APPENDIX 9.4A

PHOENIX LIFE LIMITED

Abstract of Valuation Report for Realistic Valuation

1. INTRODUCTION

(1) Valuation Date

The valuation date is 31 December 2012.

(2) Previous Valuation

The previous valuation date was 31 December 2011.

(3) Interim Valuations

An interim valuation was carried out on 30 June 2012.

APPENDIX 9.4A

90% With-Profits Fund

2. ASSETS

(1) Economic Assumptions for Valuing Non-Profit Business

The economic assumptions used to calculate the value of future profits on non-profit business are as follows:

	Current Valuation	Previous Valuation
Fixed Interest Investment return	2.42%	2.58%
Risk discount rate	2.42%	2.58%
RPI Inflation	2.88%	2.99%
Expense inflation	3.88%	3.99%

(2) Amount Determined Under INSPRU 1.3.33(2)(R)

Not applicable.

(3) Valuation of Contracts Written Outside The Fund

Not applicable.

(4) Different Sets of Assumptions

Not applicable.

(5) De Minimis Limit

Not applicable – the assumptions in (1) relate to all non-profit business within the With-Profits Fund.

3. WITH-PROFITS BENEFITS RESERVE LIABILITIES

(1) Calculation Of With-Profits Benefits Reserve

Product Type	Method	With-profits benefits reserve	Future policy related liabilities
		£m	£m
SLUK Industrial Branch business conventional WL and EA	Prospective	21.4	4.5
SLUK Ordinary Branch business conventional WL and EA	Retrospective	32.6	6.1
SLUK Ordinary Branch business	Retrospective	41.6	6.5
BULA conventional life business	Retrospective	10.1	2.8
BULA pension contracts with guaranteed annuity rate option	Retrospective	0.7	2.2
Other			0.1
Total		106.4	22.2
Form 19 Line 31		106.4	
Form 19 Line 49			22.2

(2) Correspondence with Form 19

The above totals reconcile to lines 31 and 49 of Form 19.

(3) With-Profits Benefits Reserves below De Minimis Limit

Not applicable as all products have been disclosed.

(4) Types of Products

The level of disclosure in the table above corresponds to material groupings of contracts offering significant variances in policyholder benefits. For example, contracts with and without guaranteed annuity options are identified separately.

4. WITH-PROFITS BENEFITS RESERVE – RETROSPECTIVE METHOD

(1) Retrospective Methods

(a) All contracts have been calculated on an individual policy basis.

(b) No contracts have been valued on a grouped basis.

(c) Not applicable as no contracts have been valued on a grouped basis.

(2) Significant Changes to Valuation Method

(a) There have been no significant changes in the method of calculating the with-profits benefits reserve.

(b) No policies were valued using approaches more approximate than used for the previous valuation.

(3) Expense Allocation

For each with-profits fund, the basis of allocating expenses to that fund during the financial year in question is described in note 4006 to Form 40.

The expenses charged to the with-profits fund are fixed amounts per policy inforce, inflating each year and / or an amount per premium received plus investment expenses. Additional expenses may be charged for any additional project or enhanced services provided to the with-profits fund.

(a) The previous expense investigation was carried out in respect of the financial year ended 31 December 2011.

(b) Expense investigations are carried out in respect of each financial year. Interim investigations are carried out during financial years for use in interim valuations.

(c) The expenses charged to the with-profits benefits reserve are the amounts per policy and/or per premium and for some business the investment expenses.

The expenses charged to with-profits fund in addition to those allocated to the with-profits benefits reserve comprise:

- additional project and one-off costs not charged to asset shares;
- expenses in respect of with-profits policies that were in force at the previous financial year end and no longer in force at the current financial year end;
- expenses in respect of non-profit policies;
- investment expenses not charged to asset shares;
- prior year adjustments; and
- balance between aggregation of the amounts charged to assets shares and the items identified above and the aggregate amount allocated to the fund.

The expenses allocated to the with-profits benefits reserve and the residual balance charged to the with-profits fund during the financial year were:

	Item	£m
(i)	Initial Expenses	Nil[1]
(ii)	Maintenance Expenses	0.59
(iii)	Method	Average expense charge deducted
(iv)	Expenses charged other than to with-profits benefits reserve	0.02

(4) Significant Charges

Charges for cost of guarantees, cost of capital are not charged to with-profits benefit reserves.

(5) Charges for Non-Insurance Risk

No charges were deducted from the with-profits funds for non-insurance risk.

(6) Ratio of Claims To Reserves

The average percentage of the ratio of total claims paid on with-profits insurance contracts compared to the sum of the with-profits benefits reserve for those claims plus any past miscellaneous surplus attributed to the with-profits benefits reserve less any miscellaneous deficit attributed to the with profits benefits reserves in respect of those claims, for the three preceding financial years is:

Year	SLUK CWP	SLUK UWP	BULA
Previous year -1	108%	108%	101%
Previous year	108%	108%	101%
Current year	104%	104%	104%

(7) Allocated Return

The investment return before tax and expenses allocated to the with- profits benefit reserve in respect of the financial year in question is:

Type of business	Investment Return
SLUK IB	9.05%
SLUK OB CWP	8.20%
SLUK OB UWP	9.05%
BULA	8.26%

5. WITH-PROFITS BENEFITS RESERVE – PROSPECTIVE METHOD

(1) Key Assumptions

A prospective method has been used for ex SLUK Industrial branch with-profits whole life business.

Bonus rates on with-profits whole life business are the same as the bonus rates on endowments for the same term. A bonus reserve valuation is used to determine the with-profits benefits reserve, where:

- The bonus rates are the supportable bonus rates determined from the relevant product, and
- The economic assumptions are consistent with the supportable bonus rates

The assumptions underlying this method are as follows:

	Ex SLUK IB excl Pioneer Mutual and Stamford	Pioneer Mutual with cash bonuses	Stamford with cash bonuses
Discount Rate p.a.	2.42%	2.42%	2.42%
Investment Return p.a.			
Fixed Interest	2.42%	2.42%	2.42%
Equities	2.42%	2.42%	2.42%
Expense Assumptions			
Investment Expense p.a.	0.10%	0.10%	0.10%
Per policy Expenses			
Per Annum	£0.36	£0.36	£0.36
Per Premium	30%	30%	30%
Expense Inflation p.a.	3.88%	3.88%	3.88%
Bonus Assumptions			
Reversionary Bonuses			
On Basic Sum Assured	8.50%	13.00%	4.25%

Future terminal bonus rates vary by duration in force (at time of payment) and the actual year of payment.

There are no lapses.

Expenses

The life company entered into a new MSA with Pearl Group Management Services (PGMS) with effect from 1 September 2010. Compared to the MSA at the previous valuation the new service fees are higher and the new MSA uplift in the fee inflation is lower. In addition the new service fees incorporate the cost of several additional services that were previously paid to an outsourced services provider on a fixed charge basis.

The MSA specifies fee inflation to be RPIX +1.0% at 1 January each year.

(2) Different Sets Of Assumptions

Not applicable.

6. COSTS OF GUARANTEES, OPTIONS AND SMOOTHING

(1) De Minimis Limit

Not applicable.

(2) Valuation Method For Guarantees etc.

	Cost of Guarantees & Options	Smoothing Cost	Extent of Grouping	No of Individual policies	No of model points
SLUK UWP	Variation of Black-Scholes formula	See Below	All business in this group	6,985	6,985
All other business	Stochastic model	No smoothing allowed for	All business in this group	106,567	5,102

(a) Cost of Guarantees & Options

The costs of guarantees are determined using two models. The ex-SLUK UWP pension business uses Black-Scholes formulae and all other business uses a stochastic model. The asset returns being generated by a proprietary model. The following items were calculated stochastically:

(i) The reserves required in addition to asset share to meet guaranteed benefits;
(ii) Future profits where amounts payable upon surrender are less than asset share.

The calculations were carried out using a risk neutral approach.

Cost of Smoothing

There is no significant cost of smoothing and this has been taken to be zero. All business has been modelled assuming future payouts of 100% of asset share.

(b) (i) In the stochastic model, no projections are carried out on individual policy data.

(ii) The model uses grouped policy data. However, the values for the with-profits benefits reserve are calculated on an individual basis and added to the data file before the data is grouped.

(iii) For each product type we split the data initially by bonus series. We then create separate model points for each combination of year of commencement and year of maturity

This grouping is aligned with the way in which we declare bonus rates on our business (our actual terminal bonus rate calculation are based on specimen policies split out in the same way i.e. product type, year of commencement and year of maturity although at quinquennial rather than annual intervals).

No significant attributes of the contracts should be lost with this low level of grouping.

Grouping Validations

It is impractical to attempt to validate, using the stochastic model, projections that use grouped data against projections that use individual data. Instead, comparisons are carried out using deterministic projections.

Comparison is made of the present value of key variables as well as progression of these variables over a period of up to 40 years. The comparison includes items such as asset shares, mathematical reserves, claims outgo and premium income, split by product type as necessary. Where material discrepancies arise, these may result in grouping being revisited.

(c) Guaranteed annuity option liabilities for the ex-BULA pension contracts were calculated on a prudent deterministic basis, given the low volume of these. In addition, when calculating the cost of guarantees stochastically, the initial

guaranteed sum assured has been increased to reflect the presence of the guaranteed annuity option.

The stochastic model assumes compound bonus only. The majority of the ex SLUK business participates in simple bonus only so the guarantee cost is overstated. This is not significant given the small guarantee cost overall.

(3) Significant Changes

There have been no significant changes since the previous valuation.

(4) Further Information on Stochastic Approach

(a) (i) The guarantees and options being valued using a full stochastic approach are described in 6(2)(a) above.

The following table gives an indication of the extent to which the guarantees are in or out of the money at the valuation date. For the various product types the with profits benefit reserve is shown along with the guaranteed sum assured plus bonuses payable on death/maturity and the sum of the difference where the guarantees are higher.

Product type	With-profits benefit reserve (A) £m	Sum assured plus bonuses (B) £m	Sum of positive B-A
SLUK IB	20.0	5.9	0.2
SLUK OB CWP	32.5	18.7	0.1
BULA Life	10.1	8.5	1.6
BULA Pensions	0.7	2.0	1.3

(ii) The asset returns in the stochastic model were generated by a proprietary model purchased from Barrie & Hibbert. The asset classes modelled are UK equities, overseas equities, UK property, UK corporate bonds and UK gilts.

Interest Rate

UK gilt returns are modelled using gilts + 10bps calibration in an Annual LIBOR Market Model. The Government Nominal Bond yield curve is a direct input into the model.

The calibration at the valuation date was as follows:

Term	Govt. + 10bp	Model	Difference (Model - Market) bp
1	0.32%	0.32%	0
2	0.43%	0.43%	(0)
3	0.60%	0.60%	(0)
4	0.80%	0.79%	(0)
5	1.01%	1.00%	(1)
7	1.43%	1.42%	(0)
10	1.99%	1.99%	(0)
15	2.70%	2.69%	(1)
20	3.18%	3.18%	(0)
25	3.49%	3.49%	(0)

The volatility within the model is calibrated to the market implied volatility for at the money swaptions (for 20 year swaps). The calibration at the valuation date is as follows:

Term	Market Implied Volatility	Model	Difference (Model - Market) bp
1	23.90%	28.00%	410
2	22.90%	24.90%	200
3	21.60%	22.80%	120
4	20.40%	21.20%	80
5	19.40%	20.00%	60
7	17.60%	18.10%	50
10	16.00%	16.20%	20
15	14.20%	14.30%	10
20	13.40%	12.90%	(50)
25	13.50%	11.80%	(170)
30	13.40%	10.70%	(270)

Equities and Property

Excess returns over risk free on UK equities, overseas equities and property are modelled using separate (but correlated) lognormal models. The scenario generator uses a Stochastic Volatility Jump Diffusion model for UK equities and a constant volatility model for property and overseas equities.

The UK equity model was calibrated by reference to the implied volatility of FTSE 100 options for a range of strikes (from 0.8 to 1.2) and maturities of up to 10 years. All strikes are expressed as a proportion of at-the-money.

Implied volatility data (%) at the valuation date is shown below:

Market

	Strike				
Term	**0.8**	**0.9**	**1**	**1.1**	**1.2**
1	23.90	20.60	17.60	15.20	14.00
3	25.10	23.20	21.50	19.80	18.30
5	26.30	24.80	23.40	22.10	21.00
9	28.20	27.00	26.00	25.00	24.10

Model

	Strike				
Term	**0.8**	**0.9**	**1**	**1.1**	**1.2**
1	23.30	20.80	18.40	15.60	12.30
3	25.10	23.20	21.50	19.80	18.10
5	26.60	25.20	23.90	22.70	21.50
9	27.40	26.40	25.40	24.50	23.70

Beyond 10 years the estimated volatility implied by the model calibration rises as follows:

	Strike				
Term	**0.8**	**0.9**	**1**	**1.1**	**1.2**
15	28.06	27.34	26.67	26.09	25.54
20	28.27	27.73	27.24	26.82	26.44
25	28.65	28.25	27.89	27.53	27.18
30	28.94	28.56	28.21	27.87	27.54

Difference (Model – Market) %

	Strike				
Term	**0.8**	**0.9**	**1**	**1.1**	**1.2**
1	(0.60)	0.20	0.80	0.40	(1.70)
3	0.00	0.00	0.00	0.00	(0.20)
5	0.30	0.40	0.50	0.60	0.50
10	(0.80)	(0.60)	(0.60)	(0.50)	(0.40)

There are no tests against market traded instruments for properties since there are no such instruments. A best estimate has therefore been used of 15% constant volatility.

Corporate bond

Corporate bond returns are modelled using the extended Jarrow-Lando-Turnbull model. This describes bond prices in terms of a real-world transition matrix, which gives the probability of a transition to each credit rating over one year. Risk neutral transition probabilities are assumed to vary stochastically. The transition matrix is consistent with best estimates based on historic data of long term transition probabilities and spread volatilities and corporate bond prices. The model was fitted to a sample of predominantly investment grade sterling corporate bonds.

The following are examples of observed correlations of year 10 returns from the scenarios used (ZCB = zero coupon bond):

	Output Correlations @ Year 10									
	Cash	Equities	Property	Overseas Equities	5yr Govt ZCB	15yr Govt ZCB	5yr Corp ZCB	15yr Corp ZCB	5yr Index Linked ZCB	15yr Index Linked ZCB
Cash	1	-0.09	-0.07	-0.15	-0.69	-0.77	-0.43	-0.70	-0.25	-0.35
Equities		1.00	0.30	0.63	0.14	0.15	0.56	0.33	0.06	0.12
Property			1.00	0.15	0.07	0.08	0.20	0.14	0.07	0.09
Overseas equities				1.00	0.19	0.23	0.46	0.35	0.08	0.13
5yr Govt ZCB					1.00	0.87	0.63	0.80	0.35	0.44
15yr Govt ZCB						1.00	0.58	0.93	0.17	0.35
5yr Corp ZCB							1.00	0.79	0.20	0.29
15yr Corp ZCB								1.00	0.16	0.34
5yr Index Linked ZCB									1.00	0.90
15yr Index Linked ZCB										1.00

(iii) The table below is based on 1,000 scenarios:

		Asset type (all UK assets)	**K=0.75**				**K=1**				**K=1.5**			
	n		5	15	25	35	5	15	25	35	5	15	25	35
	r	Annualised compound equivalent of the risk free rate assumed for the period. (to two decimal places)	1.00%	2.69%	3.49%	3.72%	x	x	x	x	x	x	x	x
1		Risk-free zero coupon bond	951,364	671,225	424,395	278,269	x	x	x	x	x	x	x	x
2		FTSE All Share Index (p=1)	100,676	251,537	345,902	419,209	200,691	394,053	514,049	603,968	531,761	734,987	885,416	998,632
3		FTSE All Share Index (p=0.8)	98,360	221,920	273,577	302,565	195,909	348,690	407,492	438,752	519,592	652,104	706,822	731,499
4		Property (p=1)	90,794	212,361	307,119	379,561	218,556	371,365	485,738	570,687	588,588	752,279	883,031	985,907
5		Property (p=0.8)	87,833	180,512	231,066	260,994	212,585	320,279	372,708	399,650	576,215	660,505	692,514	704,503
6		15 year risk free zero coupon bond (p=1)	18,599	24,920	24,247	26,849	83,908	91,207	108,680	136,591	499,715	499,093	513,410	535,632
7		15 year risk free zero coupon bond (p=0.8)	17,655	17,667	10,806	5,449	79,667	62,910	45,059	33,808	484,891	387,246	302,043	252,873
8		15 year risk free bonds (p=1)	23,562	38,482	44,667	50,292	98,682	121,486	137,471	155,875	497,183	494,107	510,896	533,009
9		15 year risk free bonds (p=0.8)	22,403	27,916	21,724	17,207	94,146	89,162	71,724	58,256	482,516	389,235	312,788	261,889
10		Portfolio of 65% FTSE All Share and 35% property (p=1)	72,789	194,445	280,178	350,303	173,525	332,545	441,127	526,533	527,200	680,035	814,074	915,042
11		Portfolio of 65% FTSE All Share and 35% property (p=0.8)	70,599	167,332	212,914	242,746	168,525	287,407	338,472	368,699	514,432	593,896	632,842	650,823
12		Portfolio of 65% equity and 35% 15 year risk free zero coupon bonds (p=1)	54,024	152,765	219,372	276,271	140,867	274,879	361,452	436,021	501,157	606,125	712,351	803,092
13		Portfolio of 65% equity and 35% 15 year risk free zero coupon bonds (p=0.8)	52,249	129,684	162,398	183,367	136,320	234,577	269,957	292,576	487,396	521,651	540,126	551,607
14		Portfolio of 40% equity, 15% property, 22.5% 15 year risk free zero coupon bonds and 22.5% 15 year corporate bonds (p=1)	33,812	100,943	151,047	197,657	117,094	213,783	282,752	346,440	499,108	556,675	635,956	708,721
15		Portfolio of 40% equity, 15% property, 22.5% 15 year risk free zero coupon bonds and 22.5% 15 year corporate bonds (p=0.8)	32,294	81,505	101,615	116,925	112,425	175,077	196,626	212,426	484,890	466,689	459,238	458,850
			L=15				L=20				L=25			
16		Receiver swaptions	17.21%	9.11%	7.30%	6.32%	18.69%	10.88%	9.06%	7.66%	20.03%	12.57%	10.56%	8.66%

(iv) UK initial equity yield: 3.72%
UK initial property rental yield: 4.30%

(v) Not applicable – there are no significant territories other than the UK. 1.24% of the guaranteed benefit is in relation to Eire policies

(vi) The following table shows the outstanding guarantees analysed by outstanding term. The SLUK IB business is nearly all whole life and the term has been taken as the term to age 110.

Outstanding term (years)	SLUK IB £m	SLUK OB CWP £m	BULA Life £m	BULA Pensions £m
1-5	0.0	17.1	4.0	1.2
6-10	0.2	0.2	1.2	0.6
11-15	0.5	0.1	0.3	0.2
15+	5.2	1.3	3.0	3.0

Calibration of the asset model to market data is shown, where available, in paragraph 6 (4) (a) (ii) above.

(vii) Comprehensive tests are carried out on the output produced by the Barrie & Hibbert asset model as follows:

For UK and Overseas equities and for UK property the average (over the simulated scenarios) of the discounted present values of projected asset values (with income reinvested) have been verified to be acceptably close to unity – the martingale property.

The same test has been undertaken for 15-year zero-coupon gilts and for 4 classes of zero-coupon corporate bonds with terms of 1, 5, 10, 15, 20, 25 and 30 years. Departures from unity in the average discounted present values have not had a significant impact on the valuation result.

Zero coupon bond yields calculated from the model cash output have been verified to match yields calculated from input Government spot rates and initial spot rates output from the model at time zero within an acceptable error margin.

For UK equity options verification has been made, within acceptable limits, that the option prices calculated from the model output and converted into implied volatilities using the Black-Scholes formula reproduce the expected volatility surface.

Verification has also been made, within acceptable limits that implied volatilities calculated from the simulation model output reproduce the market volatility term structure for 20 year at the money swaptions.

(viii) The assets and liabilities have been computed using 3,000 (1,500 antithetic pairs of) simulated scenarios. This results in standard errors in the calculated yield curve of less than 1 basis point for terms 1- 30 years.

For a 10-year at the money (based on the forward price) UK equity put option at a strike of 1.0, the standard error of the estimated option price represents 1.3% of its calculated value.

Similarly, for a range of swaptions with maturities between 5 and 25 years on underlying 20 year swaps the standard errors in the calculated prices represent, typically, 2.1% of these prices.

(b) Not applicable.

(c) Not applicable.

(5) Management Actions

(a) No scenario specific management actions are assumed to take place in the stochastic model.

(6) Persistency Assumptions

The surrender and paid-up assumptions are:

Product		Average surrender / paid-up rate for the policy years			
		1-5	6-10	11-15	16-20
CWP savings endowment	Surrender	25.0%	25.0%	25.0%	25.0%
CWP target cash endowment	Surrender	3.0%	3.0%	3.0%	3.0%
CWP pension regular premium	PUP	0.0%	0.0%	0.0%	0.0%
CWP pension regular premium	Surrender	0.0%	0.0%	0.0%	0.0%
UWP individual pension regular premium	PUP	5.0%	5.0%	5.0%	5.0%
UWP individual pension regular premium	Surrender	5.0%	5.0%	5.0%	5.0%
UWP individual pension single premium	Surrender	5.0%	5.0%	5.0%	5.0%

(7) Policyholders' Actions

No such assumptions were made.

7. FINANCING COSTS

The fund has no financing costs as at the valuation date.

8. OTHER LONG-TERM INSURANCE LIABILITIES

No amounts have been included in Line 46 of Form 19. The amount shown in Line 47 of Form 19 is made up as follows:

	£m
Future shareholder transfers not deducted from asset share	3.7
Provision for future tax provision	2.7
Future shareholder transfers from planned enhancements to with-profits benefit reserve	1.0
Additional provision for tax on shareholder transfers	0.2
Future investment expenses and provisions not deducted from asset share	0.4
Future tax adjustment	(0.1)
Total	7.9

9. REALISTIC CURRENT LIABILITIES

The realistic current liabilities are taken to be the same as the regulatory current liabilities.

10. RISK CAPITAL MARGIN

(a) The risk capital margin is nil.

(i) No property assets are held in the fund hence no property stress was required. The market scenario assumes that equities fall by 20%. An equity fall was the more onerous scenario.

(ii) The nominal change in yields for fixed interest securities for the purpose of the market risk scenario is 0.41%. This is consistent with a rise or fall of 17.5% in the long term gilt yield. A rise in yields is the more onerous scenario.

(iii) The risk capital margin allows for a widening of the yields available on bonds, where the change in yields depends on the credit rating. The average change in spread for bonds subject to the test, weighted by market value, was 111 basis points for the fund. This change in yields resulted in a movement in the value of these bonds of (8.62)% for the fund.

(iv) The average change in persistency experience is a 32.5% reduction in future lapse and paid-up rates. The overall percentage change in the realistic value of liabilities from applying the persistency stress is 0.92%.

(v) The change in asset value in (iii) is materially independent of the change in liability values in (iv).

(b) (i) In the stress scenarios the following additional assumption is made: Reversionary bonus rates will be reduced to nil in stages over the next two years.

(ii) Since there is no risk capital margin, the effect of assuming reduced reversionary bonuses is zero. Working capital is reduced by £0.0m

(iii) No changes would apply to the table in paragraph 6 (5) (b) if the management actions were taken

(iv) The requirements of INSPRU 1.3.188(R) would be met if the actions described in paragraph 10 (b) (i) were integrated into the projection of assets and liabilities.

(c)

(i) The risk capital margin is covered by the assets of the long-term fund and the value of future profits on non-profit business.

(ii) The scheme for the funds merger as at 31 December 2008 includes a provision that in the event that the value of the assets of any with-profits fund falls below the regulatory minimum support will be provided to that fund by way of a loan arrangement from the Non-

Profit Fund or the Shareholders Fund to the extent that the Board determines there are assets in those funds available to make such a loan.

11. TAX

Tax on assets backing the with-profits benefits reserve for BLAGAB business is charged to those asset shares approximately and allowance is made for relief on expenses.

Tax on any future policy related liabilities for BLAGAB business is allowed for in determining those liabilities.

An approximate adjustment is made to allow for any differences between the tax calculated as described and the tax expected on a corporate basis. The adjustment is calculated within the stochastic model.

12. DERIVATIVES

There are no major positions of derivative contracts held in the Fund.

13. ANALYSIS OF WORKING CAPITAL

The movement in working capital over the twelve months to the valuation date is shown in the following table.

	£m
Opening working capital	**0.0**
Write back planned benefit enhancements to zeroise working capital	5.4
Revised opening working capital	**5.4**
Opening adjustments	(0.3)
Restated opening working capital	**5.2**
Investment return on working capital	2.5
Mismatch profits and losses	(0.4)
Assumption changes	
- Non-economic	0.0
- Economic	0.1
- Policyholder actions	0.3
Impact of new business	0.0
Other Variances	
- Non-economic	0.0
- New Provisions	1.7
- Unexplained	0.3
Closing working capital before zeroisation	**9.6**
Planned benefit enhancements to distribute estate	(8.9)
Impact of planned enhancement on future policy related liabilities	(0.7)
Closing working capital	**0.0**

The following table shows a breakdown of the liabilities shown on line 47 Form 19 at the start and end of the year:

£m	Current valuation	Previous valuation
Future shareholder transfers not deducted from asset share	3.7	2.8
Provision for future tax provision	2.7	3.5
Future shareholder transfers from planned enhancements to with-profits benefit reserve	1.0	0.5
Additional provision for tax on shareholder transfers	0.2	0.2
Future investment expenses and provisions not deducted from asset share	0.4	1.1
Future tax adjustment	(0.1)	(0.1)
Provision for IB polices aged 100 years and over	0.0	2.6
Total	7.9	10.7

The following table shows a breakdown of the liabilities shown on line 51 Form 19 at the start and end of the year:

£m	Current valuation	Previous valuation
Claims Oustanding	0.4	0.3
Provisions Taxation	0.0	0.0
Creditors Taxation	0.4	1.7
Creditors Other	9.6	4.1
Accruals and Deferred income	0.0	0.0
Total	10.4	6.1

14. OPTIONAL DISCLOSURE

As in previous years, a provision has been established to distribute all of the realistic estate so the published realistic estate in Form 19 is zero and the value of the liabilities is the realistic value of the assets available to the fund. To ensure consistency with the other entities within the group, the PLL with-profits funds (including this Fund) have changed their methodology to make an allowance for the subsequent impact of this provision on the cost of guarantees.

APPENDIX 9.4A

100% With-Profits Fund

2. ASSETS

(1) Economic Assumptions for Valuing Non-Profit Business

Not applicable as there is no non-profit business valued in the 100% With-Profits Fund.

(2) Amount Determined Under INSPRU 1.3.33(2)(R)

Not applicable.

(3) Valuation of Contracts Written Outside The Fund

Not applicable.

(4) Different Sets of Assumptions

Not applicable.

(5) De Minimis Limit

Not applicable.

3. WITH-PROFITS BENEFITS RESERVE LIABILITIES

(1) Calculation of With-Profits Benefits Reserve

Product Type	Method	With-profits benefits reserve	Future policy related liabilities
		£m	£m
Premium Paying Endowments (PAL)	Retrospective	41.5	9.0
Paid Up Endowment (PAL)	Retrospective	3.3	0.7
Whole Life Premium Paying (PAL)	Prospective	23.4	5.1
Whole Life - Paid Up (PAL)	Prospective	7.8	1.7
Other	Various	3.4	0.0
Total		79.4	16.5
Form 19 Line 31		79.4	
Form 19 Line 49			16.5

(2) Correspondence with Form 19

The above reconciles to lines 31 and 49 of Form 19.

(3) With-Profits Benefits Reserves below De Minimis Limit

The amount categorised as "Other" above falls within the de minimis limit.

(4) Division of Portfolio

In the table shown in section 3.(1) above, the following classes have similar bonus declaration characteristics Premium Paying Endowments (PAL):

- Paid Up Endowment (PAL)
- Whole Life Premium Paying (PAL)
- Whole Life - Paid Up (PAL)

Other business is distinct from these classes.

4. WITH-PROFITS BENEFITS RESERVE – RETROSPECTIVE METHOD

(1) Retrospective Methods

(a) All contracts have been calculated on an individual policy basis.

(b) No contracts have been valued on a grouped basis.

(c) Not applicable as no contracts have been valued on a grouped basis.

(2) Significant Changes to Valuation Method

(a) There have been no significant changes in the method of calculating the with-profits benefits reserve.

(b) Not applicable.

(3) Expense Allocation

(a) The previous expense investigation was carried out in respect of the current financial year.

(b) Expense investigations are carried out annually.

(c)

	Item	£m
(i)	Initial Expenses	Nil
(ii)	Maintenance Expenses	0.19
(iii)	Method	Average expense charge deducted
(iv)	Expenses charged other than to with-profits benefits reserve	Nil

Since the company is closed to new business (apart from contractual increments etc.), there are no material initial expenses.

Investment expenses are allowed for by deducting the fees payable to the company's investment manager for managing the assets from the investment return credited to asset shares. A rate of 0.11% p.a (net of tax) is applied to life business.

(4) Significant Charges

Historical conditional estate distributions have been credited to asset shares during 2012 by way of additional returns. The historic investment returns applied to 2008 and 2010 have been increased by 427% and 11.1% respectively.

There are currently no guarantee charges taken from asset shares for these funds.

(5) Charges for Non-Insurance Risk

Not applicable.

(6) Ratio of Claims To Reserves

Average ratio of total claims to asset shares:

Year	Ratio of claims to asset shares (ex-PAL)	Ratio of claims to asset shares (ex_SLUK)
Previous year -1	594%	100%
Previous year (reported)	603%	100%
Previous year (restated) *	120%	100%
Current year	121%	100%

* The previous year reported value has been restated to 120% to reflect historic conditional estate distributions of 427% and 11.1% of eligible asset shares declared in 2008 and 2010 respectively.

No further estate distribution declared in 2012.

(7) Allocated Return

Unsmoothed yields for the full year (gross of tax), applied to the with-profits benefits reserve:

Type of business	Investment Return
Premium Paying Endowments (PAL)	9.28%
Paid Up Endowment (PAL)	9.28%

The asset allocation for all policies was 5% property, 40% equity and 55% fixed interest.

5. WITH-PROFITS BENEFITS RESERVE – PROSPECTIVE METHOD

(1) Key Assumptions

The discount rate used is consistent with the investment return used in determining supportable bonus rates. Hence, the risk free rates are not directly relevant to the calculation of the prospective with-profits benefits reserves.

The rates are shown in the table below:

	Premium Paying	Paid Up
Discount Rate p.a.	3.00%	3.00%
Investment Return p.a.	3.00%	3.00%
Expense Assumptions		
Investment Expense p.a.	0.11%	0.11%
Per Policy Expenses p.a.	£67.00	£67.00
Expense Inflation p.a.	4.88%	4.88%
Bonus Assumptions		
Reversionary Bonuses		
On Basic Sum Assured	5.00%	5.00%
On Accrued Bonuses	8.00%	8.00%

Future terminal bonus rates vary by duration in force at time of payment. Sample terminal bonus rates are as follows:

Elapsed Term in Years	Terminal Bonus Rate
10	494%
15	572%
20	681%
25	931%
30	1188%
35	2003%
40	3921%

There are no assumed lapse rates.

(2) Different Sets of Assumptions

Not applicable.

6. COSTS OF GUARANTEES, OPTIONS AND SMOOTHING

(1) De Minimis Limit

Not applicable.

(2) Valuation Method Used To Calculate The Costs Of Guarantees

(a) Cost of Guarantees & Options

Since the transfer of ex-SLUK Life Unitised With-Profits pensions business the costs of guarantees are no longer calculated within this Fund.

Cost of Smoothing

There is no significant cost of smoothing and this has been taken to be zero. All business has been modelled assuming future payouts of 100% of asset share.

(3) Significant Changes

There are no changes in methods or assumptions since the previous valuation.

(4) Further Information On The Approach Used To Calculate The Cost Of Guarantees

Not applicable.

(5) Management Actions

We do not assume any specific management actions take place during the projection of assets and liabilities.

(6) Persistency Assumptions

Not applicable.

(7) Policyholders' Actions

No such assumptions were made.

7. FINANCING COSTS

There are no financing arrangements.

8. OTHER LONG-TERM INSURANCE LIABILITIES

The amount shown in Line 47 of Form 19 is made up as follows:

£m	Current Valuation	Previous Valuation
Potential project costs	0.7	1.3
Total	0.7	1.3

This total of these additional reserves is the value in line 47 of Form 19. Line 46 is zero.

9. REALISTIC CURRENT LIABILITIES

The realistic current liabilities are set equal to the regulatory current liabilities.

10. RISK CAPITAL MARGIN

(a) The risk capital margin is nil.

(i) The market risk scenario assumes that equities fall by 20% and real estate falls by 12.5%. The equity fall and the property fall were the more onerous scenarios.

(ii) The nominal change in yields for fixed interest securities for the purpose of the market risk scenario is 0.41%. This is consistent with a rise or fall of 17.5% in the long term gilt yield. An increase in yields is the more onerous scenario.

(iii) The average change in spread is 1.25%. Changes in market values are:

(a) (8.63)% for bonds
(b) not applicable

(c) not applicable
(d) not applicable
(e) not applicable

(iv) Not applicable.

(v) The change in asset value in (iii) is materially independent of the change in liability values in (iv).

(b) (i) In the stress scenarios the following actions are assumed:

Terminal bonus rates are changed such that the revised estate is extinguished.

Furthermore, it is assumed that the conditional estate distributions will be decreased by £67.3m, resulting in £nil risk capital under the stresses conditions.

These actions are consistent with the PPFM and investment strategy

(ii) Under the most onerous stress the risk capital margin is reduced by £1.9m by changing the terminal bonus rates.

(iii) Not applicable.

(iv) The requirements of INSPRU 1.3.188(R) would be met if the actions described in paragraph 10 (b) (i) were integrated into the projection of assets and liabilities.

(c) (i) The risk capital margin is covered by the assets of the long-term fund.

(ii) The scheme for the funds merger as at 31 December 2006 includes a provision that in the event that the value of the assets of any with-profits fund falls below the regulatory minimum, support will be provided to that fund by way of a loan arrangement from the Non Profit Fund or the Shareholders' Fund to the extent that the Board determines there are assets in those funds available to make such a loan.

11. TAX

Tax on assets backing the with-profits benefits reserve for BLAGAB business is charged to those asset shares approximately and allowance is made for relief on expenses.

Tax on any future policy related liabilities for BLAGAB business is allowed for in determining those liabilities.

12. DERIVATIVES

The derivative positions of derivative contracts held in the Fund are summarised in the table below.

Future Contract	Position	Nominal Value	Net Market Value
		£m	£m
Currencies	Short	0.9	0.0
	Long	0.9	
Equity index	Short	0.0	0.0
	Long	0.8	
Fixed-interest securities	Short	0.0	0.0
	Long	0.5	

13. ANALYSIS OF WORKING CAPITAL

The movement in working capital over the twelve months to the valuation date is shown in the following table.

	£m
Opening working capital	**0.0**
Write back planned benefit enhancements to zeroise working capital	83.5
Revised opening working capital	**83.5**
Opening adjustments	0.3
Restated opening working capital	**83.7**
Investment return on surplus	0.3
Mismatch profits and losses	0.6
Assumption changes	
- Non-economic	0.0
- Economic	0.0
- Policyholder actions	0.0
Impact of new business	0.0
Other Variances	
- Conditional Estate Distribution	(67.3)
- Claims Payment Above Asset Share	(2.5)
- Change in provisions	0.5
- Other traced	2.6
- Unexplained	(2.1)
Closing working capital before zeroisation	**15.8**
Planned benefit enhancements to distribute estate	(15.8)
Impact of planned enhancement on future policy related liabilities	0.0
Closing working capital	**0.0**

The following table shows a breakdown of the liabilities shown on line 47 of Form 19 at the start and end of the year:

£m	Current Valuation	Previous Valuation
Potential project costs	0.7	1.3
Total	0.7	1.3

The following table shows a breakdown of the liabilities shown on line 51 of Form 19 at the start and end of the year:

£m	Current Valuation	Previous Valuation
Claims outstanding	1.9	3.8
Deferred tax provision	0.0	0.0
Provisions - Other risk and charges	0.0	0.0
Creditors - Direct insurance business	0.0	0.0
Creditors taxation	0.7	0.1
Creditors other	11.8	18.3
Accruals and Deferred Income	0.1	
Total	14.5	22.4
Line 51 from Form 19	14.5	22.4

14. OPTIONAL DISCLOSURE

With-profits benefit reserves disclosed in the tables in sections 3(1), 4(6) and 13 now reflect the conditional estate distributions of 427% and 11.1% of eligible asset shares declared in 2008 and 2010 respectively. In previous valuations, these amounts were shown within the working capital of the fund. The presentation has been revised for consistency with the other With-Profits Funds.

As in previous years, a provision has been established to distribute all of the realistic estate so the published realistic estate in Form 19 is zero and the value of the liabilities is the realistic value of the assets available to the fund. To ensure consistency with the other entities within the group, the PLL with-profits funds (including this Fund) have changed their methodology to make an allowance for the subsequent impact of this provision on the cost of guarantees.

APPENDIX 9.4A

Alba With-Profits Fund

2. ASSETS

(1) Economic Assumptions For Valuing Non-Profit Business

The economic assumptions used to calculate the value of future profits on non-profit business are as follows:

Economic Assumption	Current Valuation	Previous Valuation
Fixed Interest Investment return	2.42%	2.58%
Risk discount rate	2.42%	2.58%
RPI Inflation	2.88%	2.99%
Expense inflation	3.88%	3.99%

Allowance has been made under INSPRU 1.3.39G for the illiquid nature of a proportion of the assets (namely the corporate bonds) backing the immediate non-profit annuities within the Fund. A margin of 10% has been added to cover the risk of unexpected mismatch between the assets and liabilities.

A liquidity premium has been calculated by taking the difference between the present value of the cash flows arising from these bonds on two yields. The first is a yield equal to the equivalent risk free rate for the bond, increased by an allowance for the risk of default; the second is the gross redemption yield of the bond. The adjustment for the risk of default varies on a bond by bond basis.

(2) Amount Determined Under INSPRU 1.3.33(2)(R)

Not applicable.

(3) Valuation Of Contracts Written Outside The Fund

Not applicable.

(4) Different Sets Of Assumptions

Not applicable.

(5) De Minimis Limit

Not applicable – the assumptions in (1) relate to all non-profit business within the With-Profits Fund.

3. WITH-PROFITS BENEFITS RESERVE LIABILITIES

(1) Calculation Of With-Profits Benefits Reserve

Product Type	Method	With-profits benefits reserve	Future policy related liabilities
		£m	£m
Unitised With-Profits 0% guarantee	On an individual policy basis the face value of units has been multiplied by a factor representing the ratio of units to asset shares calculated retrospectively for representative policies of similar duration and premium paying type (i.e. single or recurring).	48.5	0.5
Unitised With-Profits 4% guarantee		16.9	0.2
Deposit Administration		95.9	21.3
Unitised Capital Guarantee Fund		21.2	0.2
With Profits Performance Fund		10.4	0.0
Capsil Series H		1.1	0.3
Paid up policies without guaranteed annuity options for which premium history is insufficient to calculate retrospective asset shares.	The present value of future benefits less expenses. The mathematical reserve was calculated using the published statutory basis, with the exception of the valuation interest rates which are as set out in paragraph 5 (1) below.	58.7	1.6
As above but with guaranteed annuity options.		5.0	1.5
Other policies without guaranteed annuity options	Individual asset shares calculated using actual premiums received, fund	247.7	98.5
Other policies with guaranteed annuity options.		102.6	77.4
Adjustments		2.3	202.4
Total		610.2	403.8
Form 19 Line 31		610.2	
Form 19 Line 49			403.8

In the table above, the split of the future policy related liabilities into the same detail as the with-profits benefits reserve is approximated. This is partly because the assessment of prospective items such as the costs of guarantees and smoothing rely on grouped data, and partly because certain realistic future liabilities are not calculated at product level.

(2) Correspondence With Form 19

The above totals reconcile to lines 31 and 49 of Form 19.

The adjustment consists of a £55.1m provision to repay part of the contingent loan (see paragraph 7), £146.4m provision for future planned enhancements to With-profits benefits reserves, and in respect of BL pre 1990 business; £2.3m adjustment for With-profits benefits reserves, £0.6m provisions and £0.2m for future shareholder transfers.

(3) With-Profits Benefits Reserves Below De Minimis Limit

Not applicable as all products have been disclosed.

(4) Types Of Products

Alba With-profit Fund has both policies with minimum Annuity Rate Option and Non-minimum Annuity Rate Option. Their costs in respect of premium paying policies are currently of a similar order and together make-up about 50% of the overall future policy related liabilities.

4. WITH-PROFITS BENEFITS RESERVE – RETROSPECTIVE METHOD

(1) Retrospective Methods

(a) All contracts have been calculated on an individual policy basis.

(b) No contracts have been valued on a grouped basis.

(c) Not applicable as no contracts have been valued on a grouped basis.

(2) Significant Changes To Valuation Method

(a) There have been no significant changes in the method of calculating the with-profits benefits reserve.

(b) No policies were valued using approaches more approximate than used for the previous valuation.

(3) Expense Allocation

(a) The previous expense investigation was carried out in respect of previous financial year.

(b) Expense investigations are carried out annually.

(c) A specific investigation was carried out for this valuation.

(i) Being closed to new business, all expenses were identified as maintenance expenses.

(ii) Maintenance expenses for the with-profits business for the year to the valuation date were:

	£m
Life - individual	3.2
Pensions - individual	0.3
Pensions - corporate	4.4
Total	7.8

(iii) Expenses incurred in the year are allocated to specific classes of business, e.g. life / pensions and individual / corporate. The individual / corporate pensions split represent the business administered by Pearl Group Management Services and Capita respectively. These are then apportioned using the number of policies per category.

(iv) The following expenses were charged to non-profit business for the year to the valuation date:

	£m
Life - individual	1.9
Pensions - individual	5.8
Pensions - corporate	5.6
Total	13.3

(v) The above expense allocation includes £5.9m project and one off costs which are not charged to the with profits benefit reserve.

(4) Significant Charges

The PPFM sets out the rules for allocating charges to asset shares. This takes into account the requirement to treat policyholders fairly. In some years this will lead to overall charges to date being reduced in order to comply with the restrictions set out in the PPFM.

Overall a 4.9% charge was applied to asset shares in the valuation year. This consists of 1.7% in respect of guaranteed annuity option costs and 3.3% in respect of non-guaranteed annuity option costs.

(5) Charges For Non-Insurance Risk

Not applicable.

(6) Ratio Of Claims To Reserves

Average ratio of total claims to asset shares:

Year	Ratio of claims to asset shares
Previous year -1	114.1%
Previous year	102.3%
Current year	105.5%

(7) Allocated Return

Unsmoothed yields for the full year (gross of tax), applied to the with-profits benefits reserve:

Life policies (gross)	5.63%
Pensions policies (Low guarantee)	6.32%
Pensions policies (High guarantee)	7.02%

The asset allocation for life policies and pensions low guarantee was 26% property and 74% fixed interest. For pensions high guarantee it was 100% fixed interest.

5. WITH-PROFITS BENEFITS RESERVE – PROSPECTIVE METHOD

(1) Key Assumptions

(a) As described in paragraph 3 (1), the prospective method uses the mathematical reserves calculated using the published statutory basis, with the exception of valuation interest rates which are changed from the rates detailed in Appendix 9.4 paragraph 4 (2) to those set out below. These comply with the regulatory rules and hence differ from the risk free rates required by paragraph 6 (4) (a) (iii):

Life Assurance Fund	
With-Profits	0.86%
Non Profit	1.67%
General Annuity Fund	
With-profits Deferred Annuities	2.93%
Non profit Deferred Annuities	1.14%
Immediate Annuities	4.05%
Pension Business Fund	
New With-Profits AP Deferred Annuities	2.20%
New With-Profits SP Deferred Annuities	2.20%
Old With-Profits AP Deferred Annuities	2.95%
Old With-Profits SP Deferred Annuities	2.95%
Non Profit AP Deferred Annuities	1.16%
Non Profit SP Deferred Annuities	2.23%
Immediate Annuities	4.07%
Laserplan	2.95%
Group Pension Plan	3.00%
PHI Fund	
Non-claims	4.00%
Claims in Payment	4.05%

(b) No assumptions about investment returns or risk adjustments other than reinvestment risk were used in this prospective method.

(c) Expense inflation of 3.88% was used.

(d) No future reversionary or terminal bonuses were assumed.

(e) The following expenses were used:

Product Type	£
Individual	
Annuities	56.03
RP WP & Unitised WP Life	93.39
RP WP & Unitised WP Pensions	155.64
SP/PUP WP & Unitised WP	46.69
Corporate	
Buyouts	42.40
Group money purchase & Group personal plans	84.78
Group deferred annuity & Executive pension plan	127.17

(f) No lapses were assumed in calculating the prospective reserves except that the expense assumptions do make an implicit allowance for the effect of expected future lapses.

(2) Different Sets Of Assumptions

Not applicable.

6. COSTS OF GUARANTEES, OPTIONS AND SMOOTHING

(1) De Minimis Limit

The cost of smoothing is £0m as all benefits are based on unsmoothed asset shares.

(2) Valuation Method For Guarantees etc.

	Cost of Guarantees & Options	Extent of Grouping	No of Individual policies	No of model points
All business	Stochastic model	All business	101,709	8,205

(a) Cost of Guarantees & Options

The costs of guarantees are determined using a stochastic model, with the asset returns being generated by a proprietary model. The following items were calculated stochastically:

(i) Guaranteed annuity option reserves;
(ii) The reserves required in addition to asset share to meet guaranteed benefits.

The calculations were carried out using a risk neutral approach.

(b) (i) In the stochastic model, no projections are carried out on individual policy data.

(ii) The model uses grouped policy data. However, the values for the with-profits benefits reserve are calculated on an individual basis and added to the data file before the data is grouped.

(iii) Policies are grouped according to product type, premium status, year of maturity, year of entry, individual / corporate business and expense group (as per the management service agreement). For certain endowment assurance classes, policies are also grouped by premium size (in bands of <£500, £500-1000, >£1000).

For some product types, policies are grouped according to maturity date more frequently than yearly (e.g. quarterly for first 10 years and yearly thereafter). The year of entry grouping is carried out in 5 year bands.

Within each group, simple averages are taken. Gender is assumed to be that of the majority within any particular group.

Grouping Validations

It is impractical to attempt to validate, using the stochastic model, projections that use grouped data against projections that use individual data. Instead, comparisons are carried out using deterministic projections.

Comparison is made of the present value of key variables as well as progression of these variables over a period of up to 40 years. The comparison includes items such as asset shares, mathematical reserves, claims outgo and premium income, split by product type as necessary. Where material discrepancies arise, these may result in grouping being revisited.

(c) No significant approximation methods were used for any residual types of products or classes.

(3) Significant Changes

There have been no significant changes since the previous valuation.

(4) Further Information on Stochastic Approach

(a) (i) The stochastic model is used to value the following guarantees and options:

- No negative terminal bonus guarantees at maturity and death within conventional with-profits contracts;
- Market value reduction-free spot maturity guarantees within unitised with-profits and deposit administration contracts;
- Guaranteed annuity options on conventional with-profits contracts;
- Surrender guarantees on flexible endowments.

Of these, the guarantees and options which are strongly "in the money" at the valuation date are the guaranteed annuity options and maturity guarantees on conventional with-profits pensions policies.

An indication of the extent of these guarantees is given in (vi) below.

(ii) The asset returns in the stochastic model were generated by a proprietary model purchased from Barrie & Hibbert. The asset classes modelled are UK equities, overseas equities, UK property, UK corporate bonds and UK gilts.

Interest Rate

UK gilt returns are modelled using gilts + 10bps calibration in an Annual LIBOR Market Model. The Government Nominal Bond yield curve is a direct input into the model.

The calibration at the valuation date was as follows:

Term	Govt. + 10bp	Model	Difference (Model - Market) bp
1	0.32%	0.32%	0
2	0.43%	0.43%	0
3	0.60%	0.60%	(0)
4	0.80%	0.80%	0
5	1.01%	1.01%	0
7	1.43%	1.43%	1
10	1.99%	2.01%	2
15	2.70%	2.73%	3
20	3.18%	3.20%	2
25	3.49%	3.50%	1
30	3.66%	3.67%	1
35	3.73%	3.74%	1

The volatility within the model is calibrated to the market implied volatility for at the money swaptions (for 20 year swaps). The calibration at the valuation date is as follows:

Term	Market	Model	Difference (Model - Market) bp
1	23.90%	28.00%	410
2	22.90%	24.90%	200
3	21.60%	22.80%	120
4	20.40%	21.20%	80
5	19.40%	20.00%	60
7	17.60%	18.10%	50
10	16.00%	16.20%	20
15	14.20%	14.30%	10
20	13.40%	12.90%	(50)
25	13.50%	11.80%	(170)
30	13.40%	10.70%	(270)

Equities

Not applicable since the Alba With-Profits Fund has zero equity exposure.

Property

Excess returns over risk free on property are modelled using a separate (but correlated) lognormal model.

Alba With-Profit Fund has approximately 39% of the total property invested in direct property and 61% in indirect property. Indirect property investments are assumed to behave as equities. As such the property volatility parameter in the ESG model is calculated as a weighted average of property and equity volatilities. A best estimate of 22.27% constant volatility has therefore been used.

Corporate bond

Corporate bond returns are modelled using the extended Jarrow-Lando-Turnbull model. This describes bond prices in terms of a real-world transition matrix, which gives the probability of a transition to each credit rating over one year. Risk neutral transition probabilities are assumed to vary stochastically. The transition matrix is consistent with best estimates based on historic data of long term transition probabilities and spread volatilities and corporate bond prices. The model was fitted to a sample of predominantly investment grade sterling corporate bonds.

The following are examples of observed correlations of year 10 returns from the scenarios used (ZCB = zero coupon bond):

	Output Correlations @ Year 10							
	Cash	Property	5yr Govt ZCB	15yr Govt ZCB	5yr Corp ZCB	15yr Corp ZCB	5yr Index Linked ZCB	15yr Index Linked ZCB
Cash	1.00	(0.08)	(0.74)	(0.81)	(0.63)	(0.79)	(0.34)	(0.45)
Property		1.00	0.06	0.02	0.16	0.06	0.15	0.12
5yr Govt ZCB			1.00	0.89	0.83	0.85	0.34	0.43
15yr Govt ZCB				1.00	0.75	0.96	0.22	0.39
5yr Corp ZCB					1.00	0.86	0.31	0.39
15yr Corp ZCB						1.00	0.23	0.39
5yr Index Linked ZCB							1.00	0.90
15yr Index Linked ZCB								1.00

(iii) The table below is based on 1,000 scenarios:

		Asset type (all UK assets)	**K=0.75**				**K=1**				**K=1.5**			
	n		5	15	25	35	5	15	25	35	5	15	25	35
	r	Annualised compound equivalent of the risk free rate assumed for the period. (to tw o decimal places)	1.01%	2.73%	3.50%	3.74%	x	x	x	x	x	x	x	x
1		Risk-free zero coupon bond	951,022	667,934	423,222	276,787	x	x	x	x	x	x	x	x
2		FTSE All Share Index (p=1)	110,002	258,580	352,537	418,708	217,004	402,895	524,812	604,226	548,503	747,386	906,213	1,000,677
3		FTSE All Share Index (p=0.8)	107,410	228,521	277,466	301,836	212,000	356,259	415,400	437,749	536,294	662,662	722,036	731,459
4		Property (p=1)	75,913	178,602	270,678	335,370	198,302	332,889	448,152	520,992	570,114	720,569	849,173	933,143
5		Property (p=0.8)	73,165	148,462	197,399	223,419	192,415	281,954	334,717	354,042	557,538	625,267	654,980	652,315
6		15 year risk free zero coupon bond (p=1)	21,119	29,099	23,640	31,116	88,578	98,539	110,110	142,980	499,882	504,064	517,200	543,177
7		15 year risk free zero coupon	20,143	21,166	10,736	7,755	84,277	69,639	44,296	38,230	484,952	391,467	304,230	258,056
8		15 year risk free bonds (p=1)	24,073	36,217	34,792	50,200	97,539	118,193	125,176	159,568	497,369	501,531	513,979	545,475
9		15 year risk free bonds (p=0.8)	22,963	25,993	17,144	16,348	92,970	85,757	59,366	58,043	482,531	392,343	309,539	269,998
10		Portfolio of 65% FTSE All Share and 35% property (p=1)	79,224	199,104	279,512	339,394	181,455	337,317	443,493	514,792	533,716	683,461	821,088	907,118
11		Portfolio of 65% FTSE All Share and 35% property (p=0.8)	76,990	171,507	211,577	231,462	176,451	291,761	338,351	357,104	520,620	597,152	637,021	638,578
12		Portfolio of 65% equity and 35% 15 year risk free zero coupon	60,626	161,018	222,967	276,934	151,538	283,882	369,256	438,236	513,654	619,509	730,983	809,397
13		Portfolio of 65% equity and 35% 15 year risk free zero coupon	58,797	137,420	164,764	183,725	146,779	242,955	274,215	292,970	499,854	533,056	553,712	553,853
14		Portfolio of 40% equity, 15% property, 22.5% 15 year risk free zero coupon bonds and 22.5% 15	37,459	103,162	144,600	188,862	121,558	216,775	279,012	333,696	505,245	561,621	641,447	707,544
15		Portfolio of 40% equity, 15% property, 22.5% 15 year risk free zero coupon bonds and 22.5% 15 year corporate bonds (p=0.8)	35,922	83,155	96,988	111,681	116,700	177,144	190,408	202,385	490,994	470,623	460,640	446,899
				L=15				L=20				L=25		
16		Receiver sw aptions	17.91%	9.85%	7.23%	6.15%	19.59%	11.78%	9.00%	7.46%	21.09%	13.59%	10.51%	8.42%

Notes:

1. The above option prices were produced by the economic scenario generator used to calibrate the Alba With-Profits Fund stochastic model. As the Alba With-Profits Fund has no exposure to equities, rows 2 and 3 are not relevant. The prices in rows 10 – 15 show the impact of correlations between different asset classes – note that this is based on the defined asset allocations which differ from those of Alba With-Profits Fund which in particular has zero equity exposure.
2. For the purposes of this table, all bonds are zero coupon and property income is reinvested.

(iv) UK initial property rental yield: 4.30%

(v) The asset model is not calibrated to any risk-free rates other than those derived from UK assets. There is no calibration to risk-free rates from overseas territories.

(vi) The table below shows the outstanding durations of significant guarantees and options within material types of product and classes of with-profits contracts. The table shows the proportion of the total present value of cost of guarantees and options split by term to maturity.

Term to maturity (years)	WP endowments	WP mortgage endowments	WP pensions funding for cash (no GAO)	WP pensions funding for annuity	WP funding for cash (with GAO)
1-5	0.14%	0.56%	0.75%	23.51%	15.24%
6-10	0.14%	0.23%	1.49%	13.61%	14.93%
11-15	0.13%	0.00%	1.32%	5.01%	10.67%
16-20	0.10%	0.00%	0.76%	1.26%	5.68%
21-25	0.04%	0.00%	0.21%	0.38%	1.82%
26-30	0.02%	0.00%	0.05%	0.03%	0.36%

Calibration of the asset model to market data is shown, where available, in paragraph 6 (4) (a) (ii) above.

(vii) Comprehensive tests are carried out on the output produced by Barrie & Hibbert asset model as follows:

For UK property, the ratio of the average (over the simulated scenarios) of the discounted present values of projected asset values (with income reinvested) to the original asset value has been verified to be acceptably close to unity – the martingale property.

The same test has been undertaken for gilts and bonds with terms of 1, 3, 5, 10, 15, 20, 30 and 40 years. Departures from unity in the average discounted present values have not been significant.

Zero coupon bond yields calculated from the model cash output have been verified to match yields calculated from input Government spot rates and initial spot rates output from the model at time zero within an acceptable error margin.

Verification has also been made, within acceptable limits, that implied volatility calculated from the simulation model output reproduces the market volatility term structure for 20 year at the money swaptions.

(viii) The stochastic model is run on 1,000 investment scenarios generated by the asset model.

The scenario generation process incorporates variance reduction techniques (antithetic variables) to ensure that the scenarios selected pass the tests described in (vii) to a close tolerance.

Reasonable convergence of the model result was validated by analysing the valuation result in 50 scenario batches in order to determine the maximum sampling error.

(b) Not applicable.

(c) Not applicable.

(5) Management Actions

(a) A provision of £55.1m is set aside in the realistic balance sheet to reflect the management action of repaying the contingent loan.

(b) No exposure to equities is assumed in the future and non guaranteed reversionary bonus rates are assumed to be zero throughout.

(6) Persistency Assumptions

The surrender and paid-up assumptions are:

Product		Average surrender / paid-up rate for the policy years			
		1-5	6-10	11-15	16-20
CWP savings endowment	Surrender	3.25%	3.25%	3.25%	3.25%
CWP target cash endowment	Surrender	3.25%	3.25%	3.25%	3.25%
UWP savings endowment	Surrender	4.0%	4.0%	4.0%	4.0%
CWP pension regular premium	PUP	0.0%	0.0%	0.0%	0.0%
CWP pension regular premium	Surrender	4.0%	4.0%	4.0%	4.0%
CWP pension single premium	Surrender	0.75%	0.75%	0.75%	0.75%
UWP individual pension regular premium	PUP	0.0%	0.0%	0.0%	0.0%
UWP individual pension regular premium	Surrender	6.0%	6.0%	6.0%	6.0%
UWP individual pension single premium	Surrender	4.50%	4.50%	4.50%	4.50%

A take up rate of 75% for guaranteed annuity options is assumed. This is consistent with the terms of the agreement with the Britannic With-Profits Fund where any deviation from this assumption is met by that fund.

(7) Policyholders' Actions

No such assumptions were made.

7. FINANCING COSTS

A contingent loan has been provided by the Non Profit Fund investment reserve to Alba With-Profits Fund (the borrower). The purpose is to maintain a regulatory surplus pursuant to both INSPRU 1.1.27(R) and INSPRU 1.1.28(R). The loan is subordinate to policyholders' interests insofar as repayment will not take place if treating policyholders fairly cannot be maintained.

The face value outstanding as at the valuation date was £55.1m. Interest payable is the interest received by the borrower on the Memorandum Account. Fees are payable by the borrower.

Any amount not required to maintain a surplus for the purposes of INSPRU 1.1.27(R) and INSPRU 1.1.28(R) can be repaid.

Following the conditions of the agreement, a provision for repayment of £55.1m of the contingent loan has been included in the realistic balance sheet as this is not required to maintain realistic solvency and would therefore ultimately be repaid.

8. OTHER LONG-TERM INSURANCE LIABILITIES

Line 47 of Form 19 remains as £0.2m over the year, this is for the present value of future shareholder transfers on BL pre 1990 business.

9. REALISTIC CURRENT LIABILITIES

The realistic current liabilities of £770.3m consist of regulatory current liabilities consistent with Form 14 Line 49.

10. RISK CAPITAL MARGIN

(a) The risk capital margin amounted to nil.

(i) No equities are held in the fund hence no equity stress was required. A fall in properties of 12.5% was assumed. A property rise was the more onerous.

(ii) A yield fall of 17.5% of the annualised 15 year gilt yield of 2.32%, i.e. 0.41% was assumed for UK fixed interest stocks. For foreign stocks the yield fall was calculated as 17.5% of the yield on 10 year government bonds of the relevant country. On average, this was 0.41%. (The foreign investments were all European apart from a small holding, £3.6m, of US Treasury bonds.) The interest rate rise was the more onerous.

(iii) The risk capital margin allows for a widening of the yields available on bonds, where the change in yields depends on the credit rating. The average change in spread for bonds subject to the test, weighted by market value, was 129 basis points for the fund. This change in yields resulted in a movement in the value of these bonds by an average of (8.60)% for the fund.

(iv) The impact of the persistency risk scenario is that the realistic value of liabilities increases by £11.5m or 1.88% of basic asset shares prior to any management action being taken.

(v) These were assumed to be materially independent.

(b) The effects of management actions are as follows.

(i) The provision to repay £55.1m of the contingent loan already provided for in line 45 of Form 19 is excluded.

An assumption is made that the future projects and issues contingency reserve will be £0.8m.

(ii) No management actions are assumed under the stress scenarios.

(iii) No exposure to equities is assumed in the future and non guaranteed bonus rates are assumed to be zero throughout.

(iv) The requirements of INSPRU 1.3.188(R) would be met if the management action described in (i) had in fact taken place.

(c)

(i) The assets covering the risk capital margin are held in the Alba With-Profits Fund and the Non Profit Fund. They consist of approved and other fixed interest securities and other assets.

(ii) The scheme for the funds merger as at 31 December 2006 includes a provision that in the event that the value of the assets of any with-profits fund falls below the regulatory minimum, support will be provided to that fund by way of a loan arrangement from the Non Profit Fund or the Shareholders' Fund to the extent that the Board determines there are assets in those funds available to make such a loan.

11. TAX

(i) The investment returns used in the calculation of the with-profits benefits reserve are net of policyholder tax, where appropriate. The calculation of the net rate allows for tax on income and gains, split by asset class and using assumed rates appropriate to those assets.

Expenses attributed to the with-profits benefits reserve are reduced to reflect tax relief where appropriate, based on assumed rates.

(ii) In calculating the value of future policy related liabilities, tax is allowed for as follows.

Asset shares (or proxies to asset shares) are projected by the stochastic model used to determine the value of guarantees, and this allows for policyholder tax as described in (i).

(iii) The realistic value of the current liabilities is taken to be equal to the regulatory value. The value of any tax provisions resulting from the company's tax computation is included here.

12. DERIVATIVES

The fund has a portfolio of European-style receiver swaptions, to mitigate the effect that falls in interest rates have on the value of contracts written with a guaranteed annuity option. As at the valuation date, the fund held swaptions valued at £30.4m with an aggregate nominal value of £133.3m.

The option dates for swaptions range from the current year until 2038, with swap tenors of between 15 and 25 years. The majority of contracts are for a strike rate of interest of 5%. In recognition of an agreement with the Britannic With-Profits Fund (referred to in paragraph 6 (6)), the relevant policies were modelled assuming a 78% take-up rate for the option. Impact of the excess take-up rate above the 75% as per paragraph 6 (6) is met by Britannic With-Profits Fund.

The fund also has a relatively small holding in Fixed Interest Futures. These had a market value of £0.01m and a nominal value of £5.9m at the valuation date.

13. ANALYSIS OF WORKING CAPITAL

The movement in working capital over the twelve months to the valuation date is shown in the following table.

	£m
Opening working capital	**0.0**
Write back provision to repay contingent loan	104.3
Write back planned benefit enhancements to zeroise working capital	0.0
Revised opening working capital	**104.3**
Opening adjustments and modelling changes	7.9
Restated opening working capital	**112.2**
Investment return on working capital	0.3
Assumption changes	
- Non-economic	6.2
- Economic	1.6
- Management actions	0.0
Impact of new business	0.0
Other variances	
- Non-economic	(11.6)
- Economic	17.2
- Changes in provisions	5.5
- Contingent loan increase	20.1
- Contingent loan interest	(0.7)
- Unexplained	5.1
Closing working capital before zeroisation	**156.0**
Provision to repay contingent loan	(55.1)
Planned benefit enhancements to distribute estate	(146.4)
Impact of planned enhancement on future policy related liabilities	45.5
Closing working capital	**0.0**

The following table shows a breakdown of the liabilities shown on line 51 of Form 19 at the start and end of the year:

£m	Current Valuation	Previous Valuation
Claims Outstanding – Gross	20.6	21.2
Claims Outstanding - Reinsurers' Share	(0.1)	(0.1)
Provision for Deferred Tax	0.0	0.0
Provisions - Other risks and charges	1.2	1.9
Creditors - Direct insurance business	10.2	10.9
Creditors - Reinsurance ceded	3.8	3.7
Taxation	0.0	5.2
Other creditors	733.9	456.8
Accruals and deferred income	0.8	0.8
Total	**770.3**	**500.3**

Line 47 of Form 19 remains as £0.2m over the year, this is for the present value of future shareholder transfers on BL pre 1990 business.

14. OPTIONAL DISCLOSURE

As in previous years, a provision has been established to distribute all of the realistic estate so the published realistic estate in Form 19 is zero and the value of the liabilities is the realistic value of the assets available to the fund. To ensure consistency with the other entities within the group, the PLL with-profits funds (including this Fund) have changed their methodology to make an allowance for the subsequent impact of this provision on the cost of guarantees.

Britannic Industrial Branch Fund

2. ASSETS

(1) Economic Assumptions For Valuing Non-Profit Business

The following table shows the principal economic assumptions that have been used to determine the value of future profits arising from non-profit life business written in the fund.

Economic Assumption*	Current Valuation	Previous Valuation
Valuation interest rate p.a.	**1.88%**	**2.08%**
Experience interest rate p.a.	**2.42%**	**2.58%**
Risk discount rate p.a.	**2.42%**	**2.58%**
Expense inflation p.a.	**3.88%**	**3.99%**

*The Experience interest rate and Risk discount rate are gross of tax and are shown before deduction of investment expenses of 0.08%.

(2) Amount Determined Under INSPRU 1.3.33(2)(R)

Not applicable.

(3) Valuation Of Insurance Contracts Written Outside The Fund

Not applicable.

(4) Different Sets Of Assumptions

Not applicable.

(5) De Minimis Limit

Not applicable – the assumptions in (1) relate to all non-profit business within the fund.

3. WITH-PROFITS BENEFITS RESERVE LIABILITIES

(1) Calculation Of With-Profits Benefits Reserve

In determining the with-profits benefits reserve shown in Line 31 of Form 19, the company uses several methods. The methods can be summarised as:

(i) Asset Share Calculations

Asset shares are a roll-up, at historic achieved investment returns, of premiums, less expenses, charges and tax, adjusted for the profit or loss on providing death benefits and the profit or loss from contracts that terminated early.

(ii) Prospective Method

This method takes the basic policy reserve, including the long term insurance capital requirement, and deducts the present value of retained earnings. The present value

of retained earnings is the present value of the surplus or deficit compared to the reserve, after taking into account all future policy-related income and outgo.

(iii) Regulatory Reserves

For some small classes of business it is not practical to apply either of the methods in (i) or (ii). In these cases the realistic reserve is taken as the regulatory reserve, excluding the long term insurance capital requirement.

The table below shows the breakdown of the with-profits benefits reserve into these methods.

Product Type	Method	With-profits benefits reserve	Future policy related liabilities
		£m	£m
Endowment	Asset Share	101	48
Whole of Life	Prospective Method	126	43
Miscellaneous adjustments	Regulatory Reserve	3	
Claims Pending	Regulatory Reserve	4	
Total		234	91
Form 19 Line 31		234	
Form 19 Line 49			91

In the table above, the future policy related liabilities' split into the same detail as the with-profits benefits reserve is approximated. This is partly because the assessment of prospective items such as the costs of guarantees and smoothing relies on grouped data, and partly because certain realistic future liabilities are not calculated at product level.

(2) Correspondence With Form 19

The amounts in (1) above reconcile directly to Form 19.

(3) With-Profits Benefits Reserves Below De Minimis Limit

Not applicable.

(4) Types Of Products

The level of disclosure in the table above corresponds to material groupings of contracts offering significant variances in policyholder benefits.

4. WITH-PROFITS BENEFITS RESERVE – RETROSPECTIVE METHOD

(1) Retrospective Methods

(a) All contracts have been calculated on an individual policy basis.

(b) No contracts have been valued on a grouped basis.

(c) Not applicable as no contracts have been valued on a grouped basis.

(2) Significant Changes to Valuation Method

(a) There have been no significant changes in the method of calculating the with-profits benefits reserve.

(b) No policies were valued using approaches more approximate than used for the previous valuation.

(3) Expense Allocation

For each with-profits fund, the basis of allocating expenses to that fund during the financial year in question is described in note 4006 to Form 40.

(a) The previous expense investigation was carried out in respect of the financial year ended 31 December 2011.

(b) Expense investigations are carried out in respect of each financial year. Interim investigations are carried out during financial years for use in interim valuations.

(c) The method by which expenses are charged to the with-profits benefits reserve in respect of individual contracts depends on the type of business and the method of determining asset shares:

- Traditional with-profits business asset shares are charged expenses based on the expenses charged by the outsourcers in respect of this business. The expenses are an amount per policy which varies by product type and by premium paying status. The amount charged to asset shares is subject to an uplift to cover direct costs and an element of project costs. Additional one-off project costs are not charged to asset shares. Investment expenses are charged to asset shares by reducing the investment return allocated.

The expenses charged to asset shares are all charged as maintenance expenses as the fund is no longer actively seeking new business and, for the purposes of this expense investigation all expenses have been treated as maintenance and consequently the subsequent analysis does not identify any initial expenses.

The expenses charged to the with-profits fund in addition to those allocated to the with-profits benefits reserve comprise:

- one-off costs not charged to asset shares;
- expenses in respect of with-profits policies that were in force at the previous financial year end and no longer in force at the current financial year end;
- the expenses incurred in respect of non-profit business in the fund;
- the investment expenses reduction not charged to asset shares;
- investment expenses associated with the investments backing other with-profits reserves and the estate;
- prior year adjustments; and
- balance between aggregation of the amounts charged to assets shares and the items identified above and the aggregate amount allocated to the fund.

The expenses allocated to the with-profits benefits reserve and the residual balance charged to the fund during the financial year were:

	Item		Expenses £m
(i)	expenses charged to with-profits benefit reserve	traditional with-profits business	2.1
(ii)	other expenses charged to fund	other project costs	0.6
		exiting with-profits policies	0.3
		non-profit policies	1.0
		investment expenses	0.6
		prior year adjustments	(0.2)
		balance	1.9
(iii)	Total expenses		6.4

(4) Significant Charges

Charges for cost of guarantees and cost of capital are not charged to with-profits benefit reserves.

(5) Charges For Non-Insurance Risk

No charges were deducted from this fund for non-insurance risk.

(6) Ratio Of Claims To Reserve

The average percentage of the ratio of total claims paid on with-profits insurance contracts compared to the sum of the with-profits benefits reserve for those claims plus any past miscellaneous surplus attributed to the with-profits benefits reserve less any miscellaneous deficit attributed to the with-profits benefits reserves in respect of those claims, for the three preceding financial years is:

Year	Average total with-profits claim ratio for financial year
Previous year -1	**100%**
Previous year	**97%**
Current year	**98%**

(7) Allocated Return

The investment return before tax and expenses allocated to the with-profits benefit reserve in respect of the financial year in question is as follows:

Type of business	Investment return
All	8.18%

5. WITH-PROFITS BENEFITS RESERVE – PROSPECTIVE METHOD

(1) Key Assumptions

Prospective methods of valuation are used in determining a proxy for an asset share calculation in respect of certain contracts. These methods are used where a retrospective asset share calculation may be inappropriate or impractical.

The prospective method was described in paragraph 3 (1) (ii).

The following table sets out the main assumptions used. There are no explicit risk adjustments made to assets.

Economic Assumptions*		
Valuation interest rate p.a.		**1.88%**
Experience interest rate p.a.		**2.35%**
Discount rate p.a.**		**2.42%**
Expense Assumptions		
Investment Expense p.a. (net of Tax)		**0.10%**
Per policy Expenses p.a. (RP)	Valuation	**£18.25**
	Experience	**£18.18**
Per policy Expenses p.a. (SP/PUP)	Valuation	**£8.14**
	Experience	**£8.11**
Expense Inflation p.a.		**3.88%**

* Investment rates are shown gross of the investment expenses of 0.096% (rounded to 0.10% in table) net per annum.

** This discount rate is the 15 year gilt yield + 10 basis points which is consistent with the risk free rates in paragraph 6 (4) (a) (iii) which are derived from the proprietary economic scenario generator model as described in paragraph 6 (4) (a) (ii) using the gilt yield curve + 10 basis points.

No future reversionary bonus is assumed in the projections. Sample terminal bonus rates are:

Sample Terminal Bonus Rates - %					
	Policy Term				
Year of Maturity	**5**	**10**	**15**	**20**	**25**
2013	**6.0**	**55.5**	**47.0**	**36.0**	**66.0**
2018	**0.0**	**35.5**	**43.5**	**36.5**	**49.0**
2023	**0.0**	**0.0**	**34.0**	**35.5**	**34.0**
2028	**0.0**	**0.0**	**0.0**	**27.5**	**29.0**
2033	**0.0**	**0.0**	**0.0**	**0.0**	**22.0**

Sample lapse rates for products valued on a prospective basis, which are based on historic experience, are:

Sample Lapse Rates - %					
	Policy Term				
Product Type	**5**	**10**	**15**	**20**	**25**
Whole of Life	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**

(2) Different Sets Of Assumptions

Not applicable.

6. COSTS OF GUARANTEES, OPTIONS AND SMOOTHING

(1) De Minimis Limit

Not applicable.

(2) Valuation Methods For Guarantees etc.

	Cost of Guarantees & Options	Smoothing Cost	Extent of Grouping	No of Individual policies	No of model points
All Business	Stochastic model	Stochastic model	All business	**168,397**	**345**

(a) Cost of Guarantees & Options

The costs of guarantees are determined using a stochastic model, with the asset returns being generated by a proprietary model. The following items were calculated stochastically:

(i) The reserves required in addition to asset share to meet guaranteed benefits

The calculations were carried out using a risk neutral approach.

Cost of Smoothing

The cost of smoothing is determined using the same stochastic model.

(b) (i) In the stochastic model, no projections are carried out on individual policy data.

(ii) The model uses grouped policy data. However, the values for the with-profits benefits reserve are calculated on an individual basis and added to the data file before the data is grouped.

(iii) The stochastic model uses a grouped policy data file.

Policies are grouped according to product type, premium status, year of maturity, year of entry, age and premium term. All policies are assumed to be male lives.

There are separate groups for each year of maturity up to and including 11 years after the valuation date. Policies maturing from 12 to 14 years after the valuation date are grouped, as are policies maturing after that time.

The year of entry grouping is carried out in 5 year bands.

Within each group, weights are applied to certain key policy features before averaging. For example, the elapsed duration is weighted by the total of the sum assured and attaching bonuses. For other data, such as premium term, a simple average is taken.

Grouping Validations

It is impractical to attempt to validate, using the stochastic model, projections that use grouped data against projections that use individual data. Instead, comparisons are carried out using deterministic projections.

Comparison is made of the key variables in the data files. The comparison includes items such as number of policies, sum assured, asset shares. Where material discrepancies arise, these may result in grouping being revisited.

(3) Significant Changes

There were no significant changes to the valuation of guarantees, options and smoothing at the current valuation date.

(4) Further Information On Stochastic Approach

(a) (i) The stochastic model is used to place a value on:

- Maturity guarantees on conventional endowments;
- The impact of bonus smoothing.

Allowing for the distribution of the estate to asset shares, there is no residual cost of guarantees or smoothing in the fund.

(ii) As for the Britannic With-Profits Fund (see below).

(iii) As for the Britannic With-Profits Fund (see below).

(iv) As for the Britannic With-Profits Fund (see below).

(v) The asset model is not calibrated to any risk-free rates other than those derived from UK assets. There is no calibration to risk-free rates from overseas territories.

(vi) Allowing for the distribution of the estate to asset shares, there is no residual cost of guarantees or smoothing in the fund.

Calibration of the asset model to market data is shown, where available, in paragraph 6 (4) (a) (ii) for the Britannic With-Profits Fund.

(vii) Comprehensive tests are carried out on the output produced by Barrie & Hibbert asset model as described for the Britannic With-Profits Fund.

(viii) The stochastic model is run on 1,000 investment scenarios generated by the asset model.

The scenario generation process incorporates variance reduction techniques (antithetic variables) to ensure that the scenarios selected pass the tests described in (vii) to a close tolerance.

(b) Not applicable.

(c) Not applicable.

(5) Management Actions

(a) The stochastic model does not take into account the possibility of actions taken by management in the projected investment scenarios, other than to the extent described below.

Bonus Policy

Future reversionary bonus rates are assumed to be zero.

Maturity payouts are targeted to be 100% of asset share, subject to the company's smoothing policy. To achieve this, the model compares policies maturing in one year against similar policies maturing in the previous year and derives a scale of terminal bonus rates such that the maximum change in payout from year to year is 15%.

Investment Mix

The proportion of real assets (UK equities, overseas equities and property) is assumed to be 32% at the valuation date and to remain constant for all future periods.

(b) For the management actions assumed to determine the costs in paragraph 6.(4), the best estimates as to the future proportions of the asset backing the with-profits benefits reserve which would consist of equities and as the future annual bonus rates for significant accumulating with profits business are shown in the following tables. They are given as at the end of the financial year in question, in 5 years time and in 10 years time, and are based on the 15 year gilt yield plus 10 basis points of 2.42%, that yield increased by 17.5% of the long-term gilt yield, that is 2.85% and that yield decreased by 17.5% of the long-term gilt yield, that is 2.00% are shown in the following tables.

Yield = 2.42%	Equity Proportion of assets backing with-profits benefits reserve			Future Reversionary Bonus Rate for accumulating with-profits business		
Type of business	at end of financial	In 5 years time	in 10 years time	at end of financial	in 5 years time	in 10 years time
Traditional Business	**32%**	**32%**	**32%**	n/a	n/a	n/a

Yield = 2.85%	Equity Proportion of assets backing with-profits benefits reserve			Future Reversionary Bonus Rate for accumulating with-profits business		
Type of business	at end of financial	In 5 years time	in 10 years time	at end of financial	in 5 years time	in 10 years time
Traditional Business	**32%**	**32%**	**32%**	n/a	n/a	n/a

Yield = 2.00%	Equity Proportion of assets backing with-profits benefits reserve			Future Reversionary Bonus Rate for accumulating with-profits business		
Type of business	at end of financial	In 5 years time	in 10 years time	at end of financial	in 5 years time	in 10 years time
Traditional Business	**32%**	**32%**	**32%**	n/a	n/a	n/a

(6) Persistency Assumptions

The surrender and paid-up assumptions are:

Product		Average surrender / paid-up rate for the policy years - %			
		1-5	6-10	11-15	16-20
CWP savings endowment	Surrender	3.0	3.0	2.0	2.0

The fund has no exposure to guaranteed annuity options.

(7) Policyholders' Actions

Not applicable.

7. FINANCING COSTS

There are no financing arrangements currently in place for the fund.

8. OTHER LONG TERM INSURANCE LIABILITIES

No amounts have been included in Line 46 of Form 19. The amount shown in Line 47 of Form 19 is made up as follows:

	£m
Data	0.0
Litigation	0.2
Future Projects	0.0
VAT	0.6
Costs Falling Outside MSA	0.4
Strachan Policy Review	0.4
TCF Reserve	0.2
Solvency II	0.2
Actuarial Systems Transformation	0.0
Capita Regulatory Buyout	0.5
Asset Management Services	0.2
Additional provision for tax *	0.5
Investment Expense Rebate credited to future asset shares	0.9
Total	4.1

* Consisting of: Tax on future shareholder transfers, CGT reserve, deferred relief on acquisition expenses, and any adjustments in respect of amounts included in current liabilities.

9. REALISTIC CURRENT LIABILITIES

The realistic value of current liabilities, shown at line 51 of Form 19, is taken to be equal to the value assessed on a regulatory basis, this being £125.10m. The figure includes creditors (including outstanding claims), provisions (including taxation), accruals and deferred income.

10. RISK CAPITAL MARGIN

(a) The risk capital margin for the fund was calculated to be zero at the valuation date.

(i) The risk capital margin allows for a fall in equity values of 20.0%. This was compared to a rise in equity values of the same amount and found to be more onerous for the fund.

A fall of 12.5% was allowed for in the value of property assets, and again this was found to be more onerous than a rise in property values of the same amount. Collective investment vehicles invested in property were stressed at 20%. JPUT's which form part of collective investment vehicles were stressed at 12.5% plus an allowance for gearing.

(ii) The scenario of a rise in fixed interest yields of 17.5% of the long-term gilt yield was compared against a fall in yields of the same amount. The more onerous result was assumed and represented a rise in yields. The nominal rise and fall in the (annualised) yields was 41 basis points.

There are no significant overseas territories. Overseas stocks were subjected to the same basis point adjustment as for UK stocks.

(iii) The risk capital margin allows for a widening of the yields available on bonds, where the change in yields depends on the credit rating. The average change in spread for bonds subject to the test, weighted by market value, was 122 basis points for the fund. This change in yields resulted in a fall in the value of these bonds by an average of 8.6% for the fund.

(iv) Persistency rates were assumed to improve by 32.5%. This was allowed for in the projections by multiplying the assumed lapse, paid-up and surrender rates at each duration by 67.5%.

Applying the persistency test on top of the tests already described in (i) to (iii) results in an increase in the value of realistic liabilities of 0.102% but this is offset by a corresponding increase in planned enhancements as described below.

(v) Not applicable

(b) The working capital takes into account planned enhancements which reflect the intention to distribute to policyholders excess assets within the fund. These enhancements are assumed to be removed in the risk capital margin conditions to the extent that they would not be payable due to reduction in the excess assets.

Some policies have been granted discretionary enhancements to investment returns attributed to asset shares. These enhancements will be removed if the estate of the fund is insufficient to finance them. No removal of enhancements has been assumed for the fund in the risk capital margin conditions.

(c) (i) The risk capital margin is zero.

(ii) The scheme for the funds merger as at 31 December 2006 includes a provision that in the event that the value of the assets of any with-profits fund falls below the regulatory minimum, support will be provided to that fund by way of a loan arrangement from the Non Profit Fund or the Shareholders' Fund to the extent that the Board determines there are assets in those funds available to make such a loan.

11. TAX

(i) The investment returns used in the calculation of the with-profits benefits reserve are net of policyholder tax, where appropriate. The calculation of the net rate allows for tax on income and gains, split by asset class and using assumed rates appropriate to those assets. For unrealised gains, a reduced rate is used in order to reflect deferral of the gain.

Expenses attributed to the with-profits benefits reserve are reduced to reflect tax relief where appropriate, based on assumed rates.

Where asset share calculations are used, the value of outstanding tax relief arising on acquisition expenses is not capitalised. This asset is reflected in Line 47 of Form 19.

Additional tax arising on shareholder transfers is met from the estate and is not chargeable to asset shares.

(ii) In calculating the value of future policy related liabilities, tax is allowed for in a number of ways.

Asset shares (or proxies to asset shares) are projected by the stochastic model used to determine the value of guarantees and smoothing, and this allows for policyholder tax as described in (i).

Additional tax on shareholder transfers, which is payable from the estate, is reflected in Line 47 of Form 19 and is derived from the stochastic model results.

The accrued amount of any tax on unrealised capital gains is included in Line 47 of Form 19. This is based on the actual unrealised gains on the valuation date multiplied by a tax rate that does not allow for deferral of the gain being realised.

Outstanding tax relief on acquisition expenses is allowed for in Line 47 of Form 19 and is based on outstanding amounts from the company's tax computation, discounted at a risk-free rate.

The tax relief from any deferred expenses from the company's tax computation is assumed to be recovered after one year, and the discounted value (at a risk-free rate) is included in Line 47 of Form 19.

In Line 47 of Form 19, adjustments are made in respect of any amounts already included as current liabilities.

(iii) The realistic value of the current liabilities is taken to be equal to the regulatory value. The value of any tax provisions resulting from the company's tax computation is included here.

12. DERIVATIVES

On the valuation date, the fund held futures contracts as described in the table below. A negative number of units held indicates that a short position is held.

Growth Fund

Index	Units	Price on the valuation date (£)	Settlement Price (£)	Unit Multiple for Settlement	Settlement Date
Dow Jones Euro	-14	2,121	2,129	10	15/03/2013
FTSE 100	-20	5,848	5,851	10	15/03/2013
S&P 500	-5	4,368	4,384	10	15/03/2013

Matched Fund

Index	Units	Price on the valuation date (£)	Settlement Price (£)	Unit Multiple for Settlement	Settlement Date
Dow Jones Euro	-38	2,121	2,129	10	15/03/2013
FTSE 100	-44	5,848	5,851	10	15/03/2013
S&P 500	-23	4,368	4,384	10	15/03/2013
TOPIX	-4	6,130	5,597	10	07/03/2013
SPI 200	-3	7,371	7,324	10	21/03/2013
LIFFE Long Gilt	26	11,892	11,864	10	26/03/2013
MSCI Emerging Market	-6	3,302	3,199	10	15/03/2013
HANG SENG	-2	8,998	8,974	10	30/01/2013

Forward Currencies (Notional Amounts £000)	Long	Short
Growth Fund	453	456
Matched Fund	2,796	2,768
Total	3,249	3,224

13. ANALYSIS OF WORKING CAPITAL

The movement in working capital over the twelve months to the valuation date is shown in the following table:

	£m
Opening working capital	**0.0**
Write back planned benefit enhancements to zeroise working capital	**72.5**
Revised opening working capital	**72.5**
Opening adjustments	**(0.3)**
Restated opening working capital	**72.3**
Investment return on working capital	1.5
Mismatch profits and losses	0.2
Assumption changes	
- Non-economic	1.4
- Economic	0.4
- Policyholder actions	0.0
Impact of new business	0.0
Other variances	
- Economic variance	3.1
- Non-economic variance	2.9
- Revenue Changes	(5.9)
- Management Actions	(2.1)
- Unexplained	6.8
Closing working capital before zeroisation	**80.5**
Planned benefit enhancements to distribute estate	(86.9)
Impact of planned enhancement on future policy related liabilities	6.4
Closing working capital	**0.0**

The following table shows a breakdown of the liabilities shown on line 47 Form 19 at the start and end of the year:

£m	Current Valuation	Previous Valuation
Data	**0.0**	**0.8**
Litigation	**0.2**	**0.6**
Future Projects	**0.0**	**0.6**
VAT	**0.6**	**0.4**
Costs Falling Outside MSA	**0.4**	**0.4**
Strachan Policy Review	**0.4**	**0.4**
TCF Reserve	**0.2**	**0.2**
Solvency II	**0.2**	**0.6**
Actuarial Systems Transformation	**0.0**	**0.1**
Capita Regulatory Buyout	**0.5**	**0.6**
Asset Management Services	**0.2**	**0.4**
Additional provision for tax *	**0.5**	**1.0**
Investment Expense Rebate credited to future asset shares	**0.9**	**2.0**
Total	**4.1**	**8.2**

* Consisting of: Tax on future shareholder transfers, CGT reserve, deferred relief on acquisition expenses, and any adjustments in respect of amounts included in current liabilities.

The following table shows a breakdown of the liabilities shown on line 51 Form 19 at the start and end of the year:

£m	Current Valuation	Previous Valuation
Regulatory current liabilities	125.1	96.6
Total	125.1	96.6

14. OPTIONAL DISCLOSURE

As in previous years, a provision has been established to distribute all of the realistic estate so the published realistic estate in Form 19 is zero and the value of the liabilities is the realistic value of the assets available to the fund. To ensure consistency with the other entities within the group, the PLL with-profits funds (including this Fund) have changed their methodology to make an allowance for the subsequent impact of this provision on the cost of guarantees.

APPENDIX 9.4A

Britannic With-Profits Fund

2. ASSETS

(1) Economic Assumptions For Valuing Non-Profit Business

The following table shows the principal economic assumptions that have been used to determine the value of future profits arising from non-profit business written in the fund.

Economic Assumption*		Current Valuation	Previous Valuation
		Base	Base
Valuation interest rate p.a.	Pensions		
	Pre vesting	2.12%	2.30%
	Post vesting	2.12%	2.30%
	Life	2.18%	2.42%
Experience interest rate p.a.	Pensions	2.42%	2.58%
	Life	2.42%	2.58%
Risk discount rate p.a.		2.42%	2.58%
Expense inflation p.a.		3.88%	3.99%

* The experience interest rates and risk discount rates are shown gross of tax and before deduction of investment expenses of 0.08% gross per annum.

(2) Amount Determined Under INSPRU 1.3.33(2)(R)

Not applicable.

(3) Valuation Of Insurance Contracts Written Outside The Fund

Not applicable.

(4) Different Sets Of Assumptions

Not applicable.

(5) De Minimis Limit

Not applicable – the assumptions in (1) relate to all non-profit business within the With-Profits Fund.

3. WITH-PROFITS BENEFITS RESERVE LIABILITIES

(1) Calculation Of With-Profits Benefits Reserve

In determining the with-profits benefits reserve shown in Line 31 of Form 19, the fund uses several methods. The methods can be summarised as:

(i) Asset Share Calculations

Asset shares are a roll up, at historic achieved investment returns, of premiums, less expenses, charges and tax, adjusted for the profit or loss on providing death benefits and the profit or loss from contracts that terminated early.

For the former Century business, the with-profits benefits reserve is based on the amount transferred from the former Century Life With Profit Fund as at 31 December 2006 in respect of this business (excluding the value of future profits and loss transfers). The amount transferred was determined using a bonus reserve valuation approach with future bonuses set so as to equal the amount available for transfer. This amount transferred became the opening asset share as at 31 December 2006 in the Britannic With-Profits Fund in respect of this business. This opening asset share has been rolled up with the actual historic experience as described above.

(ii) Prospective Method

This method takes the basic policy reserve, including the long term insurance capital requirement, and deducts the present value of retained earnings. The present value of retained earnings is the present value of the surplus or deficit compared to the reserve, after taking into account all future policy-related income and outgo.

(iii) Shadow Funds

For most unitised with-profits contracts the with-profits benefits reserve is taken as the shadow fund available from the company's mainframe systems. The shadow fund is the result of accumulating premiums less policy charges at the earned investment rate.

(iv) Regulatory Reserves

For some small classes of business it is not practical to apply any of the methods in (i) to (iii). In these cases the realistic reserve is taken as the regulatory reserve, excluding the long term insurance capital requirement (and, in the case of the Insurance ISA, the sterling reserves).

The table below shows the breakdown of the with-profits benefits reserve into these methods.

Class	Product Type	Method	With-profits benefits reserve	Future policy related liabilities
			£m	£m
Conventional	Premium-Paying Regular Premium Endowments	Asset Share	291	32
	Channel Islands Regular Premium Pensions (Premium Paying)	Asset Share	6	1
	Regular Premium, Premium Paying Pensions	Asset Share	36	46
	Whole of Life	Asset Share	13	1
	Whole of Life	Prospective Method	15	1
	Other Endowments	Prospective Method	1	0
	Other Channel Islands Pensions	Prospective Method	2	0
	Other Pensions	Prospective Method	4	5
	Miscellaneous pensions & With-profits annuity	Regulatory Reserve	14	0
	Provision	Regulatory Reserve	0	43
Unitised With-Profits	Insurance ISA	Regulatory Reserve	11	1
	Other UWP products	Shadow Funds	3,330	355
Additional				
Total			3,724	485
Form 19 Line 31			3,724	
Form 19 Line 49				485

In the table above, the split of the future policy related liabilities into the same detail as the with-profits benefits reserve is approximated. This is partly because the assessment of prospective items such as the costs of guarantees and smoothing rely on grouped data, and partly because certain realistic future liabilities are not calculated at product level.

(2) Correspondence With Form 19

The amounts in (1) above reconcile directly to Form 19.

(3) With-Profits Benefits Reserves Below De Minimis Limit

Not applicable as all products have been disclosed.

(4) Types Of Products

The level of disclosure in the table above corresponds to material groupings of contracts offering significant variances in policyholder benefits. For example, unitised with-profits business is separated from conventional with-profits business.

4. WITH-PROFITS BENEFITS RESERVE – RETROSPECTIVE METHOD

(1) Retrospective Methods

(a) All contracts have been calculated on an individual policy basis.

(b) No contracts have been valued on a grouped basis.

(c) Not applicable as no contracts have been valued on a grouped basis.

(2) Significant Changes to Valuation Method

(a) There have been no significant changes in the method of calculating the with-profits benefits reserve.

(b) No policies were valued using approaches more approximate than used for the previous valuation.

(3) Expense Allocation

For each with-profits fund, the basis of allocating expenses to that fund during the financial year in question is described in note 4006 to Form 40.

(a) The previous expense investigation was carried out in respect of the previous financial year.

(b) Expense investigations are carried out in respect of each financial year. Interim investigations are carried out during financial years for use in interim valuations.

(c) The method by which expenses are charged to the with-profits benefits reserve in respect of individual contracts depends on the type of business and the method of determining asset shares:

- Traditional with-profits business asset shares are charged expenses based on the expenses charged by the outsourcers in respect of this business. The expenses are an amount per policy which varies by product type and by premium paying status. The amount charged to asset shares is subject to an uplift to cover direct costs and an element of project costs. Additional one-off project costs are not charged to asset shares. Investment expenses are charged to asset shares by reducing the investment return allocated.
- Unitised with-profits business asset shares are charged expenses using product charges, rather than actual expenses. The product charges cover acquisition, maintenance and investment expenses.
- Smoothed return business, that is with-profits annuity business, overseas with-profits bond business and with-profits bond business, asset shares are charged expenses using product charges, rather than actual expenses. The product charges cover acquisition, maintenance and investment expenses.

The expenses charged to asset shares are all charged as maintenance expenses as the fund is no longer actively seeking new business and, for the purposes of this expense investigation, all expenses have been treated as maintenance. Consequently the subsequent analysis does not identify any initial expenses.

The expenses charged to the With-Profits Fund in addition to those allocated to the with-profits benefits reserve comprise:

- One-off costs not charged to asset shares;
- The difference between the expenses charged to the fund in respect of unitised with-profits business and smoothed business and the product charges charged to the associated asset shares;
- Expenses in respect of with-profits contracts that were in force at the previous financial year-end and are no longer in force at the current financial year-end;
- The expenses incurred in respect of non-profit business in the fund;
- The investment expenses reduction not charged to asset shares;
- Investment expenses associated with the investments backing other with-profits reserves and the estate;
- Prior year adjustments; and
- Balance between aggregation of the amounts charged to asset shares and the items identified above and the aggregate amount allocated to the fund.

The expenses allocated to the with-profits benefits reserve and the residual balance charged to the fund during the financial year were:

	Item		£m
(i)	Expenses charged to with profits benefits reserve	Traditional WP business	2.1
		Unitised WP business	24.0
		Smoothed return business	0.4
(ii)	Other expenses charged to fund	Other project costs	5.6
		Excess product charges	(11.8)
		Exiting with-profits contracts	0.6
		Non profit contracts	1.0
		Investment expenses	6.8
		Wythall Green Costs	1.0
		Prior year adjustments	(0.1)
		Balance	2.9
(iii)	**Total expenses**		**32.5**

(4) Significant Charges

Charges for cost of guarantees and cost of capital are not charged to conventional business or unitised with-profits business with-profits benefits reserves. Charges for cost of guarantees and cost of capital are included in the product charges for smoothed return business and hence are charged to the with-profits benefits reserves. The cost of capital funds the shareholder profit and loss transfer and associated tax in respect of this business. The amounts charged to the with-profits benefits reserves are:

Policies previously written in	During financial year		Preceding financial year	
	cost of guarantees	cost of capital	cost of guarantees	cost of capital
	£m	£m	£m	£m
BA	0.1	0.1	0.1	0.2

(5) Charges For Non-Insurance Risk

No charges were deducted from the fund for non-insurance risk.

(6) Ratio Of Claims To Reserves

The average percentage of the ratio of total claims paid on with-profits insurance contracts compared to the sum of the with-profits benefits reserve for those claims plus any past miscellaneous surplus attributed to the with-profits benefits reserve less any miscellaneous deficit attributed to the with-profits benefits reserves in respect of those claims, for the three preceding financial years is::

Year	Average total with-profits claim ratio for financial year
Previous year -1	100.0%
Previous year	99.0%
Current year	101.0%

(7) Allocated Return

The investment return before tax and expenses allocated to the with-profits benefits reserve in respect of the financial year in question is as follows:

Type of business	Investment Return
Policies previously written in BA other than Euro denominated business	9.41%
Policies previously written in BA - Euro denominated business (return in sterling terms)	9.78%
Policies previously written in Century	6.75%

The assets backing the former Britannic Assurance sterling denominated business, the former Britannic Assurance euro denominated business and former Century Life business are different and hence the investment returns in the above table are correspondingly different.

5. WITH-PROFITS BENEFITS RESERVE – PROSPECTIVE METHOD

(1) Key Assumptions

Prospective methods of valuation are used in determining a proxy for an asset share calculation in respect of certain contracts. These methods are used where a retrospective asset share calculation may be inappropriate or impractical.

The prospective method was described in paragraph 3 (1) (ii).

The following table sets out the main assumptions used. There are no explicit risk adjustments made to assets.

Policies previously written in BA		
Economic Assumptions*		
Valuation interest rate p.a.	Pensions	
	pre vesting	2.66%
	post vesting	2.12%
	Life	2.13%
Experience interest rate p.a.	Pensions	2.42%
	Life	2.42%
Discount rate p.a.**		2.42%
Expense Assumptions		
Investment Expense p.a.		0.15%
Per policy Expenses p.a.	Valuation	£49.09
	Experience	£48.73
Expense Inflation p.a.		3.88%

* The experience interest rates and risk discount rates are shown gross of tax and before deduction of investment expenses. The investment expenses are gross of tax.

** This discount rate is the 15 year gilt yield + 10 basis points which is consistent with the risk free rates in paragraph 6 (4) (a) (iii) which are derived from the proprietary economic scenario generator model as described in paragraph 6 (4) (a) (ii) using the gilt yield curve + 10 basis points.

No future reversionary bonus is assumed in the projections. Sample terminal bonus rates are:

Policies previously written in BA					
Sample Terminal Bonus Rates * - %					
	Policy Term				
Year of Maturity	**5**	**10**	**15**	**20**	**25**
2013	7.5	50.5	33.0	26.0	50.5
2018	0.0	45.0	43.5	39.0	29.5
2023	0.0	0.0	43.5	42.0	60.5
2028	0.0	0.0	0.0	42.0	56.5
2033	0.0	0.0	0.0	0.0	56.5

* Other than deferred annuities, for which the projected rates are zero.

For deferred annuity products valued on a prospective basis, lapses are not modelled. Sample lapse rates for other products valued on a prospective basis, which are based on historic experience, are:

Policies previously written in BA					
Sample Lapse Rates - %					
	Policy Term				
Year of Maturity	**5**	**10**	**15**	**20**	**25**
Whole of Life	1.0	1.0	1.0	1.0	1.0
Endowment	4.0	4.0	2.8	2.8	2.8

No lapses were assumed in calculating the prospective reserves except that the expense assumptions do make an implicit allowance for the effect of expected future lapses.

(2) Different Sets Of Assumptions

Not applicable.

6. COSTS OF GUARANTEES, OPTIONS AND SMOOTHING

(1) De Minimis Limit

Not applicable.

(2) Valuation Method For Guarantees etc.

	Cost of Guarantees & Options	Smoothing Cost	Extent of Grouping	No of Individual policies	No of model points
All Business	Stochastic model	Stochastic model	Ex-BA conventional	32,813	509
			Ex-BA unitised	390,905	1039
			Ex-Century conventional	2,478	215

(a) Cost of Guarantees & Options

The costs of guarantees are determined using a stochastic model, with the asset returns being generated by a proprietary model. The following items were calculated stochastically:

(i) Guaranteed annuity option reserves;
(ii) The reserves required in addition to asset share to meet guaranteed benefits.

The calculations were carried out using a risk neutral approach.

Cost of Smoothing
The cost of smoothing is determined using the same stochastic model.

(b) (i) In the stochastic model, no projections are carried out on individual policy data.

(ii) The model uses grouped policy data. However, the values for the with-profits benefits reserve are calculated on an individual basis and added to the data file before the data is grouped.

(iii) The stochastic model uses three grouped policy data files: one for formerly Britannic conventional with-profits contracts, another for formerly Century conventional with-profits contracts and a third for unitised with-profits contracts.

Former Britannic Conventional Business Grouping

Policies are grouped chiefly according to product type, premium status, premium mode, year of maturity, year of entry, premium term, age and joint life status. For single life policies, all are assumed to be male lives.

Years of maturity are grouped into one or two year bands up to and including 14 years after the valuation date. Policies maturing from 15 to 20 years after the valuation date are grouped, as are policies maturing after that time.

For the 5 years preceding the valuation date, the year of entry is not grouped. Before that, years of entry are banded into 2-3 year intervals up to 22 years

preceding the valuation date. Policies that were taken out from 23 to 37 years before the valuation date are grouped, as are any taken out earlier than that.

Within each group, weights are applied to certain key policy features before averaging. For example, the elapsed duration is weighted by the sum assured, as is the premium term. For other data, such as sums assured and premiums, a simple average is taken.

Former Century Business Grouping

Policies are grouped chiefly according to product type, premium status, year of maturity, policy term, entry age and joint life status. For single life policies, all are assumed to be male lives.

Years of maturity are grouped into one year bands up to and including 20 years after the valuation date. Policies maturing after 20 years after the valuation date are grouped together.

Policy terms are grouped into 5 year bands around terms of 10, 15 and 20 years. Policies of longer terms are grouped together.

Entry ages are grouped depending on whether greater than or less than age 40.

Within each group, weights are applied to certain key policy features before averaging. For example, the elapsed duration is weighted by the sum assured, as is the premium term. For other data, such as sums assured and premiums, a simple average is taken.

Groups which contain very small subsets of the business are grouped together.

Unitised With-Profits Grouping

Policies are grouped chiefly according to product type, series number (this being relevant for bonds that have different dates at which benefits can be taken without reduction), premium status, premium mode, year of maturity (where relevant), policy size (by units) and the ratio of the shadow fund to the value of policy units.

For policies other than whole of life bonds, the maturity year is taken as the earliest year in which benefits can be taken without reduction. The grouping by maturity year is carried out in one year bands, excluding policies due to mature in the next year.

For the ratio of the shadow fund to the value policy units, banding is normally carried out in 5% intervals. However, individual bands may be sub-divided where it is felt that there would otherwise be a bunching of policies.

Within each group, simple averages are taken to determine a representative policy.

Grouping Validations

It is impractical to attempt to validate, using the stochastic model, projections that use grouped data against projections that use individual data. Instead, comparisons are carried out using deterministic projections.

Comparison is made of the key variables in the data files. The comparison includes items such as number of policies, sum assured, asset shares. Where material discrepancies arise, these may result in grouping being revisited

(c) No significant approximation methods, other than those mentioned above, were used for any residual types of products or classes.

(3) Significant Changes

There have been no significant changes since the previous valuation.

(4) Further Information On Stochastic Approach

(a) (i) The stochastic model is used to place a value on:

- Maturity guarantees on conventional endowments;
- Guarantees on vesting of deferred annuity contracts;
- Guarantees on maturity or retirement for unitised with-profits contracts;
- Nil-penalty guarantees on the surrender of with-profits bonds at certain durations;
- The impact of bonus smoothing.

As at 31 December, for a significant proportion of the with-profits business maturity payouts (including retirements) exceed asset shares. It is intended to reduce this overpayment in line with the company's smoothing policy subject to the level of guarantees. The impact of bonus smoothing is shown in Line 44 of Form 19.

An indication of the combined impact of guarantees and smoothing is provided in (vi), below.

(ii) The asset returns in the stochastic model were generated by a proprietary model purchased from Barrie & Hibbert. The asset classes modelled are UK equities, overseas equities, UK property, UK corporate bonds and UK gilts.

Interest Rate

UK gilt returns are modelled using gilts + 10bps calibration in a Monthly LIBOR Market Model. The Government Nominal Bond yield curve is a direct input into the model.

The calibration at the valuation date was as follows:

Term	Govt. + 10bp (%)	Model (%)	Difference (Model - Market) bp
1	0.32	0.32	0.02
2	0.43	0.43	0.03
3	0.60	0.60	(0.04)
4	0.80	0.80	0.10
5	1.01	1.01	0.18
6	1.22	1.22	0.30
7	1.43	1.43	0.79
8	1.63	1.64	1.19
9	1.82	1.83	1.37
10	1.99	2.01	1.50
15	2.70	2.73	2.83
20	3.18	3.20	2.02
25	3.49	3.50	1.01
30	3.66	3.67	1.19

The volatility within the model is calibrated to the market implied volatility for at the money swaptions (for 20 year swaps). The calibration at the valuation date is as follows:

Term	Market Implied Volatility (%)	Model (%)	Difference (Model - Market) bp
1	23.90	28.00	410
2	22.90	24.90	200
3	21.60	22.80	120
4	20.40	21.20	80
5	19.40	20.00	60
7	17.60	18.10	50
10	16.00	16.20	20
15	14.20	14.30	10
20	13.40	12.90	(50)
25	13.50	11.80	(170)
30	13.40	10.70	(270)

Equities and Property

Excess returns over risk free on UK equities, overseas equities and property are modelled using separate (but correlated) lognormal models. The equity model uses a volatility surface calibrated to market implied volatilities for a range of strikes and maturities. Alternative investments are treated as UK equities.

The UK equities asset model was calibrated by reference to the implied volatility of FTSE100 options for a range of strikes (from 0.8 to 1.2) and maturities of up to 10 years. All strikes are expressed as a proportion of at-the-money.

Implied volatility data at the valuation date is shown below:

Market

Term	Strike				
	0.8	0.9	1	1.1	1.2
	%	%	%	%	%
1	23.90	20.60	17.60	15.20	14.00
3	25.10	23.20	21.50	19.80	18.30
5	26.30	24.80	23.40	22.10	21.00
7	27.40	26.10	24.90	23.80	22.70
9	28.20	27.00	26.00	25.00	24.10

Model

Term	Strike				
	0.8	0.9	1	1.1	1.2
	%	%	%	%	%
1	23.30	20.80	18.40	15.60	12.30
3	25.10	23.20	21.50	19.80	18.10
5	26.60	25.20	23.90	22.70	21.50
7	26.90	25.80	24.70	23.70	22.70
9	27.40	26.40	25.40	24.50	23.70

Beyond 10 years the estimated volatility implied by the model calibration rises as follows:

Term	Strike				
	0.8	0.9	1	1.1	1.2
	%	%	%	%	%
15	28.49	27.75	27.10	26.53	25.98
20	28.07	27.62	27.21	26.83	26.49
25	29.09	28.76	28.45	28.16	27.88
30	29.45	29.11	28.83	28.59	28.38
35	29.06	28.79	28.52	28.27	28.03
40	29.83	29.66	29.47	29.33	29.16

Difference (Model – Market) %

Term	Strike				
	0.8	0.9	1	1.1	1.2
	%	%	%	%	%
1	(0.60)	0.20	0.80	0.40	(1.70)
3	0.00	0.00	0.00	0.00	(0.20)
5	0.30	0.40	0.50	0.60	0.50
9	(0.80)	(0.60)	(0.60)	(0.50)	(0.40)

There are no tests against market traded instruments for properties since there are no such instruments. A best estimate has therefore been used of 15% constant volatility.

Corporate bond

Corporate bond returns are modelled using the extended Jarrow-Lando-Turnbull model. This describes bond prices in terms of a real-world transition matrix, which gives the probability of a transition to each credit rating over one year. Risk neutral transition probabilities are assumed to vary stochastically. The transition matrix is consistent with best estimates based on historic data of long term transition probabilities and spread volatilities and corporate bond prices. The model was fitted to a sample of predominantly investment grade sterling corporate bonds.

The following are examples of observed correlations of year 10 returns from the scenarios used (ZCB = zero coupon bond):

	Output Correlations @ Year 10									
	Cash	Equities	Property	Overseas Equities	5yr Govt ZCB	15yr Govt ZCB	5yr Corp ZCB	15yr Corp ZCB	5yr Index Linked ZCB	15yr Index Linked ZCB
Cash	1.00	(0.16)	(0.11)	(0.21)	(0.74)	(0.81)	(0.63)	(0.79)	(0.34)	(0.45)
Equities		1.00	0.32	0.61	0.14	0.15	0.33	0.23	0.12	0.15
Property			1.00	0.10	0.12	0.09	0.19	0.13	0.11	0.11
Overseas equities				1.00	0.18	0.22	0.32	0.29	0.16	0.19
5yr Govt ZCB					1.00	0.89	0.83	0.85	0.34	0.43
15yr Govt ZCB						1.00	0.75	0.96	0.22	0.39
5yr Corp ZCB							1.00	0.86	0.31	0.39
15yr Corp ZCB								1.00	0.23	0.39
5yr Index Linked ZCB									1.00	0.90
15yr Index Linked ZCB										1.00

The table below is based on 1,000 scenarios:

		Asset type (all UK assets)	K=0.75				K=1				K=1.5			
	n		5	15	25	35	5	15	25	35	5	15	25	35
	r	Annualised compound equivalent of the risk free rate assumed for the period. (to two decimal places)	1.01%	2.73%	3.50%	3.74%								
1		Risk-free zero coupon bond	951,022	667,934	423,222	276,787								
2		FTSE All Share Index (p=1)	110,002	258,580	352,537	418,708	217,004	402,895	524,812	604,226	548,503	747,386	906,213	1,000,677
3		FTSE All Share Index (p=0.8)	107,410	228,521	277,466	301,836	212,000	356,259	415,400	437,749	536,294	662,662	722,036	731,459
4		Property (p=1)	58,127	166,401	260,388	339,148	176,196	316,679	430,714	525,084	554,189	690,633	824,916	934,792
5		Property (p=0.8)	55,550	137,281	190,426	225,273	170,553	267,968	321,487	357,678	541,097	597,154	633,443	655,641
6		15 year risk free zero coupon bond (p=1)	21,119	29,099	23,640	31,116	88,578	98,539	110,110	142,980	499,882	504,064	517,200	543,177
7		15 year risk free zero coupon bond (p=0.8)	20,143	21,166	10,736	7,755	84,277	69,639	44,296	38,230	484,952	391,467	304,230	258,056
8		15 year risk free bonds (p=1)	24,073	36,217	34,792	50,200	97,539	118,193	125,176	159,568	497,369	501,531	513,979	545,475
9		15 year risk free bonds (p=0.8)	22,963	25,993	17,144	16,348	92,970	85,757	59,366	58,043	482,531	392,343	309,539	269,998
10		Portfolio of 65% FTSE All Share and 35% property (p=1)	71,377	191,609	274,448	340,522	170,200	326,897	438,868	517,125	532,952	676,474	818,334	906,406
11		Portfolio of 65% FTSE All Share and 35% property (p=0.8)	69,294	164,978	207,030	232,957	165,176	282,364	333,775	358,385	519,690	589,317	634,395	640,508
12		Portfolio of 65% equity and 35% 15 year risk free zero coupon bonds (p=1)	60,626	161,018	222,967	276,934	151,538	283,882	369,256	438,236	513,654	619,509	730,983	809,397
13		Portfolio of 65% equity and 35% 15 year risk free zero coupon bonds (p=0.8)	58,797	137,420	164,764	183,725	146,779	242,955	274,215	292,970	499,854	533,056	553,712	553,853
14		Portfolio of 40% equity, 15% property, 22.5% 15 year risk free zero coupon bonds and 22.5% 15 year corporate bonds (p=1)	34,950	100,757	146,560	193,670	116,162	212,377	279,518	340,700	507,274	559,257	644,234	711,606
15		Portfolio of 40% equity, 15% property, 22.5% 15 year risk free zero coupon bonds and 22.5% 15 year corporate bonds (p=0.8)	33,525	81,201	97,953	115,524	111,441	173,424	191,179	207,489	492,881	468,161	460,784	453,670
				L=15				L=20				L=25		
16		Receiver swaptions	17.91%	9.85%	7.23%	6.15%	19.59%	11.78%	9.00%	7.46%	21.09%	13.59%	10.51%	8.42%

Notes:

(iv) In all investment scenarios the initial equity dividend yield is set to 3.72% and the initial property rental yield to 4.30% p.a.

(v) The asset model is not calibrated to any risk-free rates other than those derived from UK assets. There is no calibration to risk-free rates from overseas territories, even where Britannic has significant investments in those territories.

(vi) The table below shows the outstanding durations of significant guarantees and options within material types of product and classes of with-profits contracts. The table shows the proportion of the total present value of cost of guarantees and options split by term to maturity.

	Conventional		Unitised With_profits	
Term to maturity/claim (years)	**Endowments**	**Whole Life**	**Endowments**	**Pensions**
1-5	13.5%	1.2%	0.5%	14.3%
6-10	7.3%	0.6%	0.3%	16.7%
11-15	7.1%	0.2%	0.2%	16.1%
16-20	3.5%	0.0%	0.1%	12.4%
21-25	0.4%	0.0%	0.0%	4.8%
26-30	0.1%	0.0%	0.0%	0.5%
31-35	0.0%	0.0%	0.0%	0.0%
36-40	0.0%	0.0%	0.0%	0.0%

Calibration of the asset model to market data is shown, where available, in paragraph 6 (4) (a) (ii) above.

(vii) Comprehensive tests are carried out on the output produced by Barrie & Hibbert asset model as follows:

For UK and Overseas equities and for UK property the ratio of the average (over the simulated scenarios) of the discounted present values of projected asset values (with income reinvested) to the original asset value has been verified to be acceptably close to unity – the martingale property.

The same test has been undertaken for gilts and bonds with terms of 1, 3, 5, 10, 15, 20, 30 and 40 years. Departures from unity in the average discounted present values have not been significant.

Zero coupon bond yields calculated from the model cash output have been verified to match yields calculated from input Government spot rates and initial spot rates output from the model at time zero within an acceptable error margin.

For UK equity options verification has been made, within acceptable limits, that the option prices calculated from the model output and converted into implied volatilities using Black-Scholes formula reproduce the expected volatility surface.

Verification has also been made, within acceptable limits, that implied volatility calculated from the simulation model output reproduces the market volatility term structure for 20 year at the money swaptions.

(viii) The stochastic model is run on 1,000 investment scenarios generated by the asset model.

The scenario generation process incorporates variance reduction techniques (antithetic variables) to ensure that the scenarios selected pass the tests described in (vii) to a close tolerance.

(b) Not applicable.

(c) Not applicable.

(5) Management Actions

(a) The stochastic model does not take into account the possibility of actions taken by management in the projected investment scenarios, other than to the extent described below.

Bonus Policy – Conventional With-Profits Business

Future reversionary bonus rates are assumed to be zero except for business formerly written in Century. For business formerly written in Century, the reversionary bonuses are those declared at the valuation date and are kept constant over the projection period. The cost of guarantees on business formerly written in Century is immaterial.
Maturity payouts are targeted to be 100% of asset share, subject to the company's smoothing policy. To achieve this, the model compares policies maturing in one year against similar policies maturing in the previous year and derives a scale of terminal bonus rates such that the maximum change in payout from year to year is 15%.

Bonus Policy – Unitised With-Profits Business
The reversionary bonus rate is zero for unitised with-profits life business. For pensions business, no reversionary bonus is paid unless the ratio (in aggregate) of the shadow fund to the unit fund (including bonus units) exceeds 115%. In this case a 3% bonus is paid.
Terminal bonus rates are calculated based on a vintage unit method, by month of purchase. The bonus smoothing logic as described for conventional business is then applied to each monthly payout. Terminal bonus rates for each calendar year are taken as an average of the calculated monthly values.

Investment Mix
Appropriate allowance is made for the expectation that the exposure of the fund to real assets (UK equities, overseas equities and property) will reduce as the portfolios reach maturity. The proportion of real assets is assumed to reduce by 0.11% per month from 47.0% at the valuation date to 20% after 20 years.

(b) For the management actions assumed to determine the costs in paragraph 6.(4), the best estimates as to the future proportions of the assets backing the with-profits benefits reserve which would consist of equities and as to future

reversionary bonus rates for significant accumulating with-profits business are shown in the following tables. They are given as at the end of the financial year in question, in 5 years time and in 10 years time, and are based on the 5 year gilt yield plus 10 basis points (1.01%) and on that yield both increased (1.41%) and decreased (0.60%) by 17.5% of the long term gilt yield.

Policies previously written in BA / Century						
Yield = 1.01%	Equity Proportion of assets backing with-profits benefits reserve			Future Reversionary Bonus Rate for accumulating with-profits business		
Type of business	at end of financial year	In 5 years time	in 10 years time	at end of financial year	in 5 years time	in 10 years time
Former Britannic Assurance tradltional with-profits	47%	40%	33%	n/a	n/a	n/a
Former Century Life traditional with-profits	14%	12%	10%	n/a	n/a	n/a
Unitised with-profits life regular premium business	47%	40%	33%	0.00%	0.00%	0.00%
Unitised with-profits life single premium business	47%	40%	33%	0.00%	0.00%	0.00%
Unitised with-profits pensions business	47%	40%	33%	3.00%	3.00%	3.00%
Unitised with-profits ISA business	47%	40%	33%	0.00%	0.00%	0.00%
With-profits euro business	56%	47%	38%	n/a	n/a	n/a

Policies previously written in BA / Century						
Yield = 1.41%	Equity Proportion of assets backing			Future Reversionary Bonus Rate for		
Type of business	at end of financial year	In 5 years time	in 10 years time	at end of financial year	in 5 years time	in 10 years time
Former Britannic Assurance traditional with-profits	47%	40%	33%	n/a	n/a	n/a
Former Century Life traditional with-profits	14%	12%	10%	n/a	n/a	n/a
Unitised with-profits life regular premium business	47%	40%	33%	0.00%	0.00%	0.00%
Unitised with-profits life single premium business	47%	40%	33%	0.00%	0.00%	0.00%
Unitised with-profits pensions business	47%	40%	33%	3.00%	3.00%	3.00%
Unitised with-profits ISA business	47%	40%	33%	0.00%	0.00%	0.00%
With-profits euro business	56%	47%	38%	n/a	n/a	n/a

Policies previously written in BA / Century						
Yield = 0.60%	Equity Proportion of assets backing			Future Reversionary Bonus Rate for		
Type of business	at end of financial year	In 5 years time	in 10 years time	at end of financial year	in 5 years time	in 10 years time
Former Britannic Assurance traditional with-profits	47%	40%	33%	n/a	n/a	n/a
Former Century Life traditional with-profits	14%	12%	10%	n/a	n/a	n/a
Unitised with-profits life regular premium business	47%	40%	33%	0.00%	0.00%	0.00%
Unitised with-profits life single premium business	47%	40%	33%	0.00%	0.00%	0.00%
Unitised with-profits pensions business	47%	40%	33%	3.00%	3.00%	3.00%
Unitised with-profits ISA business	47%	40%	33%	0.00%	0.00%	0.00%
With-profits euro business	56%	47%	38%	n/a	n/a	n/a

(6) Persistency Assumptions

The surrender and paid-up assumptions are:

Product		Average surrender / paid-up rate for the policy years - %			
		1-5	6-10	11-15	16-20
CWP savings endowment	Surrender	4.0	4.0	2.8	2.8
UWP savings endowment	Surrender	5.5	5.5	5.0	5.0
UWP bond	Surrender	10.0	10.0	10.0	10.0
CWP pension regular premium	Surrender	0.0	0.0	0.0	0.0
CWP pension single premium	Surrender	0.0	0.0	0.0	0.0
UWP individual pension regular premium	PUP	5.5	5.5	5.5	5.5
UWP individual pension regular premium	Surrender	1.5	1.5	1.5	1.5
UWP individual pension single premium	Surrender	1.5	1.5	1.5	1.5

There is an exposure to guaranteed annuity options in respect of an agreement with the Alba With-Profits Fund. In summary the agreement is such that the Alba With-Profits Fund pays the Britannic With-Profits Fund 75% of the potential guaranteed annuity cost which could arise when a customer retires and the Britannic With-Profits Fund pays the actual cost. Thus the Britannic With-Profits Fund bears the cost (or takes the profits) if the take up rate is more (less) than 75%. When calculating the realistic estate, we assume that the take up rate is 78%, as indicated by recent experience. There is a further stress for RCM of the take up rate increasing to 95%.

(7) Policyholders' Actions

The model adds an extra 10% to the underlying rates shown in the table in paragraph 6 (6) above on no market value reduction dates for unitised with-profits whole life bonds when the guarantees are in the money.

7. FINANCING COSTS

There are no financing arrangements currently in place for the fund.

8. OTHER LONG-TERM INSURANCE LIABILITIES

No amounts have been included in Line 46 of Form 19. The amount shown in Line 47 of Form 19 is made up as follows:

£m	Current Valuation
Mortgage Endowment Review	0.7
Pensions Mis-Selling	13.7
Costs Falling Outside MSAs	0.9
TCF Reserves	0.4
Stakeholder Pension Expenses	0.1
Data	0.0
Litigation	2.2
VAT	9.2
Solvency II	1.4
Strachan Policy Review	0.5
Capita Regulatory Buyout	0.9
Asset Management Services	2.3
Actuarial Systems Transformation	0.5
UWP Expenses less Charges Plus Shareholder Transfers	(16.0)
Tax on Shareholder Transfers Plus Tax on Shareholders's Share of Estate	49.4
Century Shareholder Transfers	2.5
Compensation for BAM Investment Expense	2.4
Total	**71.0**

9. REALISTIC CURRENT LIABILITIES

The realistic value of current liabilities, shown at line 51 of Form 19, is taken to be equal to the value assessed on a regulatory basis, this being £1083.05m. The figure includes creditors (including outstanding claims), provisions (including taxation), accruals and deferred income.

10. RISK CAPITAL MARGIN

(a) The risk capital margin for the fund was calculated to be zero at the valuation date.

(i) The risk capital margin allows for a fall in equity values of 20.0%. This was compared to a rise in equity values of the same amount and found to be more onerous for the fund.

A fall of 12.5% was allowed for in the value of property assets, and again this was found to be more onerous than a rise in property values of the same amount. Collective investment vehicles invested in property were stressed at 20%. JPUT's which form part of collective investment vehicles were stressed at 12.5% plus an allowance for gearing.

(ii) The scenario of a rise in fixed interest yields of 17.5% of the long-term gilt yield was compared against a fall in yields of the same amount. The more onerous result was assumed and represented a rise in yields. The nominal rise and fall in the (annualised) yields was 41 basis points.

Overseas stocks were subjected to the same basis point adjustment as for UK stocks.

(iii) The risk capital margin allows for a widening of the yields available on bonds, where the change in yields depends on the credit rating. The average change in the spread for bonds subject to the test, weighted by market value, was 135 basis points for the fund. This change in yields resulted in a fall in the value of these bonds by an average of 8.95% for the fund

(iv) Persistency rates were assumed to improve by 32.5%. This was allowed for in the projections by multiplying the assumed lapse, paid-up and surrender rates at each duration by 67.5%, with the exception of surrender rates on unitised with-profits contracts at dates when market value reductions cannot be applied.

The GAO take-up rate was assumed to be 95%.

Applying the persistency test on top of the tests already described in (i) to (iii) results in an increase in the value of realistic liabilities of 0.691% but this is offset by a corresponding reduction in planned enhancements as described below. Of the 0.691% increase 0.356% is due to the increase in the GAO take-up rate.

(v) Not applicable.

(b) The working capital takes into account planned enhancements which reflect the intention to distribute to policyholders excess assets within the With-Profits Fund. These enhancements are assumed to be removed in the risk capital margin conditions to the extent that they would not be payable due to reductions in the excess assets. This action has a value of £3.16m in the fund.

Some policies have been granted discretionary enhancements to investment returns attributed to asset shares or shadow units. These enhancements will be removed if the estate of the With-Profits Fund is insufficient to finance them. No removal of enhancements has been assumed for the fund in the risk capital margin conditions.

For the fund, the effect of the above management actions would be to leave a working capital of zero in the risk capital margin conditions.

(c) (i) The risk capital margin is zero.

(ii) The scheme for the funds merger as at 31 December 2006 includes a provision that in the event that the value of the assets of any with-profits fund falls below the regulatory minimum, support will be provided to that fund by way of a loan arrangement from the Non Profit Fund or the Shareholders' Fund to the extent that the Board determines there are assets in those funds available to make such a loan.

(d) The cost of the profit margin used in the annuity pricing basis for the base position is stressed to reflect the stressed market conditions. This is then applied to the estate as in the base case.

11. TAX

(i) The investment returns used in the calculation of the with-profits benefits reserve are net of policyholder tax, where appropriate. The calculation of the net rate allows for tax on income and gains, split by asset class and using assumed rates appropriate to those assets. For unrealised gains, a reduced rate is used in order to reflect deferral of the gain.

Expenses attributed to the with-profits benefits reserve are reduced to reflect tax relief where appropriate, based on assumed rates.

Where asset share calculations are used, the value of outstanding tax relief arising on acquisition expenses is not capitalised. This asset is reflected in Line 47 of Form 19.

Additional tax arising on shareholder transfers is met from the estate and is not chargeable to asset shares.

(ii) In calculating the value of future policy related liabilities, tax is allowed for as follows.

Asset shares (or proxies to asset shares) are projected by the stochastic model used to determine the value of guarantees and smoothing, and this allows for policyholder tax as described in (i).

Additional tax on shareholder transfers, which is payable from the estate, is reflected in Line 47 of Form 19 and is derived from the stochastic model results.

The accrued amount of any unrealised capital gains is included in Line 47 of Form 19. This is based on the actual unrealised gains on the valuation date multiplied by a tax rate that does not allow for deferral of the gain being realised.

Outstanding tax relief on acquisition expenses is allowed for in Line 47 of Form 19 and is based on outstanding amounts from the company's tax computation, discounted at a risk-free rate.

The tax relief from any deferred expenses from the company's tax computation is assumed to be recovered after one year, and the discounted value (at a risk free rate) is included in Line 47 of Form 19.

In Line 47 of Form 19, adjustments are made in respect of any amounts already included as current liabilities.

(iii) The realistic value of the current liabilities is taken to be equal to the regulatory value. The value of any tax provisions resulting from the company's tax computation is included here.

12. DERIVATIVES

On the valuation date, the fund held futures contracts as described in the table below. A negative number of units indicates that a short position is held.

Growth Fund

Index	Units	Price on the valuation date	Settlement Price	Unit Multiple for Settlement	Settlement Date
Nikkei 225	(37)	3,691 GBP	3,382 GBP	10	07/03/2013
Dow Jones	(171)	2,121 GBP	2,129 GBP	10	15/03/2013
FTSE 100	(276)	5,848 GBP	5,851 GBP	10	15/03/2013
S&P 500	(77)	4,368 GBP	4,384 GBP	10	15/03/2013
TOPIX	(26)	6,130 GBP	5,597 GBP	10	07/03/2013
SPI 200	(25)	7,371 GBP	7,324 GBP	10	21/03/2013
LIFFE Long Gilt	191	11,892 GBP	11,864 GBP	10	26/03/2013
MSCI Emerging Markets	58	3,302 GBP	3,199 GBP	10	15/03/2013
Hang Seng	(21)	8,998 GBP	8,974 GBP	10	30/01/2013

Euro Fund

Index	Units	Price on the valuation date	Settlement Price	Unit Multiple for Settlement	Settlement Date
Dow Jones	(17)	2,615 EUR	2,626 EUR	10	15/03/2013

Matched Fund

Index	Units	Price on the valuation date	Settlement Price	Unit Multiple for Settlement	Settlement Date
Dow Jones	(533)	2,121 GBP	2,129 GBP	10	15/03/2013
FTSE 100	(561)	5,848 GBP	5,851 GBP	10	15/03/2013
S&P 500	(383)	4,368 GBP	4,384 GBP	10	15/03/2013
TOPIX	(48)	6,130 GBP	5,597 GBP	10	07/03/2013
SPI 200	(33)	7,371 GBP	7,324 GBP	10	21/03/2013
LIFFE Long Gilt	41	11,892 GBP	11,864 GBP	10	26/03/2013
MSCI Emerging Markets	(164)	3,302 GBP	3,199 GBP	10	15/03/2013
Hang Seng	(28)	8,998 GBP	8,974 GBP	10	30/01/2013

Forward Currencies (Notional Amounts £000)	Long	Short
Growth Fund	168,089	164,830
Matched Fund	43,513	43,097
Euro Fund	43	43
Total	211,646	207,970

13. ANALYSIS OF WORKING CAPITAL

The movement in working capital over the twelve months to the valuation date is shown in the following table.

	£m
Opening working capital	**0.0**
Write back planned benefit enhancements to zeroise working capital	**208.0**
Revised opening working capital	**208.0**
Opening adjustments and modelling changes	4.8
Restated opening working capital	**212.9**
Investment return on opening working capital	5.4
Mismatch profits and losses	(4.2)
Assumption changes	
- Non-economic	3.9
- Economic	(1.0)
- Policyholder actions	(2.8)
Impact of new business	0.0
Other variances	
- Economic Variances	4.9
- Management Actions	(28.5)
- Revenue Changes	13.3
- Changes In Provisions	17.2
- Unexplained	(0.2)
Closing working capital before zeroisation	**220.8**
Planned benefit enhancements to distribute estate	(227.5)
Impact of planned enhancement on future policy related liabilities	6.7
Closing working capital	**0.0**

The following table shows a breakdown of the liabilities shown on line 47 of Form 19 at the start and end of the year:

£m	Current Valuation	Previous Valuation
Mortgage Endowment Review	0.7	1.5
Pensions Mis-Selling	13.7	14.7
Costs Falling Outside MSAs	0.9	1.0
TCF Reserves	0.4	0.4
Stakeholder Pension Expenses	0.1	0.1
Data	0.0	5.5
Litigation	2.2	6.6
VAT	9.2	10.1
Solvency II	1.4	3.3
Strachan Policy Review	0.5	0.5
Capita Regulatory Buyout	0.9	1.2
Asset Management Services	2.3	4.5
Actuarial Systems Transformation	0.5	1.5
UWP Expenses less Charges Plus Shareholder Transfers	(16.0)	(24.6)
Tax on Shareholder Transfers Plus Tax on Shareholders's Share of Estate	49.4	49.3
Century Shareholder Transfers	2.5	3.2
Compensation for BAM Investment Expense	2.4	3.0
Total	**71.0**	**81.8**

The following table shows a breakdown of the liabilities show on line 51 Form 19 at the start and end of the year:

£m	Current	Previous
Regulatory current liabilities	1,083.1	981.8
Total	**1,083.1**	**981.8**

14. OPTIONAL DISCLOSURE

As in previous years, a provision has been established to distribute all of the realistic estate so the published realistic estate in Form 19 is zero and the value of the liabilities is the realistic value of the assets available to the fund. To ensure consistency with the other entities within the group, the PLL with-profits funds (including this Fund) have changed their methodology to make an allowance for the subsequent impact of this provision on the cost of guarantees.

APPENDIX 9.4A

PWP With-Profits Fund

2. ASSETS

(1) Economic Assumptions For Valuing Non-Profit Business

The economic assumptions used to calculate the value of future profits on non-profit products are as follows:

	Current Valuation	Previous Valuation
Gross Investment return	See below	See below
Risk discount rate	See below	See below
RPI Inflation	2.88%	2.99%
Expense inflation	3.88%	3.99%

The value of future profits on non-profit contracts was calculated by assuming risk free rates of investment return and discount rates. These were based on a zero coupon gilt yield curve plus 10 basis points as at the valuation date.

Earned rates of return were assumed to be annual forward yields derived from the curve, net of tax and investment expenses.

Discount rates used were spot yields taken from the curve, net of tax and investment expenses.

The risk free yields (gilt yield curve plus 10 basis points) were:

	Risk Free Rate	
Term (years)	Current Valuation	Previous Valuation
1	0.32%	0.32%
2	0.43%	0.42%
3	0.60%	0.64%
4	0.80%	0.89%
5	1.01%	1.14%
6	1.22%	1.38%
7	1.43%	1.61%
8	1.63%	1.82%
9	1.82%	2.02%
10	1.99%	2.20%
12	2.31%	2.51%
15	2.70%	2.85%
20	3.18%	3.21%
25	3.49%	3.39%

Allowance has been made under INSPRU 1.3.39G for the illiquid nature of a proportion of the assets (namely the corporate bonds) backing the immediate non-profit annuities within the Fund.

A liquidity premium has been calculated by taking the difference between the present value of the cash flows arising from these bonds on two yields. The first is a yield equal to the equivalent risk free rate for the bond, increased by an allowance for the risk of default; the second is the gross redemption yield of the bond. The adjustment for the risk of default varies on a bond by bond basis.

(2) Amount Determined Under INSPRU 1.3.33(2)(R)

Not applicable.

(3) Valuation Of Contracts Written Outside The Fund

Not applicable.

(4) Different Sets Of Assumptions

Not applicable.

(5) De Minimis Limit

Not applicable – the assumptions in (1) relate to all non-profit business within the With-Profits Fund.

3. WITH-PROFITS BENEFITS RESERVE LIABILITIES

(1) Calculation Of With-Profits Benefits Reserve

Product Type	Method	With-profits benefits reserve	Future policy related liabilities
		£m	£m
With-profits – Whole Life	Prospective	121	15
With-profits – Other Life	Retrospective	1,025	124
With-profits – Pensions (Regular and Single Premium)	Retrospective	237	120
With-profits – Pensions (Paid-Up)	Prospective	218	114
UWP Life (including Whole Life With-Profits Bond)	Retrospective	236	30
UWP Pensions	Retrospective	716	145
Other		21	
Total		2,575	548
Form 19 Line 31		2,575	
Form 19 Line 49			548

In the table above, the future policy related liabilities for with-profits life business and with-profits pensions business have been split in proportion to the with-profits benefits reserves.

(2) Correspondence With Form 19

The above reconciles to lines 31 and 49 of Form 19.

(3) With-Profits Benefits Reserves Below De Minimis Limit

The amount categorised as "Other" above falls within the de minimis limit.

(4) Types Of Products

The level of disclosure in the table above corresponds to material groupings of contracts offering significant variances in policyholder benefits. For example, unitised with-profits business is separated from conventional with-profits business.

4. WITH-PROFITS BENEFITS RESERVE – RETROSPECTIVE METHOD

(1) Retrospective Methods

(a) All contracts have been calculated on an individual policy basis. Whilst the asset shares have been calculated using individual data in all cases, the method used for unitised with-profits (including Whole Life With-Profits Bond) has been the application, to the individual data, of a factor (the ratio of asset share to face value of units) which has been calculated by reference to grouped / sample data. This is consistent with the way the business is operated in practice

(b) No contracts have been valued on a grouped basis.

(c) Not applicable as no contracts have been valued on a grouped basis.

(2) Significant Changes To Valuation Method

(a) There have been no significant changes in the method of calculating the with-profits benefits reserve.

(b) No policies were valued using approaches more approximate than used for the previous valuation.

(3) Expense Allocation

(a) The previous expense investigation was carried out in the fourth quarter of the current financial year.

(b) Expense investigations are carried out annually.

(c)

	Item	£m
(i)	Initial Expenses	Nil
(ii)	Maintenance Expenses	8.0
(iii)	Investment Expenses	4.2
(iv)	Method	Average expense charge deducted
(iv)	Expenses charged other than to with-profits benefits reserve	17.2

Since the company is closed to new business (apart from contractual increments etc.), there are no material acquisition expenses.

Investment expenses were deducted from the with-profits benefits reserve at the following rates.

Product Group	Current Valuation
UWP Bond 4 & Lifestyle Bond	0.109%
Conventional and UWP Pensions	0.162%

The investment expenses for life fund business should be netted down for policyholder tax at 20%.

(4) Significant Charges

The charges deducted from the with-profits benefits reserve in the year to the valuation date and the preceding year were:

	Current Valuation	Previous Valuation
	£m	£m
Charges for guarantees and smoothing	1.6	2.0
Net losses on non-profit business	(60.3)	(0.2)
Proportion of up-front outsourcing costs attributable to the period	0.0	0.0
Write-off of initial spreads on derivative contracts	0.0	0.0

(5) Charges For Non-Insurance Risk

Not applicable.

(6) Ratio Of Claims To Reserves

Terminal bonus rates are set in advance for conventional with-profits policies. The terminal bonus rate is set based on assumptions about future investment returns. Terminal bonus rates on maturing endowment life policies and pension policies vesting at the intended retirement date were set to give the following percentages of the with-profits benefits reserve plus any past miscellaneous surplus less any miscellaneous deficit attributed to the with-profits benefits reserve, for the following specimen products and terms:

	Endowment Policies	Regular Premium Personal Retirement Plan	Single Premium Personal Retirement Plan	Regular Premium Retirement Plan	Single Premium Retirement Plan
1/1/2010 to 30/06/2010					
10 year term	100	100	128	100	151
15 year term	101	100	100	100	127
20 year term	100	100	93	100	100
25 year term	101	100	100	100	113
1/7/2010 to 31/12/2010					
10 year term	100	100	129	100	140
15 year term	100	100	107	100	120
20 year term	100	102	100	111	98
25 year term	100	102	116	110	114
1/1/2011 to 30/06/2011					
10 year term	100	100	121	100	131
15 year term	100	100	114	100	129
20 year term	100	100	100	104	100
25 year term	100	100	114	104	113
1/7/2011 to 31/12/2011					
10 year term	100	100	107	100	117
15 year term	100	100	113	100	132
20 year term	100	99	100	100	88
25 year term	100	100	103	106	106
1/1/2012 to 30/06/2012					
10 year term	100	100	103	100	113
15 year term	100	100	123	100	145
20 year term	100	100	100	100	101
25 year term	100	101	101	103	103
1/7/2012 to 31/12/2012					
15 year term	100	100	119	99	143
20 year term	100	100	100	100	100
25 year term	100	100	98	98	100
30 year term	98	100	100	98	105

Payouts on surrenders are based on the with-profits benefits reserve plus any past miscellaneous surplus less any miscellaneous deficit attributed to the with-profits benefits reserve.

Payouts on surrenders of unitised with-profits bonds have been set to the following percentages of the with-profits benefits reserve plus any past miscellaneous surplus less any miscellaneous deficit attributed to the with-profits benefits reserve but not less any exit charge:

Year	Ratio of claims to asset shares
Previous year -1	100.00%
Previous year	100.00%
Current year	100.00%

(7) Allocated Return

The rate of investment return attributed to the with-profits benefits reserve of a policy depends on the asset mix for it. The asset mix depends on the outstanding term and the level of guarantees under the policy (see PPFM for more details).

The average rates of investment return (before tax) added are:

Product Type	Gross Investment Return
Conventional Life	7.8 %
Conventional Pensions	8.6 %
UWP Bonds	8.4 %
UWP Pensions	8.9 %
Profit Plus Fund	9.0 %

5. WITH-PROFITS BENEFITS RESERVE – PROSPECTIVE METHOD

A prospective method has been used for with-profits whole life business and for paid-up with-profits pensions business.

Bonus rates on with-profits whole life business and paid-up pensions contracts are the same as the bonus rates on endowments and regular premium pension contracts respectively for the same term. A bonus reserve valuation is used to determine the with-profits benefits reserve, where:

- The bonus rates are the supportable bonus rates determined from the relevant product, and
- The economic assumptions are consistent with the supportable bonus rates

The supportable bonus rates are determined using one of the sets of economic assumptions that the company uses for illustrative projections on the business. Hence, the risk free rates are not directly relevant to the calculation of the prospective with-profits benefits reserves.

The assumptions underlying this method are as follows:

<u>With-Profits Whole Life Business</u>

The discount rate is the same as the investment return assumption. These rates together with the assumed rate for expense inflation are consistent with the assumed supportable bonus rates.

Economic Assumptions	
Discount Rate p.a. (net of investment expense)	4.13%
Investment Return p.a. (net of investment expense)	4.13%
Expense Assumptions	
Investment Expense p.a.	0.13%
Per Policy Expenses p.a.	£56.39
Expense Inflation p.a.	3.77%
Bonus Assumptions	
Reversionary Bonuses	
On Basic Sum Assured	0.25%
On Accrued Bonuses	0.25%

Future terminal bonus rates vary by duration in force (at time of payment) and the actual year of payment.

Sample terminal bonus rates are as follows:

Elapsed Term in Years	2013	2018	2023	2028	2033	2038	2043	2048	2053
5	9.3%	0.0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10	18.6%	0.0%	0.0%	n/a	n/a	n/a	n/a	n/a	n/a
15	23.5%	43.0%	12.4%	0.0%	n/a	n/a	n/a	n/a	n/a
20	27.7%	40.5%	61.9%	0.0%	0.0%	n/a	n/a	n/a	n/a
25	41.8%	45.7%	58.6%	21.0%	0.0%	0.0%	n/a	n/a	n/a
30	64.6%	68.9%	70.7%	63.1%	12.9%	0.0%	0.0%	n/a	n/a
35	92.7%	98.8%	105.1%	97.4%	92.4%	0.0%	0.0%	0.0%	n/a
40	187.0%	119.3%	142.4%	121.3%	129.9%	97.9%	0.0%	0.0%	0.0%

No lapses were assumed in the calculation of the prospective reserves.

Paid-Up With-Profits Pensions Business

The discount rate is the same as the investment return assumption. These rates together with the assumed rate for expense inflation are consistent with the assumed supportable bonus rates.

Economic Assumptions	
Discount Rate p.a. (net of investment expense)	5.09%
Investment Return p.a. (net of investment expense)	5.09%
Expense Assumptions	
Investment Expense p.a.	0.16%
Per Policy Expenses p.a.	£56.39
Expense Inflation p.a.	3.88%
Bonus Assumptions	
Reversionary Bonuses	
On Basic Sum Assured	0.20%
On Accrued Bonuses	0.20%

Future terminal bonus rates vary by duration in force (at time of payment) and the actual year of payment.

Sample terminal bonus rates are as follows:

Personal Retirement Plan

Elapsed Term in Years	2013	2018	2023	2028	2033	2038	2043	2048	2053
5	19.8%	16.3%	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10	29.7%	22.8%	20.5%	n/a	n/a	n/a	n/a	n/a	n/a
15	31.3%	34.7%	26.6%	25.3%	n/a	n/a	n/a	n/a	n/a
20	30.6%	43.2%	43.6%	34.2%	33.4%	n/a	n/a	n/a	n/a
25	47.7%	46.6%	56.6%	54.5%	45.4%	44.6%	n/a	n/a	n/a
30	53.1%	70.7%	63.0%	72.5%	70.8%	58.9%	58.9%	n/a	n/a
35	78.4%	76.4%	86.9%	85.4%	97.4%	92.0%	83.6%	85.2%	n/a
40	186.3%	92.8%	94.4%	101.4%	116.0%	125.2%	121.6%	114.3%	115.9%

Retirement Plan

Elapsed Term in Years	2013	2018	2023	2028	2033	2038	2043	2048	2053
5	12.8%	6.8%	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10	18.9%	15.6%	9.5%	n/a	n/a	n/a	n/a	n/a	n/a
15	10.3%	20.4%	14.5%	9.7%	n/a	n/a	n/a	n/a	n/a
20	16.0%	20.5%	26.4%	18.6%	13.5%	n/a	n/a	n/a	n/a
25	27.0%	25.2%	30.0%	32.7%	25.5%	20.6%	n/a	n/a	n/a
30	62.5%	39.3%	44.5%	43.5%	46.2%	41.8%	37.8%	n/a	n/a
35	87.0%	80.6%	62.9%	57.2%	62.8%	70.2%	63.2%	59.2%	n/a
40	124.4%	96.3%	100.4%	60.8%	82.5%	101.6%	102.0%	92.3%	87.7%

No lapses were assumed in the calculation of the prospective reserves.

Expenses

The life company entered into a new MSA with Pearl Group Management Services (PGMS) with effect from 1 September 2010. Compared to the MSA at the previous valuation the new service fees are higher and the new MSA uplift in the fee inflation is lower. In addition the new service fees incorporate the cost of several additional services that were previously paid to an outsourced services provider on a fixed charge basis.

The new MSA specifies fee inflation to be RPIX +1.0% at 1 January each year. The MSA at the previous valuation allowed for fee inflation at RPIX +3.8%.

(2) Different Sets Of Assumptions

Not applicable.

6. COSTS OF GUARANTEES, OPTIONS AND SMOOTHING

(1) De Minimis Limit

Not applicable.

(2) Valuation Methods For Guarantees etc.

	Cost of Guarantees & Options	Smoothing Cost	Extent of Grouping	No of Individual policies	No of model points
All Business	Stochastic model	Deterministic calculation	All business	149,281	4,155

(a) Cost of Guarantees & Options

The costs of guarantees are determined using a stochastic model, with the asset returns being generated by a proprietary model. The following items were calculated stochastically:

(i) Guaranteed annuity option reserves
(ii) The reserves required in addition to asset share to meet guaranteed benefits
(iii) Future retentions at maturity where payouts of less than 100% of asset share are being targeted (this applies to the risk capital margin only)
(iv) Future profits and losses where amounts payable upon surrender are less or more than asset share
(v) The value of future guarantee charges deducted from asset share

The calculations were carried out using a risk neutral approach.

Early Retirements

For Personal Retirement Policies the stochastic model does not allow for lapses in the period from the earliest possible retirement age up to normal retirement date. Such contracts allow benefits to be taken, with a guaranteed annuity rate at any age after 50 (60 for some earlier series). The use of a nil lapse rate after age 50 is considered to make suitable allowance for this early retirement option. For Retirement Plans a guaranteed annuity rate is not available on early retirements.

The calculations allow for the assumed expenses of paying the annuity.

The assumption is made that policyholders elect to take a proportion of their benefits as cash where permitted.

Cost of Smoothing

The small amount of smoothing cost was determined deterministically as the excess of the projected actual payouts over the projected target payouts.

For pensions policies the smoothing cost allows for any guaranteed annuity rates that will be provided on the overpayment.

Actual payouts at the valuation date are compared with target payouts.

Where there is currently an overpayment relative to the target, the assumption is made that payouts will be cut at 4 monthly intervals, the first cut being 4 months after the valuation date. The assumption is that payouts can be cut by up to 5% at any one change and 15% over 12 months until the target is reached. Projected maturity payouts are obtained for this calculation.

(b) (i) In the stochastic model, no projections are carried out on individual policy data.

(ii) All of the contracts are valued on a grouped basis. However, the values for the with-profits benefits reserve are calculated on an individual basis and added to the data file before the data is grouped.

(iii) For each product type separate model points are initially created for each combination of year of commencement and year of maturity. For unitised with-profits bonds the split is by commencement month.

This grouping allows for the asset mix associated with each cohort of business. It is aligned with the way in which bonus rates are declared on the business – actual terminal bonus rate calculations are based on specimen policies split out in the same way, i.e. by product type, year of commencement and year of maturity, although at quinquennial rather than annual intervals with monthly cohorts for unitised with-profits bonds.

The initial model point files outlined above are then more heavily grouped to improve the run times in the stochastic model by amalgamating some of the smaller model points that were not making a significant contribution to the overall results. In order to test that this heavier grouping did not materially affect the results, 3,000 simulations were run at both levels of grouping and the impact on the estate at year end was 1.35%.

One class of group unitised with-profits pensions business representing approximately 6% of with-profits liabilities is modelled as if it was an equivalent amount of similar individual pensions business.

Guaranteed annuity option liabilities were calculated assuming that all lives are male. This approach is conservative given the mortality tables used in the valuation and the nature of the guarantees given.

(3) Significant Changes

There are no significant changes in method or assumptions since the previous valuation.

(4) Further Information on Stochastic Approach

(a) (i) The guarantees and options being valued using a full stochastic approach are described in paragraph 6 (2) (a) above. The following tables give an indication of the extent to which the guarantees are in or out of the money at the valuation date. The table shows the percentage of the with-profits benefits reserve (including miscellaneous profits and losses) for each product that falls within each band. The bands are defined below.

% Asset Share	Band A	Band B	Band C	Band D
Endowments & Whole Life	0.0%	0.0%	0.0%	99.9%
Direct Written Pre 1997 Bonds	0.0%	0.0%	0.0%	100.0%
Conventional Pensions	1.6%	0.3%	0.3%	97.7%
Unitised With Profit Pensions	0.0%	0.0%	0.1%	99.9%
UWPB – Strong Guarantee	0.0%	0.0%	0.0%	100.0%
– Weak Guarantee	0.0%	0.0%	0.0%	100.0%

Where:

Band A	Contracts would need to earn >10% p.a. (higher for shorter terms) on the equities & property backing their asset share to meet the maturity guarantee
Band B	Contracts need to earn between 7.5% and 10% p.a. (higher for shorter terms) on the equities & property backing their asset share to meet the maturity guarantee
Band C	Contracts need to earn between 5% and 7.5% p.a. (higher for shorter terms) on the equities & property backing their asset share to meet the maturity guarantee
Band D	Contracts need to earn <5% p.a. on the equities & property backing their asset share to meet the maturity guarantee

(ii) The asset returns in the stochastic model were generated by a proprietary model licensed from Barrie & Hibbert. The asset classes modelled are UK equities, overseas equities, UK property, UK corporate bonds and UK gilts.

Interest Rate

UK gilt returns are modelled using a gilts + 10bps calibration in an Annual LIBOR Market Model. The Government Nominal Bond yield curve is a direct input into the model.

The calibration at the valuation date was as follows:

Term	Govt. + 10bp	Model	Difference (Model - Market) bp
1	0.32%	0.32%	0
2	0.43%	0.43%	(0)
3	0.60%	0.60%	(0)
4	0.80%	0.79%	(0)
5	1.01%	1.00%	0
7	1.43%	1.42%	0
10	1.99%	1.99%	(0)
15	2.70%	2.69%	0
20	3.18%	3.18%	(0)
25	3.49%	3.49%	(0)

The volatility within the model is calibrated to the market implied volatility for at the money swaptions (for 20 year swaps). The calibration at the valuation date is as follows:

Term	Market Implied Volatility	Model	Difference (Model - Market) bp
1	23.90%	25.97%	207
2	22.90%	23.51%	61
3	21.60%	21.88%	28
4	20.40%	20.45%	5
5	19.40%	19.45%	5
7	17.60%	17.46%	(14)
10	16.00%	16.14%	14
15	14.20%	13.89%	(31)
20	13.40%	12.89%	(51)
25	13.50%	11.77%	(173)
30	13.40%	10.95%	(245)

Equities and Property

Excess returns over risk free on UK equities, overseas equities and property are modelled using separate (but correlated) lognormal models. The ESG uses the SVJD and constant volatility model to calibrate the GBP & overseas equities respectively. Alternative investments are treated as UK equities.

The split between UK and overseas equities was 54%/46%. The asset model was calibrated by reference to the implied volatility of FTSE100 options for a range of strikes (from 0.8 to 1.2) and maturities of up to 10 years. All strikes are expressed as a proportion of at-the-money.

Implied volatility data (%) at the valuation date is shown below:

Market

	Strike				
Term	**0.8**	**0.9**	**1**	**1.1**	**1.2**
1	23.90	20.60	17.60	15.20	14.00
3	25.10	23.20	21.50	19.80	18.30
5	26.30	24.80	23.40	22.10	21.00
9	28.20	27.00	26.00	25.00	24.10

Model

	Strike				
Term	**0.8**	**0.9**	**1**	**1.1**	**1.2**
1	23.30	20.80	18.40	15.60	12.30
3	25.10	23.20	21.50	19.80	18.10
5	26.60	25.20	23.90	22.70	21.50
9	27.40	26.40	25.40	24.50	23.70

Beyond 10 years the estimated volatility implied by the model calibration rises as follows:

	Strike				
Term	**0.8**	**0.9**	**1**	**1.1**	**1.2**
15	28.06	27.34	26.67	26.09	25.54
20	28.27	27.73	27.24	26.82	26.44
25	28.65	28.25	27.89	27.53	27.18
30	28.94	28.56	28.21	27.87	27.54

Difference (Model – Market) %

	Strike				
Term	**0.8**	**0.9**	**1**	**1.1**	**1.2**
1	(0.60)	0.20	0.80	0.40	(1.70)
3	0.00	0.00	0.00	0.00	(0.20)
5	0.30	0.40	0.50	0.60	0.50
9	(0.80)	(0.60)	(0.60)	(0.50)	(0.40)

There are no tests against market traded instruments for properties since there are no such instruments. A best estimate has therefore been used of 15% constant volatility.

Corporate bond

Corporate bond returns are modelled using the extended Jarrow-Lando-Turnbull model. This describes bond prices in terms of a real-world transition matrix, which gives the probability of a transition to each credit rating over one year. Risk neutral transition probabilities are assumed to vary stochastically. The transition matrix is consistent with best estimates based on historic data of long term transition probabilities and spread volatilities and corporate bond prices. The model was fitted to a sample of predominantly investment grade sterling corporate bonds.

The asset model uses a credit transition matrix. The fit of the model is targeted to the market spread on a 7 year A rated bond only. Credit derivatives are not used to derive market implied transition probabilities.

The following are examples of observed correlations of year 10 returns from the scenarios used (ZCB = zero coupon bond):

	Output Correlations @ Year 10									
	Cash	Equities	Property	Overseas Equities	5yr Govt ZCB	15yr Govt ZCB	5yr Corp ZCB	15yr Corp ZCB	5yr Index Linked ZCB	15yr Index Linked ZCB
Cash	1	(0.09)	(0.07)	(0.15)	(0.69)	(0.77)	(0.43)	(0.70)	(0.25)	(0.35)
Equities		1	0.30	0.63	0.14	0.15	0.56	0.33	0.06	0.12
Property			1	0.15	0.07	0.08	0.20	0.14	0.07	0.09
Overseas equities				1	0.19	0.23	0.46	0.35	0.08	0.13
5yr Govt ZCB					1	0.87	0.63	0.80	0.35	0.44
15yr Govt ZCB						1	0.58	0.93	0.17	0.35
5yr Corp ZCB							1	0.79	0.20	0.29
15yr Corp ZCB								1	0.16	0.34
5yr Index Linked ZCB									1	0.90
15yr Index Linked ZCB										1

(iii) The table below is based on 3,000 scenarios:

		Asset type (all UK assets)	**K=0.75**				**K=1**				**K=1.5**			
	n		5	15	25	35	5	15	25	35	5	15	25	35
	r	Annualised compound equivalent of the risk free rate assumed for the period. (to two decimal places)	1.00%	2.69%	3.49%	3.72%	x	x	x	x	x	x	x	x
1		Risk-free zero coupon bond	951,364	671,225	424,395	278,269	x	x	x	x	x	x	x	x
2		FTSE All Share Index (p=1)	100,676	251,537	345,902	419,209	200,691	394,053	514,049	603,968	531,761	734,987	885,416	998,632
3		FTSE All Share Index (p=0.8)	98,360	221,920	273,577	302,565	195,909	348,690	407,492	438,752	519,592	652,104	706,822	731,499
4		Property (p=1)	57,325	153,511	237,898	307,204	172,760	299,917	405,256	486,851	548,874	674,686	791,692	890,640
5		Property (p=0.8)	54,929	125,734	169,643	199,235	167,027	251,837	298,297	325,787	535,939	582,600	604,610	615,171
6		15 year risk free zero coupon bond (p=1)	18,599	24,920	24,247	26,849	83,908	91,207	108,680	136,591	499,715	499,093	513,410	535,632
7		15 year risk free zero coupon bond (p=0.8)	17,655	17,667	10,806	5,449	79,667	62,910	45,059	33,808	484,891	387,246	302,043	252,873
8		15 year risk free bonds (p=1)	23,562	38,482	44,667	50,292	98,682	121,486	137,471	155,875	497,183	494,107	510,896	533,009
9		15 year risk free bonds (p=0.8)	22,403	27,916	21,724	17,207	94,146	89,162	71,724	58,256	482,516	389,235	312,788	261,889
10		Portfolio of 65% FTSE All Share and 35% property (p=1)	66,615	182,968	265,620	334,821	162,771	316,757	423,336	508,056	517,370	661,437	791,267	892,114
11		Portfolio of 65% FTSE All Share and 35% property (p=0.8)	64,559	156,843	200,664	229,890	157,921	272,856	322,472	352,825	504,353	575,749	612,057	629,970
12		Portfolio of 65% equity and 35% 15 year risk free zero coupon bonds (p=1)	54,024	152,765	219,372	276,271	140,867	274,879	361,452	436,021	501,157	606,125	712,351	803,092
13		Portfolio of 65% equity and 35% 15 year risk free zero coupon bonds (p=0.8)	52,249	129,684	162,398	183,367	136,320	234,577	269,957	292,576	487,396	521,651	540,126	551,607
14		Portfolio of 40% equity, 15% property, 22.5% 15 year risk free zero coupon bonds and 22.5% 15 year corporate bonds (p=1)	31,954	96,957	145,757	191,477	113,335	207,800	275,573	338,509	497,840	550,651	627,927	699,882
15		Portfolio of 40% equity, 15% property, 22.5% 15 year risk free zero coupon bonds and 22.5% 15 year corporate bonds (p=0.8)	30,516	78,024	97,420	112,651	108,713	169,603	190,568	205,925	483,481	460,235	451,403	450,420
			Swap Duration = 15 years				*Swap Duration = 20 years*				*Swap Duration = 25 years*			
16		Receiver swaptions	17.21%	9.11%	7.30%	6.32%	18.69%	10.88%	9.06%	7.66%	20.03%	12.57%	10.56%	8.66%

(iv) UK initial equity yield: 3.72%
UK initial property rental yield: 4.30%

(v) Not applicable – there are no significant territories other than the UK.

(vi) The following table shows the outstanding guarantees analysed by term. In addition, the guarantees in column B have a guaranteed annuity rate at vesting at various strike rates as shown below.

Term to maturity (years)	Guaranteed Benefit (Policies with no GAR) £m	Guaranteed Benefit (Policies with GAR) £m	No MVA Guarantee £m
	A	B	C
1-5	629	111	0
6-10	340	122	0
11-15	300	73	0
16-20	255	36	1
21-25	142	14	1
26-30	37	0	23

Specimen cash option rates per £100 p.a. pension for annuities guaranteed five years and payable monthly in advance:

		Cash Option £	
	Retirement Age	Male	Female
Retirement Plan	60	1,000	1,100
	65	900	1,000
	70	800	900

Specimen minimum rates per £1,000 cash for annuities with no guarantee period and payable yearly in arrears:

		Annuity £ p.a.	
	Retirement Age	Male	Female
Personal Retirement Plan	60	77.24	67.77
	65	89.98	76.79
	70	108.28	89.64
	75	128.88	104.03

Calibration of the asset model to market data is shown, where available, in paragraph 6 (4) (a) (ii) above.

(vii) Comprehensive tests are carried out on the output produced by the Barrie & Hibbert asset model as follows:

For UK and Overseas equities and for UK property the average (over the simulated scenarios) of the discounted present values of projected asset values (with income reinvested) have been verified to be acceptably close to unity – the martingale property.

The same test has been undertaken for 15-year zero-coupon gilts and for 4 classes of zero-coupon corporate bonds with terms of 1, 5, 10, 15, 20, 25 and

30 years. Departures from unity in the average discounted present values have not had a significant impact on the valuation result.

Zero coupon bond yields calculated from the model cash output have been verified to match yields calculated from input Government spot rates and initial spot rates output from the model at time zero within an acceptable error margin.

For UK equity options verification has been made, within acceptable limits, that the option prices calculated from the model output and converted into implied volatilities using the Black-Scholes formula reproduce the expected volatility surface.

Verification has also been made, within acceptable limits, that implied volatilities calculated from the simulation model output reproduce the market volatility term structure for 20 year at the money swaptions.

(viii) The assets and liabilities have been computed using 3,000 (1,500 antithetic pairs of) simulated scenarios. This results in standard errors in the calculated yield curve of less than 1 basis point for terms 1- 30 years.

For a 10-year at the money (based on the forward price) UK equity put option at a strike of 1.0, the standard error of the estimated option price represents 1.27% of its calculated value.

Similarly, for a range of swaptions with maturities between 5 and 25 years on underlying 20 year swaps the standard errors in the calculated prices represent, typically, 2.03% of these prices.

(b) Not applicable.

(c) Not applicable.

(5) Management Actions

(a) No scenario specific management actions are assumed to take place in the stochastic model. However the model allows for the investment strategy as follows:

a) Sales of property and equity during the next valuation year to bring the actual asset mix into balance with the strategic target.

b) Close matching by outstanding term of fixed interest assets to liabilities by means of a swap overlay.

c) An internal delta-hedge for equities and property which has an effect in the stress scenario.

d) Reduction in equity/property backing ratios as policies near their guarantee date for all products except the weak guarantee Unitised With-Profits Bonds.

e) Policy classes are assumed not to move from the guarantee-related asset mix band to which they are allocated at the valuation date, although in practice some changes will occur in more extreme stochastic scenarios.

Existing market value adjustment policy will continue to be applied, i.e. market value adjustments are allowed for on surrender of unitised with-profits business, but with a "floor" based on a discounted value of the no market value adjustment guarantee.

Reversionary bonus rates will remain at current levels in future years.

Future miscellaneous surplus will be nil.

Charges made to asset shares for guarantees will continue in the future at the levels for the next valuation year.

(b) The following table shows the equity backing ratio at the valuation date and best estimate equity backing ratio in 5 years and 10 years time for the following scenarios, together with the reversionary bonus rates for the accumulating with-profits business:

(i) The investment return on all assets over the relevant period is based on the forward rates derived from the risk-free interest rate curve as calibrated to at the valuation date;

(ii) As for (i) but with the risk-free interest rate curve increased across the period by 17.5% of the long-term gilt yield;

(iii) As for (i) but with the risk-free interest rate curve decreased across the period by 17.5% of the long-term gilt yield;

		Current Valuation Date	**Current Valuation Date Plus 5 years**	**Current Valuation Date Plus 10 years**
% UK & Overseas Equities	i	41%	48%	45%
	ii	Unchanged	Unchanged	Unchanged
	iii	Unchanged	Unchanged	Unchanged
Reversionary bonus rates on accumulating with-profits				
Unitised With-Profits Bond	i	Strong Guarantee 0.5% Weak Guarantee 1%	Strong Guarantee 0.5% Weak Guarantee 1%	Strong Guarantee 0.5% Weak Guarantee 1%
	ii	Nil	Nil	Nil
	iii	Nil	Nil	Nil
Unitised With-Profits Pensions	i	1%	1%	1%
	ii	Nil	Nil	Nil
	iii	Nil	Nil	Nil
PPF	i	0.1%	0.1%	0.1%
	ii	Nil	Nil	Nil
	iii	Nil	Nil	Nil

(6) Persistency Assumptions

The surrender and paid-up assumptions are:

Product		Average surrender / paid-up rate for the policy years			
		1-5	6-10	11-15	16-20
CWP savings endowment	Surrender	10.40%	11.80%	5.00%	5.00%
CWP target cash endowment	Surrender	10.40%	11.80%	5.00%	5.00%
UWP bond	Surrender	3.60%	10.40%	10.00%	10.00%
UWP bond	Automatic withdrawals	see below	see below	see below	see below
CWP pension regular premium	PUP	3.00%	3.00%	3.00%	3.00%
CWP pension regular premium	Surrender	4.00%	4.00%	3.00%	3.00%
CWP pension single premium	Surrender	7.00%	7.00%	4.00%	4.00%
UWP individual pension regular premium	PUP	5.00%	5.00%	5.00%	5.00%
UWP individual pension regular premium	Surrender	5.00%	6.60%	4.00%	4.00%
UWP individual pension single premium	Surrender	2.00%	2.00%	2.00%	2.00%

For Personal Retirement Plans the assumption is that there will be no surrenders after age 50 on the grounds that they would then be able to take their retirement benefits.

Policies that are taking automatic withdrawals are assumed to continue to do so at the current rates.

Current and future paid-up policies are assumed to lapse at the same rate as premium paying policies.

For Personal Retirement Plans lives under age 65 at the valuation date are assumed to retire at age 65; otherwise they are assumed to retire at 75 (or the maximum retirement age under the contract, if earlier).

There is no other allowance for early retirements.

Take up Rates of Guaranteed Annuity Options

The assumed proportion of cash in each scenario is dynamic according to the following formula:

$$Cash = Min\left(L, \max\{10\%, C \times F\} \times \left(1 - \frac{Min(t,T)}{S \times T}\right)\right)$$

where

$$F = R^{|k(j) \times 100} \times R^{(i-j-k(j)) \times 100 \times (ABS[i-j] > semirange)}$$

and

$$k(j) = i - Min(Max(j, i - semirange), i + semirange)$$

and

$$0 \le j \le i - 1\%$$

Where variables / constants are as follows:

L	Overall limit on cash proportion, set to 1.25 x C
C	Current experience assumption

F	Overall reduction factor comprising *R* and *R'* components (see below) to reflect decline in cash as interest rates decline and GARs become more valuable.
R	Reduction factor that applies outside of central "plateau" range (Use *R*=2/3 initially)
R'	Reduction factor that applies within central "plateau" range (Use *R'*=0.9 initially)
k(j)	Interim calculation variable depending on *i,j,* and *semirange*
semirange	Central "plateau" assumed to apply over a range from (*i* – *semirange*) to (*i* + *semirange*). Set at 1%.
T	Time in years from the valuation date
T	Period over which a decline in cash due to longevity is recognised, making GARs more valuable (use *T*=30 initially)
S	Amount of longevity decline (*S*=3 initially so that cash declines by 1/3 over *T* years)
I	This is the average yield of a long term, i.e. 20 year, benchmark conventional gilt over the period used to set the assumption for the GAO take up rate. This was the 3 year period from 1 July 2008 to 30 June 2011 over which the average yield was 4.32%.
J	20 year gilt rate at maturity for the particular scenario

If *semirange* = 1% then:

$k(j)=1\%$ $F = R' \times R^{(i-j-1\%)\times 100}$ $i-1\% \le j \le i+1\%$

$k(j)=i-j$ $F = R'^{(i-j)\times 100}$ $i+1\% \le j$

$k(j)=-1\%$ $F = R'^{-1} \times R^{(i-j+1\%)\times 100}$

Note that the 20 year interest rate is the assumed reference point for the annuity rates.

Annuitant Mortality

The mortality assumption for annuities in payment and annuities in possession arising from the exercising of guaranteed annuity options is the same as that described in Appendix 9.4, paragraph 4 (4).

(7) Policyholders' Actions

Modelled policyholder behaviour is static, i.e. it does not vary between the different stochastic simulations apart from guaranteed annuity rate take up rates, which vary according to the formula in paragraph 6 (6) above.

7. FINANCING COSTS

The fund has no financing costs as at the valuation date.

8. OTHER LONG-TERM INSURANCE LIABILITIES

No amounts have been included in Line 46 of Form 19. The amount shown in Line 47 of Form 19 is made up as follows:

	£m
Future projects and issues	3.9
Solvency II	1.7
Actuarial Transformation Systems	0.9
Outsourcer Expenses	11.4
Asset Management Services	4.3
Other *	11.2
Total	33.4

* Consisting of: Mortgage Endowment Review, GAO redress, PLP claims, costs falling outside MSAs, reviews redundancy, IBNR, overdue claims, Strachan, and UISL stabilisation.

9. REALISTIC CURRENT LIABILITIES

The reconciliation of the realistic current liabilities to the regulatory current liabilities is:

	£m
Regulatory current liabilities	1,987.6
+ Future tax adjustment	(9.1)
+ Additional tax on shareholder transfers	1.7
Realistic current liabilities	1,980.2

(a) Future Tax Adjustment

The realistic balance sheet calculations assume that tax will be payable in relation to the realistic proportion of life business. In reality the tax is calculated by reference to statutory liabilities. An approximate adjustment is made to allow for the fact that future tax will be based on the statutory life proportion rather than the realistic life proportion.

This adjustment as at the valuation date amounted to an asset of £9.1m.

(b) Additional Tax on Shareholder Transfers

An allowance is made for the additional tax arising on transfers to shareholders in respect of life business. This is calculated as a percentage of the present value of future transfers to shareholders in respect of life business.

The liability as at the valuation date amounted to £(1.7)m.

10. RISK CAPITAL MARGIN

(a) The risk capital margin is nil.

(i) The market risk scenario assumes that equities rise by 20% and real estate falls by 12.5%. The equity up and the property down were the more onerous scenarios.

(ii) The nominal change in yields for fixed interest securities for the purpose of the market risk scenario is 0.41%. This is consistent with a rise or fall of 17.5% in the long term gilt yield. A rise in yields is the more onerous scenario.

(iii) The average change in spread is 2.76%. Changes in market values are:

(a) (8.79)% for bonds
(b) Not applicable
(c) Not applicable
(d) Not applicable
(e) 4% for swaps.

(iv) The average change in persistency experience is a 32.5% reduction in future lapse and paid-up rates. The overall percentage change in the realistic value of liabilities from applying the persistency stress is 4.33%.

(v) The change in asset value in (iii) is materially independent of the change in liability values in (iv).

(b) (i) In the stress scenarios the following additional assumptions are made:

Reversionary bonus rates will be reduced to nil

The future projects and issues reserve will be unchanged

The impact of the combined stress will be partially offset by increasing guarantee charges. An introduction of an exit charge of 1% of asset share on terminations is assumed.

Furthermore, it is assumed that the planned benefit enhancements will be decreased by £136.7m, resulting in £nil risk capital under the stressed conditions.

These actions are consistent with the PPFM and investment strategy.

Since the previous valuation, there has been a change to the liquidity premium methodology for the credit risk scenario. The previous methodology fully allocated the credit risk as a default risk. The current methodology assumes that 31% of the increase in bond spreads in the credit risk scenario relates to changes in default expectations and that 69% of the increase in bond spreads is reflected in a higher liquidity premium than in base conditions.

(ii) The effect on the risk capital margin of assuming reduced reversionary bonuses is a reduction of £5.9m and of introducing a 1% exit charge is a reduction of £0.8m.

(iii) No changes would apply to the table in paragraph 6 (5) (b) if the management actions were taken

(iv) The requirements of INSPRU 1.3.188(R) would be met if the actions described in paragraph 10 (b) (i) were integrated into the projection of assets and liabilities.

(c)

(i) The risk capital margin is covered by the assets of the long-term fund and the value of future profits on non-profit business.

(ii) The scheme for the funds merger as at 31 December 2008 includes a provision that in the event that the value of the assets of any with-profits fund falls below the regulatory minimum support will be provided to that fund by way of a loan arrangement from the Non-Profit Fund or the Shareholders Fund to the extent that the Board determines there are assets in those funds available to make such a loan.

11. TAX

Tax on assets backing the with-profits benefits reserve for BLAGAB business is charged to those asset shares approximately and allowance is made for relief on expenses.

Tax on any future policy related liabilities for BLAGAB business is allowed for in determining those liabilities.

An approximate adjustment is made to allow for any differences between the tax calculated as described and the tax expected on a corporate basis. The adjustment is calculated within the stochastic model.

12. DERIVATIVES

At the valuation date the fund had a number of significant positions in interest rate swaps, swaptions and spreadlocks.

The interest rate swaps are held in connection with the fixed interest portfolio and are used to improve the matching between the assets and the liabilities against changes in the yield curve for the long-term fund as a whole.

The company has also entered into a number of swap spread lock contracts. These are used to hedge against the risk of swap spreads widening on the long (30 to 50 year) interest rate swaps that are currently held. They are structured as swaps or contracts for differences with the payout dependent on the swap spread at maturity relative to the initial swap spread, and can be a net asset or liability.

The interest rate swaptions are held in respect of the guaranteed annuity rate liabilities. Receiver swaptions are held to cover part of the guaranteed annuity rate liability where the with-profits benefits reserve is invested in equities or property. Payer swaptions are held where the with-profits benefits reserve is invested in fixed interest assets and the expected annuity benefit arising is matched by fixed interest investments. The quantum of swaptions held is based on a prudent assessment of future guaranteed annuity rate liabilities taking account of expected future lapse rates and take up rates. The duration and tenor of the swaptions corresponds broadly with the liabilities. The strike rates for the payer swaptions vary according to the rate at which it is expected the cash option will become more valuable than the guaranteed annuity rate allowing for future improvements in mortality.

The fund holds a small amount of exchange traded equity futures to assist efficient portfolio management. The fund holds currency futures to hedge currency risk on overseas bonds.

The swaps, swaptions and spreadlocks are wholly sterling denominated. As at the valuation date, the type and value of derivatives held are as follows:

Derivative	**£m**
Swaps	51.2
Swaptions	38.9
Spreadlocks	(131.4)
Currency Futures	2.1
Equity Futures	0.1

The counterparties to the swaps, swaptions and spreadlocks are approved credit institutions. Variation margin (collateral) arrangements are in place under both the swaps and swaptions. In addition the swaps provide for initial margins by both parties.

13. ANALYSIS OF WORKING CAPITAL

The movement in working capital over the twelve months to the valuation date is shown in the following table.

	£m
Opening working capital	**0.0**
Write back planned benefit enhancements to zeroise working capital	373.4
Revised opening working capital	**373.4**
Opening adjustments	(82.3)
Restated opening working capital	**291.1**
Investment return on working capital	28.9
Mismatch profits and losses	
Assumption changes	
- Non-economic	(47.9)
- Economic	
- Policyholder actions	
Impact of new business	0.0
Other Variances	
- Estate Distribution	(111.3)
- Non-economic	2.1
- Economic	106.3
- Changes in provisions	18.0
- Unexplained	7.6
Closing working capital before zeroisation	**294.7**
Planned benefit enhancements to distribute estate	(325.9)
Impact of planned enhancement on future policy related liabilities	31.2
Closing working capital	**0.0**

The following table shows a breakdown of the liabilities shown on line 47 Form 19 at the start and end of the year:

£m	Current Valuation	Previous Valuation
Future projects and issues	3.9	20.1
Solvency II	1.7	2.7
Actuarial Transformation Systems	0.9	2.3
Outsourcer Expenses	11.4	11.4
Asset Management Services	4.3	5.1
Other *	11.2	11.7
Total	33.4	53.3

* Consisting of: Mortgage Endowment Review, GAO redress, PLP claims, costs falling outside MSAs, reviews redundancy, IBNR, overdue claims, Strachan, and UISL stabilisation

The following table shows a breakdown of the liabilities shown on line 51 of Form 19 at the start and end of the year:

£m	Current Valuation	Previous Valuation
Accounting Liabilities	1,987.6	1,954.2
Future Tax Profit	(9.1)	(10.2)
Additional Tax on Shareholders' Transfers	1.7	3.0
Total	1,980.2	1,947.0

14. OPTIONAL DISCLOSURE

As in previous years, a provision has been established to distribute all of the realistic estate so the published realistic estate in Form 19 is zero and the value of the liabilities is the realistic value of the assets available to the fund. To ensure consistency with the other entities within the group, the PLL with-profits funds (including this Fund) have changed their methodology to make an allowance for the subsequent impact of this provision on the cost of guarantees.

APPENDIX 9.4A

SAL WITH-PROFITS FUND

2. ASSETS

(1) Economic Assumptions for Valuing Non-Profit Business

The economic assumptions for non-profit products are as follows:

	Current Valuation (%)	Previous Valuation (%)
Gross Investment return	See below	See below
Risk discount rate	See below	See below
RPI Inflation	2.88	2.99
Expense inflation	3.88	3.99

The margin over the RPI inflation is 1%, which is the same as 2011.

The value of future profits on non-profit products was calculated by assuming risk free rates of investment return and discount rates. These were based on a zero coupon gilt yield curve plus 10 basis points as at the valuation date.

Earned rates of return were assumed to be annual forward yields derived from the curve, net of tax and investment expenses.

Discount rates used were spot yields taken from the curve, net of tax and investment expenses.

The risk free yield curves (gilt yield curve plus 10 basis points) were:

	Risk Free Rate	
Term (years)	Current Valuation	Previous Valuation
1	0.32%	0.32%
2	0.43%	0.42%
3	0.60%	0.64%
4	0.80%	0.89%
5	1.01%	1.14%
6	1.22%	1.38%
7	1.43%	1.61%
8	1.63%	1.82%
9	1.82%	2.02%
10	1.99%	2.20%
12	2.31%	2.51%
15	2.70%	2.85%
20	3.18%	3.21%
25	3.49%	3.39%

Allowance has been made under INSPRU 1.3.39G for the illiquid nature of a proportion of the assets (namely the corporate bonds) backing the immediate non-profit annuities within the Fund.

A liquidity premium has been calculated by taking the difference between the present value of the cash flows arising from these bonds on two yields. The first is a yield

equal to the equivalent risk free rate for the bond, increased by an allowance for the risk of default; the second is the gross redemption yield of the bond. The adjustment for the risk of default varies on a bond by bond basis.

(2) Amount Determined Under INSPRU 1.3.33R(2)

Not applicable.

(3) With-Profits Benefits Reserves Below de Minimis Limit

Not applicable.

(4) Different Sets of Assumptions

Not applicable.

3. WITH-PROFITS BENEFITS RESERVE LIABILITIES

(1) Calculation of With-Profits Benefits Reserve

Product Type	Method	With-profits benefits reserve	Future policy related liabilities
		£m	£m
With-profits – Whole Life	Prospective	31	1
With-profits – Other Life	Retrospective	677	27
With-profits – Pensions (Regular and Single Premium): Libra policies	Retrospective	908	355
With-profits – Pensions (Paid-Up): Libra Policies	Prospective	190	74
With-profits – Pensions (Regular and Single Premium): non-Libra policies	Retrospective	726	284
With-profits – Pensions (Paid-Up): non-Libra Policies	Prospective	320	125
UWP Life	Retrospective	42	5
Other		3	0
Total		2,897	871
Form 19 Line 31		2,897	
Form 19 Line 49			871

In the table above, the future policy related liabilities total £871m. This is made up of £28m for with-profits life business, £838m for with-profits pensions business and £5m for UWP life business.

The split in the table above for both the with-profits life business and the with-profits pensions business is in proportion to the respective with-profits benefits reserves.

(2) Correspondence with Form 19

The above reconciles to lines 31 and 49 of Form 19.

(3) With-Profits Benefit Reserves Below de minims Limit

The amount categorised as "Other" above falls within the de minimis limit.

(4) Types Of Products

A scheme of arrangement under Part 26 of the Companies Act 2006 has been implemented with effect from 31 December 2009 to remove guaranteed annuity rates from certain UK individual with-profits pensions (pure endowment) policies in exchange for potential increases to non-guaranteed benefits. The policies affected are described as Libra policies.

The level of disclosure in the table above corresponds to material groupings of contracts offering significant variances in policyholder benefits. For example, unitised with-profits business is separated from conventional with-profits business, and pensions policies are divided into Libra and non-Libra policies.

4. WITH-PROFITS BENEFITS RESERVE – RETROSPECTIVE METHOD

(1) Retrospective Methods

(a), (b)

Product Type	Proportion of With Profits Benefit Reserve Calculated from Individual Contracts	Proportion of With Profits Benefit Reserve Calculated from Grouped Contracts
With-profits – Life (excluding whole life)	100%	0%
With-profits – Pensions (excluding paid-up policies)	100%	0%
UWP Life	100%	0%

(c) (i) Whilst the asset shares have been calculated using individual data in all cases, the method used for unitised with-profits business has been the application, to the individual data, of a factor (ratio of asset share to face value of units) which has been calculated by reference to grouped / sample data. This is consistent with the way the business is operated in practice.

(2) Significant Changes To Valuation Methods

No significant changes.

(3) Expense Allocation

(a) The previous expense investigation was carried out in the fourth quarter of 2012.

(b) Expense investigations are normally carried out on an annual basis.

(c)

	Item	£m
(i)	Initial Expenses	Nil[1]
(ii)	Maintenance Expenses	9.8
(ii)	Investment Expenses	3.7
(iii)	Method	Average expense charge deducted
(iv)	Expenses charged other than to with-profits benefits reserve	17.5

The expenses included in (iv) above include further investment expenses, other policy expenses that are not charged to asset shares (including the expenses associated with the non profit business), project costs and commission payments.

[1] Since the company is closed to new business (apart from contractual increments etc.), there are no material acquisition expenses.

(4) Significant Charges

The charges deducted from the with-profits benefits reserve in the year to the valuation date and the preceding year were:

	2012	2011
	£m	£m
Net losses on non-profit business	(27.9)	0.0
Charges for guarantees and smoothing	48.8	53.1
Project Victor - WL paying early	0.0	(4.4)

(5) Charges For Non-Insurance Risk

Not applicable.

(6) Ratio Of Claims To Reserves

Terminal bonus rates are set in advance for conventional with-profits policies. The terminal bonus rate is set based on assumptions about future investment returns. Terminal bonus rates on maturing endowment life policies and pension policies vesting at the intended retirement date were set to give the following percentages of the with-profits benefits reserve plus any past miscellaneous surplus less any miscellaneous deficit attributed to the with-profits benefits reserve but not less any exit charge, for the following specimen products and terms:

	Endowment Policies	Regular Premium Personal Pension Plan	Single Premium Personal Pension Plan	Regular Premium Executive Benefits Plan	Single Premium Executive Benefits Plan
1/1/2010 to 30/06/2010					
10 year term	100	113*	106*	100	179*
15 year term	106*	124*	133*	109*	145*
20 year term	102*	121*	152*	114*	158*
25 year term	100				
1/7/2010 to 31/12/2010					
10 year term	100*	113*	105*	100*	180*
15 year term	105*	124*	148*	109*	157*
20 year term	104*	123*	144*	120*	151*
25 year term	100				
1/1/2011 to 30/06/2011					
10 year term	100*	115*	100*	100*	159*
15 year term	106*	121*	154*	103*	146*
20 year term	102*	122*	131*	121*	132*
25 year term	100*				
1/7/2011 to 31/12/2011					
10 year term	N/A	117*	93*	105*	162*
15 year term	102*	121*	138*	109*	167*
20 year term	100*	124*	139*	110*	145*
25 year term	100*	127*	159*	113*	158*
1/1/2012 to 30/06/2012					
10 year term	N/A	119*	100	106*	165*
15 year term	101*	122*	151*	112*	184*
20 year term	100	128*	150*	115*	156*
25 year term	100	131*	168*	119*	167*
1/7/2012 to 31/12/2012					
10 year term	N/A	N/A	N/A	N/A	N/A
15 year term	100	111*	145*	100	173*
20 year term	100	113*	145*	119*	148*
25 year term	100	123*	159*	114*	137*

* Denotes that a zero terminal bonus rate applied

Payouts on surrenders for conventional with-profits policies will generally have been based on a lower percentage of the with-profits benefits reserve plus any past miscellaneous surplus less any miscellaneous deficit attributed to the with-profits benefits reserve before deducting any exit charge.

Payouts on surrenders of unitised with-profits bonds have been set to the following percentages of the with-profits benefits reserve plus any past miscellaneous surplus less any miscellaneous deficit attributed to the with-profits benefits reserve but not less any exit charge.

Year	Ratio of claims to asset shares
Previous year -1	92.5% to 100%
Previous year	94% to 100%
Current year	95.5% to 100%

(7) Allocated Return

The rate of investment return attributed to the with-profits benefits reserve of a policy depends on the asset mix for it. The asset mix and the outstanding term of the hypothecated fixed interest securities depend on the outstanding term and the level of guarantees under the policy (see PPFM for more details).

The average rates of investment return (before tax) added for the year to 31 December 2012 are:

Product Type	Investment Return
Conventional Life	6.42%
Conventional Pensions	8.16%
UWP Bond and Group Pension	3.50%
Other UWP Life	3.50%

5. WITH-PROFITS BENEFITS RESERVE – PROSPECTIVE METHOD

(1) Key Assumptions

A prospective method has been used for with-profits whole life business and for paid-up with-profits pensions business.

Bonus rates on with-profits whole life business and paid-up pensions contracts are the same as the bonus rates on endowments and regular premium pension contracts respectively for the same term. A bonus reserve valuation is used to determine the with-profits benefits reserve, where:

- the bonus rates are the supportable bonus rates determined from the relevant product, and
- the economic assumptions are consistent with the supportable bonus rates (rather than being derived from the risk free rate)

The assumptions underlying this method are as follows:

With-Profits Whole Life Business

The discount rate is the same as the investment return assumption. These rates together with the assumed rate for expense inflation are consistent with the assumed supportable bonus rates.

Economic Assumptions	
Discount rate p.a.	2.66%
Investment Return p.a.	2.66%
Expense Assumptions	
Investment Expense p.a.	0.09%
Per policy Expenses p.a.	£60.53
Expense Inflation p.a.	3.77%
Bonus Assumptions	
Reversionary Bonuses	
On Basic Sum Assured	0.10%
On accrued bonuses	0.10%

Future terminal bonus rates vary by duration in force (at time of payment) and the actual year of payment.

Sample terminal bonus rates are as follows:

Elapsed Term in Years	2013	2018	2023	2028	2033	2038	2043	2048
10	7.7%	10.1%						
15	13.3%	18.2%	6.8%					
20	15.4%	26.4%	14.5%	0.0%				
25	24.6%	23.6%	24.6%	1.6%	1.1%			
30	55.5%	40.2%	22.5%	17.9%	9.5%	0.0%		
35	167.4%	79.9%	37.7%	14.7%	28.7%	6.0%	0.0%	
40	439.0%	225.1%	84.2%	29.4%	25.2%	31.3%	3.2%	0.0%

There are no lapses.

Paid-Up With-Profits Pensions Business

The discount rate is the same as the investment return assumption. These rates together with the assumed rate for expense inflation are consistent with the assumed supportable bonus rates.

Economic Assumptions	
Discount rate p.a.	3.63%
Investment Return p.a.	3.63%
Expense Assumptions	
Investment Expense p.a.	0.118%
Per policy Expenses p.a.	£60.53
Expense Inflation p.a.	3.77%
Bonus Assumptions	
Reversionary Bonuses	
On personal pension deferred annuities	0.10%
On other products	0.05%

Future terminal bonus rates vary by duration in force (at time of payment) and the actual year of payment.

Sample terminal bonus rates are as follows:

Personal Pension Plan

Elapsed Term in Years	2013	2018	2023	2028	2033	2038	2043	2048
5	0.0%							
10	0.0%	0.0%						
15	0.0%	0.0%	0.0%					
20	0.0%	0.6%	0.0%	0.0%				
25	0.0%	0.0%	0.0%	0.0%	0.0%			
30	N/A	0.0%	0.0%	0.0%	0.0%	0.0%		
35	N/A	N/A	0.0%	0.0%	0.0%	0.0%	0.0%	
40	N/A	N/A	N/A	0.0%	0.0%	0.0%	0.0%	0.0%

Executive Benefit Plan

Elapsed Term in Years	2013	2018	2023	2028	2033	2038	2043	2048
5	11.4%							
10	5.1%	7.2%						
15	7.1%	3.4%	1.2%					
20	0.0%	4.2%	0.0%	0.0%				
25	0.0%	0.0%	5.1%	0.0%	0.0%			
30	0.0%	0.0%	0.0%	4.6%	0.0%	0.0%		
35	53.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
40	0.0%	56.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Personal Pension Plan (Deferred Annuity)

Elapsed Term in Years	2013	2018	2023	2028
25	N/A			
30	N/A	N/A		
35	101.5%	N/A	N/A	
40	176.1%	54.8%	N/A	N/A

There are no lapses.

Expenses (in respect of outsourcer expenses)

The life company entered into a new MSA with Pearl Group Management Services (PGMS) with effect from 1 September 2010. Compared to the MSA at the 2009 valuation the new service fees are higher and the new MSA uplift in the fee inflation is lower. In addition the new service fees incorporate the cost of several additional services that were previously paid to an outsourced services provider on a fixed charge basis.

The new MSA specifies fee inflation to be RPIX +1.0% at 1 January each year. The MSA at the 2009 valuation allowed for fee inflation at RPIX +3.80%.

(2) Different Sets of Assumptions

Not applicable.

6. COST OF GUARANTEES, OPTIONS AND SMOOTHING

(1) De Minimis Limit

Not applicable.

(2) Valuation Methods For Guarantees etc

	Cost of Guarantees & Options	Smoothing Cost	Extent of Grouping	No of Individual policies	No of model points
All Business	Stochastic model	Deterministic calculation	All business	150,940	4,813

(a) Cost of Guarantees & Options

The costs of guarantees are determined using a stochastic model, with the asset returns being generated by a proprietary model. The following items were calculated stochastically:

(i) Guaranteed annuity option reserves.
(ii) The reserves required in addition to asset share to meet guaranteed benefits.
(iii) Future retentions at maturity where payouts of less than 100% of asset share are being targeted
(iv) Future profits and losses where amounts payable upon surrender are less or more than asset share.
(v) The value of future guarantee charges deducted from asset share.

The calculations were carried out using a risk neutral approach.

Format of the Guaranteed Annuity Rates (GARs)

The customer can elect to take the annuity guarantee in a number of different forms (e.g. with escalation, with spouse's pension). The value of the GAR is initially calculated assuming all male aged 65, non-escalating, no spouse's pension and then a factor is used in the stochastic model to weight the value of the GAR to allow for the expected take-up of benefits in alternative forms and the resulting expected variation in cost. The weighting factors vary between contract and are as follows:

Product	Weighting Factor
Fowler PPP (non DSS)	93%
Fowler PPP (DSS)	91%
Transfer Plan	88%
Executive Benefit Plan	93%
Pension Reserve	88%
Retirement Security Plan	93%
Additional Pension Plan	95%
PPP '81	93%

Early Retirements

Contracts provide a guaranteed annuity option upon early retirement. It is probable that some surrenders are actually early retirements with a GAR. We assume that 0% of surrenders are early retirements 15 years or more before maturity increasing linearly to 100% immediately prior to maturity. A factor is also applied to reflect the earlier application of the GAR at a younger age. These adjustments are made within the stochastic model.

Our calculations allow for the assumed expenses of paying the annuity.

Based upon actual experience we assume that policyholders elect to take a proportion of their benefits as cash where permitted.

The whole of the guarantee liability is shown within the future cost of contractual guarantees.

Cost of Smoothing

A cost of smoothing only arises if the proposed bonus rates are above 0% and the payout ratio for the product is above 100%; i.e. an extra cost (cost of smoothing) is incurred as the positive terminal bonus rates are leading to maturity payments above the asset share values. If this was the case, then a deterministic model run is required to produce the future maturity cashflows with allowance for the proposed bonus rates to calculate the cost of smoothing.

At 31 December 2012, for all products where the proposed bonus rates are above 0%, the payout ratio is 100% and where the payout ratios are above 100%, the bonus rates are nil – i.e. the maturity payments are no more than the asset share values. Therefore, there is no cost of smoothing for any products and there is no need to determine the future projected maturity cashflows. Hence, the GAO cash proportion deterministic model run was not required.

(b) (i) None

(ii) All of the contracts are valued on a grouped basis.

(iii) For each product type we initially create separate model points for each combination of year of commencement and year of maturity. For unitised with profits bonds we split by commencement month.

This grouping allows for the asset mix associated with each cohort of business. It is aligned with the way in which we declare bonus rates on our business (our actual terminal bonus rate calculations are based on specimen policies split out in the same way i.e. product type, year of commencement and year of maturity although at quinquennial rather then annual intervals with monthly cohorts for unitised with-profits (UWP) bonds).

The initial model point files outlined above are then more heavily grouped to improve the run times in the stochastic model by amalgamating some of the smaller model points that were not making a significant contribution to the overall results. In order to test that this heavier grouping did not materially

affect the results 3000 simulations were run at both levels of grouping and the results differed by less than 1% for the GAR & non GAR reserves.

(c) Less than 1% is unmodelled. The guarantee cost on this business is not material.

(3) Significant Changes

There have been no significant changes since the previous valuation.

(4) Further Information on Stochastic Approach

(a) (i) The following tables give an indication of the extent to which the guarantees are in or out of the money at the valuation date. The table shows the percentage of the with-profits benefits reserve (including miscellaneous profit items) for each product that falls within each band. The bands are defined below.

% Asset Share	Band A	Band B	Band C	Band D
Endowments & Whole Life	0.0%	0.2%	0.2%	99.7%
Conventional Pensions	33.6%	4.0%	3.2%	59.2%
Unitised With Profit Bond	0.0%	0.0%	0.0%	100.0%

Where:

Band A	Contracts would need to earn >10%p.a. (higher for shorter terms) on the equities & property backing their asset share to meet the maturity guarantee
Band B	Contracts need to earn between 7.5% and 10%p.a. (higher for shorter terms) on the equities & property backing their asset share to meet the maturity guarantee
Band C	Contracts need to earn between 5% and 7.5%p.a. (higher for shorter terms) on the equities & property backing their asset share to meet the maturity guarantee
Band D	Contracts need to earn <5%p.a. on the equities & property backing their asset share to meet the maturity guarantee

(ii) The asset returns in the stochastic model were generated by a proprietary model licensed from Barrie & Hibbert. The asset classes modelled are UK equities, overseas equities, UK property, UK corporate bonds and UK gilts.

Fixed Interest

UK gilt returns are modelled using a gilts + 10bps calibration in an Annual LIBOR Market Model. The Government Nominal Bond yield curve is a direct input into the model.

The calibration at the valuation date was as follows:

Term	Govt. + 10bp	Model	Difference (Model - Market) bp
1	0.32%	0.32%	0
2	0.43%	0.43%	(0)
3	0.60%	0.60%	(0)
4	0.80%	0.79%	(0)
5	1.01%	1.00%	(1)
7	1.43%	1.42%	(0)
10	1.99%	1.99%	(0)
15	2.70%	2.69%	(1)
20	3.18%	3.18%	(0)
25	3.49%	3.49%	(0)

The volatility within the model is calibrated to the market implied volatility for at the money swaptions (for 20 year swaps). The calibration at the valuation date is as follows:

Term	Market IV	Model	Difference (Model - Market) bp
1	23.90%	28.00%	410
2	22.90%	24.90%	200
3	21.60%	22.80%	120
4	20.40%	21.20%	80
5	19.40%	20.00%	60
7	17.60%	18.10%	50
10	16.00%	16.20%	20
15	14.20%	14.30%	10
20	13.40%	12.90%	(50)
25	13.50%	11.80%	(170)
30	13.40%	10.70%	(270)

UK Equities

There have been no changes to the methods or assumptions since the previous valuation.

The split between UK and overseas equities was 50%/50%.

The asset model was again calibrated by reference to the implied volatility of FTSE100 options for a range of strikes (from 0.8 to 1.2) and maturities of up to 10 years. All strikes are expressed as a proportion of at-the-money.

Implied volatility data (%) at the valuation date is shown below:

Market

	Strike				
Term	0.8	0.9	1	1.1	1.2
1	23.90	20.60	17.60	15.20	14.00
3	25.10	23.20	21.50	19.80	18.30
5	26.30	24.80	23.40	22.10	21.00
9	28.20	27.00	26.00	25.00	24.10

Model

	Strike				
Term	**0.8**	**0.9**	**1**	**1.1**	**1.2**
1	23.30	20.80	18.40	15.60	12.30
3	25.10	23.20	21.50	19.80	18.10
5	26.60	25.20	23.90	22.70	21.50
9	27.40	26.40	25.40	24.50	23.70

Beyond 10 years the estimated volatility implied by the model calibration rises as follows:

	Strike				
Term	**0.8**	**0.9**	**1**	**1.1**	**1.2**
15	28.06	27.34	26.67	26.09	25.54
20	28.27	27.73	27.24	26.82	26.44
25	28.65	28.25	27.89	27.53	27.18
30	28.94	28.56	28.21	27.87	27.54

Difference (Model – Market) %

	Strike				
Term	**0.8**	**0.9**	**1**	**1.1**	**1.2**
1	(0.60)	0.20	0.80	0.40	(1.70)
3	0.00	0.00	0.00	0.00	(0.20)
5	0.30	0.40	0.50	0.60	0.50
9	(0.80)	(0.60)	(0.60)	(0.50)	(0.40)

Property

There are no tests against market traded instruments for properties since there are no such instruments. A best estimate has therefore been used of 15% constant volatility.

Corporate Bonds

Corporate bond returns are modelled using the extended Jarrow-Lando-Turnbull model. This describes bond prices in terms of a real-world transition matrix, which gives the probability of a transition to each credit rating over one year. Risk neutral transition probabilities are assumed to vary stochastically. The transition matrix is consistent with best estimates based on historic data of long term transition probabilities and spread volatilities and corporate bond prices. The model was fitted to a sample of predominantly investment grade sterling corporate bonds.

The asset model uses a credit transition matrix. The fit of the model is targeted to the market spread on a 7 year A rated bond only. Credit derivatives are not used to derive market implied transition probabilities. The following are examples of observed correlations of year 10 returns from the scenarios used (ZCB = zero coupon bond):

	Output Correlations @ Year 10									
	Cash	Equities	Property	Overseas Equities	5yr Govt ZCB	15yr Govt ZCB	5yr Corp ZCB	15yr Corp ZCB	5yr Index Linked ZCB	15yr Index Linked ZCB
Cash	*1.00*	(0.09)	(0.07)	(0.15)	(0.69)	(0.77)	(0.43)	(0.70)	(0.25)	(0.35)
Equities		1.00	0.30	0.63	0.14	0.15	0.56	0.33	0.06	0.12
Property			1.00	0.15	0.07	0.08	0.20	0.14	0.07	0.09
Overseas Equities				1.00	0.19	0.23	0.46	0.35	0.08	0.13
5yr Govt ZCB					1.00	0.87	0.63	0.80	0.35	0.44
15yr Govt ZCB						1.00	0.58	0.93	0.17	0.35
5yr Corp ZCB							1.00	0.79	0.20	0.29
15yr Corp ZCB								1.00	0.16	0.34
5yr Index Linked ZCB									1.00	0.90
15yr Index Linked ZCB										1.00

(iii) The table below is based on 3000 scenarios

		Asset type (all UK assets)	K=0.75				K=1				K=1.5			
	n		5	15	25	35	5	15	25	35	5	15	25	35
	r	Annualised compound equivalent of the risk free rate assumed for the period. (to two decimal places)	1.00%	2.69%	3.49%	3.72%	x	x	x	x	x	x	x	x
1		Risk-free zero coupon bond	951,364	671,225	424,395	278,269	x	x	x	x	x	x	x	x
2		FTSE All Share Index (p=1)	100,676	251,537	345,902	419,209	200,691	394,053	514,049	603,968	531,761	734,987	885,416	998,632
3		FTSE All Share Index (p=0.8)	98,360	221,920	273,577	302,565	195,909	348,690	407,492	438,752	519,592	652,104	706,822	731,499
4		Property (p=1)	90,794	212,361	307,119	379,561	218,556	371,365	485,738	570,687	588,588	752,279	883,031	985,907
5		Property (p=0.8)	87,833	180,512	231,066	260,994	212,585	320,279	372,708	399,650	576,215	660,505	692,514	704,503
6		15 year risk free zero coupon bond (p=1)	18,599	24,920	24,247	26,849	83,908	91,207	108,680	136,591	499,715	499,093	513,410	535,632
7		15 year risk free zero coupon bond (p=0.8)	17,655	17,667	10,806	5,449	79,667	62,910	45,059	33,808	484,891	387,246	302,043	252,873
8		15 year risk free bonds (p=1)	23,562	38,482	44,667	50,292	98,682	121,486	137,471	155,875	497,183	494,107	510,896	533,009
9		15 year risk free bonds (p=0.8)	22,403	27,916	21,724	17,207	94,146	89,162	71,724	58,256	482,516	389,235	312,788	261,889
10		Portfolio of 65% FTSE All Share and 35% property (p=1)	72,789	194,445	280,178	350,303	173,525	332,545	441,127	526,533	527,200	680,035	814,074	915,042
11		Portfolio of 65% FTSE All Share and 35% property (p=0.8)	70,599	167,332	212,914	242,746	168,525	287,407	338,472	368,699	514,432	593,896	632,842	650,823
12		Portfolio of 65% equity and 35% 15 year risk free zero coupon bonds (p=1)	54,024	152,765	219,372	276,271	140,867	274,879	361,452	436,021	501,157	606,125	712,351	803,092
13		Portfolio of 65% equity and 35% 15 year risk free zero coupon bonds (p=0.8)	52,249	129,684	162,398	183,367	136,320	234,577	269,957	292,576	487,396	521,651	540,126	551,607
14		Portfolio of 40% equity, 15% property, 22.5% 15 year risk free zero coupon bonds and 22.5% 15 year corporate bonds (p=1)	33,812	100,943	151,047	197,657	117,094	213,783	282,752	346,440	499,108	556,675	635,956	708,721
15		Portfolio of 40% equity, 15% property, 22.5% 15 year risk free zero coupon bonds and 22.5% 15 year corporate bonds (p=0.8)	32,294	81,505	101,615	116,925	112,425	175,077	196,626	212,426	484,890	466,689	459,238	458,850
			L=15				L=20				L=25			
16		Receiver swaptions	17.21%	9.11%	7.30%	6.32%	18.69%	10.88%	9.06%	7.66%	20.03%	12.57%	10.56%	8.66%

(iv) UK initial equity yield: 3.72%
UK initial property rental yield: 4.30%

(v) Not applicable – there are no significant territories other than the UK.

(vi) The following table shows the outstanding guarantees analysed by year. In addition, the guarantees in column B have a GAR at vesting at various strike rates as shown below.

Year	Guaranteed Benefit (Policies with no GAR)	Guaranteed Benefit (Policies with GAR)	PPPDA (Guaranteed Cash)
	£m	£m	£m
	A	B	C
2013	32	101	0
2014	103	93	0
2015	138	96	0
2016	25	90	0
2017	11	91	1
2018	112	96	0
2019	63	71	0
2020	89	57	0
2021	145	47	0
2022	82	46	0
2023	83	43	0
2024	91	44	0
2025	78	45	1
2026	90	35	1
2027	96	37	1
2028	102	37	1
2029	99	26	0
2030	85	23	0
2031	64	19	1
2032	63	16	0
2033	56	13	1
2034	31	10	0
2035	25	11	0
2036	19	4	0
2037	11	4	0
2038	14	3	1
2039	6	2	0
2040	3	0	0
2041	3	2	0
2042	0	2	0
2043	1	0	0
2044	1	1	0
2045	0	0	0
2046	1	1	0
2047	0	1	0

Specimen guaranteed annuity (£) per £1,000 cash:

		Annuity £ p.a.	
	Retirement Age	**Male**	**Female**
Executive Benefits Plan[1]	60	86.58	78.43
	65	100.00	88.50
	70	117.65	102.04
Personal Pension Plan[2]	60	92.60	82.50
	65	109.30	94.20
	70	133.80	111.30
	75	170.30	136.70

[1] guaranteed five years and payable monthly in advance
[2] payable annually in arrears

(vii) We carry out comprehensive tests on the output produced by the Barrie & Hibbert asset model as follows:

For UK and Overseas equities and for UK property we have verified that the ratio of the average (over the simulated scenarios) of the discounted present values of projected asset values (with income reinvested) to the original asset value are acceptably close to unity– the martingale property.

The same test has been undertaken for 15-year zero-coupon gilts and for 4 classes of zero-coupon corporate bonds with terms of 1, 5, 10, 15, 20, 25 and 30 years. Departures from unity in the average discounted present values have not had a significant impact on the valuation result.

We have verified that zero coupon bond yields calculated from the model cash output matches yields calculated from input Government spot rates and initial spot rates output from the model at time zero within an acceptable error margin.

For UK equity options we have verified, within acceptable limits, that the option prices calculated from the model output and converted into implied volatilities using the Black-Scholes formula reproduce the expected volatility surface.

We have also verified, within acceptable limits, that implied volatilities calculated from the simulation model output reproduces the market volatility term structure for 20 year at the money swaptions.

(viii) The assets and liabilities have been computed using 3,000 (1,500 antithetic pairs of) simulated scenarios. This results in standard errors in the calculated yield curve of less than 1bp for terms 1- 30 years.

For a 10-year at the money (based on the forward price) UK equity put option at a strike of 1.0, the standard error of the estimated option price represents 1.27% of its calculated value.

Similarly, for a range of swaptions with maturities between 5 and 25 years on underlying 20 year swaps the standard errors in the calculated prices represent, typically, 2.03% of these prices.

(b) Not applicable.

(c) Not applicable.

(5) Management Actions

(a) We do not assume that any scenario specific management actions take place in the stochastic model. However the model allows for our investment strategy as follows:

i) Re-balancing of property and equities during 2012 to bring the actual asset mix into balance with the strategic target.

ii) Close matching by outstanding term of fixed interest assets to liabilities by means of a swap overlay.

iii) An internal delta-hedge for equities and property which has an effect in the stress scenario.

iv) Reduction in equity/property backing as policies near guarantee date.

v) We assume that policy classes do not move from the guarantee-related asset mix band to which they are allocated at the valuation date, although in practice some change will occur in more extreme stochastic scenarios.

We will continue to apply existing market value adjustment (MVA) policy i.e. we allow for MVAs on surrender of UWP business (but with a "floor" based on a discounted value of the no MVA guarantee).

We assume that the guarantee charge will remain fixed at its current level, although in practice it may reduce from its current capped level in some scenarios or, in extreme scenarios, rise above it.

Reversionary bonus rates will remain at current levels in future years.

Future miscellaneous surplus will be nil.

vi) Except when less than the discounted value of maturity guarantees, exit charges on surrender for non-Libra policies will be 5% higher than on maturity. This differential reduces to nil over the last 10 years of the policy term.

For Libra policies, this exit charge on surrender will be 3% higher than on maturity. This differential also reduces to nil over the last 10 years of the policy term.

(b)

% UK & Overseas Equities		Current Valuation Date	Current Valuation Date Plus 5 years	Current Valuation Date Plus 10 years
	i	22%	26%	24%
	ii	Unchanged	Unchanged	Unchanged
	iii	Unchanged	Unchanged	Unchanged

Reversionary Bonus Rates on accumulating with profits		Current Valuation Date	Current Valuation Date Plus 5 years	Current Valuation Date Plus 10 years
		p.a	p.a	p.a
	i	0.5%	0.5%	0.5%
	ii	Nil	Nil	Nil
	iii	Nil	Nil	Nil

Derivative contracts do not have any significant impact on the figures shown.

(6) Persistency Assumptions

The surrender and paid-up assumptions are:

Product		Average surrender / paid-up rate for the policy years			
		1-5	6-10	11-15	16-20
CWP savings endowment	Surrender	2.0%	3.0%	1.5%	1.5%
CWP target cash endowment	Surrender	4.0%	4.0%	3.5%	3.5%
UWP savings endowment	Surrender	N/A	N/A	N/A	N/A
UWP target cash endowment	Surrender	N/A	N/A	N/A	N/A
UWP bond	Surrender	3.6%	12.2%	7.0%	7.0%
UWP bond	Automatic withdrawals(**)				
CWP Exec Pension - regular premium	PUP	10.00%	10.00%	10.00%	10.00%
CWP Exec Pension	Surrender	5.00%	5.00%	5.00%	5.00%
CWP Personal Pension - regular premium	PUP	5.40%	5.20%	3.00%	3.00%
CWP Personal Pension - regular premium	Surrender	2.18%	1.68%	2.50%	2.50%
CWP Personal Pension - single premium	Surrender	1.20%	1.50%	1.75%	1.75%
UWP individual pension - regular premium	PUP	N/A	N/A	N/A	N/A
UWP individual pension - regular premium	Surrender	N/A	N/A	N/A	N/A
UWP individual pension - single premium	Surrender	N/A	N/A	N/A	N/A

(*) The surrender rate for UWP bonds in the above table excludes an additional assumption for surrenders at the 10 year "no MVA" guarantee point. We assume 90% of policies surrender at this date. The figure in the table above has been derived assuming a 10% lapse rate in the tenth policy year which is consistent with the lapse rate for policies that have been in force for longer than 10 years.

(**) We assume that policies that are taking automatic withdrawals will continue to do so at the current rates.

We assume that future paid-up policies will lapse at the same rate as policies already paid up at the valuation date.

For pension policies surrendering within 15 years of normal retirement date a proportion of surrenders are deemed to be early retirements with associated

guaranteed annuity option entitlements. The proportion of surrenders assumed to be early retirements is 100% at normal retirement decreasing linearly to 0% 15 years prior to normal retirement.

Take up Rates of Guaranteed Annuity Options

The assumed proportion of cash in each scenario is dynamic according to the following formula: -

$$Cash = Min(L, (Max(10\%, (CxF)))x(1 - Min(t,T)/SxT))$$

where

$$F = R^{k(j)x100} x\, R^{(i-j-k(j))x100x(ABS(i-j)>semirange)}$$

and

$$k(j) = i - Min(Max(j, i-semirange), i+semirange)$$

where

L	Overall limit on cash proportion. For SAL PPP81 and Fowler Personal Pensions we set this to the IR maximum of 25%. For all other products we set it to 1.25 x C
C	Current experience assumption
F	Overall reduction factor comprising R and R' components (see below) to reflect decline in cash as interest rates decline and GARs become more valuable.
R	Reduction factor that applies outside of central "plateau" range (R=2/3)
R'	Reduction factor that applies within central "plateau" range (R'=0.9)
$k(j)$	Interim calculation variable depending on i,j, and semirange
$semirange$	Central "plateau" assumed to apply over a range from (i-semirange) to (i + semirange). Set at 1%.
t	Time in years from the valuation date
T	Period over which we recognise a decline in cash due to longevity making GARs more valuable (T=30)
S	Amount of longevity decline (S=3 so that cash declines by 1/3 over T years)
i	Average yield of a long term (20 year) benchmark conventional gilt over the period used to set the current experience assumption for the GAR take up rate. This was the 4.5 year period from 1 April 2006 to 30 September 2010 over which the average yield is 4.36%.
j	20 year gilt rate at maturity for the particular scenario

Annuitant Mortality

The mortality assumption for annuities in possession arising from the exercising of guaranteed annuity options is 5% higher than that described in Appendix 9.4, paragraph 4 (4).

(7) Policyholder Actions

Modelled policyholder behaviour is static i.e. it does not vary between the different stochastic simulations apart from GAR take up rates, which vary according to the formula in (6) above.

7. FINANCING COSTS

There is a financing arrangement in place to provide support to the long-term fund. The details of the arrangement are described fully in note 1508.

8. OTHER LONG-TERM INSURANCE LIABILITIES

No amounts have been included in Line 46 of Form 19. The amount shown in Line 47 of Form 19 is made up as follows:

	£m
Mortgage Endowment Reserve	2.0
Additional Guaranteed Annuity Option Reserve	0.3
Data errors, Litigation and Future projects	4.4
IBNR	1.8
Overdue claims	5.2
Reversionary annuities	0.2
GAR end date	6.5
Solvency II	1.7
Actuarial Systems Transformation	0.8
Asset Management Services	8.8
Other	-6.4
Total	**25.3**

(a) Endowment Compensation Reserve

Some policyholders have been given non-compliant advice to take out an endowment policy to repay a mortgage.

A realistic amount to cover the cost of providing compensation to them has been assessed from the number of complaints expected to be received, the proportion anticipated to be valid and the expected amount of compensation per case payable, account being taken of the FSA guidelines on determination of compensation. Provision has also been made for the cost of handling complaints received.

(b) Additional Guaranteed Annuity Option Reserve

Additional realistic reserves are held in respect of expected additional payments on with-profits pensions claims in 1999, 2000, 2001 and 2002. Terminal bonus on the claim amounts had been calculated by deducting an amount for the expected cost of providing the guaranteed annuity option on those claims. Subsequent legal advice has indicated that this was not in accordance with the House of Lords judgement in Hyman v Equitable Life Assurance Society.

(c) Data error provision, Litigation and Future projects

A liability has been included for additional liabilities which may arise in connection with data errors affecting the long-term business, future litigation settlement costs and future project costs.

(d) IBNR

A liability has been included for incurred but not reported claims.

(e) Overdue claims

This is a manual reserve that is held to provide for the position where, at some time in the past deferred annuities and retirement plan policies may have been removed from the administration systems but no claim payment (or pension in payment) appears to have been paid or established.

(f) Reversionary annuities

This reserve is to allow for the liability in respect of reversionary annuities that have been removed from the system and have not had a new record added which reflects the death of the main life (changing the annuity to an annuity in payment).

(g) GAR end date

This reserve is required because the realistic model is not able to allow correctly for the removal of the GAR end date at a mid year (ie 31 July 1999 for Transfer Plan and 30 June 1999 for DSS).

(h) Solvency II

The provision is to cover the costs of the Solvency II project apportioned to SAL.

(i) Actuarial Systems Transformation

This provision is to cover the costs of this project apportioned to SAL.

(j) Asset Management Services

This provision is to cover the costs of this project apportioned to SAL.

(k) Other

The main provisions with the "Other" item include AST reconciliation provision of £(22.3)m and UISL stabilisation of £10.3m.

9. REALISTIC CURRENT LIABILITIES

(a) Future Tax Adjustment

The realistic balance sheet calculations assume that tax will be payable in relation to the realistic proportion of life business. In reality the tax is calculated by reference to statutory liabilities. An adjustment is made to assume that future tax will be based on the statutory life proportion rather than the realistic life proportion.

The liability as at the valuation date amounted to £0.1m, i.e. the future tax adjustment is an asset.

(b) Additional Tax on Shareholder Transfers

An allowance is made for the additional tax arising on transfers to shareholders in respect of life business. This is calculated as a percentage of the present value of future transfers to shareholders in respect of life business; the percentage is as used in the embedded value calculation.

The liability at the valuation date amounted to £(0.5)m.

(c) Future Reinsurance Profits

The Company reinsures part of its endowment, whole life and UWP liabilities to Phoenix Life Limited ("PLL").

We recognise the value of the excess of future expected reinsurance claims over payments to the Company's policyholders.

At the valuation date the value of these excesses amounted to £12.7m in respect of endowment and whole life reinsurances to PLL and £32.5m in respect of the UWP reinsurances to PLL.

(d) Contingent Loan

At the previous valuation, a contingent loan liability of £113.6m was recognised in the regulatory and realistic valuations. At this valuation date, the contingent loan amount has been fully repaid.

The reconciliation of the realistic current liabilities to the regulatory current liabilities is:

	£m
Regulatory current liabilities	2,292.6
Future tax adjustment	(0.1)
Additional tax on shareholder transfers	0.5
Reinsurances	(45.2)
Contingent loan	0.0
Realistic current liabilities	**2,247.7**

10. RISK CAPITAL MARGIN

(a) The risk capital margin (RCM) amounts to £0m.

(i) The market risk scenario assumes that equities fall by 20% and real estates rise by 18.82%.

(ii) The nominal change in yields for fixed interest securities for the purpose of the market risk scenario is 0.41%. This is consistent with a rise, or fall of 17.5% in the long term gilt yield. A fall in yields is the most onerous scenario.

(iii) The average change in spread for bonds backing with-profits liabilities, other than those issued or guaranteed by a credit risk scenario exempt organisation, is 2.77%:

(a) The change in the market value of bonds backing with profits liabilities, other than those issued or guaranteed by a credit risk scenario exempt organisation, is (8.55)%
(b) not applicable
(c) not applicable
(d) not applicable
(e) The change in the market value of swaps is 0.34%. The change in value of the spreadlocks is (0.63)%.

(iv) The average change in persistency experience is a 32.5% reduction in future lapse and paid-up rates. The overall percentage change in the realistic value of liabilities from applying the persistency risk is (0.55)%.

(v) The change in asset value in (iii) is materially independent of the change in liability values in (iv).

(b) In the stress scenarios we further assume that:

(i) Annual bonus rates will be reduced to nil on traditional business and UWP business.

(ii) Since the previous valuation, there has been a change to the liquidity premium methodology for the credit risk scenario. The previous methodology fully allocated the credit risk as a default risk. The current methodology assumes that 31% of the increase in bond spreads is the credit risk scenario relates to changes in default expectations and that 69% of the increase in bond spreads is reflected in a higher liquidity premium than in both conditions.

(iii) It is assumed that the planned benefit enhancements will be reduced by £98.0m.

(iv) These actions are consistent with our PPFM and investment strategy.

(v) The estimated effect of assuming reduced annual bonuses is to reduce the RCM by £9.3m.

(vi) If the management actions described in 10(b)(i) were integrated into the projection of assets and liabilities and thus disclosed in 6(5)(a), the effect on table 6(5)(b) would be that reversionary bonus rates on accumulating with profits policies would be nil for each future year in question and for each scenario. There would be no change to future proportions of equity assets.

(vii) The requirements of INSPRU 1.3.188R would be met if the actions described in 10(b)(i) were integrated into the projection of assets and liabilities.

(c) (i) The risk capital margin is covered by a combination of assets in the long term fund (being part of the contingent loan deemed not repayable) and shareholder fund which is principally invested in money market instruments and government gilts.

(ii) The Company has in place an internal capital support memorandum which provides for the transfer of contingent loan within the shareholders' fund to the long term fund should the need arise.

11. TAX

Tax on assets backing the with-profits benefits reserve for BLAGAB business is charged to those asset shares approximately and allowance is made for relief on expenses.

Tax on any future policy related liabilities for BLAGAB business is allowed for in determining those liabilities.

An approximate adjustment is made to allow for any differences between the tax calculated as described and the tax expected on a corporate basis. The adjustment is calculated within the stochastic model.

12. DERIVATIVES

At the valuation date the company continued to hold a number of significant positions in interest rate swaps and swaptions. These positions are reviewed from time to time to ensure they continue to meet the risk reduction requirements of the fund.

The interest rate swaps are held in connection with the fixed interest portfolio and are used to improve the matching between the assets and the liabilities against changes in the yield curve for the long-term fund as a whole.

The interest rate swaptions are held in respect of the GAR liabilities. Receiver swaptions are held to cover part of the GAR liability where the with-profits benefits reserve is invested in equities or property. Payer swaptions are held where the with-profits benefits reserve is invested in fixed interest assets and the expected annuity benefit arising is matched by fixed interest investments.

The company has also entered into a number of swap spread lock contracts. These are used to hedge against the risk of swap spreads widening on the long (30 to 50 year) interest rate swaps that are currently held. They are structured as swaps or contracts for differences with the payout dependent on the swap spread at maturity relative to the initial swap spread, and can be a net asset or liability.

The contracts are denominated in sterling, are with approved credit institutions and collateral arrangements are in place to cover any risk of default.

The fund holds a small amount of exchange traded equity and gilt futures to assist efficient portfolio management. The fund holds currency futures to hedge currency risk on overseas investments.

As at the valuation date, the type and value of derivatives held are as follows:

Derivative	£m
Swaps	219.4
Swaptions	7.1
Spreadlocks	-348.7
Currency Futures	0.0
Equity Futures	0.0
Gilt Futures	-0.1

13. ANALYSIS OF WORKING CAPITAL

The movement in working capital over the twelve months to the valuation date is shown in the following table.

	£m
	YE12
Opening working capital	**0.0**
Write back provision to repay contingent loan	136.0
Write back planned benefit enhancements to zeroise working capital	0.0
Revised opening working capital	**136.0**
Modelling changes	(22.8)
Retrospective changes to asset shares	(25.8)
Other opening adjustments	0.0
Mismatch profits and losses	125.4
Assumption changes	
- Non-economic	35.7
- Economic	0.6
- Policyholder actions	0.0
Impact of new business	0.0
Other Variances	
- New provisions	48.8
- Compensation costs	0.0
- Management actions	(32.9)
- Other non-economic	0.0
- Contingent loan increase	(113.6)
- Unexplained	(6.3)
Closing working capital before zeroisation	**145.1**
Provision to repay contingent loan	0.0
Planned benefit enhancements to distribute estate	(228.5)
Impact of planned enhancement on future policy related liabilities	83.4
Closing working capital	**0.0**

The following table shows a breakdown of the liabilities shown on line 47 of Form 19 at the start and end of the year:

	Current Valuation £m	Previous Valuation £m
Mortgage Endowment Reserve	2.0	2.1
Additional Guaranteed Annuity Option Reserve	0.3	0.3
Data errors, Litigation and Future projects	4.4	21.4
IBNR	1.8	1.7
Overdue claims	5.2	3.9
Reversionary annuities	0.2	7.2
GAR end date	6.5	6.5
Solvency II	1.7	3.8
Actuarial Systems Transformation	0.8	2.3
Asset Management Services	8.8	5.3
Other provisions	(6.4)	16.2
Form 19 Line 47 total	**25.3**	**70.7**

The following table shows a breakdown of the liabilities shown on line 51 of Form 19 at the start and end of the year:

Accounting liabilities	2,292.6	2,733.8
Future tax profit	(0.1)	(1.0)
Additional tax on shareholders' transfers	0.5	0.8
Reassurance assets	(45.2)	(55.3)
Contingent loan	0.0	0.0
Form 19 Line 51 total	**2,247.7**	**2,678.3**

14. OPTIONAL DISCLOSURE

As in previous years, a provision has been established to distribute all of the realistic estate so the published realistic estate in Form 19 is zero and the value of the liabilities is the realistic value of the assets available to the fund. To ensure consistency with the other entities within the group, the PLL with-profits funds (including this Fund) have changed their methodology to make an allowance for the subsequent impact of this provision on the cost of guarantees.

APPENDIX 9.4A

Scottish Mutual With-Profits Fund

2. ASSETS

(1) Economic Assumptions For Valuing Non-Profit Business

There is no material amount of non-profit business.

(2) Amount Determined Under INSPRU 1.3.33(2)(R)

Not applicable.

(3) Valuation Of Contracts Written Outside The Fund

Not applicable.

(4) Different Sets Of Assumptions

Not applicable.

(5) De Minimis Limit

Not applicable.

3. WITH-PROFITS BENEFITS RESERVE LIABILITIES

(1) Calculation Of With-Profits Benefits Reserve

The with-profits benefits reserve and the future policy related liabilities for the different classes of business are shown in the following table:

Product Type	Method	With-profits benefits reserve	Future policy related liabilities
		£m	£m
CWP- Life	Retrospective	101	25
CWP- Life	Prospective	29	5
UWP- Life	Retrospective	255	42
Life Total		**384**	**72**
CWP Pensions with GAO	Retrospective	279	195
CWP Pensions with GAO	Prospective	29	21
CWP Pensions with GCO	Retrospective	207	252
Group Full Profit	Prospective	181	28
Other DA	Prospective	148	44
UWP Pensions, 0%	Retrospective	229	38
UWP Pensions, 4%	Retrospective	354	93
Pensions Total		**1,427**	**672**
Total		**1,811**	**744**

(2) Correspondence With Form 19

The above reconciles to lines 31 and 49 of Form 19.

(3) With-Profits Benefits Reserves Below De Minimis Limit

Not applicable: the table in (1) covers all products in the Fund.

(4) Types Of Products

The level of disclosure in the table above corresponds to material groupings of contracts offering significant variances in policyholder benefits. For example, contracts with and without guaranteed cash options and guaranteed annuity options are identified separately and unitised with-profits business is separated from conventional with-profits business. Unitised with-profits pensions business is split between that with a guaranteed minimum bonus and that without.

4. WITH-PROFITS BENEFITS RESERVE – RETROSPECTIVE METHOD

(1) Retrospective Methods

(a) All contracts have been calculated on an individual policy basis.

(b) No contracts have been valued on a grouped basis.

(c) Not applicable as no contracts have been valued on a grouped basis.

(2) Significant Changes To Valuation Method

(a) There have been no significant changes in the method of calculating the with-profits benefits reserve.

(b) No policies were valued using approaches more approximate than used for the previous valuation.

(3) Expense Allocation

(a) Expenses are equal to the fixed policy fee charged by Pearl Group Management Services for the provision of administration services, as set out in the management services agreement.

(b) Expense investigations (reviews of the management services agreement) are carried out annually.

(c) The expenses for the business for the year to the valuation date were:

	Item	£m
(i)	Initial Expenses [1]	0.00
(ii)	Maintenance Expenses	6.41
	Investment Expenses	2.57
(iii)	Method	Average expense charge deducted
(iv)	Expenses charged other than to with-profits benefits reserve	0.00

[1] Since the company is closed to new business (apart from contractual increments etc.) the initial expenses are negligible.

Investment expenses were deducted from the with-profits benefits reserve at a rate of 0.167% p.a for life business and 0.132% p.a. for pensions business.

(4) Significant Charges

There is a hedge asset in place to cover a substantial part of the guarantees within the fund. The costs of rebalancing this hedge are charged to the with-profits benefits reserve. Asset share enhancements together with these charges are combined, to give the percentage change in the with-profits benefits reserve shown in the following tables:

Asset Share Group	Current valuation	Previous Valuation
CWP Life	0.92%	(0.12)%
CWP Pensions	0.93%	(0.13)%
UWP Life	1.05%	0.00%
UWP Pensions	1.05%	0.00%

Asset Share Group	Current valuation	Previous Valuation
UWP GBP SMI Bond	1.05%	0.00%
UWP USD SMI Bond	1.07%	0.00%
UWP EUR SMI Bond	1.10%	0.00%

(5) Charges For Non-Insurance Risk

Annual management charges deducted from the fund in respect of unitised with-profits business amounted to £8.0m over the period.

(6) Ratio Of Claims To Reserve

The average percentage of the ratio of total claims paid on with-profits insurance contracts compared to the sum of the with-profits benefits reserve for those claims plus any past miscellaneous surplus attributed to the with-profits benefits reserve less any miscellaneous deficit attributed to the with profits benefits reserves in respect of those claims, for the three preceding financial years is:

Year	Ratio of claims to asset shares
Previous year -1	104.3%
Previous year	105.5%
Current year	103.3%

(7) Allocated Return

The average rates of return attributed to the with-profits benefits reserve of a policy depends on the asset mix for it. The average rates of investment return (net of tax) are:

	Investment returns
WP Conventional Life	9.39%
WP Conventional Pensions	9.41%
UWP Life (with minimum bonus)	8.74%
UWP Life (no minimum bonus)	9.71%
UWP Life (no minimum bonus) US	10.39%
UWP pensions (with minimum bonus)	9.41%
UWP pensions (no minimum bonus)	10.16%
WP Fund Euro	14.34%

5. WITH-PROFITS BENEFITS RESERVE – PROSPECTIVE METHOD

(1) Key Assumptions

Prospective methods have been used for with-profits whole life business and for some conventional pensions, as shown in paragraph 3 (1).

With-Profits Whole Life Business

The with-profits benefits reserve is determined using a bonus reserve valuation with the following assumptions:

Economic Assumptions	
Discount Rate p.a. (net of investment expense)	2.04%
Investment Return p.a. (net of investment expense)	2.04%
Expense Assumptions	
Investment Expense p.a.	0.167%
Per Policy Expenses p.a. (premium-paying)	£48.76
Per Policy Expenses p.a. (paid-up)	£34.13
Expense Inflation p.a.	3.88%
Bonus Assumptions	
Reversionary Bonus Rate	0.00%
Terminal Bonus Rate	See below
Decrements	
Mortality	74% AM92
Persistency	Nil

Future terminal bonus rates vary by duration in force at time of payment. Sample terminal bonus rates are as follows:

Term	Rate
5	4%
10	4%
15	19%
20	28%
25	34%
30	39%
35	68%
40+	141%

Conventional Pensions Business

The with-profits benefits reserve is determined using a gross premium valuation with the following assumptions:

Gross Premium Valuation

	Group Full Profit	Other Deferred Annuity	With-Profit Annuity	Other Annuity
Economic Assumptions				
Discount Rate p.a. (net)	2.50%	2.50%	2.50%	2.50%
Investment Return p.a. (net)	2.50%	2.50%	2.50%	2.50%
Expense Assumptions				
Investment Expense p.a.	0.13%	0.13%	0.13%	0.13%
Per policy - premium-paying	63.61	63.61	32.23	63.61
Per policy - paid up	0.00	44.53	0.00	0.00
Expense Inflation p.a.	4.88%	4.88%	4.88%	4.88%
Bonus Assumptions				
Reversionary Bonus	-	-	0.50%	-

No terminal bonus is assumed and there is no allowance for lapses or mortality.

(2) Different Sets Of Assumptions

Not applicable.

6. COST OF GUARANTEES, OPTIONS AND SMOOTHING

(1) De Minimis Limit

The cost of smoothing is nil as all benefits are based on unsmoothed asset shares.

(2) Valuation Methods For Guarantees etc.

Summary details of the business with guarantees are given in the following table:

	Cost of Guarantees & Options	Extent of Grouping	No of Individual policies	No of model points
All business	Stochastic model	All business	269,760	3,261

a) Cost of Guarantees & Options

The costs of guarantees are determined using a stochastic model, with the asset returns being generated by a proprietary model. The following items were calculated stochastically:

(i) Guaranteed annuity option reserves;
(ii) Guaranteed cash option reserves;
(iii) The reserves required in addition to asset share to meet guaranteed benefits.

Guaranteed annuity options allow policyholders to convert a funded cash sum into an annuity on guaranteed terms. Guaranteed cash options allow policyholders to convert a funded annuity benefit into a lump sum on guaranteed terms.

The calculations were carried out using a risk neutral approach.

(b) (i) In the stochastic model, no projections are carried out on individual policy data.

(ii) All of the contracts are valued on a grouped basis. However, the values for the with-profits benefits reserve are calculated on an individual basis and added to the data file before the data is grouped.

(iii) Policies are grouped according to product code, annuity factor, terminal bonus series, reversionary bonus series, early retirement option indicator, pension code and product class. They are also split into bands by policy term and according to the degree by which the guarantees are in or out of the money.

The values of guarantees are estimated using closed form approximations before and after grouping. These are compared to ensure that the model points are a good representation of the individual policy data

(c) The cost of options and guarantees for a small number of residual policies is approximated using a proxy contract which has been modelled accurately. The model points for the proxy contract are scaled such that in aggregate the policy count, asset share and guaranteed benefits are equal to the total values for these approximately modelled policies.

(3) Significant Changes

There have been no significant changes since the previous valuation.

(4) Further Information on Stochastic Approach

(a) (i) The stochastic model is used to value the following guarantees and options:

- No negative terminal bonus guarantees at maturity and death within conventional with-profits contracts.
- Market value reduction-free spot maturity guarantees within unitised with-profits contracts.
- Guaranteed annuity options on conventional with-profits contracts.
- Guaranteed cash options on conventional with-profits contracts.

Of these, the guaranteed annuity options and market value reduction-free guarantees are "in the money" at the valuation date. For the other guarantees, the extent to which they are "in the money" depends on duration and policy size.

(ii) The asset returns in the stochastic model were generated by a proprietary model licensed from Barrie & Hibbert. The asset classes modelled are UK equities, UK property, UK corporate bonds, UK gilts, EU equities, EU corporate bonds and EU gilts.

Interest Rate

UK gilt returns are modelled using a gilts + 10bps calibration in a monthly LIBOR Market Model. The Government Nominal Bond yield curve is a direct input into the model. Euro gilt returns are modelled in a similar fashion based on the closest equivalent to the Government Nominal bond yield curve.

The calibration at the valuation date was as follows:

	GBP			EUR		
Term	**Govt. + 10bp**	**Model**	**Difference (Model - Market) bps**	**Govt. + 10bp (equivalent)**	**Model**	**Difference (Model - Market) bps**
1	0.39%	0.39%	(0)	0.17%	0.17%	(0)
2	0.70%	0.70%	(0)	0.36%	0.36%	0
3	1.14%	1.14%	(0)	0.75%	0.76%	1
4	1.59%	1.60%	0	1.24%	1.25%	1
5	2.03%	2.03%	(0)	1.79%	1.79%	1
7	2.82%	2.79%	(3)	2.78%	2.76%	(2)
10	3.64%	3.65%	1	3.55%	3.57%	3
15	4.36%	4.36%	0	3.57%	3.53%	(4)
20	4.65%	4.66%	1	3.42%	3.44%	1
25	4.58%	4.56%	(1)	3.46%	3.45%	(1)

The volatility within the model is calibrated to the market implied volatility for at the money swaptions. (The calibration at the valuation date is as follows:

	GBP			EUR		
Term	**Market (%)**	**Model (%)**	**Difference (Model - Market) bps**	**Market (%)**	**Model (%)**	**Difference (Model - Market) bps**
1	23.90	28.17	427	30.10	32.48	238
2	22.90	24.13	123	29.10	29.69	59
3	21.60	22.62	102	27.80	28.67	87
4	20.40	21.16	76	26.80	27.42	62
5	19.40	19.74	34	25.90	26.16	26
7	17.60	17.59	(1)	24.50	23.66	(84)
10	16.00	15.90	(10)	23.50	20.67	(283)
15	14.20	14.11	(9)	22.70	16.66	(604)
20	13.40	12.82	(58)	20.90	14.75	(615)
25	13.50	11.46	(204)	18.80	12.92	(588)
30	13.40	10.67	(273)	16.70	11.79	(491)

Inflation is modelled as the difference between the nominal and real yield curves. Real interest rates are modelled using a two-factor Vasicek model, which is calibrated to be consistent with GBP and EUR index linked government bond prices as at 31 December 2012.

Equities and Property

Excess returns over risk free rates on UK equities, overseas equities and property are modelled using separate (but correlated) lognormal models. Separate equity models are used for UK and Euro equities and each model uses a local volatility surface calibrated to market implied volatilities for a range of strikes and maturities.Volatility is modelled stochastically using Heston's stochastic volatility model and incorporates a discontinuous component using Merton's jump model. Alternative investments are treated as UK equities.

The UK asset model was calibrated by reference to the implied volatility of FTSE 100 options for a range of strikes (from 0.8 to 1.2) and maturities of up to 10 years. All strikes are expressed as a proportion of at-the-money.

Implied volatility data (%) at the valuation date is shown below:

Market (%)

	Strike		
Term	**0.8**	**1**	**1.2**
1	23.90	17.60	14.00
3	25.10	21.50	18.30
5	26.30	23.40	21.00
7	27.40	24.90	22.70
9	28.20	26.00	24.10

Model (%)

	Strike		
Term	**0.8**	**1**	**1.2**
1	23.65	18.69	12.09
3	26.29	22.72	19.22
5	26.85	24.34	22.02
7	27.28	25.24	23.53
9	27.50	25.89	24.64

Difference (Model – Market) bps

	Strike		
Term	**0.8**	**1**	**1.2**
1	(25)	109	(191)
3	119	122	92
5	55	94	102
7	(12)	34	83
9	(70)	(11)	54

The Euro asset model was calibrated by reference to the implied volatility of Eurostoxx 50 options for a range of strikes (from 0.8 to 1.2) and maturities of up to 10 years. All strikes are expressed as a proportion of at-the-money.

Implied volatility data (%) at the valuation date is shown below:

Market (%)

	Strike		
Term	**0.8**	**1**	**1.2**
1	27.50	22.30	19.80
3	26.90	24.20	22.30
5	26.70	24.60	23.00
7	26.10	24.40	23.10
9	26.20	24.60	23.50

Model (%)

	Strike		
Term	**0.8**	**1**	**1.2**
1	26.04	22.00	18.24
3	26.14	23.44	21.11
5	25.72	23.90	22.22
7	25.80	24.33	23.03
9	25.70	24.42	23.30

Difference (Model – Market) bps

	Strike		
Term	**0.8**	**1**	**1.2**
1	(146)	(30)	(156)
3	(76)	(76)	(119)
5	(98)	(70)	(78)
7	(30)	(7)	(7)
9	(50)	(18)	(20)

Property volatility has been adjusted to be a weighted average of equity and direct property due to the investment in the UKCPT.

Corporate bond

Corporate bond returns are modelled using the extended Jarrow-Lando-Turnbull model. This describes bond prices in terms of a real-world transition matrix, which gives the probability of a transition to each credit rating over one year. Risk neutral transition probabilities are assumed to vary stochastically. The transition matrix is consistent with best estimates based on historic data of long term transition probabilities and spread volatilities and corporate bond prices. The model was fitted to a sample of predominantly investment grade sterling corporate bonds.

The asset model uses a credit transition matrix. The fit of the model is targeted to the market spread on a 7 year A rated bond only. Credit derivatives are not used to derive market implied transition probabilities.

The following are examples of observed correlations of year 10 returns from the scenarios used (ZCB = zero coupon bond):

	Output Correlations @ Year 10						
	Cash	Equities	Overseas Equities	5yr Govt ZCB	15yr Govt ZCB	5yr Corp ZCB	15yr Corp ZCB
Cash	1.00	(0.12)	(0.12)	(0.81)	(0.83)	(0.65)	(0.75)
Equities		1.00	0.53	0.16	0.17	0.31	0.27
Overseas equities			1.00	0.15	0.17	0.23	0.22
5yr Govt ZCB				1.00	0.94	0.81	0.86
15yr Govt ZCB					1.00	0.76	0.91
5yr Corp ZCB						1.00	0.92
15yr Corp ZCB							1.00

Nominal foreign exchange rates are modelled as the combination of real exchange rates and inflation rates where real exchange rates follow a mean-reverting process and are calibrated to the long-term best estimates derived by Barrie & Hibbert.

(iii) The table below gives further information on the stochastic approach used based on 3000 scenarios:

		Asset type (all UK assets)	K=0.75				K=1				K=1.5			
	n		5	15	25	35	5	15	25	35	5	15	25	35
	r	Annualised compound equivalent of the risk free rate assumed for the period. (to two decimal places)	1.01%	2.70%	3.49%	3.73%	x	x	x	x	x	x	x	x
1		Risk-free zero coupon bond	951,063	670,887	424,135	278,015	x	x	x	x	x	x	x	x
2		FTSE All Share Index (p=1)	108,496	257,640	344,216	424,923	214,512	407,719	515,402	614,732	546,087	761,988	897,231	1,021,321
3		FTSE All Share Index (p=0.8)	105,963	226,836	270,499	305,495	209,499	360,052	406,883	444,812	533,927	675,739	713,940	745,935
4		Property (p=1)	91,738	212,323	310,272	388,304	219,277	371,001	488,798	580,482	587,946	751,492	886,786	996,568
5		Property (p=0.8)	88,736	180,515	234,085	268,720	213,321	319,907	375,503	408,350	575,412	659,853	695,626	713,992
6		15 year risk free zero coupon bond (p=1)	21,280	29,018	23,990	27,323	87,980	96,605	105,308	136,100	500,056	500,598	512,467	536,523
7		15 year risk free zero coupon bond (p=0.8)	20,241	21,432	11,149	6,061	83,692	68,646	43,340	34,189	485,138	388,839	299,146	250,746
8		15 year risk free bonds (p=1)	24,848	36,895	37,442	47,234	99,600	116,974	128,639	155,009	499,228	497,466	514,805	541,819
9		15 year risk free bonds (p=0.8)	23,674	27,059	17,931	13,937	95,045	85,761	62,507	55,515	484,444	390,465	310,282	264,937
10		Portfolio of 65% FTSE All Share and 35% property (p=1)	78,793	195,636	276,796	352,955	183,078	337,991	440,445	532,613	537,038	698,503	816,399	930,414
11		Portfolio of 65% FTSE All Share and 35% property (p=0.8)	76,425	167,607	208,866	242,964	177,926	291,774	336,073	371,597	524,222	609,340	633,928	659,469
12		Portfolio of 65% equity and 35% 15 year risk free zero coupon bonds (p=1)	57,767	150,334	213,225	274,388	149,592	278,114	357,209	435,797	510,454	621,739	714,866	810,855
13		Portfolio of 65% equity and 35% 15 year risk free zero coupon bonds (p=0.8)	55,874	126,293	156,494	180,596	144,837	235,421	264,043	290,705	496,618	534,398	538,685	553,115
14		Portfolio of 40% equity, 15% property, 22.5% 15 year risk free zero coupon bonds and 22.5% 15 year corporate bonds (p=1)	35,122	93,928	142,404	193,777	122,192	208,529	273,763	342,847	504,580	564,531	632,102	712,001
15		Portfolio of 40% equity, 15% property, 22.5% 15 year risk free zero coupon bonds and 22.5% 15 year corporate bonds (p=0.8)	33,527	75,043	96,189	113,784	117,395	168,437	187,082	208,372	490,267	471,469	452,569	456,365

(iv) The equity dividend yields used for the UK and Euro business are:

UK initial equity yield: 3.7%;
EU initial equity yield: 3.2%.

(v) The following table shows (for K=1 only) for the risk free rate and lines 1 and 2 for the Eurozone, the only economy outside the UK to which the fund has significant asset exposure. They are denominated in euros and based on 3000 scenarios.

	Asset Type (EU Assets)	K=1			
n	Duration	5	15	25	35
	Strike price per €1m	1,035,959	1,436,756	2,029,624	2,895,757
r	Annualised compound equivalent of the risk free rate	0.71%	2.45%	2.87%	3.08%
1	Risk-Free Coupon Bond	965,290	696,012	492,702	345,333
2	ESTOXX (p=1)	210,739	366,126	464,048	562,518

(vi) The fund has significant hedge instruments that form a close match, in aggregate, to the liabilities of the fund. The hedge instruments include equity put options and swaptions. The following table compares the market prices (on a mid basis) for these instruments to the values obtained using the asset model.

Outstanding Term (Years)	Options (£)		Swaptions (£)	
	Market	Model	Market	Model
1-5	29,413,628	29,362,648	3,490,644	6,955,116
6-10	36,931,442	36,448,091	17,307,505	25,556,207
11-15	41,819,467	40,617,633	38,848,421	54,308,676
16-20	0	0	0	0
Total	**108,164,537**	**106,428,371**	**59,646,570**	**86,819,999**

Note that the modelled results in the above table are produced using a gilts+10 based calibration for consistency with the approach to valuing the liabilities. If a swaps-based calibration is used (which would be consistent with how the market would price these contracts) the discrepancy between the market and modelled values is significantly smaller.

(vii) The asset models of each main asset class have been validated by comparing the net present value of a 40-year projection of the future cashflows under the asset, including capital gains and losses, with the current value of the asset.

This was done for each of the dominant economies in which the fund has assets invested, namely the UK and the EU. At 3000 scenarios and significant durations (short to medium terms), the difference between the average net present value of each asset class of each economy and the current asset value was close (i.e. not statistically significant). This confirms that the total return for relevant assets is a martingale and risk neutral.

(viii) The assets and liabilities have been computed using 3000 (1500 antithetic pairs of) simulated scenarios. At 1000 scenarios, the cost of options and guarantees converges to ±£3.0m at a 95% confidence interval. When the number of scenarios is increased to 3000, the cost of options and guarantees converges to ±£1.7m.

(b) Not applicable.

(c) Not applicable.

(5) Management Actions

(a) No management actions were assumed in calculating the working capital.

(b) Not applicable.

(6) Persistency Assumptions

The surrender and paid-up rates are:

Product		Average Surrender/Paid-up rate for the policy years			
		1-5	6-10	11-15	16-20
CWP Savings Endowment	Surrender	4.00%	4.00%	4.00%	4.00%
CWP Target Cash Endowment	Surrender	4.00%	4.00%	4.00%	4.00%
UWP Bond	Surrender	26.00%	30.80%	15.00%	15.00%
CWP Pension Regular Premium	Surrender	5.00%	5.00%	5.00%	5.00%
CWP Pension Single Premium	Surrender	2.00%	2.00%	2.00%	2.00%
UWP Indiv Pension Regular Premium	Surrender	5.20%	7.80%	9.00%	9.00%
UWP Indiv Pension Single Premium	Surrender	14.00%	20.00%	16.00%	16.00%

Take-up Rates of Guaranteed Annuity Options

The assumed take-up rate varies with the degree of "money-ness" of the option, where this is defined as (market annuity rate / guaranteed annuity rate) at the retirement date.

Moneyness Upper Limit (%)	Take-up Rate (%)
100	0
140	75
160	85
9999	95

Take-up Rates of Guaranteed Cash Options

The assumed take-up rate varies with the degree of "money-ness" of the option, where this is defined as (GCO factor / market annuity factor) at the retirement date.

Moneyness Upper Limit (%)	Take-up Rate (%) IP Pensions	Take-up Rate (%) MP Pensions
60	5	5
90	10	30
100	25	30
9999	100	100

Annuitant Mortality

Deferred pension contracts (post vesting) include guaranteed annuity options.

The mortality assumption for annuities in possession arising from the exercising of guaranteed annuity options is the same as that is described in Appendix 9.4, paragraph 4 (4).

(7) Policyholders' Actions

Exercise of MVR-free options

The rate at which these options are exercised varies with the degree of "money-ness" of the option, where this is defined as (asset share / face value of units) at the MVR-free date. For the UK business (excluding the SMI Euro Bond) the rates are:

Moneyness Upper Limit (%)	Take-up Rate (%)
75	100
90	75
100	25
9999	0

For the SMI Euro bond the rates are:

Moneyness Upper Limit (%)	Take-up Rate (%)
75	100
90	85
100	25
9999	0

7. FINANCING COSTS

The fund has no financing costs as at the valuation date.

8. OTHER LONG-TERM INSURANCE LIABILITIES

No amounts have been included in Line 46 of Form 19.

The amount shown in Line 47 of Form 19 is composed of the present value of future transfers to shareholders and technical provisions.

The present value of future transfers to shareholders was £6.7m at the valuation date.

Technical provisions of £15.6m were held in the Fund at the valuation date.

The provisions held at the valuation date are shown in the table below:

Data Provision	0.0
Future Litigation Costs	1.3
Project and Other Costs	0.8
VAT provision for potential charges from external outsourcers	1.3
Costs falling outside MSAs	0.2
Solvency II	0.9
Actuarial System Transformation	0.2
Strachan Policy Review	0.1
TCF	0.1
Asset Management Services	2.1
Mandarin	0.0
Capital Regulatory Buyout	0.3
Extra provison for Data grouping	8.4
Total Additional Reserves	**15.6**

9. REALISTIC CURRENT LIABILITIES

The realistic current liabilities are obtained from the regulatory value by adjusting to allow for recoverable deferred tax assets. The reconciliation of the realistic current liabilities to the regulatory current liabilities is:

	£m
Regulatory current liabilities	996.7
- Recoverable deferred tax asset	0.0
- Recoverable tax on excess E	(0.0)
Realistic current liabilities	**996.6**

10. RISK CAPITAL MARGIN

(a) The risk capital margin is nil.

(i) The market risk scenario assumes that equities fall (rise) by an amount which depends on the territory in question:

% Change in Equity Markets	**%**
UK and "Non-significant" Overseas Holdings	20.00
Europe	20.00
USA	20.00

There was also a 12.5% rise / fall in property stress applied.

The equity fall and the property fall were the more onerous scenarios

(ii) The nominal change in yields for fixed interest securities for the purpose of the market risk scenario again depends on the territory in question:

Nominal change in yields on fixed interest securities	**Nominal Change in Yields**	**% change in long term gilt yield**
UK and "Non-significant" Overseas Holdings	0.41%	17.50%
Europe	0.32%	17.50%
USA	0.37%	17.50%

An increase in yields is the more onerous scenario.

(iii) The average change in spread is 1.7%. Changes in market values are:

(a) (9.4)%;
(b) Not applicable;
(c) Not applicable;
(d) Not applicable;
(e) Not applicable.

(iv) The average change in persistency experience is a 32.5% reduction in future lapse and paid-up rates. The overall percentage change in the realistic value of liabilities from applying the persistency stress is 1.9%.

(v) The change in asset value in (iii) is materially independent of the change in liability values in (iv).

(b) There is a collateral promise on the unitised with-profits business under which the cost of conventional with-profits guarantees must not be borne by unitised with-profits policyholders. However, planned enhancements arising on either unitised with-profits or conventional with-profits business may be used to reduce any deficit arising in the other category having first covered their own deficit.

(i) In the stress scenarios the following additional assumption is made:

The planned benefit enhancements will be reduced by £72.6m, resulting in £nil working capital under the stressed conditions.

(ii) The effect on the risk capital margin of reducing the planned benefit enhancements is a reduction of £72.6m.

(iii) No changes would be made to equity backing ratios or bonus rates if the management actions were taken.

(iv) The requirements of INSPRU 1.3.188(R) would be met if the actions described in paragraph 10 (b) (i) were integrated into the projection of assets and liabilities.

(c)

(i) The risk capital margin is covered by the assets of the Scottish Mutual With-Profits Fund.

(ii) The scheme for the funds merger as at 1 January 2009 includes a provision that in the event that the value of the assets of the fund falls below the regulatory minimum, support will be provided to the fund by way of a loan arrangement from the Non Profit Fund or the Shareholders' Fund to the extent that the Board determines there are assets in those funds available to make such a loan.

11. TAX

Tax on assets backing the with-profits benefits reserve for BLAGAB business is charged to those asset shares approximately and allowance is made for relief on expenses.

Tax on any future policy related liabilities for BLAGAB business is allowed for in determining those liabilities.

An amount in respect of deferred tax on anticipated recoverable investment losses has been used to reduce current liabilities.

12. DERIVATIVES

A number of structured derivative contracts are held within the fund at the valuation date to enable the fund to withstand the impact of adverse conditions. They are constructed from at-the-money vanilla over-the-counter derivatives – equity put options, equity futures, interest rate swaps, interest rate swaptions and spreadlocks – with outstanding terms ranging from 1 to 20 years.

As at the valuation date the total market price of these derivatives, on a bid basis, is £141.8m. This is split as follows:

Type	GBP (£m)	EUR (£m)	USD(£m)	Total (£m)
Swaps	48.54	0.00	0.00	48.54
Swaptions	58.48	0.00	0.00	58.48
Options	106.66	1.40	0.00	108.06
Spreadlocks	-75.46	0.00	0.00	-75.46
Futures	-0.02	0.02	0.15	0.14
Total derivatives backing guarantees	**138.20**	**1.42**	**0.15**	**139.76**
Other derivatives backing benefit reserves				2.06
Total				**141.82**

The other derivatives form part of asset backing asset shares and constitute less than 0.2% of the total.

13. ANALYSIS OF WORKING CAPITAL

The movement in working capital over the twelve months to the valuation date is shown in the following table.

	£m
Opening working capital	**0.0**
Write back planned benefit enhancements to zeroise working capital	252.6
Revised opening working capital	**252.6**
Opening adjustments	(6.2)
Restated opening working capital	**246.4**
Investment return on working capital	12.9
Mismatch profits and losses	0.0
Assumption changes	
- Non-economic	3.6
- Economic	(1.8)
- Policyholder actions	(0.7)
Impact of new business	0.0
Other Variances	
- Estate Distribution	(24.8)
- Non-economic	7.9
- Economic	13.0
- Changes in provisions	6.9
- Unexplained	2.5
Closing working capital before zeroisation	**266.0**
Planned benefit enhancements to distribute estate	(330.8)
Impact of planned enhancement on future policy related liabilities	64.9
Closing working capital	**0.0**

The following table shows a breakdown of the liabilities shown on line 47 of Form 19 at the start and end of the year:

£m	Current Valuation	Previous Valuation
Present value of future CWP transfers	6.7	8.9
Technical Provisions	15.6	25.7
Any other long term insurance liabilities	**22.3**	**34.6**

The following table shows a breakdown of the liabilities shown on line 51 of Form 19 at the start and end of the year:

£m	Current Valuation	Previous Valuation
Regulatory current liabilities	996.7	1159.4
- Recoverable deferred tax asset	0.0	0.0
- Recoverable tax on excess E	(0.0)	(0.1)
Realistic current liabilities	**996.6**	**1159.3**

14. OPTIONAL DISCLOSURE

As in previous years, a provision has been established to distribute all of the realistic estate so the published realistic estate in Form 19 is zero and the value of the liabilities is the realistic value of the assets available to the fund. To ensure consistency with the other entities within the group, the PLL with-profits funds (including this Fund) have changed their methodology to make an allowance for the subsequent impact of this provision on the cost of guarantees.

APPENDIX 9.4A

SPI With-Profits Fund

2. ASSETS

(1) Economic Assumptions For Valuing Non-Profit Business

There is no material amount of non-profit business.

(2) Amount Determined Under INSPRU 1.3.33(2)(R)

Not applicable.

(3) Valuation Of Contracts Written Outside The Fund

Not applicable.

(4) Different Sets Of Assumptions

Not applicable.

(5) De Minimis Limit

Not applicable.

3. WITH-PROFITS BENEFITS RESERVE LIABILITIES

(1) Calculation Of With-Profits Benefits Reserve

Product Type	Method	With-profits benefits reserve	Future policy related liabilities
		£m	£m
Whole life assurance	Prospective	93	27
Endowment	Retrospective	879	229
Unitised with-profits Life	Retrospective	105	27
Other	Retrospective	50	15
Life Total		**1,127**	**298**
Deferred annuity- with GCO	Retrospective	86	114
Deferred annuity- without GCO	Retrospective	164	141
Pure Endowment- with GCO	Retrospective	6	8
Unitised with-profits Pensions	Retrospective	457	125
SPI Funding	Retrospective	60	38
Pensions Total		**774**	**426**
Total		**1,901**	**724**
Form 19 Line 31		1,901	
Form 19 Line 49			724

"Other" business in this table covers smaller conventional with-profits life products for which the costs of guarantees and options are calculated approximately.

(2) Correspondence With Form 19

The above reconciles to lines 31 and 49 of Form 19.

(3) With-Profits Benefits Reserves Below De Minimis Limit

Not applicable: the table in (1) covers all products in the Fund.

(4) Types Of Products

The level of disclosure in the table above corresponds to material groupings of contracts offering significant variances in policyholder benefits. For example, contracts with and without guaranteed cash options are identified separately and unitised with-profits business is separated from conventional with-profits business.

4. WITH-PROFITS BENEFITS RESERVE – RETROSPECTIVE METHOD

(1) Retrospective Methods

(a) All contracts have been calculated on an individual policy basis.

(b) No contracts have been valued on a grouped basis.

(c) Not applicable as no contracts have been valued on a grouped basis.

(2) Significant Changes To Valuation Method

(a) There have been no significant changes in the method of calculating the with-profits benefits reserve.

(b) No policies were valued using approaches more approximate than used for the previous valuation.

(3) Expense Allocation

(a) The 2009 Court Scheme sets out the charges for the SPI With-Profits Fund. The scheme also specifies that in any financial year, these charges (calculated on a per policy basis) shall not be less than 85% or more than 115% of the costs actually incurred by Phoenix in respect of the business in the SPI With-Profits Fund. These charges are reviewed by the With-Profits Committee with a view to ensuring that they comply with these terms.

(b) Expense investigations (reviews of the management services agreement) are carried out annually.

(c) The expenses for the business for the year to the valuation date were:

	Item	£m
(i)	Initial Expenses [1]	0.0
(ii)	Maintenance Expenses	10.6
	Investment Expenses	6.7
(iii)	Method	Average expense charge deducted
(iv)	Expenses charged other than to with-profits benefits reserve	1.8

[1] Since the company is closed to new business (apart from contractual increments etc.), the initial expenses are negligible.

Investment expenses were deducted from the with-profits benefits reserve at a rate of 0.140% p.a. for traditional and deposit administration business.

(4) Significant Charges

There is a hedge asset in place to cover a substantial part of the guarantees within the fund. The costs of rebalancing this hedge were previously charged to the with-profits benefits reserve but are now charged to the estate. The resulting percentage reduction in the with-profits benefits reserve is shown in the following table.

Asset Share Group	Current Valuation
CWP Life and Pensions	0.00%
UWP Life and Pensions	0.00%

(5) Charges For Non-Insurance Risk

Charges in respect of accumulating with-profits business are as determined by the policy terms and conditions. In particular, an annual management charge is deducted from asset shares. This is 0.60% for life business and 0.85% for pensions business.

(6) Ratio Of Claims To Reserve

Average ratio of total claims to asset shares:

Year	Ratio of claims to asset shares
Previous year -1	100%
Previous year	98%
Current year	100%

(7) Allocated Return

The average rates of return attributed to the with-profit benefits reserve of a policy depends on the asset mix for it. Investment returns for Pensions products are gross of tax and those for Life products are net of tax. Investment returns for the year ending 2012 are:

	Investment Return	
Product Type	**UK**	**Irish**
Conventional Life	7.81%	9.20%
Conventional Pensions	8.80%	10.04%
UWP Life	8.03%	9.63%
UWP Pensions (with g'teed min bonus)	8.80%	10.04%
UWP Pensions (with no min bonus)	9.26%	11.23%
SPI Funding	8.80%	10.04%

The asset allocation is specific to each product. The following table summaries the investment strategy for each product grouping within the fund:

	Fixed Interest	Total equities	Property
WP_Fund_conv_life	50.0	42.0	8.0
WP_Fund_conv_pens	70.0	25.2	4.8
WP_Fund_uwp_life	40.0	51.0	9.0
WP_Fund_uwp_pens_wmb	70.0	25.2	4.8
WP_Fund_uwp_pens_nmb	40.0	51.0	9.0
WP_Fund_Euro_conv_life	50.0	37.5	12.5
WP_Fund_Euro_conv_pens	70.0	22.5	7.5
WP_Fund_SPI	70.0	25.0	5.0

5. WITH-PROFITS BENEFITS RESERVE – PROSPECTIVE METHOD

(1) Key Assumptions

A prospective method has been used for with-profits whole life business. The with-profits benefits reserve for this business is determined using a bonus reserve valuation with the following assumptions:

Economic Assumptions		
Discount Rate p.a. (net of investment expense)	2.44%	
Investment Return p.a.	2.44%	
Expense Assumptions	**UK**	**Ireland**
Investment Expense p.a.	0.14%	0.14%
Per Policy Expenses p.a. (premium-paying)	£41.33	£123.94
Per Policy Expenses p.a. (paid-up)	£28.93	£123.94
Expense Inflation p.a.	3.88%	0.00%
Bonus Assumptions		
Reversionary Bonus Rate	0.00%	0.00%
Terminal Bonus Rate	See below	See below

Future terminal bonus rates vary by duration in force at time of payment. Different rates apply for UK and Ireland business. Sample terminal bonus rates are as follows:

Term	UK	Ireland (if applicable)
5	0%	0%
10	51%	32%
15	53%	42%
20	28%	28%
25	42%	51%
30	48%	59%
35	83%	83%
40	135%	146%
50+	202%	204%

There is no allowance for lapses. The mortality assumptions are based on the TM92 / TF92 tables, with a distinction between smokers and non-smokers:

Mortality	
Male non-smoker	90% TM92_MNS
Male smoker	95% TM92_MS
Female non-smoker	90% TF92_FNS
Female smoker	80% TF92_FS

(2) Different Sets Of Assumptions

Not applicable.

6. COST OF GUARANTEES, OPTIONS AND SMOOTHING

(1) De Minimis Limit

The cost of smoothing is nil as all benefits are based on unsmoothed asset shares.

(2) Valuation Methods For Guarantees etc.

	Cost of Guarantees & Options	Extent of Grouping	No of Individual policies	No of model points
All business	Stochastic model	All business	**353,129**	**3,337**

(a) Cost of Guarantees & Options

The costs of guarantees are determined using a stochastic model, with the asset returns being generated by a proprietary model. The following items were calculated stochastically:

(i) Guaranteed annuity option reserves
(ii) The reserves required in addition to asset share to meet guaranteed benefits

The calculations were carried out using a risk neutral approach.

(b) (i) In the stochastic model, no projections are carried out on individual policy data.

(ii) All of the contracts are valued on a grouped basis. However, the values for the with-profits benefits reserve are calculated on an individual basis and added to the data file before the data is grouped.

(iii) Policies are grouped according to product code, annuity factor, terminal bonus series, reversionary bonus series, early retirement option indicator, pension code and product class. They are also split into bands by policy term and according to the degree by which the guarantees are in or out of the money.

The values of guarantees are estimated using closed form approximations before and after grouping. These are compared to ensure that the model points are a good representation of the individual policy data

(3) Significant Changes

There have been no significant changes since the previous valuation.

(4) Further Information on Stochastic Approach

(a) (i) The stochastic model is used to value the following guarantees and options:

- No negative terminal bonus guarantees at maturity and death within conventional with-profits contracts.
- Market value reduction-free spot maturity guarantees within unitised with-profits contracts.

- Guaranteed annuity options on conventional with-profits contracts.

Of these, the guaranteed annuity options and market value reduction-free guarantees are strongly "in the money" at the valuation date. For the guarantee of no negative terminal bonus, the extent to which it is "in the money" depends on duration and policy size.

(ii) The asset returns in the stochastic model were generated by a proprietary model licensed from Barrie & Hibbert. The asset classes modelled are UK equities, UK property, UK corporate bonds, UK gilts, EU equities, EU corporate bonds and EU gilts.

Interest Rate

UK gilt returns are modelled using a gilts + 10bps calibration in a monthly LIBOR Market Model. The Government Nominal Bond yield curve is a direct input into the model. Euro gilt returns are modelled in a similar fashion based on the closest equivalent to the Government Nominal bond yield curve.

The calibration at the valuation date was as follows:

	GBP			EUR		
Term	Govt. + 10bp	Model	Difference (Model - Market) bp	Govt. + 10bp (equivalent)	Model	Difference (Model - Market) bp
1	0.39%	0.39%	(0.1)	0.17%	0.17%	(0.0)
2	0.70%	0.70%	(0.2)	0.36%	0.36%	0.0
3	1.14%	1.14%	(0.1)	0.75%	0.76%	0.8
4	1.59%	1.60%	0.3	1.24%	1.25%	1.0
5	2.03%	2.03%	(0.3)	1.79%	1.79%	0.5
7	2.82%	2.79%	(2.9)	2.78%	2.76%	(2.3)
10	3.64%	3.65%	0.8	3.55%	3.57%	2.6
15	4.36%	4.36%	0.1	3.57%	3.53%	(4.2)
20	4.65%	4.66%	1.2	3.42%	3.44%	1.4
25	4.58%	4.56%	(1.5)	3.46%	3.45%	(0.8)

The volatility within the model is calibrated to the market implied volatility for at the money swaptions. The calibration at the valuation date is as follows:

	GBP			EUR		
Term	Market	Model	Difference (Model - Market) bp	Market	Model	Difference (Model - Market) bp
1	23.90	28.17	427	30.10	32.48	238
2	22.90	24.13	123	29.10	29.69	59
3	21.60	22.62	102	27.80	28.67	87
4	20.40	21.16	76	26.80	27.42	62
5	19.40	19.74	34	25.90	26.16	26
7	17.60	17.59	(1)	24.50	23.66	(84)
10	16.00	15.90	(10)	23.50	20.67	(283)
15	14.20	14.11	(9)	22.70	16.66	(604)
20	13.40	12.82	(58)	20.90	14.75	(615)
25	13.50	11.46	(204)	18.80	12.92	(588)
30	13.40	10.67	(273)	16.70	11.79	(491)

Inflation is modelled as the difference between the nominal and real yield curves. Real interest rates are modelled using a two-factor Vasicek model,

which is calibrated to be consistent with GBP and EUR index linked government bond prices as at 31 December 2012.

Equities and Property

Excess returns over risk free on UK equities, overseas equities and property are modelled using separate (but correlated) models. Separate equity models are used for UK and Euro equities and each model is calibrated to capture market volatilities that vary by strike and duration. Volatility is modelled stochastically using Heston's stochastic volatility model and incorporates a discontinuous component using Merton's jump model. Alternative investments are treated as UK equities.

The UK asset model was calibrated by reference to the implied volatility of FTSE100 options for a range of strikes (from 0.8 to 1.2) and maturities of up to 10 years. All strikes are expressed as a proportion of at-the-money.
Implied volatility data (%) at the valuation date is shown below:

Market (%)

	Strike		
Term	**0.8**	**1**	**1.2**
1	23.90	17.60	14.00
3	25.10	21.50	18.30
5	26.30	23.40	21.00
7	27.40	24.90	22.70
9	28.20	26.00	24.10

Model (%)

	Strike		
Term	**0.8**	**1**	**1.2**
1	23.65	18.69	12.09
3	26.29	22.72	19.22
5	26.85	24.34	22.02
7	27.28	25.24	23.53
9	27.50	25.89	24.64

Difference (Model – Market) %

	Strike		
Term	**0.8**	**1**	**1.2**
1	(25)	109	(191)
3	119	122	92
5	55	94	102
7	(12)	34	83
9	(70)	(11)	54

The Euro asset model was calibrated by reference to the implied volatility of Eurostoxx 50 options for a range of strikes (from 0.8 to 1.2) and maturities of up to 10 years. All strikes are expressed as a proportion of at-the-money.

Implied volatility data (%) at the valuation date is shown below:

Market (%)

	Strike		
Term	**0.8**	**1**	**1.2**
1	27.50	22.30	19.80
3	26.90	24.20	22.30
5	26.70	24.60	23.00
7	26.10	24.40	23.10
9	26.20	24.60	23.50

Model (%)

	Strike		
Term	**0.8**	**1**	**1.2**
1	26.04	22.00	18.24
3	26.14	23.44	21.11
5	25.72	23.90	22.22
7	25.80	24.33	23.03
9	25.70	24.42	23.30

Difference (Model – Market) %

	Strike		
Term	**0.8**	**1**	**1.2**
1	(146)	(30)	(156)
3	(76)	(76)	(119)
5	(98)	(70)	(78)
7	(30)	(7)	(7)
9	(50)	(18)	(20)

Property volatility has been adjusted to be a weighted average of equity and direct property due to the investment in the UKCPT.

Corporate bond

Corporate bond returns are modelled using the extended Jarrow-Lando-Turnbull model. This describes bond prices in terms of a real-world transition matrix, which gives the probability of a transition to each credit rating over one year. Risk neutral transition probabilities are assumed to vary stochastically. The transition matrix is consistent with best estimates based on historic data of long term transition probabilities and spread volatilities and corporate bond prices. The model was fitted to a sample of predominantly investment grade sterling corporate bonds.

The asset model uses a credit transition matrix. The fit of the model is targeted to the market spread on a 7 year A rated bond only. Credit derivatives are not used to derive market implied transition probabilities.

The following are examples of observed correlations of year 10 returns from the scenarios used (ZCB = zero coupon bond):

	Output Correlations @ Year 10									
	Cash	Equities	Property	Overseas Equities	5yr Govt ZCB	15yr Govt ZCB	5yr Corp ZCB	15yr Corp ZCB	5yr Index Linked ZCB	15yr Index Linked ZCB
Cash	1	-0.12	N/A	-0.12	-0.81	-0.83	-0.65	-0.75	N/A	N/A
Equities		1	N/A	0.53	0.16	0.17	0.31	0.27	N/A	N/A
Property			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Overseas equities				1	0.15	0.17	0.23	0.22	N/A	N/A
5yr Govt ZCB					1	0.94	0.81	0.86	N/A	N/A
15yr Govt ZCB						1	0.76	0.91	N/A	N/A
5yr Corp ZCB							1	0.92	N/A	N/A
15yr Corp ZCB								1	N/A	N/A
5yr Index Linked ZCB									N/A	N/A
15yr Index Linked ZCB										N/A

Nominal foreign exchange rates are modelled as the combination of real exchange rates and inflation rates where real exchange rates follow a mean-reverting process and are calibrated to the long-term best estimates derived by Barrie & Hibbert.

(iii) The table below gives further information on the stochastic approach used based on 3000 scenarios:

		Asset type (all UK assets)	K=0.75				K=1				K=1.5			
	n		5	15	25	35	5	15	25	35	5	15	25	35
	r	Annualised compound equivalent of the risk free rate assumed for the period. (to tw o decimal places)	1.01%	2.70%	3.49%	3.73%	x	x	x	x	x	x	x	x
1		Risk-free zero coupon bond	951,063	670,887	424,135	278,015	x	x	x	x	x	x	x	x
2		FTSE All Share Index (p=1)	108,496	257,640	344,216	424,923	214,512	407,719	515,402	614,732	546,087	761,988	897,231	1,021,321
3		FTSE All Share Index (p=0.8)	105,963	226,836	270,499	305,495	209,499	360,052	406,883	444,812	533,927	675,739	713,940	745,935
4		Property (p=1)	91,738	212,323	310,272	388,304	219,277	371,001	488,798	580,482	587,946	751,492	886,786	996,568
5		Property (p=0.8)	88,736	180,515	234,085	268,720	213,321	319,907	375,503	408,350	575,412	659,853	695,626	713,992
6		15 year risk free zero coupon bond (p=1)	21,280	29,018	23,990	27,323	87,980	96,605	105,308	136,100	500,056	500,598	512,467	536,523
7		15 year risk free zero coupon bond (p=0.8)	20,241	21,432	11,149	6,061	83,692	68,646	43,340	34,189	485,138	388,839	299,146	250,746
8		15 year risk free bonds (p=1)	24,848	36,895	37,442	47,234	99,600	116,974	128,639	155,009	499,228	497,466	514,805	541,819
9		15 year risk free bonds (p=0.8)	23,674	27,059	17,931	13,937	95,045	85,761	62,507	55,515	484,444	390,465	310,282	264,937
10		Portfolio of 65% FTSE All Share and 35% property (p=1)	78,793	195,636	276,796	352,955	183,078	337,991	440,445	532,613	537,038	698,503	816,399	930,414
11		Portfolio of 65% FTSE All Share and 35% property (p=0.8)	76,425	167,607	208,866	242,964	177,926	291,774	336,073	371,597	524,222	609,340	633,928	659,469
12		Portfolio of 65% equity and 35% 15 year risk free zero coupon bonds (p=1)	57,767	150,334	213,225	274,388	149,592	278,114	357,209	435,797	510,454	621,739	714,866	810,855
13		Portfolio of 65% equity and 35% 15 year risk free zero coupon bonds (p=0.8)	55,874	126,293	156,494	180,596	144,837	235,421	264,043	290,705	496,618	534,398	538,685	553,115
14		Portfolio of 40% equity, 15% property, 22.5% 15 year risk free zero coupon bonds and 22.5% 15 year corporate bonds (p=1)	35,122	93,928	142,404	193,777	122,192	208,529	273,763	342,847	504,580	564,531	632,102	712,001
15		Portfolio of 40% equity, 15% property, 22.5% 15 year risk free zero coupon bonds and 22.5% 15 year corporate bonds (p=0.8)	33,527	75,043	96,189	113,784	117,395	168,437	187,082	208,372	490,267	471,469	452,569	456,365
			L=15				L=20				L=25			
16		Receiver sw aptions	17.97%	9.56%	7.41%	6.25%	19.65%	11.44%	9.19%	7.58%	21.13%	13.22%	10.72%	8.56%

(iv) UK initial equity yield: 3.72%
Overseas initial equity yield: 3.17%

(v) The following table shows entries (K=1 only) for the risk free rate and lines 1 and 2 for the Eurozone, the only economy outside the UK to which the fund has significant asset exposure. They are denominated in euros and based on 3,000 scenarios.

	Asset Type (EU Assets)	K=1			
n	Duration	5	15	25	35
	Strike price per €1m	1,035,959	1,436,756	2,029,624	2,895,757
r	Annualised compound equivalent of the risk free rate	0.71%	2.45%	2.87%	3.08%
1	Risk-Free Coupon Bond	965,290	696,012	492,702	345,333
2	ESTOXX (p=1)	210,739	366,126	464,048	562,518

(vi) The fund has significant hedge instruments that form a close match, in aggregate, to the liabilities of the fund. The hedge instruments include equity put options and swaptions. The following table compares the market prices (on a mid basis) for these instruments to the values obtained using the asset model.

Outstanding Term (Years)	Options (£)		Swaptions (£)	
	Market	Model	Market	Model
1-5	37,373,361	36,896,277	830,704	2,568,012
6-10	19,692,543	19,164,162	2,527,297	4,520,772
11-15	26,160,856	24,765,068	6,621,437	9,802,873
16-20	0	0	0	0
Total	**83,226,760**	**80,825,507**	**9,979,438**	**16,891,657**

Note that the modelled results in the above table are produced using a gilts+10 based calibration for consistency with the approach to valuing the liabilities. If a swaps-based calibration is used (which would be more consistent with how the market would price these contracts) the discrepancy between the market and modelled values is significantly smaller.

(vii) The asset models of each main asset class have been validated by comparing the net present value of a forty year projection of the future cashflows under the asset, including capital gains and losses, with the current value of the asset.

This was done for each of the dominant economies in which the fund has assets invested, namely the UK and the EU. At 3000 scenarios, the difference between the average net present value of each asset class of each economy and the current asset value was close (i.e. not statistically significant). This confirms that the total return is a martingale and risk neutral.

(viii) The assets and liabilities have been computed using 3,000 (1,500 antithetic pairs of) simulated scenarios. At 1,000 scenarios, the cost of options and guarantees converges to $\pm$£2.284m at a 95% confidence interval. When the number of scenarios is increased to 3,000, the cost of options and guarantees converges to $\pm$£1.341m.

(b) Not applicable.

(c) Not applicable.

(5) Management Actions

(a) No management actions were assumed in calculating the working capital.

(b) Not applicable.

(6) Persistency Assumptions

The surrender and paid-up rates are:

Product		Average Surrender/Paid-up rate for			
		1-5	6-10	11-15	16-20
CWP Savings Endowment	Surrender	6.40%	6.80%	8.70%	4.50%
CWP Target Cash Endowment	Surrender	6.40%	6.80%	8.70%	4.50%
UWP Bond	Surrender	6.00%	10.00%	10.00%	10.00%
UWP Target Cash Endowment	Surrender	6.00%	10.00%	10.00%	10.00%
UWP Bond	Automatic withdrawals	13.00%	11.40%	11.00%	11.00%
CWP Pension Regular Premium	PUP	2.25%	3.85%	4.25%	4.25%
CWP Pension Regular Premium	Surrender	2.00%	5.00%	5.00%	5.00%
CWP Pension Single Premium	Surrender	2.00%	5.00%	5.00%	5.00%
UWP Indiv Pension Regular Premium	PUP	4.50%	3.30%	3.00%	3.00%
UWP Indiv Pension Regular Premium	Surrender	5.50%	6.30%	6.50%	6.50%
UWP Indiv Pension Single Premium	Surrender	5.50%	6.30%	6.50%	6.50%

Take-up Rates of Guaranteed Annuity Options

The assumed take-up rate varies with the degree of "money-ness" of the option, where this is defined as (market annuity rate / guaranteed annuity rate) at the retirement date.

Moneyness Upper Limit (%)	Take-up Rate (%)
100	0
140	75
160	85
9999	95

Annuitant Mortality

Deferred pension contracts (post vesting) include guaranteed annuity options.

The mortality assumption for annuities in possession arising from the exercising of guaranteed annuity options is the same as that is described in Appendix 9.4, paragraph 4 (4).

(7) Policyholders' Actions

Exercise of MVR-free options

The rate at which these options are exercised varies with the degree of "money-ness" of the option, where this is defined as (asset share / face value of units) at the MVR-free date. For the UK business the rates are:

Moneyness Upper Limit (%)	Take-up Rate (%)
75	100
90	75
100	25
9999	0

7. FINANCING COSTS

The fund has no financing costs as at the valuation date.

8. OTHER LONG-TERM INSURANCE LIABILITIES

No amounts have been included in Line 46 of Form 19. The amount shown in Line 47 of Form 19 is made up as follows:

	£m
Present value of future transfers	38.0
Additional charges on UWP	8.5
Statutory Liabilities for NP GAOs	13.1
Future projects and issues	2.3
VAT	1.5
Costs falling outside MSAs	0.1
TCF	0.1
Solvency II	1.0
Actuarial Systems Transformation	0.2
Strachan	0.2
Percana	2.6
Capita Regulatory Buyout	0.2
Mandarin Fees	0.0
Credit default Peak 1 provision	0.0
Fender	2.6
AST reconciliation impacts	22.6
Total	**92.8**

9. REALISTIC CURRENT LIABILITIES

The reconciliation of the realistic current liabilities to the regulatory current liabilities is:

Description	
Regulatory current liabilities	879.0
Recoverable deferred tax asset	0.0
Recoverable tax on excess E	(0.6)
Total	**878.4**

10. RISK CAPITAL MARGIN

(a) The risk capital margin is nil.

(i) The market risk scenario assumes that equities fall (rise) by an amount which depends on the territory in question:

% Change in Equity Markets	%
UK and "Non-significant" Overseas Holdings	20.00
Europe	20.00
USA	20.00

The equity rise and the property rise were the more onerous scenarios.

(ii) The nominal change in yields for fixed interest securities for the purpose of the market risk scenario again depends on the territory in question:

Nominal change in yields on fixed interest securities	Nominal Change in Yields	% change in long term gilt yield
UK and "Non-significant" Overseas Holdings	0.41%	17.50%
Europe	0.32%	17.50%
USA	0.37%	17.50%

In each case this is consistent with a rise or fall of 17.5% in the appropriate long term gilt yield. A reduction in yields is the more onerous scenario.

(iii) The average change in spread is 1.59%. Changes in market values are:

(a) (8.42%)
(b) Not applicable
(c) Not applicable
(d) Not applicable
(e) Not applicable

(iv) The average change in persistency experience is a 32.5% reduction in future lapse and paid-up rates. The overall percentage change in the realistic value of liabilities from applying the persistency stress is 1.21%.

(v) The change in asset value in (iii) is materially independent of the change in liability values in (iv).

(b) (i) In the stress scenarios the following additional assumption is made:

The planned benefit enhancements will be reduced by £128.56m, resulting in £nil working capital under the stressed conditions.

(ii) The effect on the risk capital margin of reducing the planned benefit enhancements is a reduction of £128.56m.

(iii) No changes would be made to equity backing ratios or bonus rates if the management actions were taken.

(iv) The requirements of INSPRU 1.3.188(R) would be met if the actions described in paragraph 10 (b) (i) were integrated into the projection of assets and liabilities.

(c) Assets covering risk capital margin

(i) The risk capital margin is covered by the assets of the long-term fund.

(ii) The scheme for the funds merger as at 1 January 2009 includes a provision that in the event that the value of the assets of the fund falls below the regulatory minimum, support will be provided to the fund by way of a loan arrangement from the Non-Profit Fund or the Shareholders Fund to the extent that the Board determines there are assets in those funds available to make such a loan.

(d) A stock lending arrangement is in place at the current valuation which created a liability and an asset of equal value from a balance sheet perspective. Under the terms of the agreement the stock lending at the current valuation does not result in material risk under the stress scenarios as stock lending assets are matched to stock lending liabilities on a daily mark to market basis. As such no allowance has been made for this in the RCM scenarios under Peak 2 reporting.

11. TAX

Tax on assets backing the with-profits benefits reserve for BLAGAB business is charged to those asset shares approximately and allowance is made for relief on expenses.

Tax on any future policy related liabilities for BLAGAB business is allowed for in determining those liabilities.

An amount in respect of deferred tax on anticipated recoverable investment losses has been used to reduce current liabilities.

12. DERIVATIVES

A number of structured derivative contracts are held within the fund at the valuation date to enable the fund to withstand the impact of adverse conditions. They are constructed from at-the-money vanilla over-the-counter derivatives – equity put options, equity futures, interest rate swaps, interest rate swaptions and spreadlocks – with outstanding terms ranging from 1 to 20 years.

As at the valuation date the total market price of these derivatives, on a bid basis, is £157.56m. This is split as follows:

Type	GBP (£m)	EUR (£m)	Total (£m)
Swaps	25.67	57.35	83.02
Swaptions	7.46	2.13	9.59
Options	60.56	22.85	83.41
Futures	(0.02)	(0.09)	(0.11)
Spreadlocks	(19.81)	0.00	(19.81)
Total derivatives backing guarantees	**73.86**	**82.23**	**156.09**
Other derivatives backing benefit reserves			1.47
Total			**157.56**

The other derivatives form part of the assets backing asset shares and constitute less than 0.1% of the total.

13. ANALYSIS OF WORKING CAPITAL

The movement in working capital over the twelve months to the valuation date is shown in the following table.

	£m
	Current Valuation
Opening working capital	0.0
Write back planned benefit enhancements to zeroise working capital	272.9
Revised opening working capital	**272.9**
Opening adjustments and modelling changes	39.2
Restated opening working capital	**312.1**
Investment return on working capital	12.2
Mismatch profits and losses	0.0
Assumption changes	
- Non-economic	(1.6)
- Economic	(3.6)
- Policyholder actions	0.0
Impact of new business	0.0
Other variances	
- Non-economic	76.2
- Economic	29.8
- Changes in provisions	40.0
- Asset share enhancements	(110.4)
- Unexplained	(9.6)
Closing working capital before zeroisation	**345.1**
Planned benefit enhancements to distribute estate	(365.4)
Impact of planned enhancement on future policy related liabilities	20.3
Closing working capital	**0.0**

The following table shows a breakdown of the liabilities shown on line 47 Form 19 at the start and end of the year:

£m	Current Valuation	Previous Valuation
Discounted value of future transfer to shareholders	38.0	34.4
Excess charges on UWP fund	8.5	8.4
Mathematical reserves in respect of non-profit GAOs	13.1	10.4
Provisions	33.3	77.7
Total	**92.82**	**130.78**

The following table shows a breakdown of the liabilities shown on line 51 Form 19 at the start and end of the year:

£m	Current Valuation	Previous Valuation
Regulatory current liabilities	879.0	1092.6
Recoverable deferred tax asset	0.0	0.0
Recoverable tax on excess E	(0.6)	(0.7)
Realistic current liabilities	**878.4**	**1091.9**

14. OPTIONAL DISCLOSURE

As in previous years, a provision has been established to distribute all of the realistic estate so the published realistic estate in Form 19 is zero and the value of the liabilities is the realistic value of the assets available to the fund. To ensure consistency with the other entities within the group, the PLL with-profits funds (including this Fund) have changed their methodology to make an allowance for the subsequent impact of this provision on the cost of guarantees.

APPENDIX 9.4A

NPI WITH-PROFITS FUND

As part of the transfer of NPIL to PLL on 1st January 2012 a new NPI WP fund was created. NPIL held predominantly non-profit business but the unit-linked business had a unitised with-profit (UWP) option and this business transferred to NPI WP.

The UWP business is wholly reinsured to Phoenix Life Assurance Limited (the former Pearl Assurance Limited), including associated expenses and charges; the NPI WP fund therefore has no net assets. Asset shares and any bonuses paid by the NPI WP fund are determined by the reinsurer. As a consequence the NPI WP fund does not require the appointment of a With-Profits Actuary. Further to this it is also not the intention to complete Appendix 9.4a since the detailed questions are not applicable.

Returns under the Accounts and Statements Rules

Statement of information on the Actuary appointed to perform the With-Profits Actuary function required by rule 9.36

Phoenix Life Limited

Global business

Financial year ended 31 December 2012

From 1 April 2012 to 31 December 2012, the actuary who was appointed to perform the with-profits actuary function for for the Britannic Industrial Branch Fund and the Britannic With-Profits Fund was Mr K J Arnott.

1 (a) During the year Mr Arnott held 244 shares in Phoenix Group Holdings ("PGH"), the ultimate holding company, under the Company's Share Incentive Plan. He also held options to subscribe for 59,471 shares in PGH granted under the Company's Long Term Incentive Plan and the Save As You Earn Scheme (SAYE).

(b) Mr Arnott had no other pecuniary interest with the insurer during the year.

(c) The aggregate of the remuneration and value of other benefits receivable by Mr Arnott from the insurer in respect of 2012 was £419,372.

(d) Mr Arnott was a member of the PGL Pension Scheme throughout the year, and was entitled to the standard benefits under the rules of the scheme.

2 The insurer has made a request of Mr Arnott to furnish to it the particulars specified in rule 9.36(1) of IPRU(INS). The above particulars were obtained from the insurer's Human Resources records with the permission of Mr Arnott.

Note 1

Under rule 9.36(4) of IPRU(INS), reference to the insurer includes reference to any body corporate which is the insurer's subsidiary undertaking or parent undertaking and to any other subsidiary undertakings of its parent undertaking.

Returns under the Accounts and Statements Rules

Statement of information on the Actuary appointed to perform the With-Profits Actuary function required by rule 9.36

Phoenix Life Limited

Global business

Financial year ended 31 December 2012

Throughout the year, the actuary who was appointed to perform the with-profits actuary function for the 90% With-Profits Fund, 100% With-Profits Fund, Phoenix With-Profits Fund, Scottish Mutual With-Profits Fund, SPI With-Profits Fund, SAL With-Profits Fund and NPI With-Profits Funds was Mr A E Burke.

1 (a) During the year Mr Burke held 244 shares in Phoenix Group Holdings ("PGH"), the ultimate holding company, under the Company's Share Incentive Plan. He also held options to subscribe for 30,208 shares in PGH granted under the Company's Long Term Incentive Plan and the Save As You Earn Scheme (SAYE).

(b) Mr Burke held an insurance policy issued by the insurer in the normal course of business, the transactions being of a minor nature.

(c) The aggregate of the remuneration and value of other benefits receivable by Mr Burke from the insurer in respect of 2012 was £225,460.

(d) Mr Burke was a member of the PGL Pension Scheme throughout the year, and was entitled to the standard benefits under the rules of the scheme.

2 The insurer has made a request of Mr Burke to furnish to it the particulars specified in rule 9.36(1) of IPRU(INS). The above particulars were obtained from the insurer's Human Resources records with the permission of Mr Burke.

Note 1

Under rule 9.36(4) of IPRU(INS), reference to the insurer includes reference to any body corporate which is the insurer's subsidiary undertaking or parent undertaking and to any other subsidiary undertakings of its parent undertaking.

Returns under the Accounts and Statements Rules

Statement of information on the Actuary appointed to perform the With-Profits Actuary function required by rule 9.36

Phoenix Life Limited

Global business

Financial year ended 31 December 2012

Throughout the year, the actuary who was appointed to perform the with-profits actuary function for the Alba With-Profits Fund was Ms H C Jones.

1 (a) During the year Ms Jones held options to subscribe for 1,604 shares in Phoenix Group Holdings, the ultimate holding company, granted under the Company's Long Term Incentive Plan and the Save As You earn Scheme (SAYE).

(b) Ms Jones had no other pecuniary interest with the insurer during the year.

(c) The aggregate of the remuneration and value of other benefits receivable by Ms Jones from the insurer in respect of 2012 was £224,997.

(d) Ms Jones was a member of the PGL Pension Scheme throughout the year, and was entitled to the standard benefits under the rules of the scheme.

2 The insurer has made a request of Ms Jones to furnish to it the particulars specified in rule 9.36(1) of IPRU(INS). The above particulars were obtained from the insurer's Human Resources records with the permission of Ms Jones.

Note 1

Under rule 9.36(4) of IPRU(INS), reference to the insurer includes reference to any body corporate which is the insurer's subsidiary undertaking or parent undertaking and to any other subsidiary undertakings of its parent undertaking.

Returns under the Accounts and Statements Rules

Statement of information on the Actuary appointed to perform the With-Profits Actuary function required by rule 9.36

Phoenix Life Limited

Global business

Financial year ended 31 December 2012

From 1 January 2012 to 31 March 2012, the actuary who was appointed to perform the with-profits actuary function for the Britannic Industrial Branch Fund and the Britannic With-Profits Fund was Mr A Rendell.

1 (a) During the year Mr Rendell held options to subscribe for 27,614 shares in Phoenix Group Holdings, the ultimate holding company, granted under the Company's Long Term Incentive Plan and the Save As You Earn Scheme (SAYE).

(b) Mr Rendell had no other pecuniary interest with the insurer during the year.

(c) The aggregate of the remuneration and value of other benefits receivable by Mr Rendell from the insurer in respect of 2012 was £215,482.

(d) Mr Rendell was a member of the PGL Pension Scheme throughout the year, and was entitled to the standard benefits under the rules of the scheme.

2 The insurer has made a request of Mr Rendell to furnish to it the particulars specified in rule 9.36(1) of IPRU(INS). The above particulars were obtained from the insurer's Human Resources records with the permission of Mr Rendell.

Note 1

Under rule 9.36(4) of IPRU(INS), reference to the insurer includes reference to any body corporate which is the insurer's subsidiary undertaking or parent undertaking and to any other subsidiary undertakings of its parent undertaking.

Returns under the Accounts and Statements Rules

Certificate required by rule 9.34(1)

Phoenix Life Limited

Global business

Financial year ended 31 December 2012

We certify that:

(1) (a) the return has been properly prepared in accordance with the requirements in IPRU(INS), GENPRU and INSPRU as modified by the waivers in supplementary notes 0201; and

(b) we are satisfied that:

(i) throughout the financial year, the insurer has complied in all material respects with the requirements in SYSC and PRIN as well as the provisions of IPRU(INS), GENPRU and INSPRU; and

(ii) it is reasonable to believe that the insurer has continued so to comply subsequently, and will continue so to comply in future.

(2) (a) in our opinion, premiums for contracts of long-term insurance business entered into during the financial year and the resulting income earned are sufficient, under reasonable actuarial methods and assumptions, and taking into account the other financial resources of the insurer that are available for the purpose, to enable the insurer to meet its obligations in respect of those contracts and, in particular to establish adequate mathematical reserves;

(b) the sum of the mathematical reserves and the deposits received from reinsurers as shown in Form 14 constitute proper provision at the end of the financial year for the long-term insurance business liabilities (including all liabilities arising from deposit back arrangements but excluding other liabilities which had fallen due before the end of the financial year) including any increase in those liabilities arising from a distribution of surplus as a result of an actuarial investigation as at that date into the financial condition of the long-term insurance business;

(c) the with profits funds have been managed in accordance with the Principles and Practices of Financial Management, as established, maintained and recorded under COBS 20.3; and

(d) the directors, have in preparing the return, taken and paid due regard to:

(i) advice from every actuary appointed by the insurer to perform the actuarial function in accordance with SUP 4.3.13R; and

(ii) advice from every actuary appointed by the insurer to perform the with-profits actuary function in accordance with SUP 4.3.16AR.

M J Merrick	A Moss	M D Ross
.....	.....	.....
Chief Executive	Director	Director

Date: 18 March 2013

Returns under the Accounts and Statement Rules

Independent auditor's report to the directors pursuant to rule 9.35 of the Interim Prudential Sourcebook for Insurers

Phoenix Life Limited

Global business

Financial year ended 31 December 2012

We have audited the following documents prepared by the insurer pursuant to the Accounts and Statements Rules set out in Part I and Part IV of Chapter 9 to IPRU(INS) the Interim Prudential Sourcebook for Insurers, GENPRU the General Prudential Sourcebook and INSPRU the Prudential Sourcebook for Insurers ("the Rules") made by the Financial Services Authority under section 138 of the Financial Services and Markets Act 2000:

- Forms 2, 3, 11 to 19, 40 to 45, 48, 49, 56, 58 and 60 (including the supplementary notes) ("the Forms");
- the statement required by IPRU(INS) rule 9.29 ("the statement"); and
- the valuation reports required by IPRU(INS) rule 9.31 ("the valuation reports").

We are not required to audit and do not express an opinion on:

- Forms 46, 47, 50 to 55, 57, 59A and 59B (including the supplementary notes);
- the statements required by IPRU(INS) rules 9.30 and 9.36; and
- the certificate required by IPRU(INS) rule 9.34(1).

This report is made solely to the insurer's directors, in accordance with IPRU(INS) rule 9.35. Our audit work has been undertaken so that we might state to the insurer's directors those matters we are required by the Rules to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the insurer for our audit work, for this report, or for the opinions we have formed.

Respective responsibilities of the insurer and its auditor

The insurer is responsible for the preparation of an annual return (including the Forms, the statement and the valuation reports) under the provisions of the Rules. The requirements of the Rules have been modified by the directions issued under section 148 of the Act referred to in supplementary note 0201. Under IPRU(INS) rule 9.11 the Forms, the statement and the valuation reports are required to be prepared in the manner specified by the Rules and to state fairly the information provided on the basis required by the Rules. The methods and assumptions determined by the insurer and used to perform the actuarial investigation as set out in the valuation reports are required to reflect appropriately the requirements of INSPRU 1.2 and 1.3.

It is our responsibility to form an independent opinion as to whether the Forms, the statement and the valuation reports meet these requirements, and to report our opinion to you. We also report to you if, in our opinion:

- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the Forms, the statement and the valuation reports are not in agreement with the accounting records and returns; or
- we have not received all the information we require for our audit.

Basis of opinion

We conducted our work in accordance with Practice Note 20 'The audit of insurers in the United Kingdom (revised)' issued by the Auditing Practices Board. Our work included examination, on a test basis, of evidence relevant to the amounts and disclosures in the Forms, the statement and the valuation reports. The evidence included that previously obtained by us relating to the audit of the financial statements of the insurer for the financial year on which we reported on 20 March 2013. It also included an assessment of the significant estimates and judgments made by the insurer in the preparation of the Forms, the statement and the valuation reports.

We planned and performed our work so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the Forms, the statement and the valuation reports are free from material misstatement, whether caused by fraud or other irregularity or error, and comply with IPRU(INS) rule 9.11.

In accordance with IPRU(INS) rule 9.35(1A), to the extent that any document, Form, statement, analysis or report to be examined under IPRU(INS) rule 9.35(1) contains amounts or information abstracted from the actuarial investigation performed pursuant to IPRU(INS) rule 9.4, we have obtained and paid due regard to advice from a suitably qualified actuary who is independent of the insurer.

Opinion

In our opinion:

(a) the Forms, the statement and the valuation reports fairly state the information provided on the basis required by the Rules as modified and have been properly prepared in accordance with the provisions of those Rules; and

(b) the methods and assumptions determined by the insurer and used to perform the actuarial investigation as set out in the valuation reports appropriately reflect the requirements of INSPRU 1.2 and 1.3.

Ernst & Young LLP

Ernst & Young LLP
Statutory Auditor
London
20 March 2013