



Society of Actuaries in Ireland

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# **Variable Annuities: Modern life insurance**

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April 2015

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# Agenda

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**1. What is a  
Variable Annuity?**

**2. Development  
of VA Markets**

**3. How VA  
Products Work**

**4. Customer  
Profile**

**5. Customer  
Solutions**

**6. Challenges for  
VA Providers**

**7. Finally**



# 1. What is a Variable Annuity?



# 1. What is a Variable Annuity?

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“a contract between an investor and an insurance company, under which an investor makes a lump-sum payment or series of payments. In return, the insurer agrees to make periodic payments to you beginning immediately or at some future date. The investor can choose to invest their purchase payments in a range of investment options.”



U.S. SECURITIES  
AND EXCHANGE  
COMMISSION

## Typical Features

- + unit-linked structure
- + guarantees
- + economically managed
- + single premium
- + whole of life
- + single or joint life



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“any unit-linked or managed fund vehicle which offers optional guarantee benefits as a choice for the customer”

*VA Working Party, 2008*



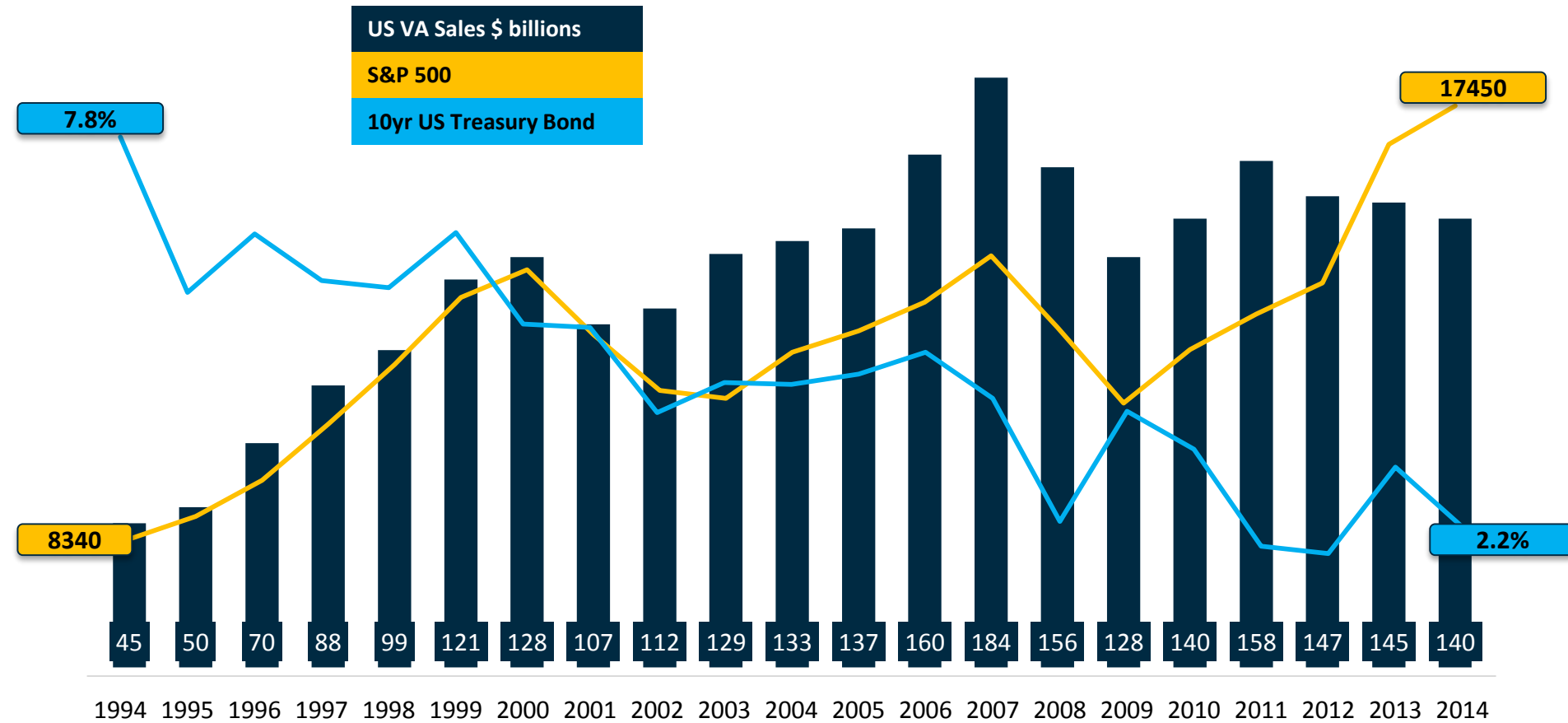
**Teachers Insurance and  
Annuity Association –  
College Retirement  
Equities Fund  
1952**

## 2. Development of VA markets





## 2. Development of VA markets – USA



Source: LIMRA

**1990s:** Modern day VA market developed, driven by strong bull market

**From 2000:** VA providers initiated hedging programs

**2013-2014:** Some providers embark on “de-risking” exercise, resulting in lower sales



## 2. Development of VA markets – Top 10 US

Rank	Company	'14 (\$bn)	'13 (\$bn)
1	Jackson National Life	23.1	20.9
2	Lincoln Financial	13.1	14.4
3	AIG	12.7	12.3
4	TIAA CREF	12.5	13.9
5	Aegon/Transamerica	10.1	8.4
6	Prudential	9.9	11.4
7	AXA	9.7	9.7
8	MetLife	6.3	10.6
9	Nationwide	6.2	5.7
10	RiverSource Life Insurance	4.9	5.2



## 2. Development of VA markets – Japan



The Dai-ichi Frontier Life Insurance Co., Ltd.

MEIJI YASUDA



AEGON Sony Life

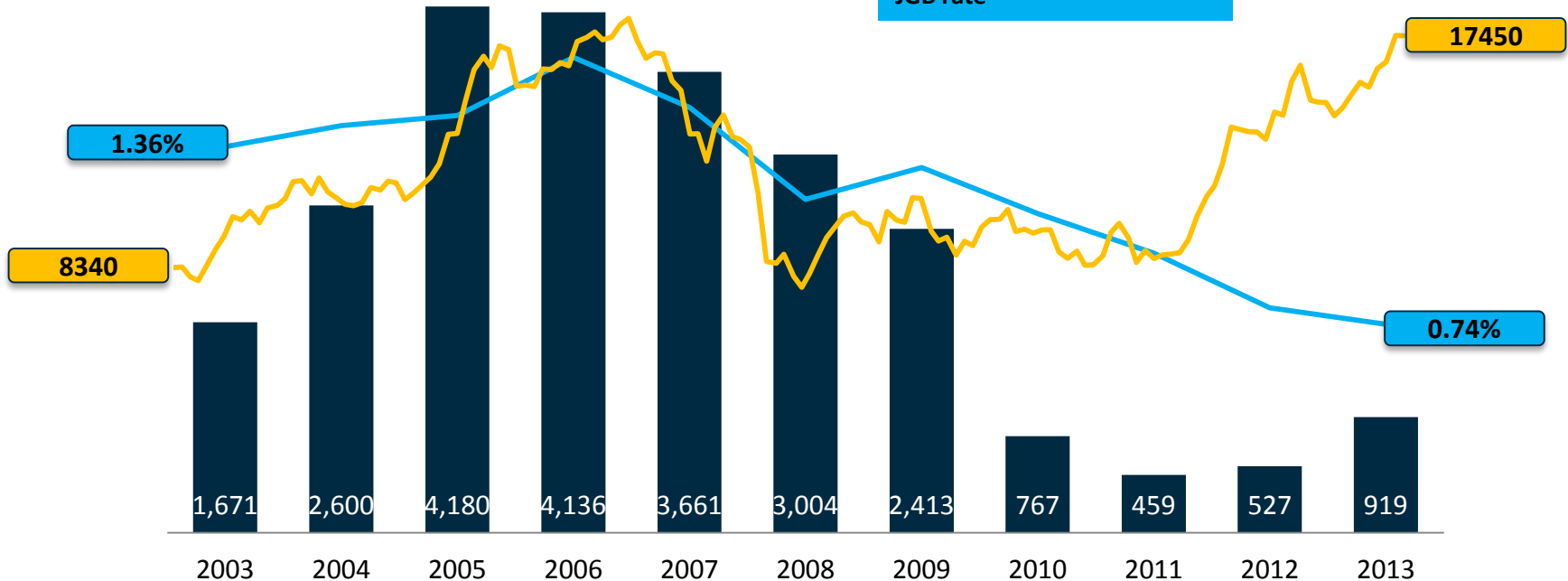


Mitsui Sumitomo Insurance

Japan VA Sales JPY billions

Nikkei 225

JGB rate



Source: Annual statistical report, Insurance Research Institute, 2014

### 1999

VA providers enter market as financial deregulation paves way for VA sales

### 2002-2006

Sales grew rapidly as further deregulation allows banks to sell VA, helped by strong bull market.

### 2009

Major players exit market

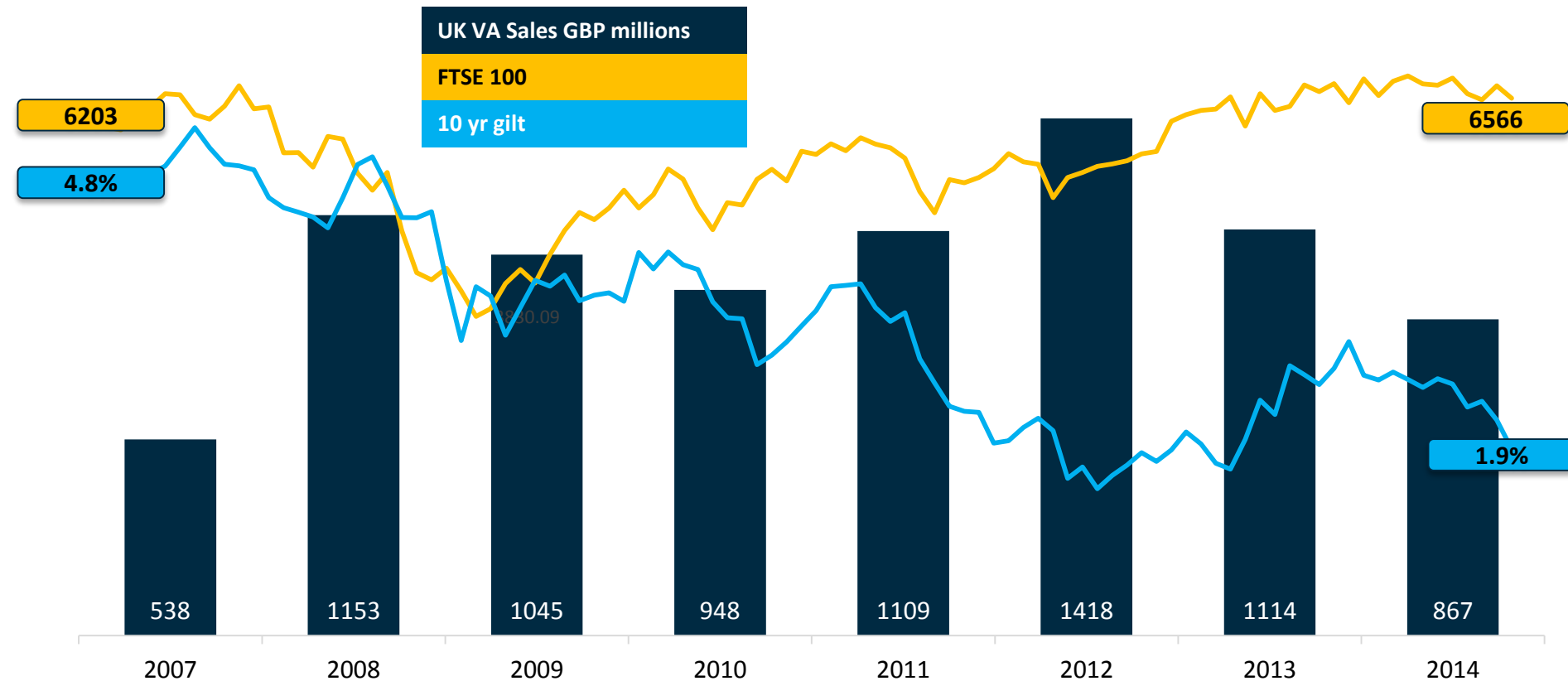
### 2013

Sales growing again. Emergence of foreign currency denominated VA products.





## 2. Development of VA markets – UK



Source: Towers Watson

**2006:** VA launched in UK

**2008/09:** Some providers exit market; others delay planned launches

**2012:** Pre-RDR fire sale

**2013 & 2014:** Regulatory change, pension liberalisation

**2015:** New entrants? Market growth of £3-5bn by 2017?



## 2. Development of VA markets – Rest of world



Sun  
Life Financial

Manulife



MetLife  
ERGO

Allianz



Canada Life



ING



AEGON



MetLife



MetLife

KYOBO  
교보생명

SAMSUNG life

Korea Life Insurance



MACQUARIE

OnePath  
a company of ANZ

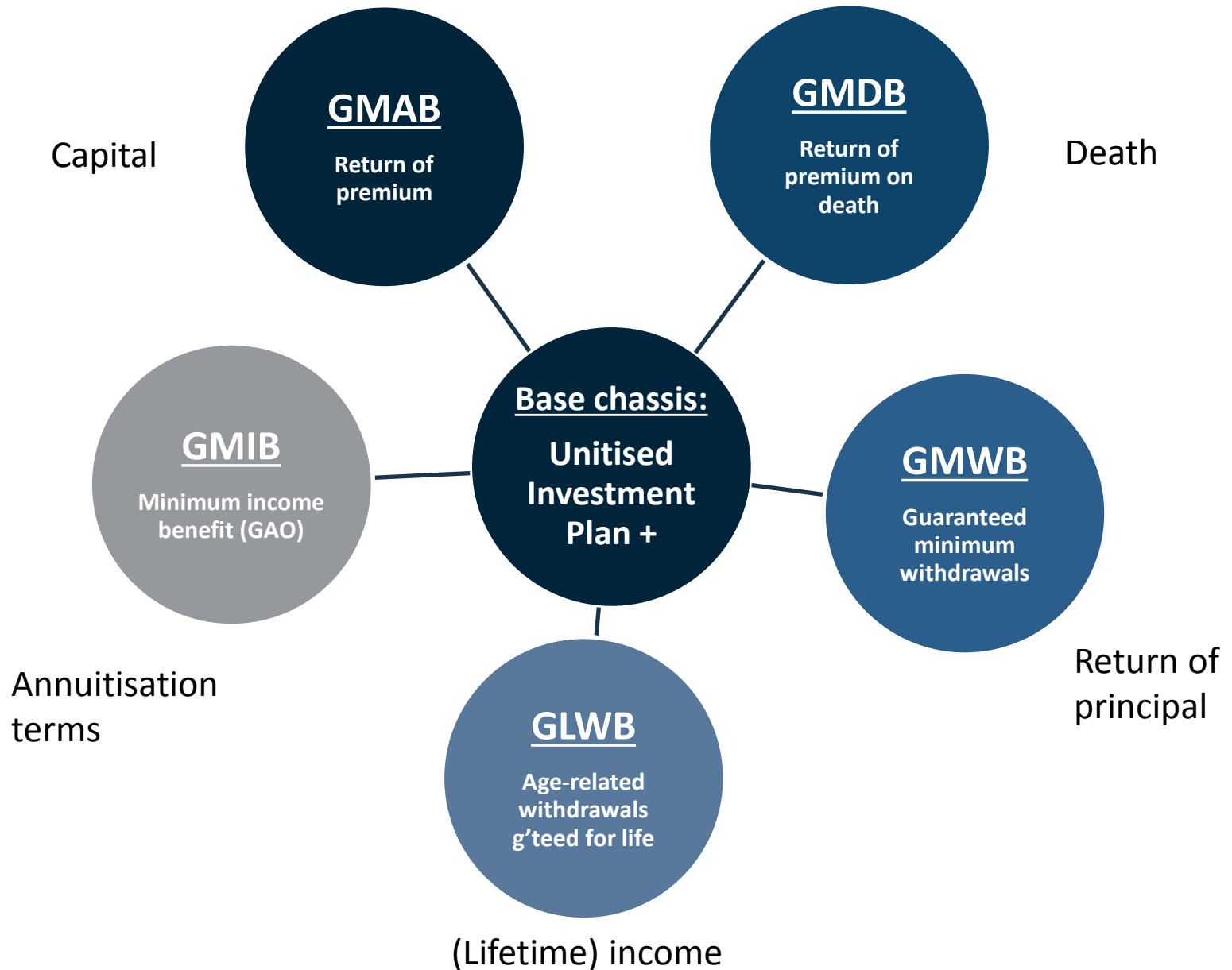


### 3. How VA Products Work





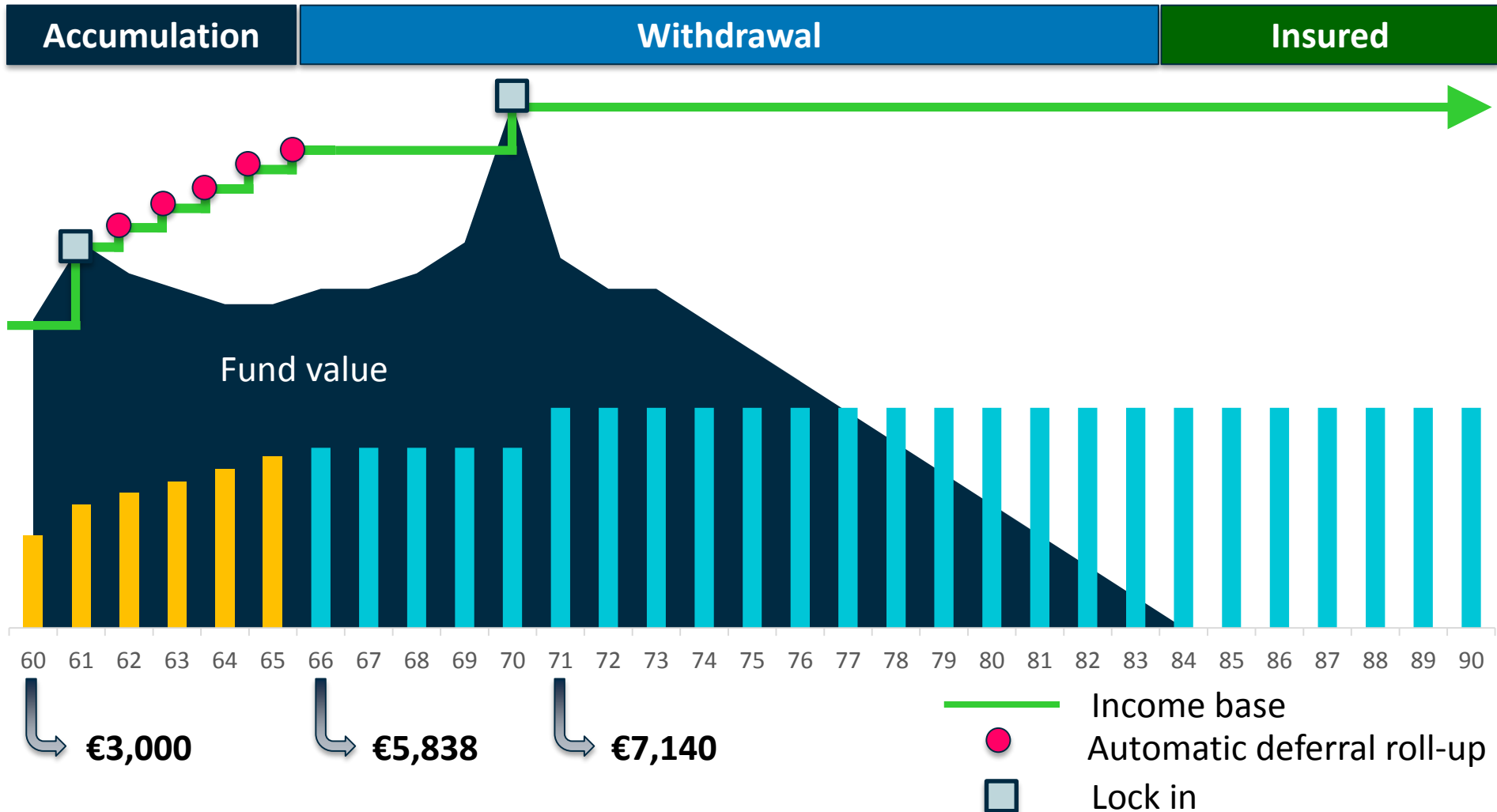
### 3. How VA Products Works – GMxB





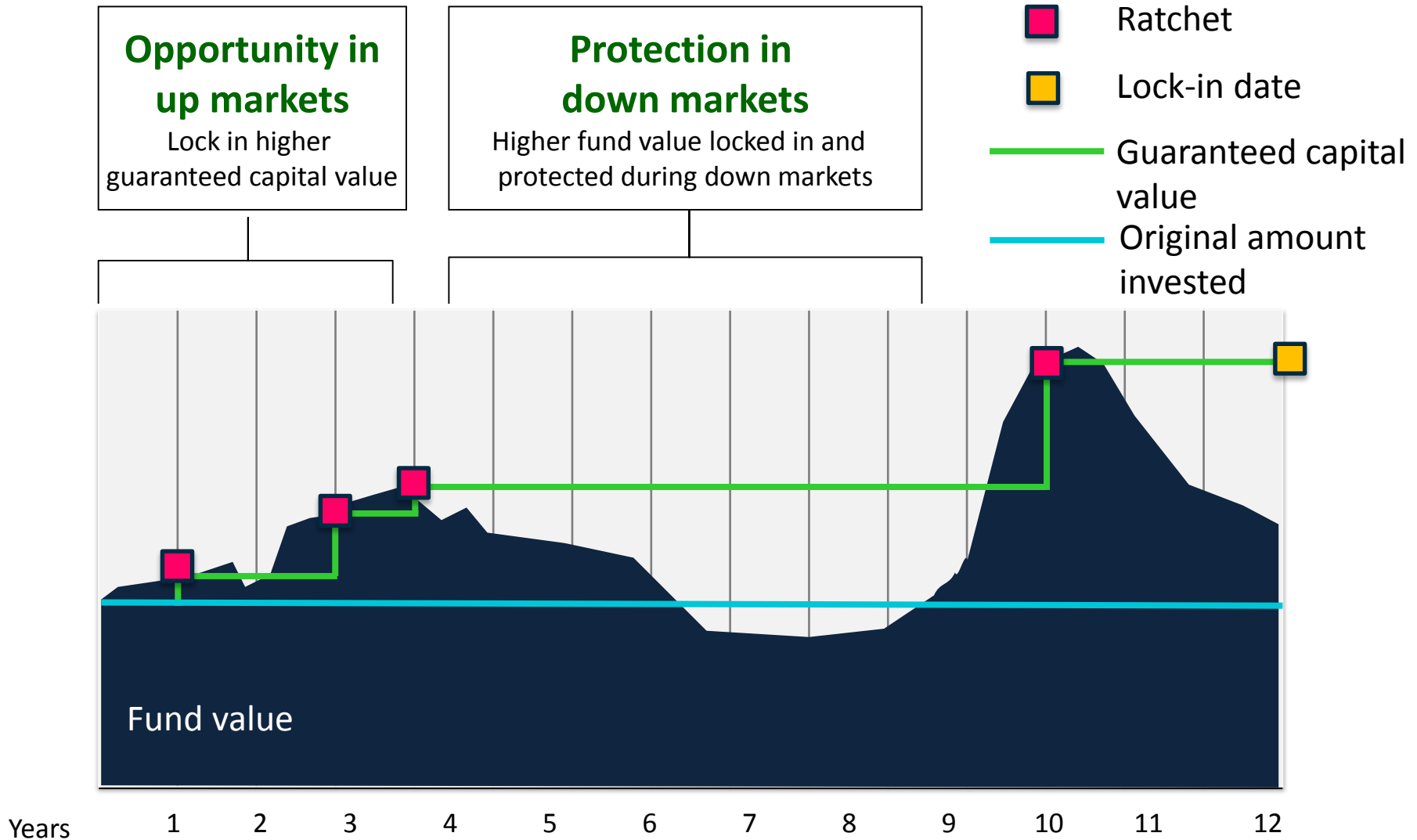
### 3. GLWB – Retirement “ruin” protection

A 60 year old individual invests €100k lump sum. She defers income until 66. Income rates depend on her age when starting income. In this example, it's 3% p.a. from age 60 and 4% p.a. from age 66





### 3. GMAB/GMDB – Capital protection



## 4. Customer Profile





## 4. Customer Profile

- Near or at retirement (50+)
- €50k or more to invest
- Looking for guaranteed income, capital
- In need of access/flexibility



**70%**  
want guaranteed income

*Source: The Second Aegon UK Readiness Report, November 2014*



**66%**

of working age people are worried about having enough money to live on day-to-day in later life

Reproduced with permission from The Future of Retirement *A balancing act*, published in 2015 by HSBC Holdings plc.

Nearly **70%** of all those with DC pension savings favoured using their pot to deliver a guaranteed income, particularly an income protected against inflation.

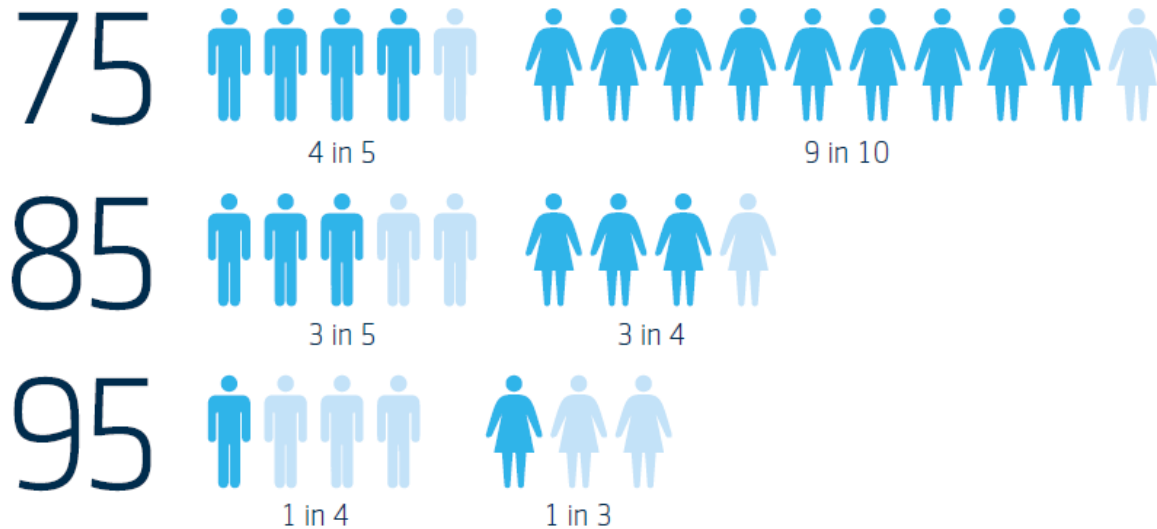
Source: Making the system fit for purpose: How consumer appetite for secure retirement income could be supported by the pension reforms, ILC-UK, January 2015





## 4. Customer Profile - Longevity risk

The chances of a 60 year old living to age:



Source: CMI Personal Pensioners, males, vested — PPMV00 ultimate. CMI Personal Pensioners, females, vested — PPFFV00 ultimate. Sourced [www.actuaries.org.uk](http://www.actuaries.org.uk). Publication date 01 August 2006

- Men underestimate their life expectancy by between 4.2 and 5.5 years
- Women underestimate their life expectancy by between 5.6 and 6.3 years

**Source:** Making the system fit for purpose: How consumer appetite for secure retirement income could be supported by the pension reforms, ILC-UK, January 2015



## 4. Customer Profile - Longevity risk & inflation

If you invest £100,000 in a standard UK savings account at 60 and start taking income immediately...

If you take a yearly income of

£ **3,900**

Half of your money will run out by age

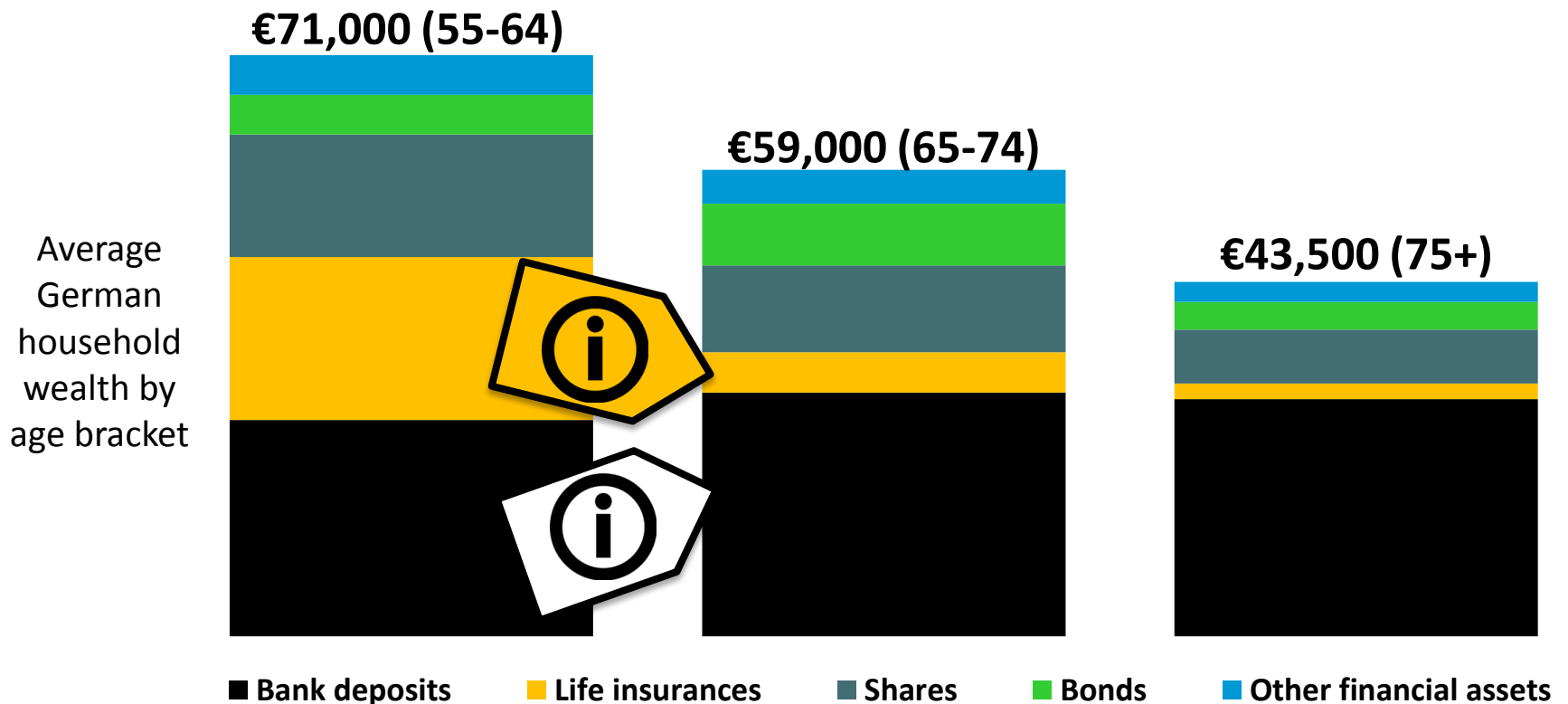
**74**

All your money will run out by age

**88**

The chance you'll live to **88** is more than

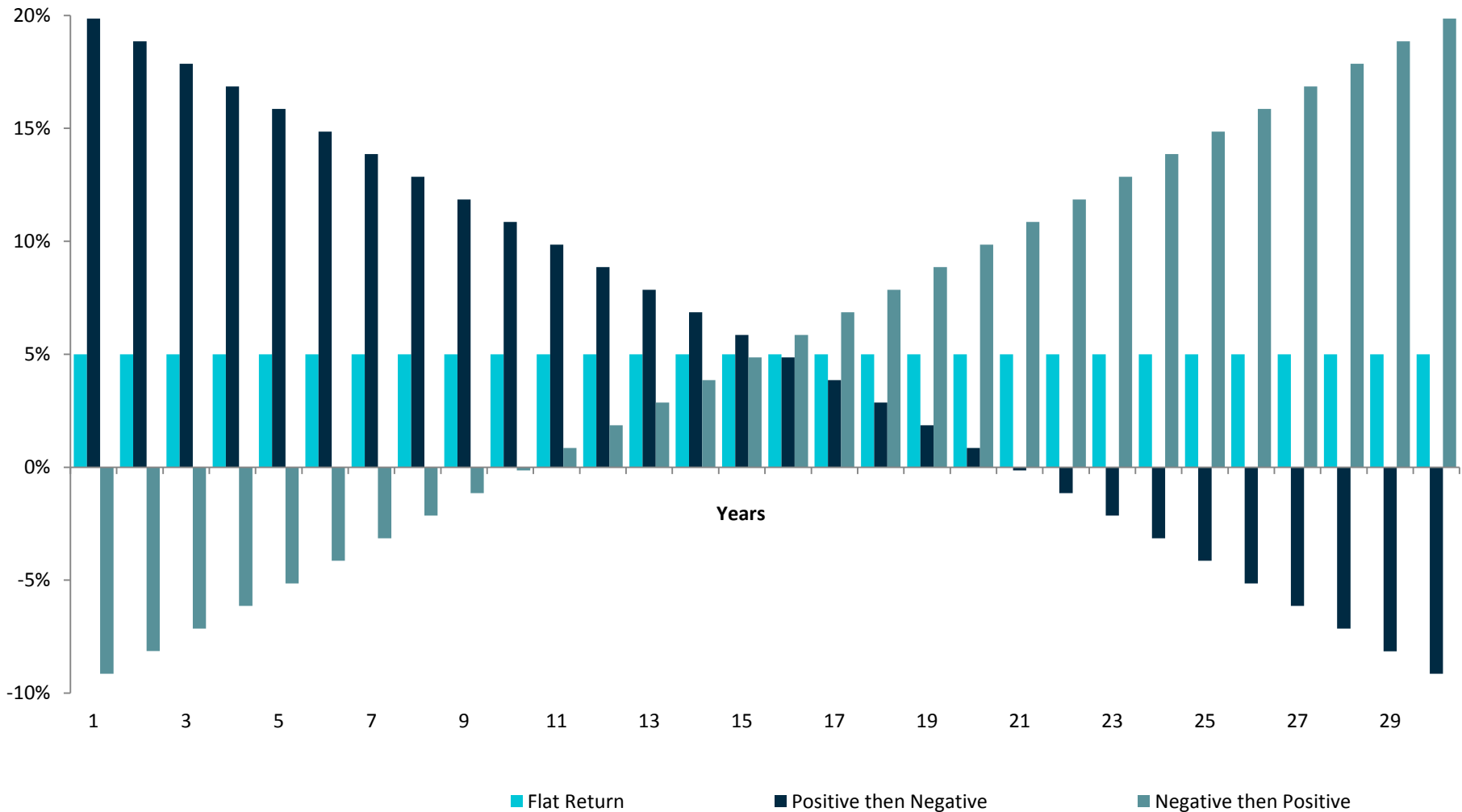
**1 in 2**





## 4. Customer Profile - Volatility risk & path dependency

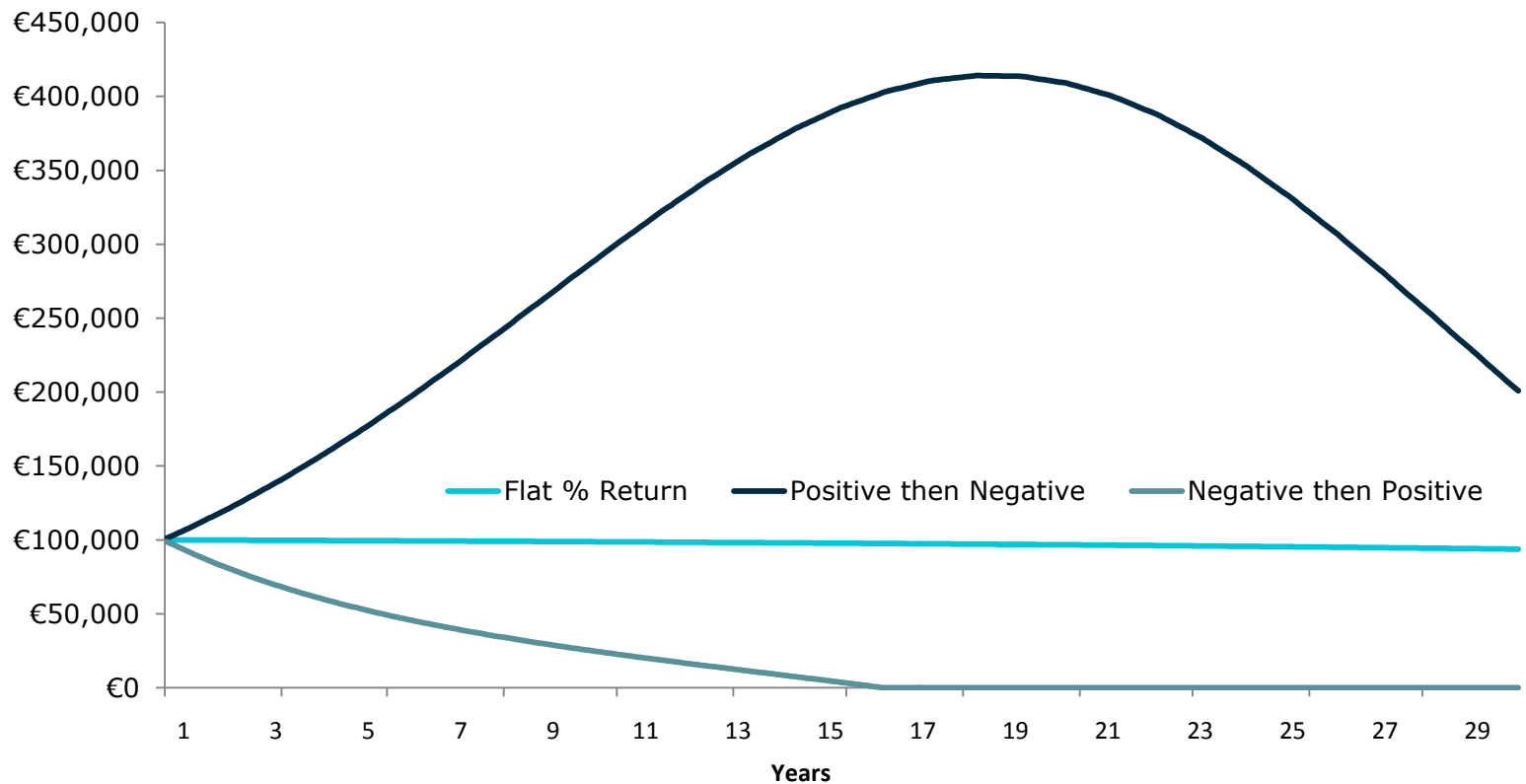
**It's not all about the average return; the path taken counts too**





## 4. Customer Profile - Volatility risk & path dependency




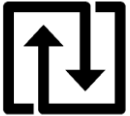
### Fund Value Development



(Scenarios taking 4% of investment + 1% (of fund value) in charges)







## 4. Customer Profile – Concerns/needs

Risk	Customer concerns/needs	Solution
 <b>Longevity</b>	<b>69%</b> of working age people are worried about running out of money in retirement <small>Reproduced with permission from The Future of Retirement A balancing act, published in 2015 by HSBC Holdings plc.</small>	<ul style="list-style-type: none"><li>• Guaranteed (lifetime) income</li></ul>
 <b>Growth / Inflation</b>	<b>60%</b> of adults are concerned about the impact of inflation on retirement income <small>Research conducted for MGM Advantage of 1,487 UK non retired people between 27.03.10 and 29.03.10</small>	<ul style="list-style-type: none"><li>• Exposure to assets with upside potential to beat inflation</li></ul>
 <b>Volatility</b>	Customers are exposed not only to market upswings, but also the timing of these swings	<ul style="list-style-type: none"><li>• Potential to lock in investment gains (downside protection)</li></ul>
 <b>Flexibility / Access</b>	<b>42%</b> of consumers consider flexibility for life changes to be most important in retirement <small>Source: Aegon At Retirement Report 2012, YouGov research commissioned by Aegon Ireland</small>	<ul style="list-style-type: none"><li>• Access to cash / remaining fund value</li></ul>



## 4. Customer Profile – Concerns/needs

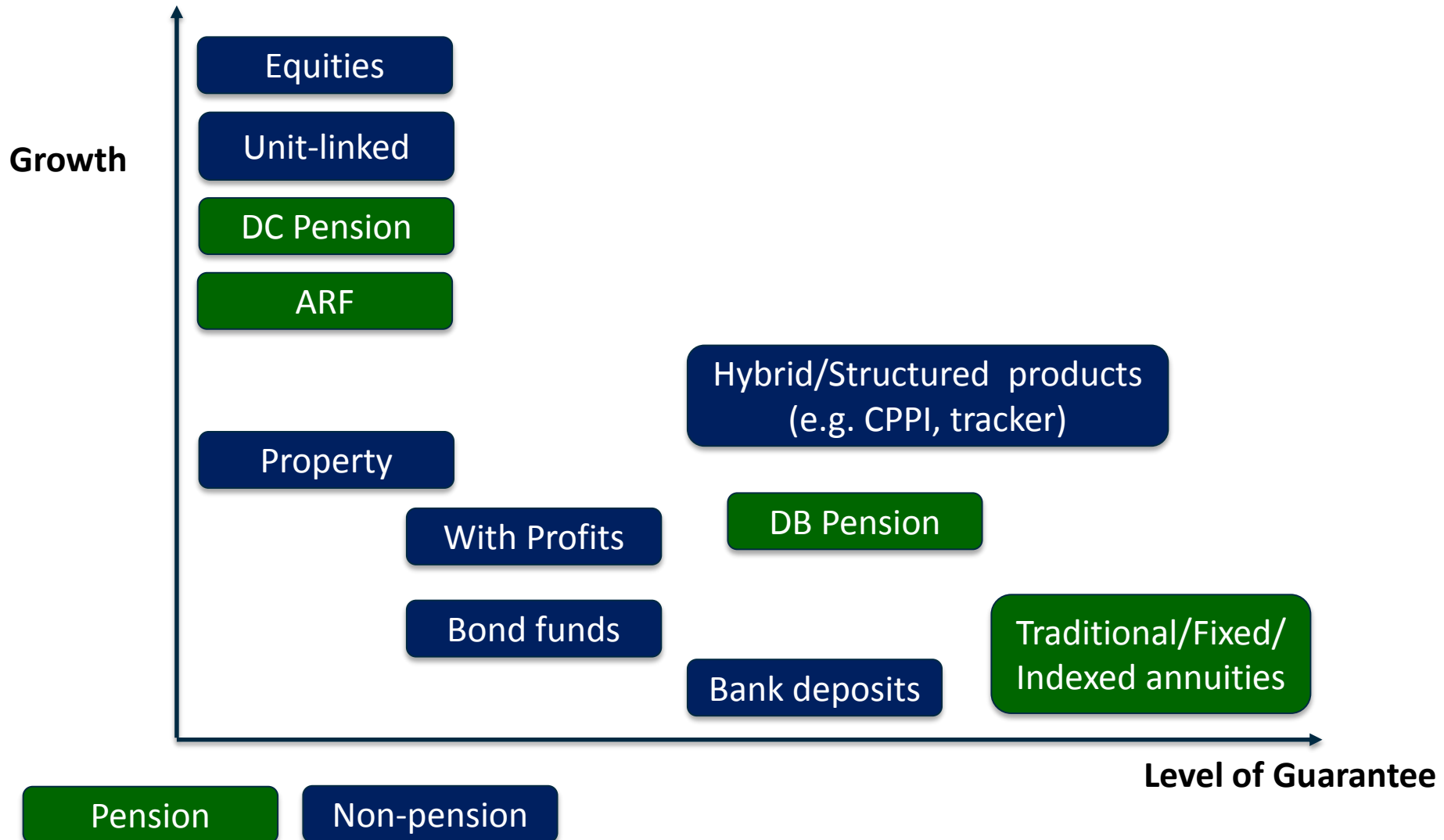
Risk	Customer concerns/needs	Solution
 <b>Reduced safety nets from governments &amp; employers</b>	<p>On average, UK people want £35,000 p.a. retirement income – more than 5x current UK state pension of £5,880 (single person). In reality, most are only likely to achieve £12,000. Source: The Aegon UK Readiness Report, How ready is the UK for retirement? April 2014</p>	<ul style="list-style-type: none"><li>• Guaranteed (lifetime) income</li></ul>
 <b>Inheritance</b>	<p>Typically, 40% of clients in the UK asked advisers for products that offer the ability to pass on remaining funds on death</p> <p>Source: Aegon At Retirement Report 2012, YouGov research commissioned by Aegon Ireland</p>	<ul style="list-style-type: none"><li>• Death benefit</li></ul>
 <b>Transparency + Simplicity</b>	<p>I want to know what I'm investing in; what I'll get back and how much it costs. I want a simple solution that I can understand</p>	<ul style="list-style-type: none"><li>• Transparent costs</li><li>• Transparent benefits</li><li>• Disclosures</li></ul>
 <b>Tax</b>	<p>I want to maximise my income and reduce my tax liability</p>	<ul style="list-style-type: none"><li>• Gross roll-up</li><li>• Income largely tax-free</li></ul>

## 5. Customer Solutions





## 5. Customer Solutions – Traditional product map







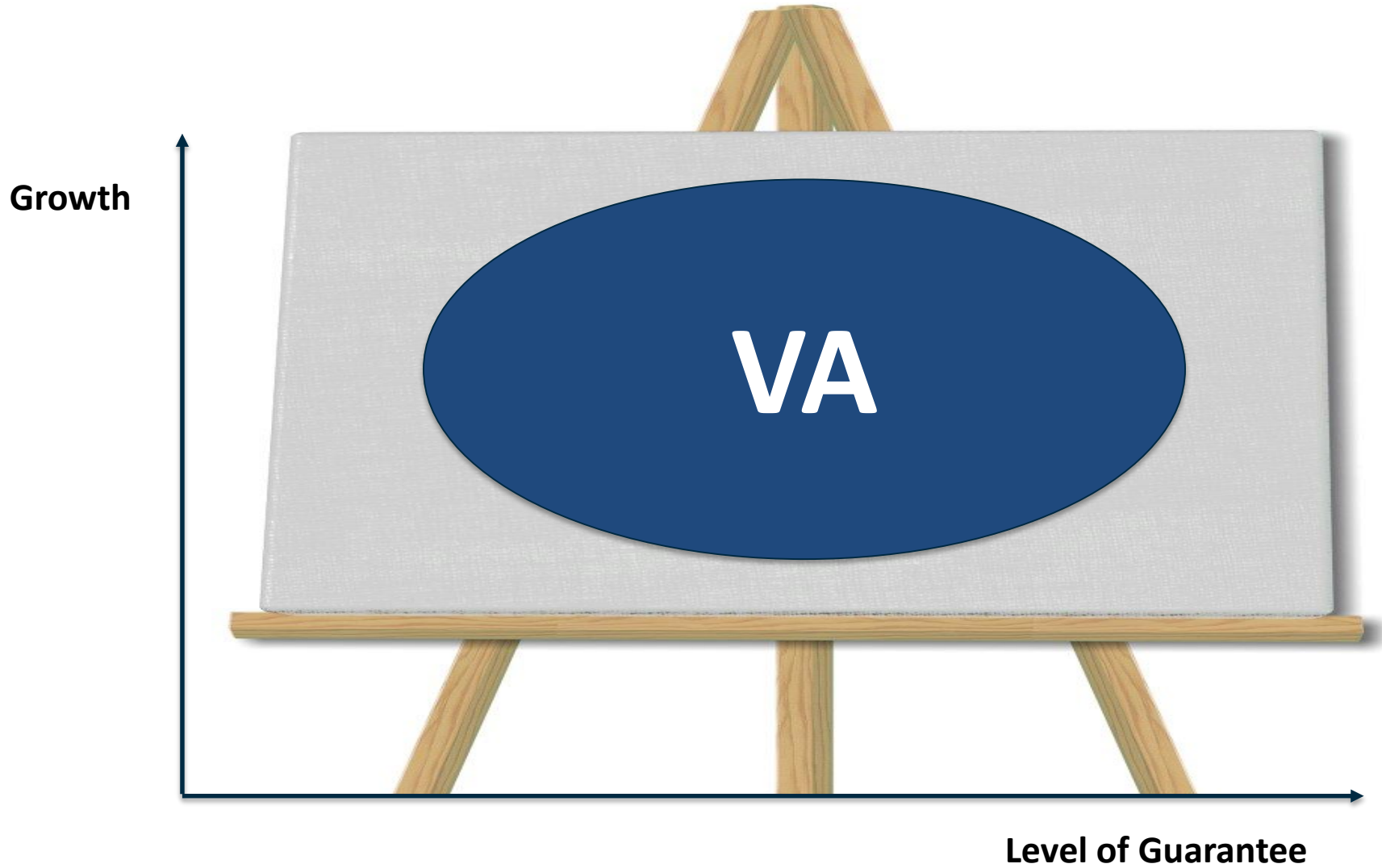
## 5. Customer Solutions - Traditional product features

Customer Need	Annuities	Structured/ Hybrid	DB Pension	Equities/UL/ARF/ Property	Variable Annuities
Guaranteed lifetime income	✓	✗	✓ ?	✗	✓
Upside potential	-	✓	-	✓	✓
Growth Lock In	-	✓	-	✗	✓
Access	✗	-	✗	✓	✓
Transparency	✗	✗	✗	✓	✓
Simplicity	✓	✗	✓	✓	✗



## 5. Customer Solutions - canVAs

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## 6. Challenges for VA Providers



## 6. Challenges for VA Providers

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### **Cost**

- Scale needed
- Investment in risk experts
- Investment in data infrastructure
- Global network



### **Complexity**

- Market perception
- Risk Management



### **Risk Management**

- Economic capital model
- Sophisticated hedging
- Solvency II & Internal Model
- Intrusive regulation



### **Economics**

- Market conditions
- Low interest rates, long-term guarantees
- Competition from non-economic products



## 6. Challenges for VA Providers – Risk Management

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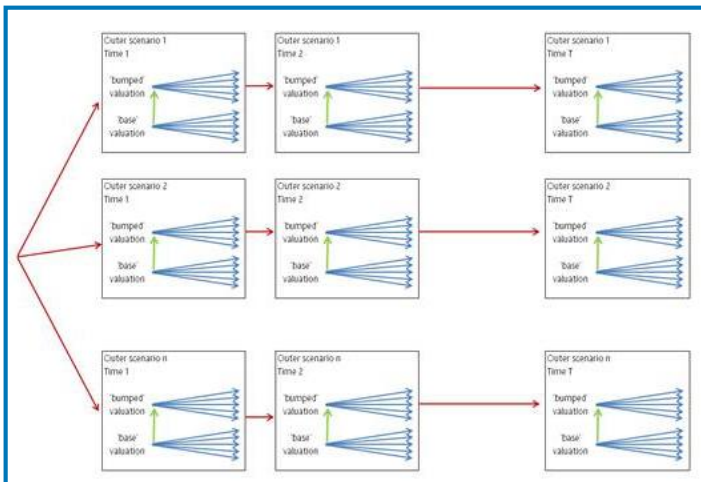
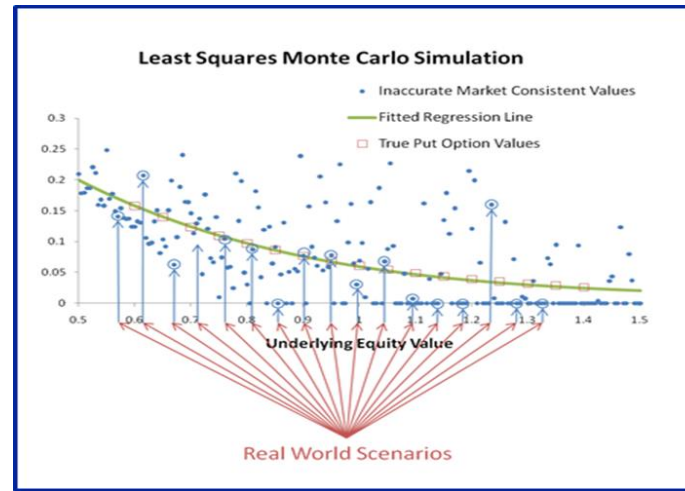
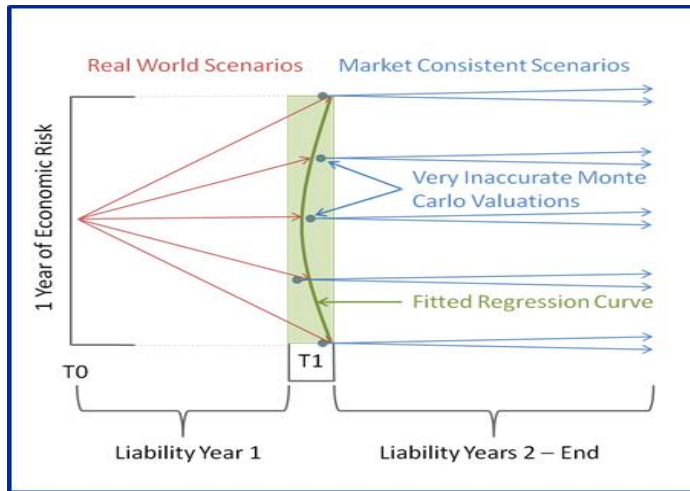
To be effective, all pieces to the Risk Management puzzle must be complete





## 6. Challenges for VA Providers – Risk Management

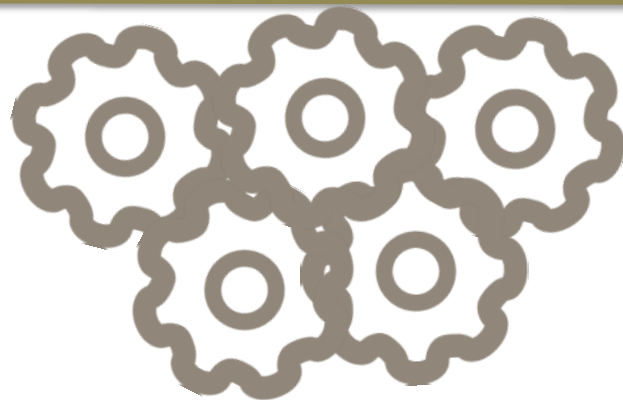
Customer and regulatory needs are driving development and sophistication.





## 6. Challenges for VA Providers – The swan of insurance

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## 7. Finally





## 7. Recap - Modern life insurance

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Customers nearing and in retirement have varied needs and face challenging risks



VAs are a modern insurance solution designed to address these needs and risks



VAs require careful management using modern hedging and risk management practices



## 7. Finally – Opportunity for Ireland, Inc.



c.120 actuaries/students working predominantly on VA products in Ireland



Central Bank of Ireland is fast becoming a frontier regulator for VA globally



Colleges: quality and quantity of actuarial students means that we are becoming a self-sustaining and well regarded ecosystem



# Contact details

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