

**EEV TO MCEV ANALYST AND INVESTOR BRIEFING  
PRESENTATION SCRIPT**

**4 February 2009**

**Philip Scott**

**Nic Nicandrou**

**David Rogers**

**Tim Harris**

**Philip Scott – Aviva Chief Financial Officer**

Thank you Andrew, and on to the adoption of MCEV and what it means for Aviva.

**Slide 4**

In terms of our agenda, I will talk through the objectives and benefits of MCEV reporting and why embedded value reporting is a valuable source of information for assessing the performance of long term business.

I will then talk about the impact MCEV adoption has had on our embedded value and results for 2007 and half year 2008.

MCEV provides the reader with significantly more information and disclosures than EEV and I will talk through the highlights of this, including a look at the Implied Discount Rates under MCEV, compared to the discount rates we used under EEV.

In order to provide more of a flavour of the changes under MCEV for our larger spread businesses in the UK and the US, I will invite Nic Nicandrou and David Rogers to take us through how these products are structured and how MCEV discloses the profits we make on these products. Tim Harris will then take us through the results of our strong and diverse European region.

I will then summarise the key points regarding MCEV, before taking your questions.

## **Slide 5**

So why is Aviva adopting MCEV now, particularly in current volatile investment markets?

Firstly, and most importantly, we believe it is a step forward to increase the transparency of our business and we are happy to lead the industry on this.

Secondly, Aviva is a strong and diversified group under both EEV and MCEV. This can be seen by looking at the impact of the restatement on our embedded values, with net asset value per share decreasing by only 1% for 2007. However, MCEV is a more volatile measure when investment markets are volatile, and our net asset value per share at the half year 2008 decreased by 7%. I will talk later about the impact current market conditions have had on these results and what adjustments we have made to better reflect the economic reality of the profitability of the group.

It is important to note that, the economics of our business do not change under MCEV, but the timing of profit recognition does. As you will have seen from our restatement pack, the most significant impact is on spread business such as annuities in payment in the UK and the annuity products we sell in our US business. These are all relatively straightforward products, within which there is an underwriting component and an investment return component. The majority of our profits on these products arise from the investment return component and these are similar in nature to profits made by a fixed income investment management business. Under EEV, we recognised this profit up front within the value of new business. Under market-consistent methodology, the investment return up to the risk free rate is included in the value of new business and the rest of the return is recognised as it is earned, in the expected return line, as a component of operating profit. This is a significant change in profit recognition from EEV and is a more transparent method for investors to look at the business. It is also more in line with the way spread profits are recognised under IFRS.

In addition, through the additional disclosures under MCEV, we are providing an insight into the duration and emergence of future profit that was not be visible under EEV. This in turn is important information for making capital allocation decisions.

## **Slide 6**

Firstly, let's look at why embedded value is key to measuring the performance of long-term business and how we look at a number of different performance measures at Aviva.

Embedded value is a key method for assessing long-term business and shareholder value creation. At the very basic level, embedded value looks at the value of long term business and the profits that are expected to flow to shareholders. It reports the profits from selling new business and the management of existing business in a way that is aligned to shareholders interests. This underlying view of the benefits of embedded value has not changed under MCEV.

In addition, embedded value allows for the impact of the cost of capital and the cost of guarantees and it is a useful measure for making capital allocation decisions.

The fundamentals of the business we are writing are the same as before, and this is demonstrated when we look at the IRR on new business. The IRR reported under MCEV includes all the product cash flows and the results under MCEV are not significantly different from those we published under EEV.

But, embedded value is not the only basis on which we report and manage our business at Aviva. IFRS reporting is our primary statutory reporting basis and is often used for cross industry comparisons by analysts and market commentators. At Aviva, we look at both embedded value and IFRS, because they are telling us two different things. As an insurance business, we deal in long term cash flows. We therefore look at the results being generated in the year under IFRS, and also the present value of the future cash flows within the business on an embedded value basis.

IFRS has a direct link to our dividend policy, which of course is unaffected by MCEV, and is often used as a proxy for cash generation. It is also important to recognise that IFRS for insurance currently involves a mixture of measures based on local statutory reserving, and the methodologies and the amounts of prudence vary across product types and countries. With a single overall approach to the valuation of long-term business, there is more consistency within the embedded value framework.

Regulatory reporting under the IGD rules is highly mechanistic and is concerned with ensuring that sufficient funds are held to protect policyholders. It is not an appropriate basis to assess the value of the long-term business.

It is worth noting that both MCEV and IFRS methodologies will report the same total profit over the life of a contract. The difference between the approaches is the point in time at which it is deemed appropriate to recognise those profits.

### **Slide 7**

So what are the benefits MCEV brings? Well it's a big step forward for financial reporting for life insurance companies, as it increases the transparency of the reporting through the use of a consistent earnings valuation framework.

European Embedded Value has been criticised because earnings valuation is not consistent across companies. All accounting and embedded value approaches require assumptions about the future, including future financial markets. The key change brought about by MCEV is the valuation of future profits using external measures of risk provided by the open market. Market-Consistent EV uses economic assumptions that replicate market prices.

There are also a number of new disclosure requirements. These extra disclosures will increase the transparency of our business. I will go through some of these and what they are telling you about our business in more detail later on.

Thirdly, MCEV demands a mandatory external audit. There is a requirement that the methodology, assumptions and results are subject to external review – which may be either an audit firm or an actuarial consultancy. At Aviva, this is not a great change for us as we had elected to carry out a full scale review under EEV. However, it will be a step forward for the industry.

As I mentioned previously, the way investment profits are recognised under MCEV is more closely aligned to IFRS. We also use longer term investment rate assumptions to determine the investment return component in operating profits, which again is more closely aligned to our IFRS reporting. When we set our IFRS target to double IFRS EPS

by 2012, we were cognisant that we would be moving to an MCEV basis and from my point of view, aligning MCEV to IFRS where appropriate is a logical way to manage the business.

And finally, the other two reporting methods, Solvency II and IFRS for Insurers Phase II are both moving towards a market-consistent approach. Whilst MCEV differs in a number of respects from these measures, the market-consistency concept is common.

### **Slide 8**

MCEV is really just the next step in the evolving embedded value landscape.

This slide shows some of the benefits gained when EEV was introduced and some of the new and useful additions under MCEV.

Under EEV, I think we made significant improvements when we started making explicit allowance for the time value of options and guarantees. And the quality of our disclosures and sensitivity analysis significantly improved.

Under MCEV, significant steps have been made to improve industry comparability through making economic assumptions market consistent and making explicit non-hedgeable risk allowances. You will have seen in the pack that improvements have been made to the disclosures, particularly in terms of disclosures around capital generation and usage, and our sensitivity analysis. In addition, we have given enough information in our sensitivity analysis for you to model any base case scenario you like, to facilitate full market comparisons between companies.

The CFO Forum announced in December that they were reviewing the application of their principles in current market conditions. They are specifically looking at the use of swaps as the reference rate, volatility assumptions, the cost of non-hedgeable risks and liquidity premiums. We are actively participating in these discussions. What we are setting out today is our view on an appropriate methodology in the current markets. As CFO Forum thinking develops, our methodology will be updated.

### **Slide 9**

So let's take a look at the impact of the restatement on our embedded value and results for the full year 2007 and half year 2008.....

PVNB has increased by 4% in 2007 and 5% in 2008, due to the lower discount rate used under MCEV to discount regular premiums. The discount rate is lower because risk free rates are used as the basis for determining these.

Gross new business contribution has reduced by 2% in 2007 and 27% in 2008, mainly due to the impact of only recognising investment return up to the risk free rate.

This of course has had a consequential impact on margins with 2007 down 20 basis points and 2008 down 90 basis points. The fall in the first half of 2008 is more marked because of the fall in the risk free rate we are using. The two factors driving this are the fall in swap rates and the impact of credit spreads widening. This impacts both the discount rate and results in lower investment return cash flows being recognised in new business, particularly for spread business.

Operating profits for 2007 are down by 7% and for half year 2008 down by 12%. Part of the operating profit reduction is due to the fall in the new business contribution and part from the impact of lower discount rates on operating assumption changes. In terms of our return on capital employed target which was on an EEV basis, this has been removed as a result of adopting MCEV. As the new methodology beds down, we will look at an appropriate measure on an MCEV basis.

Equity shareholders funds have decreased by 1% in 2007 and 7% in half year 2008 with net asset value per share down 9p in 2007 and 48p in 2008.

And finally IRRs on new business are 12.9% for half year 2008 and 12.9% for 2007.

### **Slide 10**

Looking at half year 2008 embedded value and comparing the EEV and the MCEV results, it is worth noting that there is little change to net worth. The change is in the value of future profits, due to using risk free rates for assessing the future income.

Also, whilst changes to the time value of options and guarantees, frictional costs and more explicit allowances for the costs of non hedgeable risk are important, actually in terms of the group's embedded value they are not the main focus.

### **Slide 11**

Let's turn to some of the key changes under MCEV that are driving our restated figures. There are five key changes to highlight,

Firstly, the changes to economic assumptions are the most significant, with financial risks being valued consistently with market prices. This includes using actual market yield curves and volatilities. For those of you who are interested in the detail, in practice it is difficult to determine the discount rate for individual cash flows and so, in line with the CFO Forum MCEV Principles, we have used "certainty equivalents" as a practical approach. This method requires us to use a risk-free reference rate to determine both the investment return and the discount rate. We have adopted the CFO Forum Principles and Guidance except for the use of an adjusted risk-free yield due to current market conditions for immediate annuities in the UK and the Netherlands and for our US business.

New business is valued on start of quarter economic assumptions, rather than at start of year under EEV, which values contracts on the economics applying when the business was accepted on to our books.

Moving now to non-hedgeable risks. This is the risk that the operational assumptions on lapses, expenses or mortality may be incorrect. An explicit allowance for non-financial, non-hedgeable risks must now be made and disclosed. Previously the allowance was implicit in the discount rate.

Thirdly, we have also reviewed the required capital and revised these where appropriate to be in line with our business unit economic capital.

We have also taken the opportunity to more clearly define our operating assumptions across the group. Under MCEV, the setting of all operating and demographic

assumptions is more sophisticated. We have reviewed assumptions – particularly lapses – to ensure that these reflect the probability-weighted best estimate, considering the range of possible future experience.

And finally, we have disclosed details of the Implied Discount Rates - being the discount rate that would be needed in a traditional embedded value calculation to give the Market Consistent Embedded Value.

### **Slide 12**

So let's look at the financial impacts of each of these principle changes on the half year 2008 restated embedded values and the value of new business.

Of greatest importance is the change in economic assumptions. This includes the removal of risk premia on equities, properties and bonds under EEV. The reduction in value is countered to some degree by the positive impact of calculating the risk free rate by reference to swaps rather than corporate bonds.

The next line shows the beneficial impact of discounting at a risk free rate. The explicit allowance for market and non-market risks is shown in the risk premia and cost of non-hedgeable risk lines. Under EEV, these allowances were implicit in the discount rate.

The next line shows the gross cost of non hedgeable risk, which is shown explicitly under MCEV. Under EEV, allowance for this was previously implicit in the discount rate.

The small required capital revisions apply to the UK, Delta Lloyd, Italy and the US, where our assumptions are more in line with our economic capital requirements.

The small operating assumption changes reflect offsetting movements in UK and Polish lapse assumptions and strengthened Spanish and US lapse assumptions.

And finally other changes are insignificant and reflect refinements to our actuarial modelling.

### **Slide 13**

I'd now like to take a closer look at the impact the current turbulent markets have had on our restated results....

Firstly a little background. The MCEV principles were designed in a period of relatively stable market conditions, which certainly was not the case in 2008. The CFO Forum announced in December that it has agreed to conduct a review of the impact of turbulent market conditions on the MCEV Principles, the results of which may lead to changes to the published MCEV Principles or the issuance of guidance. The particular areas under review include implied volatilities, the cost of non-hedgeable risks, the use of swap rates as a proxy for risk-free rates and the effect of liquidity premia. This is of course of greatest relevance to early adopters such as Aviva.

As a result of this impending review, we have adopted the CFO Forum Principles and Guidance, with the exception that we have used a different – but equally valid – method for calculating the risk free yield for our annuity businesses in the UK, the US and the Netherlands. The methodology currently requires that swap rates are used as a proxy for risk free rates. Whilst this is ok in stable markets, the risk free rate in the current environment is higher than the swap rate.

We have used a replicating portfolio approach – looking at packages of assets which give the same cashflows as our liability cashflows. The market value of the replicating assets is the market value of the liabilities.

Working with Tillinghast, we have looked for the lowest cost of assets that give the required cashflows. In normal markets, the various available packages should have a single price – close to the swap yield. However, in the current market, an approach that invests in corporate bonds and uses Credit Default Swaps to remove credit risk is cheaper – equivalently, it has a higher yield.

The yellow shaded area shows the excess yield that can be earned above the swap rate from buying a bond and combining it with a credit default swap. This applies to products such as ours where assets can be bought and held to maturity. What we are seeing

here is a disconnect between the risk free rate that can be earned through swaps and the risk free rate we can earn through purchasing a bond with a credit default swap.

Therefore, we have taken risk free rate using bonds and credit default swaps and applied them to our major annuity books. We have increased the risk free rate for immediate annuities in the UK and the Netherlands, and our immediate annuities, deferred annuities and other US contracts by 25 basis points for new business in the second half of 2007 and 50 or 55 basis points for the first half of 2008. This position at each reporting date is shown as a dotted line on the graph.

We believe that the risk-free rate calculated in this way is an appropriate adjustment to the CFO Forum methodology. It is our intention to use this methodology for year-end 2008 with the adjustments updated for our UK/Netherlands block and the US block, separately.

#### **Slide 14**

Turning now to the impact of MCEV on our reported gross margins.....

This slide shows our group margins by product category under EEV and MCEV, compared to expected results.

The impact overall on the group margin is limited due to our product and geographical diversity.

Margins on risk business such as protection have generally increased under MCEV. This reflects lower than average market risk relative to the risk discount rate used under EEV. The limited change in 2008 is due to US protection business which includes an element of market risk, strengthening of Spanish lapse assumption and the use of realistic statutory reserves in the UK.

Savings business is broadly unchanged.

But the greatest change is predictably on our annuity business as profits generated on investment spread are only recognised as it is earned each year instead of being

capitalised when we sell a new contract. The earnings will emerge in our operating profits. When valuing our in force book under MCEV it is important to include the value that is expected to emerge over time from the spread.

David will talk more about how to quantify this when he takes us through our US business.

### **Slide 15**

Turning next to our regional analysis.....

The pie charts on this slide show the mix of risk, savings and spread business in our four regions.

This shows the largest spread businesses to be in the US and the UK and so it is here that we would expect to see some decreases in embedded value and the value of new business. However, whilst we have significantly grown in the US, our business is much smaller in group terms than our larger business in Europe and the UK.

Similarly in the Asia Pacific Region we write a large amount of risk and savings business and so profits have increased.

The European Region has a diversified range of business and new business profits are broadly unchanged.

Finally, the group product split shown in this pie chart shows just how well diversified the group is and that the majority of our business is savings in nature, followed by annuities and protection.

### **Slide 16**

And these predicted trends are borne out in the actual numbers for 2007.

In our largest region Europe, the value of new business increased by 10% due to the greater proportion of savings and protection business. Immediate and deferred annuity exposure in the Netherlands does dampen the value of new business, and there are

some increases in the time value of options and guarantees in France and in the Netherlands.

Average IRRs are in line with the group average of 13% with an average payback period of 12 years. Embedded value increases by less than 3%. The small movement in these metrics shows the balance within our European portfolio.

In the UK, the value of new business decreased by 9% due to the greater proportion of spread business, with IRRs of 13% and a payback period of 8 years. Embedded value decreases by less than 3%. Nic will look at the drivers of the business in more detail later.

In the US, the value of new business decreased by 52% and embedded value decreased by 24%, due to the large proportion of spread business. However we cannot look at these metrics in isolation to assess this business as with IRRs of 12% and a payback period of only 6 years, the business remains very attractive. David will talk in more detail about the US products and the profits we earn and our track record in this regard.

And in Asia, the value of new business increases by 51% due to the greater proportion of savings business, with IRRs of 21% and a payback period of only 4 years. Embedded value increases by 8%.

### **Slide 17**

Turning to the implied discount rates.....

The Implied Discount Rate or IDR is the discount rate that needs to be applied to future expected cashflows including investment spread profits, to make them the equal MCEV values.

Comparing the IDRs under MCEV and the EEV discount rates will give an indication to whether the aggregate risk allowances under EEV were too high or low. However, you should bear in mind that in general, the IDR will be slightly higher than the EEV discount rate, as EEV makes an explicit allowance for the time value of options and guarantees.

However, the comparison should give you a good picture as to whether the hair cuts applied to our EEV reporting were excessive or not.

As you can see from the table, the IDRs overall and for our larger businesses are higher than the EEV discount rate. In Asia under EEV, the risk discount rate included prudent additional risk loadings based on group averages.

### **Slide 18**

MCEV provides significant new disclosures and these are listed in the slide.

The emergence of free surplus from existing business and the use of free surplus in writing new business is shown on page 31 of your packs. And this shows that net capital is being generated in our UK and European businesses, which we are using to invest in our faster growing US and Asia Pacific businesses.

Payback periods are shown on page 30 of the pack, along side the IRR calculations. These show that the group achieved an average IRR of 12.9% for 2007, with an average payback period, including recovery of required capital on an undiscounted basis of 9 years.

Page 31 of the packs shows a detailed analysis of the emergence of future profits from the value of the inforce or VIF. This analysis shows that over 40% of our VIF across the group emerges in 5 years or less and around 70% emerges in 10 years or less.

And finally page 44 of your packs shows our extensive new sensitivity analysis, which you can use to put our numbers on any basis to facilitate market comparison.

### **Slide 19**

Regional review

### **Slide 20**

**Nic Nicandrou – Chief financial officer - UK Life**

Thank you Philip and good morning everyone.

It doesn't feel like two minutes since I presented to you Aviva's adoption of European Embedded Value, when my message was, that this held no fears for Aviva.

Well today, I will be covering the impact of Market Consistent Embedded Value on the UK Life business, and the message, is pretty much the same, that this holds no fears for our business.

In my session I will give you:

- an overview of the UK Life financials on the Market Consistent Embedded Value basis,
- and I will explain the main differences that arise as we move from the EEV to the MCEV reporting basis

### **Slide 21-22**

This first slide shows the impact of the adoption of MCEV on

- new business value,
- operating earnings, and
- total embedded value, for both FY2007 and HY2008

As you can see, in overall terms, the embedded value of the business is lower by 12%, operating earnings are lower by 9% at 30 June 2008 and the % differences for FY2007 are more modest. The fact that these indicators remain strong when viewed through this new lens, confirms the benefits of both

- our scale in the UK, where we have a substantial back book and a sizeable new business franchise; and
- our broad and diversified product strategy, where we are not over-reliant on any single product line

New business value is lower, and the restatement effect is more pronounced in 2008. This is entirely attributable to annuity business, where asset yields achieved above the risk-free rate are not factored-in, and will instead be recognised as they are earned. The fall, therefore, merely reflects a change in the timing of recognition of profits and not a change in the underlying fundamentals of this business.

Indeed, when evaluating the economics of our new business as a whole, by reference to Internal Rates of Return and payback periods, these remain strong, at 13% un-levered and 8 years respectively.

There is nothing in the adoption of MCEV, that changes the strategy that we have consistently followed in the UK over the past few years, a strategy, that has seen us drive profitability forward, through simplifying the business, making it operationally efficient, leveraging our scale to extract the full value of the back book, and exploiting our data asset to improve our risk pricing.

That said, MCEV does provide additional insight into the progress that we have been making, and I will explore this more fully in the next few slides by reference to the financial measures shown here, focusing on the 30 June 2008 position.

### **Slide 23**

Starting with total embedded value, this slide highlights the effect of MCEV on our with-profits, non-profit and annuity portfolios, at 30 June.

In overview, the main difference arises on annuities, whose contribution to the embedded value, has fallen by approximately £0.7bn. MCEV does not factor the asset yields achieved above the risk-free rate – the latter having been set at swaps + 50 bps at 30 June 2008, for the reasons Philip outlined in his presentation.

In actual fact, at 30 June, the yields that we achieved on assets supporting the annuity business, were 90bps higher than risk-free. By not recognising this, MCEV is treating this 90bps as an implicit allowance for defaults. Aviva's strong and well-established in-house capabilities of managing credit risk, have kept credit default losses to below 10bps, over the previous 19 years.

We believe, that the majority of this additional yield, will emerge as profits, and based on the portfolio size of £16bn, this will produce pre-tax earnings, of £150m pa, less any actual default losses. In value terms, taken over the average contract term of 10 years,

these earnings, are equivalent to an after tax value of almost £1bn, before deducting any actual default losses.

The slide also shows, that there is no material change to both the non-profit, and the with-profits portfolios. I would, nevertheless, like to highlight a couple of points:

1. Firstly, on non-profit, the uplift in value is due to protection, but this has been offset, by a £0.1bn adverse effect of moving the lapse assumptions to mean best estimates.
2. And secondly, on with-profits, the use of market risk pricing for valuing the guarantees of this business, has not resulted in a “burn-through” cost to the estate.

#### **Slide 24**

Turning to operating earnings, this slide sets out the effect of MCEV on both:

- total earnings, and
- on the relative contribution to these earnings, from new and existing business, at 30 June.

I will expand, on both of these components more fully in a moment, but the key messages here are:

1. Firstly, that new business value is lower by £81m, which is principally due, to the way, MCEV treat annuities.
2. Secondly,
  - that earnings from existing business are higher by £42m, which partially mitigates the lower value from new business,
  - and now contributes 80% to the total re-emphasising the importance of running our back-book well, which we have put considerable emphasis on, in recent years.
  - And thirdly, as we've been consistently saying, our business is less reliant on growing sales volumes, but to drive overall profitability forward.

#### **Slide 25**

This next slide summarises the effect of MCEV on new business value, analysing it between annuities and the rest of our portfolio.

It shows that the reduction, is almost entirely due to annuities.

Covering off the rest of the business first, the adoption of MCEV;

- Increases the reported new business value for protection by 15%, reflecting the benefit of lower discount rates,
- Whilst for asset accumulation business, the new business value is largely unchanged.

Moving on to annuities, I said earlier that under MCEV, the new business value, does not factor, the actual yields achieved in each period, on the assets we purchased to back the new business written. In the six month period to 30 June, this amounted to 90bps.

The best way of illustrating how this comes about, and why new business value is different to EEV, is to share with you a simplistic analysis of the pricing methodology, that we applied in the first half of 2008, which I set out on this next slide.

### **Slide 26**

The slide shows:

- That the gross spread achieved in the period, on assets backing new annuity business, was 195 bps above gilts.
- This was achieved, by backing the business written, with 80% corporate bonds, with an average S&P rating of single-A, and 20%, commercial and equity release mortgages.
- we deduct from this 20 bps for expenses, and an allowance for reinvestment risk, which is modest, as the assets and liabilities are closely cash flow and duration matched.
- we then deduct, an allowance for credit risk of 30 bps, which is based on our long term outlook for defaults (net of recoveries),
- and arrive at a net spread, of 145bps above gilts.
- In the first half of 2008 we, alongside our competitors, passed some of this net spread to customers through annuity rates. Economically, this is passing across, part of the liquidity premium, which we believe exists within the gross spread, to compensate for our buy to hold approach to these assets.

- Therefore, an average of 85 bps above gilts was passed on to annuitants through the rates, which means, that the locked-in margin under EEV was 60 bps, and is equivalent to £84m of new business value on this basis - this “locked-in” margin, provides cover for defaults, over and above our long-term allowance, and for the risk of longevity.

### **Slide 27-29**

- Under MCEV we value new business, by reference to a risk-free rate, derived using the methodology set out by Philip earlier.
- In the first six months of 2008, the MCEV risk-free rate, was set at 55bps above swaps which is equivalent to 85bps over gilts.
- As this risk free rate, is the same as the return given to annuitants,
  - the new business value is nil
  - however, additional profits will be reported in future periods, as the 90 bps – being the difference between actual yields of 175bps over gilt, and risk-free of 85bps over gilt, is earned, net of any defaults.

I appreciate that I have taken you into a lot of detail, but it does clarify for you, why there is a difference in the reported value of new business.

Taking you back-up to commercial fundamentals, we write annuities, because we are in the business of taking risk. Commercially, we are happy to take this risk, provided it is part of a balanced portfolio, we understand the risk, we know how to price it, and, as I have already said, we have a well established capability, of managing this risk over many years, with historic default rates well below market benchmarks.

I can't emphasise enough, that the fundamentals of this business are unchanged, and that annuity business remains profitable.

Indeed, when evaluating the economics of annuities by reference to Internal Rates of Return and payback periods, these remain attractive, at 19% unlevered and 6 years respectively.

### **Slide 30**

My final slide, looks at the effect of MCEV on our existing business operating earnings, analysed between with-profits, non-profit and annuity portfolios, at 30 June.

Again, the most significant effect is on annuities, which has delivered, an additional £40m of earnings, reflecting the asset yield we did earn in this period, above risk-free. This confirms what I have been outlining to you, that MCEV merely affects the timing of the recognition, and not the overall quantum of profits

The inset chart is a further illustration of this, by reference to the profit signature of an annuity contract written in the first half of 2008, under the MCEV, the EEV and the statutory bases. All three produce the same level of total profit, but report it at different times

As for the rest of our portfolio, the existing business earnings are largely unchanged.

In closing, I would like to re-cap on three key points:

- One MCEV holds no fears for our business, re-enforces the benefits of our scale and our broad product offering, and provides further insights into the successful execution of our strategy
- Two, yes MCEV reports lower annuity values than before, but more profit will emerge in future years, so net/net , the overall financial outcome is unchanged.
- And three, commercially, we are comfortable with the risks that we are taking, in the context of a balanced business portfolio, we are satisfied that the economics of our overall business are robust and we regard the characteristics of our new business franchise as attractive.

Thank you for your attention, David will now take you through the effect of MCEV on Aviva USA.

### **Slide 31**

**David Rogers - Chief Accounting Officer**

### **Slide 32**

Let's now turn the focus onto our US business – this, of course, is the part of the Aviva portfolio where the impact of the change to MCEV reporting is most pronounced although, as we've seen, within the total group portfolio the overall impact is much more balanced.

As we've already heard, probably the most fundamental change that comes with the adoption of MCEV is in relation to the timing of recognition of credit-spread profits.

As Nic has already highlighted, while EEV recognised up-front the discounted value of the expected credit profit over the life of the contract, under MCEV it's only the risk-free return that is recognised initially. Any additional credit profit in excess of that will be recognised as and when it is earned - and will come through in expected return and total return.

So for the US business, this means that:

- While PVNBP increases marginally, new business margins fall from 3.0% to 1.4% for 2007 and from 3.1% to -0.4% for HY2008
- Total MCEV goes from £1.6bn to £1.2bn for 2007 and from £1.7bn to £1.0bn at the end of HY2008.
- And IRRs, which are calculated on a real-world basis are between 11 and 12%.

Now - the economics of our business model are unchanged so let's look in more detail at the drivers of these changes.

### **Slide 33**

We'll start with the overall investment model, then move on to the impact on profit profiles and how risk free rates and spreads have moved.

Then we'll look at how we might bridge back to the value reported under EEV before finishing with a brief look at some of the additional information we're disclosing today.

We'll start by looking at the investment model for our equity and fixed indexed annuities, which are the main products we sell to our customers in the US.

As you can see from the slide, after paying commission the balance of each premium is then split:

- The equity index participation is covered by the purchase of Over-The-Counter options - almost all of these are tied to the S&P500 and so the OTC market is deep and liquid.
- Customers can choose from a wide range of crediting strategies, with the risk to the company managed through adjustments to caps, spreads and participation rates – and the evidence of how well this product is working with customers is clear in our 2008 new business numbers.
- The return-of-premium and surrender value guarantees are covered through buying bonds to match the different durations of those guarantees. We have a strong track record in risk selection for that bond portfolio.

So the liabilities to policyholders are well-matched by the appropriate asset investments and profit is driven partly by the expense margins but primarily through the earning of credit spreads. It is our delivery of that credit profit that is key to the success of this business.

Under MCEV new business contribution (NBC) captures:

- All costs of acquisition and administration
- All costs of options and guarantees
- Only the risk-free return on assets.
- Total embedded value reflects the impact of movements in spreads on asset values.
- The excess over the risk-free rate will be recognised as it is earned and will come through in expected return and total return.

### **Slide 34**

We can see that difference in approach to profit recognition in the profit profile of our products – and I've used a fixed annuity product here as an example.

The graph shows discrete and cumulative profit profiles for EEV, MCEV and IFRS:

As always the total profits / total cash-flows are the same under all bases but you can see clearly the contrast with EEV reporting:

- Under EEV (which is shown as the blue bars and as the top line in the graph) all those credit profits are captured in NBC at inception whereas for MCEV the initial reported profit is low and the excess investment profit emerges over the life of the contract.
- You can also see that, at the interest rates we saw at the half year 2008, the MCEV profit profile is similar to that seen with IFRS reporting.

### **Slide 35**

So, as we've seen, the delivery of credit profits is a key component of our business model and also that the component that's reported up-front under MCEV is influenced by prevailing risk-free rate.

On this graph we can see the average yield for A-rated US corporate bonds (which is the largest single component of our US asset portfolio). We can also see the swap rates and the changes in the credit spread between them since the middle of 2005:

- This spread includes expected default experience but also recognizes the risk around the volatility of that default experience, liquidity and other elements.
- As a result, for Aviva's MCEV, we have included an additional premium of 50bps for HY 2008 on top of swap rates to recognise the additional risk free returns available where the backing asset portfolio can be held to maturity.
- On the graph you can see that, after a period of stability through 2007, swap rates have fallen and spreads widened since the start of 2008.

For MCEV this means that:

- When risk-free rates are higher and spreads are narrower, as they were at the end of 2007, MCEV NBC will recognize a much larger proportion of the expected profit up front - with a smaller "excess return" emerging over the contract life.
- As risk-free rates fall the margins that can be recognised up-front will be compressed against guarantees so NBC will fall – this is exactly what we see in the first half of 2008.

- However, strong real returns will still emerge over the life of the policy – these will reflect that additional spread less any actual default experience seen. And if we look at our credit selection and default experience we see that, where comparisons are available, our performance is significantly better than industry benchmarks.

### **Slide 36**

So let's try and quantify that additional value not captured in the reported MC embedded value.

As we've seen, at the end of the 2008 half-year the total market return on corporate bonds was around 6.7% and, based on the composition of our portfolio, that will also be representative of the actual returns we earn:

- Our risk-free reference rate is based on the swap rate of 4.8% with an additional allowance (based on our buy-and-hold approach to the portfolio) of 50bps to give an adjusted risk-free rate of 5.3%.
- On top of that there remains a significant additional spread present and, after a prudent annual allowance for defaults of, say, 25 bps that's equivalent to 114 bps at end of HY 2008.
- Around 2/3 of this additional value will flow through to shareholders to give a net-of-tax return of around £85m.
- The present value of this additional shareholder element (net of tax) over the average term of our policies (7 years) would be £600m.
- And this, together with the slightly greater than £100m of changes that relate to increased risk charges, assumption changes and cost of non-hedgeable risk, bridge us back to embedded value reported under EEV at the HY 2008.

### **Slide 37**

So let's summarise what this means for our US business.

As we've said MCEV has no impact on the profits that will ultimately be reported – what changes is just the timing of when that profit is recognised:

- This means that our reported MCEV shows the impact of recognising only risk-free return up-front and this flows through NB contribution, margin and total MCEV.

- Additional spread profit in excess of the risk-free rate will emerge as it's earned - and the value of that additional margin that will emerge over time, together with the other basis changes we've made, bridges the gap to the EEV value previously reported.

The other metrics we've included in the pack today complete the picture:

- IRR (including long-term rate of return) = 11.4% HY '08 / 11.8% FY '07
- Payback period (including return of required capital and initial expenses) is short at 6 years – that's in line with what we see for our UK annuities
- And you can see in our new disclosure on the maturity profile of our business how 51% of in-force VIF + 61% of new business VIF emerges in less than 5 years

MCEV does give us a new lens on the business, one that sits alongside our IFRS reporting, and it does emphasise the importance robust risk and credit management.

Underpinning all of this there is no change to underlying economics of the business:

- Great new business franchise – we've seen that in the new business results announced today.
- Strong track record of credit selection and management
- Significant additional profits expected to emerge from the new and in-force portfolios over the life of those policies making this business a key part of our overall Aviva portfolio.

### **Slide 38**

I'll now hand over to Tim Harris who'll update you on the results for our European business.

## **Tim Harris Chief Financial Officer – Europe**

Good morning. I'm Tim Harris, the Chief Financial Officer of Aviva Europe. This morning I'm going to talk to you about the impact of MCEV on the embedded value results of our business in Europe.

### **Slide 39**

Cutting to the chase, the Aviva Europe MCEV story can be summed up as reflecting the benefits of writing a diversified portfolio of business.

Whilst the overall impact of the switch is broadly neutral this is a balance of the impacts discussed by David and Nic, offset by movements arising from risk and savings business. This is akin to the position for Aviva as a Group overall.

To remind you, Aviva Europe covers the business written in all European countries other than the UK. This includes both western Europe where the businesses are more developed, Eastern Europe where the businesses and the insurance industry is still developing, and Delta Lloyd covering Netherlands, Belgium and Germany.

Commercially, whilst the MCEV methodology provides a useful extra lens on the business, especially by increasing comparability for performance purposes, there are no major impacts on our strategy. The MCEV results reinforce our strategy of strength and diversity by market, product and distribution. As Nic said, MCEV hold no fears for our business.

I am pleased to say that, at full year 2007 and half year 2008 the key MCEV of Aviva Europe has increased.

The reasons for this are:

- The lower discount rate used in MCEV increasing the value of protection and savings business, especially in Spain, Italy and France.
- In the Netherlands, on the other hand, the levels of annuity and corporate pension business reduce the up front value of business written. In addition, the mortality adjustment in the Delta Lloyd in-force annuity book we announced in the first half of

2008 has a larger impact on operating profit under MCEV than EEV which explains the reduction in overall MCEV operating profit compared to EEV.

- We have also seen an increase in the value of the time value of options and guarantees in France and the Netherlands offset by the positive impact of the lower discount rate.

#### **Slide 40**

The impact of the movement to MCEV by country is illustrated on this slide where all countries have shown an increase other than the Netherlands.

As I have said, in the Netherlands we have the similar impact on annuity business as the US and UK of not taking into account spreads on the bonds backing the annuity and corporate pensions business.

In France the impact of moving to MCEV at FY 07 and HY08 is different. This is because of the impact of the volatility of the markets during 2008 on the Time Value of Options and Guarantees.

#### **Slide 41**

Moving on, my next slide shows the geographical spread of the value of new business which again is generally showing an increase under the MCEV basis.

Again the exception is the Netherlands due to the high levels of corporate pension and annuity business written.

Spain's new business contribution at HY08 is nearing the Full Year 07 values. This is due to the acquisition of Caja Murcia in December last year. As well as a full six months contribution we also have the one-off effect of transferred business in the first half of 2008.

Other Europe, whilst small in comparison to some of the other markets, is showing how the growth of the businesses in the predominantly eastern European countries is beginning to become more significant. In particular, the sales of the new Pillar II

pensions product in Romania which commenced in May 2008 made a significant contribution in half-year 08 compared to half-year 07.

The impact of the economic downturn can be seen on the business written in Ireland in the HY08 New Business contribution.

#### **Slide 42**

In terms of the present value of new business premiums, again an increase of MCEV over EEV is seen, due to the lower discount rate with different impacts in different countries for the reasons mentioned earlier.

On this slide we also show the payback period for the different countries which is on average around 12 years across Aviva Europe. This is heavily impacted by the business written in the Netherlands with a payback of around 22 years. In this respect the MCEV methodology clearly demonstrates the impact in 2007 and 2008 of writing significant large single premium corporate pension deals in the Netherlands. Without Delta Lloyd the overall average falls to slightly over 6 years, ranging from 3 years in Spain to 8 years in France. By any standards, these are attractive payback periods supporting our strategy.

#### **Slide 43**

In summary, there is no fundamental overall impact of the move to MCEV on the Aviva Europe business due to diversity of product, country and market.

This is despite the impact of the annuity and corporate pension business written in the Netherlands, where we anticipate profits will emerge in future years which have not been taken credit for on the revised reporting basis.

In short, the methodology endorses the strength of our strategy founded on diversity in product, market and distribution.

Finally, it is probably worth mentioning that the greater consistency of approach required by MCEV provides a useful and more transparent way of comparing the underlying business performance between markets.

Many thanks for your attention – I would now like to hand back to Philip for his closing remarks.

**Slide 44**

**Philip Scott – Aviva Chief Financial Officer**

Thank you Tim for outlining the strength and diversity of our European businesses.

In summary then:

MCEV is a better measure of profit recognition, particularly for the investment returns on spread business. And it is much closer to IFRS reporting in this regard.

EV reporting is still important for understanding life businesses but it is not the only measure. At Aviva we look at both EV and IFRS, with our main target being to double IFRS EPS by 2012. Both IFRS and IGD are unchanged following the adoption of MCEV. Secondly, MCEV gives much more information including disclosures on capital generation and greater sensitivity analysis. It also gives insight into duration and emergence of investment profits, which is useful for capital allocation decisions.

Thirdly, our MCEV reporting clearly demonstrates the strength and value we generate from being a well diversified group, in terms of geographies and product. MCEV does change the timing of profit recognition and as a result, operating profits are lower and new business value does not now include all of the investment return we expect to make up front. However, with IRRs of 12.9% and a payback period of 9 years, the group's new business is still a very attractive proposition.

The group has a strong balance sheet on any measure. The impact of adopting MCEV on the group embedded value is not that significant in stable markets, as demonstrated in our 2007 figures. The impact of volatile markets on our half year 2008 numbers is well understood and as we expected.