



Society of Actuaries in Ireland

Actuarial Careers & Hot Topics

21st February 2017

Disclaimer

The views expressed in this presentation are those of the presenter(s) and not necessarily of the Society of Actuaries in Ireland



The Society of Actuaries in Ireland

- 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 860 Fellows & 620 Student Members
 - Everyone knows everyone!



The Society of Actuaries in Ireland

- 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

- 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

6.30pm – 7.30pm:

- Life & Health Insurance – Ronan Judge
- General Insurance – Jennifer Keegan
- Pensions & Investments – John Moran
- Wider Fields – Rachel Lynch

7.30pm – drinks reception next door



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Current Topics
Life & Health Insurance

Ronan Judge

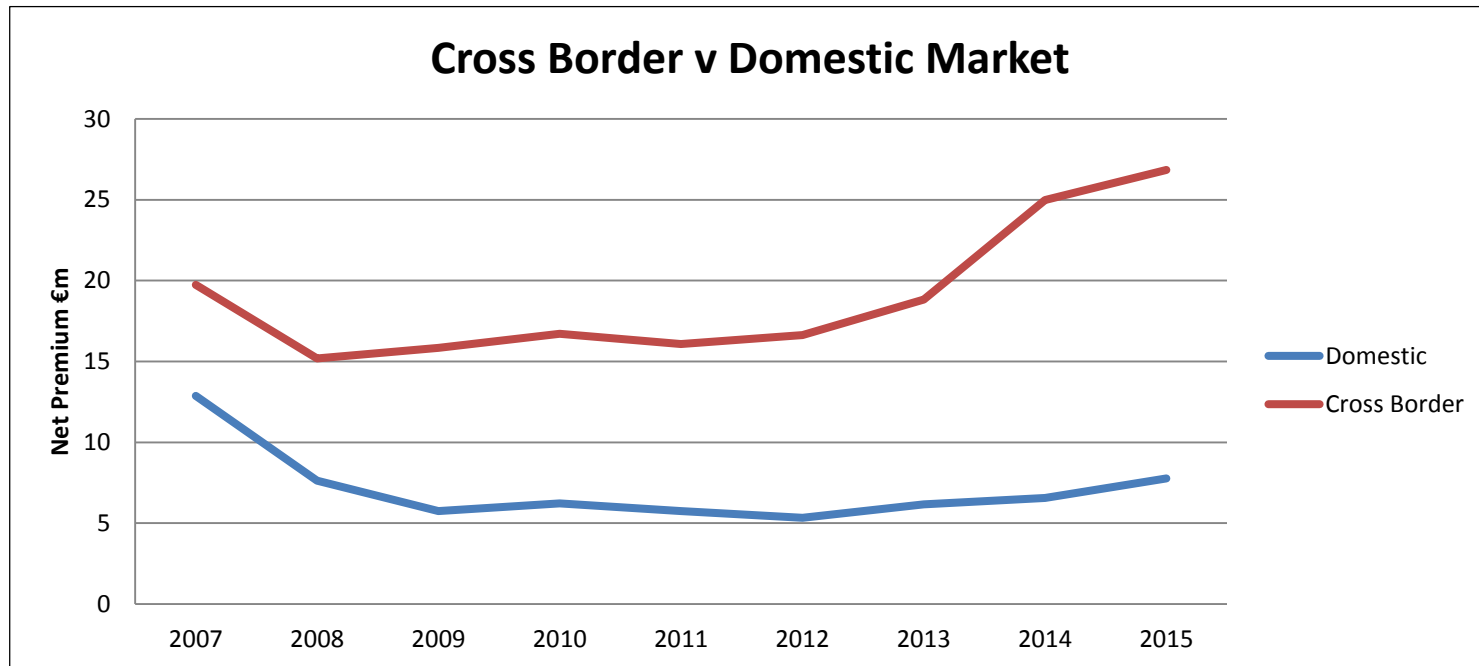
Agenda

- Life Overview
 - Market Update and Developments
- Health Overview
 - Market Update and Developments
- Working in Life Insurance

Life Overview

- Domestic market
 - c.16 life companies
- Cross-border market
 - c.57 life companies
 - Including: Aegon, Allianz, AXA, Generali, IntesaSanpaolo, MetLife, SEB, Standard Life International, ... Zurich
 - c.110 reinsurance companies and SPVs (includes non-life)

Growth of our Life Insurance Market

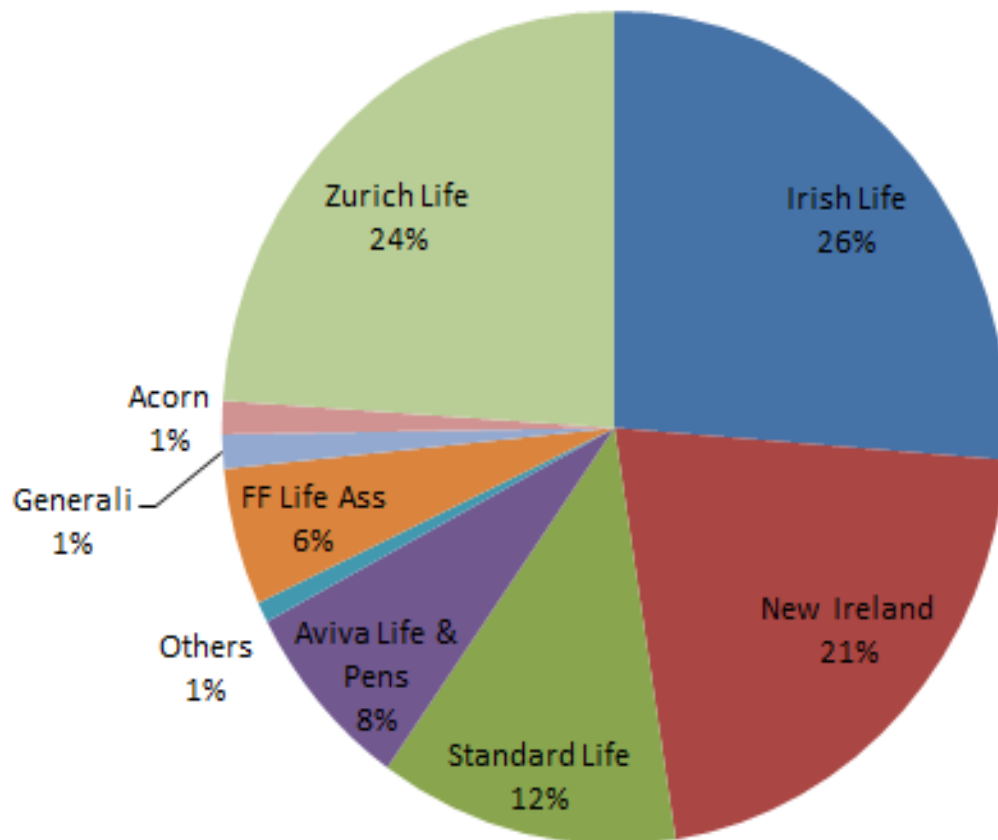


Source: CBI Blue Book 2015

- Note the recent growth in both domestic and cross border markets
- Cross-border market growth lead to a 9 year high in 2014
- 2013 - 2015 saw over 25% growth in the domestic market and over 40% in cross-border market

Domestic Life Market

APE 2015: Domestic Market



4 main players
accounting for over
80% of the market

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

Domestic Life Market Developments



Irish Life
&
Canada
Life



Aviva
&
Ark Life



Laya
(iptiQ)

VHI Life



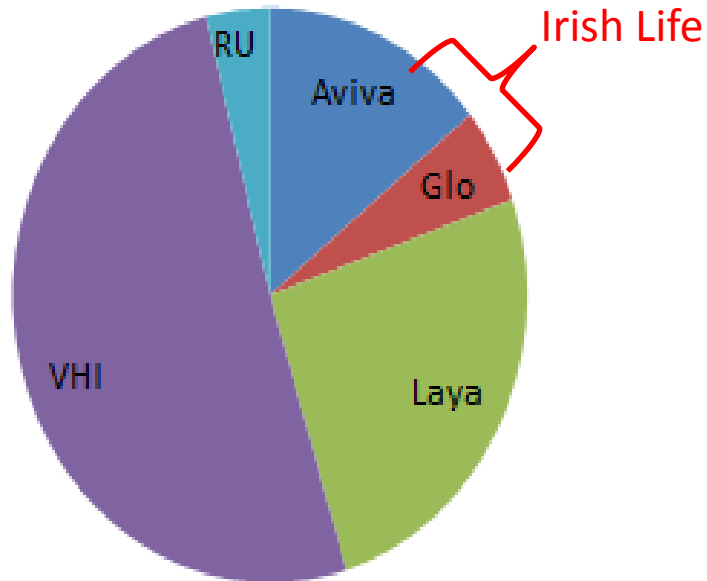
Danica Life

HSBC Life

AVIVA Life
& Pensions

Domestic Health Market

Market Share (December 2015)



RU = restricted undertakings, health cover for particular groups e.g ESB

Market Evolution

- VHI – original statutory body
- Laya (then Quinn) joined in 90s ending monopoly
- Aviva (now Irish Life) entered in 2004
- GloHealth (now Irish Life) entered in 2012

Developments & Partnerships

- VHI - a regulated entity since July 2015
- Laya taken over by AIG in Jan 2015
- Irish Life bought Aviva and GloHealth in 2016.

Private Health Insurance (PHI)

Community Rating

- ensures that health insurance is available to all at an affordable cost

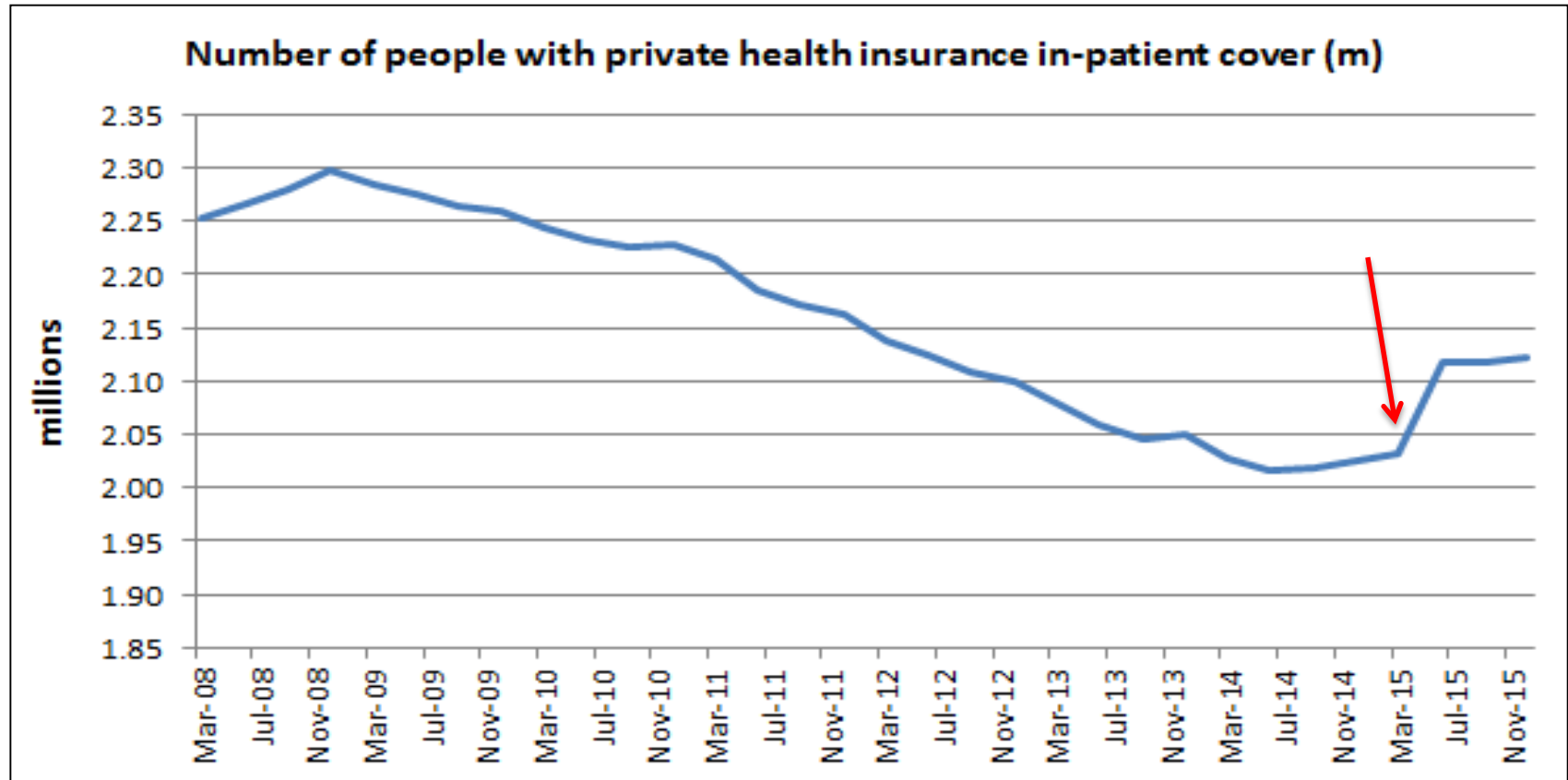
Risk Equalisation

- aims to ensure the claims cost of high-risk members are evenly shared between all insurers in the market

Lifetime Community Rating

- From May 1st 2015, those over age 34 when first taking out insurance will pay a premium loading of 2% for every year of age beyond 34
- Introduced lifetime community rating to incentivise younger customers to take out health insurance

PHI – Lifetime Community Rating



- Spike in numbers with health insurance at May 2015

Working in Life Insurance

- What's it like?

Life Insurance – Types of Jobs



- Large Life Company



- Small Life Company



- Reinsurer



- Consultancy

Life Insurance – Different Areas

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

What's it like?

- 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

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

Practical Tips

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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What does a General Insurance actuary do?

Jennifer Keegan

Objectives of the session

- What does a GI actuary do?
- Recent non-life market developments

What does a GI actuary do?

Broad GI practice areas

- **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)?

- **Range of risk types:**

- *Personal lines*

- Private Motor
- Household

- *Commercial lines*

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



What does a GI actuary do?

Examples of day-to-day work in a non-Life actuarial consultancy

- Reserving reviews
- Discharge of statutory roles
- Actuarial governance & finance, actuarial and claims process improvement
- Banking & credit risk analytics
- Solvency II
- Capital and risk management
- Financial reporting
- Financial modelling
- Independent Actuary
- Insolvencies & run-off solutions
- Transfer pricing



What does a GI actuary do?

What's it like?

- Working in Excel
- Programming Software (R/SAS)
- Most of the work is problem solving
 - What is a client's model doing?
 - How can I model a particular feature of a client's business?
- Communicating results in “plain English”
- Building relationships with clients



What does a GI actuary do?

What's it like?

- Varied work – insurance, banking, data analytics
- Working for many clients simultaneously
- Lots of interaction with different departments/non-actuaries
- Project based work
- Secondments





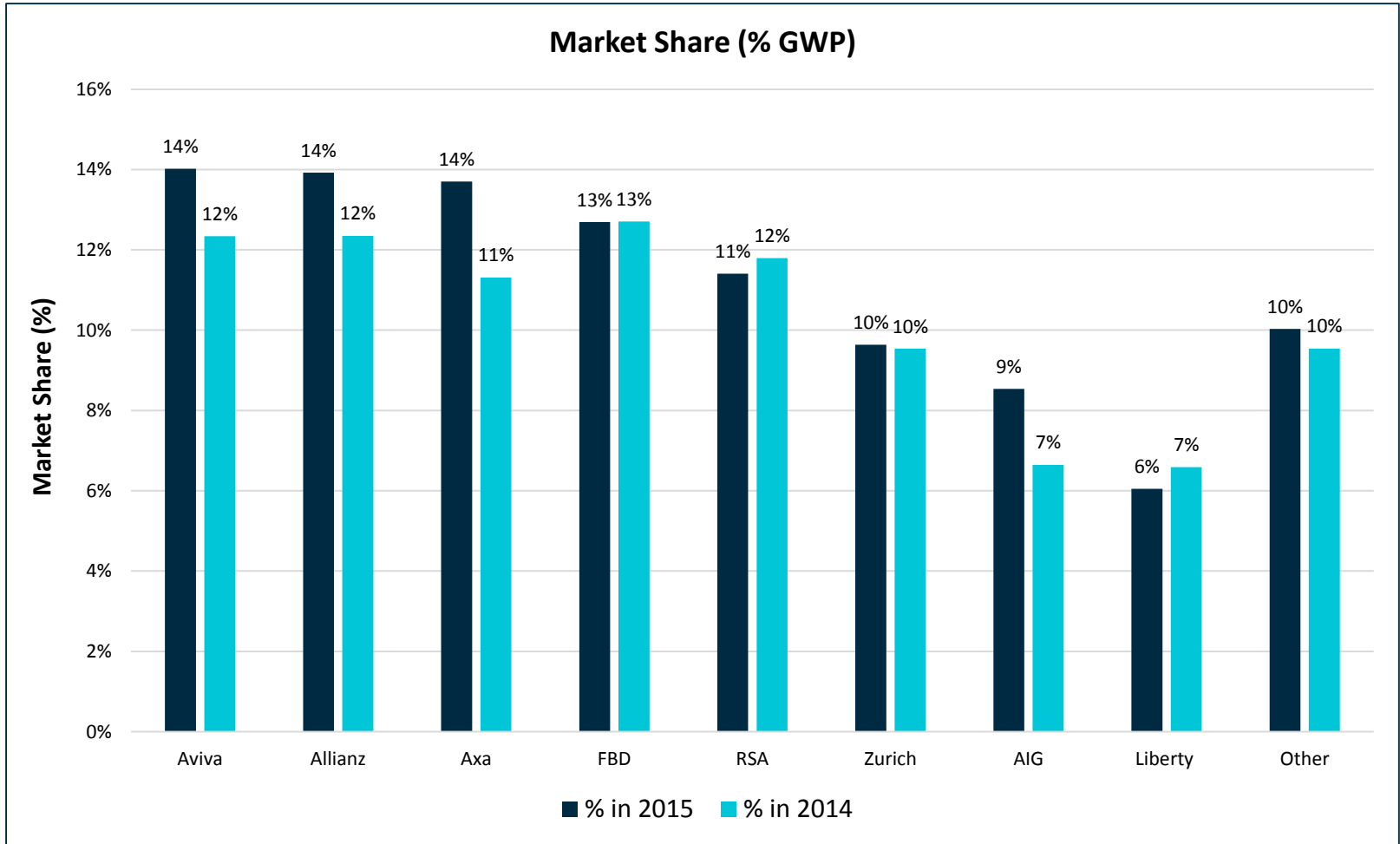
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Non-Life Market Developments 2014-2016

Jennifer Keegan



Distribution of market share





Market developments – 2014 to 2016

- **Increases to court award limits (February 2014)**
 - From €6.4k to €15k in District Court
 - From €38k to €60k in Circuit Court
- **Recovery of Benefit and Assistance Scheme (RBA) (August 2014)**
 - enables the Department of Social Protection to recover some welfare payments from personal injury awards directly from the insurer.
- **New Court of Appeal (October 2014)**
 - New judges appointed to High Court to fill vacancies – seen as less experienced and more “plaintiff friendly”





Market developments – 2014 to 2016

- **Reduction in discount rate (Russell vs HSE case, Dec 2014)**
 - used in valuing personal injury awards
 - reduced from 3% to 1% for cost of care and 1.5% for loss of earnings
 - Upheld on appeal in November 2016
- **Periodic Payment Orders (PPOs) (July 2015)**
 - Annual payment rather than lump sum
 - Transfers risk from claimant to insurer
 - Civil Liability (Amendment) Bill 2017
- **Book of Quantum (October 2016)**
 - Guidance as to personal injury court awards
 - Previous version from 2004 often ignored





Market developments – 2014 to 2016

- **Collapse of Setanta Insurance (April 2014)**

- €90m outstanding claims
- Court ruled that Motor Insurers' Bureau of Ireland (MIBI) liable for claims
- Costs passed on to the insurers through a levy
- Currently under appeal with the Supreme Court



- **Collapse of Enterprise Insurance (July 2016)**

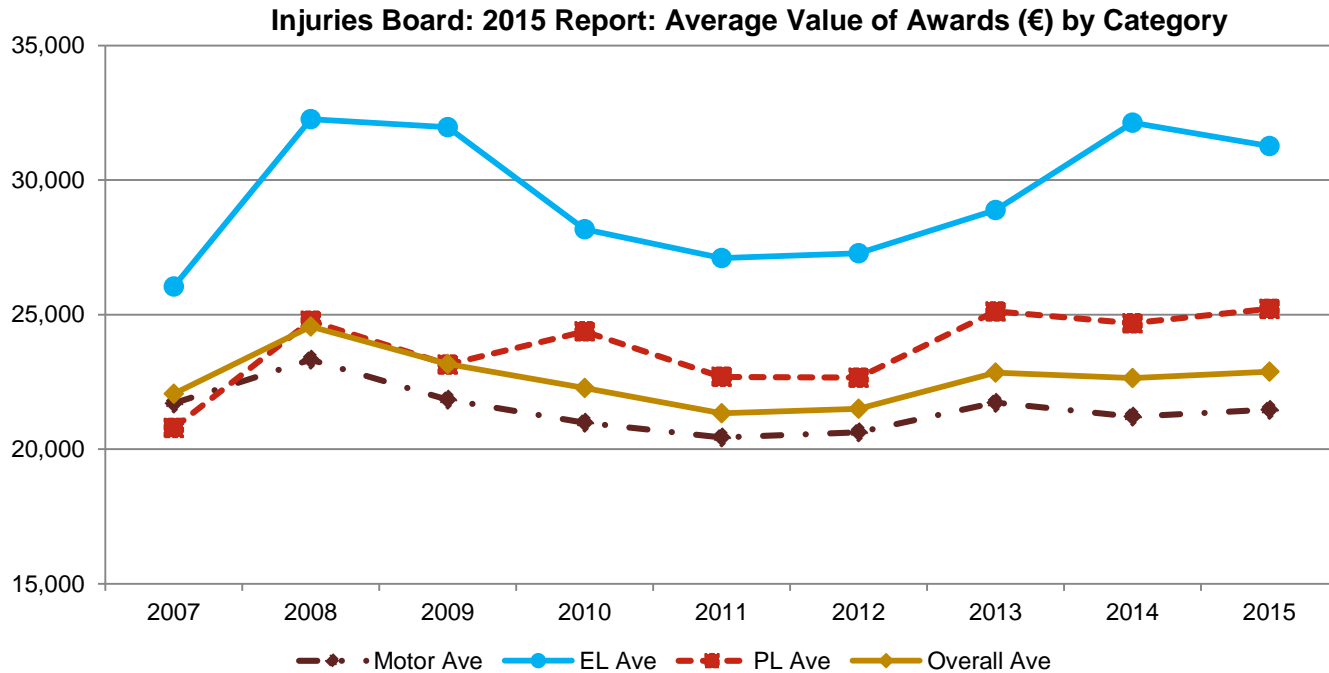
- Gibraltar-based insurer
- Approximately 14,000 Irish motorists affected
- Company was a member of MIBI
- Raises questions over “passporting” of insurance companies





Market developments – 2014 to 2016

- **Increase in claims awards**



- Courts Report 2015: High Court awards: +17.8% compared with 2014
- Circuit Court awards: +21.2% compared with 2014
- Whiplash claims out of line with other other European countries



Market developments – 2014 to 2016

- **Increased uncertainty for Irish insurers**
- **Challenges to maintain a profitable business model**
- **Increased claims costs**
- **Increased premiums**
- **More work for actuaries to make sense of this uncertainty!**



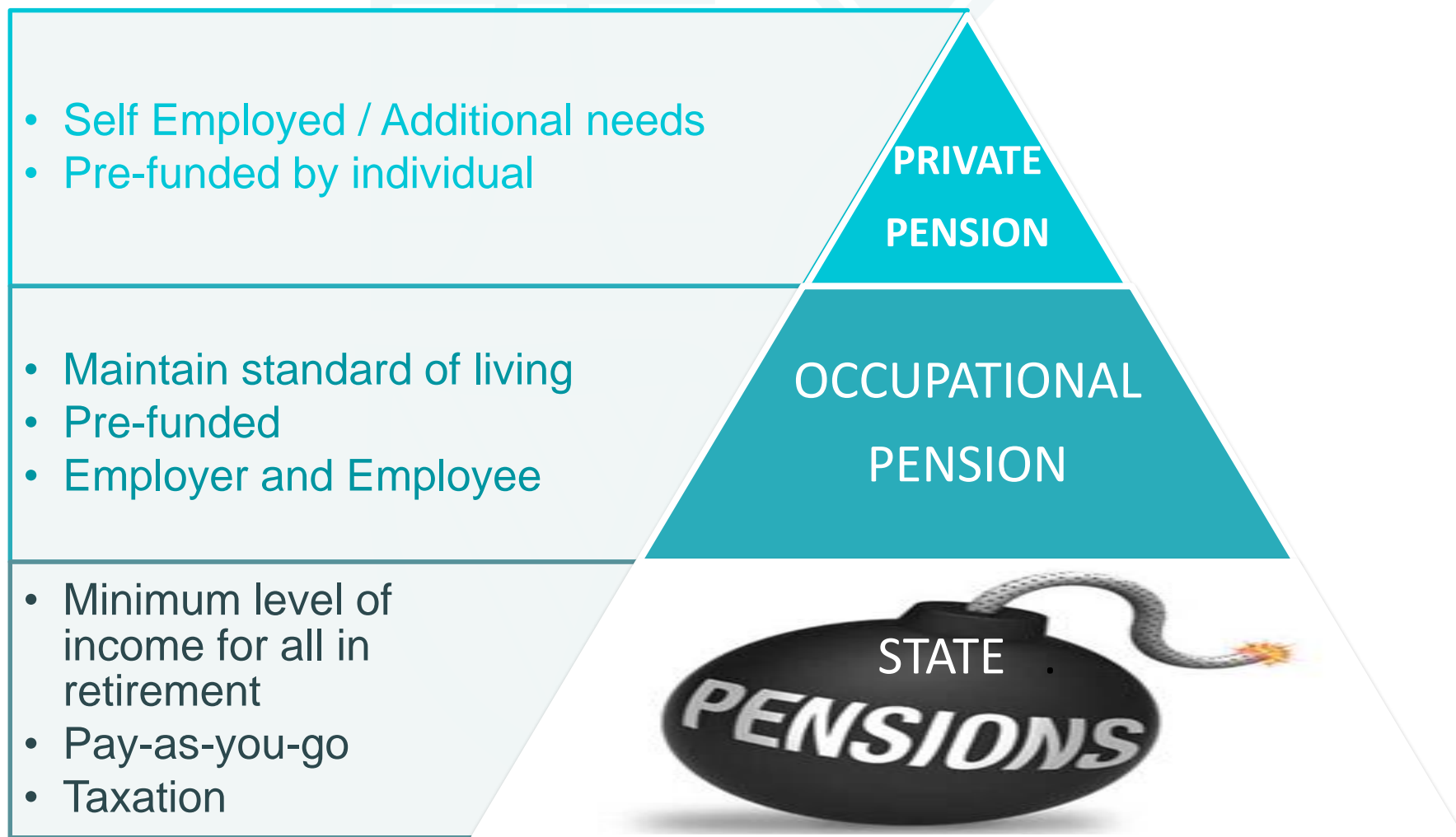


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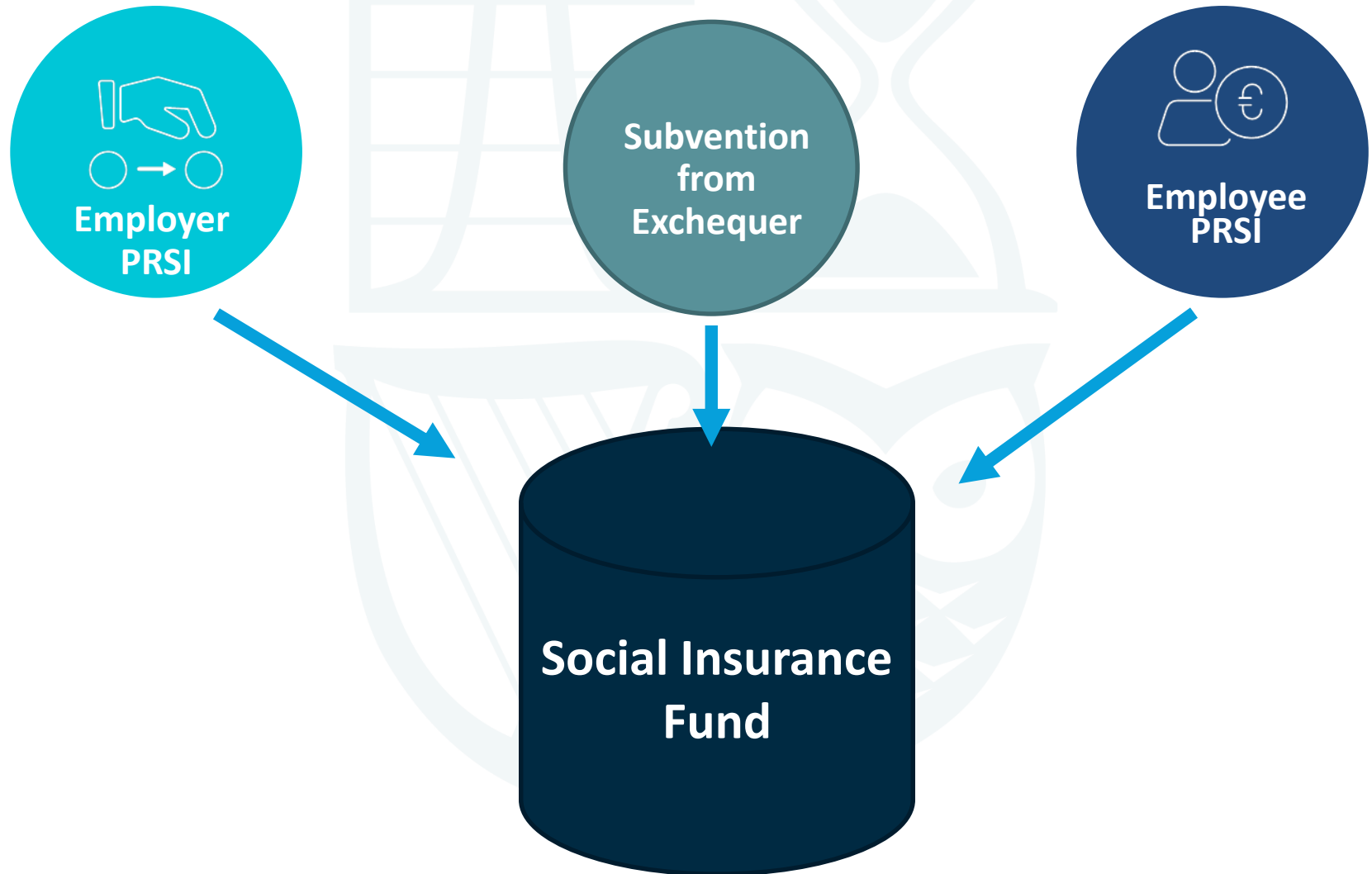
Pensions & Investments

John Moran FSAI

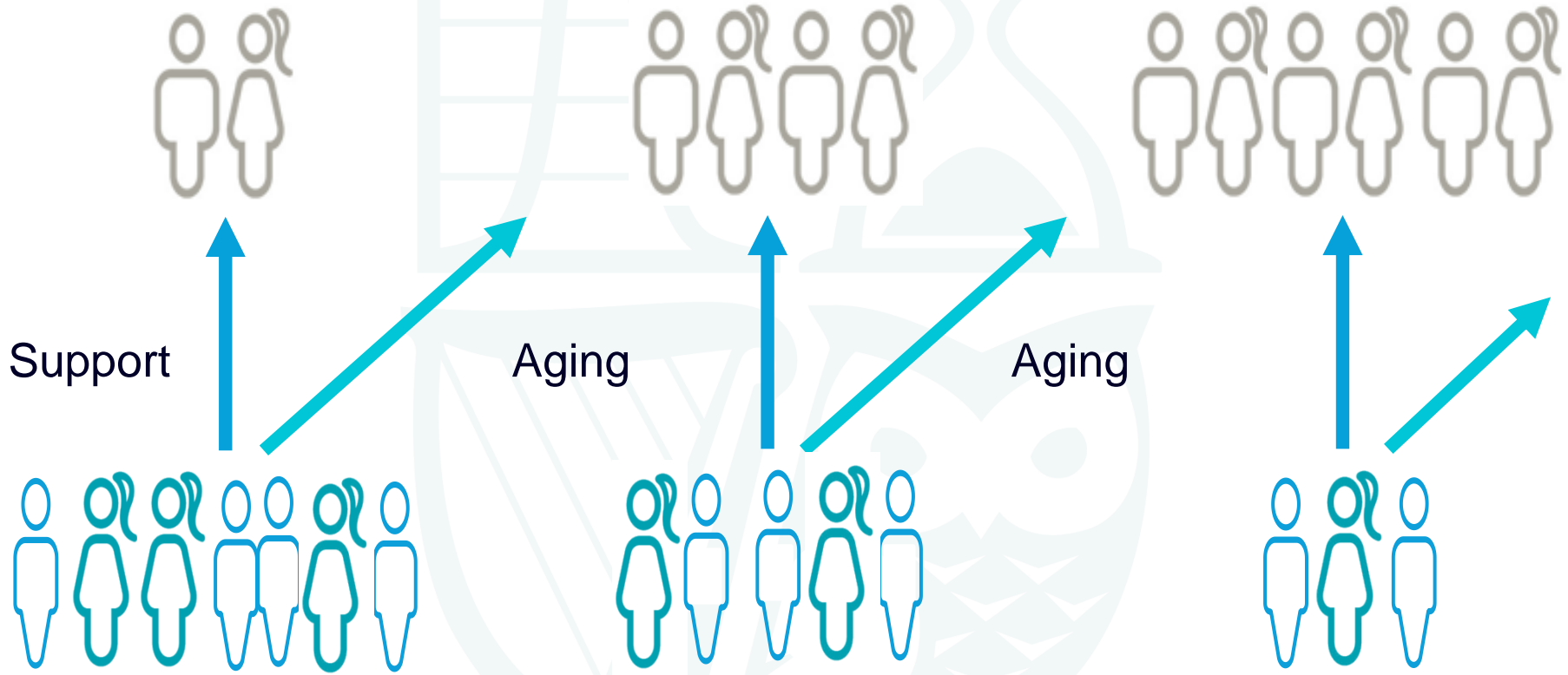
PENSION PROVISION



STATE PENSION – SOCIAL INSURANCE FUND

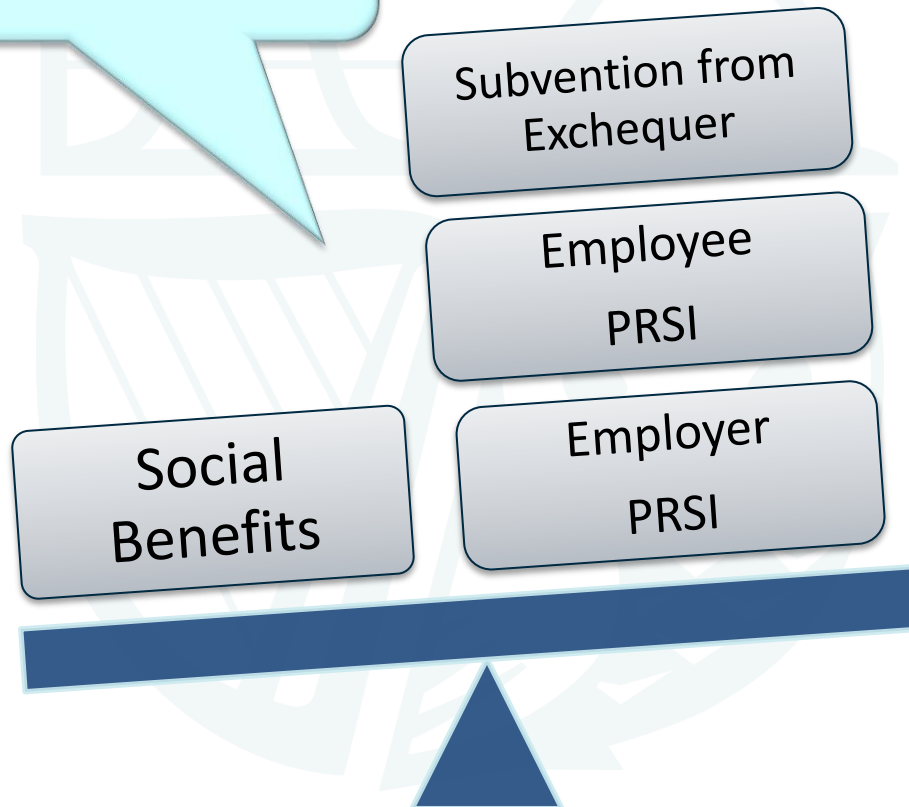


STATE PENSION - INTER-GENERATION SUPPORT?



STATE PENSION – STRIKING THE RIGHT BALANCE?

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



By 2055, just two people will be working to support every pensioner, down from about five today

OCCUPATIONAL PENSION SCHEMES – DB

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

OCCUPATIONAL PENSION SCHEMES – DC

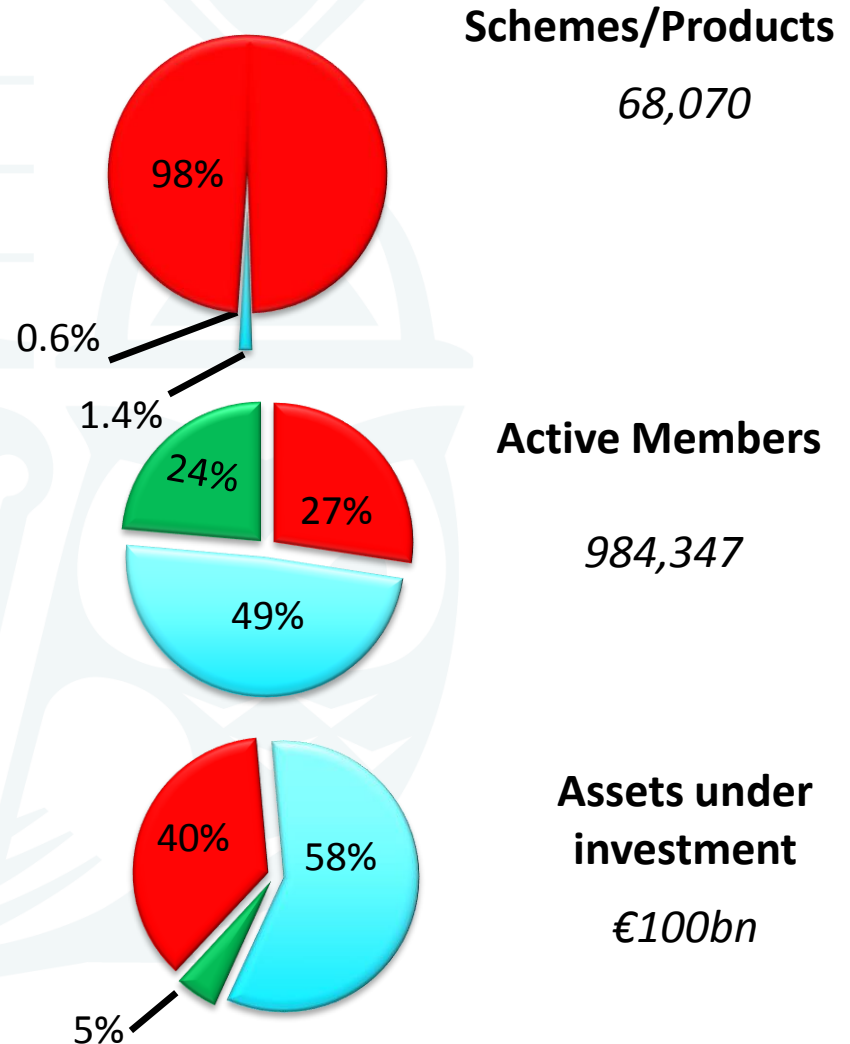
Defined Contribution (DC)

- 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
- **Hybrid schemes** – combine characteristics of both

PENSIONS LANDSCAPE

Occupational Pension Schemes	Schemes	Members
DC	67,125	281,629
DB	814	465,110
PRSAs	Products	Contributors
Std/Non Std	131	237,608
Total	68,070	984,347

- PRSAs
- Defined Contribution
- Defined Benefit



DEFINED BENEFIT PENSION SCHEMES

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



Independent
News & Media

666 is the number of DB schemes subject to the funding standard as at 31 March 2016

70% of schemes met the statutory Funding Standard when submitted in year before 31 March 2016. Most of the remainder have plans in place to address deficits

9 schemes had still not submitted recovery plans by 31 March 2016

TERMINOLOGY - THE MAIN ASSET CLASSES

Equities

Share in company profits
Capital return/dividend income
Long term real returns
Volatile

Fixed Income / Bonds

Known fixed payment stream
Interest is main return
Inflation risk

Property

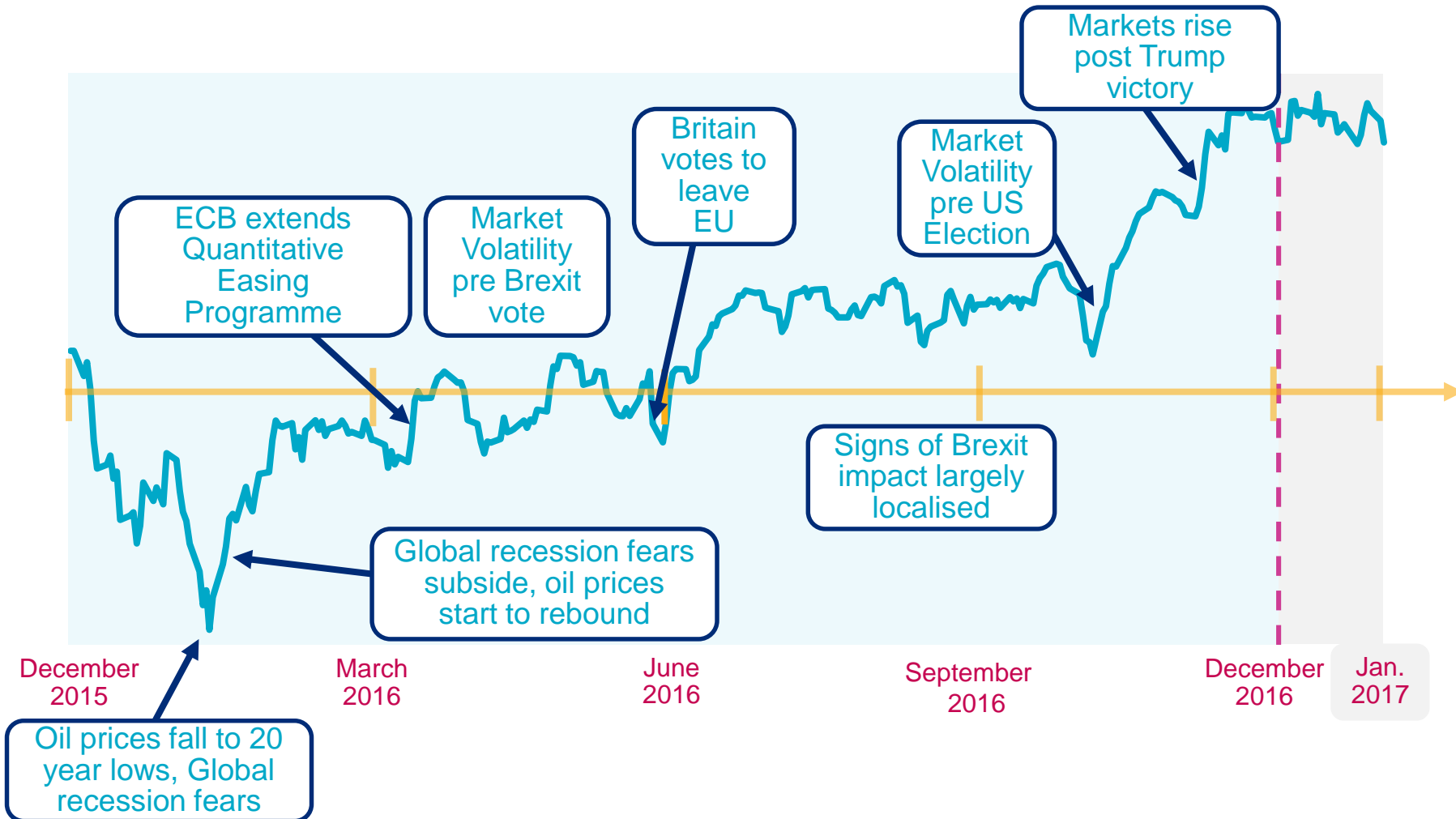
Steady income stream
Capital return/rental income
Long term real returns
Size/liquidity risk

Cash

Underperforms other asset classes
over long-term
Low risk/low return
Tactical asset class (refuge)

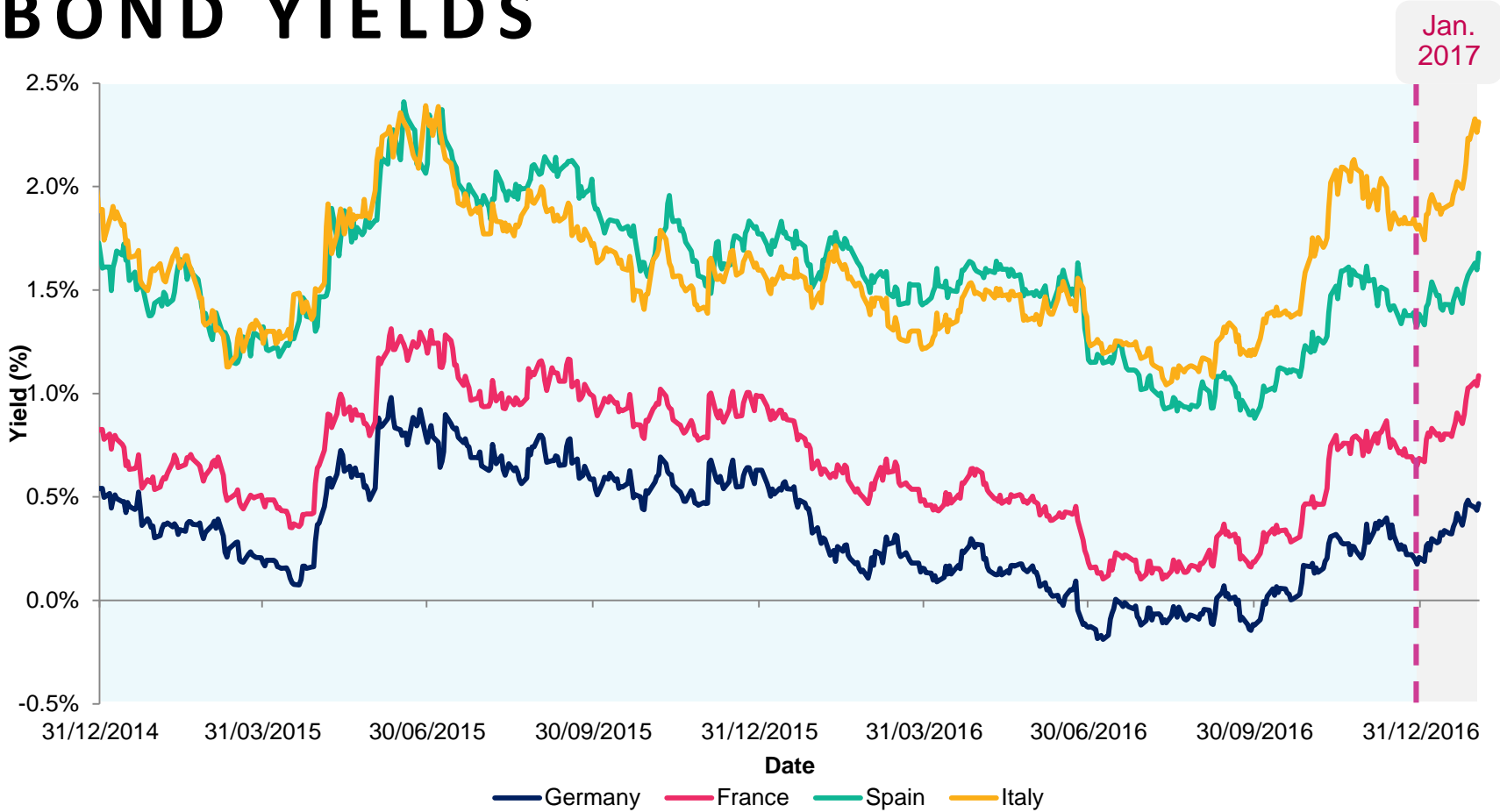
- Schemes can invest in other asset classes: Hedge Funds, Currency, Commodities Infrastructure.

DEVELOPED GLOBAL EQUITY MARKETS



Despite intermittent bouts of volatility, global equities returned +11.4% in 2016. Market returns were flat in early 2017.

EUROZONE 10 YEAR SOVEREIGN BOND YIELDS



Despite yields rising over the past few months, **valuations** remain expensive.

Source: Mercer

RISK MANAGEMENT

Hot Topics

- Enhanced Transfer Values
- Contingent Assets
- Longevity Swaps
- Pension Increase Exchange



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A day in the Life as a Pensions Actuary!

Any Questions?



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Actuarial Careers including careers in non-traditional actuarial fields

Rachel Lynch FSAI

Agenda

- Introduction
- Wider Fields Committee
- Wider Fields Careers



Introduction

- Ireland has the highest number of actuaries per capita globally
- Vast majority work in the traditional areas, but there is movement outside of these areas

Society of Actuaries in Ireland

The Actuarial Profession in Ireland

Combining actuarial expertise with a strong, active and creative mindset to bring real value to local and global employers.

A brief snapshot of actuaries in Ireland

The Society of Actuaries in Ireland has over 1,400 members, including over 750 qualified actuaries, making Ireland the country with the highest number of actuaries per capita globally.

Over 1,400 members	Over 750 fully qualified actuaries	78% of members are under 40	34% of members are female
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Industry Sectors

*90% of our members work in the insurance and pensions industries

57% Life Insurance	18% Pensions	15% Property and Casualty Insurance	10% Other
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Our members also work in healthcare, banking and investment. In addition, a growing number are expanding into other industries such as data analysis, customer finance and sports betting, where an actuary's analytical and risk management expertise adds considerable value.

"Some years ago Zurich chose Dublin as the base for its pan-European business and it has grown from strength to strength. This could not have been possible without ready access to a highly skilled workforce as well as a strong regulatory environment."
Patrick Shanley, CEO of Zurich, Zurich

"I have found the Irish actuaries to be second to none in the skills they offer, with a desire to drive business results while maintaining strong ethics in their day to day work."
Berg Heide, IRMSA, Chief Actuary, MetLife

Actuarial work is international in nature, providing Irish actuaries with a broad international outlook and experience.

Actuarial Education in Irish Universities

In Ireland most actuarial students complete a degree or other third level education as the first step to becoming an actuary. Following this, the majority of actuarial students work while studying for the exams of the Institute and Faculty of Actuaries.

6 universities offering actuarial degree courses	120 university graduates entering the actuarial workforce in Ireland each year
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"The technical quality of Irish actuaries is very high due to the culture of candidate choice into the Irish university's actuarial graduate programs. Many Irish actuaries have been exposed to the challenge of writing and justifying expert judgement in a wide range of areas, which is increasingly relevant in a technology environment. Accordingly, SCOR has found that Irish actuaries have been well placed to provide the solutions to challenges/opportunities within SCOR Group."
Stephan Gieseler, Chief Emerging Actuary, Western United Life

"There are three main reasons as to why we located in Ireland. The geographical location of Dublin makes it a gateway to Europe; educated, available, skilled local talent has been a key factor in our success; and finally, a stable, capable and respected regulator in the Central Bank of Ireland."
Derek O'Leary, Chief Executive Officer, MetLife Europe

Ireland is the only English speaking country in the Eurozone.

Companies employing the most actuaries in Ireland

Actuarial employment is currently concentrated in large towns and cities.

Most actuaries in Ireland work in Dublin with a number also in Cork and Belfast.

The Society of Actuaries in Ireland is the professional body representing the actuarial profession in Ireland. The Society is dedicated to serving the public by fostering the highest standards of professionalism and competence in actuarial practice.

February 2016

Society of Actuaries in Ireland
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Wider Fields Committee

- Established in October 2014
- Areas of focus are: Promotion, Proposition, Data Analytics
- Achievements:
 - IDA engagement
 - IMI events added to CPD calendar
 - Evening meetings
 - Titanic competition



Wider Fields

- Banking
- Data Analytics / Predictive Modelling
- Aircraft Leasing
- Risk Management



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Any Questions?
