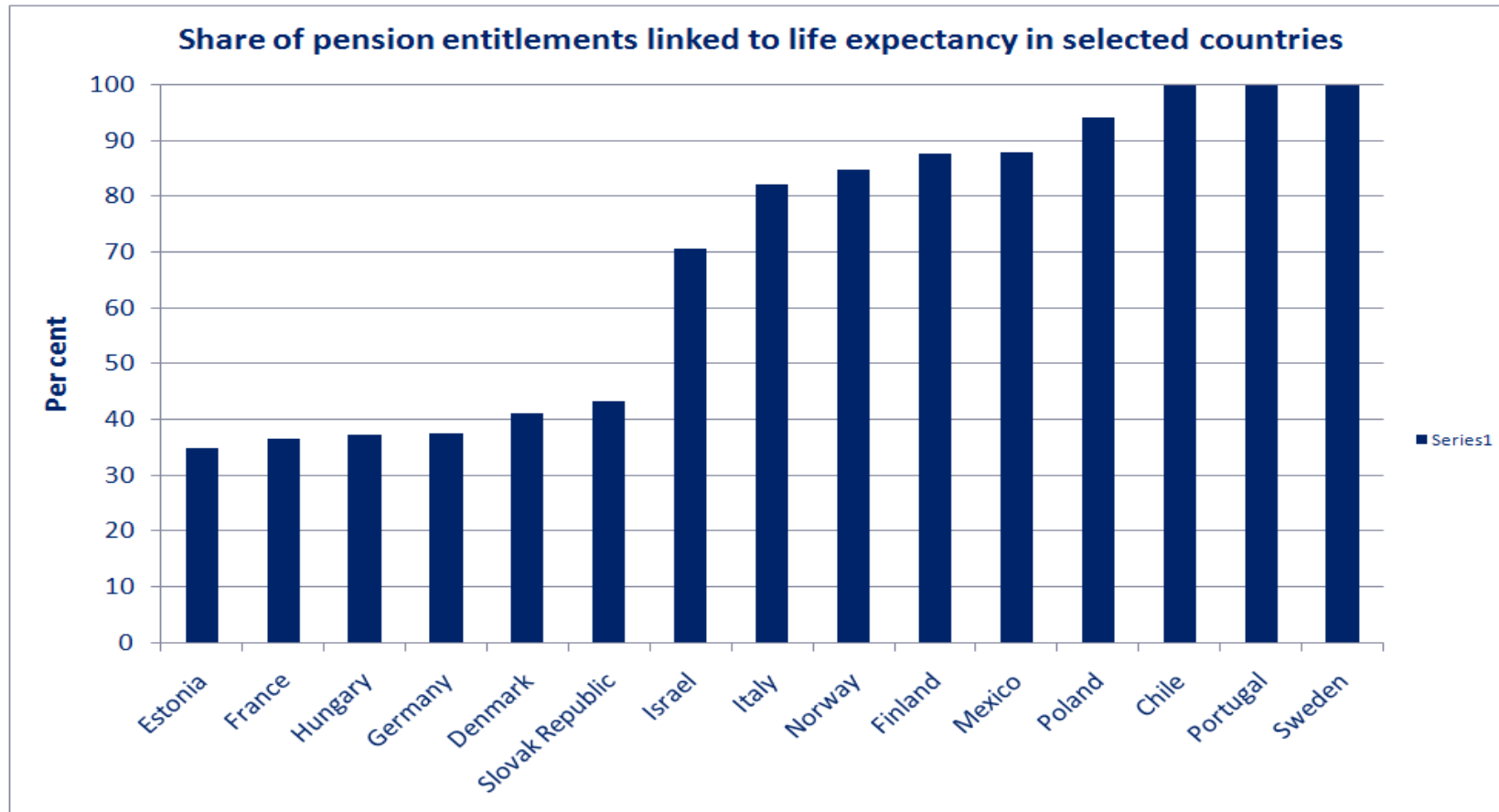
Sources: IMF

Range of values cover replacement rate of 60% or 80% replacement rate to retirees aged 65 or older

UN longevity assumptions for 2010 - 2050



Share of pension entitlements linked to life expectancy in selected countries



Source: OECD 2011

Includes links to life expectancy through defined-contribution plans



SOLVENCY II



The Financial Climate

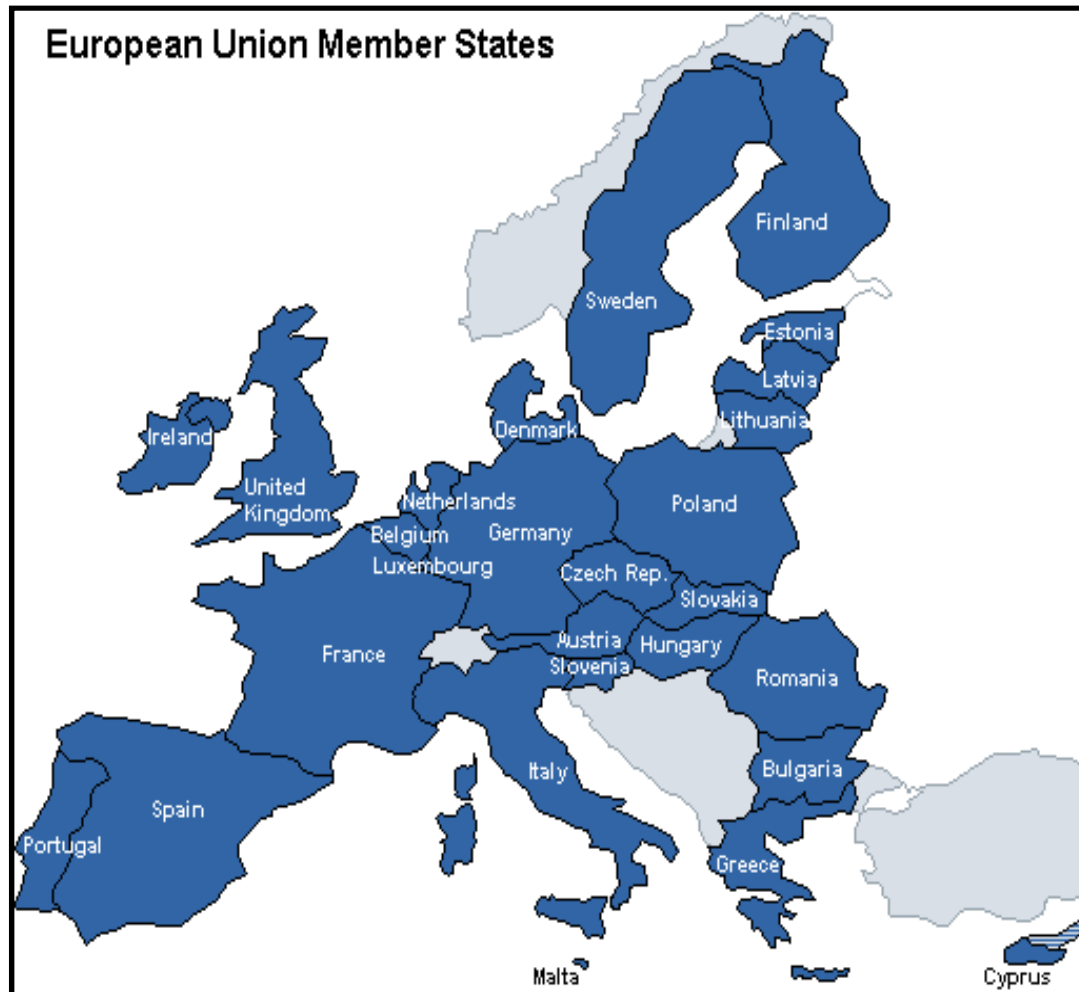


TRUST!

It takes decades to build trust and
a few seconds to destroy it.



The European Union project, bringing together:



- 27 Countries
- 23 Languages
- an economic Union
- a Social Union
- the 30 Countries in European Economic Area
- different Legal Systems

Worldwide Actuarial Community



Europe and its Insurance Industry

- **More than 500m people**
- **20% of Gross World Product**
- **Significant exporter in the world**

- **5,200 insurance companies**
- **41% of world insurance premium**
- **More than €1,000 billion of premiums**

The Three Pillar Approach

Pillar 1

Quantitative requirements

- Balance sheet (including technical provisions)
- Minimum capital requirement (MCR)
- Solvency Capital Requirement (SCR)

Market-consistent valuation
Risk Based requirements



Pillar 2

Qualitative requirements and supervisory review

- Governance, risk management and required functions
- Own risk and solvency assessment
- Supervisory review process

Business governance
Risk-based supervision

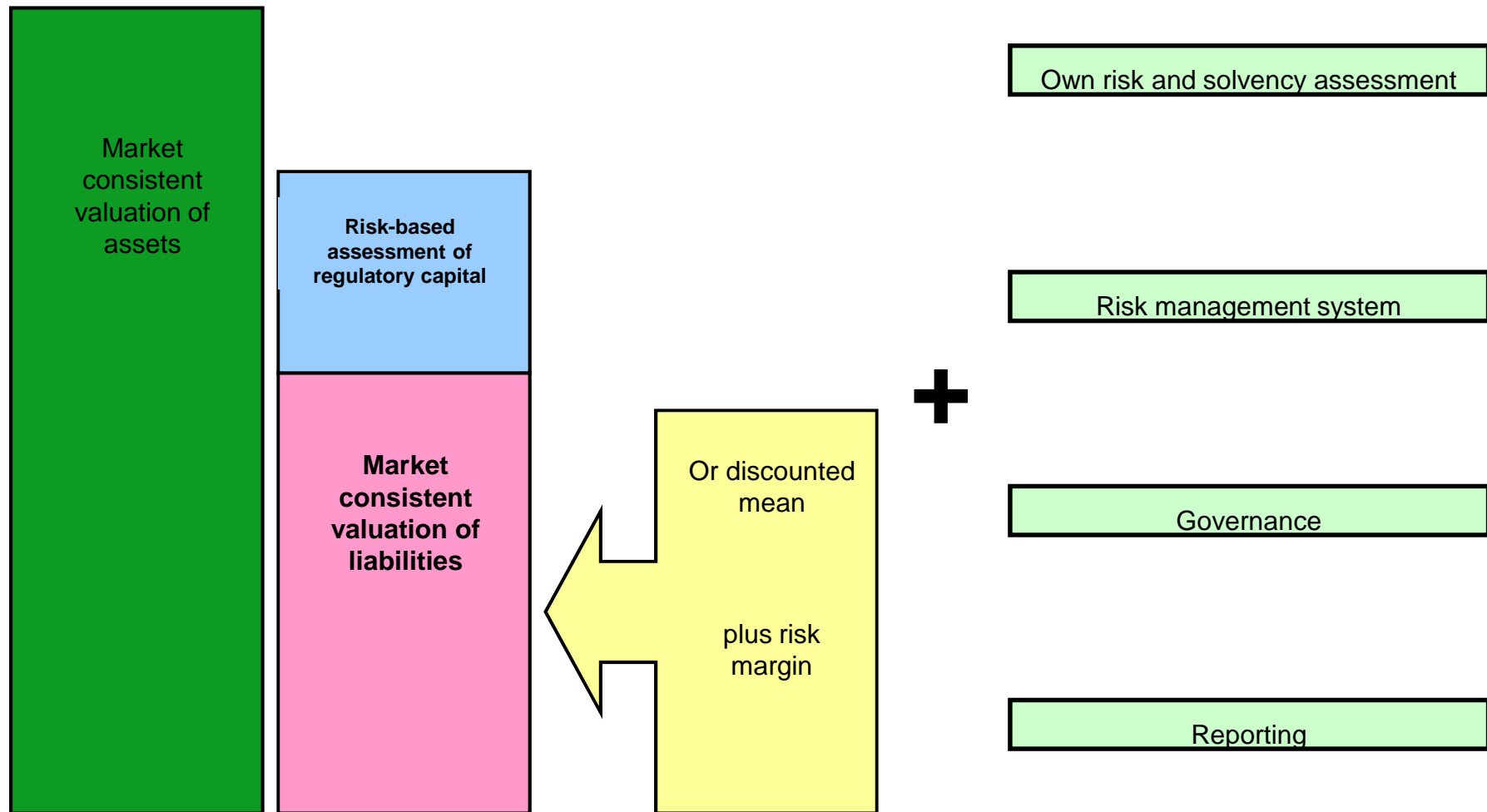
Pillar 3

Reporting, disclosure and market discipline

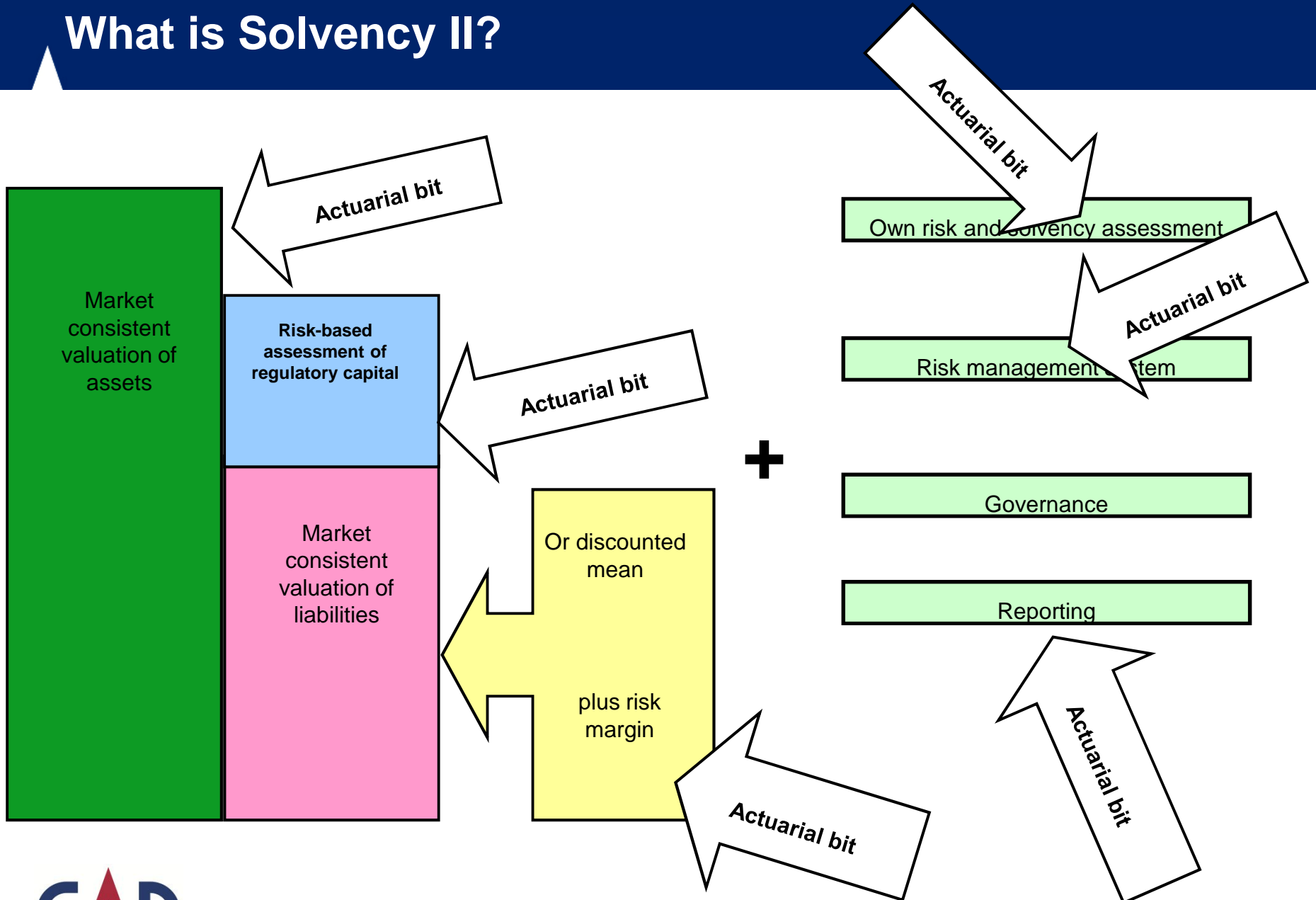
- SFCR and RSR
- Disclosure
- Transparency
- Support of risk-based supervision through market mechanisms

Disclosure
Transparent markets

What is Solvency II ?



What is Solvency II?



INTERNAL MODELS

Expected

UK

Between 50 and 100 insurers

All other EU

Under 50 insurers





Asia on the rise

Demand for actuarial talent in Asia is at a high, driven by Solvency II, says Luke Hawkins



Luke Hawkins is a senior consultant at Darwin Rhodes, Asia

Asia offers a wealth of opportunities for actuaries looking for a move abroad. The Asian insurance markets have bounced back, post-global recession, which has meant that demand for

permanent actuarial specialists far outstrips supply.

Solvency II is adding to this rapid growth in a more subtle way, with European life companies that have a presence in Asia needing to ensure that their Asia business is compliant well in advance of the looming Solvency II

deadlines. While many of these companies have made a lot of headway building specialist Solvency II teams in Europe, the lack of established ICA/QISS expertise in Asia makes the need more acute.

In Europe the Solvency II boom began with a need for valuations and modelling specialists, and Asia is following suit. Current life insurance skill sets in high demand include ICA, RBC, EEV, MCEV, IFRS, financial reporting and economic capital. Modelling skills, too, are at a premium — Prophet is particularly sought-after, while ALS and ESG skills are also desirable.

Much of the demand is centred on Hong Kong, where many life companies base their regional headquarters. This makes it a focal point for both life companies and consultancies. Ideal candidates for these positions in Asia will have past Solvency II-related actuarial experience in Europe. As many of these life

companies have their head offices in Europe, English is often the only required language.

The non-life market is a niche market within Asia but is set to expand aggressively. European companies in the region that have head offices in London are well equipped to adjust to Solvency II, as they can call on their overseas counterparts. Naturally, the need for this expertise in non-life spans across companies, consultancies and reinsurers.

Many European actuaries are now capitalising on this shortage in Asia, with high salaries and anxious insurers making for a good combination.

Longer term, individuals that aid companies in their Solvency II projects will be crucial to that company's future growth. They will know the internal models and reporting standards on which future plans will be built, making them integral to success and highly prized.

SOLVENCY II AND PENSIONS

???





CURRENT ISSUES FOR UK ACTUARIES



MEMBERSHIP

Non - UK Members (8999/21626) 40%

Non – UK Students (5668/10454) 55%



COMPETITION

CFA

OTHER PROFESSIONS

ACADEMIC



UK MARKET CHANGES

↓ DB Pensions
Post Solvency II
Reserved Roles

↑ Risk, Long-Term Care, Modelling/Assurance
International





New UK Strategy



INSTITUTE AND FACULTY OF ACTUARIES STRATEGY

Education

Member Support

Regulation

Public Affairs

Learned Society (Advancing Actuarial Science)

Quality support for an evolving profession



Education





Member Support



Regulation



Public Affairs



PROCESS FOR INFLUENCE



TOO MANY THINK THE REVERSE





Advancing Actuarial Science



International



SKILLS & VALUES

PROFESSION'S NEW STRATEGY – VALUES

Core Values

- | | |
|--------------|--------------------------------------|
| Trustworthy | - Reliable |
| | - Demonstrating Integrity |
| Professional | - Delivering quality and consistency |
| | - Evidence-based |

Behavioural/Aspirational

- | | |
|---------------|------------------------------|
| Collaborative | - Working in partnership |
| | - Team player |
| Engaging | - Open-minded |
| | - Valuing others opinions |
| | - Insightful and challenging |
| | - Transparent |
| | - Accessible |
| | - Confident and robust |



CONCLUSION – WHAT IS AN ACTUARY?

- UNCERTAINTY AND RISK
- MATHEMATICAL/STATISTICAL
- LONG-TERM FINANCIAL
- MODELLING & ANALYSIS, CERTIFICATIONS
&
- PROFESSIONAL CODE & STANDARDS
- ASSURANCE
- QUALITY AND CONSISTENCY





Trevor Llanwarne
Government Actuary
United Kingdom

