

The Actuarial Profession
making financial sense of the future

Highlights of the 2009 life conference
John Cummings (+ Gavin Coates and Derek Wright)



How insurers survived the financial crisis – a Reviewing Actuary's perspective

Agenda

- Impact of credit crunch
- A selection of ideas
- Looking ahead

Impact of the credit crunch

AEGON €3bn injection from Dutch government to boost capital base	Prudential Sale of Taiwanese agency business to China Life	Aviva WP estate attribution scheme Delta Lloyd IPO
Oct 2008 ————— Sept 2009		
Lehman Brothers Whoops!	Swiss Re Capital instrument of CHF 3.0 bn issued to Berkshire Hathaway	Friends Provident Merger with Resolution Plc agreed

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Key capital events 2009

	Equity raising	Raised government capital	Cut dividend	Sold business units	Raised hybrid capital
AEGON	Yes	Yes	Yes	Yes	No
Aviva	No	No	Yes	Yes	Yes
AXA	Yes*	No	Yes	No	No
Legal & General	No	No	Yes	No	Yes
Old Mutual	No	No	Yes	No	No
Prudential	No	No	No	Yes	Yes
Standard Life	No	No	No	Yes	No
Swiss Re	No	No	Yes	No	Yes
ZFS	Yes*	No	Yes	No	Yes

* Raised capital for expansion purposes

Source: Company data, Morgan Stanley research

Key capital themes in the market

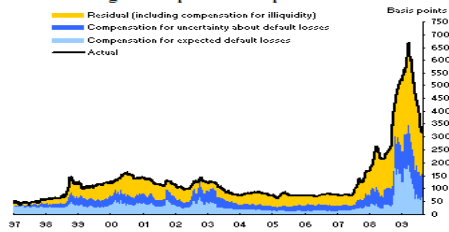
	Description	Example
Recognising assets	<ul style="list-style-type: none"> Recognise economic assets if no FSA credit Release of margins e.g. through FSA discussion 	<ul style="list-style-type: none"> Aviva – NP surplus for IGD Pru – WP surplus for IGD
Protecting value	<ul style="list-style-type: none"> Optimisation of hedging to maximise efficiency De-risking policyholder guarantees 	<ul style="list-style-type: none"> KPMG client - WP derisking Others
Improving cashflow	<ul style="list-style-type: none"> Bringing forward the emergence of cashflows 	<ul style="list-style-type: none"> KPMG client
Optimising corporate structure	<ul style="list-style-type: none"> Allow greater diversification or capital release 	<ul style="list-style-type: none"> Swiss Re - subs to branches AXA - ISPV
Capital markets	<ul style="list-style-type: none"> Passing risk to markets through financial instruments 	<ul style="list-style-type: none"> Swiss Re - mortality bonds AEGON UK - securitisation
Reducing risk and capital	<ul style="list-style-type: none"> Derisking guarantees, release of margins Third party financing 	<ul style="list-style-type: none"> FP staff pension scheme deal Others

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Credit risk – remember this?

Chart 1 Decomposition of sterling-denominated investment-grade corporate bond spreads



Credit risk - what happened?

Had never really followed INSPRU 1.2.16(2) G:

- "Margin for adverse deviation of a risk should generally be greater than or equal to the relevant market price for that risk"

Were we prepared?

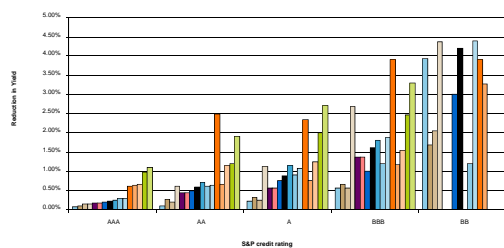
- Had not really been an issue – not specialist subjects for many AFHs
- We had thought of the possibilities - ICAS – but no business continuity plan

Lots of activity

- The experts disseminated knowledge quickly
- Data from Great Depression / BoE model / CDSs / etc not convincing or conclusive
- FSA?

Firms all over the place with detailed methodology

Credit risk - where we ended up



Credit risk – where we ended up

End result

- Firms ended up ~25-30% of spread – pragmatic solvency compromise
- Outliers

Audit approach

- Did firms analyse the evidence? Management engaged?
- INSPRU 1.2.10R – “must use ... assumptions ...in accordance with generally accepted actuarial practice”

Going forward

- A year's research – what has it done for us?
- Will need to be revisited
- FSA ?

Illiquidity premium – in IFRS

Client

- IFRS reporter with VIF asset on Group Balance Sheet - “Each cash flow is valued using discount rate consistent with ... the capital markets.”
- Used to use “risk free” - big hit from widening credit spreads

IFRS 4

- Para 27: “... will become less relevant and reliable if it introduces an accounting policy that reflects future investment margins”
- BC137: “Replicating portfolio approaches ... attempt to measure the characteristics of the liability”

Solution

- Illiquidity premium exists
- Set up a “reference portfolio” and calculate discount rate from that

Illiquidity premium

Why only annuities?

Answer (a): Cashflows are predictable

Answer (b):

- All insurance liabilities are (pretty much) illiquid
- So should use illiquidity premium to value all insurance liabilities
- However, policyholder option (to surrender / cease) has a value
 - which equals the illiquidity premium
- So liability to firm = liability (using illiquidity premium) + value of option
 - = liability (using liquid risk free rate)

Applies to some other liabilities too (e.g. PHI claims in payment reserve)

Insurance Groups Directive

Aviva – IGD Non-Profit surplus

- Individual guidance from FSA allowed recognition of £0.4bn non profit surplus
- No need physically to effect the transfers
- FSA will consider relaxing formal rules to access capital where, in its current form, an economic asset is not providing solvency benefit

Prudential – Future WP transfers

- Individual guidance from FSA allowed recognition of £0.3bn future WP transfers
- Structured as TDSL referencing the last annuity liabilities, with counterparty providing guarantee
- *"Through an innovative transaction we have been allowed by the regulator to include £0.3bn of the shareholders' economic interest in the future transfers from the UK WP Fund"*
- Also sold agency force in Taiwan and issued bonds

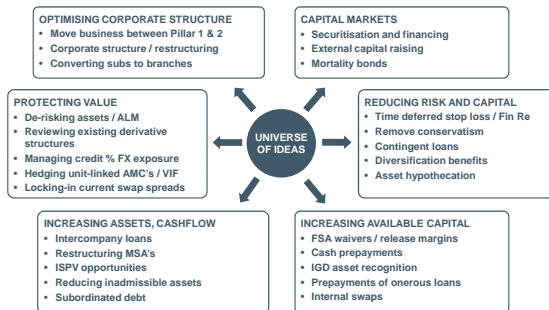
Derisking

Group Level	With-Profit Specific
<ul style="list-style-type: none">• Top down / bottom up hedging• Managing credit exposure• Transfer annuities• Loan refinancing• Optimise ALM• Managing currency exposure• AMC & VIF hedging	<ul style="list-style-type: none">• Internal delta hedge• Strengthen management actions• EBR varying by duration / g'tees• Restructure existing hedges• EBR reduction• De-risking the estate• Remove discretionary guarantees• Lock-in swap spread

Back to basics

- PS 06/14 – it's never too late!
- Implicit margins
 - Health business – inception and termination rates
 - Mortality and longevity
- Data?
- Accounting regime

Innovative structures: quite a selection!



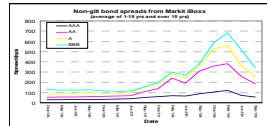
Lots of ideas!

- 2009 had examples of the best of actuaries ... and the not so best!
- Understand the business
- Think about:
 - Peak 1/Peak 2/Pillar 2/IGD/EEV/IFRS/economic reality/volatility/management bonus/ ...
 - Where are the crunch points?
 - In "normal" and "not-so-normal" times
- It takes thought ... and time
 - Not so easy, with shortage of actuaries!

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Looking ahead – credit risk



Going forward

- Lots of research – what has it done for us?
- Still work to do
- FSA? CEIOPS?

Looking ahead – other issues

Recession

- Time to relax? Or double dip?
- Increased lapses / impact on PHI business / increase in fraudulent claims?
- Inflation / interest rates

Other issues:

- RDR / personal accounts / ...
- Resource shortages

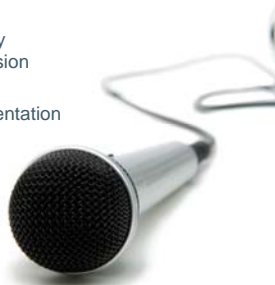
Release or build up solvency capital?

Looking ahead

- BAS
 - 1 April 2010 – TAS R!
- Solvency II
- IFRS – Insurance Contracts Phase 2

Questions or comments?

Expressions of individual views by members of The Actuarial Profession and its staff are encouraged. The views expressed in this presentation are those of the presenter(s).



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