



Society of Actuaries in Ireland

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# Actuarial Careers and Hot Topics

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24<sup>th</sup> March 2015

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# The Society of Actuaries in Ireland

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- The governing body for actuaries in Ireland
  - Develop the role and standing of profession in Ireland
  - Support actuaries throughout their careers
  - Enforce standards of practice/regulate actuaries
  
- Small profession – circa 800 Fellows
  - Everyone knows everyone!



# The Society of Actuaries in Ireland

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- Not an examining body
  - Students do exams of the UK's Institute and Faculty of Actuaries
- The Society does represent students in Ireland
  - Liaise with IFoA to discuss student needs and exams
  - Representatives on IFoA student forums



# The Society of Actuaries in Ireland

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- Student Society
  - Organises social events for students
- New student seminar every September
  - Make sure you come when you start full time
- Guide for new students
  - Published on SAI website
  - Irish perspective guide to registering for and taking exams
- Join when you can



# Agenda

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6.30pm – 8pm:

- Life & Health update – Eamon Comerford
- Working in Life Insurance – Patrick Meghen
- Solvency II – Patrick Meghen
- General Insurance – Majella McDonnell
- Pensions – Sarah Kelly
- Career Advice – Jenny Johnston

8pm – drinks reception next door



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**Life and Health Update**  
Eamon Comerford

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24.03.2015

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# Life Overview

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- Market overview and developments
- M&A activity

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# Market overview

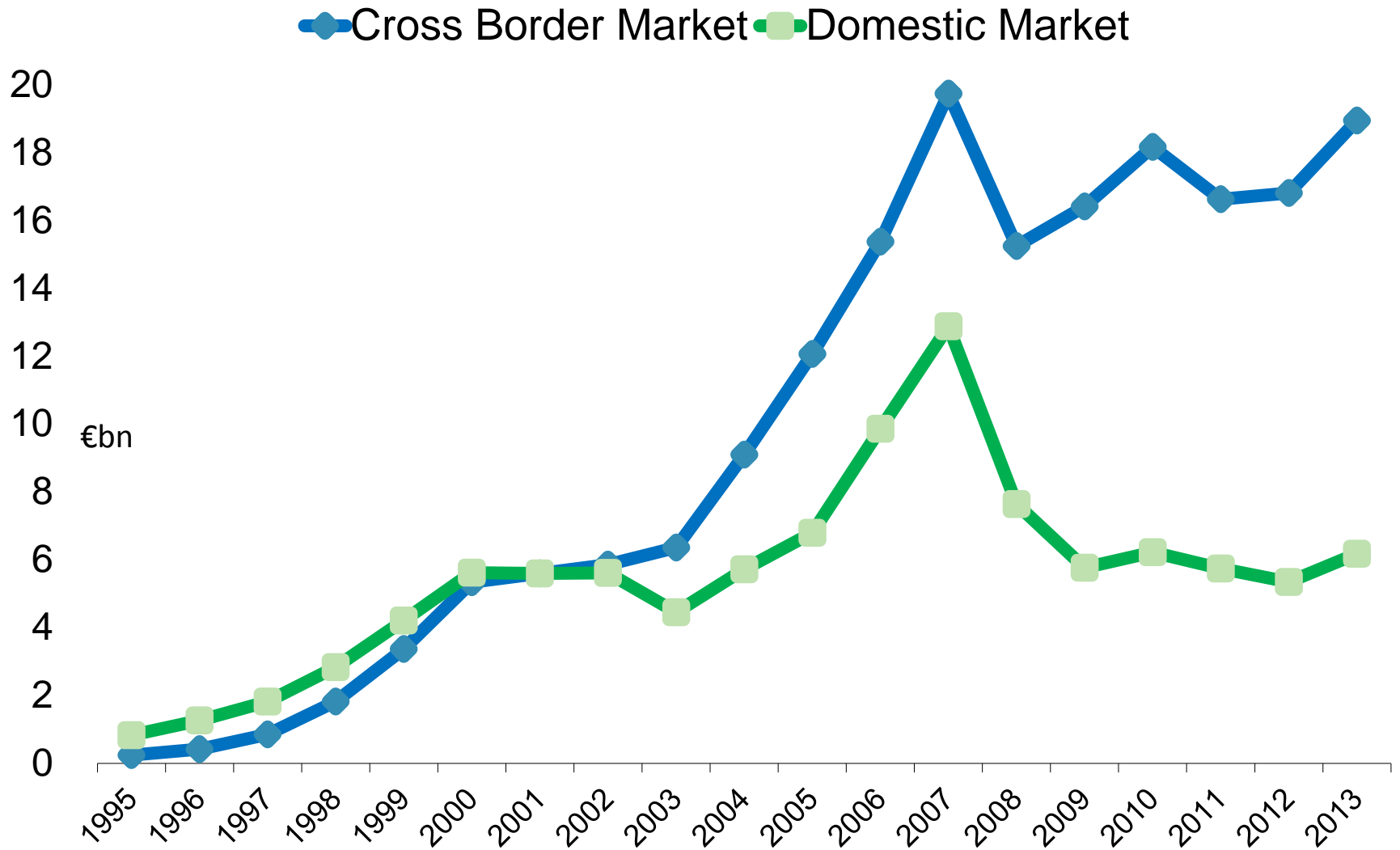
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- Domestic market
  - c.13 life companies
- Cross-border market
  - c.57 life companies
  - Including: Aegon, Allianz, AXA, Generali, Intesa Sanpaolo, MetLife, SEB, Standard Life International, ... Zurich
  - c.110 reinsurance companies and SPVs (includes non-life)





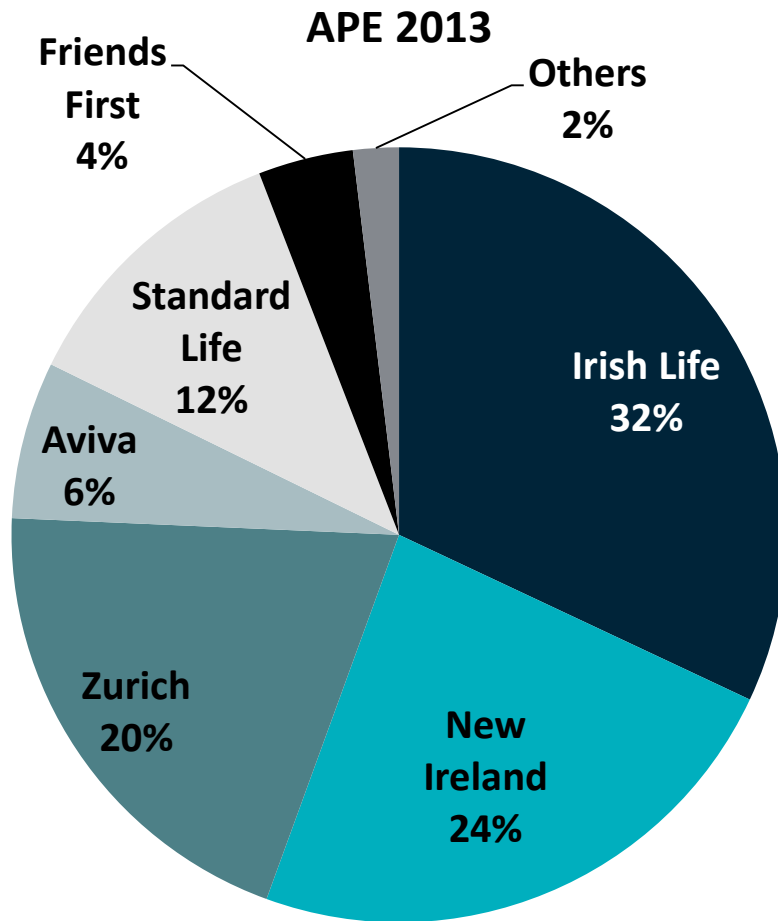
# Market overview – New Business Premiums



Source: 2013 and older Blue Books (CBI Insurance Statistics)



# Market overview - Domestic Premiums



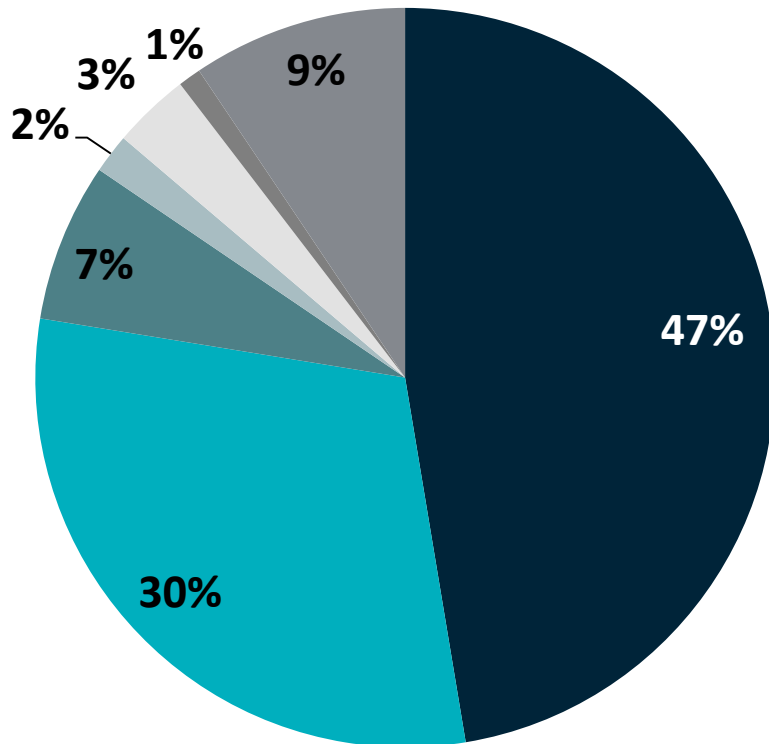
Annual Premium  
Equivalent (APE) =  
 $AP + 0.1 * SP$

Market  
dominated by a  
few players



# Market overview - Cross Border Premiums

Total Premium Income (Gross) 2013



- Italy
- UK
- Germany
- Sweden
- France
- Spain
- Other

Italy focus  
10 Companies

UK focus  
7 Companies

Multi-territory  
15 Companies



# Domestic Market - Market Consolidation



Irish Life  
&  
Canada  
Life



Aviva  
&  
Ark Life



New  
Ireland



Danica Life  
  
HSBC Life  
  
AVIVA Life  
& Pensions

# Health Overview

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- Market overview
- Market developments

***Disclaimer:***

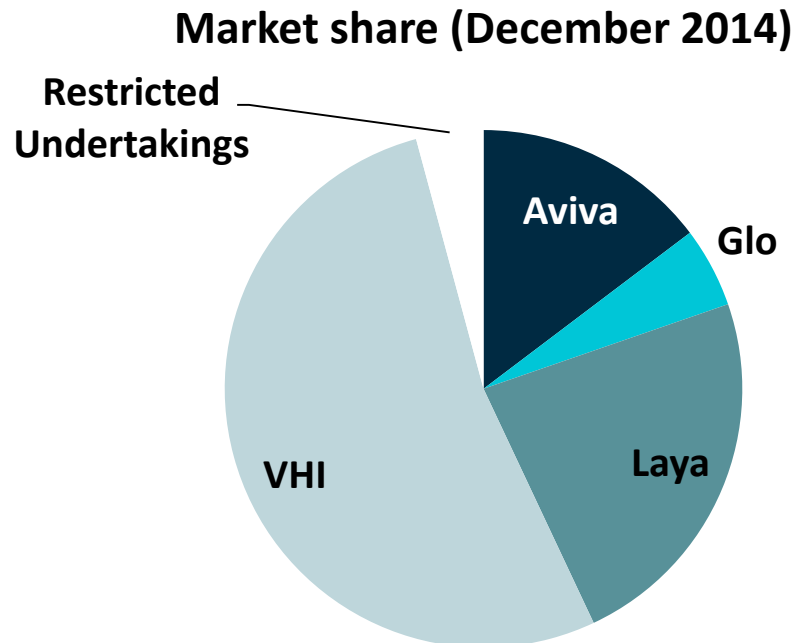
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# Market overview

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- Four main players:
  - VHI Healthcare
  - Laya Healthcare (formerly Quinn Healthcare)
  - Aviva Health
  - Glo Health

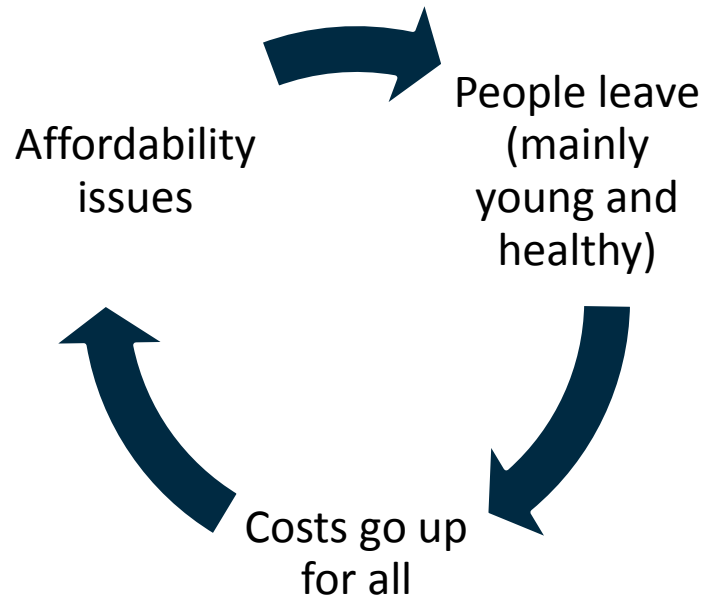




# Market developments - contraction

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- Two main problematic issues:
  1. Vicious cycle of contraction

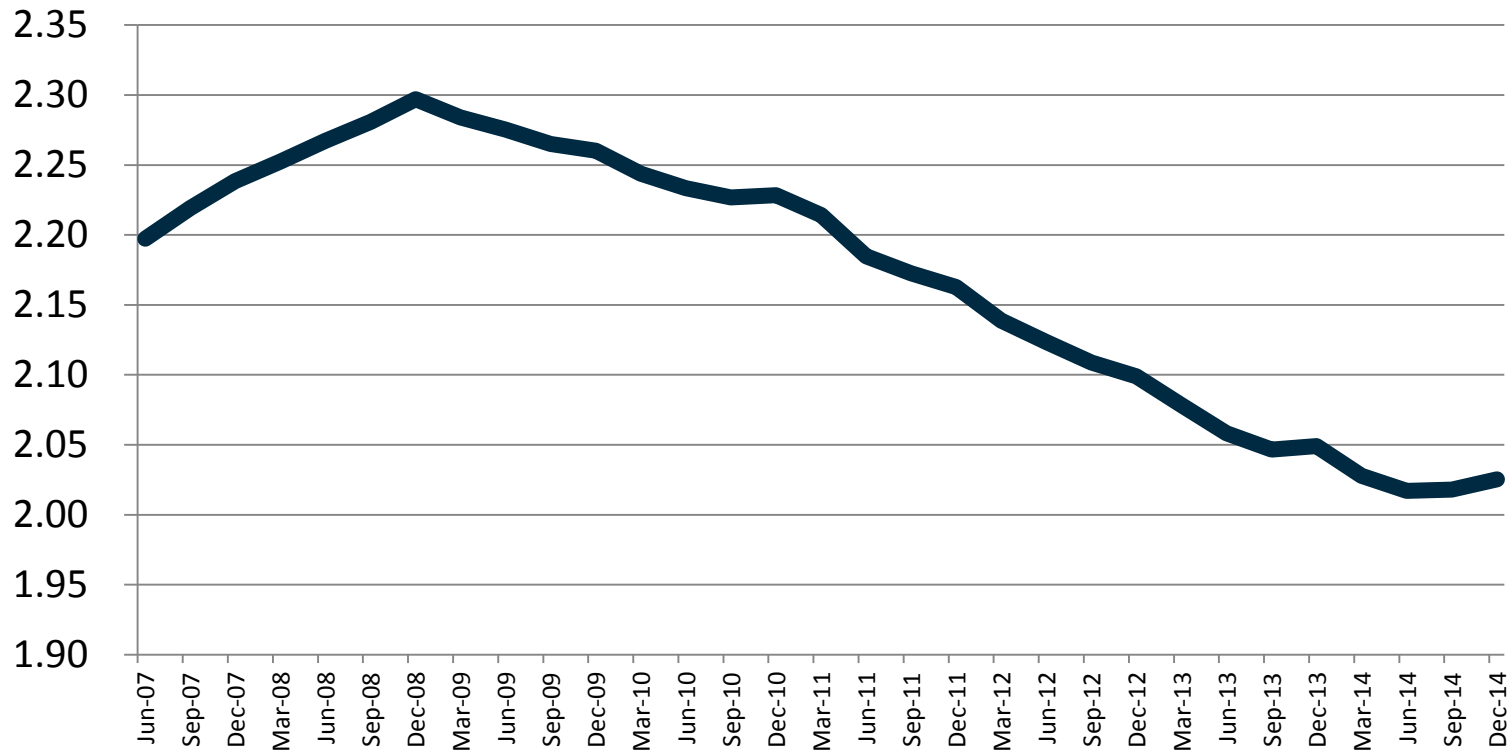




# Market developments - contraction

- Two main problematic issues:
  1. Vicious cycle of contraction

**Number of people with private health insurance in-patient cover (m)**







# Market developments – product proliferation

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- Two main problematic issues:
  2. Proliferation of products





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# **Actuarial Careers & Hot Topics Working in Life Insurance**

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Patrick Meghen - 24.03.2015

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# Life Insurance – Related Subjects

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- Financial Mathematics (CT1)
- Finance & Financial Reporting (CT2)
- Survival Models (CT4)
- Actuarial Mathematics/Contingencies (CT5)
- Actuarial Risk Management (CA1)

# Life Insurance – Types of Jobs

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- Large Life Company



- Small Life Company



- Reinsurer



- Consultancy

# Life Insurance – Different Areas

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- Reporting
  - Data, setting assumptions, running models, analyse changes, reporting
- Pricing
  - Market analysis, update pricing models, profit analysis, product documentation

# What's it like?



# What's it like?

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- Working in Excel
- Modelling Software (Prophet/MoSes/MG-Alfa)
- Cash flow models
- Not all mortality tables
- Most jobs are in the Life Insurance sector
- Practical solutions & problem solving



# Life as a Consultant

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- A lot more variety
  - Working for several different companies
  - Reporting & Pricing work
  - Project work
  - M&A experience
- Longer hours, more demands



# Practical Tips

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1. Read the job specs
2. Try get some insider knowledge before applying
3. Focus on qualification
4. Consider changing job
5. Build your experience
6. Think of the “long term”
7. Have a nice working environment





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# **Actuarial Careers & Hot Topics Solvency II**

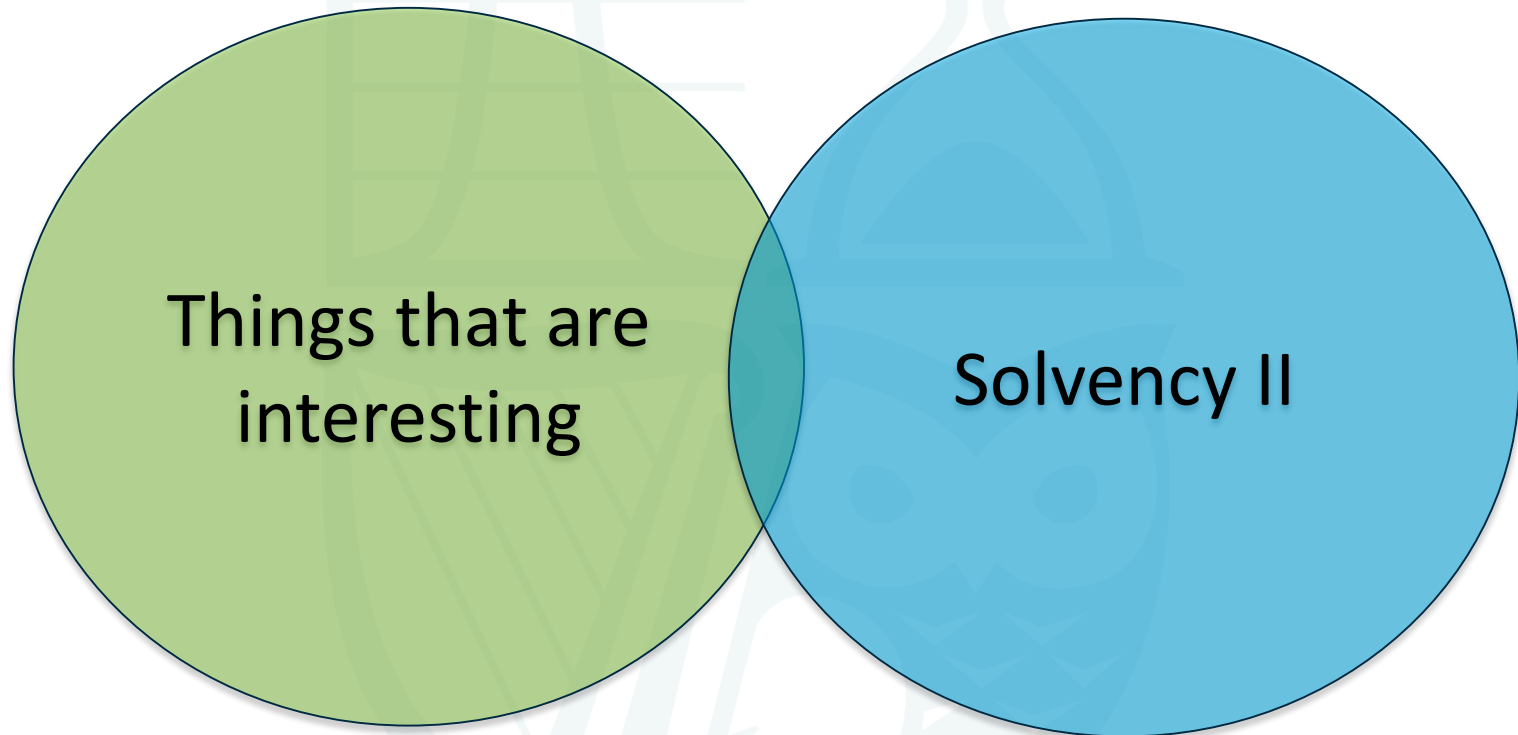
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Patrick Meghen - 24.03.2015

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# Solvency II Overview & Update

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***Disclaimer:***

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# Solvency II – why should I care?

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- 1. Exams
- 2. Job Interviews
- 3. Your future job





# Key points to be covered

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- Solvency II – the “3 Pillars”
- The “3 Levels” (not the 3 Pillars)
- Implementation Timetable





# Solvency II – definition

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- New regulatory regime for (re)insurance companies
- Same rules apply for all countries in the EU
- “Risk based approach”



# Solvency II - 3 Pillars

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# Solvency II - Legislation





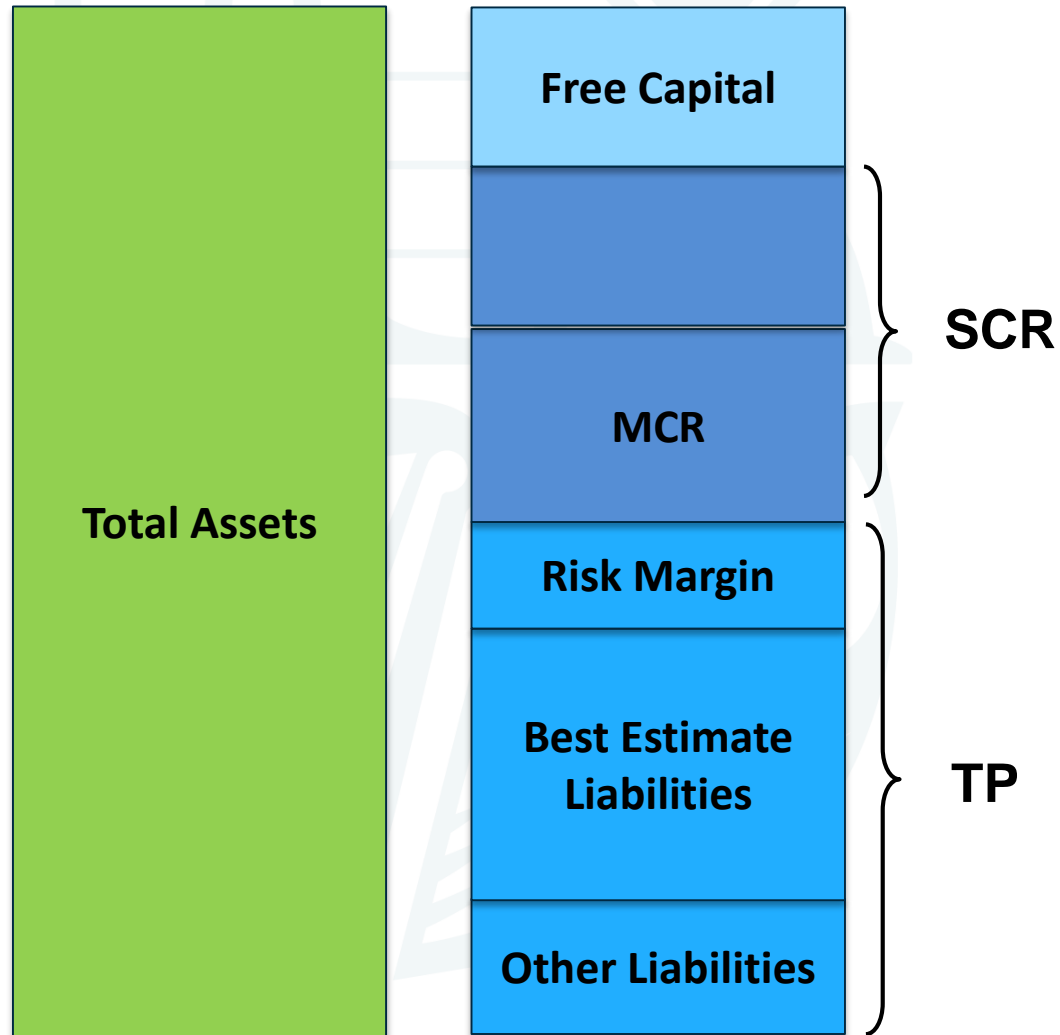
# Pillar 1

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- Value Assets & Liabilities on a market consistent basis
- Technical Provisions, SCR/MCR
- Internal Model/Standard Formula

# Pillar 1 – Assets & Liabilities

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# Progress Update – Pillar 1

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- Companies are well prepared (generally)



- Some points to note:
  - Technical Provisions (data quality, assumptions, automation)
  - Own Funds (classify capital)
  - Capital Requirement Calculations (SCR & MCR)
  - Internal Models

## Pillar 2

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- Governance
- Policies
- Functions
- Own Risk & Solvency Assessment (ORSA)
- Risk Management



## Pillar 2

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- **Systems of Governance**
  - Organisational structures
  - Segregation of responsibilities
  - Written policies
- **Risk Management Systems**
  - Strategies, processes, reporting, procedures, contingency plans
  - Specified minimum requirements
  - Risk Management Function



# Drafting Policies & Documents

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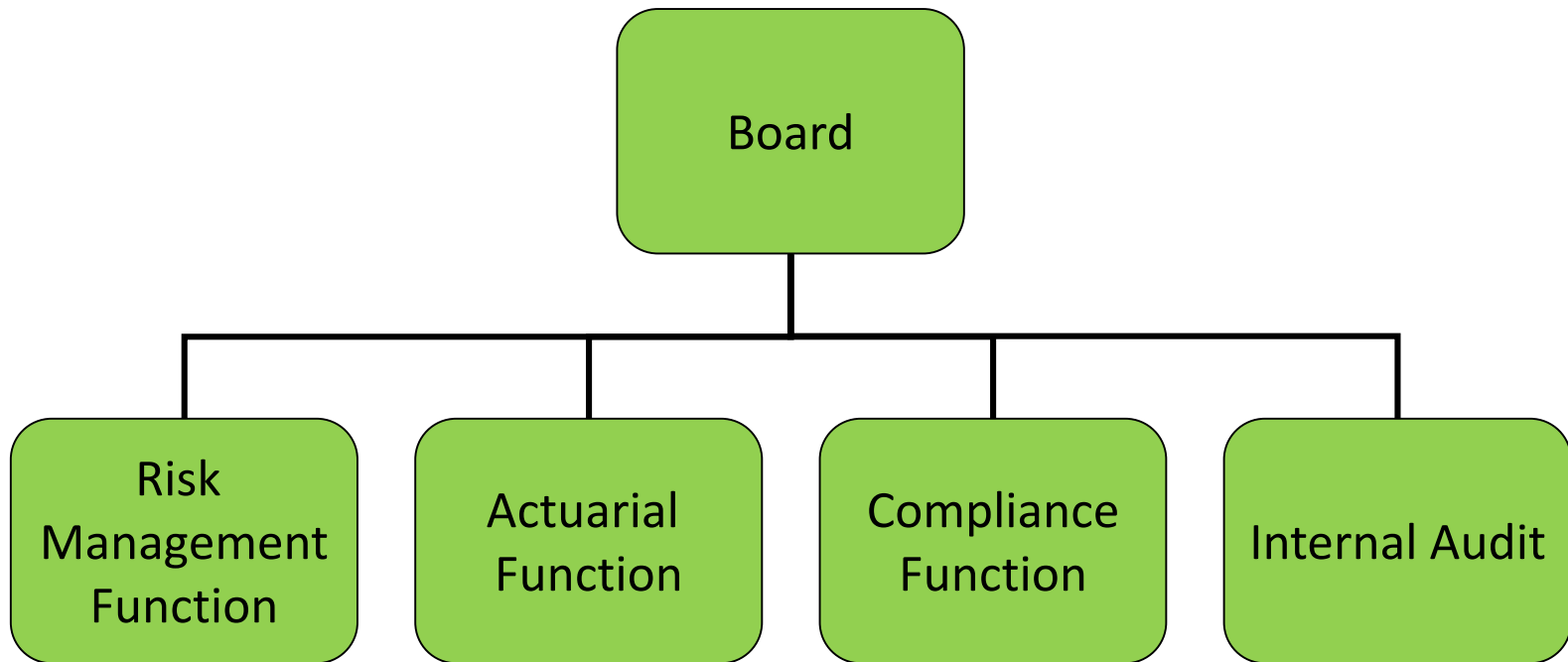
- Solvency II requires **a lot** of written policies!

General Governance Requirements	Internal Controls	Capital Management	Group Governance
Risk Management	Internal Audit	Own Funds Requirements	Actuarial Function
Fit & Proper	Outsourcing	ORSA	& lots more...



# Functions

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- A lot of companies are forming separate risk departments



# ORSA/FLAOR

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*Requires companies to project their economic balance sheet over their business planning horizon, subject it to a range of stresses and scenarios and determine their capital needs.*



## Challenges:

- Hard to do the actual projections (nested calculations)
- Modelling management actions included in the stresses
- Lots of documentation
- Board involvement
- Review and validation





# Progress Update – Pillar 2

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- Companies are getting there
- Some points to note:
  - A lot of work done to date on policies etc.
  - ORSA/FLAOR being improved upon this year



# Pillar 3 - Reporting

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- SFCR (public)
  - Solvency & Financial Condition Report
- RSR (private)
  - Regular Supervisory Report



# Pillar 3 - Lots of Reporting

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- QRTs (quantitative)
  - Quantitative Reporting Templates
  - Liabilities
  - Assets
  - Extra Information





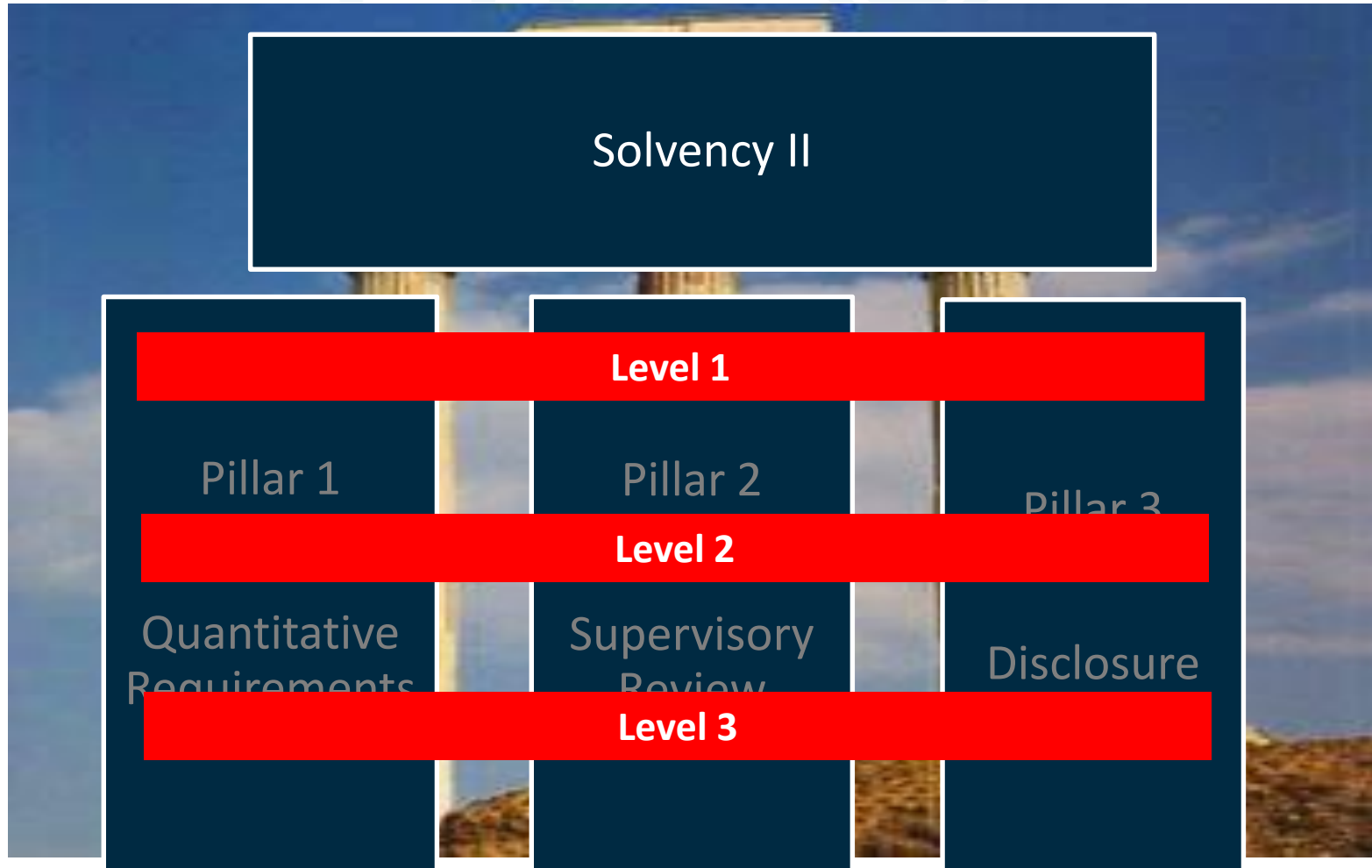
# Progress Update – Pillar 3

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- Not very good
  - Not implemented yet
  - Not fully automated
  - Not tested
- Preparatory Phase
  - Reporting
- Solvency I Reporting
  - until 2016

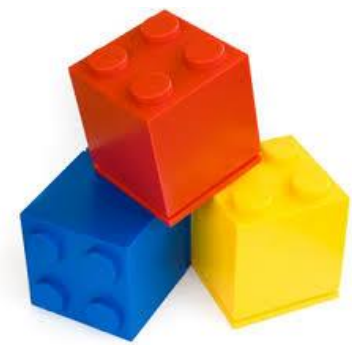


# Solvency II - Legislation



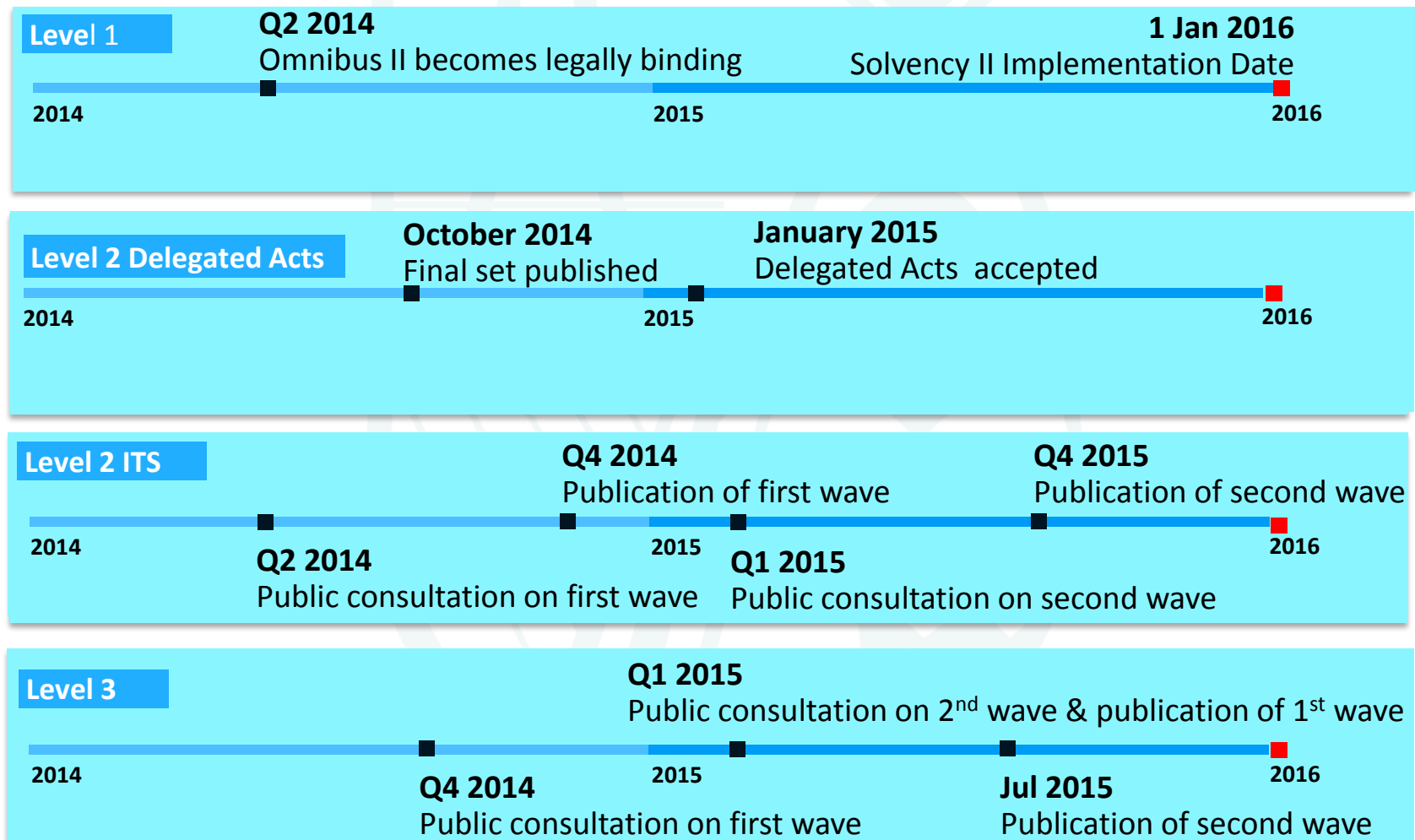


# Solvency II – Building Blocks

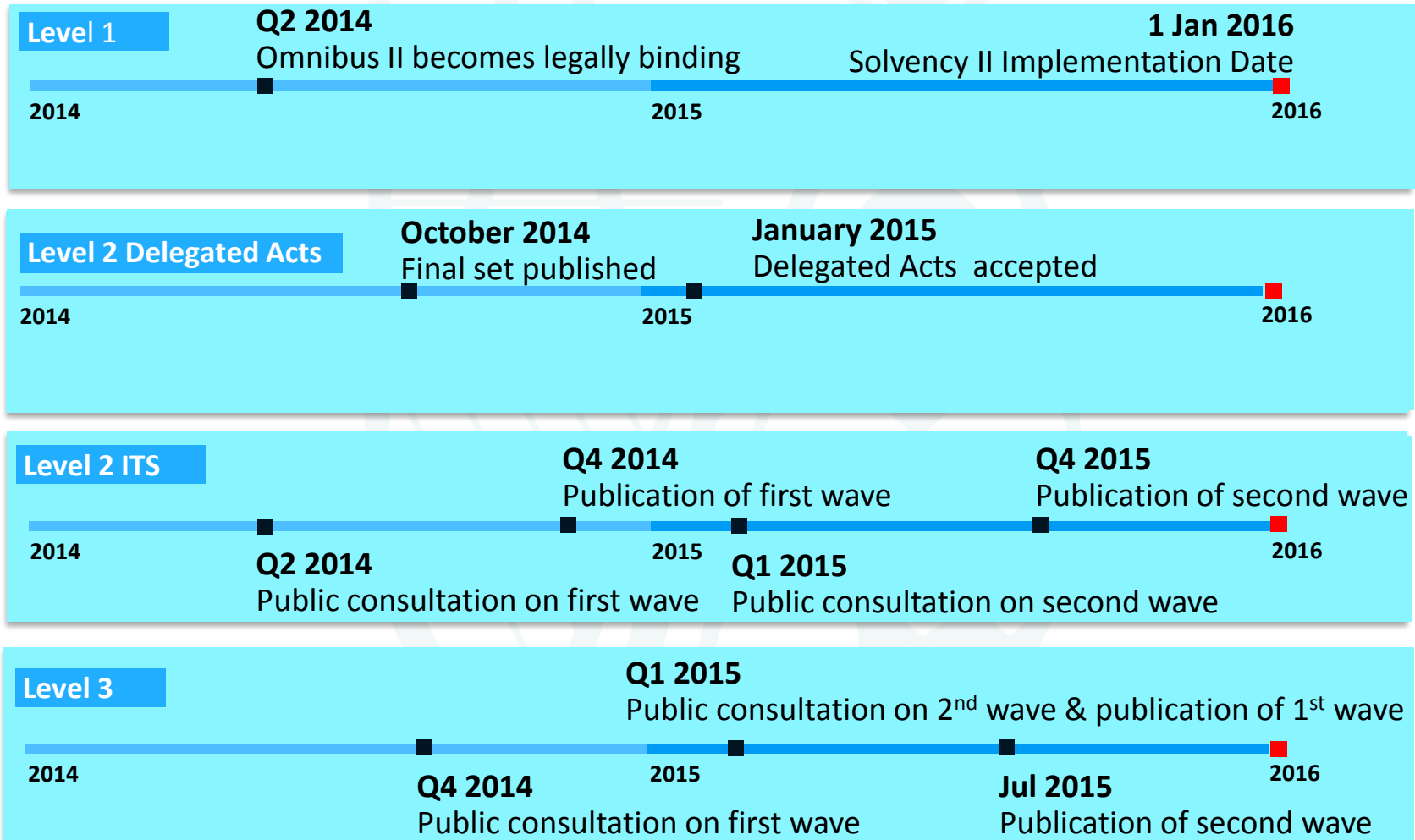


Level	Description	Purpose	Responsibility of
1	Directive	Sets out overall framework	Council & Parliament
2	Delegated Acts	Give more detail on specifics	Commission (with advice from EIOPA)
	Implementing Technical Standards	Conditions of application of delegated acts	Commission (drafted by EIOPA)
3	Supervisory Guidelines	EU wide regulatory guidelines	EIOPA

# Solvency II – Regulatory Timetable



# Solvency II – Regulatory Timetable





# Solvency II – Early Implementation

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- Preparatory Guidelines
  - Individual regulators have started implementing parts of SII
  - These guidelines help ensure consistency
- Central Bank of Ireland has its own Preparatory Guidelines
  - Sets out their early implementation plans
  - Amount required is based on a company's PRISM rating
- Areas covered
  - Submission of Information
  - Systems of Governance
  - FLAOR (Forward Looking Assessment of Own Risk)



# The End!

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Solvency II - it's coming for you!



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**Actuarial Careers & Hot Topics**  
**General Insurance**  
**Majella McDonnell**

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24.03.2015

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# Objectives of the session

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- What does a GI actuary do?
- Non-life market developments
- Pricing topics
- Reserving topics

***Disclaimer:***

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# What does a GI actuary do?

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- **Pricing**
  - Generalized Linear Models (GLMs)
- **Reserving**
  - Run-off Triangles
- **Capital Modelling**
  - Modelling internal economic capital
- **Risk**
  - Identifying, measuring and controlling risk

Accident Year	Age						
	1	2	3	4	5	6	7
1	357848	1124788	1735300	2218270	2745596	3319994	3466346
2	352118	1236139	2170033	3353322	3799067	4120063	
3	290507	1292306	2218525	3235179	3085995		
4	316080	1418858	2195047	3757447			
5	443160	1136350	2128333				
6	396132	1333217					
7	440832						

Run-off triangle (accumulated figure)

# What does a GI actuary do (ctd)?

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- **Range of risk types:**

- *Personal lines*

- Private Motor
- Household

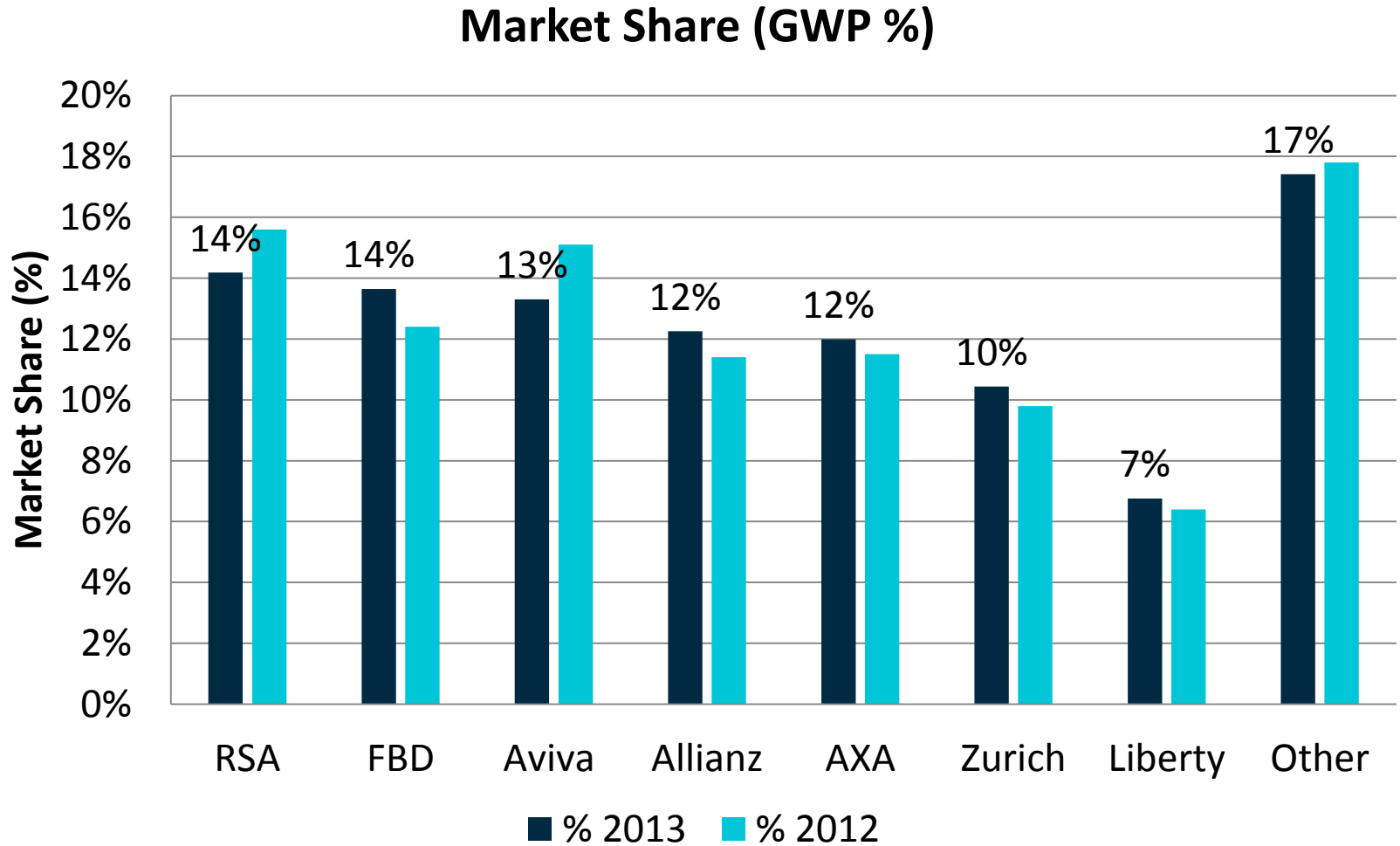
- *Commercial lines*

- Fire
- Commercial Motor
- Employers' / Public / Product Liability
- Marine and Aviation





# Distribution of market share





# 2014 market developments

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- Collapse of **Setanta Insurance** in April 2014
  - 75k policies in-force at time of liquidation
  - Outlook for regulation of EU insurers in Ireland?



- Impact of **weather events**
  - Storm Darwin (Feb 2014): €110m





# Impact of Storm Darwin

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# Pricing topics

- **Telematics**

- Relates motor premium to measured driving ability
- AXA DriveSave product, [www.boxymo.ie](http://www.boxymo.ie)





# Pricing topics

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- **Postcode System**

- New postcode database (Eircode) to be rolled out this year
- Availability of more granular rating information

- **Office of Public Works (OPW)**

- Insurers to take OPW flood defence info into account



# Reserving topics

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- **Periodic Payment Orders (PPOs)**
  - Annual payment rather than lump sum
  - Transfers risk from claimant to insurer
- **Increases to court award limits**
  - From €6.4k to €15k in District Court
  - From €38k to €60k in Circuit Court
- **Reduction in discount rate**
  - Judge Cross ruling to be appealed by the State





# Questions during Q&A session

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# **PENSIONS**

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Sarah Kelly FSAI

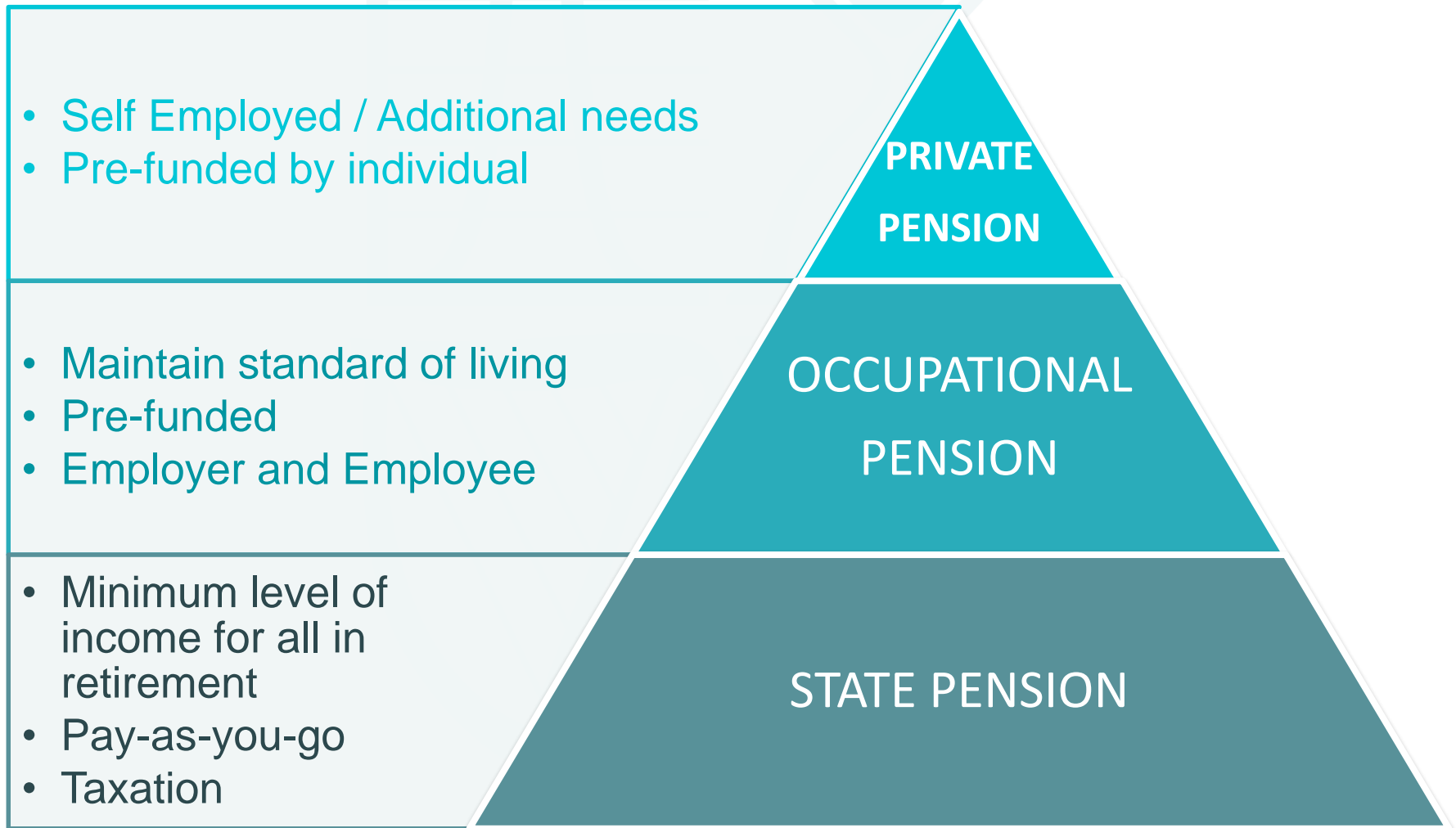
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# AGENDA

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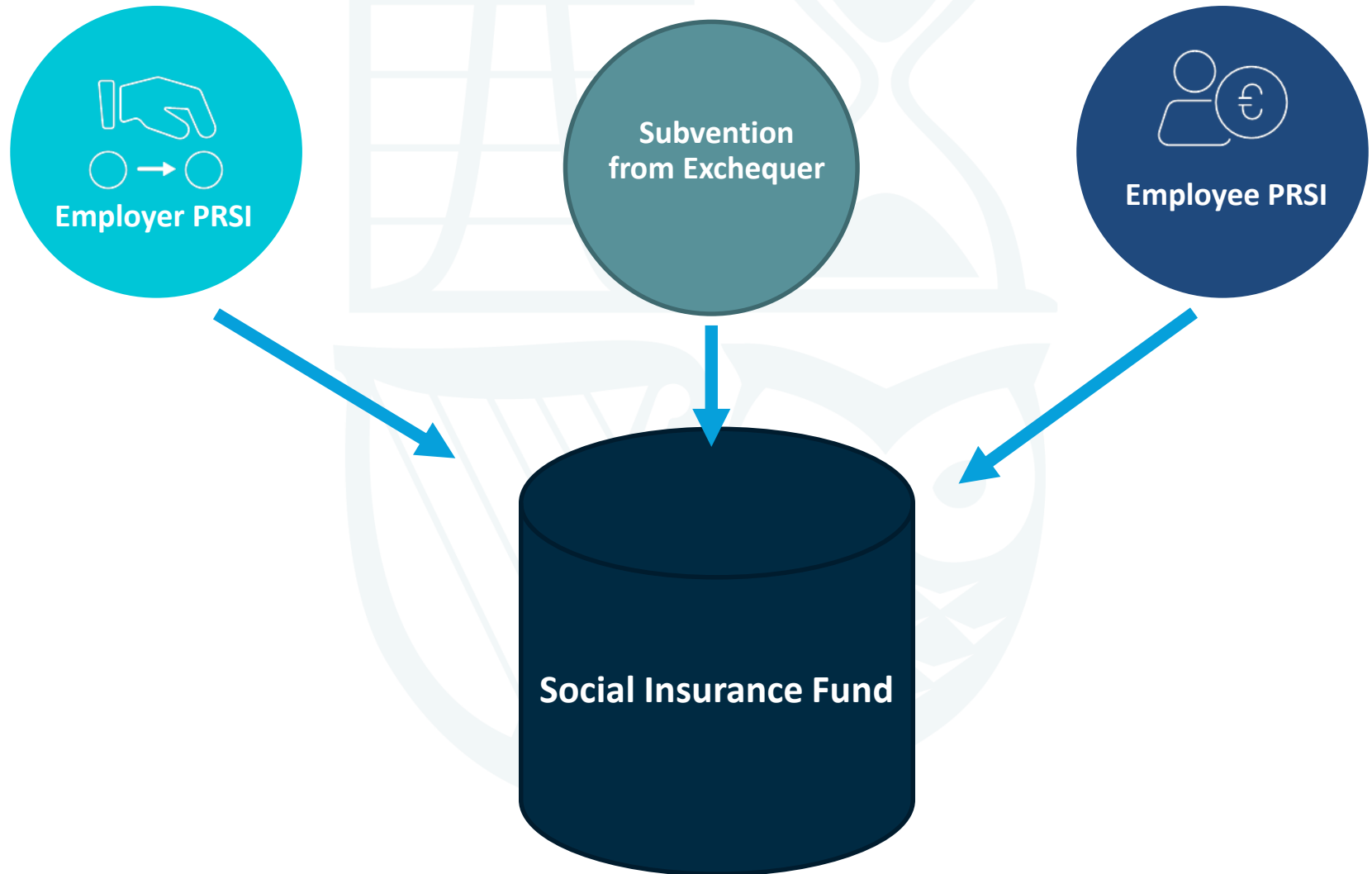
1. Overview of Pension Provision in Ireland
2. State Pension
3. Need for Pension Planning
4. Defined Benefit Pensions
5. Defined Contribution Pensions

# PENSION PROVISION



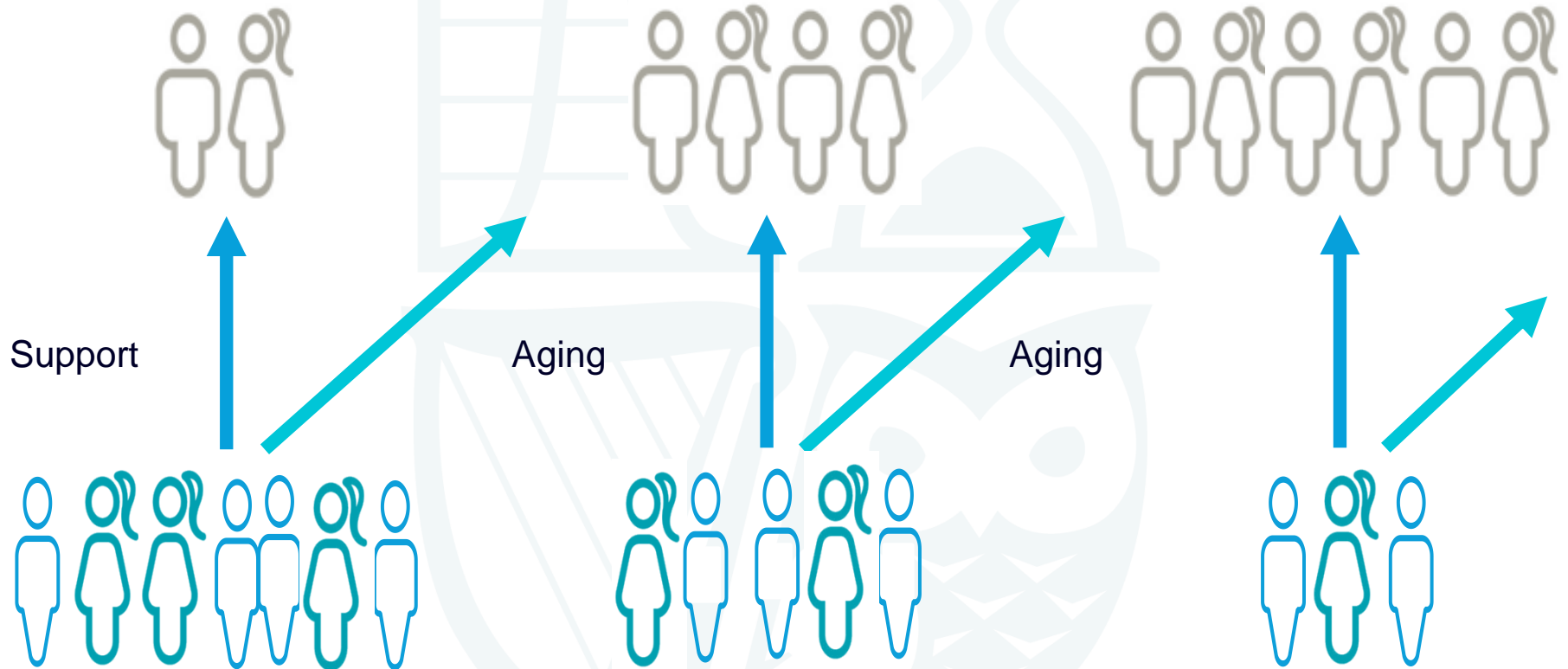


# STATE PENSION – SOCIAL INSURANCE FUND



# STATE PENSION - INTER-GENERATION SUPPORT?

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# STATE PENSION

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Present value of future shortfalls expected to build up in the Social Insurance Fund between 2011 and 2066

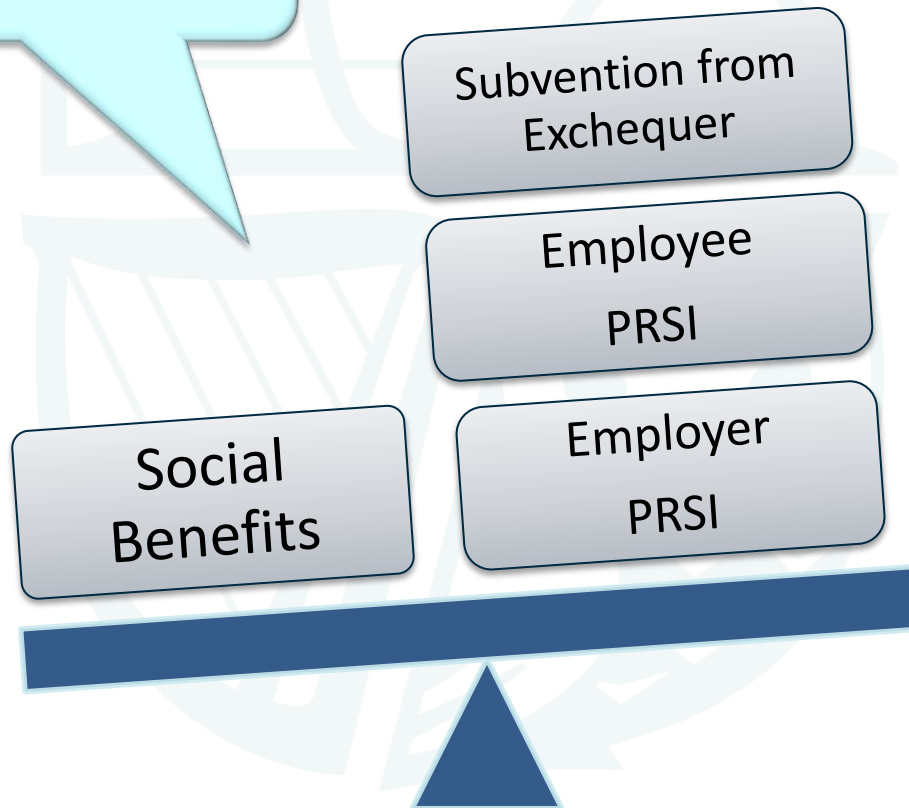


**€324bn**

# STATE PENSION – STRIKING THE RIGHT BALANCE?

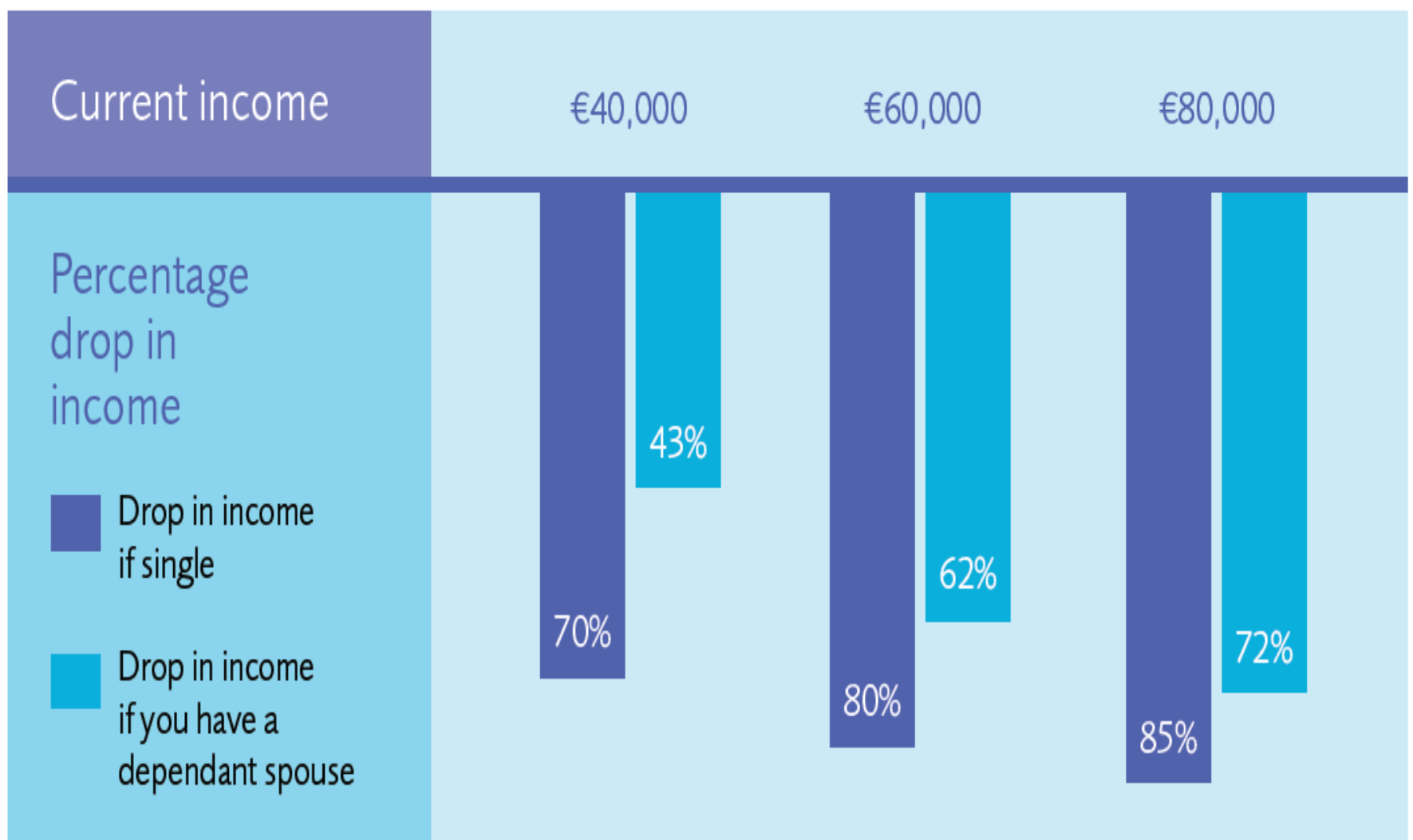
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If unchanged, increased longevity and an ageing workforce will result in large deficits or increased subvention



By 2050 there won't be enough people working to support the State Pension

# Need for Pension Planning



# OCCUPATIONAL PENSION SCHEMES – DB

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## Defined Benefit (DB)

- Set level of pension and/or lump sum at retirement
- The level of benefits depends on your service in the scheme and salary at retirement
- Private sector:
  - pension of  $\frac{1}{60}$ th of salary for every year of service to a maximum of  $\frac{40}{60}$ ths.
- Public sector schemes:
  - lump sums of  $\frac{3}{80}$ ths of salary
  - pension of  $\frac{1}{80}$ th of salary for every year of service maximum of 40 years service

# DEFINED BENEFIT SCHEMES - LOTS OF MOVING PARTS....

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**Future of State Pension**

**Increasing Longevity**

**Pension Levy**

**Auto-enrolment**

**Standard Fund Threshold**

**Sovereign Annuities**

**Conflicts of Interest**

**Falling AAA bonds yields**

**Regulatory Environment**

**Increasing Governance**

**Litigation**

**Conflicts of interest**

**European Legislation**

**Falling AA corporate bonds**

**De-risking investment strategy**

**Priority Order**

# DEFINED BENEFIT PENSION SCHEMES

Many high profile Companies have had to review their Defined Benefit Schemes



49% of schemes met the statutory Funding Standard as at end of April 2014. Most of the remainder having plans in place to address deficits

56 schemes had still not submitted recovery plans by end of April 2014

35 Proposals to Reduce Benefits  
28 accepted, 1 withdrawn and 6 pending review



# OCCUPATIONAL PENSION SCHEMES – DC

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## Defined Contribution (DC)

- Employee contribution and the contribution paid by your employer are usually fixed % salary
- Contributions invested in a fund
- No guarantees
- Benefits at retirement will depend on a number of different factors:
  - contribution levels
  - fund performance
  - plan charges
  - Annuity rates available when you retire
- **Adequacy of pension benefit?**

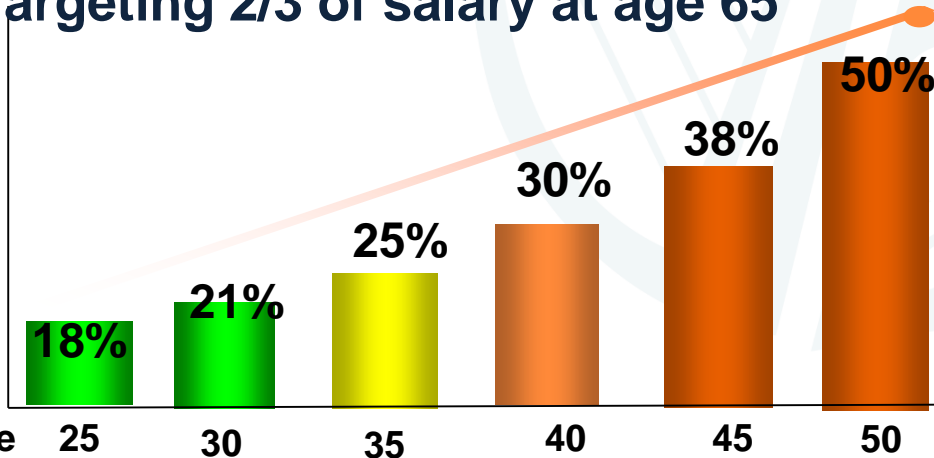
# TYPICAL DEFINED CONTRIBUTION PENSION

- 5% employer & 5% employee contribution
- 30 year old earning €40k p.a. retiring at age 65, contributing 10% salary

		Value in today's terms
Cash Fund	€535k	€190k
Pension	€21,026	€7,472 + €11,976 State Pension

- Assumes:
  - 5.4% investment growth & 1.25% management fee & 96% allocation
  - Contributions increasing by 3% p.a. & pension escalating by 2% p.a.
  - Annuity rate of 3.93%

## Targeting 2/3 of salary at age 65



### Assumes:

- Inclusive of State Pension of €230.30 per week
- Investment growth of 5.25%
- Inflation of 3%
- Assumes retirement age of 66

Source: Irish Life Guide to Pensions

# Popularity of Schemes

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- **Growth of DC**
  - Currently ratio of 2:1 in DB
  - Down from 4.5:1 in 1996\*
- **Hybrid Schemes increasingly popular**
  - Combines characteristics of both DB & DC
  - Investment risk shared between employee & employer



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**ANY QUESTIONS?**

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# Career Advice

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24/03/2015

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**UNIQUE**



**SUITABILITY**



**AWARE**

**U**

**New**

**UNIQUE**

**IT**

**Question**

**U Control**

**Exams**

# SUITABILITY

## GI

Analytical

Problem solving

IT

Life ?

## Reporting & Reserving

Formulaic

Attention to detail

Organised

## Pricing

Commercial

Creative

Flexible

Multi - task

Communication

## Consultancy





# AWARE

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“the people who are crazy enough to think they can change the world are the ones who do.”

Steve Jobs