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Risk measures for Long term investment – Are they fit for purpose?

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Risk, Investment and Pensions conference
Celtic Manor, Newport, Wales
07 June 2017

Agenda

- Introduction
- Short Term vs Long Term Investors
- Regulation and its impact
- Approaches to tackling procyclicality
- Conclusions

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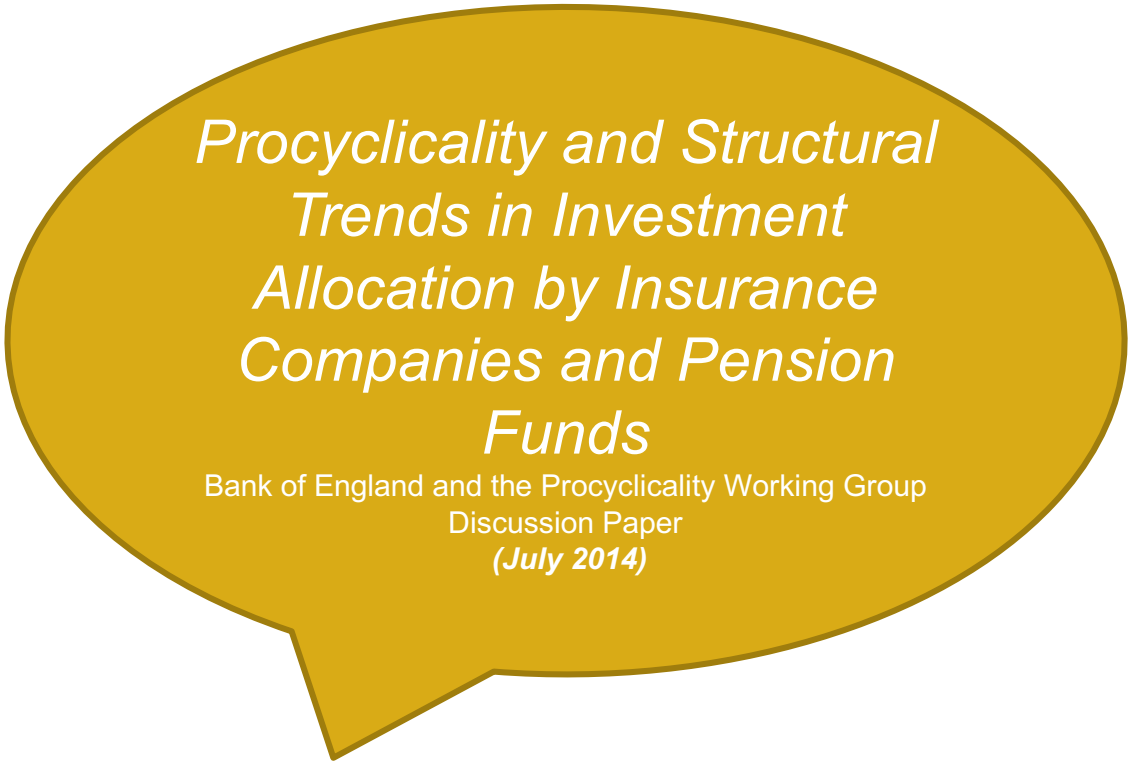
Introduction – Procyclicality spotlighted



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IFoA presentation of BoE (2014) paper

March 2015

UK Treasury Committee inquiry into EU Insurance Regulation (Solvency II)

September 2016 – May 2017

Expert panel Pension Funds and Life Companies: Are they Fit for Purpose?

IFoA event **(September 2015)**

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What is Procyclicality ?

Defined as

investing in the short term in a way that could exacerbate market movements and contribute to asset price volatility (including through asset price feedback loops), or

investing in the medium term in a way that might exaggerate the peaks and troughs of asset price or economic cycles.

BoE (2014)

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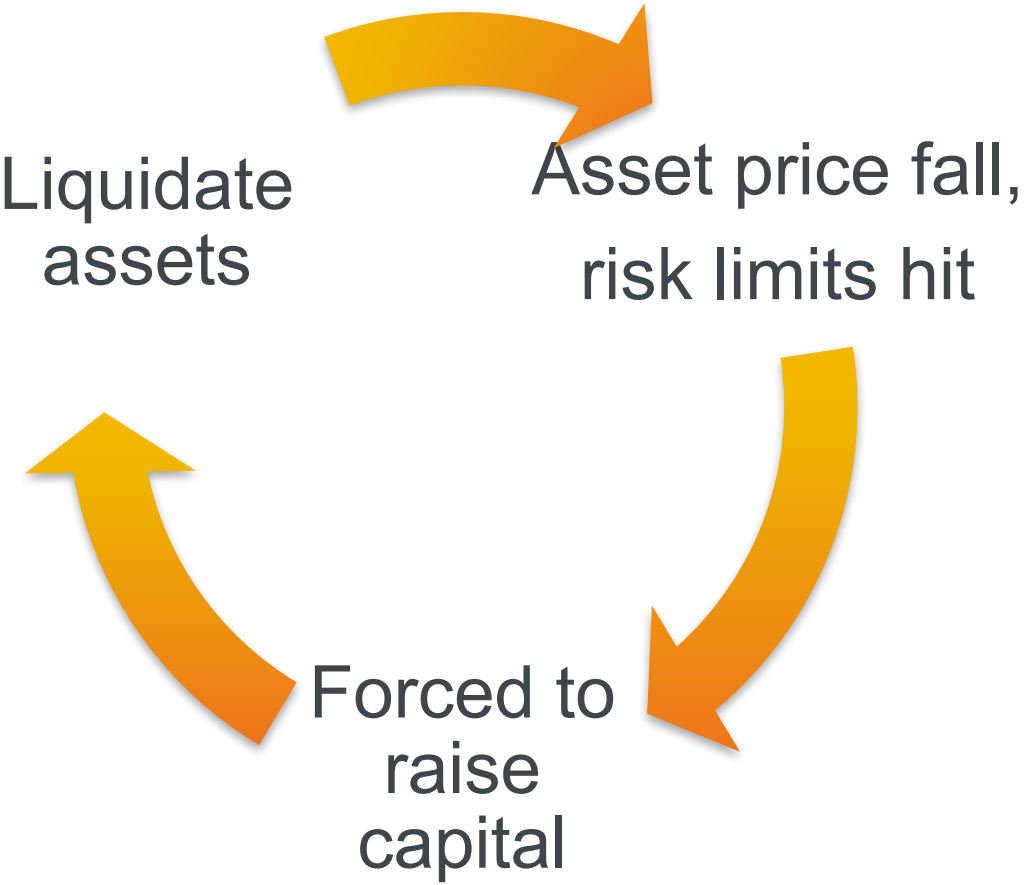

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Recent developments

September 2016 – May 2017

- UK Treasury Committee inquiry into EU Insurance Regulation (Solvency II)
- Written evidence September – November 2016
- Oral evidence January – February 2017
- IFoA submitted both written and oral evidence
- Concluded by the general election with no report published

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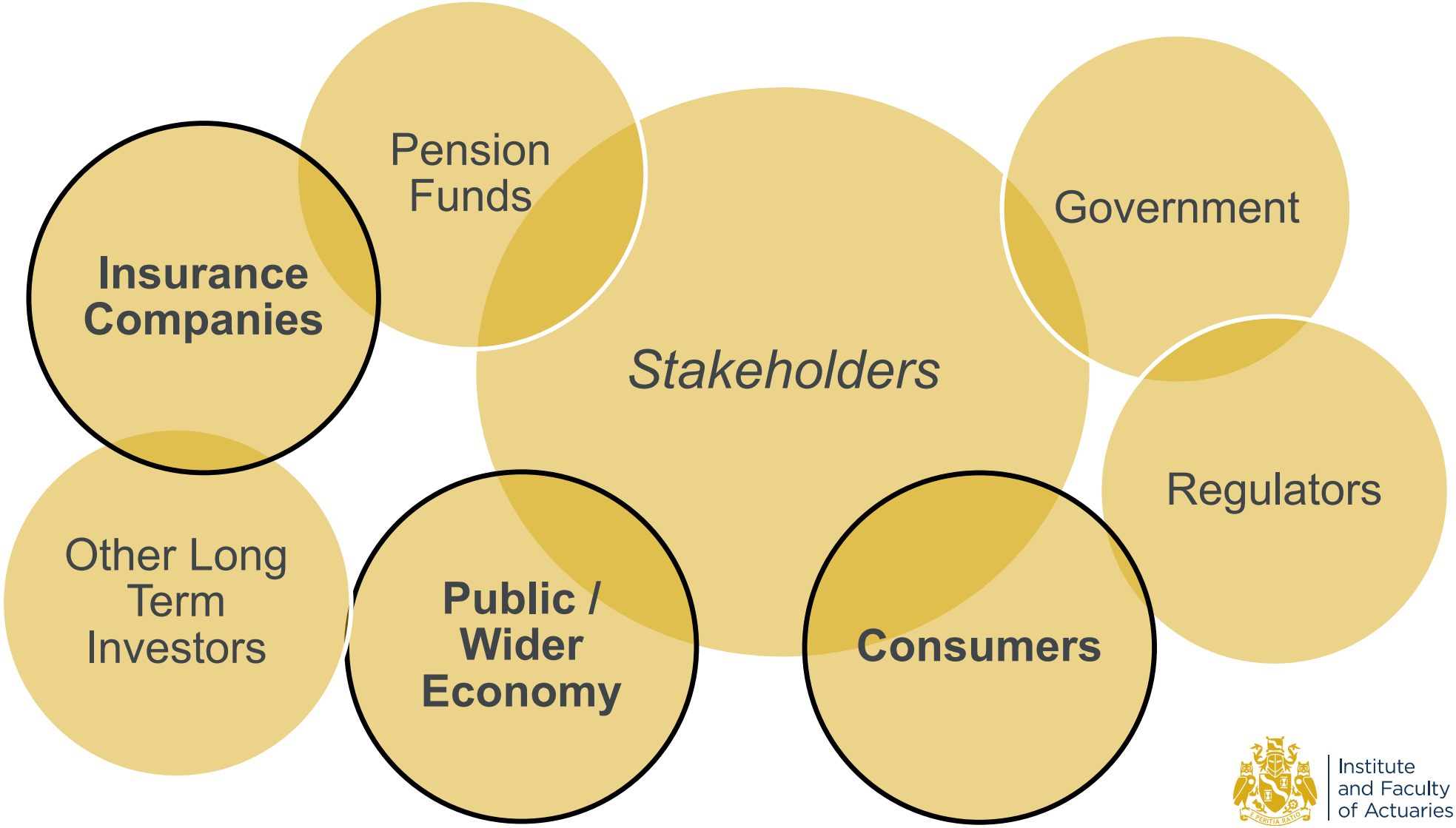

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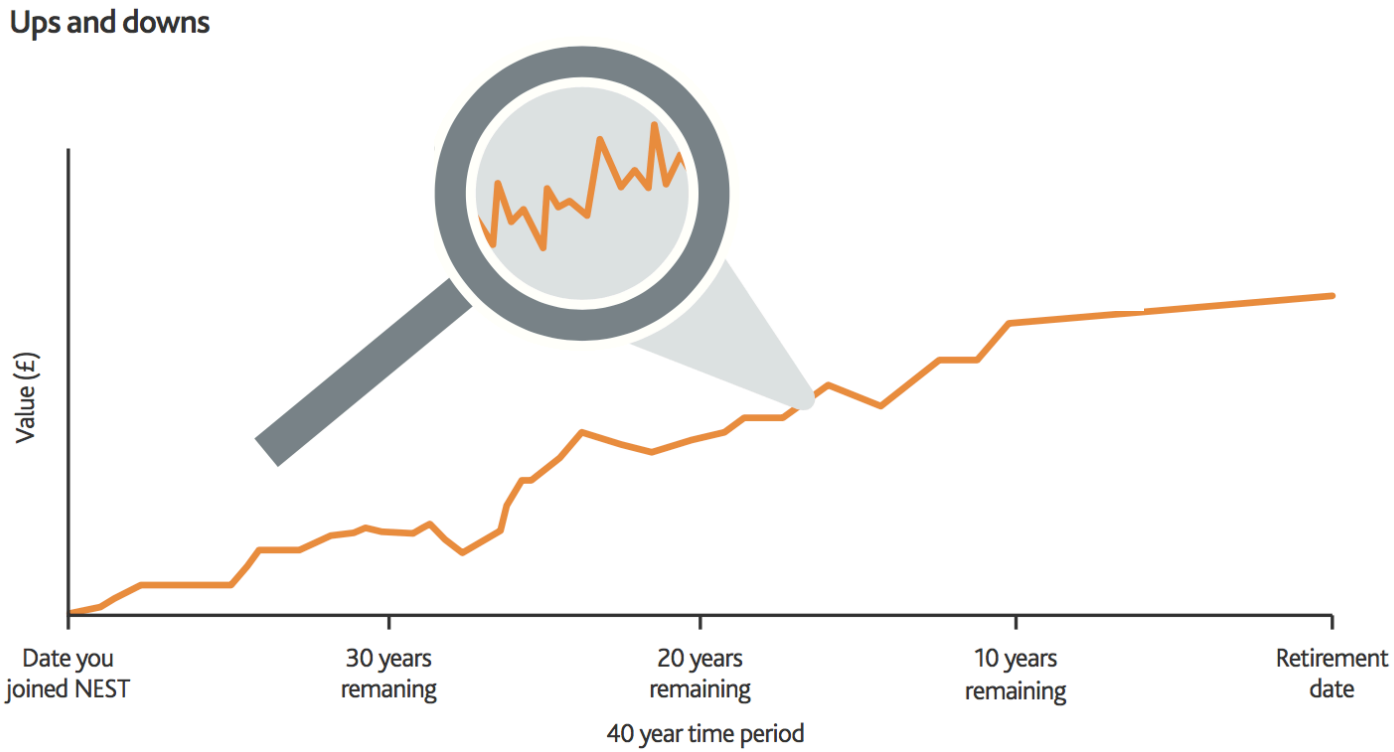
Short Term vs Long Term Investors



Source: NEST *Improving consumer confidence in saving for retirement (2014)*

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The real Economic risk for Long Term Investors

Shortfall risk

The possibility that changes in the values or returns on assets cause an ICPF with long term liabilities to fail to achieve its goals

- Cash payments when due
- Not PV at single point in time

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Market performance – Returns patterns

S&P 500 TR data over 1928-2014 (86 years): Average return 12% p.a. (daily return annualised)

Measurement time horizon	Proportion of negative returns	Proportion < 2 standard deviations
Daily	48%	6%
Annual	29%	3%

Measurement time horizon (Average cumulative return)	Proportion of negative returns
Discrete 10 years	10%
Overlapping 10 years	7%
Overlapping 20 years	0%

Data source: Avinash Persaud *Reinventing Financial Regulation: A blueprint for overcoming systemic risk (2015)*

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Short term volatility

- What drives asset price volatility?
  - Demand for cash
  - Short-term sentiment
  - Herding behavior
  - Speculation
- Notion of risk as volatility
  - Framework not designed for long term investors

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Risk capacity

- “In the hands of the holder”
- Risk capacity is *not* risk appetite or mood
- *Distinct types* of risk
- Investing versus trading horizons
- Risk evolution profile –

  Managing ***value*** over time

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"Insurance companies… play a stabilising role in the financial system... The risks to which insurers are exposed are not, in general, correlated with the business cycle…

*This **allows** them to take **a long-term perspective** that others cannot, and to make long-term investments..."*

Mark Carney

Governor of the Bank of England

May 2014

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Current Regulatory Approach (Solvency II)

- Risk-based solvency requirements for insurers in UK/EU
- Solvency Capital Requirement (SCR) - **one year 99.5% VaR basis**
- Insurers must hold eligible capital equal to liabilities plus SCR
- Standard formula (SF) or insurer's internal models (IM)
- Much capital required for SF equity shocks
- Various mitigants available - complex and expensive

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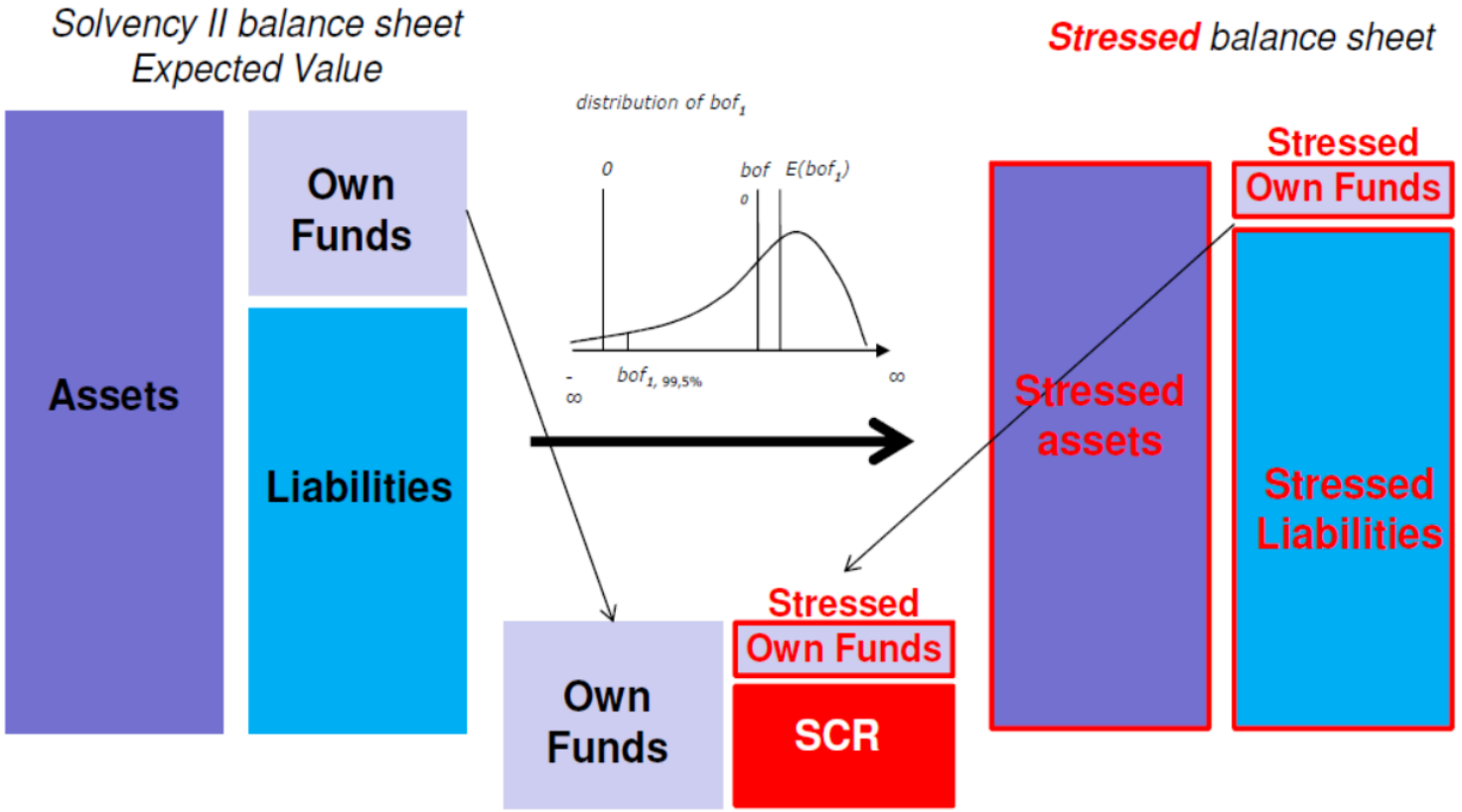
Solvency II mechanics



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Observations, from BoE (2014)

- ICPFs investment risk bearing has declined dramatically in recent decades
- Most of the reduction has occurred over the past decade, since accounting standards and regulations based on market prices were introduced
- **Misreading of risk**
- Excessive reliance.. on MTM and other short-term measures has exacerbated the impact of the economic crisis by encouraging life companies to act procyclically

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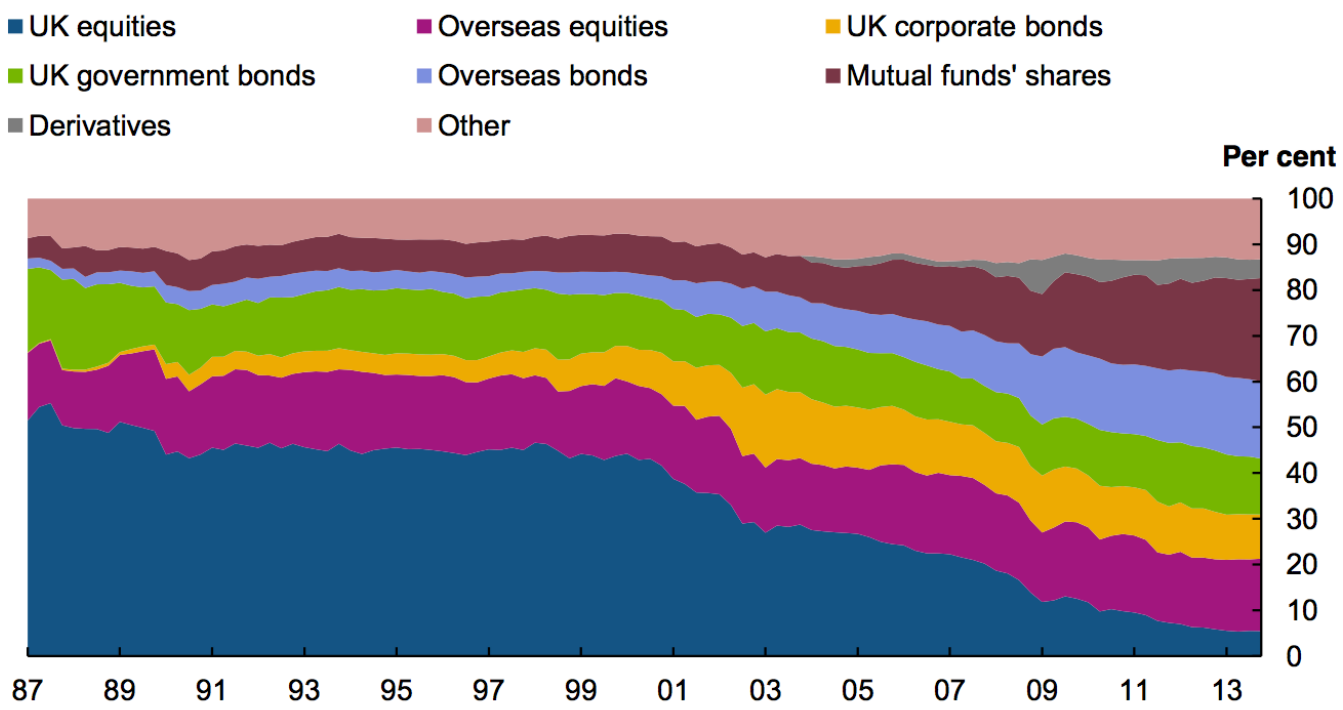
Chart 2: Allocation of UK ICPF assets to different asset classes (nominal)[(a)(b)(c)]



Source: ONS and Bank calculations

(a) Bonds includes money market instruments, medium- and long-term bonds. The split of overseas bonds by issuer is not available.

(b) Other includes currency, deposits, loans, other accounts receivable and insurance technical reserves.

(c) Derivatives data are shown separately from 2004, but prior to this are included in corporate bonds.

Picture source: BoE (2014)

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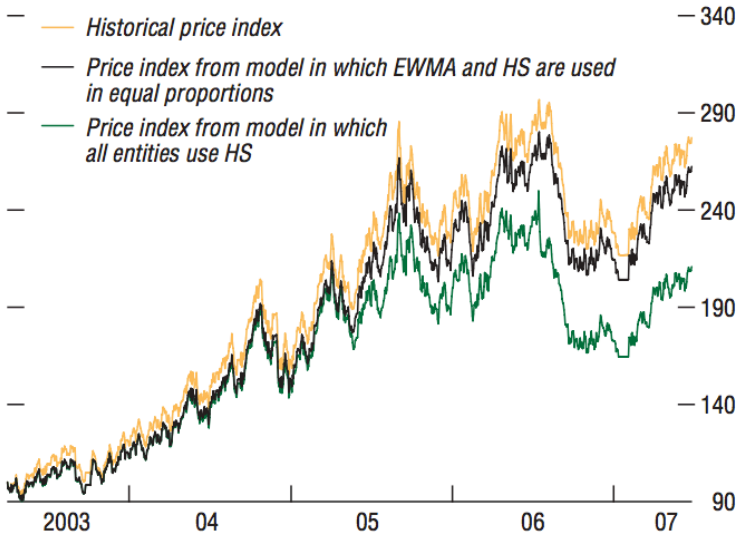
IMF simulations

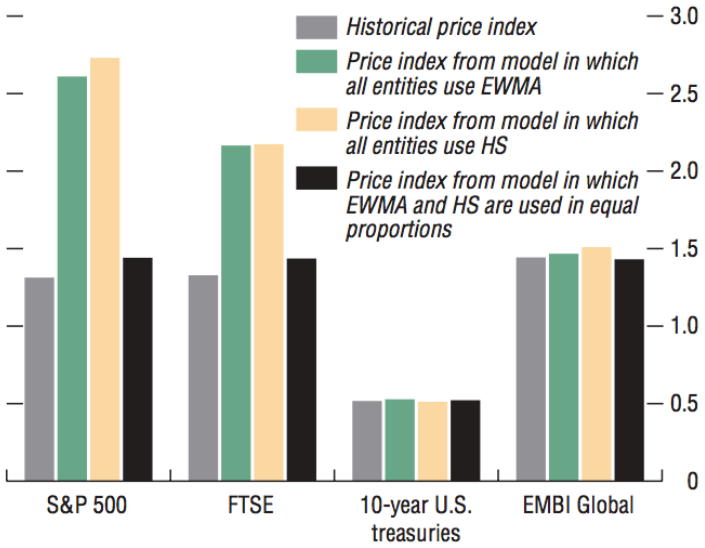
source: IMF *Global Financial Stability Report (October 2007)*

Figure 2.9. Asset Price Dynamics Under Alternative Model Specifications
(Index; April 1, 2003 = 100)



Sources: Bloomberg L.P.; and IMF staff estimates.
Note: EWMA = exponentially weighted moving average; HS = historical simulation. The price indices refer to the Commodity Research Bureau energy futures index, one of the assets included in the VaRs of the simulated financial institutions.

Figure 2.10. Selected Asset Volatilities Under the Interactive Model
(Standard deviations; in percent)



Sources: Bloomberg L.P.; and IMF staff estimates.
Note: EWMA = exponentially weighted moving average; HS = historical simulation. The standard deviation is calculated over the stress period August 1998.

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IAIS – current developments

- The International Association of Insurance Supervisors
- Formulating the Global Insurance Capital Standard (ICS)
- A risk-based method, VaR based
- A minimum capital standard
- ICS Principle 7 includes aim to **“minimise inappropriate procyclical behaviour”**

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Insurers are not banks

*"One reason why tools developed for other sectors might **not** be directly applicable [for the insurance sector] is that the likelihood, timing and effect of the macroprudential risk being propagated and amplified may not operate in an identical way across sectors because of **differences in business models**."*

Victoria Saporta

Executive Director of Prudential Policy Directorate at the Bank of England and Chair of the Executive Committee of the International Association of Insurance Supervisors

November 2016

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Approaches to tackling procyclicality

- Do nothing
- Short Term Adjustments
- Long Term Approaches
- Structural Changes

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Do nothing

- Regulation there to protect consumers
- Capital required is reflective of the cost of offloading liabilities
- Less capital weakens consumer protection
- More capital makes insurance more expensive
- Is procyclicality the price of protecting consumers/the government against systemic shocks?

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Short Term Adjustments – Counter Cyclical Buffers

- Work of another working party so only mentioned briefly
- Currently done on an ad hoc basis via regulatory forbearance
- Extra capital is required when markets go up and less when they go down
- Assumes mean reversion in markets
- Fundamental changes still have to be recognised at some point
- When does it become ‘kicking the can down the road’?

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Long Term Approaches

*"..an approach to valuation of assets and liabilities that **makes a distinction** in the **structure of liabilities** between those that allow assets to be held **long-term** and those that might require **immediate sale** of assets. If this distinction is not made there is a risk that the value of insurers' assets and liabilities becomes unnecessarily volatile, which **itself can become a source** of asset liquidation risk."*

Victoria Saporta

Executive Director of Prudential Policy Directorate at the Bank of England and Chair of the Executive Committee of the International Association of Insurance Supervisors

November 2016

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Long Term Approaches – Long Term Measures

- Rather than looking at one year dispersion metrics other approaches could be used such as
  - Discounted Cashflows
  - Longer period used in determining risk / Run off measures
  - Allowance for illiquidity/asset return in liability calculations

Long Term Approaches – Discount Cashflow Valuation

- Designed to recognise the need to meet cashflows rather than realisable market values
- Assets to be valued by discounting the liabilities they back
- Used for with DB pension valuations pre 2000s
- Creates risks if one insurer needs to be wound up, can create regulatory arbitrage and makes comparisons between insurers difficult

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Long Term Approaches – Longer Period for Measuring Risk / Run off approaches

- Short term measures only focus on volatility but ignores return.
- Procyclicality can be reflected in the return assumption providing a natural counter cyclical buffer
- Different insurers have different liability profiles which may lead to more variation in asset structure
- Returns not market observable (forward looking) so risk of static historic looking assumptions or manipulation to affect reserve levels

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Long Term Approaches – Recognizing Illiquidity

- AA designed to be a ‘low risk rate’ with some allowance for illiquidity
- Could use higher discount rates/lower reserves to incentivise insurers to find non liquid opportunities, increasing diversification and reducing procyclicality
- Pension schemes (for TPs) are allow to discount based on expected return on assets – in theory this should provide a counter cyclical effect but not often seen.

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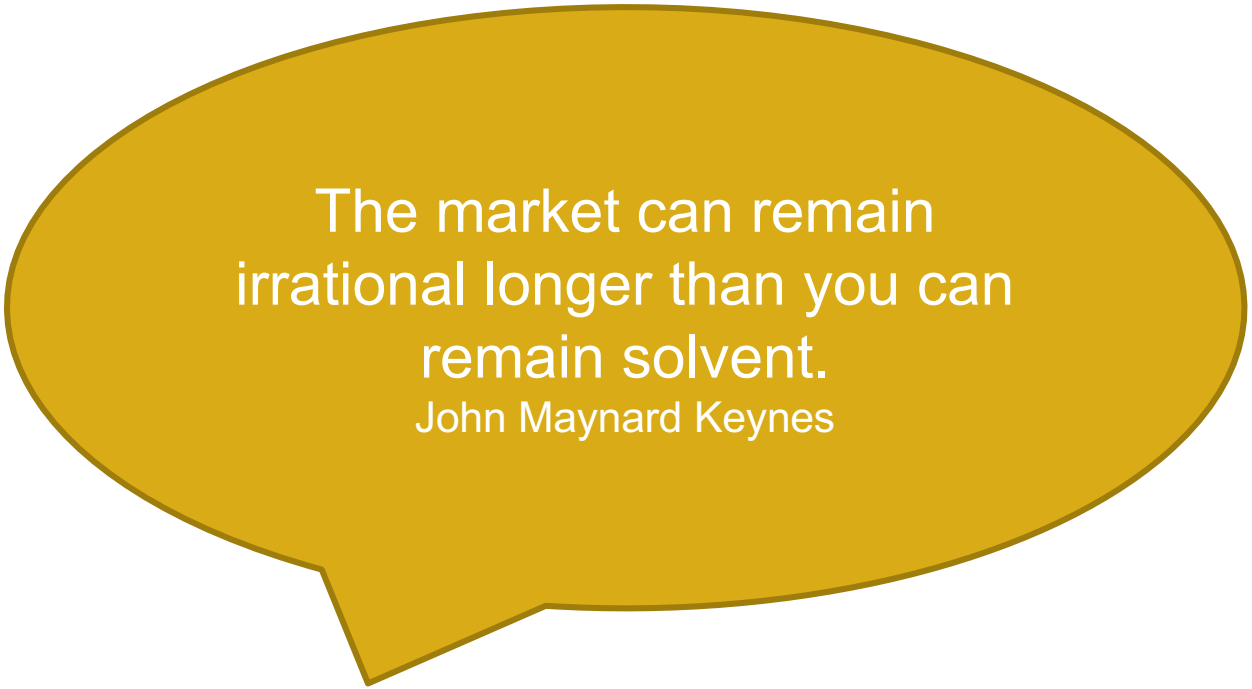
Long Term Approaches – The Downside



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Structural changes

- Pensions world reduced risk with DC schemes
- Unit linked / with profits life policies have similar effects for insurance
- Indirectly happening with pensions freedoms which reduces the annuity market
- Possible room for a hybrid product to leave consumers with market risk whilst providing market protection.
- However products are more complex and not suitable for everyone

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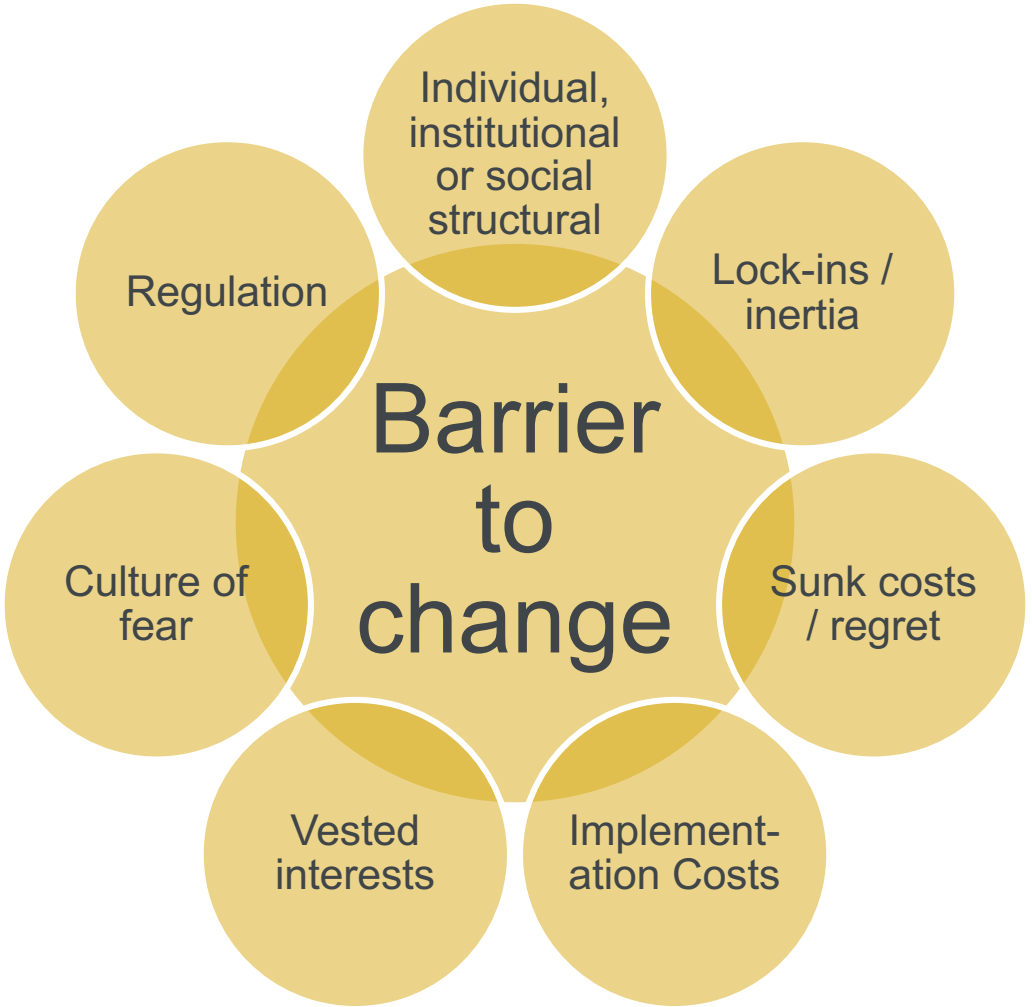

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Conclusions

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“Regulation is not just about minimising the risks insurers pose. It’s also about allowing them to play a positive role as a source of long-term finance for the economy.”

Mark Carney

Governor of the Bank of England

May 2014

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Full *Risk Measures Working Party* membership list as at 22 May 2017:

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Contact details

- Research is ongoing

We welcome your inputs and insights…

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Thank you for your interest

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Questions

Comments

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