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Market Consistent Embedded Value
The road to recovery

It has been a turbulent couple of years since the launch of the Market Consistent Embedded Value (MCEV) Principles and Guidance in June 2008. During 2009 markets began to recover from the worst economic downturn in more than 60 years. Whilst the recovery is generally reflected in this year's MCEV results the consistency of approach promised by the Principles and Guidance has not materialised. In fact company publications are still characterised by a variety of different reporting methods and assumptions. Where the CFO Forum has struggled to achieve full comparability in shareholder value reporting, the new Solvency II regime will impose it for regulatory reporting. It is the latter which is exercising the insurance sector as the new regime takes shape, with shareholder value reporting developments taking a lower priority. Indeed the very essence of Market Consistent Embedded Value is unclear in the light of Solvency II.

This year's report analyses the MCEV results published by 16 major European insurers, with a focus on those companies with UK operations. Our analysis draws out some of the key themes which have emerged over the last couple of years by comparing MCEV across the industry. We also look ahead to the anticipated impact that the Solvency II regime will have on reported shareholder value.

We are always interested to get your feedback and hear your views on the topics we cover. If you would like to contribute to the debate, or ask a question to our experts, please speak to your usual Deloitte contact, or one of the team listed on page 13.

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Partner – Actuarial & Insurance Solutions

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Deloitte view

Still no consistency

The MCEV concept, whilst theoretically clear, is in practice still some way from achieving the original CFO Forum aims. The 2009 results are again characterised by a variety of different reporting methodologies and a lack of consistency in all but the most fundamental elements of the bases. You might well be forgiven for struggling to understand a proper economic analysis of change in embedded value over the last two years, given the inconsistencies in application of illiquidity premiums and a multitude of volatility assumptions in 2008 and 2009. The challenge of comparing results across companies to understand which have successfully weathered the economic storm and continued to add value, remains a daunting task.

Smoothing the results

The shareholder need for stability in both earnings and dividends in volatile conditions was always going to be challenging in a market consistent regime. Management discretion in choosing certain elements of the economic basis such as the size of the illiquidity premium and implied volatility assumptions, have been added to the toolkit to "smooth" the stated shareholder value in the disclosures since MCEV was adopted. This may be helpful to management, but reduces comparability.

New business value, a key element of management's contribution to value, added only 4% to opening embedded values in 2009, compared to the 56% arising from positive economic variances. In light of this it is perhaps surprising that management teams have not put more effort into hedging out the economic variability in the results.

Recovery and growth

Analysts typically identify a theme for each reporting season. 2008 was all about the strength of the balance sheet and this year appears to be all about growth potential. Whilst Prudential may continue to look to the high growth markets in Asia despite its now aborted acquisition of AIA, Aviva is focussing on the retiring baby boomers in the more mature European markets for its future expansion. Standard Life is concentrating on the UK, which it describes as a "stupendous" growth market.

Illiquidity premiums

The end of 2008 saw controversy in relation to illiquidity premiums and their role in MCEV. That controversy continued in 2009 and has become an issue in relation to Solvency II and IFRS.

Insurers are currently split into two camps, those who made no adjustment and continued their pre 2008 practices, and those who adjust the reference rate upwards for the illiquidity premium. The second approach has generally resulted in a higher MCEV.

The lack of detail describing the approach and the degree of management discretion over illiquidity assumptions, may be seen by some observers as providing a margin which runs counter to the spirit of the Principles and Guidance.

Solvency II

The Solvency II regime is the biggest regulatory change to come into force in the insurance industry and will shape its future for years to come. Insurers continue to ramp up their change programmes to ensure readiness for the new regime. Solvency II is adding a significant layer of complexity to the insurance industry and IFRS Phase II and MCEV calculations and reporting add further cost, so it is important for firms to streamline their reporting processes to capture synergies.

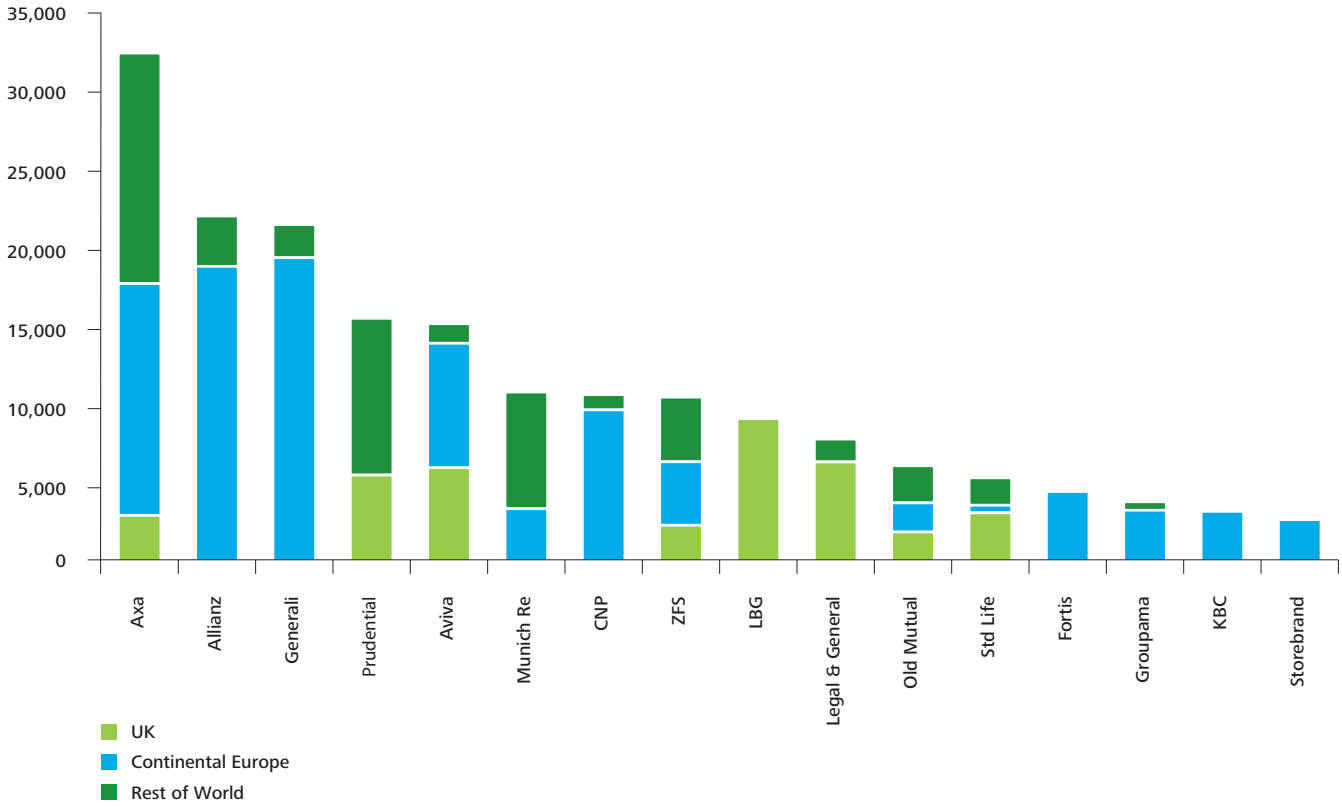
Franchise Value

The market's own view of potential for growth should in theory be reflected in the difference between a company's market capitalisation and its MCEV. Our year-end analysis of four major UK players shows only Prudential with a share price (just) above its embedded value per share. Although insurers are now reporting embedded values nearly as high as pre-crisis levels, the different methodologies and assumptions employed, both between companies, and from year to year, make firm conclusions difficult to draw. Companies with predominantly UK business might be suffering from investor worries about future growth potential. Solvency II and its anticipated capital impact is probably also weighing on investors' minds.

2009 Embedded Value results

The aggregate Embedded Value of long term covered business at 31 December 2009 for the 16 insurers in our survey was £179bn, up by 17% from £153bn reported last year. Of the £179bn, £37bn was written in the UK, £93bn in continental Europe and the remaining £49bn outside of Europe.

Figure 1. Global Life EV 2009 (£m)



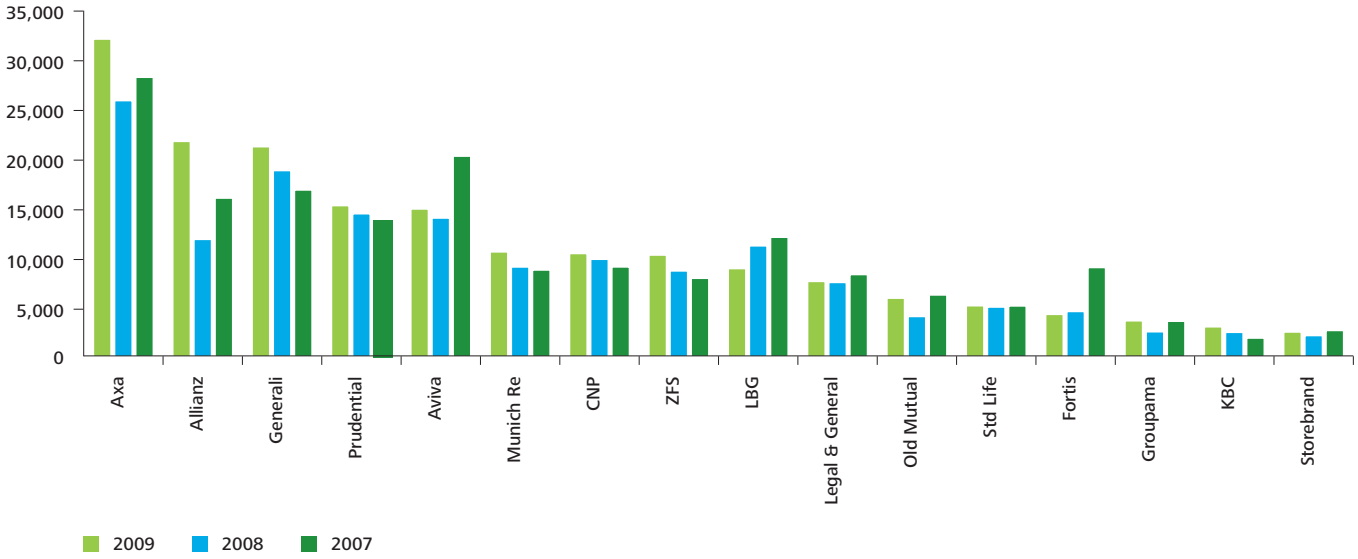
Source: Companies' disclosure & Deloitte analysis

Notes: Old Mutual does not split out the wealth management EV for UK from the rest of Europe in its results and hence all is considered UK. Fortis does not split out its small amount of non-European business.

The figures do not make allowance for Resolution's acquisition of parts of Axa UK.

Figure 2 shows the embedded value for life business reported for each company at the end of 2009 together with the two previous years' results.

Figure 2. Global Life EV 2007 - 2009 (£m)



Source: Companies' disclosure & Deloitte analysis

Axa remains the largest insurer in our sample, some considerable margin ahead of Allianz and Generali, and this position will not change once Resolution takes over part of Axa UK's business. Had Prudential completed its acquisition of AIA this would have propelled them into second place behind Axa, giving an indication of the step change this would have represented for Prudential. Currency fluctuations have a significant impact on the results, particularly for those companies with large volumes of non-UK business which have been converted into a depreciating sterling for the purposes of our comparison.

The top insurer by UK embedded value is Lloyds Banking Group which combines the insurance business of Scottish Widows and HBOS, followed by Legal & General.

Allianz showed the largest increase in embedded value, up by 94% compared to 2008. The increase was predominantly due to economic variance which represents 65% of the opening embedded value. Legal & General was the only company to show a small negative economic variance explained by restructuring in the non-profit annuity portfolio.

2009 saw little M&A activity due to uncertainty in the economic environment. The only major deal was Resolution's acquisition of Friends Provident, in a transaction that valued FP at £1.9bn. 2010 has seen increased M&A activity with the mooted AIA deal already mentioned, along with Resolution's agreed acquisition of parts of Axa UK. Also on the horizon is ING's disposal of its insurance arm, as required by the European Commission following the provision of state aid to ING. The likely outcome is for an IPO of the insurance portfolio of ING which is considered too big and complex for one rival to take over.

Economic variances

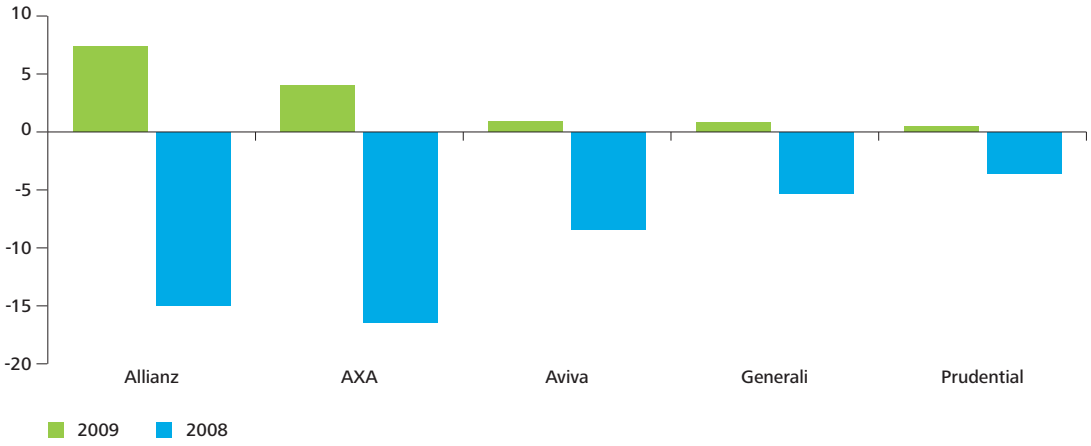
Over 2009, markets recovered part of the losses incurred during the height of the crisis in 2008. Of the total increase in embedded value in 2009, more than half (56%) is accounted for by economic variances.

The following table shows how three key economic indicators changed over the last two years.

Table 1

	Jan - Dec 2009	Jan - Dec 2008
Equities (FTSE levels)	22%	-31%
Gilt yields (10 year)	+69bps	+82bps
Credit spreads	-142bps	+211bps

Figure 3. Economic variance in 2009 and 2008 (£bn)



Source: Companies' disclosure and Deloitte analysis

Whilst the broad pattern of variances is consistent with the direction of the economic indicators shown for 2008 and 2009, there is little additional detail to explain the relative sizes of the variances. Where variances are small, should we conclude that the company has little market exposure to movements represented by these indicators, or should we conclude that they have successfully hedged their exposure, and, if so, at what cost? One might also ask if any smoothing has been applied. These are legitimate questions which, given the current level of disclosure, remain largely unanswered.

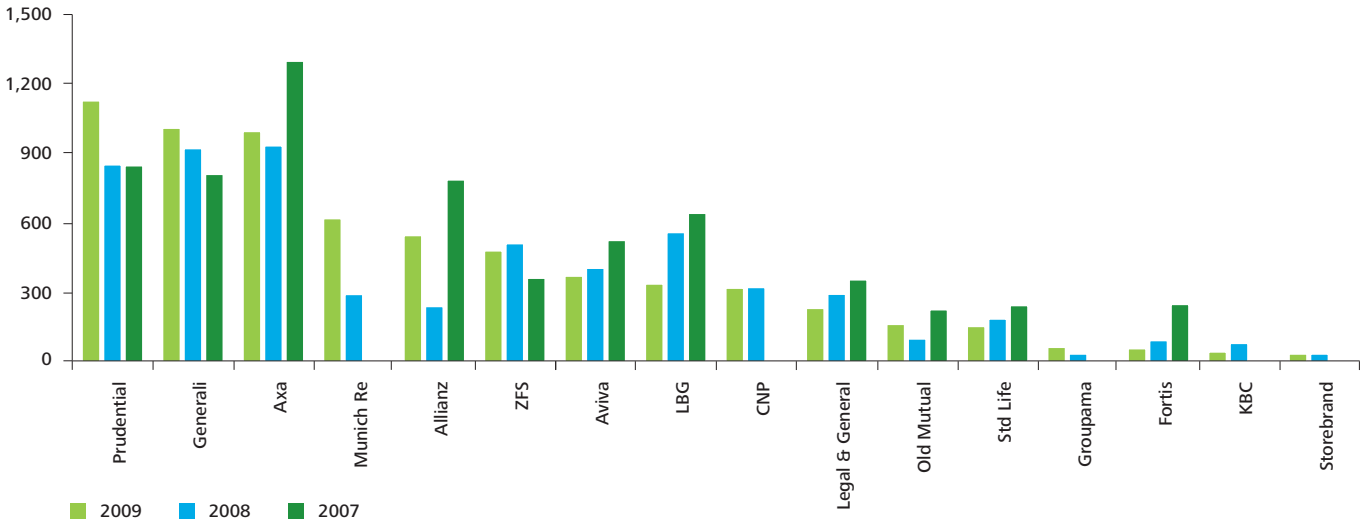
The size of these economic variances demonstrates that achieving stability in earnings in a volatile market was always going to be challenging in a market consistent environment. Management discretion in choosing certain elements of the economic basis such as the size of the illiquidity premium and implied volatility assumptions has proved to be valuable in "smoothing" the stated shareholder value in the disclosures since MCEV was adopted. What is surprising is that the importance of economic variances relative to embedded value has not led to more effort to hedge out the variability of the results.

2009 new business results

Figure 4 shows the value of new business written over the last three years.

The aggregate value added by new business for our 16 firms during 2009 was £6.6bn or 4% of the aggregate opening EV. New business value has traditionally always been considered a key area where management can be seen to be creating shareholder value. Unfortunately throughout MCEV's short lifetime the level of new business value has been dwarfed by the impact of prevailing market conditions, with economic variances accounting for most of the change in MCEV.

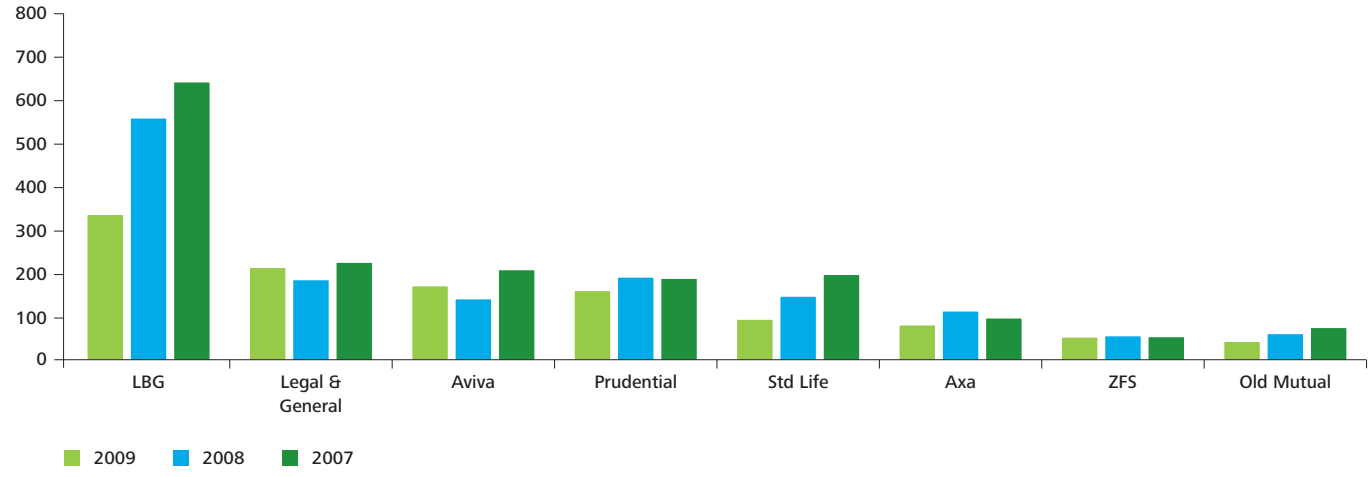
Figure 4. Value of global new covered business 2007 - 2009 (£m) (net of tax)



Source: Companies' EV disclosures

Figure 5 shows the value of UK new business written over the last three years for the main UK players in our sample. Overall new business values continue to decrease showing a fall of 20% compared to the new business value of 2008. This was driven mainly by a drop in volumes with the average margin on a PVNBP basis remaining relatively constant.

Figure 5. Value of UK new covered business 2007 - 2009 (£m) (net of tax)

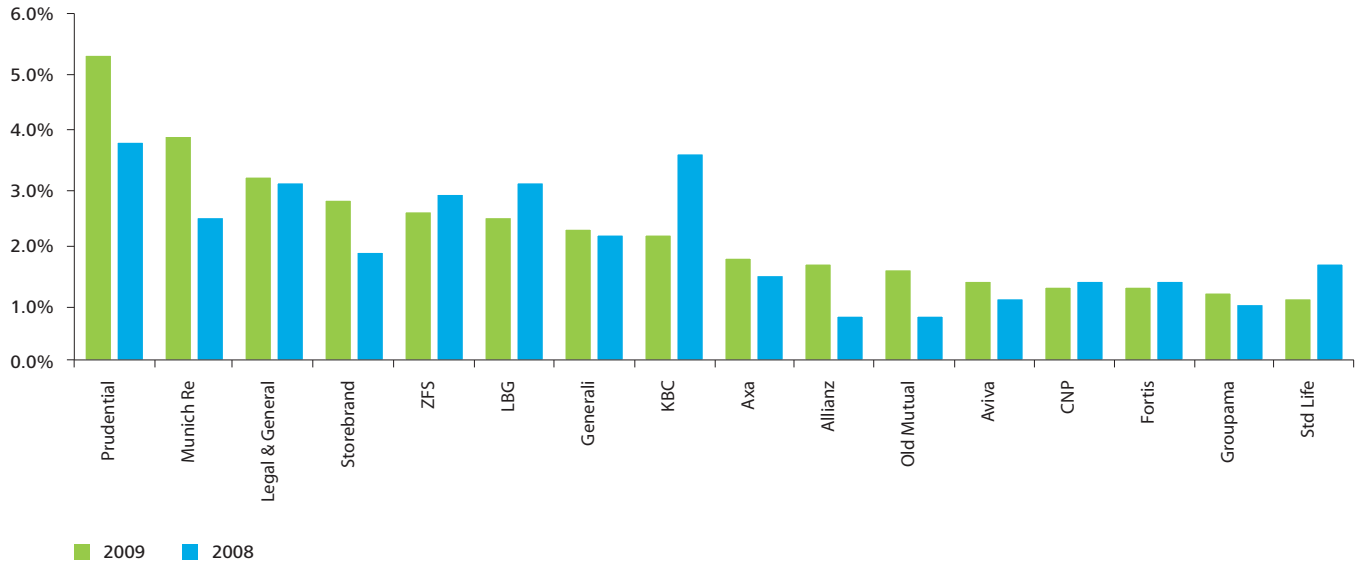


Source: Companies' EV disclosures

Lloyds Banking Group has the largest value of new business in the UK in 2009, although it showed a significant reduction of 39% compared to 2008. This was mainly driven by a reduction in sales volumes caused by adverse economic conditions and the withdrawal of some legacy HBOS products.

Figure 6 shows the wide range of new business margins, from Standard Life at 1.1% to Prudential at 5.3%. These differences tend to be driven by business mix and underlying cost base, although there isn't sufficient information disclosed at a product level to draw any firm conclusions.

Figure 6. 2008 - 2009 new business margin on a PVNBP basis (net of tax)



Source: Companies' EV disclosures

Methodology and assumptions

Table 2 shows a comparison of the different methodologies and assumptions used in our sample set for the reference rates, illiquidity premium, volatilities, and the cost of residual non-hedgeable risks. We comment on each of these below.

Reference rate

Nearly all companies covered in our analysis have used the swap curve for the reference rate except for territories where there is no deep and liquid market where government bonds were used.

Illiquidity premiums

In October 2009, the CFO Forum published an amendment to the MCEV Principles to reflect the inclusion of illiquidity premium. The changes re-stated that the reference rate to be applied under MCEV should be based on the swap yield curve based on the currency of the cash flows, with an illiquidity premium where appropriate. The CFO Forum is undertaking further work to develop more detailed application guidance to maintain consistency going forward.

The effect of the illiquidity premium is difficult to estimate as illiquidity assumptions potentially enter an embedded value calculation in four places. Firstly, it may be appropriate to recognise higher returns on assets where those returns are deemed to compensate illiquidity risk rather than cash flow risk. Secondly, it may be appropriate to strip out any illiquidity effects from the prices of calibration assets before these are used to set economic assumptions. Thirdly, investors in illiquid assets should consider the circumstances in which they might be forced sellers, and establish appropriate provision for the contingent illiquidity cost. Finally, consideration should be given to whether the illiquidity of an insurer's own shares could be a reason to increase the required return to shareholders.

The typical application of illiquidity premiums has been in relation to the impact on asset returns which is also the only application resulting in a higher embedded value. The methodology has changed little between 2008 and 2009 and typically it was the same insurers who took credit, although the level was more modest than in 2008.

If it is believed that corporate bond spreads have returned to more normal levels, firms could in theory have chosen to treat 2008 as a one-off situation, reducing the illiquidity premium back to zero in 2009. In practice no firm chose to do this. A variety of different illiquidity premium adjustments to the reference rate have been used, ranging from 0 to 100 basis points. The average reduction of the level of the illiquidity premium was 58% for the UK, 54% for the Eurozone and 75% of rest of world.

Volatility

Most companies regarded markets as having returned to more "normal" conditions in 2009 as evidenced by their use of implied volatility assumptions consistent with the balance sheet reporting date. This is in sharp contrast to the 2008 results where few companies used 2008 year-end volatilities. As a consequence, although observed implied volatilities have actually reduced over 2009, some companies have increased their volatility assumption, reducing their stated embedded value.

Cost of Residual Non-hedgeable Risk

The Cost of Residual Non-hedgeable Risk (CRNHR) continues to be an area where companies apply a number of different approaches. Some companies already comply with the MCEV principles and use a cost of capital approach to determine the CRNHR. There is a wide range of different charges ranging between 0.5% and 7% per annum.

Table 2. Key EV assumptions

Company	Reference rates	Illiquidity premiums	Volatilities	CRNHR
Axa	Swap rates 31 December 2009.	• UK, US & Hong Kong: 50 bps • Eurozone & Switzerland: 30 bps. • Japan: 20bps.	Implied volatility 31 December 2009.	Allowance for non-financial risk assuming a higher locked-in capital base.
Allianz	Swap rates as at 31 December 2009 & government bonds in countries where there is no deep and liquid market.	No allowance for liquidity premium.	Implied volatility 31 December 2009.	Capital charge of 4.5%. This is derived as 90% (Allianz's beta for the insurance segment) multiplied by a 5% equity risk premium.
Generali	Swap rates 31 December 2009.	• Continental Europe (excluding Switzerland): 20 bps. • Switzerland: 10 bps. • US: 30 bps.	Implied volatility 31 December 2009.	Capital charge of 4% applied to relevant risk-capital.
Prudential	Weighted RDR: 8.8% (Asia), 7.2% (Jackson), 10.2% (UK annuity), 7.4% (UK others).	UK annuity: 104 bps.	Combination of actual market data, historic market data and an assessment of longer-term economic conditions.	Allowed as a margin in the discount rate. Defined as: – 100 bps for UK annuity business. – 50 bps Group's other business.
Aviva	Swap rates 31 December 2009.	• UK: 100bps. • France: 30bps. • Spain: 30bps. • Delta Lloyd: 15bps. • US immediate annuities: 65bps. • US deferred annuities and other contracts: 55bps.	Implied volatility 31 December 2009.	Capital Charge of 2.5% applied to group-diversified capital.
Munich Re	Swap rates as at 31 December 2009 & government bonds in countries where there is no deep and liquid market.	No allowance for liquidity premium.	Implied volatility 31 December 2009.	Capital charge of 7% allowing for diversification between covered and non-covered business.
CNP	Swap rates 31 December 2009.	16 bps.	Implied volatility 31 December 2009.	Based on the cost of capital approach but do not mention the charge applied.
ZFS	Swap rates 31 December 2009.	No allowance for liquidity premium.	Implied volatility 31 December 2009.	Capital charge of 2.5% allowing for diversification between covered and non-covered business.
Lloyds Banking Group	15 year UK gilt yield for non-annuity business.	Annuity business: 75 bps.	No mention.	No mention.
Legal & General	UK RDR = 8.0%, USA RDR = 7.4%, Europe RDR = 7.1%.	N/A.	N/A.	N/A.
Old Mutual	Swap rates 31 December 2009.	• US Life business: 100bps • OMLAC's Retail Affluent Immediate Annuity: 50 bps • No liquidity premium allowance made for the other regions.	Combination of actual market data, historic market data and an assessment of longer-term economic conditions.	Capital charge of 2.6% applied to the group diversified capital required in respect of non-hedgeable risks.
Standard Life	UK RDR = 7.61%, Europe = 6.89%.	N/A.	Implied volatility 31 December 2009.	Allowance was made by applying stress tests to the VIF using internal capital model, and quantifying an additional risk margin based on the results of the stress tests. For Asia the charge was calculated using a cost of capital approach on the risk capital arising from the key sources of non-market risk.
Fortis	Swap rates 31 December 2009.	• Eurozone: 20bps. • US & Hong Kong: 50 bps.	Implied volatility 31 December 2009.	Capital charge of 0.5% applied to the target solvency capital.
Groupama	Swap rates 31 December 2009.	25 bps.	Implied volatility 31 December 2009.	Capital charge of 0.75% but no details on the methodology used.
KBC	Swap rates 31 December 2009.	20 bps.	Implied volatility 31 December 2009.	KBC calculates a market value margin (MVM) on a cost of capital approach as 6% of the capital required to cover the life insurance risks (mortality and longevity), operational risks and non-hedgeable ALM risks. KBC considers that the frictional cost is implicitly allowed in the MVM.
Storebrand	Market interest rates for up to 10 years, long term equilibrium level applied from 20 years and linear interpolation between 10 years and 20 years.	No alliance for illiquidity premium.	Implied volatility 31 December 2009.	Capital charge of 4% pa applied to the QIS 4 capital requirement. The CRNHR also allows for the illiquidity of the Norwegian and Swedish swap markets.

Market developments

Annuities

The UK and Ireland are unusual within Europe because of a retirement model in which savers have traditionally been required to purchase life annuities on, or soon after, retirement. A handful of insurers compete aggressively in this market, and have amassed billions of pounds in annuity liabilities, typically backed partly by corporate bonds. Traditional embedded value allows credit to be taken for most of the yield on these bonds when discounting the liabilities, so the present value of that portion of the spread attributable to shareholders comes through as a profit at inception. Similar issues arise in the US, where the products called "fixed annuities" are in fact similar to European profit sharing business, with some credit in the valuation basis taken for spreads on corporate bonds.

Textbook application of market consistent reporting uses discount rates based on gilts or swaps. This is unflattering to a business model which shares corporate bond spreads with policyholders, as the sharing must be recognised as a liability with no corresponding asset. For this reason, the large annuity writers have tended to argue that MCEV is inappropriate for annuity business and have shied away from disclosing on this basis.

The CFO Forum seems to have squared this circle by permitting illiquidity premiums in the discount rate. This may tempt annuity writers into the MCEV fold, as they can report on the same basis they did before and yet still claim market consistency. However, this still leaves open the wider issue of consistency between insurers. Analysts must appreciate that two different approaches can both be market consistent but not consistent with each other.

The return to growth and future strategy

For all businesses, and insurance is no exception, future growth is key to survival. The most eye-catching strategic deal was the potential £23.3bn takeover of AIA by Prudential. This transaction put particular emphasis on the "high-growth, high-margin" markets of south-east Asia as an important rationale for the deal.

In a similar move, Axa is buying the stake which it does not own in Axa Asia Pacific. The deal will simplify Axa's management and move it closer to its goal of tripling earnings from emerging economies to 15 per cent in three to five years.

In contrast to the Pru and Axa, Aviva decided to concentrate on the European market. Andrew Moss, Aviva's chief executive, argued that in spite of Europe's slower economic growth, it was a more attractive market than Asia because of its greater scale, savings levels and the opportunity to sell more products to the "baby-boomers" who are moving into retirement. He added that: "It's stable, well-regulated and relatively low-risk."

Another view of future growth was taken by Standard Life in which David Nish its CEO dubbed the UK a "stupendous" growth market for pensions business. Mr Nish said there was at least £700bn in pensionable assets up for grabs. Its Q1 2010 results have provided a strong start to the year, consistent with that strategy.

Solvency II

Insurers are undertaking huge programmes of change to ensure complete readiness for Solvency II. We comment below on two key areas of significant impact on insurers' compliance with Solvency II and their possible impact on MCEV.

Processes and systems

MCEV and Solvency II have some conceptual differences but will require similar tools for reporting. Firms developing financial models can look to take advantage of some synergy benefits between the two regimes. Improved risk processes reduce the likelihood of error such as inaccurate data, giving more reliable management information and higher confidence in the published MCEV results. Combined disclosure will allow firms to streamline their reporting timelines, improve efficiency and accuracy, reduce cost and create a more streamlined Finance function.

Business strategy

The final calibration of the asset risk charges is yet to be finalised by the European Commission but it is likely that it will still result in increased capital requirements for some companies and hence reduced attractiveness of equity and complex credit asset classes. As a result, insurance companies might decide to shift out of equity and into investment grade corporate bonds and government bonds.

Difficult questions about valuation of illiquid assets and liabilities affect both embedded value reporting and Solvency II. While the CFO Forum's inclusive approach has permitted diverse treatments within embedded value reporting, Solvency II will standardise reporting for statutory purposes. The most recent quantitative impact study under Solvency II adopts a two stage approach. The first stage is to estimate illiquidity premiums for corporate bond markets, varying by currency but not by term. The second step is to partition liabilities into buckets according to the multiple of the illiquidity premium (0%, 50%, 75% or 100%) they are deemed to capture. As the CFO Forum has been a major sponsor of the Solvency II approach we can expect many of these ideas to resurface in future calculations of MCEV.

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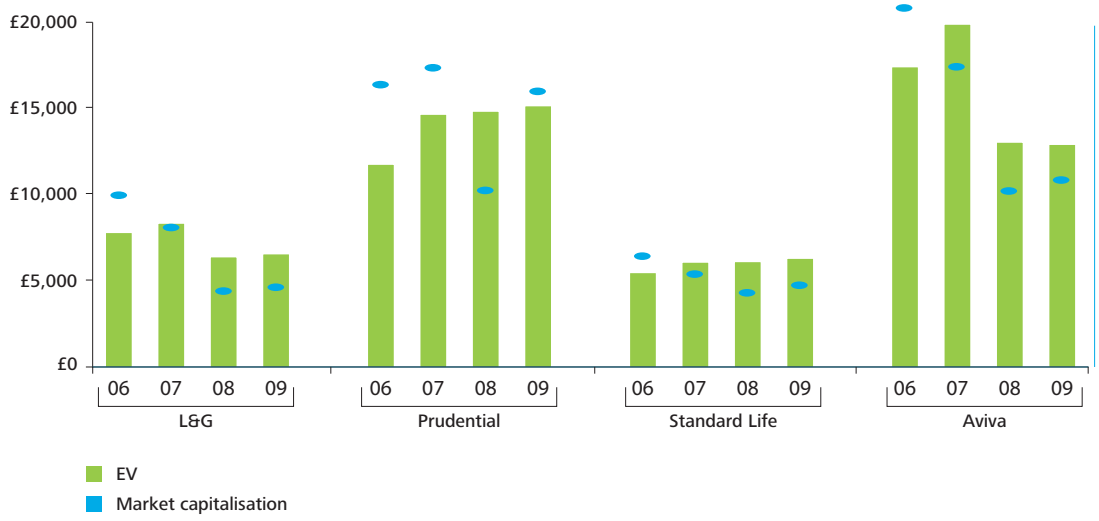
Franchise Value

In figure 7, we consider the Franchise Value – the excess of a company's market capitalisation over and above its EV, for four listed companies over the last four years.

At the height of the crisis in 2008 our sample companies were trading at significant discounts to EV, implying a negative franchise value. With the stabilisation of the financial markets during the latter part of 2009 the difference between market capitalisation and EV has narrowed although L&G, Standard Life and Aviva were all still showing negative franchise value at year-end 2009. Given the different assumptions and methodologies used in each company's reported embedded value any conclusions need to be heavily caveated.

For L&G and Standard Life, two companies with predominantly UK business models, commentators speculated about concerns over future growth potential and that less well diversified portfolios might lead to higher capital requirements under Solvency II. As a substantial annuity writer L&G appeared to be suffering from the uncertainty around Solvency II capital requirements. Aviva is more diversified than L&G and Standard Life but with 92% of Aviva's EV coming from the UK and the European businesses it may suffer from investors' doubt over future growth. Prudential, which writes significant volumes of new business outside the EU, may be better positioned to take advantage of faster growing markets compared to the UK and Europe. Geographical diversification and a comparatively lower capital requirement may also be a factor.

Figure 7: Implied Franchise Value and EV (£m)



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