Annexe 1B

Size of the inherited estates – supplementary report

A report for the policyholder advocate in connection with the reattribution of the inherited estates of the CGNU Life and CULAC with-profits funds

September 2009

Report by: KPMG LLP

Contents

This annexe was first published on 3 September 2009 but was revised on 8 September to correct two typographical errors (which are annotated in the text of the annexe at paragraphs 1.06 anmd 6.00).

1.00 Introduction and Summary

1.01 Context

This supplementary appendix has been prepared by KPMG LLP for the policyholder advocate, and is a response to Aviva's paper on the same aspect of the proposals. Whilst we have endeavoured within this appendix to explain technical terms and concepts, it remains the case that this is a technical report intended for readers who have some familiarity with the concepts involved.

1.02 Background

The policyholder incentive payments (PIPs) made to holders of Elected Policies will equal the initial minimum amounts offered in the offer letter (which were based on a face value of the combined inherited estates of £1.2bn) multiplied by a uniform uplift which reflects the extent to which the average of the combined inherited estates of CGNU Life and CULAC on 30 June 2009, 31 July 2009 and 28 August 2009 exceeds £1.2 billion.[1] [2] Note that the unweighted average of these three values, increased to allow for two months of interest using the two month LIBOR rate applying on 31 July 2009, will be used. A minimum of 1.0 applies to the uniform adjustment.

As part of the process of calculating the uniform adjustment, the realistic balance sheet (RBS) as at 31 May 2009 is first obtained by establishing the values of the assets, asset shares, guarantee costs and other liabilities as at 31 May 2009 using the in-force policy data on that date and the actual calibrated economic assumptions as at 31 May 2009. Calibration in this context refers to the process by which the assumptions used to project economic data in a model are set such that, for example, the volatilities and yield curves implied by the output of the model reflects as closely as possible volatilities and yield curves observed in the market. A model can never replicate the market exactly, and the fit (ie how close the output reflects the market data), reflects how well the model is calibrated.

[1] Throughout this appendix we have assumed the fund transfer and reattribution is effected on 1 October 2009.
[2] The uniform adjustment will also reflect an allowance for minimum incentive payments offered in respect of policies which have been surrendered or otherwise become ineligible policies on or prior to August 2009. This aspect of the calculation is not considered in this appendix.

Due to time constraints, the 30 June 2009, 31 July 2009 and 28 August 2009 positions are then derived by the process below:

- project the assets and asset shares using an estimate of the investment returns achieved between the 31 May 2009 and the relevant valuation date. The estimate will be based on the returns achieved by reference to appropriate market indices allowing for tax,
- recalculate the guarantee costs and other liabilities allowing for the new asset share level and the economic conditions at the relevant valuation date;
- determine the revised inherited estates.

A projected total return percentage will be applied to each stock held at 31 May 2009.

The resulting value of the combined inherited estates of CGNU Life and CULAC which is then used in the determination of the PIPs is referred to as the "Estate Value".

The above approach effectively freezes the position as at 31 May 2009 as far as all non-financial aspects are concerned, but updates the position post 31 May 2009 to the relevant dates for changes in financial conditions. In particular, no allowance is made for premiums paid, claims arising or new business after 31 May 2009.

Appendix 35B to the policyholder advocate's full report considered the size of the inherited estates as at 31 December 2008. This supplementary report should be read in conjunction with Appendix 35B and we have not repeated here the detailed explanations within that appendix.

1.03 Purpose of this report

Our aim in producing this report is to identify any areas of prudence in the 31 May 2009 CGNU Life and CULAC RBSs in order that the policyholder advocate can include any such prudence in her updated analysis used for providing guidance to policyholders. Any areas of prudence identified will be assumed to be valid for all levels of "Estate Value" used in the policyholder advocate's analysis and for the avoidance of doubt, the same level of prudence is

assumed to be included in the rolled forward inherited estates at 30 June 2009, 31 July 2009 and 28 August 2009 which are the values used to determine the PIP.

Such prudence, while appropriate for FSA solvency purposes, may not be appropriate for the purpose of calculating the value of potential benefits from special distributions forgone because they favour shareholders by making the value of these potential benefits lower. Any areas of prudence identified are to be used by LECG in its modelling to provide an update to the policyholder advocate of the value of potential benefits forgone based upon end 2008 policy data and for a range of different amounts of the combined inherited estates of CGNU Life and CULAC.

As a part of this process, it was agreed with the policyholder advocate that we would have discussions with, and share our findings with the FSA.

Throughout this report we make comparisons between Aviva's market consistent embedded value (MCEV) basis and its RBS basis. The rules around the basis used for MCEV are that the assumptions are to be the company's best estimate (i.e. excluding margins for prudence). Clearly, expectations of what may happen in the future are judgemental and there could be a range of assumptions which could be deemed to be a company's best estimate. However we have taken the MCEV basis as Aviva's view of its best estimate basis and as such as a good starting point to determine whether there are any areas of prudence in the RBS. We note that Aviva has only recently reported on an MCEV basis, however we have used the term MCEV throughout the report as a term used for best estimate assumptions with risk free rates equal to swaps, (which we used during the negotiations).

Aviva, in its evaluations of the value of the offer to policyholders and to shareholders at 31 December 2008, allowed for a £100m addition to the value of the published inherited estates at that date. It is our understanding that only a very small part of this £100m was in respect of the difference between the MCEV basis and the RBS basis. We believe that, where appropriate, the full impact of differences between the two bases should have been taken into account by Aviva in its offer.

For the avoidance of doubt, any areas of prudence in the 31 May 2009 inherited estates of CGNU Life and CULAC over and above that reflected in the £100m above have not, as far as we are aware, been allowed for in Aviva's analysis of the value to shareholders of the deal. However, the additional prudence has been taken into account by the policyholder advocate in her assessment presented in the guidance to policyholders.

The policyholder advocate has shared the results of our analysis as at 31 May 2009 with the FSA so that this can be considered as part of the FSA's "fairness review".

In this report we have sought to highlight those areas in the Aviva RBS valuation of CGNU Life and CULAC as at 31 May 2009 where conservatism in the figures reported to the FSA may understate what we consider a fair or reasonable valuation of the inherited estates. Such conservatism can arise from the methods or approaches laid down by the FSA, or from the implementation of these methods by the industry generally or by any particular company. Aviva is by no means unusual in having some element of conservatism in its implementation. It is stressed here that the adjustments proposed in this report are put forward for the purposes of the reattribution transaction. None of the adjustments are intended to question the appropriateness of Aviva's published RBSs, and the areas of prudence we have highlighted are not out of line with what we would expect to see within the basis used for the RBS.

1.04 Summary of the inherited estates

The table below summarises the financial position of the two funds at 31 December 2008 and 31 May 2009 (before any post valuation adjustments):

Table 1.1: Summary of the inherited estates at 31 December 2008, and 31 May 2009

	31 December 2008			31 May 2009		
(£millions)	CGNU	CULAC	Total	CGNU	CULAC	Total
Regulatory value of the admissible assets of the fund	14,798	15,175	29,973	13,647	14,394	28,041
- non-profit mathematical reserves	-965	-2,002	-2,968	-948	-1,833	-2,781
+ present value of future profits on non-profit business	396	436	832	398	353	751
Total realistic assets	14,229	13,609	27,837	13,097	12,914	26,011
With profits benefit reserve (WPBR)	10,120	9,595	19,715	10,070	9,476	19,546
+ Planned enhancements	570	565	1,135	238	246	484
- Planned deductions	-8	-6	-14	-8	-6	-13
+ Guarantee charges	-60	-49	-109	-55	-45	-100
+ Contractual guarantees	1,146	1,060	2,206	1,207	1,209	2,416
guaranteed minimum pension (GMP)	17	21	38	10	13	23
+ non-Contractual guarantees (Mortgage Endowment Promise)	221	219	440	178	211	388
+ Financial options (GAOs)	20	210	230	15	141	156
+ Smoothing costs	-27	-16	-43	-71	-63	-134
- Shareholder transfers & tax	147	158	305	107	121	228
+ Other long-term insurance liabilities	-149	-111	-260	-182	-135	-317
+ Realistic current liabilities	1,466	1,199	2,665	1,122	1,181	2,303
Total realistic liabilities	13,464	12,845	26,309	12,631	12,349	24,980
Excess realistic assets (i.e. the estate)	765	764	1,529	466	565	1,031

Source: 2008 FSA returns Forms 18 & 19 and Aviva's interim Realistic Reporting report. Figures are subject to rounding.

The post valuation adjustments as at 31 May 2009 total +£24m, giving combined value of £1,055m at that date.

The 31 May 2009 combined inherited estates are below £1.2bn, the value below which in its "It's your choice" booklet, Aviva states "is the lowest value at which we would be likely to still be able to proceed". However, the provisional values at 30 June 2009 and 31 July 2009 are £1,174m and £1,257m respectively; and the average of these two figures exceeds

£1.2 billion. Given the constraints on time, Aviva was not able to finalise its review of the provisional results prior to the completion of this report. Its final review of these figures is expected to be completed by 8 September. Therefore the results above may be different to those which are actually used in the calculation of the "Estate Value". The provisional 28 August 2009 value is expected to be available during the High Court hearing.

The inherited estates have reduced significantly over the period. The analysis has revealed that a significant amount of the reduction was due to lower property values (down 15% in UK and 17% in Europe) which reduced asset shares and thus significantly increased the cost of guarantees. Clearly this is a situation which could reverse in the future. Changes in equity values over the period played a limited part in the reduction in the inherited estates due to the fact that there was limited equity exposure in the inherited estates and the approach of dynamically hedging the impact of equity risk on guarantee costs. Movements in fixed interest yields also had a significant negative impact on the inherited estates due to the estate having continuing over exposure to long dated stocks. The loss in the first quarter was a partial reversal of the substantial profits achieved by this strategy in 2008. Aviva has since removed the over exposure to long dated stocks. Movements in index-linked gilts were also adverse due to the estate having over exposure to short dated stock. Other factors impacting the reduction in the inherited estates are discussed in more detail in section 2.

1.05 The adjusted value of the inherited estate

The table[3] below summarises the published value of the inherited estate and the adjustments we proposed for use by the policyholder advocate in her analysis at 31 May 2009 (which is based upon end 2008 data). The adjustments included by the policyholder advocate in her analysis at 31 December 2008 which were based upon end 2006 data are also shown for comparative purposes.

Table 1.2: Adjustments to the combined inherited estate at 31 May 2009 and 31 December 2008

Item (£millions)	31 December 2008	31 May 2009	Section
Value of the inherited estate	1,529	1031	
Stochastic Modelling developments post 31 May 2009	0	50*	
Post valuation adjustments	41	(26)*	
Total value of inherited estate	1,570	1,055	
Add back 2007 new business subsidy	[redacted]	[redacted]	
Adjust mortgage endowment mis-selling reserve.	10	5	3.07
Add back contingency prudence	33	29	3.07
Adjust "other compensation" liabilities to MCEV		8	3.07
Adjust non-profit annuity value of in-force (VIF)	[redacted]	[redacted]	3.03
Adjust other non-profit VIF	0	15	3.03
Convert liabilities to swaps	-30	29	4.04
Adjust persistency assumptions to MCEV on insurance bonds	[redacted]	[redacted]	4.02
Adjust persistency assumptions on endowments	8	0	4.02
Prudence in projected equity backing ratio (EBR)		5	4.03
Adjust persistency assumptions to MCEV on CULAC conventional pensions with GAOs.		10	4.02
Adjust GAO take-up and mortality to MCEV		10	4.02
Total adjustments	177	174	
Revised inherited estate	1,747	1,229	

Source: KPMG Analysis

[3] Aviva has required that certain figures in the table be blanked out on the basis that the figures for the 2007 new business subsidy are commercially sensitive. If only the 2007 new business subsidy figures were blanked, it would still be possible to derive them from the table. Accordingly, other figures in the table, and later on in this report have also been blanked out even though Aviva does not claim that they are of themselves commercially sensitive. The policyholder advocate believes the 2007 new business subsidy figures are not commercially sensitive and that they should be disclosed.

- *The £50m shown as at 31 May 2009 for 'stochastic modelling developments post 31 May 2009' represents the effect of enhancements to the stochastic models which were made by Aviva after the models had been used to generate the 31 May 2009 figures. This figure has been provided to us by Aviva. We understand that the enhanced model will be used to prepare the RBS as at 30 September 2009.

- *The -£26m shown as at 31 May 2009 refers to the 'overs and unders' adjustment which would ordinarily have been included in the final RBS results as at 31 May 2009 given more time. Normally such items are picked up after formalising results and would be included in the next formal valuation. Since the 31 May 2009 valuation will be used as the basis for determining the June, July and August estimates for the purpose of the incentive payments to be made, we believe that this should be included in the 31 May 2009 results.

Four of the adjustments for prudence shown in table 1.2 above made at 31 May 2009 were not made at 31 December 2008. The prudence within these areas was known about at 31 December 2008, but adjustments were not made at 31 December 2008:

- Prudence in projected equity backing ratio (EBR) - a small area of additional prudence has been highlighted by the revised methodology and we have now taken a high level adjustment into account.

- Adjust persistency assumptions to MCEV on CULAC conventional pensions with GAOs – we have considered the available experience analyses and believe that a slightly higher lapse assumption could be justified for the MCEV basis (which will reduce the allowance made for the cost expected to arise on the exercise of GAOs).

- Adjust GAO take-up and mortality to MCEV – the impact was small at the year end and time constraints meant we were not provided with estimates. For the 31 May results we have been provided with details of the impact and have therefore included this in the adjustments made.

- Adjust "other compensation" liabilities to MCEV – more detailed analysis highlighted this as an area of prudence.

If future experience follows the assumptions underlying the MCEV then the proportion of each of the adjustments shown in Table 1.2 which are held in respect of policies which are allocated to the New WPSF on the Effective Date will revert to shareholders over time.

The adjustments above in table 1.2 are explained in sections 3 and 4. A summary of the items discussed in sections 3 and 4 for which adjustments have been made is set out below:

2007 New Business Subsidy ([redacted] adjustment to the estate)

This figure has been updated by Aviva since 31 December 2008 to allow for the rate of investment return credited to asset shares over the five month period.

Other long term insurance liabilities (+£5m, +£29m, +8m adjustments to the estate)

At the year end we made adjustments to the inherited estate for the following items:

- Mortgage endowment mis-selling reserve +£10m
- Converting mortgage endowment promise to swaps £0m
- Converting UWP VIF to swaps £0m
- Contingency prudence +£33m

For the May 2009 RBS we have taken the same approach as at the year end to the adjustments to be made:

Aviva has informed us that the mortgage endowment mis-selling reserve has decreased due to a release of reserves offsetting actual claims as well as a weakening of the reserves reflecting the actual experience being more favourable than assumed. In light of this we have reduced the adjustment we made from £10m to **£5m** to reflect this reduction.

The impact of moving the mortgage endowment promise and UWP VIF onto swaps (i.e. the MCEV basis) was immaterial for both the 31 May 2009 and 31 December 2008 valuations.

The contingency reserve has been reduced from £33m to £29m and our May 2009 adjustment of **+£29m** therefore reflects the reduction in the reserve.

In addition to the above adjustments, Aviva provided us with further information with regard to the value placed on the "other compensation costs" for MCEV purposes. The difference between the RBS and MCEV figures is **£8m** and we have made an additional adjustment for this at 31 May 2009.

Value of the non-profit business ([redacted], +£15m adjustment to the estate)

The key assumptions used in valuing the annuity business are annuitant mortality and credit spreads (or liquidity premiums) applied. The mortality basis was considered at the year end and we made no adjustment for this assumption as it was based on the MCEV assumptions and was in line with the industry.

To allow for any prudence in the RBS liquidity premiums, we asked Aviva to provide us with the results of the calculation of the value of the non-profit business using future investment return assumptions for annuities based on swaps plus 150 basis points (the MCEV basis used for shareholder owned annuity business) and for other non-profit business based on swaps (the MCEV basis), consistent with the approach we took at the year end. The non-economic assumptions adopted to value non-profit business for RBS purposes are the same as for the MCEV basis.

The results provided by Aviva were as follows:

[redacted] for non-profit annuity VIF

£15m for other non-profit VIF.

These amounts are included in Table 1.2.

Convert all relevant liabilities to swaps (+£29m adjustment to the estate)

The one area of potential prudence in the market consistent methodology which we highlighted at the year end was the use of a risk free rate of gilts plus 10 basis points as opposed to the use of swaps.

At 31 December 2008 the difference was -£30m which was negative due to the distortion in the swap and gilt yields. We reduced the estate at 31 December 2008 for this -£30m.

We asked Aviva to provide us with the impact of valuing the liabilities using swaps as opposed to gilts plus 10 basis points at 31 May 2009 and the impact of this was an increase in the inherited estates by a total **of £29m**. This was almost totally due to the impact on liabilities for inflation protection guarantees. We have made this adjustment to the 31 May 2009 inherited estates.

Persistency – Insurance Bonds ([redacted] adjustment to the estate)

There are some durations where the RBS lapse assumptions are more prudent than the MCEV assumptions (ie lapse assumptions are lower which means that more polices are projected to stay in force and benefit from minimum guarantees in adverse scenarios). In addition the assumptions have been changed at in-force durations 7 and 8 for UWP policies for which MVR-free dates apply in the future. The total impact of using assumptions different from the MCEV assumptions is around [redacted] and, of this, the impact of the change in the assumptions made by Aviva at 31 May 2009 is £16m.

At the year end we added back [redacted] for prudence in the persistency assumptions in relation to the differences in the RBS and MCEV. This was based on an estimate provided by Aviva which turned out to be an over-estimate. The estimate of the difference provided by Aviva at 31 May 2009 is [redacted].

Our adjustment at 31 May 2009 is reduced from [redacted] to [redacted] which reflects the known differences in the MCEV and RBS bases. We have not made an adjustment for the additional

£16m for the updated assumptions since these reflect actual changes in persistency experience as opposed to additional levels prudence.

Projected EBR (+£5m adjustment to the estate)

The changes to the modelling of the projected EBR include a small amount of prudence in relation to the approximations inherent in the projection of the support provided by the inherited estate. In addition, we have mentioned in our previous report that there is a small amount of prudence in the modelling due to the fact that the EBR is not allowed to reduce below 40% where, in reality, it could (in very extreme cases). We asked Aviva what the impact of removing this 40% floor would be. The result would be an increase in the inherited estate of £11m at 31 May 2009. This is clearly an extreme scenario and thus the actual allowance for prudence is somewhere between 0 and £11m. Given the fact that there are two potential areas of prudence (albeit small), we have made an adjustment at 31 May 2009 of **£5m** to allow for both of these.

Adjust persistency assumptions to MCEV on conventional pensions with GAOs (+£10m adjustment to the estate).

The persistency assumption for the contracts with GAOs was changed at the 31 December 2008 year end from 5% to 1.5%. We made no adjustment to the inherited estate at 31 December 2008 for this on the understanding that the MCEV assumption at the 2009 half year would be adjusted to be consistent with the RBS assumption.

The MCEV assumption at 30 June 2009 was not adjusted and we have been informed that the MCEV results are relatively insensitive to this assumption, and hence it is unclear whether the change will be made. We note however that post Wagner the MCEV results will become sensitive to this assumption because of the more direct exposure the AVLAP shareholder will have to the experience of the with-profits policies of the New WPSF.

We have seen a high level summary of the available experience analysis which does suggest that some reduction in rates from 5% may be appropriate. However, in the absence of confirmation that the MCEV basis will be changed, we have made a small adjustment to the inherited estates under the assumption that the MCEV basis could be higher than the 1.5% used in the RBS. The high level adjustment we have made is +**£10m.**

Take- up rates and mortality on business with GAOs (+£10m adjustment to the estate)

For the business with GAOs, the MCEV mortality basis is weaker than for the RBS basis (i.e. more deaths are expected under MCEV which means fewer policyholders are assumed to benefit from the exercise of the GAO). The impact of using MCEV assumptions as opposed to the RBS assumptions is to increase the inherited estate by approximately £3m.

Similarly, the GAO take-up rates used for the RBS are more prudent (i.e. are higher) than the corresponding MCEV assumptions. The impact of using MCEV assumptions as opposed to the RBS assumptions is estimated to increase the inherited estate by less than £10m.

We identified there were some margins at the year end but were informed that these were likely to be immaterial. Although the figures above are relatively immaterial, we have nevertheless added a further **£10m** in light of the prudence in the mortality and take-up rate assumptions at 31 May 2009.

Table 1.3: Inherited estates estimated as at 30 June 2009, 31 July 2009

				(£millions)	
Unaudited Inherited Estate as at	CGNU	CULAC	Total	Post Valuation Adjs	Total
31 May 2009	466	565	1,031	24	1,055
30 June 2009	512	662	1,174	0	1,174
31 July 2009	568	689	1,257	0	1,257

Source: Aviva realistic report – interim 2009

The figures for 30 June 2009 and 31 July 2009 inherited estates in the table above, subject to any final review, along with the 28 August 2009 figure will form the basis on which the Estate Value is calculated. Any post valuation adjustments made as at 31 May 2009 are included in the 30 June 2009 and 31 July 2009 valuations.

1.06 Valuation of the Estate Value used to determine the PIP

It is an FSA requirement that any new with-profits business sold from the beginning of 2007 should be sold without an expectation that it would require a permanent subsidy from the inherited estates. For the 2007 new business subsidy, both Aviva and the policyholder advocate took the new business subsidy into account in their analyses of the deal. The method to eliminate the new business subsidies was not prescribed by the FSA but the objective was that existing policyholders should not expect to be worse off due to the writing of this business. As noted in section 2, shareholder transfers are reduced to the extent that the value of new with-profits business determined at point of sale would otherwise be negative. For this purpose the value of new business is calculated by Aviva on an MCEV basis (we refer to any such restriction in shareholder transfers as "new business subsidy" in this report, but in practice the restriction is intended to ensure that new with-profits business is not expected to require a permanent subsidy from the inherited estates).

The elimination of any potential subsidy on an MCEV basis rather than the more prudent RBS basis at point of sale will mean that the inherited estate (which is determined on the RBS basis) will suffer an up front reduction due to the new business sold. This reduction in the inherited estate will be recouped over time if the future experience of the new with-profits business follows the MCEV basis, hence in the longer term policyholders are not expected to be worse off in terms of the impact on the overall inherited estate.

Accordingly, the value of the inherited estates at 31 May 2009 will be understated by the difference between the point of sale value of new with-profits business written in 2008, and in the first five months of 2009, calculated using the MCEV basis and that value calculated on an RBS basis. If future experience for such new business follows the MCEV basis then that difference will accrue to the inherited estate of the Old WPSF and the RIEESA according to

the ‘Old WPSF Proportion’ and the ‘New WPSF Proportion’ respectively, since these are the proportions that such business will be allocated to the Old WPSF and the New WPSF on the Effective Date. We therefore have no concerns regarding this treatment.

However, the resulting understatement of the value of the inherited estates at 31 May 2009 will reduce the uniform uplift which would otherwise be applied to minimum incentive payments, and importantly the release of the majority of these margins over time have not, as far as we are aware, been taken into account in Aviva’s assessment of the offer.

The actual impact on the combined inherited estates at the point of sale of the 2008 new business on a RBS basis is £16m, and the impact on the combined inherited estates writing new business in 2009 is estimated to be less than £5m.

We believe that, in order to ensure that policyholders who decide to elect are not disadvantaged by the sale of new business in 2008 and 2009, Aviva should make a positive adjustment to the value of the inherited estates at 31 May 2009 used for the purposes of calculating the Estate Value (on which the incentive payments made to holders of Elected Policies will depend). This adjustment should reflect the notional additional reduction in shareholder transfers required in order to eliminate the subsidy on the RBS basis at point of sale. This adjustment would be approximately £20m.

More generally, as far as we are aware, Aviva assumed the RBS basis applied in all areas of its negotiations, including its valuation of the inherited estates for the purposes of estimating the potential special distributions forgone by policyholders and the potential shareholder value arising from the reattribution. In other words, Aviva took very little account of the margins between the MCEV basis and the RBS basis in its negotiations for determining the PIPs. We believe such an approach acts to understate the potential benefits forgone by policyholders, and the potential shareholder value arising from the reattribution, as calculated by Aviva.

For the avoidance of doubt, the policyholder advocate has taken full account of the £174m in her analysis of the deal throughout the negotiations. To be clear, of the £74m million of additional adjustment over and above the adjustment allowed for in Aviva’s analysis

(£100m), only £20 million is a direct consequence of the new business subsidy due to* writing new business in 2008 and 2009.

At the time of writing this report we are unaware of Aviva's intention in respect of any areas of prudence identified over and above those already allowed for in Aviva's analysis (i.e. that reflected in the £100m), or in respect of the new business subsidy in determining the "Estate Value" used in the PIP calculations.

1.07 Scope and nature of the actuarial review

31 May 2009 RBS

The majority of our work has been focussed on the 31 May 2009 RBS since it is this calculation which forms the basis for projecting the estimates for 30 June 2009, 31 July 2009 and 28 August 2009 which will be used in the determination of the incentive payments to be made to holders of Elected Policies. Our review of the RBS as at 31 May 2009 considers the following areas, and a cross reference to where these areas are considered further is shown:

Item	**Cross reference**
Credit spreads/Liquidity premiums	3.03
Annuitant mortality	3.03
Other liabilities	3.07
Lapses	4.02
GAO take-up rates	4.02
Projected EBR	4.03
Risk free interest rates	4.04
Equity implied volatilities	4.04
The real yields used to determine RPI	4.04
Assumed margin between consumer price index (CPI) and retail price index (RPI)	4.04
Property volatility	4.04

* The words "the new business subsidy due to" were omitted in error from the version of this annexe published on 3 September 2009.

It was not within our scope to perform an audit of the results or to review Aviva's underlying experience analyses. We have therefore assumed that Aviva's experience analyses are correct.

In general, where the non-economic assumptions for the RBS at 31 May 2009 are the same as Aviva's assumptions used in its 30 June 2009 published MCEV, we have assumed that these are by their nature realistic since it is usual practice to use realistic assumptions in a company's published embedded value. Where the assumptions differ, we have looked further into the reasons behind the differences.

We have paid particular attention to methodology and assumption changes since 31 December 2008 and have discussed with the Aviva actuaries the reasons for the changes.

Several changes have been made to Aviva's Life DFA model (see appendix 33B of the policyholder advocate's full report) since 31 December 2009. It was not within our scope to review the changes made to the models.

The analysis of movement in the inherited estates details the reasons for any changes in the inherited estates over the period, and this will highlight any changes in methodologies and assumptions as well as the impact of changes in economic conditions. We have looked at Aviva's analysis of movement of the inherited estates in order to gain a full understanding of any changes made to the methodology and assumptions.

In order to produce this report for the policyholder advocate we have had to collect information from a number of different sources. Principally this involved:

- Reviewing documentation supplied by Aviva in response to requests.
- Meeting the Aviva actuarial team to discuss the technical actuarial practices and methodologies used to prepare the RBS.

30 June 2009, 31 July 2009 and 28 August 2009 RBS

We have reviewed the roll forward methodology for estimating the RBS for the three dates which are to be used to derive the PIPs. We have also considered whether any further areas of prudence have been introduced into the assumptions via the calibration of the economic scenario generators (ESG) at these three dates.

It was not within our scope to review the implementation of the methodology, nor the application of the two months interest which is applied as discussed in section 1.02, or the determination of the component of the uplift formula which allows for minimum incentive payments offered in respect of 'voluntary exits' to 28 August 2009.

1.08 Structure of this report

In Section 2 we discuss the movement in the inherited estates of CGNU Life and CULAC from 31 December 2008 to 31 May 2009. Section 3 discusses whether there are any areas of prudence in the items in the RBS which are not generated stochastically. Section 4 then considers the liabilities which are calculated stochastically and whether the methodologies and assumptions used result in any areas of prudence.

Any adjustments made are shown in table 1.2 and a cross reference is given to the section which discusses the adjustment. Any resulting adjustments made are highlighted in bold in the text in sections 3 and 4 to make it easier to use the cross referencing in table 1.2.

Section 5 discusses the estimated value of the inherited estates at 30 June 2009, 31 July 2009 and 28 August 2009.

Section 6 considers whether any adjustments should be made to the Estate Value used in determining the PIP.

2.00 Inherited estates 31 December 2008 to 31 May 2009

2.01 Introduction

Like most companies, Aviva analyses the movement in the inherited estate over time. This analysis provides a check on the results and is key to the understanding of the business and to the management of the funds. We have used the analysis of the movement in the inherited estates of CGNU Life and CULAC from 31 December 2008 to 31 May 2009 to ensure that there are no changes to the assumptions or methodologies which have a material impact on the inherited estate and which have not been covered by the scope as set out in section 1.07.

2.02 Analysis of movement in the inherited estates

The tables below show how the inherited estates have moved over the five month period. Clearly the inherited estates have reduced significantly over the period. The analysis highlights where there have been any significant methodology or assumption changes as well as areas where the inherited estates have moved for other reasons.

Table 2.1: Analysis of movement of the inherited estates from 31 December 2008 to 31 May 2009

(£millions)	CGNU	CULAC	Total
Open	765	764	1,529
Close	466	565	1,031
Change to analyse	-299	-199	-498
Investment performance	-320	-272	-592
Modelling/opening adjustments	20	25	45
Assumption changes			
-Economic	-12	72	60
-Non Economic	6	3	9
Policy holder behaviour (lapses)	61	-11	50
Other experience variance	-36	-3	-39
New business	-20	-12	-32
Miscellaneous	1	5	6
Untraced	2	-6	-4
Total	-299	-199	-498

Source: "Realistic Reporting – Interim 2009" document

2.03 Key factors contributing to the change in the combined inherited estates over the period

We have set out below the key factors which have contributed to the movement in the inherited estates over the period below:

Impact of investment performance on the inherited estates

The impact of investment performance on the funds and on the inherited estates has been significant. The table above shows a decrease in the inherited estates totalling around £600m. Although the impact on the cost of guarantees of reductions in asset shares are hedged to a degree against falls in the market, the hedge does not mitigate against the movement in property or corporate bonds, and these two asset classes have played a significant part in the reduction in the inherited estate over the period.

The major contributors to the reduction across the two funds are:

- Index linked assets having a shorter duration than the inflation linked guarantee liabilities (impact on combined inherited estates -£52m). An increase in implied inflation increased the assets due to the projected income stream increasing with the higher implied inflation, however, the increase was far less than the increase in the cost of inflation linked guarantees which was also affected by the higher implied inflation over a longer period.

- The average term of gilt assets being longer than the liabilities (impact on combined inherited estates -£147m). An increase in yields meant asset shares reduced and the cost of the guarantees therefore increased. However the increase in discount rate had a limited positive impact due to the average term of the liabilities being shorter.

- Property impact (impact on combined inherited estates -£173m). The value placed on property has reduced, this has reduced asset values and asset shares, and has increased the value of the cost of guarantees.

- Mismatch between the non-profit liabilities and the assets backing these liabilities, (impact on combined inherited estates -£118m). The amount is offset partly by a £52m change in assumptions due to the changes in yields (discussed under "changes in economic assumptions" below).

- The adverse impact on the inherited estates themselves (impact on combined inherited estates -£42m) of investment returns (e.g. property and fixed interest).

- Excluding the £52m offset allowed for under "changes in economic assumptions", the above sum to -£532m: the remaining -£60m is a mixture of smaller items including some tax impacts.

Changes in modelling approach

There have been a number of opening adjustments and changes made to the modelling in order to make the modelling more accurate and these have in total increased the combined inherited estates by £45m. We have discussed the changes made with the Aviva actuaries and agree that the type of changes which have been implemented have been made to improve the accuracy of the modelling. The £45m is made up of a number of larger numbers both positive and negative.

- As it potentially involves more judgement, we discussed with Aviva in greater depth the changes made to the projected equity backing ratios (EBR). This was a change in the methodology for projecting EBRs, where the impact is -£37m. We were informed that the revised methodology now uses a formula which more closely follows the approach taken in practice to derive the EBR. However due to the complex nature of the modelling, some approximations are made, and these are described further below.

- The £45m also includes an amount of [redacted] which is a change to the shareholder transfer adjustment in relation to the elimination of the 2008 new business subsidy. This change arose due to many of the modelling improvements/opening adjustments. We note that overall there was a positive impact on the inherited estate in respect of

modelling improvements and opening adjustments. The new business subsidy elimination is discussed further at the end of this section.

- The above sum to -£106m, the other +£151m are a mixture of modelling improvements which have overall significantly increased the estate and which we have discussed with Aviva. It was not within our scope to review the implementation of such changes.

There are some additional stochastic modelling developments planned and these are currently in two phases. The first – Release 2 (August 2009) has just been delivered The second – Release 3 (early / mid 2010) is still being planned and the developments are at an early stage.

Release 2 – these changes add £50m to the inherited estate at 31 May 2009 and have been included as an adjustment to the inherited estate value at that date.

Release 3 – Aviva expects these changes to have a slightly negative impact on the inherited estate, but Aviva has made no adjustment to the estate at 31 May 2009 for these, and so consequently there will be no impact on the inherited estate value used for calculating the Final Aggregate PIP for these changes.

Description of the revised EBR projection methodology:

At a very high level, the EBR within each scenario in each future time period is a function of the value of the projected guarantees, the asset shares and the support available from the inherited estate.

The EBR is calculated approximately by methods which avoid the need to carry out stochastic projections at each future time period for each scenario (delta hedging techniques are used). These modelling methods are common in the industry and are not intended to bring into the methodology any intentional bias in terms of prudence.

In such calculations, fixed interest assets are assumed to be risk free, and as such they have zero volatility. The volatility assumption for the proportion of the asset shares invested in

risky assets is fixed at 18% across all scenarios and all time periods. This rate is an average rate across all risky assets backing the asset shares and this rate is a long term assumption which changes relatively infrequently.

For the determination of the projected EBRs for use in the RBS calculations, a higher projected volatility serves to reduce the EBR. A reduced EBR would in turn reduce the cost of guarantees in the RBS. We would therefore be concerned if the volatility used in these projections was under estimated. From our perspective, for the volatilities assumed in the calculation of the cost of guarantees for the RBS, high volatility serves to increase the liabilities and reduce the inherited estates, being concerned that volatilities are too low is counter-intuitive. Our view is that 18% could be considered low. However, given that this is currently the rate used in the calculation of the EBRs used in practice, and is not an approximation, we believe it is reasonable to use this rate.

It is important to note that the process we discuss here is purely in respect of the determination of the actual and projected EBRs which are used as inputs into the RBS. The volatilities discussed are not those reflected in the underlying economic calibration used to determine guarantee costs in the RBS.

Another area of judgement in the calculation of the EBR is the level of support given by the inherited estates. The more support assumed to be given, the higher the EBR, and the higher the EBR, the higher the value of guarantees in the RBS is likely to be. This would reduce the inherited estates. We are therefore concerned if the projected inherited estate is likely to be over-estimated. The inherited estate (i.e. the excess of assets over asset shares, the cost of guarantees and other liabilities determined on a realistic basis) is assumed, for this part of the model, to be invested in fixed interest assets, and this is not in line with management's assertion that the inherited estate in the longer term should be invested in the same EBR as the asset shares.

This alone could lead to a higher projected inherited estate in some scenarios than we would expect due to the fact that fixed interest assets are less volatile. However, it is the adverse scenarios where the guarantees will be higher than asset shares and it is these scenarios where

it is more likely that the inherited estate would be invested more heavily in fixed interest assets in practice. This reduces the potential for overstating the projected estate support, and hence overstating the cost of guarantees. For calculating the level of support from the estate, Aviva has assumed that the new business volume is in line with the Wagner base assumptions (i.e. those used by Aviva and the policyholder advocate in the negotiations – the policyholder advocate also considered two other lower volume new business scenarios).

Higher new business volumes reduce the support required from the inherited estate for existing business which in turn reduces the EBR and this in turn reduces the value of the guarantees in the RBS. We would therefore be concerned if the assumed levels of new business volumes were understated. We do not believe this to be the case.

Changes in economic assumptions

The total impact on the combined inherited estates was +£60m.

- +£52m is from a reduction in reserves due to the increase in fixed interest yields arising from the £118m reduction in the value of assets backing those liabilities mentioned under the investment performance section above.

- The main change in the economic assumptions was the reduction in assumed volatilities (impact on combined inherited estates of +£131m).

- One other key change in the economic assumptions was the change from using real world assumptions to market consistent assumptions for the with-profits business where the WPBR is not based on asset shares (impact on combined inherited estates -£100m). Using market consistent assumptions means projecting lower bonuses rates. However, under the market consistent basis the guarantees are more likely to apply (because future growth in asset shares is assumed to be lower) and the cash flows (claim payments typically outweigh future premium income) were discounted at a lower rate. The arguments for being concerned about areas of prudence are not as relevant for this reserve as they are for the cost of guarantees because any profits which may emerge over time (due to favourable experience) will be added to the

endowment asset shares and cannot revert to shareholders except for 10% of bonuses which may be declared in relation to such profits. Note that it was not within our scope to review the implementation of this change.

- The other -£23m is a mixture of other small changes.

Changes in policyholder behaviour (lapses)

The total impact on the combined inherited estates was +£50m.

Lapses assumptions were increased on endowments (impact on combined inherited estates +£20m), and on policies with a mortgage endowment promise (impact on combined inherited estates +£46m).

Lapse assumptions were reduced on policies with "No-MVR" guarantees which reduced the estates (impact on combined inherited estates -£16m).

Other experience variances

The total impact on the combined inherited estates was -£39m.

This is mainly due to payouts where the actual cost of the guarantee proves to be higher than the projected cost of the guarantees held within the liabilities thus having a negative impact on the inherited estates. It was not within our scope to review these calculations.

New business

The total impact at the end of May on the combined inherited estates of the new with-profits business sold in the first 5 months of 2009 as reported in the table above was -£32m. We discuss this further in section 6.

If the expenses, shareholder transfers (net of tax) and the expected cost of guarantees are expected to exceed charges for new with-profits policies written from 2008 onwards, then

Aviva is required to reduce shareholder transfers such that the excess is eliminated. To complicate matters, the elimination is performed on an MCEV basis at the point of sale and so the year end RBS result for new business could still show a positive or negative impact on the inherited estate. Note also that Aviva only includes marginal costs in this calculation and does not allow for overheads.

We have been informed by Aviva that the estimated impact on the combined inherited estates as 31 May 2009, of writing new business at the point of sale in the first five months of 2009, after allowing for the restriction of shareholder transfers on an MCEV basis, is less than -£5m. For the avoidance of doubt, the impact of the reduced shareholder transfers in respect of the elimination of the 2009 new business subsidy (on an MCEV basis) is allowed for in the estate figure of £1,031m at 31 May 2009 as shown in table 1.1. The impact above is calculated as at the point of sale and the impact on the final year end figures could be different, (as it was at the end of May 2009).

The 2008 year end adjustment to shareholder transfers in respect of new with-profits policies written in 2008 was [redacted] (this increased the inherited estates by [redacted] and is included in the £1,529m shown in table 1.1). However, the actual adjustment that Aviva believes should have been made is [redacted], together with a reduction to shareholder tax reserves of [redacted]. The difference is due mainly to changes to the models and opening adjustments made by Aviva since the year end which are included in the "changes in modelling approach" section above. The impact on the 31 December 2008 inherited estates from changing these figures is [redacted] + [redacted] –[redacted] =[redacted] (ie the estate reduced by a total of [redacted]). This [redacted] forms a part of the +£45m impact of modelling/opening adjustments shown in table 2.1 above.

We note that all figures are calculated (where relevant) allowing for the fact that the actual 2008 shareholder transfers were reduced by [redacted] in 2008 for the 2008 new business subsidy.

The 31 May 2009 figures shown in Table 1.1 allows for the restriction to shareholder transfers in respect of new with-profits business written to that date in 2009 determined on an MCEV basis and the restatement of the restriction applied in respect of with-profits business written in 2008.

Other

Other items in the table are not material, but it is worth mentioning that analysing the movement in two very large numbers makes it difficult to be able to analyse every detail. The amount which remains unanalysed is relatively low and as such is reasonable.

3.00 Non-stochastically calculated items in the 31 May 2009 RBS

3.01 Introduction

In this section we consider all material items in the RBS which are not calculated using stochastic models, and discuss the potential for prudence in the methodology or assumptions used in the calculations.

3.02 Asset valuation as at 31 May 2009

Table 3.1: Extract from table 1.1

	May 31 2009		
(£millions)	CGNU	CULAC	Total
Regulatory value of the admissible assets of the fund	13,647	14,394	28,041

Source: Aviva realistic report – interim 2009

We made no adjustment to these figures at the year end, and it is not within our scope to review the asset value.

3.03 Value of the non-profit business

The valuation of this asset involves judgement and is similar to calculations performed for the liabilities. Valuing non-profit business on a realistic basis allows companies to take credit for the expected future profits of this business in their RBS. The present value of future profits otherwise known as the value of in-force business (VIF) therefore needs to be calculated and appears as an asset on the balance sheet. This approach arises as, in the first instance, non-profit liabilities are included on a prudent basis, and the VIF aims to release this prudence as

part of the overall RBS. At the year end we made an adjustment to this figure to allow for the remaining prudence in the valuation of the VIF.

Table 3.2: Extract from table 1.1

	May 31 2009		
(£millions)	CGNU	CULAC	Total
value of future profits on non-profit business (VIF)	398	353	751

Source: Aviva realistic report – interim 2009

Note that the post valuation adjustment of +£23m to the annuity VIF is not included in the figures above

The key assumptions used in valuing the annuity business are annuitant mortality and credit spreads (or liquidity premiums). The mortality basis was considered at the year end and we made no adjustment for this assumption as it was based on the MCEV assumptions and was in line with those used within the industry. Liquidity premiums are discussed below.

We asked Aviva to provide us with the results of calculating the value of the non-profit business with the assumptions for annuities based on swaps plus 150 basis points (the MCEV basis used for shareholder owned annuity business) and for other non-profit business based on swaps (the MCEV basis). This is consistent with the approach we took at the year end. The non-economic assumptions used for the RBS are the same as for MCEV. Note that although the percentage of assets which back the annuities and are invested in risk free assets has increased from 50% at 31 December 2008, we still believe that 150 basis points over swaps is a reasonable level at which to set the liquidity premium. The two bases used for annuities and non-annuities and the results of the differences are set out below:

Table 3.3: Results of revaluing the non-profit VIF at 31 May 2009

NP VIF *£millions*	**RBS**	**MCEV**	**Difference**
Annuities	121	[redacted]	[redacted]
Other VIF	630	645	15
Total	**751**	[redacted]	[redacted]
Annuities – post valuation adjustment	23	0	-23
Revised Total	**774**	[redacted]	[redacted]
Basis used for NP VIF			
Risk Free Rate (RFR)	Gilts +10 bps	Swaps	
Earned rate on Immediate Annuities	RFR + 125 bps	RFR + 150 bps	
Earned rate - Other	RFR	RFR	
Discount rate - Immediate Annuities	RFR + 50 bps	RFR+150 bps	
Discount rate – Other	RFR + 50 bps	RFR	

Source: Aviva responses to questions

The basis for annuities in the RBS at 31 December 2008 used a liquidity premium of 100 basis points over risk free rates (assumed to be gilts plus 10 basis points). There was a weakening of the RBS basis at May 2009 (which used a liquidity premium of 125 basis points but the same discount rates as used at 31 December 2008). This weakening contributes to the difference in the adjustments we made at the year end compared to 31 May 2009 (see Table 1.2). In addition, the impact of using a lower discount rate in the RBS at 31 May 2009 compared to the assumed MCEV basis, has contributed to a difference between RBS and MCEV of [redacted] (made up of the [redacted] and -£23m in the above table). Note that the –£23m is a post valuation adjustment and the correct value of the annuities on the RBS basis was £121m + £23m = £144m.

We discussed with Aviva the lack of any material difference in the results shown in table 3.3 above between the two bases, and Aviva provided some further high level analysis. We were comfortable with Aviva's explanations.

At the year end we were given a high level estimate of the impact of moving the non-profit annuities to using swaps + 150 basis points (this was estimated at [redacted]). This turned out to

be an over estimate. In addition, we were informed at 31 December 2008, that a move to swaps for other non-profit VIF was likely to be immaterial.

For May 2009 (see Table 1.2) we have made the following adjustments to the inherited estates in line with the above figures:

[redacted] for non-profit annuity VIF

+£15m for other non-profit VIF

3.04 With-profit benefit reserve

Table 3.4: Extract from table 1.1

	May 31 2009		
(£millions)	CGNU	CULAC	Total
Asset shares	10,070	9,476	19,546

Source: Aviva realistic report – interim 2009

The calculation of asset shares, unlike other components of the realistic liabilities, is not an area where prudence could penalise policyholders. Under the Scheme, which sets out how the new with-profit sub-fund will operate post reattribution, asset shares form part of the "core asset account" which are assets allocated to policyholders, and to which the shareholders' only right is at most 10% of distributions arising from bonuses allocated to policies. As a result, while an overstatement of the asset shares for electing policies reduces the size of the available inherited estate, the core assets (which are all attributable to electing policyholders if not required to meet expenses and other liabilities chargeable to the core assets in accordance with the Scheme) will be overstated by an equal amount.

For the most part, CGNU Life and CULAC calculate their with-profits benefit reserve taking into account the individual circumstances of each policy. However, for whole life contracts and some small blocks of business, such an approach is either not appropriate, or robust historical data is not available. In these cases either a bonus reserve valuation (BRV) is carried out or the statutory (Peak 1) reserves are held. In these cases, although prudence could, in extreme cases, reduce the guarantees met by the shareholder, we believe that it is as

likely that surpluses would emerge. As surpluses in the New WPSF will emerge into core assets via an addition to the endowment asset shares, (and not to shareholders) we do not believe that making adjustments to the inherited estate in relation to the WPBR is appropriate or necessary.

There have been a number of changes as at 31 May 2009 to the WPBR BRV approach due to refinements to the models and changes in assumptions for the bonus reserve valuation. It was not within our scope to review the model changes. The estimated impact of the changes in the assumptions to the whole-life WPBR BRV is -£100m.

3.05 Planned enhancements to asset shares

Table 3.5: Extract from table 1.1

	May 31 2009		
(£millions)	CGNU	CULAC	Total
+ Planned enhancements	238	246	484

Source: Aviva realistic report – interim 2009

The majority of the above reserve is in respect of the special distribution made to policyholders. The special distribution is in the form of a special bonus awarded to qualifying policies in three tranches over 2008, 2009 and 2010. The cost of the outstanding tranches of the special distribution is included in the planned enhancements. The amount has decreased over 2009 due to the fact that the second instalment has been declared. This has served to increase the asset shares and payouts on exiting policies which qualified for the second tranche of the bonus, and as a result of movements in investment markets.

In addition, within CGNU Life, a small block of unitised with-profits (UWP) policies was written on the basis of a minimum guaranteed bonus growth rate. For most of these contracts this minimum has since been removed in return for an additional 0.5% regular bonus each year.

The planned enhancement relating to the 0.5% bonus is calculated approximately in the balance sheet.[4] We are, however, comfortable that given the small number of policies to which this applies the effect of the estimate on the inherited estate is limited.

3.06 Smoothing

Table 3.6: Extract from table 1.1

	May 31 2009		
(£millions)	CGNU	CULAC	Total
+ Smoothing costs	-71	-63	-134

Source: Aviva realistic report – interim 2009

Strictly, the difference between the payout under a contract and the asset share is made up of both the cost of guarantee (which may be zero) and the cost of smoothing (which could be positive or negative). To be consistent, both the guarantee cost and the smoothing cost should be determined as part of the same process.

CGNU Life and CULAC target with-profits payouts at 100% of asset share over time, and the cost of guarantees is determined as the excess (if any) of minimum guaranteed benefits over the asset share.

Payouts have been higher than asset shares over the first five months of 2009 due to smoothing, so the liabilities for smoothing costs have become more negative over the period – increasing the deduction which is expected to be made from payouts in the future. The impact on the overall inherited estate of these movements should be minimal.

Our considerations of prudence, as discussed above, are not relevant for the smoothing reserves as any smoothing account in the New WPSF will form part of the core assets as do the WPBR.

[4] As 0.5% of the unit reserve multiplied by the term outstanding.

3.07 Other long term insurance liabilities

Table 3.7: Extract from table 1.1

	31 May 2009		
(£millions)	CGNU	CULAC	Total
- Shareholder transfers & tax	107	121	228
+ Other long-term insurance liabilities	-182	-135	-317
Total	-75	-14	-89

Source: Aviva realistic report – interim 2009 - figures subject to rounding

The tables below sets out the additional liabilities recognised by CGNU Life and CULAC on their balance sheets at 31 December 2008 and 31 May 2009.

Table 3.8: Other long term insurance liabilities

	31 December 2008			31 May 2009		
(£millions)	CGNU	CULAC	Total	CGNU	CULAC	Total
Shareholder transfers not charged to asset shares and tax on shareholder transfers	147	158	305	107	121	228
Pensions review	1	12	13	1	12	13
Aviva pension scheme	6	7	13	6	7	13
Mortgage endowment mis-selling	12	20	32	4	14	18
Other compensation costs	12	9	21	12	8	20
Costs of future expenses not charged to asset shares	23	19	41	22	17	39
Mortgage Endowment Promise data provisions	10	2	12	10	2	12
UWP VIF	-230	-196	-427	-251	-211	-462
Additional reserve for contingency	17	16	33	13	16	29
Total	-2	48	44	-75	-14	-89

Source: Aviva responses to questions – figures are subject to rounding

In this section we consider the figures in the above table which are NOT shaded. The shareholder transfers (except for the new business subsidy elimination) and tax on such transfers are an output of the stochastic models used to calculate the liabilities discussed below in section 4.

There have been no significant increases since the year end in the other liabilities.

At the year end we made adjustments to the inherited estate for the following items:

- Mortgage endowment mis-selling reserve +£10m

- Converting mortgage endowment promise to swaps £0m
- Converting UWP VIF to swaps £0m
- Contingency prudence +£33m

For the May 2009 RBS we have taken the same approach as at the year end to the adjustments to be made:

Aviva has informed us that the mortgage endowment mis-selling reserve has decreased due to a release of reserves offsetting actual claims as well as a weakening of the reserves reflecting actual experience being favourable relative to the assumptions made. In light of this we have reduced the adjustment we made from £10m to **£5m** (see table 1.2).

The impact of moving the mortgage endowment promise and UWP VIF valuation onto swap rates was immaterial for both the 31 May 2009 and 31 December 2008 valuation. For the May 2009 RBS Aviva has provided us with a total figure for moving all the liability bases onto swaps (+£29m) of which +£28m is in respect of bonds with guarantees. This is discussed in more detail below in section 4.06.

The contingency reserve has been reduced from £33m to £29m and our May 2009 adjustment of **+£29m** (see table 1.2) therefore reflects the reduction in the reserve.

In addition to the above adjustments, Aviva provided us with further information with regard to the value placed on the "other compensation costs" for MCEV purposes. The difference is **£8m** (see table 1.2) and we have made an additional adjustment for this at 31 May 2009.

3.08 Realistic current liabilities

Table 3.9: Extract from table 1.1

	31 May 2009		
(£millions)	CGNU	CULAC	Total
+ Realistic current liabilities	1,122	1,181	2,303

Source: Aviva realistic report – interim 2009

The current liabilities of the fund are, for the most part, measured in exactly the same way as they would be in the Report and Accounts, and represent expected short term outgoings, (for example claims which have been reported but not yet paid). Deferred tax assets or liabilities also form part of the current liabilities. For the 31 May 2009 RBS, a tax asset of £185m (£48m at 31 December 2008) has been deducted from the current liabilities. This represents 100% of the discounted unrelieved acquisition costs and 50% of the full potential tax asset on equity / property gains.

Tax assets represent future expected tax benefits due to the fact that investment losses have been made which can be used to reduce future tax bills. Aviva has informed us that the 50% on equity / property reflects the fact that in roughly half the economic scenarios modelled no future gains are projected to be made and so no credit for the economic value of the reduced tax charge could be made in these scenarios. Although there may be some prudence in this assumption, we do not believe this to be material and so no adjustments have been made to the current liabilities. In arriving at this view, we confirmed with Aviva that none of the deferred tax asset relates to fixed interest assets which allow losses to be offset against future coupons. This would have made the likelihood of recovering tax losses more likely.

It was not within our scope to review the current liabilities.

4.00 Stochastically calculated items in the 31 May 2009 RBS

4.01 Introduction

In this section, we consider the methodology used to calculate the more significant individual entries in the RBS for liabilities which are calculated stochastically. The areas we have considered are those which were material as at 31 May 2009.

4.02 Key demographic assumptions used

When considering the assumptions and methodology used, we have concentrated on the material areas where key judgements are made with regard to the assumptions which could result in prudence in the reserves. This would reduce the face value of the inherited estates and may eventually be released to shareholders. The table below highlights the key areas in terms of the reserves which we discuss further.

Table 4.1: Extract from table 1.1

	May 312009		
(£millions)	CGNU	CULAC	Total
+Contractual guarantees	1,207	1,209	2,416
guaranteed minimum pension (GMP)	10	13	23
non-Contractual guarantees (Mortgage Endowment Promise)	178	211	388
Financial options (GAOs)	15	141	156
Total	1,410	1,574	2,984
Guarantee charges	-55	-45	-100

Source: Aviva realistic report – interim 2009

A more detailed split of the first four reserves noted in the table above is set out below. ***The capital letters in the columns refer to cross references to the assumptions set out below. MCEV assumptions are shown in brackets in this section where they differ from the corresponding RBS assumption.***

Table 4.2: Detailed breakdown of the cost of guarantees[5]

	May 31 2009	
(£millions)	CGNU	CULAC
Conventional Life (excl MEP)	A [redacted]	A [redacted]
Mortgage endowment promise products (MEP)	A [redacted]	A [redacted]
Conventional Pensions (excl GAO & GMP)	B [redacted]	C [redacted]
Guaranteed annuity options (GAO)	B [redacted]	C [redacted]
Guaranteed minimum pensions (GMP)	[redacted]	[redacted]
No-MVR Life	D [redacted]	D [redacted]
Inflation protection guarantees	E [redacted]	E [redacted]
MBG	[redacted]	[redacted]
Other UWP Life	F [redacted]	F [redacted]
UWP Pensions	G-K [redacted]	G-K [redacted]
Total before guarantee charges (as per table 4.1)	**1,410.2**	**1,574.0**

Source: Aviva response to questions

Note that the guarantee charges shown in table 4.1 are those that apply to the inflation guarantee products and the value placed on those future charges is calculated using the model which is also used to calculate the liability in respect of that guarantee (considered below).

We have set out comments below on assumptions which have either changed between 31 December 2008 and 31 May 2009, or which are different from the MCEV assumptions used by Aviva.

[5] Certain information in this appendix has been redacted (ie blanked out). This has been a requirement of Aviva, in order to prevent the public disclosure of information which Aviva believes is commercially sensitive. In some cases figures or words which are not deemed by Aviva to be commercially sensitive have been redacted in order to prevent the reader from deriving the nature of the information which Aviva deems to be commercially sensitive. The policyholder advocate does not agree that this information is commercially sensitive and believes that the redactions are inappropriate and unnecessary.

Persistency - pensions

	31 December 2008 and 31 May 2009 lapse assumptions			
Duration	Personal Pension G	International Personal Pension H	Executive Personal Pensions I	Stakeholder friendly J
0	1.75%	1.0%	2.5%	3.5%
1	1.75%	2.0%	2.5%	3.5%
2	1.75%	3.0%	2.5%	3.5%
3	1.75%	4.0%	2.5%	3.5%
4	1.75%	5.0%	2.5%	3.5%
5	1.75%	20.0%	2.5%	3.5%
6	1.75%	10.0%	2.5%	3.5%
7	1.75%	8.0%	2.5%	3.5%
8	1.75%	8.0%	2.5%	3.5%
9	1.75%	8.0%	2.5%	3.5%
10+	1.75%	8.0%	2.5%	3.5%

Source: Aviva response to questions

	31 December 2008 and 31 May 2009 lapse assumptions
CGNU Conventional Pension (incl SEDA) B	**1%**
CULAC Conventional Pension (with GAOs) C	**1.5%** [redacted]

Source: Aviva response to questions

The lapse assumption for the conventional pensions with GAOs (C) was reduced at the 31 December 2008 year end from 5% to 1.5%. We made no adjustment to the inherited estate at 31 December 2008 for this on the understanding that the same change would be made to the MCEV assumption adopted at the 2009 half year.

The MCEV assumption at 30 June 2009 was not reduced and we are informed that the MCEV results are relatively insensitive to this assumption, and hence it is unclear whether the change will be made. We note that post Wagner the MCEV results will become sensitive to this assumption because the AVLAP shareholder will be more directly exposed to the experience

[6] Certain information in this appendix has been redacted (ie blanked out). This has been a requirement of Aviva, in order to prevent the public disclosure of information which Aviva believes is commercially sensitive. In some cases figures or words which are not deemed by Aviva to be commercially sensitive have been redacted in order to prevent the reader from deriving the nature of the information which Aviva deems to be commercially sensitive. The policyholder advocate does not agree that this information is commercially sensitive and believes that the redactions are inappropriate and unnecessary.

of the with-profits policies of conventional pension contracts with GAOs that are allocated to the New WPSF.

We have seen a high level summary of the available experience analysis which does suggest that some reduction in rates from 5% may be appropriate. We believe that a slightly higher assumption representing the best estimate for both MCEV and for RBS could be justified. The high level adjustment we have made is +**£10m** (see table 1.2)**.** This is in the context of the impact at the end of 2008 of this change to lapse rate assumptions on CULAC conventional pensions being a reduction in the estate of £34.8m (split £26.4m GAO and £8.4m maturity guarantees). We have discussed this adjustment with the Aviva actuaries who are involved in setting the RBS basis and note that this is an area of disagreement between us. They would recommend an MCEV assumption in line with the RBS assumption.

Persistency – Insurance Bonds

	31 December 2008 lapse assumptions			31 May 2009 changes
Duration	UWP policies with a 'NO MVR' Gtee D	RPI Gtee bonds E	Other Bonds F	UWP policies with a 'NO MVR' Gtee D
0	N/A	1%	1%	
1	N/A	2% [redacted]	2% [redacted]	
2	N/A	2.75% [redacted]	2.75% [redacted]	
3	N/A	3.75% [redacted]	3.75% [redacted]	
4	N/A	4.75% [redacted]	4.75% [redacted]	
5	N/A	19%	22%	
6	13%	9.5%	13%	
7	13%	9.5%	13%	[redacted]
8	9%	9.5%	13%	[redacted]
9	5%	9.5%	13%	
10	50%	9.5%	13%	
11	5%	9.5%	9.5%	
12	9.5%	9.5%	9.5%	
13	9.5%	9.5%	9.5%	
14	9.5%	9.5%	9.5%	
15+	9.5%	9.5%	9.5%	

Source: Aviva response to questions

We can see from the table above that there are some durations where the RBS lapse assumptions are more prudent than the MCEV assumptions (ie lapse assumptions are lower which means that more polices are projected to stay in force and benefit from minimum guarantees in adverse scenarios). In addition the assumptions at in-force durations 7 and 8 for UWP policies for which future MVR-free dates apply have reduced for the RBS but not for the MCEV. The total impact of this difference is around [redacted] of this the impact of the change in assumptions made at 31 May 2009 is -£16m.

At the year end we added back [redacted] for persistency prudence in relation to the differences in the RBS and MCEV basis highlighted in column E above. This was based on an estimate provided by Aviva which turned out to be an over-estimate. The figure for the difference in the assumptions at 31 May 2009 is [redacted]

The rates above in column F have minimal impact as the business has no guarantees.

We had discussions with Aviva about the changes since the year end shown in bold in column D above and based on our understanding of the most recent experience, we are comfortable with the change in the assumption. We have not reviewed the experience analysis. We note that the MCEV basis remains unchanged as it is not normal practice to change the MCEV assumptions other than at a year end.

Our adjustment at 31 May 2009 has been reduced from [redacted] to [redacted] (see table 1.2) which reflects the known differences between the MCEV and RBS lapse rate bases shown in column E above.

Persistency - TIB/SIPPs:

Duration	31 December 2008 and 31 May 2009 assumption K
0	5%
1	10%
2	10%
3	10%
4	10%
5	45%
6	45%
7	45%
8	45%
9	45%
10	45%

Source: Aviva response to questions

No adjustments have been deemed necessary for the assumptions set out above as there is no difference between the RBS and MCEV bases.

Persistency - Endowments with and without mortgage promises

Duration	CULAC 31 December 2008 and 31 May 2009 assumption A	CGNU 31 December 2008 RBS assumption and (31 May 2009 MCEV assumption) A	CGNU 31 May 2009 RBS assumption A
10	7.0%	3.0%	7.0%
11	6.0%	3.0%	6.0%
12	5.5%	3.0%	5.5%
13	5.5%	2.5%	5.5%
14	5.0%	2.0%	5.0%
15	5.0%	2.0%	5.0%
16	5.0%	2.0%	5.0%
17	5.0%	1.5%	5.0%
18	4.0%	1.5%	4.0%
19	3.0%	1.0%	3.0%
20	2.5%	0.5%	2.5%
21	2.5%	0.5%	2.5%
22+	1.5%	0.5%	1.5%

Source: Aviva response to questions

From the above table we can see that the CGNU assumptions have been brought into line with CULAC for the RBS. We understand that this is due to the experience for CGNU showing higher lapses than assumed. This change has increased the inherited estate by +£46m for the endowments with mortgage promises and +£20m for other endowments.

At the year end we made a small adjustment (+£8m) for the fact that the experience analysis for this business was not conclusive. Given the basis has now been weakened (increasing the inherited estates by +£66m) we have taken that adjustment out of the 31 May 2009 RBS and hence no further adjustment is required. We expect the MCEV basis to be brought into line with the RBS basis at the year end and that the temporary effect of the MCEV having a prudent basis compared to the RBS is a short term effect.

Mortality[7]

Business/Product	31 December 2008 and 31 May 2009 assumption
Endowments	
Conventional Life – Endowments and Low Cost Endowments A	[redacted]
Pensions – (excluding Pensions DA, S32 and GAO) G-K	[redacted]
Annuities in payment Males B&C	95.5% PCMA00 with 100% medium cohort improvement factors, minimum 1.5% pa, applicable from 2005
Annuities in payment Females B&C	90% PCFA00 with 75% medium cohort improvement factors, minimum 1.0% pa, applicable from 2005
Pensions DA, S32, GAO 'In Deferment' B&C	[redacted]
Unitised Life - Bonds	
CGNU, CGU, GA, CU and NU D-F	[redacted]

Source: Aviva response to questions

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For the GAO business, the MCEV mortality basis is weaker (i.e. higher mortality is assumed, so fewer policyholders are assumed to attain the age where the option can be exercised) than for the RBS basis. The impact of using different mortality rates to MCEV is an increase in reserves (and hence a reduction in the estates) of approximately £3m.

GAO take- up rates[8]

Fund		31 December 2008 and 31 May 2009 assumption
CGNU	B	80% [redacted]
CULAC	C	87% [redacted]

Source: Aviva response to questions

The GAO take-up rates are assumed to increase by 1% every year from 2008 onwards, until an ultimate level of 95% is reached

The take-up rates assumed for guaranteed annuity options are important factors in the realistic liability determined for these options. The GAO take-up rates used for the RBS are more prudent (i.e. higher) than the MCEV assumptions. The impact of using MCEV assumptions as opposed to the RBS assumptions is estimated to be an increase in reserves of at most £10m.

We identified there were some margins in these assumptions at the year end but that these were likely to be immaterial. On the basis of further work performed by Aviva to estimate the effect of differences between the RBS basis and the MCEV basis, we have added a further **£10m** in light of the mortality and take-up rate prudence above.

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Expenses

Aviva has informed us that the expense assumptions follow the MSA agreement and are the same for both the RBS and the MCEV. We have thus made no adjustments in respect of expenses. Note we have not reviewed the recently implemented management services agreement.

4.03 Projected EBR

As discussed in section 2.03 above, the changes to the modelling of the projected EBR could include a small amount of prudence in relation to the approximations inherent in the projection of the support provided by the inherited estate. In addition, we have mentioned in our previous report that there is a small amount of prudence in the modelling due to the fact that the EBR is not allowed to reduce below 40% where in reality, in very extreme cases it could. We asked Aviva what the impact of removing this 40% floor would be. The result would be an increase in the inherited estate of £11m. This is clearly an extreme scenario, and so the actual allowance for prudence is somewhere between 0 and £11m. Given the fact that there are two potential areas of prudence (albeit small), we have made an adjustment at 31 May 2009 of **£5m** (see table 1.2) to allow for these.

4.04 Calibration of the ESG

The economic assumptions used to determine the RBS are market consistent. They are determined by direct reference to prices observable in the market and so can mostly be set by an automated process with little requirement for judgement. An ESG, developed by Barrie & Hibbert (B&H) and widely used in the UK insurance industry, provides one thousand economic scenarios over a 30 year projection period to enable stochastic modelling of the liabilities.

To determine the RBS at 31 May 2009 Aviva commissioned B&H to provide a one-off calibration for the ESG. B&H produce similar calibrations using the same methodologies each quarter for use by their clients in the industry. This provides economy-specific calibrations for the UK, US, Eurozone and Japan, and reflect the fund's significant investment

territories. Aviva's economic assumptions as at 31 May 2009 are drawn from the B&H calibration.

The approach taken by Aviva for calibration of the ESG is unchanged from 31 December 2008.

Risk-free rate

Consistent with RBS reporting practice, Aviva uses a risk-free rate equal to the yield curve on government bonds (gilts) plus a 10 basis point margin. We have agreed that these rates are consistent with market rates.

For RBS reporting it is assumed that all assets earn the risk-free rate on average.

Interest rates

Interest rate volatilities are derived from swaption prices at a range of option terms and swap maturities. We have compared these to independent data at 31 May 2009 and found no material differences. The fit of the model to market volatilities is comparable with standard B&H calibrations. The calibration is weighted towards swaptions using 20 year swaps which is consistent with the expected period of payment on annuities, (relevant for business with GAOs).

We have also compared the real interest rates to independent data with an acceptable level of agreement. The calibration of the term structure of the real interest rates is more approximate than for the nominal yield curve. It was not within our scope to review the values of significant index-linked gilt assets under the modelled term structure and check that they are consistent with the market at year end.

The difference between the real yield and nominal yield provides the rate of inflation assumed in the basis.

Equity implied volatilities

Equity volatility assumptions are derived from the implied volatility on over-the-counter equity options. At ordinary period ends B&H source data from a panel of contributing investment banks in order to reduce the effect of any outliers and better reflect actual trading prices. It is not clear how many banks provided information for the end May calibration. A comparison to end June calibrations shows that the June volatility was a little lower than at the end of May. This is consistent with market observations. It was not within our scope to review the source data from the investment banks.

The calibration of equity volatility has been weighted towards at-the-money options. As most of the time value of guarantees within the fund relates to policies with guarantees at-the-money this is appropriate. Market data is only available to terms of ten years. The volatility surface is extrapolated beyond ten years at levels implied by the longest dated available options. An alternative approach used by some peer companies is to extrapolate towards a long-term best estimate. This would reduce the level of the volatilities at the longer durations. We understand from Aviva that most of the guarantees have terms less than 10 years, and so this is not an issue we are concerned about.

The B&H Local Volatility equity model has been used. This allows a term structure approach to calculate equity volatilities, as well as variations depending on strike, but is less commonly used than more straightforward time-varying models. The extrapolation methodology is less well defined and the correlation between equities and bonds may not replicate the calibrated targets very well. It was not within our scope to test whether the model appropriately replicates equity option prices at a range of strikes.

Although equity calibrations have been provided for the US, Europe, Japan and Asia-Pacific, only the UK calibration is used for modelling equities. This should not have a material impact on the results.

Property volatility

Property volatility has been maintained at 15%, this is consistent with prior periods and Aviva's best estimates. Deriving property volatility from the market prices of options on property indices is not possible as such options are not sufficiently traded. The assumption used is not out of line with the industry although Aviva itself states that its own investigation of historical statistics produced lower volatilities. We would not expect to see volatilities much lower than this and so would not make an adjustment.

Corporate bonds

Corporate bond spreads are determined for ratings from AAA to BBB, based on the risk free rates (taken as government bond yields plus 10bp). We checked that the rates used in the calibration are consistent with market data. To achieve risk neutrality – that corporate bonds only earn the risk-free rate on average – an allowance is made for defaults and rating transitions. These are derived from historic experience, adapted to achieve a market consistent calibration.

Output testing

The scenario files used to value the guarantees, and produced from this calibration, have been subjected to output tests to ensure their appropriateness for use. These have not been reviewed but this approach should be consistent with the approach taken for the audited year end results.

4.05 Assumed margin between CPI and RPI

Aviva sold business with guarantees based on the CPI between the end of April 2008 and the end of May 2009.

The RPI is derived from the real and nominal yield curves which we believe is a reasonable approach. Aviva proposes to use RPI less 0.7% p.a. for modelling CPI inflation.

At the year-end Aviva modelled guarantees linked to CPI in the same way as guarantees linked to RPI. Market instruments are not available to derive market consistent assumptions about future CPI inflation. Historically inflation over a 5 year period (relevant for most of the guarantees in question) has been higher using the RPI measure than the CPI measure. Hence using RPI as a proxy for CPI provided a margin at the year end.

Aviva has estimated that on average the differences in 5 year RPI inflation versus CPI inflation starting from February 1988 has been 4.1% higher than CPI supporting the proposed reduction of 0.7% pa.

The impact of this change on the inherited estates as at 31 May 2009 was +£24m in respect of business sold in 2008. The impact on the 2008 new business subsidy elimination was stated to be £23m and this reduced the inherited estate (since it reduced the restriction on shareholder transfers). Therefore the change had little effect on the inherited estates overall.

The margin assumed between CPI and RPI for the purposes of the 31 May 2009 RBS calculations appears reasonable, and has little impact on the results due to the offset discussed above.

4.06 Convert liabilities to swaps

The area of potential prudence which we highlighted at the year end in the market consistent methodology was the use of risk free rates equal to gilt yields plus 10 basis points, rather than equal to swap yields.

At 31 December the difference between the liabilities assuming gilts plus 10bp and assuming swaps was -£30m. This was negative due to the distortion in the swap and gilt yields in the market. We reduced the estate at 31 December for this by -£30m.

We asked Aviva to provide us with the impact of valuing the liabilities using swaps as opposed to gilts plus 10 basis points at 31 May 2009. The impact of this was to increase the inherited estates by a total **of £29m** (see table 1.2), which we have allowed for in our

adjustments, (note that £28m of the £29m is in respect of inflation linked guarantee business).

It is the inflation linked guarantee business on which Aviva was required to eliminate any new business subsidy sold in 2008 and to 31 May 2009. This elimination was calculated on an MCEV basis, and the difference between MCEV and RBS bases created a strain in the inherited estates. We discuss this issue further in Section 6.

5.00 RBS at 30 June 2009, 31 July 2009 and 28 August 2009

5.01 Methodology used in the estimations of the inherited estates

The 30 June 2009, 31 July 2009 and 28 August 2009 positions are to be derived by following the process described below:

- project the assets and asset shares using an estimate of the investment returns achieved between the 31 May 2009 and the relevant valuation date. The estimate will be based on the returns achieved by reference to appropriate market indices allowing for tax;
- recalculate the guarantee costs and other liabilities allowing for the new asset share level and the economic conditions at the relevant valuation date;
- determine the revised inherited estates

The revised inherited estate will be the excess of the projected value of the assets less the projected value of the asset shares, guarantee costs and other liabilities.

The key drivers of change are expected to be equity values, property values, interest rates, credit spreads and equity implied volatility. The effect of the changes in economic conditions will be derived by reference to the end of May data.

A projected total return percentage will be applied to each stock, using the investment returns achieved on appropriate market indices between the 31 May 2009 and the relevant valuation date.

The same process will be applied to the assets backing asset shares to calculate the total asset shares at the relevant valuation date. The growth in the total asset shares will represent the gross investment return to be credited to asset shares.

An approximate allowance will be made for switches between asset classes between the end of May and the relevant valuation date where these occur as a result of the operation of the dynamic hedging in the estate and/or changes to the investment benchmark.

An adjustment for tax will be applied to the investment return credited to life asset shares at the appropriate policyholder rate using an approximate split of the gross investment return between income and capital gains.

The 31 May 2009 policy data will be used. No adjustments will be made in the period between the 31 May 2009 and the relevant valuation date for new business, decrements or differences in actual to expected expenses.

No allowance will be made for premiums and claims between the 31 May 2009 and the relevant valuation date. In essence it will be assumed that there is no strain or surplus arising from premiums paid (either from existing business or from new business).

It will also be assumed that the amount of any claim paid is equal to asset share plus the reserve for the cost of guarantees, with no strain or surplus arising.

The non economic assumptions used will be those used for the 31 May 2009 valuation.

Economic Scenario calibrations will be obtained from Barrie & Hibbert as at 30 June 2009, 31 July 2009 and 28 August 2009 - these will incorporate the updated economic assumptions as at these respective dates.

The updated asset mix will reflect indexed asset movements and an approximate allowance for any switches between asset classes.

Those ESG calibrations will be used for the purpose of determining the reserves for guarantee costs using the same models and non-economic assumptions as used for the 31 May 2009 RBS.

Guaranteed policy benefits will be increased so as to allow for the accrual of regular bonuses based on the current interim rates over the projection period and inflation protected guarantees will be adjusted so as to allow for estimated inflation over the projection period.

Note that the outstanding policy terms on the data will be reduced by one month, two months and three months for the valuations carried out at 30 June 2009, 31 July 2009 and 28 August 2009 respectively and by correspondingly increasing the policyholder ages.

The value of in-force non-profit business will be recalculated so as to allow for changes in the risk free rate between 31 May 2009 and the relevant valuation date.

Movements in unit linked and guaranteed fund business will be allowed for by using equity sensitivities.

We believe the methodology set out above to be reasonable. In addition we consider the indices to be used, most of which are based on the FTSE, to be appropriate for the assets to which they will be applied. We note that the process of averaging over three months serves to reduce the effect of short term fluctuations in the calculation of the Estate Value.

Note that for overseas property no change in value will be allowed for, other than that attributable to sterling/local currency exchange rate changes. We do not believe this approximation to be biased and are comfortable with this approach.

5.02 Inherited Estates at 30 June 2009, 31 July 2009 and 28 August 2009

Unaudited Inherited Estate as at	CGNU	CULAC	Total	(£millions) Post Valuation Adjs	Total
31 May 2009	466	565	1,031	24	1,055
30 June 2009	512	662	1,174	0	1,174
31 July 2009	568	689	1,257	0	1,257

Source: Aviva realistic report – interim 2009

It was not within our scope to review the roll forward calculations.

The figures for 30 June 2009 and 31 July 2009 inherited estates in the table above, subject to any final review, along with the 28 August 2009 figure will form the basis on which the Estate Value is calculated. Any post valuation adjustments made as at 31 May 2009 are included in the 30 June 2009 and 31 July 2009 valuations.

5.03 Calibration of the ESG

ESG calibration at 30 June 2009

The calibration used at 30 June 2009 is a generic market consistent calibration provided by B&H to all clients.

There has been a slight update in methodology for the June and July calibrations by B&H on nominal interest rate but this does not change the results significantly.

The economic assumptions used by Aviva at the end of June and July are also based on market consistent calibration produced by B&H. We have compared the June and July calibrations to May and the methodologies are consistent for real interest rates, equity volatility and credit spreads. The yield curve and equity volatility are lower in July than May and June.

6.00 Calculation of the Estate Value used to determine the PIP

The above sections of the report deal with areas of prudence which we believe exist in the RBS as at 31 May 2009 and which will be used by LECG in order to evaluate the offer. For the avoidance of doubt Aviva has allowed for a £100m adjustment to the inherited estate used in their evaluation of the PIP offer, very little of this adjustment took account of the difference between the RBS and MCEV bases.

This section of the report considers whether the actual value of the inherited estate at 31 May 2009 which is used to determine the incentive payments made should be adjusted for any reason.

It is an FSA requirement that any new with-profits business sold from the beginning of 2007 should be sold without the expectation that it would require a permanent subsidy from the inherited estates. For the 2007 new business subsidy, both Aviva and the policyholder advocate took the new business subsidy into account in their analyses of the deal. The method used to eliminate the new business subsidies is not prescribed by the FSA but the objective is that existing policyholders should not expect to be worse off due to the sale of this business. As noted in section 2, shareholder transfers are reduced to the extent that the value of new with-profits determined at point of sale would otherwise be negative. For this purpose the value of new business is calculated by Aviva on an MCEV basis.

We agree the use of the MCEV basis as opposed to the RBS basis for the purpose of limiting the shareholder transfer. In relation to the use of marginal expenses versus including an allowance for overheads, we believe that this area is more judgemental. We do however believe this approach to be reasonable on the grounds that overheads would be the same whether this new business was sold or not.

However, the elimination of any potential subsidy on an MCEV basis rather than the more prudent RBS basis at point of sale will mean that the inherited estate (which is determined on the RBS basis) will suffer an up-front reduction due to the new business sold, however, this reduction will be recouped over time if the future experience of the new with-profits business

follows the MCEV basis, and so in the longer term policyholders are not expected to be worse off in terms of the impact on the inherited estate.

Accordingly, the value of the inherited estates at 31 May 2009 will be understated by the difference between the point of sale value of new with-profits business (written in 2008 and in the first five months of 2009) calculated using the MCEV basis and that value calculated using the RBS basis. If future experience for such new business follows the MCEV basis then that difference will accrue to the inherited estate of the Old WPSF and the RIEESA according to the 'Old WPSF Proportion' and the 'New WPSF Proportion' respectively, since these are the proportions that such business will be allocated to the Old WPSF and the New WPSF on the Effective Date. With regards to the impact on the size of the inherited estates in this respect, we have no concerns.

However, the resulting understatement of the value of the inherited estates at 31 May 2009 will reduce the uniform adjustment which would otherwise be applied to minimum incentive payments.

The actual impact on the combined inherited estates at the point of sale of the 2008 new business on a RBS basis is -£16m, and the impact on the combined inherited estates of writing new business in 2009 is estimated to be less than -£5m.

We believe that Aviva should make a positive adjustment to the value of the inherited estates at 31 May 2009 used for the purpose of calculating the Estate Value (on which the incentive payments made to holders of Elected Policies will depend). This adjustment should reflect the notional additional reduction in shareholder transfers required in order to eliminate the subsidy on the RBS basis at point of sale. This adjustment would be approximately +£20m.

The policyholder advocate has made the FSA aware of our views in this area.

Note that the elimination of the new business subsidies is calculated at point of sale and not at the year end. The year end inherited estates could still be impacted by this new business even if the elimination were to be performed on a RBS basis because experience over the year could change (for example increased volatilities could further increase the cost of guarantees).

However this effect could work in either direction and we agree that the calculation should as far as practicable be performed as at the point of sale.

As far as we are aware, Aviva assumed the RBS basis applied in all areas of its negotiations, including its valuation of the inherited estates for the purposes of estimating the potential special distributions forgone by policyholders and the potential shareholder value arising from the reattribution. In other words, Aviva took very little account of the margins between the MCEV basis and the RBS basis in its negotiations for determining the PIPs. We believe such an approach acts to understate the potential benefits forgone by policyholders, and the potential shareholder value arising from the reattribution, (as calculated by Aviva).

In summary, the policyholder advocate considers the total adjustment that should be made by Aviva, in respect of these potential areas of prudence, to the value of the inherited estate for the purpose of calculating the PIP is £74m. This can either be thought of as the level of adjustments identified by us (£174m) less the adjustments taken into account by Aviva in its analysis of the deal (£100m), or it could be thought of as the sum of £20m for the new business subsidy point which has made policyholders who choose to elect worse off as a direct consequence of the sale of new business in 2008 and 2009, and £54 million in respect of the difference between the prudence allowed for in Aviva's analysis (£100m) and the policyholder advocate's analysis (£154m if we assume that £20 million adjustment is made by Aviva). At the time of writing this report the policyholder advocate is unaware of whether it is Aviva's intention to increase the estate value by either the £20m or the full £74m.

For the avoidance of doubt, the policyholder advocate has taken full account of the £174 million in her analysis of the deal throughout the negotiations, and to be clear, of the £74 million commented on above, only £20 million is a direct consequence of the new business subsidy due to* writing new business in 2008 and 2009.

* The words "the new business subsidy due to" were omitted in error from the version of this annexe published on 3 September 2009.