

Appendix 40

Analysis of Potential Future Special Distributions for Policyholders and Shareholders

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

June 2009

Report by: LECG Ltd.

Contents

1.00	Introduction and summary of conclusions	3
2.00	The counterfactual scenarios used in the analysis	9
3.00	Analysis of the policyholder book	16
4.00	The impact of new with-profits business	23
5.00	Aviva's analysis of the value of potential distributions to eligible policyholders absent a reattribution	31
6.00	The policyholder advocate's analysis of the special distributions of excess surplus forgone by electing policyholders	34
7.00	Conclusions	38
Annexe A:	Present value of potential future distributions of excess surplus at 1 October 2009 for other estate values	41
Annexe B:	Charts for aggregate value of special distributions forgone, 2006 – 2031, for other estate values under consideration	43

1.00 Introduction and summary of conclusions

1.01 Introduction

This appendix has been prepared by LECG Ltd. for the policyholder advocate. While care has been taken to explain the technical terms and concepts contained in this appendix, the complex issues involved will be better understood by readers with some familiarity of the concepts involved.

The purpose of this appendix is to present analysis on the potential future position of eligible CGNU Life and CULAC with-profits policyholders in the absence of a reattribution. The nature of the reattribution Scheme is that policyholders are being offered a payment (Policyholder Incentive Payment – PIP) in exchange for giving up their future rights to potential special distributions of excess surplus from the inherited estates of the funds.¹ To assess Aviva’s offer to eligible policyholders, it is necessary to assess what the potential value of those special distributions would be, absent a reattribution, which policyholders would give up if they accept Aviva’s reattribution offer.

Eligible policyholders may expect to receive four main types of benefit from the inherited estates:

- benefit security from the capital cushion provided by the inherited estates in excess of the funds’ realistic liabilities;
- greater investment freedom, in terms of the ability to invest in higher risk assets that, on average, are expected to provide higher returns to investors over the medium- to long-term;
- smoothing up and down, which protects maturing policies from temporary market fluctuations that might affect the policies’ value at the date of maturity; and

¹ In this appendix, we do not distinguish between special distributions of excess surplus to regular premium policyholders and single premium policyholders, considering instead all policyholders in aggregate.

- the possibility of future special distributions of excess surplus from the inherited estates.

The first three benefits will continue to be provided to eligible policyholders whether they accept the offer or not, and so will not be *forgone* in the event of a reattribution. The benefit that will be forgone by electing policyholders is the possibility of future special distributions of excess surplus from the inherited estates. With regards to policyholders who choose to accept the PIP offer, it is this interest in potential special distributions that will be acquired by Aviva under the reattribution in exchange for the PIP. The interest of electing policyholders in the inherited estates will be transferred to the Reattributed Inherited Estate External Support Account (RIEESA), which will be owned by shareholders subject to the terms of the Reattribution Scheme. This appendix describes the work that has been done to estimate and then to analyse the potential special distributions of excess surplus to eligible policyholders, shareholders and future policyholders in the absence of a reattribution.

The impact of new with-profits business on the value of potential special distributions to eligible policyholders is described in detail in *Appendix 39: The Impact of FSA Guidance on Policyholders*. This explains that a higher level of new with-profits business which, under current FSA rules, is supported by inherited estate capital that is retained in the funds, serves to defer and dilute the interests of eligible policyholders in any special distributions made. Under current regulations, therefore, the level of new with-profits business assumed in the projections is critical to the value of potential special distributions to eligible policyholders.

Appendix 38: Aviva's New With-Profits Business Assumptions explains that the policyholder advocate has used two new with-profits business sensitivities (-5 per cent and -15 per cent declines per annum from 2011) in addition to Aviva's assumption of 5 per cent growth per annum from 2011. This appendix reviews the funds' future position under those three new with-profits business assumptions, representing a broad range of potential outcomes. All of the scenarios used assume that the inherited estates are calculated in the manner considered appropriate for this exercise by the policyholder advocate, as advised by KPMG. Further details of that approach are set out in *Appendix 35: Size of the Inherited Estates*.

The analysis contained in this appendix is based on data provided by Aviva in response to requests from LECG. The accuracy of the analysis is therefore dependent on the accuracy of the fund projections provided by Aviva. The data provided by Aviva is based on its “best estimate” of the funds’ future performance on a deterministic basis.² This method uses Aviva’s best estimate of the future rate of return likely to be achieved within the funds, on average, and then assumes this will be achieved in every year covered by the projections. These projections cover a 25 year period from the release of the initial data in 2006 (ie. up to 2031).

It is of course extremely unlikely that events will transpire in precisely this way, as recent events in financial markets show. Nevertheless, for the purposes of this analysis, both LECG and Aviva believe the resulting figures provide a reasonable basis for evaluation of potential special distributions in any given year, and that the use of estimates in this way does not materially affect the soundness of the resulting analysis.

The remainder of this appendix is divided into six sections:

- Section 2 summarises the policyholder advocate’s base line scenarios and places them in the context of the appendix;
- Section 3 discusses the data set provided by Aviva, such as the number and type of policies within the funds and the manner in which they are assumed to run off, absent a reattribution;
- Section 4 considers the impact of new with-profits business assumptions on potential future distributions of excess surplus to eligible policyholders, future policyholders and shareholders;
- Section 5 assesses Aviva’s approach to the assessment of potential future special distributions of excess surplus forgone by electing policyholders;

² A “best estimate” analysis is performed on a “real world” basis i.e. using assumptions intended to model actual economic outcomes, rather than on a “market consistent” basis.

- Section 6 sets out LECG’s analysis of the potential future special distributions of excess surplus to eligible policyholders under each of the policyholder advocate’s scenarios; and
- Section 7 contains LECG’s conclusions.

1.02 Summary of conclusions

This appendix analyses the potential value of special distributions of excess surplus to eligible policyholders, future policyholders and shareholders, absent a reattribution, over a 25 year period from 2006, after which, for analytical convenience, the remaining inherited estate is assumed to be split between policyholders and shareholders according to the 90:10 principle of the funds³. The expected value of those special distributions to eligible policyholders is the value of their interest in the inherited estates, which electing policyholders will forgo when they accept the reattribution offer. Aviva will be acquiring all the potential future special distributions to policyholders (both eligible and future policyholders), assuming 100 per cent acceptance of its offer by eligible policyholders).

LECG’s analysis has considered a number of different potential sizes of the inherited estates at 1 October 2009 and the aggregate PIP. In addition, LECG has used a range of alternative new with-profits business assumptions to model the effects of new with-profits business on the value of special distributions to eligible policyholders.

LECG has modelled potential future special distributions based on KPMG’s assessment of the inherited estates found in Appendix 35: *Size of the Inherited Estates*, which entails adjusting the inherited estates upwards by £177 million at 31 December 2008 (equivalent to £185 million at 1 October 2009, the Effective Date of the reattribution). However, the PIP is calculated on the Reattribution Estate as valued by Aviva during the months leading up to the Effective Date. The estate values quoted in this appendix therefore refer to the Reattribution Estate value, or the “unadjusted estate value” upon which the PIP is calculated, while the special distributions to which the PIP offer is compared have been calculated after adding

³ This assumption is made by LECG and by Aviva in the data provided in order to facilitate the modelling process. It does not materially affect the analysis performed.

KPMG's advised adjustments. For example, at a Reattribution Estate of £1,200 million the aggregate PIP offer is £500 million; when calculating special distributions for comparison against that PIP offer, LECG has added £185 million at 1 October 2009, for a total estate value of £1,385 million at the Effective Date.

The present value of projected special distributions over the next 25 years, plus each group's share of the estate upon division in 2031, are summarised in the tables below for Reattribution Estate values of £1,200 million (the lowest value at which the reattribution will proceed) and £1,570 million (equivalent to the end-2008 published figure of £1,529 million plus a £41 million post year-end adjustment) at 1 October 2009. The estate values quoted throughout this appendix are Aviva's valuations of the Reattribution Estate as at 1 October 2009, to which the £177 million adjustments at 31 December 2008 advised by KPMG are added by the policyholder advocate. Further details can be found in *Appendix 35: Size of the Inherited Estates*.

Table 1 Present value of potential future distributions of excess surplus absent a reattribution, valued at 1 October 2009, unadjusted estate of £1,200 million,* £ million

Scenario	Eligible policyholders	Future policyholders	Shareholders	Eligible policyholders' share of distributions to all policyholders
Aviva new with-profits business assumptions: +5% p.a.	83	1,087	130	7%
Policyholder advocate alternative new with-profits business assumption: -5% p.a.	292	886	131	25%
Policyholder advocate alternative new with-profits business assumption: -15% p.a.	431	753	132	36%

Source: LECG analysis

Note: The adjusted estate value is £1,385 million, including £177 million adjustments at 31 December 2008 as advised by KPMG, rolled forward to £185 million at 1 October 2009.

Table 2 Present value of potential future distributions of excess surplus absent a reattribution, valued at 1 October 2009, unadjusted estate of £1,570 million,* £ million

Scenario	Eligible policyholders	Future policyholders	Shareholders	Eligible policyholders' share of distributions to all policyholders
Aviva new with-profits business assumptions: +5% p.a.	197	1,298	167	13%
Policyholder advocate alternative new with-profits business assumption: -5% p.a.	448	1,055	168	30%
Policyholder advocate alternative new with-profits business assumption: -15% p.a.	605	904	168	40%

Source: LECG analysis

Note: The adjusted estate value is £1,755 million, including £177 million adjustments at 31 December 2008 as advised by KPMG, rolled forward to £185 million at 1 October 2009.

As is clear from the tables, the value of shareholders' 10 per cent of special distributions is relatively unaffected by the amount of new with-profits business written for any given size of inherited estate. That is because new with-profits business serves to defer, but not dilute, the value of shareholders' distributions; as capital left in the funds generates a return its present value to shareholders will remain the same provided it is discounted at the fund growth rate. The total of the 90 per cent of special distributions paid to all policyholders is also relatively unaffected by the amount of new with-profits business written. The division of those special distributions between eligible and future policyholders, however, is radically altered by the amount of new with-profits business assumed to be written, absent a reattribution, ranging from 7 per cent under Aviva new business assumptions to 36 per cent assuming a 15 per cent p.a. decline in new business, at an estate of £1,200 million. At higher estate values eligible policyholders receive a higher proportion of estimated future special distributions, because all things being equal, a higher estate value will result in earlier distributions, when eligible policyholders make up a larger proportion of the funds. The results of the analysis for a range of estate values at 1 October 2009 are shown in Annexe A: .

The dilutive effects of new with-profits business on the potential value of special distributions to eligible policyholders is a function of the fact that, under current FSA rules, future policyholders acquire their interest in the inherited estate without charge, by means of the intergenerational transfer of capital from the current generation of policyholders. In addition, the inherited estate is presumed to meet the cost of the non-market risk associated with new policies as the FSA permits, but does not require any associated non-market risk to be charged to new policyholders. If the capital subsidy to new policyholders were to cease to be permitted by the FSA so that new business was fully-supporting, eligible policyholders would receive all of future policyholders' special distributions in addition to the value that they might otherwise receive, an estimated total of between £1,200 million and £2,400 million (depending on the size of the estates). It should also be noted that eligible policyholders benefited from the same transfer of capital from the previous generation when they joined the funds.

Although LECG has not been able to analyse the numerical effect of varying the level of investment returns from Aviva's best estimate of 6.60 per cent pre-tax,⁴ a higher average level of investment returns would lead to higher special distributions, and vice-versa. For the purposes of providing guidance to policyholders, LECG has considered a case in which special distributions increase by 25 per cent above those under Aviva new business assumptions as a proxy for higher investment returns, the results of which are shown in *Appendix 45: Formulation of Guidance to Policyholders*.

2.00 The counterfactual scenarios used in the analysis

This section sets out LECG's basis for the estimation of cash flows that eligible policyholders might expect to receive, in aggregate, from the CGNU Life and CULAC inherited estates, absent a reattribution, across a range of assumptions regarding the value of the Reattribution Estate at 1 October 2009 and the level of new with-profits business assumed to be written in

⁴Obtaining the data necessary to vary the investment returns was considered prohibitively expensive and time-consuming. LECG and the policyholder advocate consider that using the best estimate average returns presents the most realistic future scenario and provides a sufficient basis for analysis.

the future. Those assumptions are also discussed in *Appendix 42: Evaluation of the Aggregate PIP Offer*.

2.01 The origins of an inherited estate excess surplus

In general terms, absent a reattribution, policyholders and shareholders both share to a degree in the benefits provided by the inherited estate, including potential special distributions of excess surplus, but the terms on which the benefits are provided are at the discretion of the company managing the funds. The amount of discretion the company has (and who it is exercised for – the policyholders or the shareholders) is at the heart of the policyholder advocate’s legal analysis and challenge to the FSA (see *Appendix 25: Legal issues arising in respect of rights and interests in and uses of inherited estates* and *Appendix 26: FSA guidance letters and responses*).

The FSA has ruled that an inherited estate is principally to be used to:

- secure policyholders’ benefit security;
- provide investment freedom;
- smooth returns to maturing policies;
- support investments in the firm’s business; and
- provide capital to support the writing of new with-profits business .⁵

Since new with-profits business requires some of the capital of the estates to be retained in the fund, the volume of new with-profits business reduces special distributions of excess surplus to the current generation of policyholders, thereby creating the intergenerational transfer of the estate from one group of policyholders to another.

In the policyholder advocate’s view, eligible policyholders have an expectation of receiving some potential value of special distributions from the estates, absent relatively extreme assumptions about the level of new with-profits business, investment returns and the costs of meeting existing policy guarantees. The FSA has acknowledged this by making it clear that

⁵ An assessment of the impact on policyholders of the FSA’s guidance with respect to uses of the inherited estate can be found in *Appendix 39: The Impact of FSA Guidance on Policyholders*.

eligible policyholders in aggregate may have a reasonable expectation that future special distributions of excess surplus from the inherited estate of a with-profits fund are not zero. However, both the value and timing of any special distribution to CGNU Life and CULAC policyholders are uncertain and, based on the analysis carried out by LECG, none would be expected to arise before 2012 at the earliest, suggesting that some eligible policyholders, whose policies are scheduled to mature in the near future, are unlikely to receive any such special distributions.

Under COBS rule 20.2.21, an insurer's governing body is required to conduct an annual assessment of whether a fund's inherited estate is in excess of the amount required to meet any regulatory capital requirement (or Individual Capital Assessment - ICA) and the amount the FSA permits to support new with-profits business plans. If such an "excess surplus" does exist, and to retain that surplus would be a breach of its duty to treat customers fairly, the firm must declare a special distribution from the inherited estate, perform a reattribution or convince the FSA that it is in policyholders' best interests that the excess remain in the fund. It should be noted that if the free intergenerational transfer of estate capital were not permitted by the FSA, new with-profits business would have no impact on the analysis of excess surplus.

It is the potential special distributions from the CGNU Life and CULAC inherited estates that constitute the benefits that eligible policyholders are being asked to forgo in return for an individual PIP, and which are therefore the focus of this appendix.

In line with the PPFMs of the CGNU Life and CULAC with-profits funds:

- Aviva considers an excess surplus is deemed to exist, and a special distribution mandatory, if the assets of the inherited estate exceed a level consistent with a

credit rating of AAA by 20 per cent or more, and believes that before that point potential special distributions remain discretionary;⁶

- any such special distributions would be divided between policyholder and shareholders in a ratio of 90:10; and
- special distributions are permitted to be made between AA and AAA. LECG's analysis assumes special distributions above AAA. LECG notes that the February 2008 distribution took the inherited estates to a level between AA and AAA.

LECG has constructed a model of the funds' behaviour using Aviva's data, which dates from the end of 2006; details on this and other models used to support the policyholder advocate's analysis can be found in *Appendix 33: Modelling for the Purposes of the Reattribution*. That model may be calibrated to reflect any given size of the unadjusted Reattribution Estate at 1 October 2009 that requires analysis, consistent with the reattribution offer to policyholders, the terms of which vary with the size of the inherited estate at the Effective Date of the reattribution (assumed to be 1 October 2009). The model projects a pattern of regular benefits and special distributions of excess surplus to eligible policyholders, new policyholders and shareholders in each year to 2031.⁷ In 2031, for analytical convenience, the fund is assumed to be wound up and the inherited estates distributed between policyholders and shareholders in a ratio of 90:10.

As policyholders' regular benefits are unaffected by a reattribution, this appendix sets out only the value of special distributions of excess surplus to policyholders (both eligible and new) and shareholders, including the final distribution assumed to occur in 2031, as special distributions are the potential benefits forgone by eligible policyholders who choose to accept the reattribution offer. As noted earlier, the value of special distributions will depend on a wide range of factors, including the level of new with-profits business assumed to be written

⁶ The policyholder advocate, based on guidance from the FSA, understands that distributions of excess surplus could occur as soon as the AAA level was exceeded. Below this level, Aviva says that distributions are possible but considered unlikely, although the special distribution that was made at the beginning of 2008 did reduce the level below AAA. Aviva has used a level of 105 per cent of AAA as a modelling assumption in certain of its analyses, but says that it is neither committed nor obliged to make distributions of excess surplus above such a level.

⁷ Regular benefits are comprised of reversionary and terminal bonuses. The model has also been constructed to enable the analysis of other benefits to shareholders, such as the value of writing new with-profits business from the inherited estates.

by Aviva which is supported by capital from the inherited estates. LECG's analysis of the potential special distributions forgone by electing policyholders is intended to cover a reasonable range of future outcomes, rather than all possible future outcomes. The assumptions used in the analysis are described in the remainder of this section.

2.02 Drivers of special distributions from the inherited estates

There are three main drivers of potential special distributions of excess surplus over time:

- the capital requirement of the funds;
- the level of investment returns; and
- the amount of new with-profits business written using estate capital.

a) The determination of the **level of capital retained** to provide security for policyholders' guaranteed benefits is set by the firm. As set out in *Appendix 39: The Impact of FSA Guidance on Policyholders*, all else being equal, a lower risk appetite requires the funds to maintain a larger amount of surplus capital and raises the threshold above which special distributions of excess surplus might be made, and therefore delays any such distributions. Since new with-profits business is permitted to participate in special distributions, this delay means that eligible policyholders face a dilution, and hence a reduction in the value of their expected special distributions.

Aviva has said that it prefers to maintain sufficient capital in the inherited estates to afford a level of security equivalent to a credit rating of between AA and AAA. Aviva says that, absent a reattribution, it has no obligation to declare any distributions of excess surplus unless capital in the inherited estates is at a level equivalent to 120 per cent of a credit rating of AAA. The policyholder advocate believes, based on guidance from the FSA, that a better balance of interests would be achieved if distributions of excess surplus occurred as soon as the AAA level was exceeded.

Following the special distribution of £2.3 billion announced by Aviva on 8 February 2008, Aviva stated that the fund's capital strength lay approximately half

way between the AA and AAA levels. However, given the stock market performance during 2008, the funds now stand at the lower end of the range, close to the AA level.

- b) The size of the inherited estates and the build-up of any excess surplus available for special distributions will depend partly on the level of **investment returns** in the funds. In practice, the level of investment returns is unlikely to be stable over time.

On average, Aviva's best estimate is that the CGNU Life and CULAC funds will earn a 6.60 per cent p.a. pre-tax return, or 6.15 per cent p.a. post-tax on average. Such a return corresponds to the 54th percentile of the range of returns projected by the Aviva model. The best estimate data set provided to LECG assumes that the funds will earn a 6.60 per cent pre-tax return in every year of the projection period to 2031. Both LECG and Aviva agree that this approach does not materially affect the soundness of the analysis.

- c) The impact of **new with-profits business** on the value of potential special distributions to policyholders is described in detail in *Appendix 39: The Impact of FSA Guidance on Policyholders*. This explains that a higher level of new with-profits business serves to defer and dilute the interests of eligible policyholders in any special distributions made. Under current regulation, therefore, the level of new with-profits business supported by estate capital assumed in the projections is critical to the value of potential special distributions to eligible policyholders.

In the data provided, Aviva assumes that new with-profits business volumes would, absent a reattribution, grow after 2010, and for the life of the fund, by 5 per cent per annum in nominal terms. Aviva has assumed that this nominal rate of growth would be divided roughly equally between inflation at 2 to 3 per cent and real growth in new with-profits business of 2 to 3 per cent. In conducting her assessment of the reattribution offer, the policyholder advocate has evaluated a range of potential new with-profits business outcomes, the 5 per cent annual growth assumed by Aviva and a 5 and 15 per cent annual decline. Aviva's new with-profits business assumptions and

the policyholder advocate's new business assumptions are discussed in detail in *Appendix 38: Aviva's New With-Profits Business Assumptions*.

2.03 Base line counterfactuals used by the policyholder advocate

In *Appendix 42: Evaluation of the Aggregate PIP Offer*, LECG has set out three baselines against which Aviva's offer has been evaluated. Each of those reflects assumptions and calculations made by the policyholder advocate and her team of advisers, with variations in the amount of new with-profits business assumed to be written absent a reattribution. Table 3 below summarises the assumptions made in those counterfactuals.

Table 3 Base line counterfactuals used to estimate future special distributions of excess surplus without a reattribution, calculated at 1 October 2009

	Aviva's new with-profits business assumptions: +5% p.a. from 2011	Policyholder advocate alternative new with-profits business assumptions	Policyholder advocate alternative new with-profits business assumptions
Capital requirement	AAA	AAA	AAA
Fund growth rate	6.60% p.a. pre-tax, 6.15% p.a. post-tax	6.60% p.a. pre-tax, 6.15% p.a. post-tax	6.60% p.a. pre-tax, 6.15% p.a. post-tax
New with-profits business volumes	+5% p.a. from 2011 onwards.	-5% p.a. from 2011 onwards	-15% p.a. from 2011 onwards
Size of the estate (reference case) ⁸	Unadjusted Estate = £1,200 million Adjusted Estate = £1,385 million	Unadjusted Estate = £1,200 million Adjusted Estate = £1,385 million	Unadjusted Estate = £1,200 million Adjusted Estate = £1,385 million

The main difference between the bases, as may be seen from the table, is the level of new with-profits business assumed to be written in the future. In the analysis of potential special distributions forgone by eligible policyholders, the amounts of all future special distributions have been expressed in present value terms by discounting them at the net fund growth rate in each year, an average of 6.15 per cent.

⁸ The adjusted estate consists of the unadjusted estate plus £177 million in adjustments at 31 December 2008 (£185m at 1 October 2009) as advised by KPMG in Appendix 35: *Size of the Inherited Estates*.

3.00 Analysis of the policyholder book

3.01 Composition and run-off of the book

The policyholder book is composed of two with-profits funds, CGNU Life and CULAC. For the purposes of this appendix, however, the funds are analysed as if they were a single entity, an approach that Aviva says it follows in the management of the funds.⁹

A summary of LECG's projection of the assets and liabilities of the funds under the Aviva new with-profits business assumptions is shown in Table 4 below.¹⁰ The proportions represented by eligible policyholders are shown as existing business (EB) and those represented by new policyholders as new with-profits business (NB). These figures are based on Aviva's data adjusted for the policyholder advocate's basis. This includes the policyholder advocate's treatment of the pre-retribution special distribution of £2.3 billion that was announced in February 2008, which has been added to the asset shares of eligible policies.

Table 4 Summary of combined funds, Aviva new with-profits business assumptions, policyholder advocate basis, 2006 – 2031, unadjusted estate of £1,570 million at 1 October 2009, £ billion

Summary of funds	2006	2011	2016	2021	2026	2031
Assets	29.3	26.7	25.7	27.0	30.9	38.0
Asset shares (EB)	21.0	14.6	9.4	6.0	3.7	2.2
Asset shares (NB)	0.0	6.4	10.7	15.8	22.0	29.8
Unmodelled asset shares	1.0	0.7	0.6	0.4	0.3	0.1
Cost of guarantees (EB)	1.2	0.8	0.5	0.2	0.0	0.0
Cost of guarantees (NB)	0.0	0.1	0.1	0.2	0.3	0.4
Other liabilities	1.9	1.9	1.6	1.7	1.7	2.0
Total liabilities	25.0	24.5	22.9	24.2	28.0	34.6
Assets - Liabilities	4.2	2.2	2.8	2.8	2.9	3.4

⁹ The totals and the tabular data presented in this section may not reconcile perfectly due to underlying rounding in the numbers presented.

¹⁰ These include both maturing policies and lapses / surrenders in line with Aviva's estimates

Table 4 shows that, at the end of 2006, the funds had total assets of approximately £29.3 billion and total liabilities of approximately £25.0 billion. The difference between the two, £4.2 billion represents the surplus assets of the funds and is a proxy for the value of the inherited estates. The actual inherited estate calculation, however, makes a series of further assumptions. From the table, the intergenerational nature of the fund is quite clear. At the outset, all of the liabilities of the fund are associated with current policies. Over time, however, current policies diminish as they mature, or for reasons of surrender, lapse or mortality. At the same time, the new with-profits business written into the funds builds up so that by 2016, a clear majority of the funds' assets and liabilities are projected to be associated with policies that were not in existence at the outset of the projection period. Between 2006 and 2021, the fund is projected to be smaller in nominal terms than at the beginning of the projection period. Implicitly, current policies are projected to run off more quickly than they are replaced by new with-profits business. After 2021, however, a combination of investment returns and assumed sustained new with-profits business volumes means that the funds' assets and surplus grow once again until the end of the projection period in 2031.

The position under the policyholder advocate's lowest new with-profits business assumptions (15 per cent per annum decline from 2011 onwards) is shown in Table 5.

Table 5 Summary of combined funds, 15% annual decline in new with-profits business from 2011, policyholder advocate basis, 2006 – 2031, unadjusted estate of £1,570 million at 1 October 2009, £ billion

Summary of funds	2006	2011	2016	2021	2026	2031
Assets	29.3	26.5	21.9	16.7	12.4	9.1
Asset shares (EB)	21.0	14.6	9.6	6.3	4.1	2.4
Asset shares (NB)	0.0	6.2	7.3	7.0	6.1	5.2
Unmodelled asset shares	1.0	0.7	0.6	0.4	0.3	0.1
Cost of guarantees (EB)	1.2	0.8	0.5	0.2	0.0	0.0
Cost of guarantees (NB)	0.0	0.1	0.1	0.1	0.1	0.1
Other liabilities	1.9	1.9	1.4	1.1	0.7	0.6
Total liabilities	25.0	24.2	19.5	15.0	11.3	8.5
Assets - Liabilities	4.2	2.2	2.5	1.7	1.1	0.7

*Figures include the policyholder advocate's treatment of the pre-retribution distribution of £2.3 billion, as described above.

Table 5 shows the same pattern of run-off of existing business as in Table 4, with differences due to lower capital being retained in the fund, and thus higher special distributions added to the asset shares of existing business, relating to lower new business levels. The volumes of new with-profits business being written into the funds, however, are much lower.

Accordingly, the fund continues to shrink from its maximum size from 2011 to the end of the projection period, despite investment growth. It is also apparent that most of the policies with significant guarantees are projected to have left the funds by 2016.

A breakdown of the number of current policies by company and product type is shown in Table 6 below. In the table, "CWP" refers to conventional with-profits policies, while "UWP" refers to unitised with-profits policies.

Table 6 Number of current policies by product, 2006 – 2031¹¹

Number of policies in force	2006	2011	2016	2021	2026	2031
CGNU Life						
CWP Life	■	■	■	■	■	■
CWP Pension	■	■	■	■	■	■
UWP Life	■	■	■	■	■	■
UWP Pension Stakeholder	■	■	■	■	■	■
UWP Pension Trustee Investment Bonds	■	■	■	■	■	■
UWP Pension Other or Individual Group	■	■	■	■	■	■
CGNU Life Total	845,713	433,700	230,720	123,333	69,067	38,112
CULAC						
CWP Life	■	■	■	■	■	■
CWP Pension	■	■	■	■	■	■
UWP Life	■	■	■	■	■	■
UWP Pension	■	■	■	■	■	■
CULAC Total	334,834	192,829	106,297	56,639	29,022	10,145
Total (EB)	1,180,548	626,529	337,017	179,973	98,089	48,257

The table confirms the rapid decline in the number of pre-existing policies over the period to 2016. By that date, fewer than 30 per cent of the policies in force at the end of 2006 will still be in the funds. The reduction in policyholder numbers is likely to be similar. The dominance of unitised policies reflects the fact that all new with-profits business in the funds has been written on a unitised basis for a number of years now. By policy type, it is apparent that Aviva expects investment policies to run off more quickly than pension policies.

¹¹ Aviva has required that some of these figures be blanked out on the basis that they are commercially sensitive. The policyholder advocate believes these figures are not commercially sensitive and should be disclosed.

Table 7 below shows how the pattern of asset shares develops over the 25 years of the projection between current and new policies. As for assets and liabilities, the asset share of new with-profits business policies dominates those from current policies from 2016 onwards under Aviva's new with-profits business assumptions. Under the policyholder advocate's alternative assumptions, however, current policies' asset shares are only outweighed by new policies' asset shares after 2021, and then only slightly. Note that the lower special distributions under Aviva's new with-profits business assumptions, over time, lead to lower asset shares for eligible policyholders, on the assumption that future special distributions are paid indirectly in the form of bonuses, rather than directly to policyholders.

Table 7 Total asset shares of policies in force, policyholder advocate basis, 2006 – 2031, unadjusted estate of £1,570 million at 1 October 2009, £ billion

	2006	2011	2016	2021	2026	2031
Aviva new with-profits business						
Current policies	21.0	14.6	9.4	6.0	3.7	2.2
UWP Life (NB)	0.0	6.1	9.6	13.2	17.2	21.9
UWP Pension (NB)	0.0	0.3	1.1	2.5	4.7	7.9
Total (Aviva NB assumptions, +5% p.a.)	21.0	21.0	20.0	21.8	25.7	32.0
Policyholder advocate new with-profits business						
Current policies	21.0	14.6	9.6	6.3	4.1	2.4
UWP Life (NB)	0.0	5.9	6.8	6.2	5.1	3.9
UWP Pension (NB)	0.0	0.3	0.5	0.8	1.0	1.3
Total (PA alternative NB assumptions -15% p.a.)	21.0	20.7	16.9	13.2	10.2	7.7

In terms of asset shares, Table 8 shows the distribution of liabilities by policy type grouped by the duration in force of the policies.

Table 8 Asset shares by product, current policies, 31 December 2006, by duration in force, £ billion¹²

	< 5 years	6 - 10 years	11 - 15 years	> 15 years	Total
CGNU Life					
CWP Life	■	■	■	■	■
CWP Pension	■	■	■	■	■
UWP Life	■	■	■	■	■
UWP Pension Stakeholder	■	■	■	■	■
UWP Pension Trustee Investment Bonds	■	■	■	■	■
UWP Pension Other or Individual Group	■	■	■	■	■
CGNU Life Total	6.2	6.5	2.0	2.1	16.8
CULAC					
CWP Life	■	■	■	■	■
CWP Pension	■	■	■	■	■
UWP Life	■	■	■	■	■
UWP Pension	■	■	■	■	■
CULAC Total	0.0	0.6	1.8	1.8	4.2
Total (EB)	6.2	7.1	3.8	3.9	21.0

In general, in the CULAC with-profits fund, older policies have larger asset shares. In the CGNU Life with-profits fund, however, there are very large liabilities associated with a small group of unutilised policies written within the last ten years or so. LECG understands that these policies are single premium policies, generally with no fixed maturity dates. Aviva's lapse assumptions indicate that the company believes that many holders of such policies (i.e. those who have an option to surrender without a Market Value Reduction (MVR) penalty) will

¹² Aviva has required that some of these figures be blanked out on the basis that they are commercially sensitive. The policyholder advocate believes these figures are not commercially sensitive and should be disclosed.

choose to surrender them over the next three years. Although asset shares are slower to run down than policy numbers (in terms of their 2006 values), this reflects the growth in the value of the products rather than a change in the make-up of the policyholder universe or the average policy size. In other words, there is no ‘bulge’ of large policies in the book that causes asset shares to run down more slowly than policyholder numbers.

Table 9 shows the average value of asset shares by product type and duration in force at the end of 2006. The table demonstrates that the average policy size within the CULAC fund is significantly smaller than in the CGNU Life with-profits fund. LECG has requested that Aviva explain the reasons for the differences in average policy size. Aviva has been unable to provide detailed explanations, but LECG understands from Aviva that they relate to the past marketing of the policies, the level of guaranteed benefits and the average duration in force of different policyholder groups.

Table 9 Average asset shares (exc. unmodelled asset shares*) by product and duration in force, current policies, 31 December 2006, £¹³

Asset Shares	< 5 years	6 - 10 years	11 - 15 years	> 15 years	Total
CGNU Life					
CWP Life	████	████	████	████	████
CWP Pension	████	████	████	████	████
UWP Life	████	████	████	████	████
UWP Pension Stakeholder	████	████	████	████	████
UWP Pension Trustee Investment Bonds	████	████	████	████	████
UWP Pension Other or Individual Group	████	████	████	████	████
CGNU Life Average	19,490	23,294	16,378	16,740	19,880
CULAC					
CWP Life	████	████	████	████	████
CWP Pension	████	████	████	████	████
UWP Life	████	████	████	████	████
UWP Pension	████	████	████	████	████
CULAC Average	4,146	10,884	13,392	12,343	12,461
Overall Average	19,391	21,192	14,830	14,413	17,776

*Unmodelled asset shares relate to policies where the data provided to LECG did not enable an asset share to be calculated

4.00 The impact of new with-profits business

As noted in Section 2.00 above, new with-profits business, if supported by estate capital, has a significant impact on the value of potential special distributions to eligible policyholders from the inherited estates. New with-profits business, as currently written, raises the capital that needs to be retained in a with-profits fund and impacts the magnitude, timing and division of future distributions from the inherited estate, deferring special distributions and diluting

¹³ Aviva has required that these figures be blanked out on the basis that they are commercially sensitive. The policyholder advocate believes these figures are not commercially sensitive and should be disclosed.

eligible policyholders' interests, transferring the remainder of the policyholders' share in special distributions from the estates to future policyholders. The dilutive effects of new with-profits business are exacerbated by the deferral, as eligible policyholders become a progressively smaller portion of the total policyholder base over time. Although special distributions to shareholders are similarly delayed by new with-profits business, there is in the case of shareholders no *dilutive* effect and therefore no reduction in the expected value of their special distributions, as any capital held in the funds will generate a return which compensates for the delay.

The FSA has recently issued guidance that precludes the use of the inherited estates to subsidise most of the operational costs of new with-profits business: new policies must be written on terms that anticipate the repayment of any initial capital strain over the life of the policy. Capital "borrowed" from the inherited estates to write new with-profits business must earn a commercial return that takes account of the risk of writing new with-profits business; in particular, the cost of underwriting any associated guarantees. Aviva has confirmed that new with-profits business will be written on terms that comply with the FSA's guidance, irrespective of whether there is a reattribution or not. The FSA however does not require new with-profits business to cover the cost of its non-market risk, or to cover the value of the capital transferred from the current generation to the new policies.

This means that apart from the potential impact of non-market risks in relation to new with-profits business, the FSA does not permit the writing of new with-profits business to be done in ways that erode the value of the estates over the medium-term. The inter-generational transfer of capital, however, is expressly permitted by the FSA's guidance, and is the source of the impact of new with-profits business on the division of special distributions between current and future policyholders. A fuller discussion of these issues is contained in *Appendix 39: The Impact of FSA Guidance on Policyholders*.

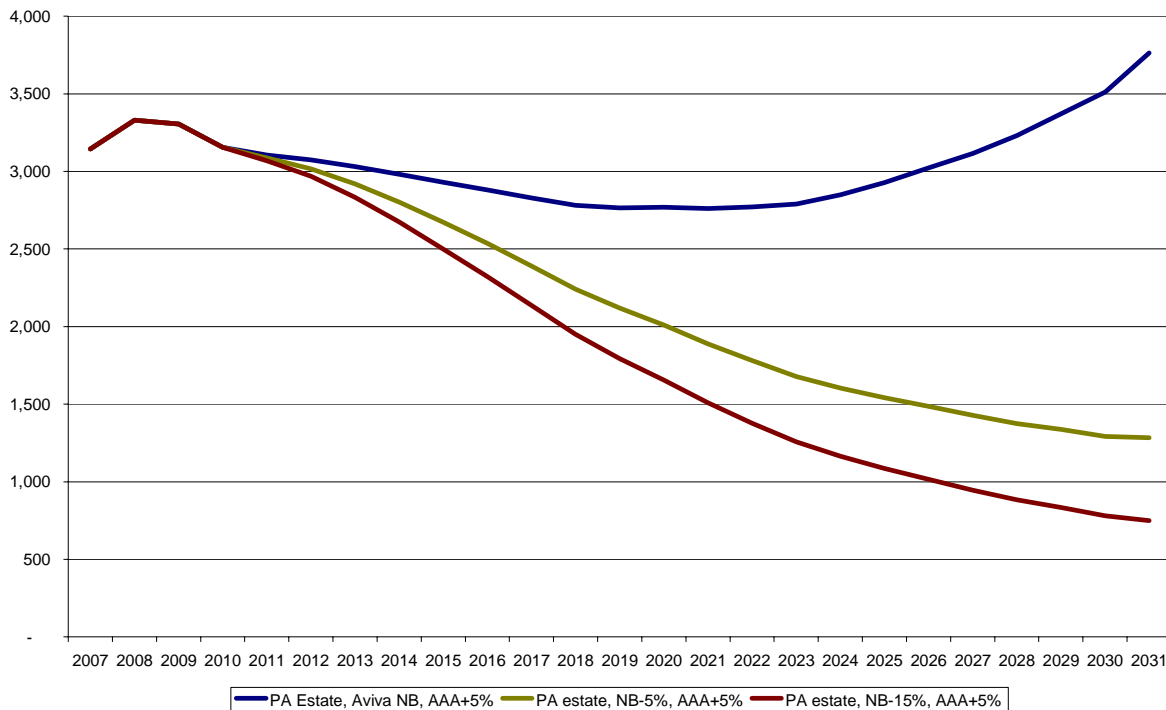
The purpose of this section is to illustrate the effect of new with-profits business on the pattern and magnitude of the funds' capital requirements and potential special distributions of excess surplus from the inherited estates to shareholders and eligible policyholders, using

outputs from the LECG category level model, which is described in detail in *Appendix 33: Modelling for the Purposes of the Reattribution*.

4.01 The effect of new with-profits business on capital requirements

Figure 1 shows Aviva’s best estimate of the amount of capital required to maintain a prudential solvency of AAA+5 per cent¹⁴ under Aviva’s new business assumptions (5 per cent per annum growth from 2011) and the policyholder advocate’s alternative assumptions for future new with-profits business (minus 5 per cent per annum and minus 15 per cent per annum after 2011). In principle, absent a reattribution, any capital in the funds above this level (i.e. an excess surplus) could be distributed to policyholders and shareholders in a ratio of 90:10.

Figure 1 Capital requirements on Aviva and alternative new with-profits business assumptions, 2006 – 2031, £ million



Source: Aviva, revised new with-profits business data

¹⁴ Aviva’s assumption for modelling purposes is that special distributions occur above AAA+5 per cent.

The lower (burgundy and yellow) lines in the chart show a declining requirement for capital, with reducing new with-profits business, reflecting the progressive attrition of the current base of policyholders, which is not being fully replaced by new policies entering the funds. The upper (blue) line shows falling capital requirements until 2021, but at a slower rate due to the writing of new with-profits business. After 2021, the blue line, based on Aviva's new with-profits business assumptions, shows the expected long-term growth of the fund reflecting the rate at which new with-profits business is brought in. From that date, the introduction of new with-profits business outweighs the projected rate of attrition of current policyholders, leading to a growth in capital requirements.

4.02 Effects of new with-profits business on shareholders

From the shareholders' perspective, a higher volume of new with-profits business defers the payment of special distributions from the inherited estates, all else being equal, but since the capital is generating an appropriate return this does not erode shareholder value. Figures 2 and 3 below show the value of potential special distributions from the estates to shareholders, absent a reattribution, on Aviva's new with-profits business assumptions and the policyholder advocate's lower new with-profits business assumptions, with a capital requirement of AAA (the policyholder advocate's assumption), above which special distributions of excess surplus are assumed to be made. The projected cash flows exclude the payment of the special distribution announced by Aviva on 8 February 2008. These figures correspond to values of the inherited estate at the Effective Date (that is, the Reattribution Estate) of £1,200 million, and £1,570 million (the end-2008 published value of £1,529 million plus a £41 million post year-end adjustment); as noted earlier, £177 million of adjustments at 31 December 2008 advised by KPMG have been added to the estate for this analysis.

Figure 2 Present value of estimated special distributions to shareholders from the inherited estates, without a reattribution, Aviva and alternative policyholder advocate new with-profits business assumptions, unadjusted estate of £1,200 million, £ million

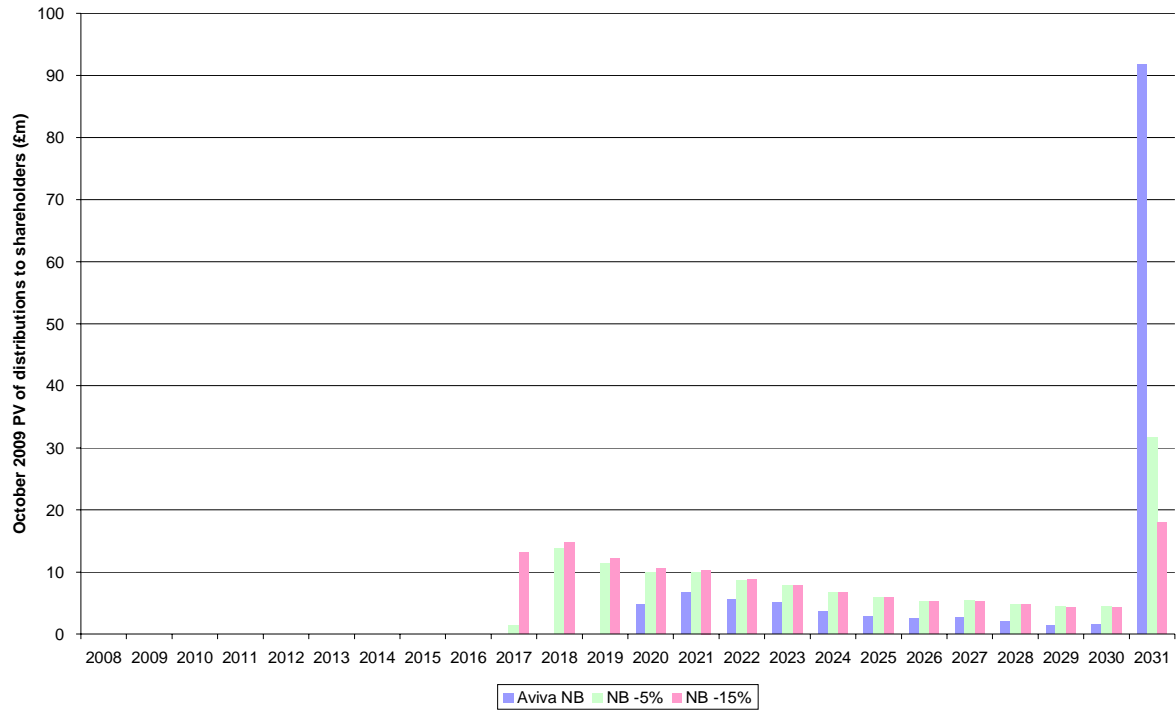
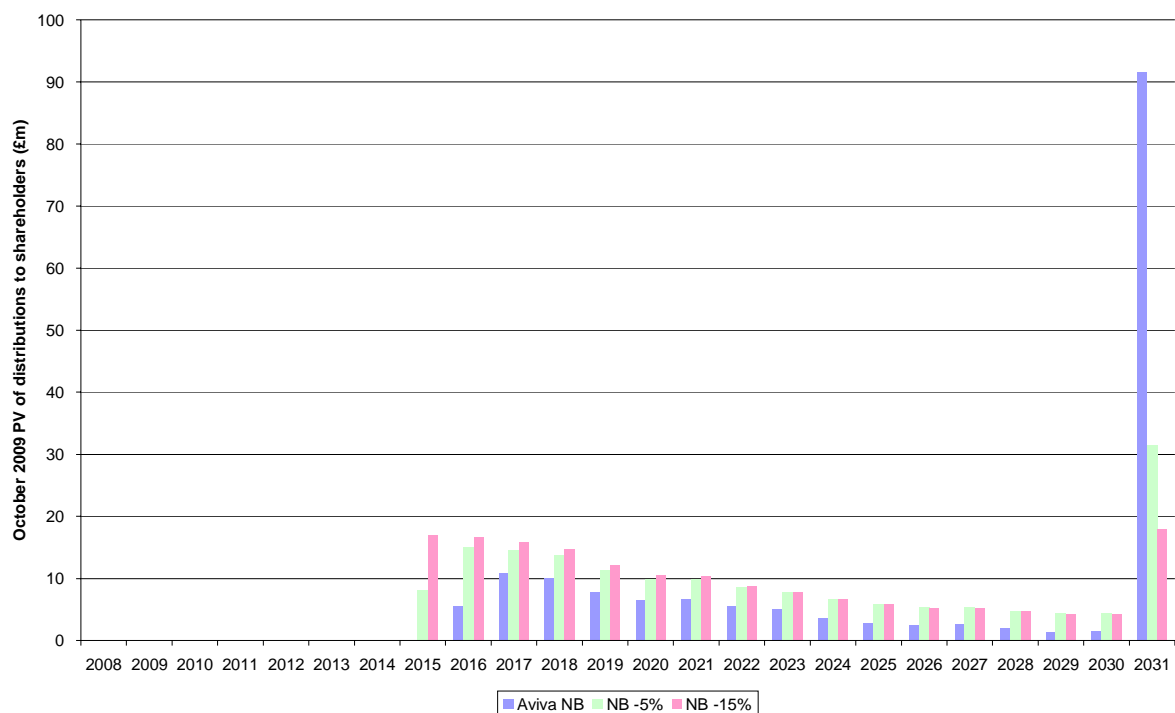


Figure 3 Present value of estimated special distributions to shareholders from the inherited estate, without a reattribution, Aviva and alternative policyholder advocate new with-profits business assumptions, unadjusted estate of £1,570 million at 1 October 2009, £ million



The blue bars show the post-tax value of special distributions to shareholders under Aviva’s new with-profits business assumptions of 5 per cent per annum from 2011; the green and pink bars show the same cash flows using the policyholder advocate’s alternative new with-profits business assumptions of 5 per cent or 15 per cent annual declines from 2011 onwards. As may be seen, shareholders will receive larger cash flows from the inherited estates if less new with-profits business is written, except at the end of the projection period. The large projected release in 2031 (at the end of the period that is explicitly modelled) reflects the modelling assumption that the fund is wound up and the inherited estate distributed at the end of the projection period.¹⁵ Clearly, the release of capital at the end of the period will be larger if

¹⁵ In practice, the release of capital will take place over a number of years after 2031, rather than in a single year as shown here, which is an artefact of the modelling period being limited to 25 years.

more capital is retained within the fund to support the writing of additional new with-profits business.

Despite the appearance of significant differences between the sets of cash flows, the present value of projected shareholder cash flows is consistent across the range of new business assumptions, as one would expect if the capital tied up in new with-profits business is receiving an appropriate return. Under Aviva's new with-profits business assumptions, shareholders may expect to receive total special distributions without a reattribution with a present value of approximately £167 million from an unadjusted estate of £1,570 million, and £130 million from an unadjusted estate of £1,200 million; on the basis of the policyholder advocate's low new with-profits business assumption of a 15 per cent annual decline, the present value is £168 million for an unadjusted estate value of £1,570 million, and £131 million for an unadjusted estate of £1,200 million.

4.03 Impact of new with-profits business projections on policyholders

The impact on eligible policyholders is very different from that on shareholders as the figures in the following section show. Figures 4 and 5 show the present value of special distributions to eligible policyholders on Aviva's and the policyholder advocate's alternative new with-profits business assumptions year by year. From the figures it is evident that, absent a reattribution, eligible policyholders would be significantly better off if Aviva wrote lower levels of new with-profits business.

Figure 4 Present value of estimated special distributions to eligible policyholders from the inherited estate, without a reattribution, Aviva new with-profits business assumptions and policyholder advocate alternative new with-profits business assumptions, unadjusted estate of £1,200 million at 1 October 2009, £ million

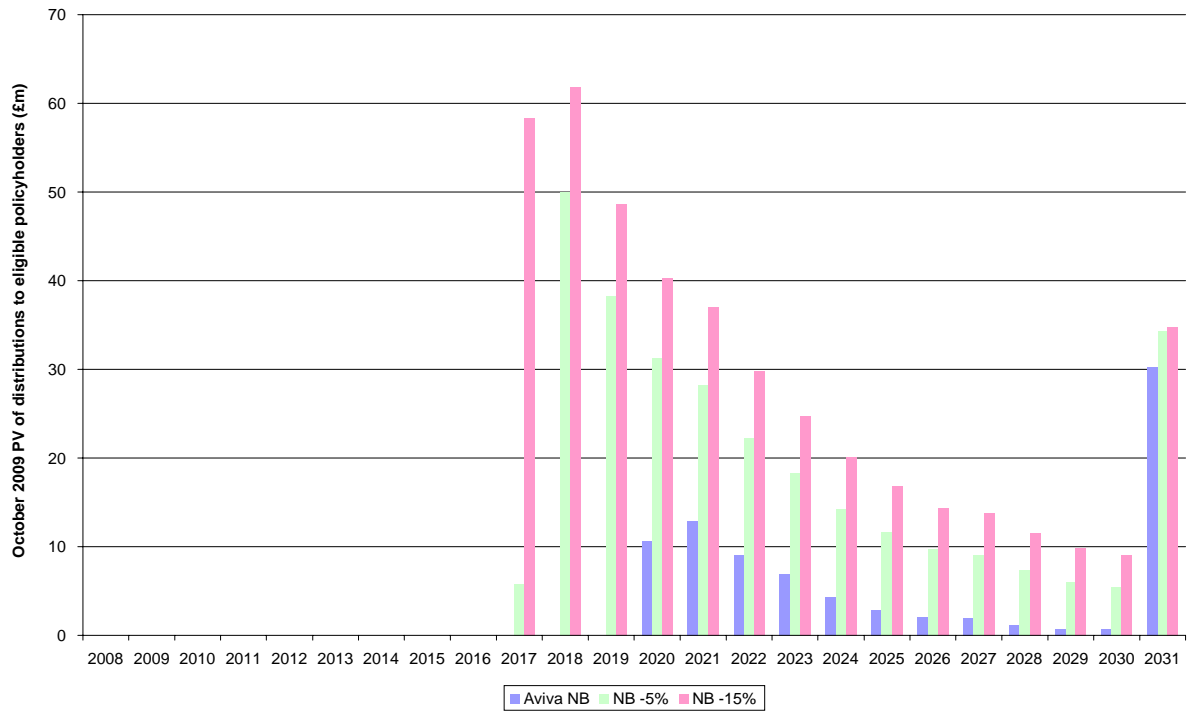
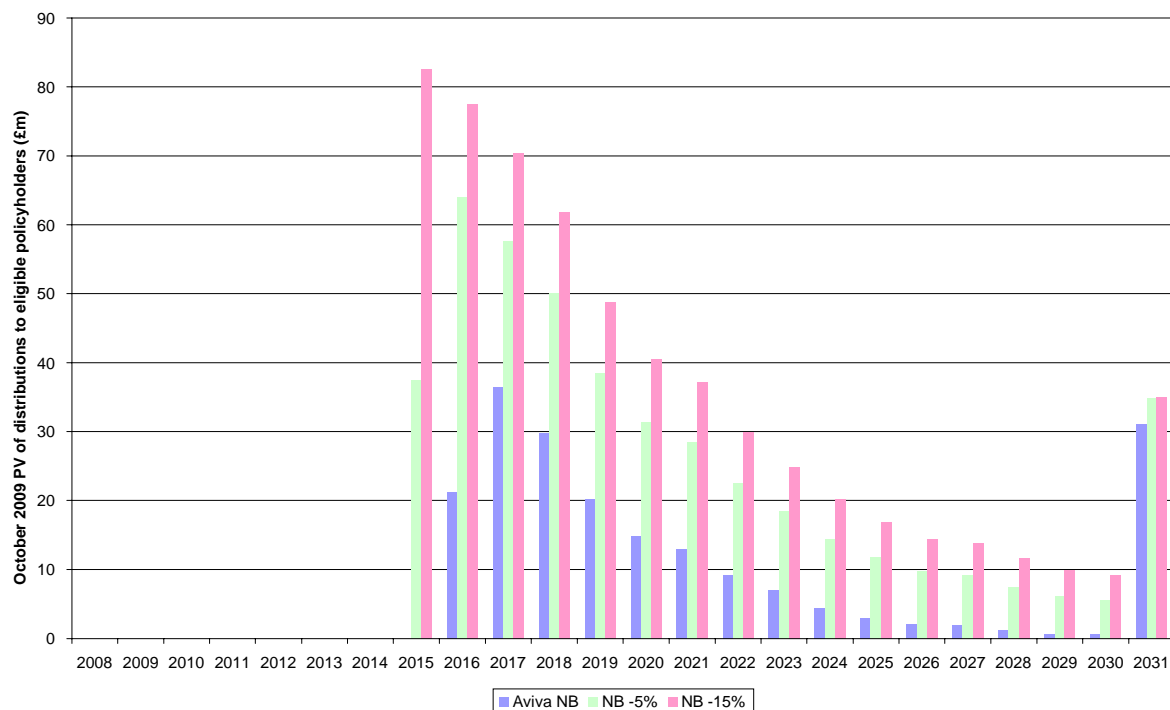


Figure 5 Present value of estimated special distributions to eligible policyholders from the inherited estate, without a reattribution, Aviva new with-profits business assumptions and policyholder advocate alternative new with-profits business assumptions, unadjusted estate of £1,570 million at 1 October 2009, £ million



Source: Aviva, revised new with-profits business data, LECG model

The present value of the impact on eligible policyholders of Aviva’s new with-profits business assumptions compared to the policyholder advocate’s 15 per cent p.a. decline in new with-profits business assumptions is around £408 million (£197 million compared to £605 million) at an unadjusted estate value of £1,570 million at 1 October 2009. At an unadjusted estate of £1,200 million, the difference is £348 million: £83 million compared to £431 million.

5.00 Aviva’s analysis of the value of potential distributions to eligible policyholders absent a reattribution

Aviva uses a ‘stochastic’ model (a model which estimates the probabilities of various potential outcomes) to project fund returns in the future. Aviva says that it typically tests particular scenarios in its model using 1,000 runs, some of which will exhibit highly positive

returns, while others result in strong negative returns, or even the ruin of the funds. Aviva examines the output from its modelling to understand how the funds might behave under a variety of potential outcomes for market returns and other variables.

LECG understands that the Aviva model projects the funds' capital requirements, based on actuarial assumptions about the level of capital adequacy required to maintain the risk appetite within a range acceptable to shareholders. In each year of each scenario, it is possible to test if the value of the assets in the inherited estates exceeds the capital required to maintain a credit rating equivalent to AAA plus 5 per cent.¹⁶ If the size of the inherited estates exceeds this threshold, a special distribution of excess surplus could potentially occur, and is assumed to occur in the modelling analysis. If it is below the AAA plus 5 per cent threshold, no such special distribution is assumed to occur in the modelling analysis. It should be noted that the recent February 2008 special distribution led to an inherited estates rating between AA and AAA.

In a proportion of the runs modelled by Aviva, excess surplus distributions are projected to occur. A small proportion of the runs may show extraordinary investment returns over long periods and very high distributions of excess surplus, or very low investment returns and adverse outcomes for policyholders and shareholders. Most of the runs show more modest excess surplus distributions or even no such distributions at all.

LECG understands that Aviva uses the profile of distributions of excess surplus from across its modelling runs to calculate a single figure that, given a particular set of assumptions, represents what Aviva refers to as the Value of Potential Distributions to Policyholders (VPDP). In any given set of runs, depending on the timing of such distributions, the model will calculate that some portion of these potential distributions may be received by eligible policyholders, the remainder being received by future policyholders as part of the transfer of estate from current to future policyholders.

¹⁶ Note that the policyholder advocate assumes a release point of AAA, rather than the AAA+5% assumed in Aviva's analysis. Aviva says that it is only obliged to declare a special distribution, in practice, when the level of the inherited estate exceeds 120% of AAA.

At 9 February 2009, based on the assumptions embodied in the Aviva basis of calculation set out in *Appendix 42: Evaluation of the Aggregate PIP Offer*, Aviva identified the VPDP for eligible policyholders for a range of Reattribution Estate values at the Effective Date, as shown in Table 10 below.

Table 10 Aviva’s aggregate VPDP calculations* for a range of aggregate PIP values, 1 October 2009

Unadjusted Estate (£m)	Aggregate VPDP
1,200	103
1,300	130
1,400	161
1,500	195
1,600	233
1,700	273
1,800	317
1,900	364
2,000	414
2,100	468
2,200	525
2,300	585
2,400	650
2,500	720

Source: Aviva

* Aviva’s VPDP calculations have not been updated since 2008 and therefore a direct comparison with the policyholder advocate’s calculations may be misleading.

6.00 The policyholder advocate's analysis of the special distributions of excess surplus forgone by electing policyholders

The main purpose of this section is to set out the results of the analysis undertaken by LECG for the policyholder advocate to estimate the aggregate value of the potential future special distributions that would be forgone by eligible policyholders if 100 per cent of policyholders accepted the reattribution offer. In addition, LECG sets out a number of analyses that break down this aggregate value and that serve to illustrate the points made in Section 4.00 above. It should be noted that, although precise numbers are given, these numbers can only be viewed as approximations. LECG gives central estimates based on Aviva's projections that have been provided to the policyholder advocate.

6.01 The aggregate value of special distributions

LECG has estimated the potential special distributions that could be received by eligible policyholders, future policyholders and shareholders from 1 October 2009 to December 2031, as well as the each group's share of the estate when it is assumed to be divided after that period. On the basis of Aviva's new with-profits business assumptions, but using the policyholder advocate's calculation of the size of the inherited estates, the value of potential special distributions forgone by eligible policyholders is £83 million on the assumption of an unadjusted estate value of £1,200 million at 1 October 2009, or £197 million on the assumption of an unadjusted estate value of £1,570 million at 1 October 2009. On the basis of the policyholder advocate's assumption of a 15 per cent annual decline in the amount of new with-profits business from 2011 onwards, the value of potential special distributions to eligible policyholders rises to £431 million at an estate of £1,200 million and £605 million at an estate of £1,570 million. Due to the differences in assumptions made by Aviva and the policyholder advocate, the values of special distributions of excess surplus forgone differ from the VPDP figures calculated by Aviva. The present values of potential special distributions to eligible policyholders, future policyholders and shareholders obtained under

each of the three differing new with-profits business assumptions are shown in Figures 6 and 7 below.

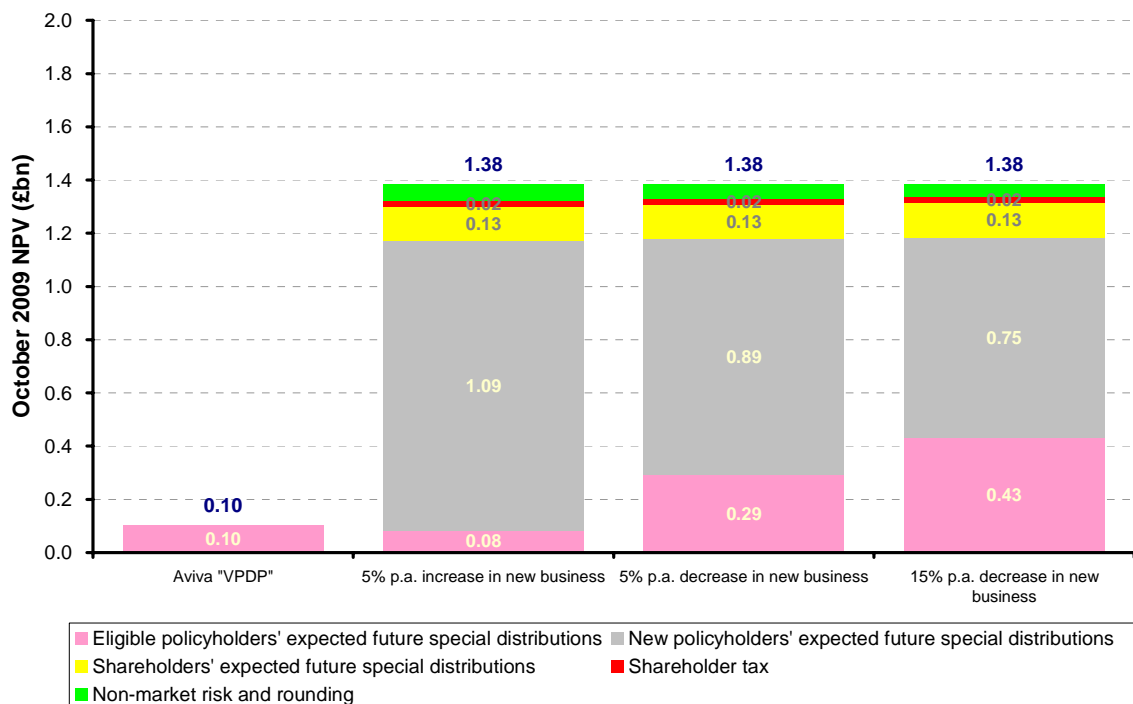
The figures also illustrate the redistributive effect of new with-profits business away from the current generation of policyholders. In order to show clearly where the value of the estate is forecast to end up, we show not only the value of the estate forecast to go to shareholders¹⁷ and policyholders (both eligible and new), but also the amount of shareholder tax on special distributions expected to be paid by the estate (the red bar) and the non-market risk (the green bar), a portion of which is a benefit already provided to eligible policyholders, and a portion of which is also provided without charge to future policyholders. Under any of the three new business assumptions analysed, the total present value of potential future special distributions remains the same; it is the division between eligible and future policyholders that changes. It may also be seen that the value of potential special distributions to shareholders remains largely unchanged, leaving approximately the same aggregate amount available for potential distribution to policyholders, both eligible and future.

The chart therefore shows the redistributive impact of Aviva's new with-profits business assumptions (shown in the bar second from the left), compared to the policyholder advocate's alternative assumptions (shown in the two rightmost bars). It can be seen that in all three cases a majority of policyholders' share of special distributions is predicted to go to future policyholders and not to eligible policyholders in the absence of a reattribution.¹⁸ If 100 per cent of eligible policyholders accept the Aviva offer, it is estimated that they will forgo the potential special distributions indicated by the pink bars in exchange for the PIP.

¹⁷ The value of the estate is shown net of certain FSA concessions which are reserves in the fund. The FSA concessions, as deducted by the policyholder advocate, benefit shareholders by £297 million in addition to the amounts shareholders receive from the reattribution transaction. Further details are provided in *Appendix 39: The Impact of FSA Guidance on Policyholders*.

¹⁸ Charts for other values of inherited estate are shown in Annexe B:
35 of 45

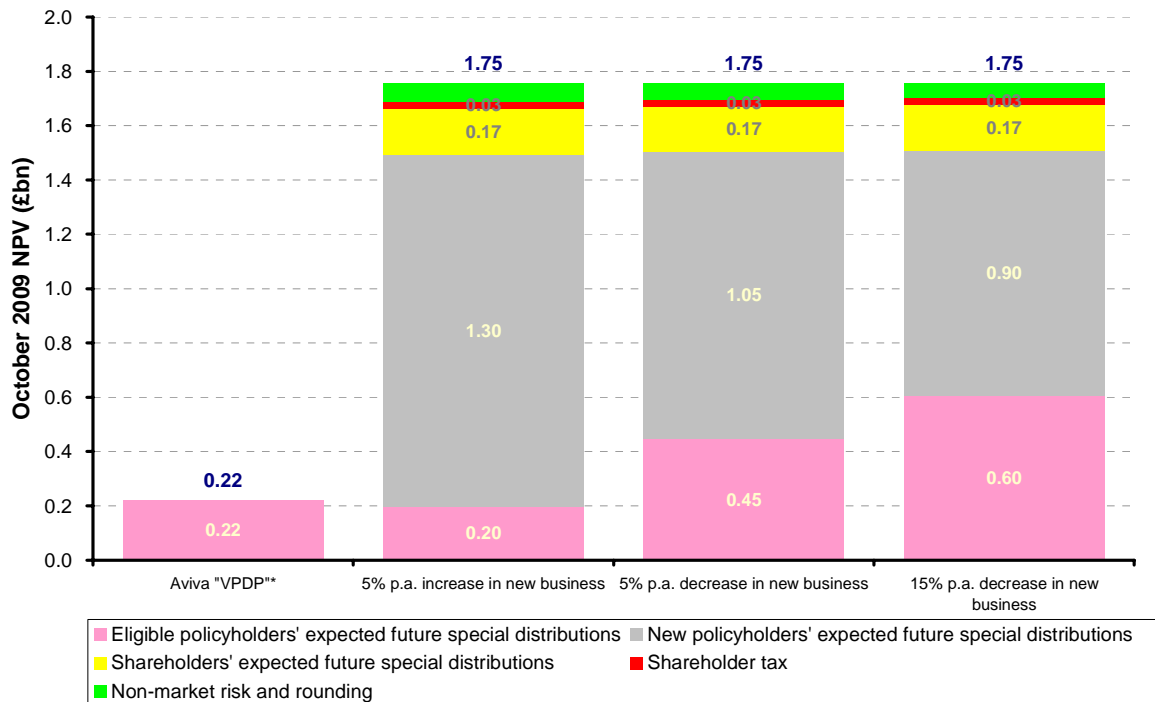
Figure 6 Aggregate value of potential special distributions of excess surplus absent a reattribution, unadjusted estate of £1,200 million* at 1 October 2009, £ billion



Source: LECG analysis, revised new with-profits business data

*The total value of £1.38 billion shown in the figure represents the unadjusted estate of £1,200 million, plus £177 million of adjustments at 31 December 2008 as advised by KPMG.

Figure 7 Aggregate value of potential special distributions of excess surplus absent a reattribution, unadjusted estate of £1,570 million at 1 October 2009, £ billion**



Source: LECG analysis, revised new with-profits business data

*Aviva's VPDP at this estate level has been interpolated from the data supplied for estates of £1,500m and £1,600m

**The total value of £1.75 billion shown in the figure represents the unadjusted estate of £1,570 million, plus £177 million of adjustments at 31 December 2008 as advised by KPMG.

Across the range of new business assumptions, policyholders may share in approximately £1,200 million of special distributions from an unadjusted estate of £1,200 million¹⁹, or £1,500 million of special distributions from an unadjusted estate of £1,570 million. The division of those potential distributions between current and future policyholders is markedly different depending on the new with-profits business assumptions that are made. Using Aviva's new with-profits business assumptions, the estimated special distributions to eligible policyholders are £348 million lower than they would be under the alternative assumption of a 15 per cent p.a. decline in new with-profits business assuming an unadjusted estate value of

¹⁹ Adjustments of £177 million at 31 December 2008 as advised by KPMG have been added to the unadjusted estate values before calculating estimated special distributions; therefore, the actual value available for distribution is higher than £1,200 million.

£1,200 million, and £408 million lower assuming an unadjusted estate value of £1,570 million.

There are differences between the assumptions used by Aviva and the policyholder advocate to calculate the aggregate value of the inherited estate and future special distributions; further, Aviva's VPDP calculations have not been updated as recently as the policyholder advocate's. These factors cause further differences in the value of potential special distributions that eligible policyholders might receive from the inherited estate. This explains the difference between the £103 million VPDP calculated by Aviva, and the £83 million value of special distributions calculated by the policyholder advocate, using the same new with-profits business assumptions employed by Aviva, at an unadjusted estate of £1,200 million.

7.00 Conclusions

The purpose of this appendix has been to estimate the aggregate potential value of future special distributions of excess surplus to policyholders and shareholders, absent a reattribution. Following a reattribution, all other benefits to policyholders and shareholders are expected to remain constant. It is all policyholders' rights to 90 per cent of potential future special distributions that are being acquired by Aviva under the terms of the reattribution; eligible policyholders will be giving up (if 100 per cent elect for the reattribution) a proportion of those policyholder rights, the proportion depending in particular on the amount of new business assumed.

There are three main drivers of potential future special distributions of excess surplus:

- the insurer's risk appetite, which determines the capital requirements;
- the level of investment returns; and
- the amount of new with-profits business written using estate capital.

Aviva's preferred risk appetite is to maintain a surplus equivalent to a credit rating of between AA and AAA, and Aviva says it would not be obliged to make a special distribution of excess surplus unless the funds' credit rating exceeded AAA by 20 per cent or more. However, for

modelling purposes, Aviva has assumed that special distributions occur at AAA+5 per cent. In accordance with the policyholder advocate's interpretation of the FSA's guidance, LECG has modelled special distributions of excess surplus, on the basis that a better balance of interests would be achieved if capital were distributed above AAA.

With respect to investment returns, LECG has used Aviva's best estimate projection of investment returns over the years to 2031, which assumes average pre-tax earnings of 6.60 per cent p.a. and post-tax earnings of 6.15 per cent p.a. Actual returns in any given year, or on average over the projection period, may be either higher or lower than Aviva's best estimate. Clearly, higher investment returns (on average) would tend to generate higher special distributions of excess surplus and vice-versa.

Finally, with respect to new with-profits business, as has been noted in *Appendix 39: The Impact of FSA Guidance on Policyholders*, all else being equal, a higher amount of future new with-profits business serves to reduce the value of potential special distributions to eligible policyholders through deferment and dilution. This is because FSA rules allow new with-profits business to be supported by estate capital: new with-profits business is not required to cover either the cost of its non-market risk or the value of capital transferred to it from the current generation of policyholders. Although shareholders' special distributions of excess surplus are also delayed by new with-profits business, there is no dilutive effect to shareholders and so no loss of value to them.

Aviva has projected the value of new with-profits business that it expects to write up to 2010, after which date it assumes the value of new with-profits business written into the funds to increase by 5 per cent p.a. The policyholder advocate has no firm view as to the likely amount of new with-profits business that Aviva may sell, but considers that Aviva's assumptions may lie at the upper end of the range of potential outcomes. For that reason, LECG has estimated the potential value of special distributions assuming that new with-profits business declines by 5 per cent per annum from 2011 or by 15 per cent per annum from 2011.

This appendix has shown that, under any new with-profits business assumptions used, over half of the value of potential special distributions to eligible policyholders is expected to arise after 2016, by which point the majority of eligible policyholders will have left the funds. The fact that the funds are dominated by new with-profits business from that date means that such policyholders experience a strong dilution of their potential future special distributions from the inherited estate. Under Aviva's new with-profits business assumptions, we estimate the value of special distributions to eligible policyholders to be £83 million, assuming an unadjusted estate of £1,200 million at 1 October 2009, or £197 million assuming an unadjusted estate of £1,570 million. On the policyholder advocate's alternative, lower new with-profits business assumptions of a 15 per cent annual decline, the dilution of eligible policyholders' interests is considerably lower, with estimated special distributions to eligible policyholders of £431 million at an unadjusted estate of £1,200 million, and £605 million at an unadjusted estate of £1,570 million (increases of £348 million and £408 million respectively).

As noted in *Appendix 39: The Impact of FSA Guidance on Policyholders*, the impact of new with-profits business on the division of potential special distributions between current and future policyholders would disappear if the FSA's rules were changed (as the policyholder advocate considers they should be) and no longer permitted estate capital to be retained in the fund to support new with-profits business. Absent the dilutive impact of new with-profits business, under current FSA rules eligible policyholders could expect to receive between £1,200 million and £2,400 million of special distributions for unadjusted estate values between £1,200 million and £2,500 million at 1 October 2009.

Annexe A: Present value of potential future distributions of excess surplus at 1 October 2009 for other estate values

Table 11 Present value of potential future distributions of excess surplus absent a reattribution, valued at 1 October 2009, unadjusted estate of £1,800 million, £ million

Scenario	Eligible policyholders	Future policyholders	Shareholders	Eligible policyholders' share of distributions to all policyholders
Aviva new with-profits business assumptions: +5% p.a.	292	1,405	189	17%
Policyholder advocate alternative new with-profits business assumption: -5% p.a.	557	1,148	190	33%
Policyholder advocate alternative new with-profits business assumption: -15% p.a.	721	990	191	42%

Source: LECG analysis

Note: The adjusted estate value is £1,985 million, including £177 million adjustments at 31 December 2008 as advised by KPMG, rolled forward to £185 million at 1 October 2009.

Table 12 Present value of potential future distributions of excess surplus absent a reattribution, valued at 1 October 2009, unadjusted estate of £2,100 million, £ million

Scenario	Eligible policyholders	Future policyholders	Shareholders	Eligible policyholders' share of distributions to all policyholders
Aviva new with-profits business assumptions: +5% p.a.	440	1,521	219	22%
Policyholder advocate alternative new with-profits business assumption: -5% p.a.	716	1,253	220	36%
Policyholder advocate alternative new with-profits business assumption: -15% p.a.	885	1,090	220	45%

Source: LECG analysis

Note: The adjusted estate value is £2,285 million, including £177 million adjustments at 31 December 2008 as advised by KPMG, rolled forward to £185 million at 1 October 2009.

Table 13 Present value of potential future distributions of excess surplus absent a reattribution, valued at 1 October 2009, unadjusted estate of £2,500 million, £ million

Scenario	Eligible policyholders	Future policyholders	Shareholders	Eligible policyholders' share of distributions to all policyholders
Aviva new with-profits business assumptions: +5% p.a.	679	1,635	258	29%
Policyholder advocate alternative new with-profits business assumption: -5% p.a.	958	1,364	259	41%
Policyholder advocate alternative new with-profits business assumption: -15% p.a.	1,128	1,199	260	48%

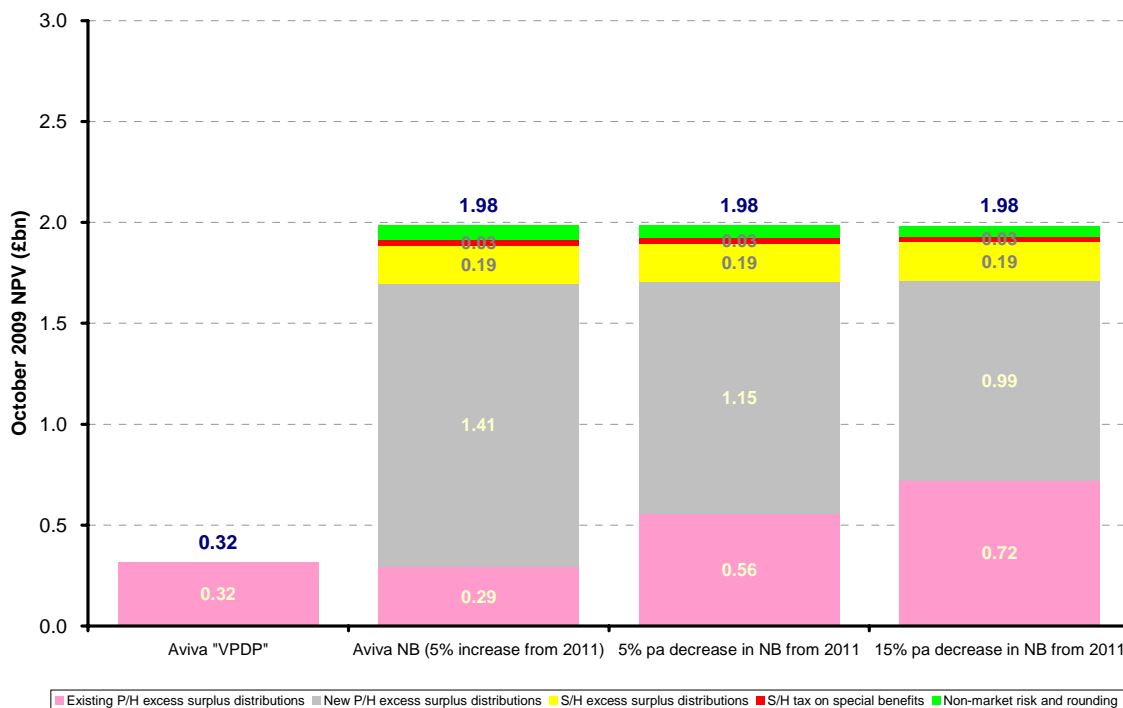
Source: LECG analysis

Note: The adjusted estate value is £2,685 million, including £177 million adjustments at 31 December 2008 as advised by KPMG, rolled forward to £185 million at 1 October 2009.

Annexe B: Charts for aggregate value of special distributions forgone, 2006 – 2031, for other estate values under consideration

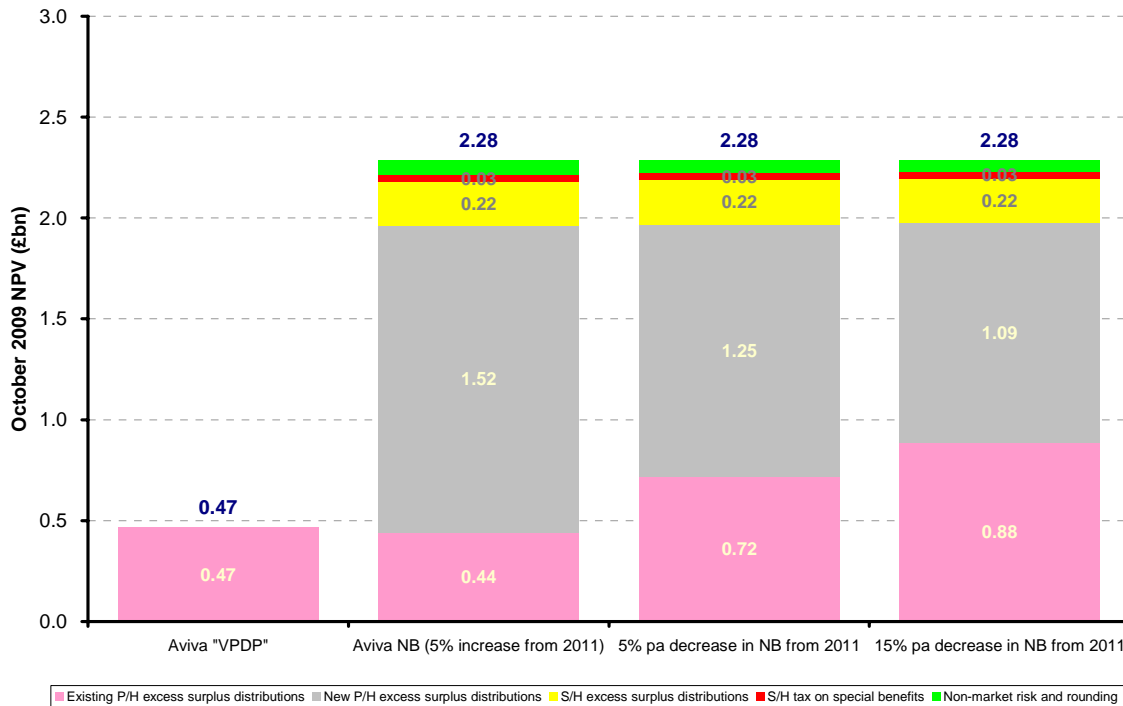
The present values of potential special distributions to eligible policyholders, future policyholders and shareholders obtained under each of the three differing new with-profits business assumptions are shown in the figures below. If 100 per cent of eligible policyholders accept the Aviva offer, it is estimated that they will forgo the potential special distributions indicated by the pink bars in exchange for the PIP.

Figure 8 Aggregate value of potential special distributions of excess surplus absent a reattribution, 2006 – 2031, unadjusted estate of £1,800 million, £ billion



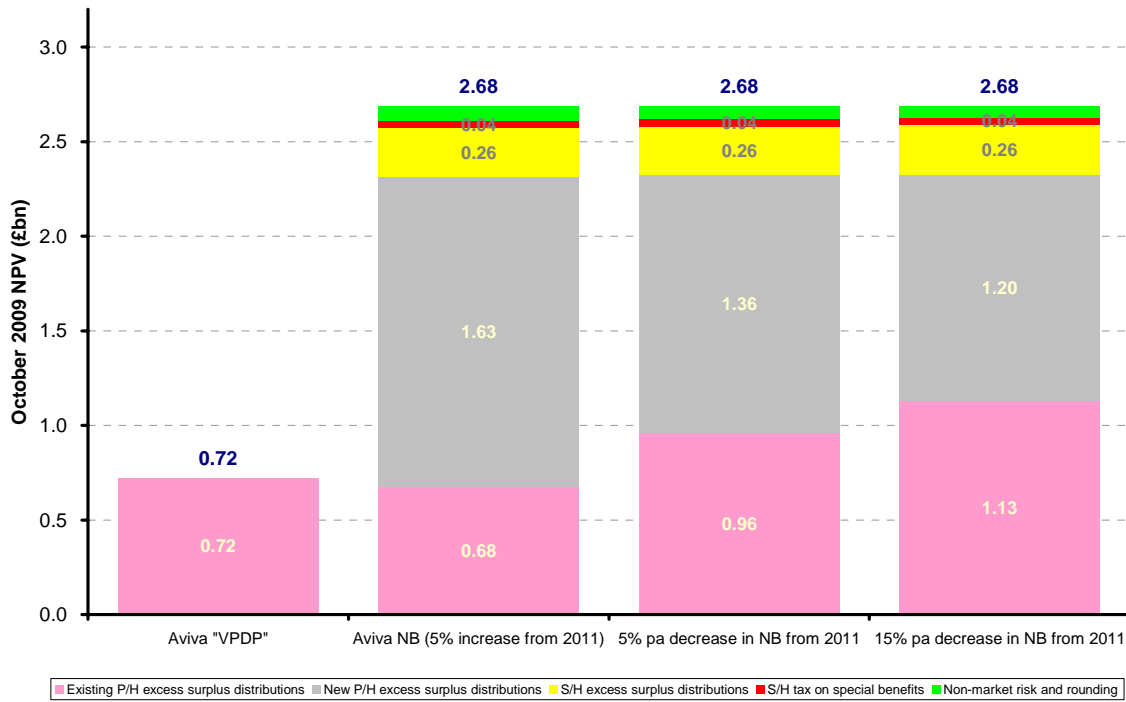
*The total value of £1.98 billion shown in the figure represents the unadjusted estate of £1,800 million, plus £177 million of adjustments at 31 December 2008 as advised by KPMG.

Figure 9 Aggregate value of potential special distributions of excess surplus absent a reattribution, 2006 – 2031, unadjusted estate of £2,100 million, £ billion



*The total value of £2.28 billion shown in the figure represents the unadjusted estate of £2,100 million, plus £177 million of adjustments at 31 December 2008 as advised by KPMG

Figure 10 Aggregate value of potential special distributions of excess surplus absent a reattribution, 2006 – 2031, unadjusted estate of £2,500 million, £ billion



*The total value of £2.68 billion shown in the figure represents the unadjusted estate of £2,500 million, plus £177 million of adjustments at 31 December 2008 as advised by KPMG