Latest developments in financial reporting

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- Global updates
- The European perspective
- Japanese reporting framework
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Some global updates

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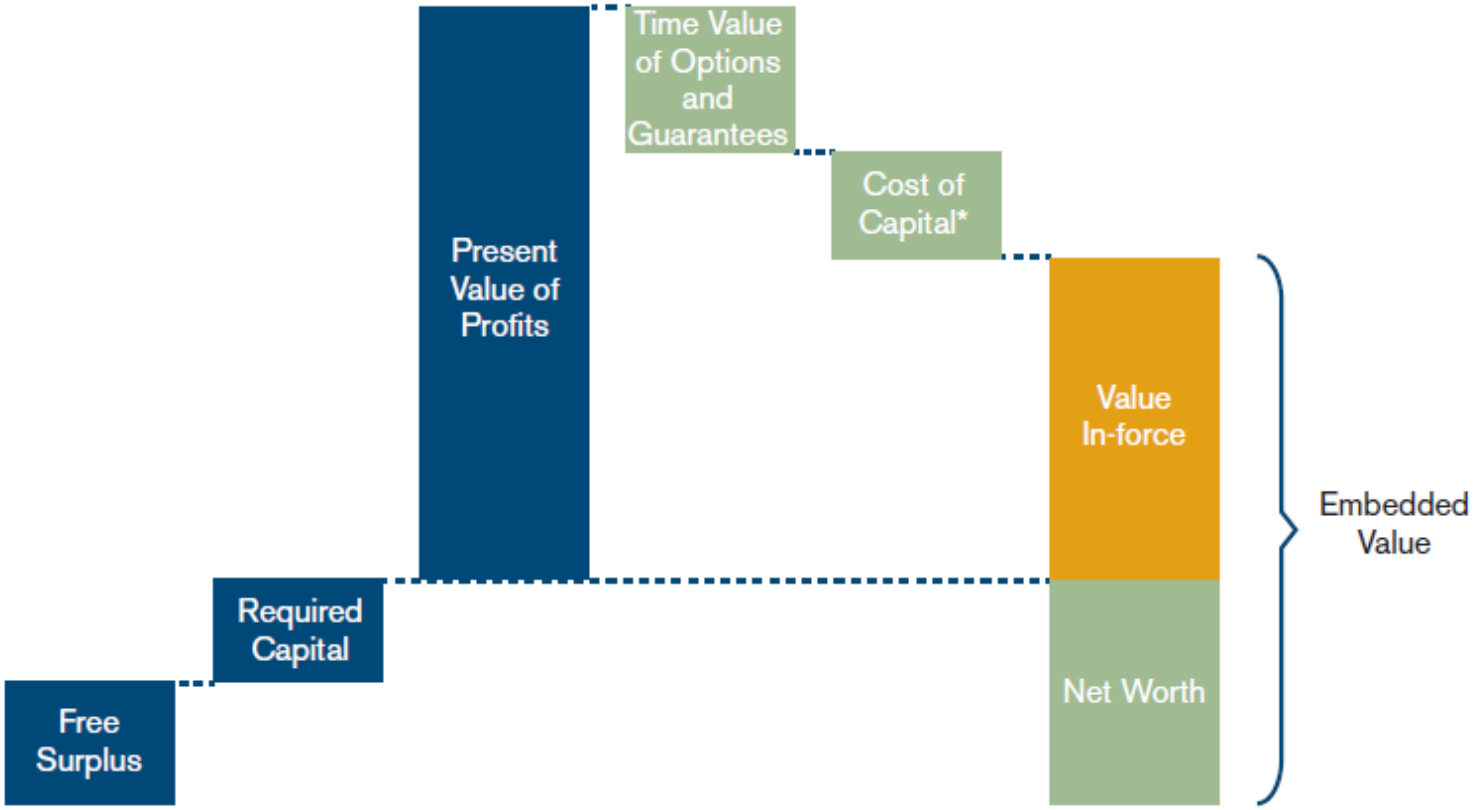
Components of Embedded Value



* Under the MCEV Principles, the cost of capital is split into frictional costs and the cost of residual non-hedgeable risks. Companies using the EEV Principles may also choose to adopt this approach.

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2011 CFO Forum Public Statements

April 2011

The CFO Forum withdrew its intention that the *Market Consistent Embedded Value Principles* would be the only recognised format of embedded value reporting from 31 December 2011.

September 2011

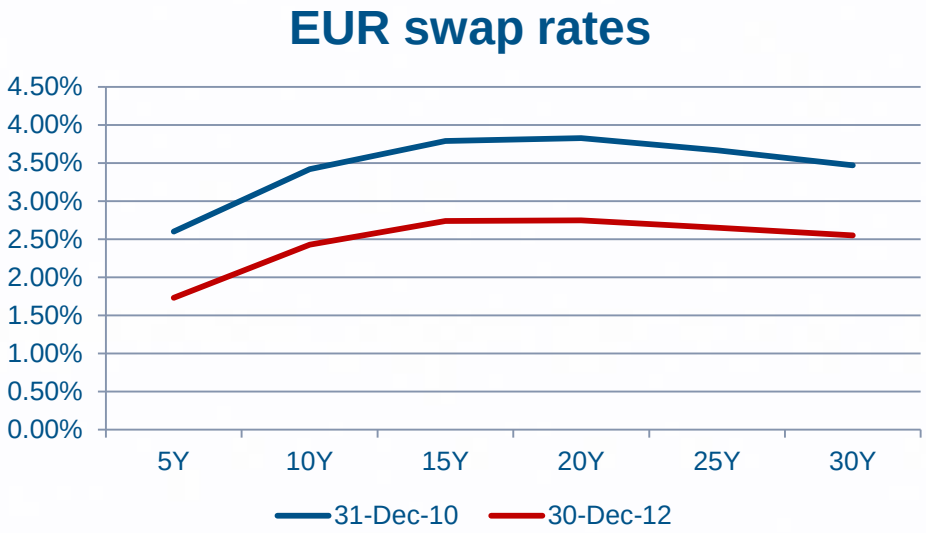
The CFO Forum issued transitional guidance that, up to and including the 30 June 2012 reporting period, there would be no requirement to make allowance for the developing Solvency II regimes when applying the MCEV Principles or the European Embedded Value Principles.

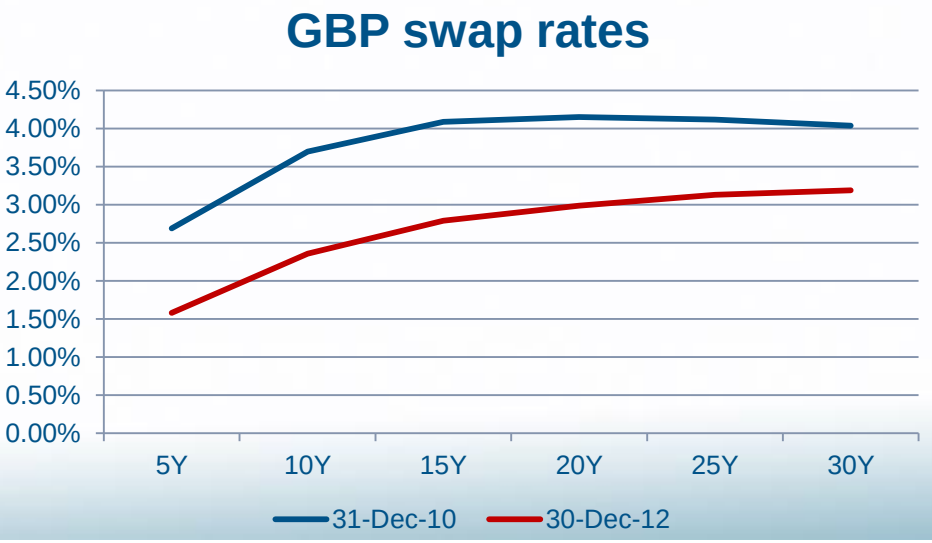
December 2011

The CFO Forum issued guidance relating to the current sovereign debt market conditions, suggesting that an allowance within the reference rate be used in the embedded value, or alternatively that an equivalent disclosure should be provided as a sensitivity.

Market movements in EUR and GBP

- As if it were possible, EUR and GBP rates continued to decline…





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European companies

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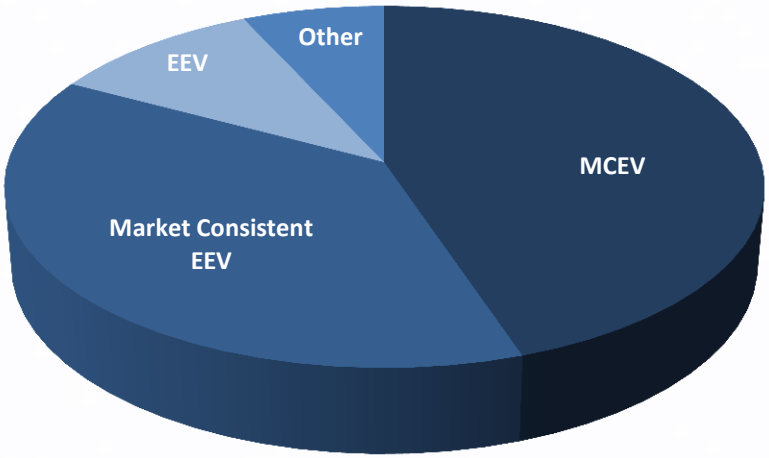
Reporting under MCEV & EEV Principles



- The MCEV Principles were most commonly used by companies at the end of 2011 (45%)
- Overall, over 80% of companies used some form of market-consistent methodology for 2011 year-end reporting
- These proportions have generally remained static when compared to 2010.
- Only one company (VIG) moved from a market-consistent EEV approach to an MCEV approach over 2011.

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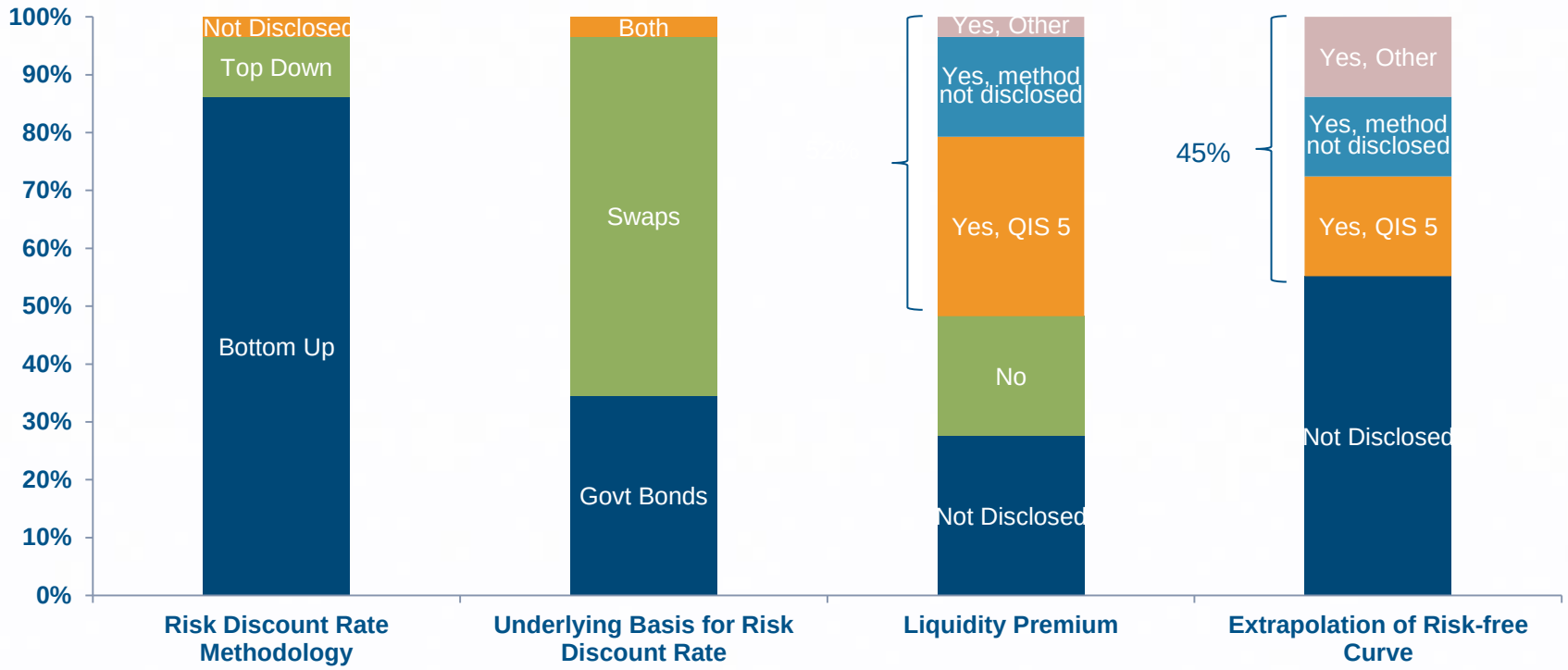
Hot Topics

- A number of hot topic areas were identified within companies' year-end disclosures. These include:
- The Construction of the Risk Discount Rate.
  - The Risk Discount Rate Methodology (Top-down or Bottom-up).
  - The Underlying Basis for the Risk Discount Rate.
  - The Allowance for any Liquidity Premium.
  - The Extrapolation of the Risk-free Curve.
- Size of Liquidity Premiums.
- Cost of Residual Non Hedgeable Risks.
- Time Value of Options and Guarantees.

Construction of the Risk Discount Rate



- The majority of companies use a bottom-up approach with swaps. Not surprising as this is required under the MCEV Principles.
- QIS 5 methodologies were most popular for setting the liquidity premium and extrapolating the risk-free curve.

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Size of Liquidity Premiums

- In 2011 there was a widespread upward shift in the size of liquidity premiums.
  - 1 company in our sample disclosed LP in excess of 100bps in 2010.
  - 10 companies our in sample disclosed LP in excess of 100bps in 2011.

- In many countries high levels of LP were disclosed for all business lines, not just annuities.

Many companies carried out LP sensitivities, mainly:
- 10bps increase to the LP
- removal of the LP

bps	2010			2011		
	Min	Max	Average	Min	Max	Average
UK	45	109	79	71	135	118
US	46	75	60	70	133	98
Euro	23	59	42	43	118	94
Overall	23	109	57	43	135	102

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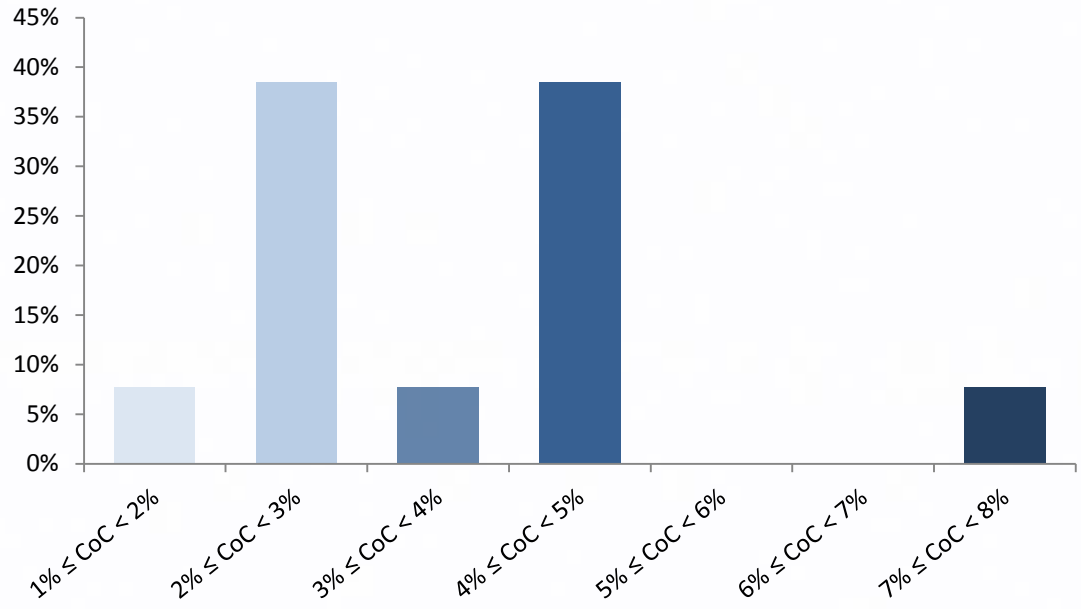
Cost of Residual Non-Hedgeable Risks



The equivalent average CoC charge graph above is based on those companies reporting under the MCEV Principles.

- Lowest charge 1.2% per annum
- Highest charge 7.0% per annum

- Companies moving towards greater consistency and alignment with their
  - European peers
  - developing SII framework

- Whilst not directly comparable, current SII guidance refers to a CoC charge of 6% - greater than the level many MCEV companies are using.

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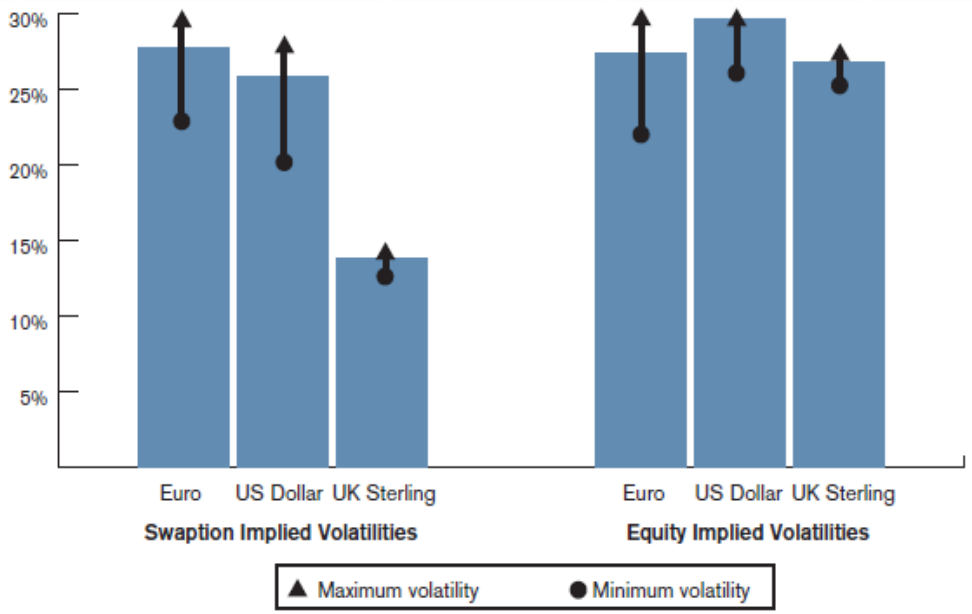
Time Value of Options and Guarantees

- 08 November 2012

- The majority of companies use stochastic models on a market consistent basis.
- Calibration of models to financial market implied volatility was based on 2011 end-period values for interest rates & equities.
- However, for property many used historical analysis and expert opinion.
- Most companies used 1,000 economic scenarios.
- 14 out of 29 companies in our sample disclosed the use of dynamic policyholder behaviour.



* Swaption implied volatilities are based on 20-year swap length, 20-year option term.
** Equities based on 10-year options.

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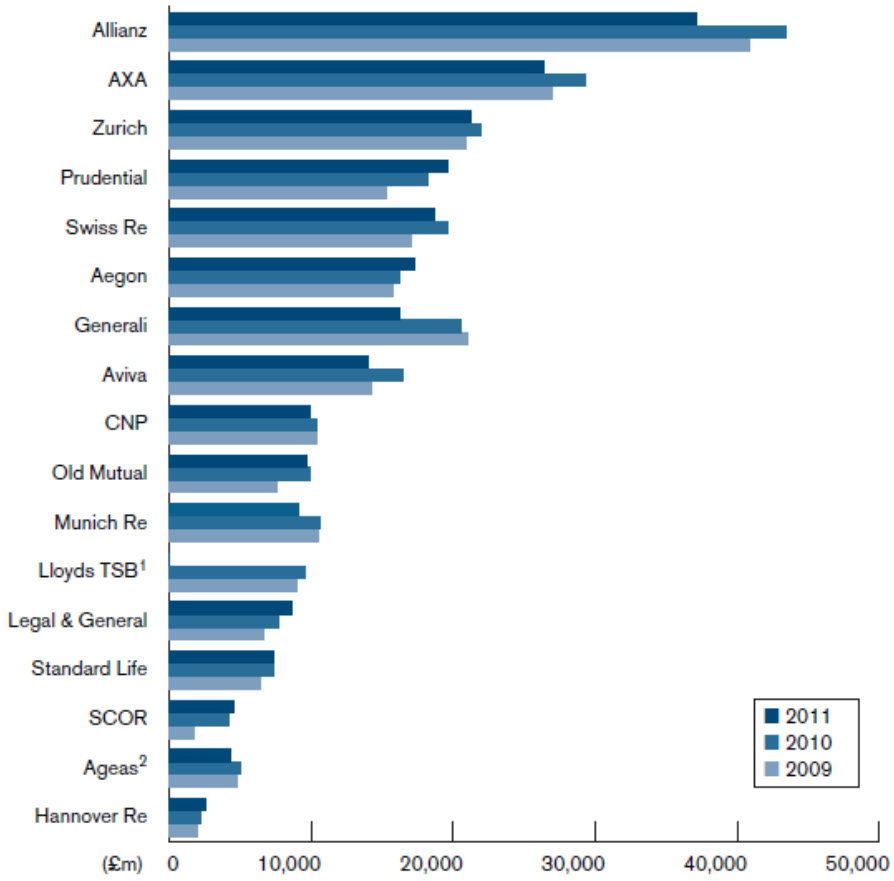
Year End Embedded Value Results



1 Lloyds TSB did not disclose its group MCEV but did publish the value of new business at the end of 2011.
2 Ageas embedded value is the total of 'life' and 'non-life & other insurance'.

CFO Forum members combined EV of £227 billion in 2011 (2010: £252 billion). Majority of companies experienced falls with a small handful experiencing modest increases.

Top 2011 performers (% increase) were Hannover Re, Legal & General and SCOR. Generali, Allianz and Aviva experienced the largest percentage reductions.

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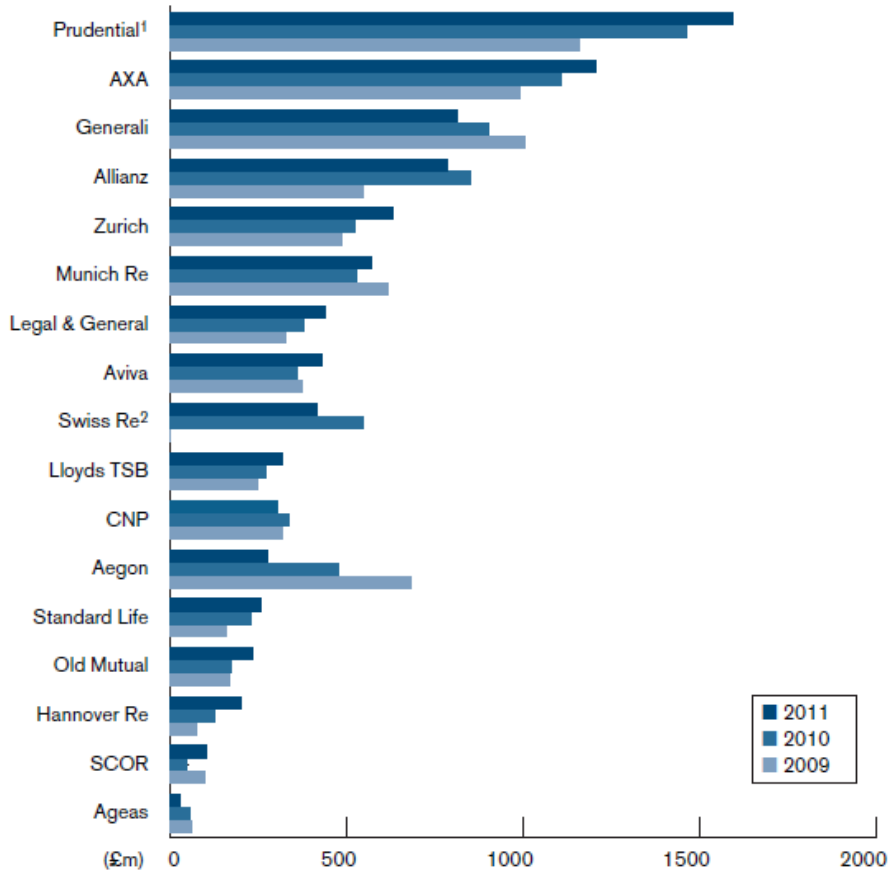
Year End Value of New Business Results



1 Prudential's disclosed gross of tax VNB has been adjusted by the relevant 2011, 2010 and 2009 UK tax rate.
2 The Swiss Re VNB only includes the value from its underwriting activities.

CFO Forum members combined VNB topped £8.6 billion in 2011 (2010: £8.4 billion).

Average new business margin increased from 2.4% in 2010 to 2.5% in 2011.

Offset by a reduction in overall volume of new business of 3%.

Two-thirds of companies reported an increase in VNB

One-third of companies reported a reduction in VNB

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SCOR Global Life

- SCOR's results were strong for 2011

EURmn	MCEV 2010	MCEV 2011	Increase
Shareholder net worth	1,076	1,538	462
Value of in-force	1,135	1,782	647
MCEV	**2,211**	**3,319**	**1,108**

SCOR Global Life

- Helped by an acquisition…

MCEV Transamerica Re @ 9 August 2011	1,074
Purchase price	(646)
Transaction costs	(13)
MCEV gain on purchase	**414**

SCOR Global Life

- And limited exposure to market risk might have helped too…

Sensitivity analysis	EURmn
Base case	3,319
Mortality/morbidity -5%	1,135
No mortality improvements	(1,584)
Mortality/morbidity (annuities) -5%	0
Lapse rates -10%	73
Maintenance expenses -10%	64
Interest rates +100bps	(68)
Interest rates -100bps	73
Equity and property capital values -10%	(20)
Equity and property implied volatilities +25%	(3)
Swaption implied volatilities +25%	(0)

Assicurazioni Generali

- Generali's results were mixed for 2011

Group EURmn	31-Dec-10	30-Dec-11	Increase
ANAV	10,976	11,138	(72)
VIF	12,951	8,233	(4,076)
EV	**23,927**	**19,372**	**(4,148)**

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Assicurazioni Generali

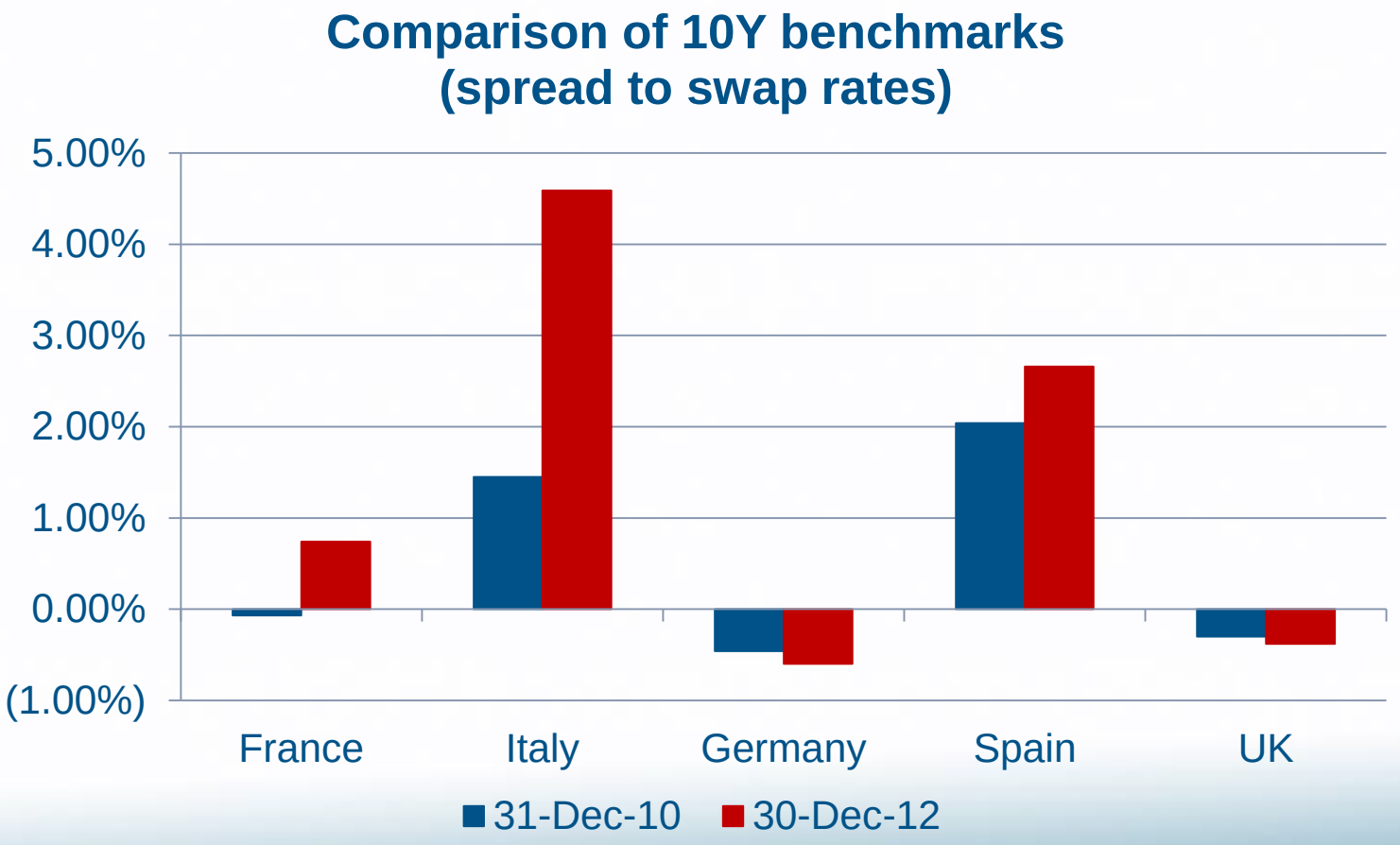
Germany EURmn	31-Dec-10	30-Dec-11	Increase
ANAV	1,116	1,103	(13)
VIF	2,990	2,641	(349)
EV	**4,106**	**3,743**	**(363)**

France EURmn	31-Dec-10	30-Dec-11	Increase
ANAV	2,592	2,616	24
VIF	1,453	1,212	(241)
EV	**4,045**	**3,828**	**(217)**

Italy EURmn	31-Dec-10	30-Dec-11	Increase
ANAV	4,589	4,517	(72)
VIF	3,287	(789)	(4,076)
EV	**7,877**	**3,729**	**(4,148)**

Market movements

- Market movements had an adverse impact on the financial results of many insurance companies



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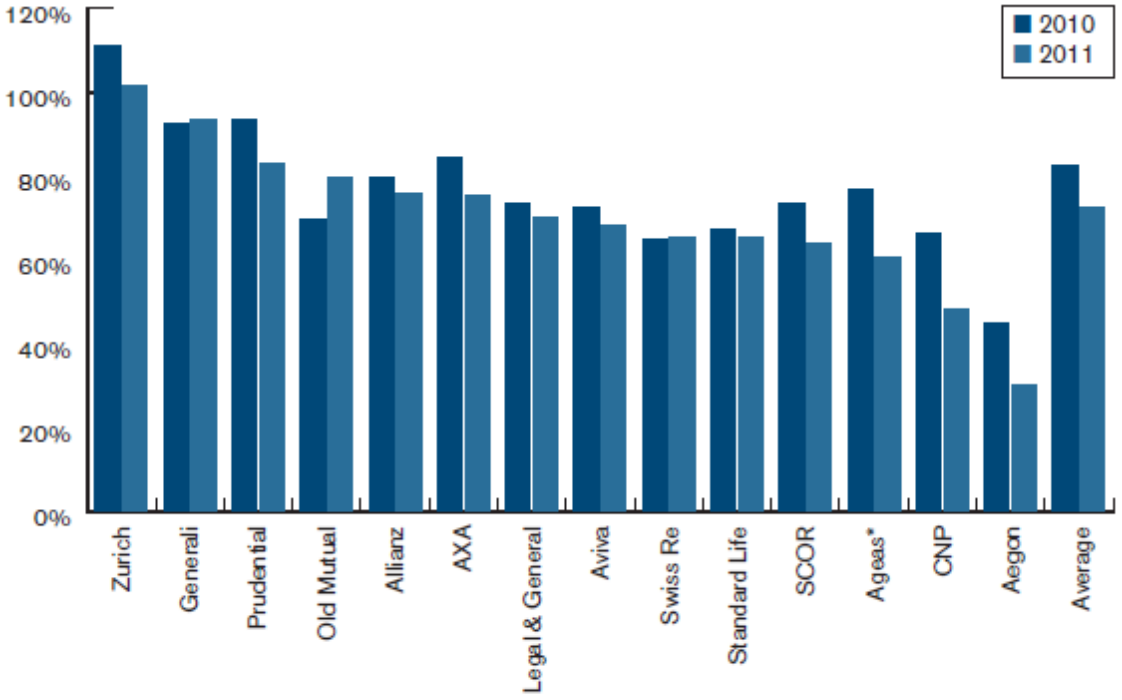
Assicurazioni Generali

- Generali illustrated the effect of introducing a government spread premium defined as the difference at the ten year duration between the "AAA & others" curve provided by the European Central Bank (a weighted average of government bond issues) and the swap curve

VIF EURmn	Base	Sensitivity	Increase
Germany	2,641	3,610	969
France	1,212	2,503	1,291
Italy	(789)	1,398	2,187
Group	**8233**	**13207**	**4,974**

Market Capitalisation as a % of Embedded Value



Excludes Lloyds Banking Group, Hannover Re and Munich Re. A comparison of their embedded values to market capitalisation has not been included because their embedded values do not contain all the business within the group.
Market capitalisation based on share price from Bloomberg multiplied by number of shares (from companies' Report and Accounts) or taken directly from companies' Report and Accounts, as appropriate.
* Ageas embedded value is the total of 'life' and 'non-life & other insurance'.

- Discrepancy between market cap and EV due to many reasons, including:
  - EV makes no allowance for future new business or intangibles.
  - Timing differences
- EV exceed market cap for almost all companies.
- Gap between market cap and EV widened over 2011
  - Avg market cap as % of EV fell from 82% to 72%

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Summary

CFO Forum relaxed previous requirements that meant MCEV was no longer the only recognised format for EV reporting and relaxed requirements around alignment of EV methodology to SII.

Over 80% of companies in our sample used some form of market consistent EV methodology (almost static since 2010).

Companies continue to align reporting approaches – in particular using the QIS 5 methodology in setting the liquidity premium for their EV reporting.

Allowance for liquidity premium significantly increased in 2011.

2011 end period implied volatilities were used in the calibration of stochastic models and a large number disclosed their allowance for dynamic policyholder behaviour.

Overall reduction in EV but some companies still experienced modest increases. VNB remained robust.

Discrepancies between Market Capitalisation and EV persist.

Japanese companies

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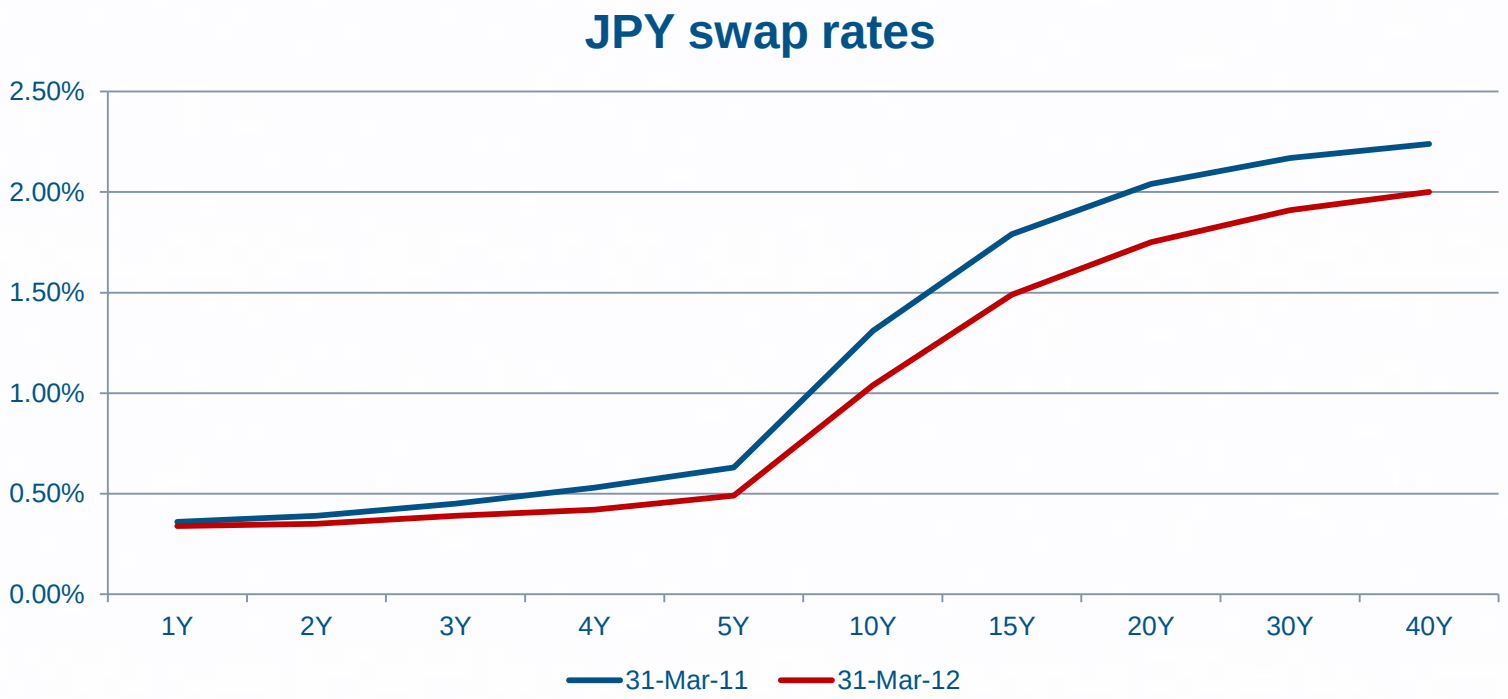
Market movements

- As if it were possible, JPY rates continued to decline…



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Overview of EV reporting by Japanese companies

- The following table summarises the EV methodology adopted by the main life insurers in Japan:

	Dai-ichi	LifeNet	Sompo Japan Himawari Life	Sony Life	Sumitomo Life	T&D Life
Method	MCEEV	MCEEV	MCEV	MCEV	MCEEV	MCEEV
RFR method	Bottom up	Bottom up	Bottom up	Bottom up	Bottom up	Bottom up
RFR basis	Government bond and swap	Swap	Swap	Government bond	Government bond	Swap
Liquidity premium	Yes	No	No	No	No	No
Required capital	Regulatory Internal	Regulatory Internal	Regulatory Internal	Regulatory Internal Rating agency	Regulatory Internal	Regulatory Internal
Cost of capital	Frictional cost	Frictional cost	Frictional cost	Frictional cost	Frictional cost	Frictional cost
Dynamic p/hr behaviour	Yes	No	Yes	Yes	No	Yes

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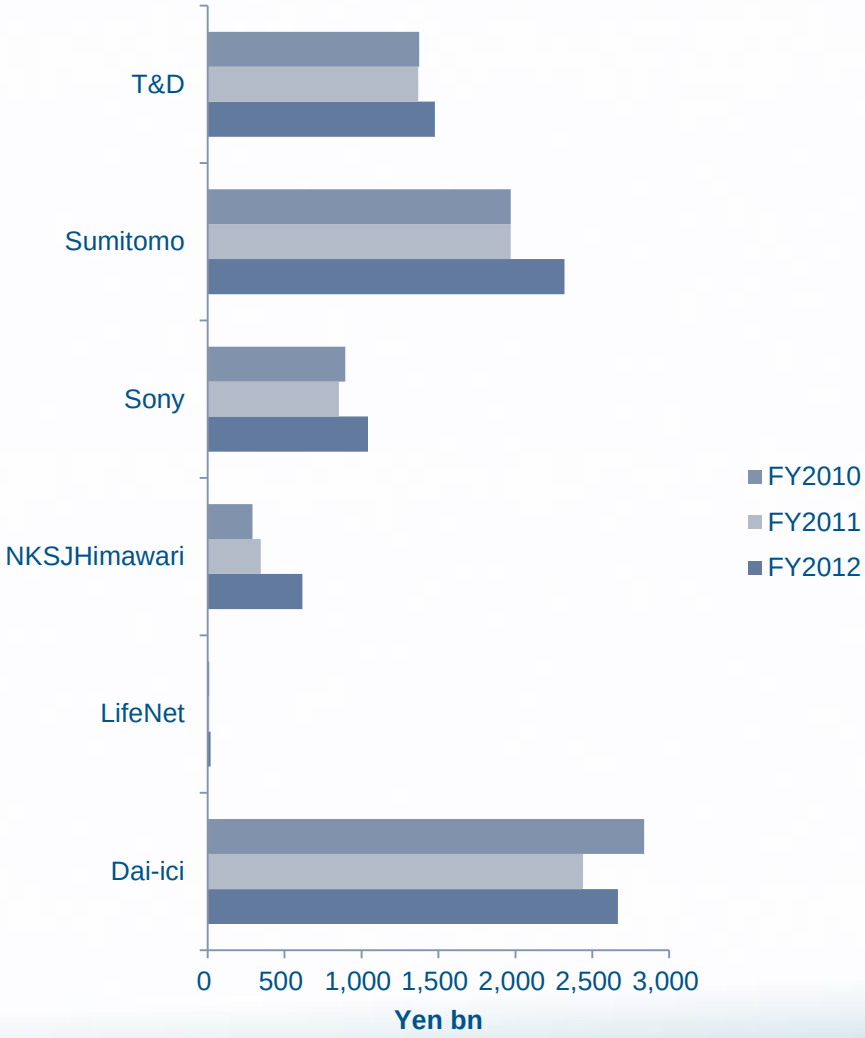
Year End Embedded Value Results (Japan)



- The embedded values reported by the Japanese companies have been relatively stable over the past three years.
- The embedded values have generally increased due to the lower interest rate environment, which results in unrealised gains on the asset values.
- The significant increase in embedded value for Sompo Japan Himawari is due to the merger between Nippon Koa and Sompo Japan Himawari in October 2011.

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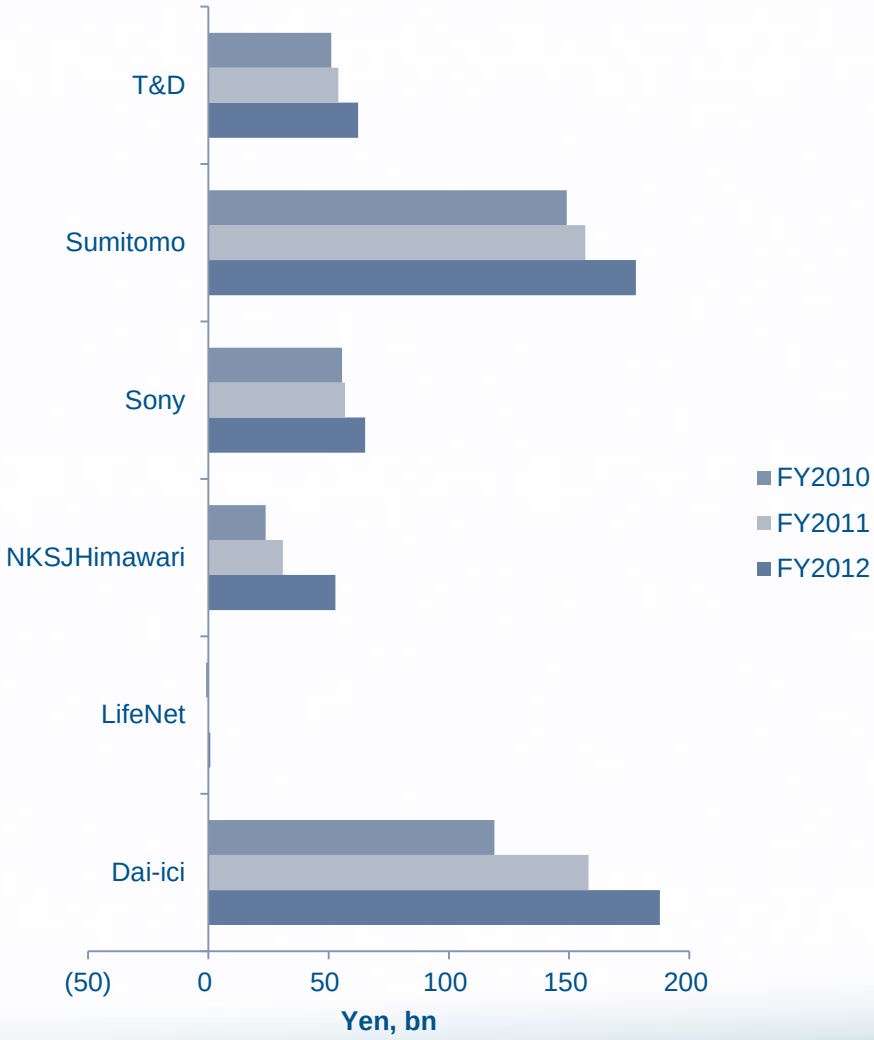
Year End Value of New Business Results



- The VONB reported by the Japanese companies have been relatively stable over the past three years.

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LIFENET Insurance Company

- LIFENET Insurance Company is one of the first internet based insurance companies operating in Japan, and commenced business in 2008 with clearly stated objectives, which can be seen on their website:

Life insurance will be comprehensible

- (1) Our products will be simple and comprehensible. There will not be complex policies with special provisions.
- (2) Life insurance is a financial product designed to mitigate risk, and we believe the customer should decide what products are necessary for them.

Life insurance will be cost-competitive

- (1) We believe that no one should pay premiums that are more expensive than necessary, and will be innovative and creative in order to develop and maintain the most cost-competitive products possible.

Life insurance will be convenient

- (1) We know our customers have very busy lives. That is why our customers can apply for our life insurance policies via the Internet, 24 hours a day, 7 days a week.

- Their goal is to “become a comprehensible life insurance company” and their stated aim is to give full and detailed information disclosure to achieve this

LIFENET Insurance Company

- Highlights of their FY2012 embedded value disclosures include:

(JPYmn)	31-Mar-11	31-Mar-12	Increase
Value of in-force business	1,986	5,122	3,136
Certainty equivalent value	4,896	11,147	6,251
Time value options and guarantees	0	0	0
Frictional cost of capital	(69)	(95)	(26)
Allowance for non-market risk	(2,840)	(5,930)	(3,090)

LIFENET Insurance Company

- New business disclosures:

(JPYmn)	31-Mar-11	31-Mar-12	Increase
Value of new business	(65)	788	853
Adjusted net worth	(1,620)	(2,192)	(572)
Value of in-force business	1,554	2,981	1,427
Certainty equivalent value	3,343	5,788	2,445
Time value options and guarantees	0	0	0
Frictional cost of capital	(43)	(45)	(2)
Allowance for non-market risk	(1,745)	(2,761)	(1,016)
PV future premiums	24,125	34,393	10,268
Margin	(0.3%)	2.3%	2.6%
Ultimate expense basis VNB	1,010	1,692	682
Ultimate margin	4.2%	4.9%	0.7%

LIFENET Insurance Company

- New business disclosures:

(JPYmn)	Change in EEV	Change in VNB
EEV and VNB 31 March 2012	**18,547**	**788**
1.0% increase in RFR	823	392
1.0% decrease in RFR	(1,527)	(722)
0.5% increase in RFR	462	221
0.5% decrease in RFR	(619)	(291)
10% decrease in equity and real estate	(13)	0
10% decrease in opex	741	368
10% decrease in lapses	(578)	(257)
5% decrease in claim incidence rates	1,720	767
Change required capital to 200% of solvency margin ratio	72	35

Singapore companies

Overview of EV reporting by Singapore companies

- The leading insurers, Great Eastern and AIA have both used Traditional Embedded Value approach to report their embedded value. Prudential on the other hand uses a European Embedded Value (EEV) approach.

	Great Eastern	ntuc income	PRUDENTIAL	AIA
Method	TEV	Not provided in Financial statements	EEV	TEV
Risk Discount Rate	8.0%		3.9% for VIF, 4.65% for VNB	7.5%
Investment Returns by Fund	5.25% - Par 4.00% - Non Par 7.00% - ILP		Not disclosed	Not disclosed
Investment Returns by Asset Class	Not disclosed		1.6% for government bonds, 7.7% for equities	2.43% for 10 year bond, 7.75% for equities
Required capital	Minimum regulatory requirements (120%?)		Max(local statutory requirement, economic capital requirement)	180% RBC requirements

Comparison of NB Margins

In S$ Million	Great Eastern	PRUDENTIAL	AIA
Value of one year's new business	210	Not disclosed	207
New business Annualized Premium Equivalent (APE)	533*	Not disclosed	333
NB Margin	39%	76% (includes Malaysia, Singapore, Thailand, Vietnam	62%

Mix of 2011 NB APE As per MAS Statistics	Great Eastern	Prudential	AIA
Par	68%	53%	20%
Non Par	21%	24%	42%
Linked	9%	22%	24%
Group	1%	1%	13%
Total	**100%**	**100%**	**100%**

APE = 10% SP + 100% RP
* Figures not available in annual report. Taken from MAS Statistics

Lower margins for GE compared to Prudential and AIA likely driven by a much higher proportion in Par business. While it is easier to sell "Par" business, margins are significantly lower due to 90:10 profit share split

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Sensitivity analysis and other disclosures

Sensitivity analysis	Great Eastern	PRUDENTIAL	AIA
Sensitivity tests presented	• Investment returns +0.5%, RDR +1.0%; • Investment returns -0.%, RDR -1.0%	• 1% increase in RDR; • 1% increase in interest rates; • 1% decrease in interest rates; • 1% increase in equity/ property yields; • 10% fall in equity/ property market values; • 5bps increase in long term expected defaults; • 10 bps increase in liquidity premium; • 10% decrease in maintenance expenses; • 10% decrease in lapse rates; • 5% decrease in mortality/ morbidity rates	• 200 bps increase in RDR; • 200 bps decrease in RDR; • 50 bps increase in interest rates; • 50 bps decrease in interest rates; • 10% increase in lapse rates; • 10% decrease in lapse rates; • 10% increase in mortality/ morbidity rates; • 10% decrease in maintenance expenses • Expense inflation set o 0%
Sensitivity results disclosed separately for SG	**No**	**No**	**No**

AIA has by far the most disclosures in relation to Asian operations, setting a clear benchmark for reporting in Asia.

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Questions?

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