Allianz

Market Consistent Embedded Value Report

2008

Allianz

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1 Introduction

1.1 Basis of Preparation

Embedded value (or "EV") represents shareholders' economic value of the in-force life, health and pension business of an insurance company, which is the value of the business written as of 31 December 2008. Future new business is not included.

Allianz discloses Embedded Value in line with the European Insurance CFO Forum Market Consistent Embedded Value (MCEV) Principles[1©] ('the Principles') which had been launched in June 2008. The projection of assets and liabilities applying market consistent economic assumptions ensures a consistent valuation of assets and liabilities. In addition an explicit allowance is made for non-hedgeable risk.

In December 2008 the CFO Forum concluded that the current market environment displays highly unusual characteristics which reflect wide spread concern in the market about liquidity and triggers unusual activities. The CFO Forum therefore agreed that companies calculating MCEV may adhere to Principle 15.3 and apply average volatilities or volatilities taken from a different date than the valuation date as a more adequate basis for the valuation of long term business in the books. As a consequence, and following our interpretation of Principle 12 and Guidance 15.3, we base MCEV on volatilities based on 30 September 2008 which can be considered comparable to an average of implied volatilities over the year as outlined in Appendix B.

As required by the Principles we introduced Group MCEV in our disclosure 2008, but do not show a movement of Group MCEV as required by the Principles. In addition, as in previous years, we do not include look-through profits in our main values but provide them as additional information only as we would like to retain a clear split between the segments in line with our primary IFRS accounts

Since the market consistent bottom up methodology applied to calculate 2007 EV figures was already largely in line with the MCEV Principles, the only change in methodology to adapt MCEV Principles was to introduce an allowance for non-hedgeable financial risk for MCEV 2008. For this reason no separate restatement to the MCEV Principles is shown.

This document provides details on the results, methodology and assumptions used to calculate the 2008 MCEV for the Allianz Group in accordance with the disclosure requirements of the MCEV Principles.

The methodology and assumptions used to determine the 2008 embedded value results for the Allianz Group have been reviewed by the Tillinghast Insurance Consulting practice of Towers Perrin. Their opinion is included in Section 4.

1.2 Covered Business

Allianz Group presents its primary IFRS accounts in the four segments Life/Health, P/C, Banking and Asset Management. The business covered in embedded value figures includes all material operations which are consolidated into the Life/Health segments in the IFRS accounts of Allianz Group worldwide. The main product groups are:

- Life, health and disability products including riders
- Deferred and immediate annuity products both fixed and variable
- Unit-linked and indexed linked life products
- Capitalization products

The MCEV for long term health business written in the German Health entity Allianz Private Krankenversicherung (APKV) is included for the first time in this year's disclosure.

All calculations are net of external reinsurance: results for individual regions are shown net of intra-group reinsurance with the value of such intra-group reinsurance being included in the total embedded value. Where debt is allocated to the covered business, it is marked to current market value.

All results reflect the interest of Allianz shareholders in the life entities of the Group. Where Allianz does not hold 100% of the shares of a particular life entity a deduction is made for the corresponding minority interest[2]. Entities that are not consolidated into Allianz IFRS accounts, i.e. entities where Allianz only holds a minority, are not included. In particular the companies in India and Thailand are not included.

The pension fund business written outside the Life/Health segment is also not included.

1.3 Definitions

According to MCEV Principle 3, MCEV is defined as the present value of shareholders' interests in the earnings distributable from assets allocated to the covered business after sufficient allowance for the aggregate risks in the covered business. It is calculated on an after-tax basis taking into account current legislation and known future changes.

The EV can be broken down into the net asset value, i.e. the value of the assets not backing liabilities, and the value of in-force, i.e. the value of future profits emerging from operations and assets backing liabilities.

The net asset value (or NAV) contains

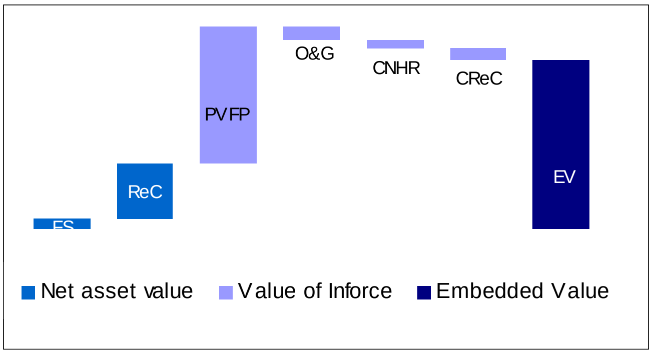
- the required capital (or ReC), i.e. the amount of capital necessary to run the business
- and the free surplus allocated to the covered business (or FS).

The value of in-force covered business (or VIF) is defined as

- the present value of future profits from in-force business (or PVFP)

after allowance for

- the time value of financial options and guarantees (or O&G),
- the cost of residual non-hedgeable risks (or CNHR),
- the frictional cost of required capital (or CReC).



A detailed description of these terms is provided in the methodology section in the appendix.

[2] Minorities are evaluated as of 31.12.2008

2 Overview of results

As of 31 December 2008 Allianz Group's total embedded value amounts to EUR 12,545mn, EUR 9,382mn or 43% lower than published in 2007.

The value of new business written in 2008 was EUR 256mn; EUR 821mn or 76% less than the value published in 2007.

Allianz's embedded value and value of new business were adversely affected by the economic crisis in 2008, in particular from the fall in equity values and correspondingly high equity volatility, widening of credit spreads and lower interest rates. Interest rates in the key economies we operate in fell significantly in Q4, for example Euro zone rates dropped by approximately 100bps and US rates fell by approximately 200bps. Credit spreads on USD AA corporate bonds increased up to 300bps.

The MCEV reported in 2008 was calculated using unadjusted swap rates at 31 December 2008 and this methodology inherits the distortions of the current financial market on future cash flow valuation, hence the resulting low reported value. However, the sensitivities we have performed (see Section 2.6) show that when markets stabilise to pre-crisis levels, the MCEV of our Life & Health businesses will also recover. In addition in Section 2.5, we show, that under current real world assumptions, we continue to expect strong cashflow generation from our businesses.

2.1 Embedded Value results

As mentioned above the economic crisis affected our MCEV results significantly. Main drivers were credit spread widening and equity drops in the US market where our value dropped by EUR 6.2bn. In Europe and Asia the lower interest rates and the equity movements led to a decrease in MCEV by EUR 3.2bn.

The table below shows the embedded value result split by its components: the net asset value and the value of in-force.

Exhibit 1: MCEV

	2007	2008	change in 2008
	EUR mn	EUR mn	%
Net asset value	9,369	9,884	5%
Free surplus	*2,454*	*-63*	*-103%*
Required capital	*6,915*	*9,946*	*44%*
Value of Inforce	12,557	2,662	-79%
Present value of future profits	*16,338*	*9,332*	*-43%*
Cost of options and guarantees	*-1,790*	*-4,296*	*140%*
Cost of residual non-hedgeable risk	*-804*	*-1,009*	*25%*
Frictional Cost of required capital	*-1,187*	*-1,366*	*15%*
MCEV	**21,927**	**12,545**	**-43%**

The embedded value as of 31 December 2008 was EUR 12,545mn, which is 43% lower than EUR 21,927mn, the value published in 2007, after allowing for a net capital outflow of EUR 162mn.

This takes into account the inclusion of the German Health business, which increased MCEV by EUR 1,821mn, and the Spanish entity Eurovida and the newly consolidated entity in Turkey.

As set out above, the material change in the MCEV during 2008 is a result of the economic crisis in 2008.

The increase in the required capital shown in Exhibit 1 is driven by an increase in capital requirements in the US, Taiwan, and other European entities (see Section 3 for additional regional specific comments). As explained in Appendix A the Required Capital is the higher of the local solvency requirements, requirements from local market standards and the internal risk capital requirement. While all entities are always capitalized to meet the higher of the local solvency capital or local market standard requirements, the internal risk capital requirement needs to be met at the Group level. Temporary distortions in some markets will not immediately result in capital injections. In the presentation to analysts, as well as in the risk disclosure in the primary accounts according to IFRS 7, we show that the Group is sufficiently capitalized also from an economic point of view. A slightly negative free surplus at Group level is a consequence of ignoring available buffers in sufficiently capitalized entities to fill up requirements in entities temporarily below requirements.

The drop in the VIF is mostly attributable to the sharp decline in the PVFP reflecting lower investment margins as a result of lower reinvestment rates and the reduction in buffers from unrealized capital gains following the equity market falls. In addition, the O&G values have increased, mainly in Germany, as a result of lower interest rates bringing the options and guarantees closer to the strike point in the long term due to interest rates decreasing to below 3% at the long end of the yield curve.

The increase in cost of residual non-hedgeable risk is higher in 2008 following the inclusion of the German health business, the introduction of the internal risk capital model in Taiwan and higher longevity risk capital requirements in Spain and Switzerland due to the impact of lower interest rates.

The increase in cost of holding required capital is comparatively smaller as this reflects the much smaller future investment margins, and hence correspondingly smaller tax costs.

The breakdown of the opening adjustments as well as the drivers for the change in embedded value during the year are set out in detail in the following sections.

2.2 New Business

Allianz's value of new business was adversely affected by the economic crisis in 2008, in particular from the widening of credit spreads and lower interest rates at year end. As stated above, the value of new business reflects current market distortions and we expect this value to recover if markets stabilise and return to normal levels. Please note that due to the fact that the value of new business is restated to year end assumptions, the unfavorable economic conditions at year end also affected the valuation of the value of new business written in the first three quarters.

Exhibit 2 below shows the value of new business at point of sale, calculated using year-end economic and non-economic assumptions.

Exhibit 2: Value of New Business

	2007	2008	change in 2008
	EUR mn	EUR mn	%
Value of New Business at point of sale	**1,077**	**256**	-76%
New Business Margin[1]	3.0%	0.8%	-2.2%-p
Present value of new business premium	*36,303*	*33,812*	*-7%*
APE Margin[2]	26.1%	6.8%	-19.3%-p
Single Premium [3]	*20,813*	*18,611*	*-11%*
Recurrent Premium	*2,040*	*1,898*	*-7%*
Recurrent premium multiplier [4]	8	8	*6%*

1) New business margin = Value of new business / Present value of future new business premiums

2) APE margin = Value of new business / (recurrent premium + single premium/10)

3) The single premium 2008 is slightly understated, see footnote on Exhibit 11

4) Recurrent Premium Multiplier = (PVNBP - single premium) / recurrent premium

2008 new business includes the increase in scope to include the German Health business, the Spanish entity Eurovida and Allianz Turkey.

Overall new business volumes decreased, but remain at high levels in 2008, with a larger drop in single premium business than in regular premium business.

Exhibit 3 below summarizes the analysis of change in the new business value from the value published in 2007 to the 2008 value.

Exhibit 3: Development of Value of New Business

	Value of New Business	New Business Margin	Present Value of NB Premium
	EUR mn	EUR mn	EUR mn
Reported Value as at 31 December 2007	**1,077**	**3.0%**	**36,303**
Total initial adjustments	29	0.0%	1,425
Change in Foreign Exchange	*-21*	*0.0%*	*-139*
Change in Allianz interest	*12*	*0.0%*	*659*
Restatements	*38*	*0.0%*	*905*
Adjusted Opening Value as at 31 December 2007	**1,106**	**2.9%**	**37,728**
Change in volume	-116	0.0%	-3,940
Change in business mix	-80	-0.2%	0
Change in assumptions	-654	-1.9%	25
Other	0	0.0%	0
Value of new business as at 31 December 2008	**256**	**0.8%**	**33,812**

The initial adjustments to the value of new business include:

- Change in foreign currency exchange rates (EUR -21mn), primarily as a result of the weakening of the Korean Won , which is partially offset by the strengthening of the US Dollar and Swiss Franc;
- Change in Allianz interest in the Group's life insurance companies (EUR +12mn), in particular in Germany;
- Restatements (EUR +38mn) reflecting the inclusion of the German health business and Spanish entity Eurovida for the first time.

New business volumes in 2008 are 7% below the level achieved in 2007. The present value of new business premiums decreased from EUR 36,303mn to EUR 33,812mn in 2008. Volume grew in France, Spain, Switzerland and New Europe. However, growth in these regions could not support the significant reduction in volume seen in Italy and Asia.

Continued challenging market conditions have resulted in the need to be more competitive to maintain market share, particularly in the US and Asia. Besides we had growth opportunities in group business in France and Switzerland, albeit at slightly lower margins. This slightly negative impact from business mix is partly offset by the positive impact from stable volumes in higher margin products in Germany and New Europe.

As mentioned, the main impact on new business is the economic market downturn, in particular the fall in interest rates across all regions. New business sold in the first three quarters of 2008 generated positive value and margins at the level of previous years, but the revaluation of the new business on year end economic assumptions resulted in a negative impact of EUR 654mn and a corresponding margin drop of 1.9%. The reduction in value is largest in the US, where the value of new business fell by EUR 422mn due to assumption changes at year end.

For details on the regional development please refer to Section 3.

2.3 Analysis of MCEV Earnings

Exhibit 4 shows the change in embedded value split by components from the published 2007 value to the value as of 31 December 2008. The analysis of earnings is presented in the format required by the MCEV Principles regrouping the presentation of movement analysis from last year's disclosure.

Exhibit 4: Analysis of Earnings of Embedded Value

	Earnings on MCEV analysis			
	Free Surplus	Required Capital	ViF	MCEV
	EUR mn	EUR mn	EUR mn	EUR mn
Opening MCEV reported as at 31 December 2007	**2,454**	**6,915**	**12,557**	**21,927**
Total opening adjustments	199	324	1,981	2,504
Foreign Exchange Variance	*46*	*-5*	*102*	*143*
Acquired / Divested business	*22*	*74*	*268*	*364*
Restatements	*130*	*255*	*1,611*	*1,997*
Adjusted Opening MCEV as at 31 December 2007	**2,653**	**7,239**	**14,538**	**24,430**
Value of new business at point of sale	**-73**	**0**	**329**	**256**
Expected existing business contribution *reference rate*	298	58	955	1,312
Expected existing business contribution *in excess of reference rate*	193	3	435	631
Transfer from VIF and required capital to free surplus	186	595	-781	0
on in-force at begin of year	*1,712*	*-178*	*-1,533*	*0*
on new business	*-1,525*	*773*	*752*	*0*
Experience variance	**-45**	**35**	**-60**	**-70**
Assumption changes	**129**	**-123**	**1,124**	**1,131**
Other operating variance	-386	274	1,228	1,116
Operating MCEV earnings	303	843	3,230	4,376
Economic variances	**-2,859**	**1,864**	**-14,774**	**-15,768**
Other non operating variance	3	0	-333	-331
Total MCEV earnings	-2,553	2,707	-11,877	-11,723
Closing adjustments *Net capital movements*	-162	0	0	-162
Closing MCEV as at 31 December 2008	**-63**	**9,946**	**2,662**	**12,545**

The initial adjustments include the following changes:

- **Change in foreign currency exchange rates** (EUR 143mn). Strengthening of the US Dollar and the Swiss Franc against the Euro is partially offset by the weakening of the Korean Won.
- **Change in Allianz interest in the Group's life insurance companies** (EUR 364mn). This adjustment represents the change in Allianz Group's interest in its entities over the year. Allianz bought out the remaining minorities in Allianz Leben, Germany in 2008.
- **Restatements** (EUR 1,997mn). This shows the increase in scope for the MCEV to include the German Health business, the Spanish entity Eurovida and Turkey.

The key components of the change in 2008 are as follows:

- **Value of new business (VNB) written in the year (EUR 256mn)**
This represents the value of new business written in the year. The new business value at point of sale is valued based on year-end economic and non-economic assumptions, and takes into account all expenses in connection with new business, including acquisition expense overruns. Additional details on the development of the value of new business are provided in Section 2.2.

- **Expected existing business contribution** is comprised of three elements.

  - **Expected existing business contribution with reference rates (EUR 1,312mn)** shows the **unwinding of the discount on embedded value with reference rates** used in the market consistent projection. For the in-force portfolio as at the start of the year, it contains notional interest on all embedded value components for one year using the start of the year assumptions. The MCEV increases as all future profits now require one year less discounting.

    For the new business written during the year it contains the progression from point of sale until end of year based on new business assumptions.

    In addition, this step contains the **release from risk with regard to O&G and non-financial risks**. The margin for the year built into the valuation for uncertainty with regard to asymmetric financial risk and non-financial risk is released in this step.

  - **Existing business contribution in excess of reference rates (EUR 631mn)** shows the additional earnings in MCEV consistent with management expectations for the business. In this step, based on normalized real world assumptions shown in Appendix C, risk premiums on equity, real estate and corporate bonds are expected to materialize in the first projection year 2008, whereas risk free assumptions are maintained unchanged for the further projection from 2009 onwards. This step was added to Allianz MCEV earnings analysis for compliance with the MCEV Principles.

  - **Transfer from VIF and required capital to free surplus** shows the effect of **the realization of the projected net profits** from the VIF to the NAV. It reduces the value of in-force and increases the NAV, but does not have any impact on the embedded value in total as it only contains the release of profits included in the value of in-force to the free surplus during the year. It also includes the projected release from required capital to free surplus.

    This step is shown separately for in-force at the beginning of the period and new business written during the period. For new business, it shows the negative impact on free surplus projected to occur during the first year to the extent that initial expenses are higher than profits in the first year, and to the extent that these expenses cannot be covered through policyholder funds (EUR 752mn impact on VIF). The amount of additional required capital to be held for new business (EUR 773mn impact on required capital) increases the strain on the free surplus at the point of sale. The **total strain from new business** on the free surplus is the combined impact of expense strain and initial capital binding, and this sums up to EUR 1,525mn negative impact on free surplus.

- **Experience variances (EUR -70mn):** This item shows the impact of deviations of actual experience from expectations during the year regarding non-economic factors – for example higher or lower lapses, mortality, expenses, etc. This item contains various partially offsetting items which are explained in the regional section. This item also includes the impact of one-off costs. For 2008 an amount of EUR 180mn of one-off expenses have been excluded from the expense base when setting expense assumptions. The details for each region are described in Section 3.

- **Assumption changes (EUR 1,131mn):** Changes in non-economic assumptions such as those for lapses, mortality and expenses, which occurred during the year are included in the line items 'Assumption changes'. The main driver for this change are the favorable expense assumptions in Germany and France, changes in mortality/disability assumptions in France, as well as refinements in assumptions for disability and annuity products in Germany

- **Other operating variances (EUR 1,116mn)** include operating impacts not included above, such as management reaction to economic changes, e.g. changes in crediting and investment strategies, or impact of mandatory regulatory changes. Further, model changes need to be included in this item. This shows the impact from changes in the investment strategy as well as model refinements in Germany, and the revision of the crediting strategy in France. The details for each region are described in Section 3.

Operating MCEV earnings: This item shows the change of the adjusted opening MCEV due to all operating drivers listed above and amounts to EUR 4,376mn or 18% of adjusted opening MCEV.

- **Economic variances (EUR -15,768mn)** include the impact of changes in interest rates, the impact of actual development of financial markets as well as the impact of actual performance of the assets in the portfolio. It includes investment variances on new business from point of sale till end of year, such as drop in market value on single premiums invested in equity.

  The significant drop in MCEV is due to the drop in interest rates mainly during the last quarter with an MCEV impact of EUR -5.8bn, the fall in equity markets during the year with an impact of EUR -5.0bn, and the widening of credit spreads with an impact of EUR -5.0bn. Across all regions, economic variances in the year were negative. The largest impact is seen in Europe (EUR -9.1bn), where interest rates and equity value falls impacted both the O&G and the PVFP, and the US (EUR -6.1bn) where widening credit spreads and equity falls contributed to the significant reduction in the PVFP. The details of the development per region are described in Section 3.

- **Other non-operating variances (EUR -331mn)** include mandatory regulatory changes and other changes in legislation. This shows the impact of new legislation for policyholder participation (MZVO) in Germany. For additional information please refer to the corresponding regional analysis in Section 3.

Total MCEV earnings: This item summarizes the movements during the year due to all drivers listed above and amounts to EUR -11,723mn or -48% of the adjusted opening MCEV.

- **Closing adjustments: Net capital movement (EUR -162mn)** is net of dividends paid by, and capital injections to our life companies.

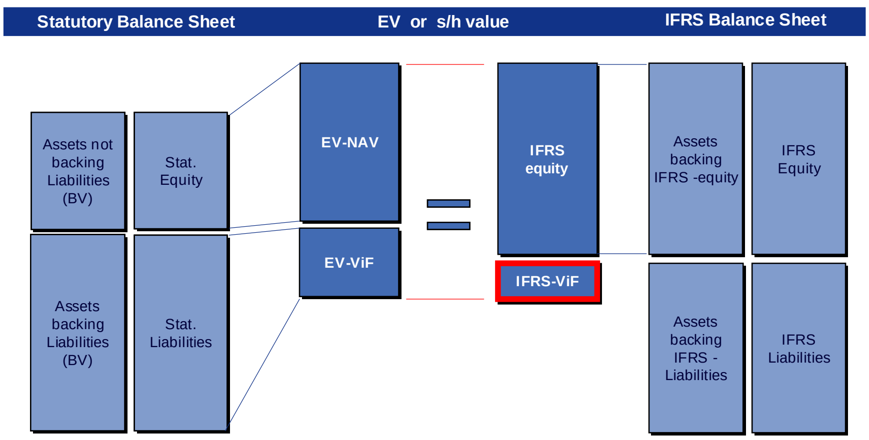
2.4 Shareholder value not accounted for in Group IFRS Equity

Allianz Embedded Value reflects the value of shareholders' interest in the life business of Allianz Group. This value includes the determination of best estimate liabilities for bonus payments and tax payments, which are derived from results based on local statutory accounting rather than on the Group's IFRS profit and loss account (P&L). Therefore local balance sheet and P&L are the starting point for the embedded value projections of our subsidiaries.

However, the result of these calculations is a balance sheet reflecting the shareholder value of the in-force business. The accounting principles applied in the projection are required to determine realistic best estimate cash-flows. Apart from this, in the definition of embedded value the local balance sheet also determines the split of the total embedded value into NAV, i.e. the value of the assets not backing liabilities which can also be interpreted as the equity component of the embedded value, and VIF, i.e. the value of future profits emerging from operations and assets backing liabilities.

For Allianz Group's other segments, the shareholder value is derived from the Group's IFRS equity. Starting from the embedded value balance sheet we have determined the additional value not accounted for in IFRS equity, i.e. the shareholder margin in our life business that has not yet been recognized in the Group equity. This additional value is referred to below as IFRS-VIF. As the impact of future new business is not included in the Embedded Value, we compare it to the IFRS equity excluding any goodwill.

For this exercise we analyzed the differences between the embedded value balance sheet and the IFRS-balance sheet, to determine elements that have been recognized in the IFRS-equity but not in the EV- NAV and vice versa.



The table below shows that of the EUR 2,662mn future related element of EV (i.e. PVFP less O&G less CNFR less CReC), EUR 515mn represents an economic value of the covered life insurance business that is not captured within the IFRS shareholders' equity:

Exhibit 5: Additional Value not accounted for in IFRS equity

	2007	2008
	mn EUR	mn EUR
Value of Inforce	**12,557**	**2,662**
Deferred acquisition cost / value of business acquired	-12,956	-17,348
Difference in IFRS reserves compared to statutory reserves	9,260	11,191
Shareholders' portion of unrealized capital gains included in PVFP	-1,355	1,330
Asset valuation differences	218	884
Other adjustments	1,856	1,797
Additional value not accounted for in IFRS shareholders' equity	**9,580**	**515**

The primary components of the table are as follows.

- **Deferred acquisition cost / value of business acquired (EUR -17,348mn)**
  The excess of the IFRS amount of the deferred acquisition cost (DAC) and value of business acquired (VOBA) assets over the statutory levels included in the PVFP. This item decreased from last year due to a higher DAC from more capitalization, shadow adjustments and adding German Health business.

- **Difference in IFRS reserves compared to statutory reserves (EUR +11,191mn)**
  This reserve difference is shown after offsetting the policyholders' portion of any unrealized gains or losses and asset valuation differences. Aggregate IFRS life technical and unallocated profit sharing reserves exceed statutory reserves used in PVFP modeling. The main reason for this difference is that in many local statutory accounting models, instead of setting up a deferred acquisition cost asset, the reserves are reduced to reflect part of these acquisition costs, as per local regulation. This excess of IFRS reserves increases the value not accounted for in IFRS shareholders equity. This item increased from last year as policyholder unrealized gains reduced and from adding German Health business.

- **Shareholders' portion of unrealized capital gains included in PVFP (EUR +1,330mn)**
  When projecting future profits on a statutory basis, the related profits/losses will include the shareholder value of unrealized capital gains/losses. To the extent that assets in IFRS are valued at market and the market value is higher/lower than the statutory book value, these profits/losses have already been taken into account in the IFRS equity.
  This item was negative last year due to unrealized capital gains under local statutory accounting, and turned positive this year due to more unrealized losses.

- **Asset valuation differences (EUR +884mn)**
  This element is the shareholder value of the difference between market value and book value of assets (valued at IFRS book value).

- **Other Adjustments (EUR +1,797mn)**
  This includes various items not included above related to differences in valuation under embedded value and IFRS, including differences in tax treatment.

Based on the MCEV for the covered business and the IFRS equity for the non-covered business the Allianz Group MCEV is shown in the following Exhibit.

Exhibit 6: Group MCEV

	2008
	EUR mn
Additional value not accounted for in IFRS shareholders' equity	**515**
IFRS equity (excluding goodwill) for Allianz group	**22,463**
Group MCEV	**22,978**
Covered business MCEV	**12,545**
IFRS equity (excluding goodwill) non covered business	**10,432**

2.5 Release of free cash flows to shareholder

To provide an overview of the expected maturity profile of distributable earnings from the current in-force book, we add the release of free cash flows to shareholder generated from our MCEV to disclosure for 2008. Free cash flows to shareholder are projected as the net of tax profits according to a deterministic best-estimate projection based on real-world economic assumptions as shown in Appendix C and the projected release of required capital. The following table shows the release of free cash flows to shareholder clustered by 5 year time buckets, where each bucket includes the undiscounted sum of these years. Please note that as we only show cash flows generated from the current in-force portfolio, they do not allow for any future new business strain.

Exhibit 7: Release of free Cash Flows to Shareholder

	Free Cash Flows
	EUR mn
year 1-5	9,978
year 6-10	9,176
year 11-15	7,357
year 16-20	5,540
year 21-25	4,368
year 26-30	3,414
year 31-35	2,660
year 36-40	2,791
year 41-45	1,804
year 46-50	1,349
later than 50 year	3,804

Timing of the cash flows depends very much on the underlying portfolio, and varies over the Group. Within Allianz there are short term portfolios e.g. short term saving or protection, as well as long term portfolios as for example annuities. The overall long duration of liabilities is mainly driven by the block of long term traditional business in Germany.

2.6 Sensitivities

Sensitivity testing with respect to the underlying best estimate assumptions is an important part of embedded value calculations. Both economic and non-economic factors are tested. The same management actions and policyholder behavior have been assumed in the sensitivities as for the base case. It should be noted that the various sensitivities are in most cases correlated so that the impact of two events occurring simultaneously is not likely to be the sum of the outcomes of the corresponding tests.

As we stated earlier, we expect that the stabilization of economic markets will result in a recovery of Allianz's MCEV to pre-crisis levels. Looking at the sensitivities across all our businesses, we see that an increase in interest rates by 100bps leads to an increase in value by EUR 5,067mn, an increase in equity and property values by 10% leads to an increase in value by EUR 1,179mn, and a narrowing of the credit spreads in the US by 200bps leads to an increase by EUR 2,828mn. All of these give an indication of the increase in value expected when markets recover.

The numbers presented in the table below provide the sensitivity with regard to the primary economic and non-economic factors according to the MCEV Principles. The size of the assumption shifts are not indicative of what may or may not actually occur; in reality the factors will move in increments greater or smaller than those presented below.

Exhibit 8a: Sensitivities

	In-Force		New Business	
	MCEV	MCEV	VNB	VNB
	EUR mn	%	EUR mn	%
Central Assumptions	**12,545**	100%	**256**	100%
Required Capital equal to local solvency capital	509	4%	41	16%
EV change by economic factors				
Risk Free Rate -100bp	-9,686	-77%	-819	-320%
Risk Free Rate +100bp	5,067	40%	289	113%
Risk Free Rate -50 bp	-3,923	-31%	-118	-46%
Risk Free Rate +50 bp	2,532	20%	155	60%
Charge for CNHR +100bp	-293	-2%	-24	-9%
Equity and property values - 10% [1]	-1,179	-9%	-47	-18%
Swaption volatilities +25%	-1,940	-15%	-117	-46%
Equity option volatilities +25%	-1,151	-9%	-83	-33%
EV change by non-economic factors				
Lapse Rates -10%	82	1%	35	14%
Maintenance Expenses -10%	658	5%	52	20%
Mortality -5% for products with death risk	178	1%	7	3%
Mortality -5% for products with longevity risk	-398	-3%	-17	-7%

1) Deviating from analyst presentation due to late correction

A breakdown of the sensitivity results by region is provided in Section 3.

- **Sensitivity to capital requirement**
  Using only local solvency capital requirements to determine the required capital instead of the internal required capital reduces the necessary capital and the corresponding cost of holding capital. However, for several companies the capital requirement is already determined by the local statutory requirement and therefore the EV increases only by EUR 509mn or 4%.

- **Sensitivity to a decrease/increase of the underlying market risk free rates**
  This sensitivity shows by how much the EV would change if market interest rates in the different economies would fall/rise. The sensitivity is designed to indicate the impact of a sudden parallel shift in the risk-free yield curve, accompanied by a shift in all economic assumptions including discount rates, market values of fixed income assets as well as equity and real estate return

assumptions. Due to the asymmetric and non-linear impact of embedded financial options and guarantees, falling market rates have a higher impact on EV than rising interest rates and the impact increases for each further step down.

As shown above a shift of -100bps in interest rates causes a reduction of the Group's MCEV by EUR 9,686mn or 77%. This is significantly higher than the corresponding impact shown for 2007 as risk free rates have fallen significantly across all economies (e.g. by approximately 100bps for EUR and by approximately 200bps for USD), and are now closer to guarantees. Besides, after the drop in equity less buffers are available to absorb interest rate shocks. Despite interest rates moving closer to the guarantees the deterministic PVFP remains positive for our European regions. Further, in implementing the new profit sharing regulation in Germany not all management levers where valued to mitigate the impact of the new regulations in particular for low investment scenarios, and thus the impact of the downshift shown can be considered as conservative.

The value of new business decreases significantly by EUR 819mn and turns negative mainly due to interest rates being closer to the current guarantee on new business in Germany. However, if interest rate remained at current low levels, guarantees for future new business will decrease accordingly.

- **Sensitivity to an increase in the charge for non-hedgeable risk by 100 bps**
  The effect of increasing the capital charge for non-hedgeable risk by 100bps decreases the EV by EUR 293mn, or 2%.

- **Sensitivity to a decrease in equity/property values at the valuation date by 10%**
  This sensitivity is designed to indicate the impact of a sudden change in the market values of equity and property assets. Since the modeled investment strategies take into account a certain target allocation based on market value, this shock may lead to a rebalancing of the modeled assets at the end of the first year, when defined boundaries for each asset class are exceeded.
  A drop of equity values by 10% reduces MCEV by EUR 1,179mn and the sensitivity remains on the level shown for 2007, as equity share has reduced.
  We have also assessed that the up and down sensitivities are reasonably symmetrical.

- **Sensitivity to an increase in volatilities for fixed income and for equity incl. real estate by 25%**
  This sensitivity shows the effect of increasing all implied volatilities, i.e. swaption implied volatilities, and equity option implied volatilities including real estate volatility, by 25% of the assumed rate. Where no option prices are available from the market, historic volatilities were increased to account for the same effect. As an increase in volatilities leads to a higher time value of options and guarantees for traditional participating business, MCEV decreases by EUR 1,940mn or 15% for an increase in swaption implied volatility and by EUR 1,151mn or 9% for an increase in equity option implied volatility. This sensitivity increased from last year due a higher value of options and guarantees as a consequence of market turbulences. Please note that in line with MCEV Principles we now show a drop by 25% separately for swaption and for equity option implied volatilities, whereas last year only an increase of swaption and equity option implied volatilities together and by 10% was reported.

- **Sensitivity to a decrease in lapse rates by 10%**
  The impact of a 10% proportionate decrease in projected lapse rates is an increase in EV of EUR 82mn or 1%. This impact decreased from last year in line with the overall decrease of Value of In-Force.

- **Sensitivity to a decrease in maintenance expenses by 10%**
  The impact of a 10% decrease in the projected expenses on EV is EUR 658mn or 5% as future projected profits would increase. This sensitivity increased from last year due to a refined modeling of crediting of technical results and the lower level of unallocated reserve to buffer the impact in France.

- **Sensitivity to a decrease in mortality and morbidity rates by 5%**
  This sensitivity shows the impact of a decrease of mortality and morbidity rates of 5%. Higher mortality has a negative impact in products with mortality risk (e.g. endowments and term life products) and a positive impact in products with longevity risk (life annuities). Since the future experience for the different insured populations in the two product groups might vary significantly the impact of this sensitivity is shown separately. For products with mortality risks the impact of decrease in mortality rates by 5% leads to an increase of EUR 178mn or 1%. The impact on products with longevity risk is a decrease in value of EUR 398mn or 3%. This sensitivity increased from last year for similar reasons as for maintenance expenses. Still, this impact is on a low level, as this is mitigated by the ability to share technical profit and hence the sensitivity to longevity risk is low.

For MCEV 2008 Allianz discloses additional sensitivities to show the impact of the market turbulences and distortions which mainly occurred in the fourth quarter of 2008. The following additional sensitivities have not been included in the scope of Towers Perrin's external review, as they have been prepared after finalising the local MCEV reviews.

Exhibit 8b: Additional Sensitivities

	In-Force	
	MCEV	MCEV
	EUR mn	%
Central Assumptions	**12,545**	100%
EV change to Credit Spreads		
for Allianz Life US only		
Narrowing of credit spreads by 100bp	1,498	12%
Narrowing of credit spreads by 200bp	2,828	23%
Narrowing of credit spreads by 300bp	4,207	34%
EV based on government bond rates instead of swap rates	313	2%
for Allianz Italy and New Europe only		
EV change to Year end volatilities		
Volatilities as of 31 December 2008	-5,202	-41%
EV mark to model based on an increase in reference rates, see text below		
50bp on Europe and 100bp on US	4,708	38%

- **Narrowing of credit spreads for US business**
  For year end 2008 credit spreads widened and market values for corporate bonds dropped significantly, which mostly affected our US business and decreased the MCEV of our US entity to EUR -3,318mn. As a sensitivity, we show the impact of narrowing of credit spreads on the MCEV of our US business, thus reversing the reported development, see the Exhibit above. The MCEV of AZ Life US increases by EUR 1,498mn when credit spreads narrows by 100bps, and a reasonably linear improvement in value is seen when spreads narrow by 200bps and 300bps respectively.

- **Risk free assumptions based on government bonds**
  For year end 2008 interest rates for government bonds were significantly above the swap rates for some countries as Italy or New Europe’s economies. For these entities we show the impact when calculating MCEV based on government bond rates. For Italy the government bond rates are more than 100bps higher than swap rates at the long end of the yield curve, which results in spreads and lower market values on Italian government bonds. When assuming risk free assumptions based on government bonds instead of swaps, the MCEV for Italy increases by EUR 274mn.

Similarly for New Europe's economies, government bonds have higher returns than swaps. MCEV for New Europe increases by EUR 39mn when taking government bond yields as risk free assumptions.

- **Year end volatilities**
  Disclosed figures are based on volatilities as of 30 September 2008, as year end volatilities displayed unusual characteristics as outlined in Appendix B. Swaption implied volatility as of 31 December is 80% higher for Euro swaps, and equity option volatility is 20% higher which results in a significantly higher value of option and guarantees. When applying implied volatilities as of 31 December 2008. MCEV decreases by EUR 5,202mn from higher options and guarantees. This is mainly driven by the significantly higher option and guarantee value in Germany. This impact can be considered as conservative due to the implementation of the new regulation on crediting strategy in Germany, (see comment on the sensitivity to decrease in risk free rates in Section 2.6).

- **MCEV based on increase in reference rates**
  Despite current low market values on corporate bonds the expectation in the industry is that a significant part the margins on corporate bonds over current risk free rates will materialize over the duration of the portfolio, i.e. that the margins reflect the price of lower liquidity rather than credit default probabilities. To provide an estimation of the impact of higher returns of less liquid assets, we provide a sensitivity that allows for higher reference rates for our US and European business, but compensates for the change in market values of corporate bonds by lower credit spreads. In our calculation we assume an uplift by 50bps for the European businesses and by 100bps for the US. In addition, we allow for the impact of assuming government bond rates instead of swaps for Italy and New Europe as explained above. The impact of the sensitivity is an increase in the MCEV by EUR 4,708mn or 38% to EUR 17,253mn. If we allow for an uplift by 300bps for the US portfolio, the MCEV rises by a further EUR 3,289mn to EUR 20,542mn.

Allianz

3 Regional analysis of Embedded Value

3.1 Overview

The following tables provide an overview of the contribution of the various operating entities and regions to the embedded value results and to the value of new business of Allianz Group. A detailed analysis for each region is provided in the following sections.

The regions are defined as follows:

- **Germany** includes Allianz Leben AG; its subsidiaries are included at equity. The VA business of GLU Ltd. is also included.
- **Germany Health** consists of the German Health entity Allianz Private Krankenversicherung
- **France** includes the life entities of AGF in France.
- **Italy** includes the life entities of Allianz Italy including the Irish subsidiary.
- **Western Europe** is comprised of the remaining entities in Western Europe including operations in Switzerland, Austria, Allianz Seguros in Spain, Belgium, Netherlands, Portugal, Greece, Egypt and now also includes Allianz Eurovida in Spain and Turkey.
- **New Europe** is made up of the entities in Central and Eastern Europe including operations in Slovakia, Poland, Hungary, Czech Republic, Croatia, Romania and Bulgaria.
- **USA** consists of Allianz Life of North America.
- **Asia** includes the consolidated Asian operations in Korea, Taiwan, Japan, China, Indonesia and Malaysia.
- **Holding** includes the impact of holding costs and intra-group reinsurance .

Exhibit 9 provides an overview of the 2008 embedded value by region and a break down of the components:

Exhibit 9: Embedded Value Results by region

	Germany	Germany Health	France	Italy	Western Europe	New Europe	USA	Asia	Holding	**Total**
	EUR mn	EUR mn	EUR mn	EUR mn	EUR mn	EUR mn	EUR mn	EUR mn	EUR mn	**EUR mn**
Net asset value	*1,506*	*297*	*1,977*	*1,698*	*2,053*	*299*	*1,387*	*597*	*70*	***9,884***
Free surplus	406	53	204	830	174	138	-773	-1,091	-4	**-63**
Required capital	1,100	244	1,773	868	1,878	161	2,160	1,688	74	**9,946**
Value of Inforce	*3,801*	*795*	*1,818*	*1,055*	*475*	*349*	*-4,705*	*-729*	*-199*	***2,662***
Present value of future profits	6,336	996	3,155	1,334	1,320	447	-3,914	-162	-179	**9,332**
Cost of options and guarantees	2,245	0	894	113	448	37	475	84	0	**4,296**
Cost of residual non-hedgeable risk	67	36	172	88	222	37	148	239	0	**1,009**
Frictional Cost of required capital	223	165	272	78	175	22	167	244	20	**1,366**
MCEV	**5,308**	**1,092**	**3,795**	**2,754**	**2,528**	**649**	**-3,318**	**-132**	**-129**	**12,545**
in % of total Embedded Value	42%	9%	30%	22%	20%	5%	-26%	-1%	-1%	100%
Value of In-Force by product type										
Traditional	3,600	795	1,524	707	127	195	-1,321	-1,080	-199	4,349
Unit Linked	194	0	293	368	346	148	-1,264	279	0	364
Index Linked	7	0	0	-20	2	7	-2,120	72	0	-2,051

The MCEV for the European region is EUR 16,124 mn. As a result of the economic crisis, in particular interest rate falls in Europe, the MCEV reduced by EUR 2,317mn. The impact of the crisis is much larger in the US, where widening of credit spreads reduced value to EUR -3,318mn in 2008 and in Asia where interest rate falls resulted in a decrease in the MCEV to EUR -132mn.

Exhibit 10 provides an overview of the ratios between **required capital** and reserve / solvency requirement.

Exhibit 10: Required capital

	2007			2008		
	Required Capital EUR mn	% of Reserve	% of Solvency Requirement	Required Capital EUR mn	% of Reserve	% of Solvency Requirement
Germany	1,041	0.9%	36620%	1,100	1.0%	28544%
German Health				244	1.4%	140%
France	1,778	3.2%	100%	1,773	3.1%	100%
Italy	902	2.7%	100%	868	2.9%	100%
Other Western Europe	1,043	4.2%	113%	1,878	7.2%	157%
New Europe	115	5.0%	122%	161	7.2%	150%
USA	1,244	2.8%	160%	2,160	4.8%	297%
Asia	717	6.4%	185%	1,688	17.0%	450%
Allianz Re	75	5.1%	100%	74	5.2%	100%
Total	**6,915**	**2.4%**	**140%**	**9,946**	**3.3%**	**188%**

Required capital increased by EUR 3,031mn to EUR 9,946mn in 2008 due to the impact of higher capital requirements in the US (see Section 3.8 for further details), higher capital requirements in Taiwan following the introduction of the Internal Risk Capital model, as well as higher requirements in other Western Europe due to the impact of a lower value in-force as available source to cover risk capital. As a consequence aggregate required capital relative to reserves and local solvency requirements has increased in 2008.

For Germany additional capital on top of Allianz's internal required capital and solvency capital was allocated to better reflect local market standards. The required capital proportional to the reserve is still low due to high policyholder resources admissible for solvency purposes and the high value of in-force available as an eligible source of capital for internal capital purposes. Please see Appendix A 2 on the required capital definition.

Exhibit 11 provides an **overview over the new business values 2008**, the split by product type and the most important KPIs by region:

Exhibit 11: New Business Value at point of sale by region

	Germany	Germany Health	France	Italy	Western Europe	New Europe	USA	Asia	Holding	Total
	EUR mn	EUR mn	EUR mn	EUR mn	EUR mn	EUR mn	EUR mn	EUR mn	EUR mn	EUR mn
New Business Value	**300**	**15**	**123**	**96**	**62**	**58**	**-364**	**21**	**-55**	**256**
in % total VNB	117%	6%	48%	38%	24%	23%	-142%	8%	-21%	100%
New Business Margin	**3.3%**	**1.6%**	**1.9%**	**2.5%**	**2.0%**	**5.4%**	**-5.5%**	**0.7%**	**n/a**	**0.8%**
Present value of NB premium	*9,033*	*922*	*6,330*	*3,814*	*3,131*	*1,069*	*6,595*	*2,918*	*0*	*33,812*
APE Margin[2]	36.6%	19.6%	18.9%	17.4%	17.8%	41.0%	-55.4%	4.1%	n/a	6.8%
Single Premium [3]	*2,481*	*0*	*4,731*	*2,513*	*1,207*	*477*	*5,787*	*1,414*	*0*	*18,611*
Recurrent Premium	*571*	*76*	*179*	*300*	*229*	*93*	*79*	*371*	*0*	*1,898*
Recurrent premium multiplier [4]	11	12	9	4	8	6	10	4		8
New Business Value by product type										
Traditional	233	15	98	64	45	33	-145	5	-55	292
Unit Linked	63	0	25	30	16	24	-106	-10	0	41
Index Linked	4	0	0	2	1	1	-113	26	0	-77
New Business Margin by product type										
Traditional	3.0%	1.6%	2.3%	4.1%	1.8%	5.2%	-9.8%	1.0%	n/a	1.5%
Unit Linked	5.4%		1.3%	1.4%	2.8%	6.3%	-4.8%	-0.6%	n/a	0.4%
Index Linked	4.0%			1.7%	2.0%	2.1%	-3.9%	3.4%	n/a	-1.9%

1) Index Linked in the US also includes a small block of fixed annuity products

2) APE margin = Value of new business / (recurrent premium + single premium/10)

3) The single premium for Germany Life in 2008 does not include following items:
increase in quota share of co-insurance contract (EUR 95mn), Kapitalisierungsprodukt (EUR 341mn),
certain special funds products (EUR 127mn) and Parkdepot business (EUR 813mn, also excluded in 2007: EUR 565mn)

4) Recurrent Premium Multiplier = (PVNBP - single premium) / recurrent premium

The table above shows the stability of new business value and volume generation in our main mature markets in Europe. As expected the growth markets in Asia have been particularly badly hit in 2008 by the strikes in Korea and loss in demand for investment related savings contracts in Taiwan and China.

In US the new business margin was hit most due to the financial nature of the products sold in the current challenging financial market environment.

For more detailed information on each region please refer to the regional analysis in the following sections.

3.2 Germany Life

The share of Allianz SE in Allianz Leben AG increased from 95% in 2007 to 100%. On a comparable basis, the 2007 embedded value would have been EUR 6,750mn and the value of new business would have been EUR 382mn.

In 2008, the MCEV for Germany was affected by falls in interest rates and equity markets, which also explains the lower new business value. However, new business volume remains high and Germany continues to contribute significantly to total value added in the Group.

3.2.1 Development of Value of New Business

The value of new business written by Allianz Leben AG in 2008 was EUR 300mn, which is 17% lower than the published value for 2007. The new business margin decreased from 3.9% to 3.3%. Exhibit 12 shows an analysis of the change in new business value:

Exhibit 12: Movement of Value of New Business - Germany

	Value of New Business	New Business Margin	Present Value of NB Premium
	EUR mn	%	EUR mn
Reported Value as at 31 December 2007	**362**	**3.9%**	**9,188**
Total initial adjustments	19	0.0%	485
Change in Foreign Exchange	*0*	*0.0%*	*0*
Change in Allianz interest	*19*	*0.0%*	*485*
Restatements	*0*	*0.0%*	*0*
Adjusted Opening Value as at 31 December 2007	**382**	**3.9%**	**9,672**
Change in volume	-12	0.0%	-298
Change in business mix	1	0.0%	0
Change in assumptions	-71	-0.6%	-341
Value of new business as at 31 December 2008	**300**	**3.3%**	**9,033**

Initial adjustments added 5% to the value published for the end of 2007, which is the result of Allianz's higher interest in Allianz Leben.

2007 was an exceptional year for volume growth in Germany and this year, volumes remain at the same high levels despite the economic crisis towards the end of 2008.

Main driver of the lower new business value is the impact of the revaluation of the new business with economic assumptions at the year end. The significantly lower interest rate curve across the whole term structure reduced VNB by EUR 74mn and margin by -0.6%.

The change in present value of new business premium shown under assumption changes is due to the fact that the *Kapitalisierungsprodukt* was not included in the modeled business for 2008 (see Exhibit 9 in Section 3.1 for additional details).

3.2.2 Development of Embedded Value and Free Surplus

The total embedded value for Allianz Leben decreased from EUR 6,412mn to EUR 5,308mn after a dividend payment of EUR 354mn.

The movement analysis in Exhibit 13 summarizes the main drivers for the change in embedded value of Allianz Leben.

Exhibit 13: Analysis of Earnings of Embedded Value - Germany

	Earnings on MCEV analysis			
	Free Surplus	Required Capital	ViF	MCEV
	EUR mn	EUR mn	EUR mn	EUR mn
Opening MCEV reported as at 31 December 2007	**419**	**1,041**	**4,952**	**6,412**
Total opening adjustments	22	55	261	338
Foreign Exchange Variance	*0*	*0*	*0*	*0*
Acquired / Divested business	*22*	*55*	*261*	*338*
Restatements	*0*	*0*	*0*	*0*
Adjusted Opening MCEV as at 31 December 2007	**441**	**1,096**	**5,213**	**6,750**
Value of new business at point of sale	**0**	**0**	**300**	**300**
Expected existing business contribution *reference rate*	67	1	356	424
Expected existing business contribution *in excess of reference rate*	1	0	175	176
Transfer from VIF and required capital to free surplus	264	34	-298	0
on in-force at begin of year	*416*	*0*	*-416*	*0*
on new business	*-151*	*34*	*117*	*0*
Experience variance	**21**	**0**	**219**	**240**
Assumption changes	**0**	**0**	**802**	**802**
Other operating variance	0	-1	990	989
Operating MCEV earnings	354	34	2,544	2,932
Economic variances	**-35**	**-30**	**-3,622**	**-3,687**
Other non operating variance	0	0	-333	-333
Total MCEV earnings	319	4	-1,412	-1,088
Closing adjustments *Net capital movements*	-354	0	0	-354
Closing MCEV as at 31 December 2008	**406**	**1,100**	**3,801**	**5,308**

The embedded value increased as a result of Allianz's higher interest in Allianz Leben, which led to a higher adjusted opening value.

The MCEV earnings were -16% of the adjusted opening value. The main drivers of the negative earnings were the economic variances, i.e. the fall in interest rates and equity markets and the impact of higher volatilities affecting the value of options and guarantees.

Earning the risk free investment return on the in-force portfolio increased MCEV by EUR 424mn, expected returns in excess of risk free rates increased MCEV further by EUR 176mn.

The new business strain was EUR 151mn. The increase from last year is due to a change in regulation (VVG Reform) which requires acquisition expense loadings to be spread over five years. However, the new business strain is still low compared to other markets and reflects the impact of the German open-fund business model, where new business and in-force portfolio are managed as a single fund. This structure allows for the offset of new business strain against technical profits from the in-force portfolio before policyholder profit sharing.

Experience variances and assumption changes mainly reflect the positive impact from lower expenses. The change in assumption also contains the impact of a revaluation of the shareholder value of additional reserves set up for annuity business and refined assumptions for disability product riders.

All expenses are allocated and no one-off cost or expense overruns are excluded for Germany.

Other operating variances show the impact of changes from investment strategy, resulting in lower equity participation, as well as a model refinement to better reflect projected lapse gains.

Economic variance of EUR -3,687mn shows the impact of the lower interest rates at the year end and equity market falls. The drop in the long term reinvestment rates to below 3% reduces the investment margins available in the future, and drops in equity values resulted in a reduction in the available buffers in the unrealized capital gains. However, as set out in Section 3.2.3 below, even under further stress conditions, the PVFP generated from this business remains positive.

The other non operating variance shows the negative impact of new legislation for policyholder participation Mindestzuführungsverordnung (MZVO). The MZVO defines more explicitly the rules for policyholder profit participation by profit sources and harmonizes the participation rules across generations. Allianz Leben has implemented the MZVO in such a way that the best estimate policyholder profit participation does not change and the rules form a floor to the current crediting strategy. Not all available management levers introduced by the MVZO are used under adverse market scenarios in the valuation of the business.

3.2.3 Sensitivities

Exhibit 14 shows the sensitivities for embedded value and value of new business:

Exhibit 14: Sensitivities - Germany

	Inforce	Inforce	NB	NB
	EUR mn	%	EUR mn	%
Central Assumptions	**5,308**	100%	**300**	100%
Required Capital equal to local solvency capital	222	4%	15	5%
EV change by economic factors				
Risk Free Rate -100bp	-4,791	-90%	-484	-161%
Risk Free Rate +100bp	1,799	34%	68	23%
Charge for CNHR +100bp	-19	0%	-1	0%
Equity and property values - 10% [1]	-425	-8%	-16	-5%
Swaption volatilities +25%	-1,549	-29%	-88	-30%
Equity option volatilities +25%	-695	-13%	-66	-22%
EV change by non-economic factors				
Lapse Rates -10%	60	1%	10	3%
Maintenance Expenses -10%	126	2%	12	4%
Mortality -5% for products with death risk	16	0%	1	0%
Mortality -5% for products with longevity risk	-211	-4%	-11	-4%

1) Deviating from analyst presentation due to late correction

Allianz Leben's business has a long premium payment term, in addition to having a high proportion of traditional participating business. As a result, sensitivities to market drivers show a significantly higher impact on MCEV than the sensitivities to non-economic factors. Sensitivities to non-economic parameters remain low because of the mitigating effect of (technical) profit sharing.

Due to the asymmetric nature of the embedded financial options and guarantees, falling market rates have a much higher impact on MCEV than rising interest rates. With the current low interest rate environment, the sensitivity to interest rates is much higher than in 2007, for both in-force and new business portfolios. In the central scenario, the interest rates at the long end of the curve is below 3%. In the interest rate down scenario, the corresponding interest rates would be below 2% and at this level, the options and guarantees are close to the strike point. It then follows that the time value of the option and guarantees is very high but the corresponding PVFP remains positive as technical margins are still sufficient. As stated above, not all management levers available as a result of the MZVO change are used to mitigate the impact of adverse interest rates movements. A similar argument applies for sensitivities to swaption and equity option volatilities.

3.3 Germany Health

In 2008, Allianz included the MCEV for the German Health entity Allianz Private Krankenversicherung (APKV) as part of its covered business.

The opening MCEV for 2007 was EUR 1,821mn and increased Allianz's 2007 MCEV by 8%. During 2008 the MCEV dropped to EUR 1,092mn as a direct result of the economic market downturn.

3.3.1 Development of Value of New Business

The value of new business written by our German health business in 2008 was EUR 15mn with a new business margin of 1.6%. Exhibit 15 shows an analysis of the change in new business value:

Exhibit 15: Movement of Value of New Business - German Health

	Value of New Business	New Business Margin	Present Value of NB Premium
	EUR mn	%	EUR mn
Reported Value as at 31 December 2007	**0**	**0.0%**	**0**
Total initial adjustments	23	2.9%	769
Change in Foreign Exchange	*0*	*0.0%*	*0*
Change in Allianz interest	*0*	*0.0%*	*0*
Restatements	*23*	*2.9%*	*769*
Adjusted Opening Value as at 31 December 2007	**23**	**2.9%**	**769**
Change in volume	-1	0.0%	-26
Change in business mix	0	0.0%	0
Change in assumptions	-7	-1.3%	179
Value of new business as at 31 December 2008	**15**	**1.6%**	**922**

In 2008, the value of new business decreased significantly from EUR 23mn to EUR 15mn, and the new business margin decreased from 2.9% for 2007 to 1.6%.

This decrease is mainly driven by the drop in interest rates, which decreased the value of new business by EUR 7mn and margin by 1.3%. In addition to this, premium volume fell by 3% which decreased VNB by further EUR 1mn.

3.3.2 Development of Embedded Value and Free Surplus

The total embedded value for the German health business decreased from EUR 1,821mn to EUR 1,092mn by EUR 729mn after a dividend payment of EUR 75mn.

The analysis of earnings in Exhibit 16 summarizes the main drivers for the change in embedded value of the German health business.

Exhibit 16: Analysis of Earnings of Embedded Value - Germany Health

	Earnings on MCEV analysis			
	Free Surplus	Required Capital	ViF	MCEV
	EUR mn	EUR mn	EUR mn	EUR mn
Opening MCEV reported as at 31 December 2007				
Total opening adjustments				
Foreign Exchange Variance				
Acquired / Divested business				
Restatements	*76*	*238*	*1,506*	*1,821*
Adjusted Opening MCEV as at 31 December 2007	**76**	**238**	**1,506**	**1,821**
Value of new business at point of sale	**0**	**0**	**15**	**15**
Expected existing business contribution *reference rate*	14	0	69	83
Expected existing business contribution *in excess of reference rate*	0	0	14	14
Transfer from VIF and required capital to free surplus	56	5	-61	0
on in-force at begin of year	*56*	*5*	*-61*	*0*
on new business	*0*	*0*	*0*	*0*
Experience variance	**-8**	**0**	**-1**	**-10**
Assumption changes	**0**	**0**	**0**	**0**
Other operating variance	7	0	-6	1
Operating MCEV earnings	68	5	29	103
Economic variances	**-16**	**0**	**-741**	**-757**
Other non operating variance	0	0	0	0
Total MCEV earnings	52	5	-711	-654
Closing adjustments	-75	0	0	-75
Net capital movements				
Closing MCEV as at 31 December 2008	**53**	**244**	**795**	**1,092**

The opening MCEV for 2007 was EUR 1,821mn with a NAV of EUR 314mn and a VIF of EUR 1,506mn.

MCEV earnings were EUR -654mn or -36% of the adjusted opening value.

Earning the risk free investment return on the in-force portfolio increased MCEV by EUR 83mn, expected returns in excess of risk free rates increased MCEV further by EUR 14mn. The main impact during 2008 was the fall in interest rates and equity markets which had an overall impact of reducing MCEV strongly by EUR 757mn or by 42%.

All expenses are allocated and no one-off cost or expense overruns are excluded for the German health business.

The new business strain is zero, since acquisition expenses are fully covered by acquisition expense loadings from new business and in-force portfolios, as these also contribute to the marginal value of new business.

3.3.3 Sensitivities

Exhibit 17 shows the sensitivities for embedded value and value of new business:

Exhibit 17: Sensitivities - Germany Health

	Inforce	Inforce	NB	NB
	EUR mn	%	EUR mn	%
Central Assumptions	**1,092**	100%	**15**	100%
Required Capital equal to local solvency capital	44	4%	0	3%
EV change by economic factors				
Risk Free Rate -100bp	-291	-27%	-4	-25%
Risk Free Rate +100bp	332	30%	3	19%
Charge for CNHR +100bp	-10	-1%	0	-1%
Equity and property values - 10%	-17	-2%	0	0%

The German health business's MCEV is most sensitive to changes in interest rates. A drop in interest rates by a further 100bps from current low levels reduces MCEV by EUR 291mn or 27%. The impact of the up and down shifts in interest rates show a symmetric behavior.

A drop in equity and property values by 10% reduces MCEV by EUR 17mn or 2%. No sensitivity to volatility changes is shown as the value of options and guarantees is zero. As the German health business has the ability to adjust premiums as a result of non-economic assumption changes, no sensitivities to non-economic assumptions are shown.

3.4 France

In 2008 the MCEV of AGF France was adversely impacted by the market turbulences in the last quarter of the year and dropped by EUR 800mn or 17%. The impact of market changes was partially offset by lower expenses and changes in crediting strategies.

3.4.1 Development of Value of New Business

The value of new business written by AGF in 2008 was EUR 123mn, which is 15% lower than the value reported in 2007. The new business volumes in AGF increased, but due to lower interest rates at the year end, margin dropped from 2.5% in 2007 to 1.9% in 2008.

Exhibit 18 shows an analysis of the change in new business value:

Exhibit 18: Movement of Value of New Business - France

	Value of New Business	New Business Margin	Present Value of NB Premium
	EUR mn	%	EUR mn
Reported Value as at 31 December 2007	**146**	**2.5%**	**5,787**
Total initial adjustments	0	0.0%	1
Change in Foreign Exchange	*0*	*0.0%*	*0*
Change in Allianz interest	*0*	*0.0%*	*1*
Restatements	*0*	*0.0%*	*0*
Adjusted Opening Value as at 31 December 2007	**146**	**2.5%**	**5,788**
Change in volume	14	0.0%	542
Change in business mix	22	0.3%	0
Change in assumptions	-58	-0.9%	0
Value of new business as at 31 December 2008	**123**	**1.9%**	**6,330**

In 2008, AGF's new business premium volume grew by 9% despite the challenging insurance market conditions in France and this increased the value of new business by EUR 14mn. Decreasing sales in unit linked investment products was more than compensated for by growth in highly profitable traditional and multi-support products in the individual and group life lines. This positive shift in business mix increased both the new business value by EUR 22mn and margin by 0.3%.

However, the drop in interest rates in the last quarter of 2008 decreased the value of new business by EUR 58mn and the margin by 0.9% which led to a value of new business of EUR 146mn and a margin of 1.9% for 2008.

3.4.2 Development of Embedded Value and Free Surplus

The total MCEV for AGF France decreased by EUR 800mn or 17% from EUR 4,595mn in 2007 to EUR 3,795mn for 2008.

The movement analysis in Exhibit 19 summarizes the main drivers for the change in embedded value of AGF France.

Exhibit 19: Analysis of Earnings of Embedded Value - France

	Earnings on MCEV analysis			
	Free Surplus	Required Capital	ViF	MCEV
	EUR mn	EUR mn	EUR mn	EUR mn
Opening MCEV reported as at 31 December 2007	**34**	**1,778**	**2,782**	**4,595**
Total opening adjustments	0	0	0	0
Foreign Exchange Variance	*0*	*0*	*0*	*0*
Acquired / Divested business	*0*	*0*	*0*	*0*
Restatements	*0*	*0*	*0*	*0*
Adjusted Opening MCEV as at 31 December 2007	**34**	**1,778**	**2,782**	**4,595**
Value of new business at point of sale	**0**	**0**	**123**	**123**
Expected existing business contribution *reference rate*	52	4	194	251
Expected existing business contribution *in excess of reference rate*	7	-2	99	104
Transfer from VIF and required capital to free surplus	-39	174	-135	0
on in-force at begin of year	*330*	*-33*	*-297*	*0*
on new business	*-369*	*207*	*162*	*0*
Experience variance	**-110**	**32**	**-139**	**-217**
Assumption changes	**-4**	**5**	**431**	**431**
Other operating variance	66	-106	697	657
Operating MCEV earnings	-28	107	1,270	1,349
Economic variances	**198**	**-112**	**-2,235**	**-2,149**
Other non operating variance	0	0	0	0
Total MCEV earnings	170	-5	-965	-800
Closing adjustments *Net capital movements*	0	0	0	0
Closing MCEV as at 31 December 2008	**204**	**1,773**	**1,818**	**3,795**

AGF's MCEV earnings in 2008 were EUR -800mn.

Earning the risk free investment return on the in-force portfolio increased MCEV by EUR 251mn, and expected returns in excess of risk free rates increased MCEV further by EUR 104mn.

Experience variances had a negative impact of EUR 217mn which was mainly due to higher effective tax rates. In line with emerging experience, more favorable assumptions for expenses and mortality/morbidity are used this year which increased MCEV further and resulted in an overall increase of EUR 431mn in the MCEV from assumption changes.

All expenses are fully allocated when setting expense assumptions in France with the exception of a one-off cost of EUR 50mn (gross of tax) which is a result of the ongoing restructuring projects in AGF following the minority buy-out in 2007. There are no further one-off costs or expense overruns.

As with our German business, the main impact on MCEV for 2008 is the economic variances resulting from the drop in interest rates both at the short and long end and the decline in equity markets. In addition, AGF was also affected by the devaluation of the corporate bond portfolio resulting from unprecedented high spread levels. All three factors led to an overall reduction in the MCEV by EUR 2,149mn or by 47%.

The impact of economic variances above was partially offset by the revision of the crediting strategy at the product level and for the "reserve de capitalization", which is shown under "Other Operating Variances".

3.4.3 Sensitivities

Exhibit 20 shows the sensitivities for embedded value and value of new business of AGF France.

Exhibit 20: Sensitivities - France

	Inforce	Inforce	NB	NB
	EUR mn	%	EUR mn	%
Central Assumptions	**3,795**	100%	**123**	100%
Required Capital equal to local solvency capital	0	0%	0	0%
EV change by economic factors				
Risk Free Rate -100bp	-1,202	-32%	-56	-45%
Risk Free Rate +100bp	734	19%	34	28%
Charge for CNHR +100bp	-67	-2%	-6	-5%
Equity and property values - 10%	-393	-10%	0	0%
Swaption volatilities +25%	-101	-3%	0	0%
Equity option volatilities +25%	-278	-7%	0	0%
EV change by non-economic factors				
Lapse Rates -10%	42	1%	9	8%
Maintenance Expenses -10%	234	6%	12	10%
Mortality -5% for products with death risk	74	2%	2	2%
Mortality -5% for products with longevity risk	-81	-2%	0	0%

Sensitivities to economic assumptions have increased from last year due to the lower interest rate environment we are currently in and smaller buffers available from unrealized capital gains as a result of the equity market falls in 2008.

The value of options and guarantees is higher than it was in 2007 following interest rate drops as guarantees are now on average closer to the money. As such, a further fall in the risk free rate of 100bps reduces MCEV by EUR 1,202mn or 32%. An increase in interest rates by 100bps augments the MCEV by EUR 734mn or 19%.

A drop in equity and real estate market values reduces the MCEV by EUR 393mn or 10%.

Increases in volatility in a low interest rate environment also results in higher changes in the MCEV. Due to the asset mix backing the business, AGF has a higher exposure to movements in equity option volatility, and an increase in implied equity volatilities reduces MCEV by EUR 278mn or 7%.

Sensitivities to non-economic factors are low, but are higher than last year as a consequence of refined modeling of crediting of technical results and the lower level of unallocated reserve to buffer the impact.

3.5 Italy

In 2008, revenues in the Italian insurance market declined especially in bancassurance and financial advisors' distribution channels. As a consequence of the deteriorating economic environment and the default of Lehman Brothers, index linked and unit linked production dropped. Furthermore, banks' desire to finance their own liquidity needs contributed to a significant drop in insurance products turnover compared to the bank's own savings products. Allianz Italy's MCEV reduced from EUR 3,522mn to EUR 2,754mn in 2008. This is driven by the decline in new business volumes and the impact of low interest rates at the year end. The valuation of the business is also affected by the high Italian government bond spreads over the risk free swap rates used for the MCEV. Allianz's MCEV methodology does not allow for these spreads to be capitalised.

3.5.1 Development of Value of New Business

The value of new business written by Allianz Italy in 2008 was EUR 96mn with a new business margin of 2.5%. Exhibit 21 shows an analysis of the change in new business value in 2008.

Exhibit 21: Movement of Value of New Business - Italy

	Value of New Business	New Business Margin	Present Value of NB Premium
	EUR mn	%	EUR mn
Reported Value as at 31 December 2007	**208**	**2.9%**	**7,130**
Total initial adjustments	0	0.0%	0
Change in Foreign Exchange	*0*	*0.0%*	*0*
Change in Allianz interest	*0*	*0.0%*	*0*
Restatements	*0*	*0.0%*	*0*
Adjusted Opening Value as at 31 December 2007	**208**	**2.9%**	**7,130**
Change in volume	-99	0.0%	-3,401
Change in business mix	-6	-0.2%	0
Change in assumptions	-7	-0.2%	85
Value of new business as at 31 December 2008	**96**	**2.5%**	**3,814**

General insurance market under-performance and the economic market crisis affected new business volumes, for both unit linked and traditional business lines. In the second half of the year, Allianz Italy's competitors pushed top line with a spread based product with guarantee level between 5% and 6% using dedicated credit risk instruments to back the liabilities. Due to the level of risk inherent in these products, Allianz Italy did not follow the emerging market trend, which in turn affected new business volumes.

The change in new business margin is partly driven by a change in new business mix as a result of a shift to lower margin products, but to a greater extent by the difference at the valuation date between the Italian government yields and the Euro swap rates used for the MCEV. The capitalization of the spreads inherent in the Italian government bonds would increase the value of new business by EUR 10mn, and hence resulting in a stable new business margin of 2.8%.

3.5.2 Development of Embedded Value and Free Surplus

The total embedded value for the Italian operations decreased from EUR 3,522mn to EUR 2,754mn after a net capital movement of EUR -337mn.

The movement analysis in Exhibit 22 summarizes the main drivers for the change in embedded value of Allianz Italy.

Exhibit 22: Analysis of Earnings of Embedded Value - Italy

	Earnings on MCEV analysis			
	Free Surplus	Required Capital	ViF	MCEV
	EUR mn	EUR mn	EUR mn	EUR mn
Opening MCEV reported as at 31 December 2007	**909**	**902**	**1,711**	**3,522**
Total opening adjustments	0	0	0	0
Foreign Exchange Variance	*0*	*0*	*0*	*0*
Acquired / Divested business	*0*	*0*	*0*	*0*
Restatements	*0*	*0*	*0*	*0*
Adjusted Opening MCEV as at 31 December 2007	**909**	**902**	**1,711**	**3,522**
Value of new business at point of sale	**0**	**0**	**96**	**96**
Expected existing business contribution *reference rate*	43	42	65	151
Expected existing business contribution *in excess of reference rate*	5	0	1	6
Transfer from VIF and required capital to free surplus	250	-21	-228	0
on in-force at begin of year	*360*	*-85*	*-275*	*0*
on new business	*-110*	*63*	*47*	*0*
Experience variance	**63**	**-18**	**0**	**45**
Assumption changes	**0**	**0**	**15**	**15**
Other operating variance	-14	-1	12	-3
Operating MCEV earnings	347	1	-38	310
Economic variances	**-89**	**-35**	**-618**	**-742**
Other non operating variance	0	0	0	0
Total MCEV earnings	258	-34	-656	-432
Closing adjustments *Net capital movements*	-337	0	0	-337
Closing MCEV as at 31 December 2008	**830**	**868**	**1,055**	**2,754**

The MCEV earnings were EUR -432mn or -12% of the adjusted opening MCEV.

Earning the risk free investment return on the in-force portfolio increased MCEV by EUR 151mn, and long term expected returns in excess of risk free rates (excluding interests in non-life cross-holdings) increased MCEV further by EUR 6mn.

Impact of experience variances and assumption changes increased the value slightly. Higher lapse experience and corresponding assumption changes have both led to a reduction in the MCEV. This is more than offset by the positive effect of lower effective tax in Italy and the increase in asset management fee income following a revision of service level agreements with AGI Italy.

All expenses are fully allocated when setting expense assumptions in Italy with the exception of a one-off cost of EUR 10mn (gross of tax) which is a result of the integration costs in Allianz spa. There are no further one-off costs or expense overruns.

The fall in interest rates and widening of spreads on Italian government bonds decreased the in-force value. As mentioned above, the Allianz MCEV methodology does not allow for the capitalisation of the spreads on government bonds in the VIF or the VNB. However, for asset liability matching purposes, Allianz Italy uses government bonds to back its liabilities. If the additional spreads on Italian government bonds were taken into account, the additional value created would increased the VIF by EUR 274mn.

3.5.3 Sensitivities

Exhibit 23 shows the sensitivities for the embedded value and value of new business of Allianz Italy.

Exhibit 23: Sensitivities - Italy

	Inforce	Inforce	NB	NB
	EUR mn	%	EUR mn	%
Central Assumptions	**2,754**	100%	**96**	100%
Required Capital equal to local solvency capital	0	0%	0	0%
EV change by economic factors				
Risk Free Rate -100bp	-93	-3%	-2	-2%
Risk Free Rate +100bp	52	2%	3	3%
Charge for CNHR +100bp	-24	-1%	-3	-3%
Equity and property values - 10%	-47	-2%	-1	-1%
Swaption volatilities +25%	-74	-3%	-4	-4%
Equity option volatilities +25%	-12	0%	-1	-1%
EV change by non-economic factors				
Lapse Rates -10%	22	1%	3	3%
Maintenance Expenses -10%	32	1%	4	4%
Mortality -5% for products with death risk	4	0%	1	1%
Mortality -5% for products with longevity risk	-4	0%	0	0%

All of the sensitivities are comparatively low for Allianz Italy. Liabilities in the Italian business are well matched and backed by government bonds, which under normal conditions would lead to low interest rate sensitivity and low options and guarantees value. However, under current market conditions where Italian government bonds have significantly higher yields as a result of the higher spreads than corresponding swaps, the effectiveness of the asset-liability matching is slightly distorted resulting in higher interest rate sensitivity and correspondingly higher options and guarantees value.

3.6 Other Western Europe

In 2008, Other Western Europe also includes the Spanish entity Eurovida and Allianz Turkey for the first time. The addition of both entities increased the value of the MCEV of the region by EUR 182mn from the 2007 published value.

3.6.1 Development of Value of New Business

In 2008, the value of new business of the entities included in "Other Western Europe" was EUR 62mn with a new business margin of 2.0%. This represents a reduction in the value of new business of 44% and a drop in the margin of 2.3%. Exhibit 24 shows an analysis of the change in new business value.

Exhibit 24: Movement of Value of New Business - Other Western Europe

	Value of New Business	New Business Margin	Present Value of NB Premium
	EUR mn	%	EUR mn
Reported Value as at 31 December 2007	**93**	**3.9%**	**2,378**
Total initial adjustments	18	0.4%	197
Change in Foreign Exchange	*2*	*0.0%*	*56*
Change in Allianz interest	*0*	*0.0%*	*2*
Restatements	*16*	*0.4%*	*140*
Adjusted Opening Value as at 31 December 2007	**111**	**4.3%**	**2,575**
Change in volume	20	0.0%	463
Change in business mix	-21	-0.7%	0
Change in assumptions	-48	-1.6%	93
Value of new business as at 31 December 2008	**62**	**2.0%**	**3,131**

Including Eurovida and Allianz Turkey increased the new business value by EUR 16mn. This impact was further increased by EUR 2m as a result of the strengthening of the Swiss Franc against the Euro.

The overall growth in volume after initial adjustments in the region is strong at 22%. Healthy premium growth is maintained in Switzerland, Portugal and Spain and this compensates the challenging market conditions in the Netherlands and Belgium due to low appetite for investment related products, especially unit linked products. Swiss volume growth is supported by significant increase in volumes in its group business.

The new business margin remain high at 3.6% before allowance of the impact of lower interest rates at the year end. Adverse impact of lower interest rate rates on the total new business sold reduces margin from 3.6% to 2%, and the corresponding impact on value is EUR -48mn.

3.6.2 Development of Embedded Value and Free Surplus

The embedded value for the entities in the “Other Western Europe” region increased from EUR 3,346mn to EUR 2,528mn after a net capital movement of EUR 153mn, and opening adjustments of EUR 312mn.

The movement analysis in Exhibit 25 summarizes the main drivers for the change in embedded value:

Exhibit 25: Analysis of Earnings of Embedded Value Western Europe

	Earnings on MCEV analysis			
	Free Surplus	Required Capital	ViF	MCEV
	EUR mn	EUR mn	EUR mn	EUR mn
Opening MCEV reported as at 31 December 2007	**612**	**1,043**	**1,690**	**3,346**
Total opening adjustments	91	53	167	312
Foreign Exchange Variance	*33*	*35*	*61*	*129*
Acquired / Divested business	*0*	*0*	*0*	*1*
Restatements	*58*	*18*	*106*	*182*
Adjusted Opening MCEV as at 31 December 2007	**703**	**1,096**	**1,858**	**3,657**
Value of new business at point of sale	**0**	**0**	**62**	**62**
Expected existing business contribution *reference rate*	36	1	104	141
Expected existing business contribution *in excess of reference rate*	12	0	23	35
Transfer from VIF and required capital to free surplus	95	85	-180	0
on in-force at begin of year	*251*	*-15*	*-235*	*0*
on new business	*-156*	*100*	*55*	*0*
Experience variance	**10**	**35**	**16**	**61**
Assumption changes	**133**	**-127**	**33**	**40**
Other operating variance	106	-110	46	42
Operating MCEV earnings	393	-116	106	382
Economic variances	**-1,078**	**898**	**-1,488**	**-1,668**
Other non operating variance	3	0	0	3
Total MCEV earnings	-682	782	-1,382	-1,283
Closing adjustments *Net capital movements*	153	0	0	153
Closing MCEV as at 31 December 2008	**174**	**1,878**	**475**	**2,528**

The MCEV earnings were EUR -1,283mn or -35% of the adjusted opening MCEV.

The opening adjustments include the impact as a result of the strengthening of the Swiss Franc against the Euro (EUR 129m) and the inclusion of the Spanish entity Eurovida, and Allianz Turkey in the MCEV for the first time (EUR 182m).

Earning the risk free investment return on the in-force portfolio increased MCEV by EUR 141mn, and long term expected returns in excess of risk free rates increased MCEV further by EUR 35mn.

Experience variance and assumption changes include better than expected mortality experience for risk products in Spain and in Switzerland, and positive lapse and expense result in Belgium. Disability annuity business in Switzerland also contributed to the positive operating variance, however this was off-set by enhanced modelling of the annuity conversion options.

All expenses are fully allocated when setting expense assumption for all entities in the region with the exception of Switzerland, where EUR 4mn (gross of tax) spent on strategic initiatives was excluded. There are no further one-off costs or expense overruns.

Economic variance is the main driver for change in the MCEV in 2008. In particular, the economic downturn at year end adversely impacted the whole region. Lower interest rates and significant falls in equity values reduced available buffers and subsequently reduced MCEV by EUR 1,668mn. The impact is higher on the traditional portfolios where options and guarantees are closer to the strike point as interest rates fall. In addition, significantly higher credit spreads for corporate bonds adversely impacted the value in Spain.

The net capital movement of EUR 153mn includes dividend payments from Switzerland, Spain, Netherlands and Portugal of EUR 95mn, which is off-set by a capital transfer to Belgium of EUR 248mn.

3.6.3 Sensitivities

Exhibit 26 shows the sensitivities for the embedded value and value of new business.

Exhibit 26: Sensitivities - Other Western Europe

	Inforce	Inforce	NB	NB
	EUR mn	%	EUR mn	%
Central Assumptions	**2,528**	100%	**62**	100%
Required Capital equal to local solvency capital	84	3%	7	12%
EV change by economic factors				
Risk Free Rate -100bp	-1,022	-40%	-49	-79%
Risk Free Rate +100bp	475	19%	17	28%
Charge for CNHR +100bp	-60	-2%	-5	-8%
Equity and property values - 10%	-169	-7%	-11	-17%
Swaption volatilities +25%	-118	-5%	-5	-7%
Equity option volatilities +25%	-87	-3%	-5	-9%
EV change by non-economic factors				
Lapse Rates -10%	17	1%	5	8%
Maintenance Expenses -10%	111	4%	8	13%
Mortality -5% for products with death risk	34	1%	4	7%
Mortality -5% for products with longevity risk	-57	-2%	-3	-4%

The sensitivity to interest rates for in-force and new business has increased significantly from 2007. The main driver for this is the low level of interest rates in the central assumptions which means that further interest rate falls would bring options and guarantees much closer to the strike point than they currently are. Due to the asymmetric nature of the embedded financial options and guarantees, falling market rates have a much higher impact on MCEV than rising interest rates. A similar argument applies for sensitivities to swaption and equity option volatilities.

The impact of sensitivities to a decrease in maintenance expense assumptions is highly dependent on whether technical profits are subject to profit sharing with policyholders as is the case in Switzerland and Austria.

3.7 New Europe

The New Europe region currently contributes 5% of the total embedded value (EUR 649mn), and 23% of the total value of new business (EUR 58mn). The pension fund business written outside the Life/Health segment is not included in the regional MCEV.

3.7.1 Development of Value of New Business

The value of new business contribution from New Europe in 2008 was EUR 58 million with a new business margin of 5.4%. Exhibit 27 shows an analysis of the change in new business value.

Exhibit 27: Movement of Value of New Business - New Europe

	Value of New Business	New Business Margin	Present Value of NB Premium
	EUR mn	%	EUR mn
Reported Value as at 31 December 2007	**58**	**6.6%**	**880**
Total initial adjustments	0	0.2%	-24
Change in Foreign Exchange	*0*	*0.2%*	*-22*
Change in Allianz interest	*0*	*0.0%*	*2*
Restatements	*0*	*0.0%*	*-4*
Adjusted Opening Value as at 31 December 2007	**58**	**6.8%**	**856**
Change in volume	12	0.0%	169
Change in business mix	-14	-1.4%	0
Change in assumptions	2	0.0%	44
Value of new business as at 31 December 2008	**58**	**5.4%**	**1,069**

In 2008, the value of new business decreased by 1% but new business volume increased significantly (+25%), mainly as a result of increases in single premium business.

The main contributors to the significant increase in sales volumes are Poland, Slovakia and Hungary. Slovakia and Hungary had successful sales of single premium Unit Linked and Indexed Linked products, which results in an increase in the value of new business as well. Poland launched a new single premium bank deposit product after the loss of bancassurance tie-up in the second half of the year and sold significant volumes but at a very tight profit margin.

The large increase in sales volumes almost compensates for the reduction in value as unit linked and index linked products have in general lower margins. As business mix shifted towards lower margin investment type products, the overall profit margin decreased from 6.6% to 5.4%, but this is still a high level of margin.

Assumption changes include the impact of lower interest rates in the region at year end, which for unit linked business results in an increase in value and volume.

3.7.2 Development of Embedded Value and Free Surplus

The MCEV for New Europe increased from EUR 567mn in 2007 to EUR 649mn in 2008.

The movement analysis in Exhibit 28 below summarizes the main drivers for the change in embedded value.

Exhibit 28: Analysis of Earnings of Embedded Value - New Europe

	Earnings on MCEV analysis			
	Free Surplus	Required Capital	ViF	MCEV
	EUR mn	EUR mn	EUR mn	EUR mn
Opening MCEV reported as at 31 December 2007	**81**	**115**	**371**	**567**
Total opening adjustments	-7	0	9	3
Foreign Exchange Variance	*-2*	*1*	*8*	*7*
Acquired / Divested business	*0*	*0*	*1*	*1*
Restatements	*-4*	*-1*	*-1*	*-6*
Adjusted Opening MCEV as at 31 December 2007	**75**	**115**	**380**	**570**
Value of new business at point of sale	**0**	**0**	**58**	**58**
Expected existing business contribution *reference rate*	5	3	28	36
Expected existing business contribution *in excess of reference rate*	2	0	2	4
Transfer from VIF and required capital to free surplus	18	17	-36	0
on in-force at begin of year	*67*	*-1*	*-65*	*0*
on new business	*-48*	*19*	*30*	*0*
Experience variance	**4**	**-2**	**-14**	**-12**
Assumption changes	**0**	**0**	**-15**	**-15**
Other operating variance	3	-8	20	14
Operating MCEV earnings	32	11	42	85
Economic variances	**-66**	**35**	**-73**	**-104**
Other non operating variance	0	0	0	0
Total MCEV earnings	-34	46	-30	-19
Closing adjustments *Net capital movements*	98	0	0	98
Closing MCEV as at 31 December 2008	**138**	**161**	**349**	**649**

MCEV earnings were EUR -19mn or -3% of the adjusted opening MCEV value.

Earning the risk free investment return on the in-force portfolio increased MCEV by EUR 36mn, and expected returns in excess of risk free rates increased MCEV further by EUR 4mn.

MCEV grew as a result of the relatively strong value of new business, which is driven by continued successful sales of single premium unit linked and indexed linked business.

Experience variance of EUR -12mn is from higher lapses, expenses and commissions mainly in Slovakia and Hungary.

All expenses are fully allocated when setting expense assumptions in New Europe with the exception of a one-off cost of EUR 2.5mn (gross of tax) which is mainly attributable to the administration and IT systems upgrade in Slovakia following their conversion to the Euro. There are no further one-off costs or expense overruns reported.

Assumption changes reduced MCEV by EUR -15mn and, are mainly from higher expense and commission assumptions due to increasing sales costs in Slovakia. This is partly offset by the positive impact from revised lapse rate assumptions.

Other operating variances of EUR 14mn is largely from enhanced modelling of unit linked and group business in Poland and Slovakia.

Economic variance of EUR -104mn is due to poor economic performance in 2008, in particular falling interest rates at the year end and falling equity markets.

The net capital movement of EUR 98mn is mainly a reallocation of capital between the life and non-life entities in Slovakia and a capital injection in Poland and Croatia.

For New Europe, it was observed that the spreads between government bond rates and swap rates widened at year end across the region. Swap rates are significantly lower than the government bond rates by around 100 to 150 bps at year end. If the MCEV was calculated using government bond yields instead of swaps, the additional value generated is EUR 39mn.

3.7.3 Sensitivities

Exhibit 29 shows the sensitivities for the embedded value and the value of new business.

Exhibit 29: Sensitivities - New Europe

	Inforce	Inforce	NB	NB
	EUR mn	%	EUR mn	%
Central Assumptions	**649**	100%	**58**	100%
Required Capital equal to local solvency capital	5	1%	1	1%
EV change by economic factors				
Risk Free Rate -100bp	-47	-7%	0	-1%
Risk Free Rate +100bp	26	4%	-1	-2%
Charge for CNHR +100bp	-7	-1%	-1	-2%
Equity and property values - 10%	-4	-1%	0	-1%
Swaption volatilities +25%	-8	-1%	-1	-1%
Equity option volatilities +25%	-1	0%	0	0%
EV change by non-economic factors				
Lapse Rates -10%	10	1%	5	8%
Maintenance Expenses -10%	30	5%	4	8%
Mortality -5% for products with death risk	12	2%	3	4%
Mortality -5% for products with longevity risk	0	0%	0	0%

Sensitivities for New Europe are all small, however, sensitivities to economic assumptions have increased from last year due to the lower interest rate environment and less buffers available from unrealized capital gains to absorb adverse movements.

There are no significant changes to the sensitivity of non-economic factors for both in-force and new business.

3.8 USA

Deteriorating investment conditions with widening credit spreads, lower interest rates, declining equity markets, as well as higher volatility, affect both value of new business and value of in-force in 2008.

3.8.1 Development of Value of New Business

The value of new business written by AZ Life US in 2008 amounts to EUR -364mn with a new business margin of -5.5%. Exhibit 30 shows an analysis of the change in new business value.

Exhibit 30: Movement of Value of New Business - US

	Value of New Business	New Business Margin	Present Value of NB Premium
	EUR mn	%	EUR mn
Reported Value as at 31 December 2007	**93**	**1.4%**	**6,411**
Total initial adjustments	5	0.0%	370
Change in Foreign Exchange	*5*	*0.0%*	*370*
Change in Allianz interest	*0*	*0.0%*	*0*
Restatements	*0*	*0.0%*	*0*
Adjusted Opening Value as at 31 December 2007	**98**	**1.4%**	**6,781**
Change in volume	-5	0.0%	-358
Change in business mix	-35	-0.5%	0
Change in assumptions	-422	-6.4%	172
Value of new business as at 31 December 2008	**-364**	**-5.5%**	**6,595**

The 2008 new business value is EUR 462mn lower than the value in 2007, after adjustment for the higher exchange rate for the USD.

The business mix shift to lower-margin products contributed to the decline in the new business margin.

However, the main driver for the significant margin decrease is the adverse financial market developments in 2008, with low interest rates and significantly higher volatilities and credit spreads. Business sold in the first three quarters of 2008 generated positive value and margins, but the revaluation of the new business at year end economic assumptions resulted in a negative impact of EUR 422mn for the US. Products have since been redesigned and re-priced, and some changes have already been implemented. Pending completion of the regulatory approval cycle, the rest of the changes will be implemented from Q2 2009 onwards.

Compared to new business margins last year, about 93% of the total decline in margin of 6.9% is a result of the economic market changes. As a significant contribution to this decline in value is the disproportionately high level of corporate bonds spreads at the year end, it is expected that new business margin, and hence value will revert to a positive level once credit spreads reduce back to normal levels.

On real world assumptions, the business in the US is expected to generate positive shareholder cashflows.

3.8.2 Development of Embedded Value and Free Surplus

The total embedded value for Allianz Life US decreased from EUR 2,884mn to EUR -3,318mn after a capital injection of EUR 200mn.

The movement analysis in Exhibit 31 summarizes the main drivers for the change in embedded value.

Exhibit 31: Analysis of Earnings of Embedded Value - US

	Earnings on MCEV analysis			
	Free Surplus	Required Capital	ViF	MCEV
	EUR mn	EUR mn	EUR mn	EUR mn
Opening MCEV reported as at 31 December 2007	**476**	**1,244**	**1,164**	**2,884**
Total opening adjustments	28	72	67	167
Foreign Exchange Variance	*28*	*72*	*67*	*167*
Acquired / Divested business	*0*	*0*	*0*	*0*
Restatements	*0*	*0*	*0*	*0*
Adjusted Opening MCEV as at 31 December 2007	**504**	**1,316**	**1,231**	**3,051**
Value of new business at point of sale	**-35**	**0**	**-329**	**-364**
Expected existing business contribution *reference rate*	56	0	125	181
Expected existing business contribution *in excess of reference rate*	153	5	118	276
Transfer from VIF and required capital to free surplus	-327	225	102	0
on in-force at begin of year	*146*	*-16*	*-130*	*0*
on new business	*-474*	*241*	*232*	*0*
Experience variance	**-39**	**0**	**-77**	**-116**
Assumption changes	**0**	**0**	**-37**	**-37**
Other operating variance	-95	41	-367	-422
Operating MCEV earnings	-288	270	-464	-482
Economic variances	**-1,189**	**574**	**-5,472**	**-6,087**
Other non operating variance	0	0	0	0
Total MCEV earnings	-1,477	844	-5,936	-6,569
Closing adjustments	200	0	0	200
Net capital movements				
Closing MCEV as at 31 December 2008	**-773**	**2,160**	**-4,705**	**-3,318**

The MCEV earnings were EUR -6,569mn.

The strengthening of the US Dollar led to an increase in the opening MCEV of EUR 167mn. The capital injection in 2008 contributed another EUR 200mn to the MCEV.

Earning the risk free investment return on the in-force portfolio increased MCEV by EUR 181mn, and long term expected returns in excess of risk free rates increased MCEV further by EUR 276mn.

For Required Capital we reflect the level agreed with local rating agencies. The resulting deficiency in the NAV compared to Required Capital (EUR -773mn) as reflected in Free Surplus is considered temporary.

The new business strain in 2008 is significantly higher than last year due to the higher capital requirement.

Experience variance and assumption changes show the negative impact from higher lapses and expenses.

All expenses are fully allocated when setting expense assumption in the US with the exception of a one-off cost of EUR 83mn (gross of tax) which mainly relates to legal expenses on ongoing litigations. There are no further one-off costs or expense overruns.

For taxation purposes, AZ Life is treated as part of Allianz of America, which also includes the non-life entity Firemen's Fund. Profits emerging from both entities are considered when determining the effective tax rate. For additional details, please see Appendix B.

Other Operating Variance of EUR -422mn shows an impact on MCEV which was analysed after data submission and revealed an underestimation of equity movements, which should have been shown under economic variances.

Capital market turbulences throughout 2008 and especially at the year end had a significant impact on the MCEV. In particular, low interest rates, higher credit spreads and underperformance of equity investments, as well as higher volatility reduced the MCEV by EUR 6,087mn. Sensitivities show that the loss in value reported would be recovered if capital markets return to normal levels.

Despite the negative value, under real world assumptions (allowing for realization of some of the credit spreads), cashflow generation remains positive.

3.8.3 Sensitivities

Exhibit 32 shows the sensitivities for AZ-Life embedded value and value of new business:

Exhibit 32: Sensitivities - US

	Inforce	Inforce	NB	NB
	EUR mn	%	EUR mn	%
Central Assumptions	**-3,318**	100%	**-364**	100%
Required Capital equal to local solvency capital	111	-3%	14	-4%
EV change by economic factors				
Risk Free Rate -100bp	-1,390	42%	-200	55%
Risk Free Rate +100bp	1,154	-35%	157	-43%
Charge for CNHR +100bp	-39	1%	-5	1%
Equity and property values - 10%	-109	3%	-20	6%
Swaption volatilities +25%	-75	2%	-19	5%
Equity option volatilities +25%	-63	2%	-10	3%
EV change by non-economic factors				
Lapse Rates -10%	-76	2%	-11	3%
Maintenance Expenses -10%	87	-3%	8	-2%
Mortality -5% for products with death risk	-3	0%	-6	2%
Mortality -5% for products with longevity risk	-36	1%	-3	1%

Sensitivity to economic factors have increased significantly in 2008.

The sensitivity to changes in the risk free rate shows significant impact in value, coming mainly from the Fixed and Fixed Indexed Annuities. This is because lower interest rates lead to spread compression as the business is closer to the contractual guarantees. In addition, the options and guarantees will be closer to the money and hence result in a significant loss of future profits. Higher volatilities increase the time value of the options and guarantees embedded in these products and hence the MCEV reduces under the volatility sensitivities as well.

For sensitivities to credit spreads for the US business, please see Section 2.6.

The sensitivity to lower lapse rates shows a loss in the MCEV. This mainly comes from the Variable Annuity business, indicating that as options and guarantees are in the money due to the adverse capital market movements, the loss of future profits would be higher than expected if policyholders react economically and stay longer than expected.

3.9 Asia

Asia suffered from lower sales volumes and drops in interest rates and equity affecting both the value of the in-force and new business. In 2008, the reported results also include the new operation in Japan, which currently sells Variable Annuity products.

The main companies in the region, Allianz Life Korea, Allianz Taiwan Life and Allianz Life Japan all report embedded value on a MCEV basis.

3.9.1 Development of Value of New Business

The value of new business of our Asian operations decreased to EUR 21mn, which is 87% lower than the value reported in 2007. The new business margin in 2008 is 0.7%. Exhibit 33 shows an analysis of the change in new business value.

Exhibit 33: Movement of Value of New Business - Asia

	Value of New Business	New Business Margin	Present Value of NB Premium
	EUR mn	%	EUR mn
Reported Value as at 31 December 2007	**159**	**3.5%**	**4,529**
Total initial adjustments	-36	-0.5%	-373
Change in Foreign Exchange	*-28*	*-0.2%*	*-543*
Change in Allianz interest	*-8*	*-0.3%*	*170*
Restatements	*0*	*0.0%*	*0*
Adjusted Opening Value as at 31 December 2007	**124**	**3.0%**	**4,156**
Change in volume	-39	0.0%	-1,320
Change in business mix	-30	-1.1%	0
Change in assumptions	-33	-1.2%	82
Value of new business as at 31 December 2008	**21**	**0.7%**	**2,918**

The 2007 new business value was adjusted for the change in exchange rate, mostly the impact of a weakening Korean Won.

New business volume decreased to EUR 2,918mn, driven by adverse performance in Korea and Taiwan. In Korea, sales were much lower than last year due to the prolonged strike by the labour unions. In Taiwan, the local regulator has tightened regulation on sales practices of Structured Notes products. This action has negatively affected the whole insurance industry, and in particular Allianz Taiwan because these products accounted for the majority of their sales last year. The negative volume effects in Taiwan and Korea were partly offset by the higher than expected sales volumes in Japan.

The negative impact of the change in business mix is mostly driven by Japan, where new business margins are low reflecting the start-up status of the entity. In addition, China also contributed to the negative impact as mostly lower margin business was sold. Korea partly offset these negative effects, as it sold relatively more high margin equity index products.

The negative effect of the change in assumptions was the result of lower interest rates in the region, mostly affecting Korea and Taiwan.

3.9.2 Development of Embedded Value and Free Surplus

The embedded value for the Asian entities fell from EUR 637mn to EUR -132mn after a capital injection of EUR 107mn supporting growth in China and Japan.

The movement analysis in Exhibit 34 summarizes the main drivers for the change in embedded value:

Exhibit 34: Analysis of Earnings of Embedded Value - Asia

	Earnings on MCEV analysis			
	Free Surplus	Required Capital	ViF	MCEV
	EUR mn	EUR mn	EUR mn	EUR mn
Opening MCEV reported as at 31 December 2007	**-78**	**717**	**-3**	**637**
Total opening adjustments	-12	-95	-30	-136
Foreign Exchange Variance	*-12*	*-113*	*-35*	*-160*
Acquired / Divested business	*1*	*18*	*5*	*24*
Restatements	*0*	*0*	*0*	*0*
Adjusted Opening MCEV as at 31 December 2007	**-89**	**622**	**-32**	**501**
Value of new business at point of sale	**-37**	**0**	**58**	**21**
Expected existing business contribution *reference rate*	25	4	13	42
Expected existing business contribution *in excess of reference rate*	12	0	3	15
Transfer from VIF and required capital to free surplus	-87	79	8	0
on in-force at begin of year	*74*	*-16*	*-58*	*0*
on new business	*-161*	*95*	*66*	*0*
Experience variance	**18**	**-11**	**-64**	**-57**
Assumption changes	**0**	**0**	**-37**	**-37**
Other operating variance	-459	461	-152	-150
Operating MCEV earnings	-527	532	-170	-165
Economic variances	**-582**	**533**	**-526**	**-575**
Other non operating variance	0	0	0	0
Total MCEV earnings	-1,109	1,065	-696	-740
Closing adjustments *Net capital movements*	107	0	0	107
Closing MCEV as at 31 December 2008	**-1,091**	**1,688**	**-729**	**-132**

The MCEV earnings are EUR -740mn or -148% of the adjusted opening value, mostly driven by adverse economic variance as all companies suffered from lower interest rates and the falls in the equity markets.

The total initial adjustment is mostly attributable to foreign exchange movements as a result of the weaker Korean Won, which depreciated 25% in 2008.

Earning the risk free investment return on the in-force portfolio increased MCEV by EUR 42mn, and long term expected returns in excess of risk free rates increased MCEV further by EUR 15mn.

Morbidity and expense assumptions were updated in Korea and Taiwan, and this had a negative impact on the value. The negative effect reported as other operating variance is mostly a result of the higher risk capital requirement in Taiwan following its adoption of the Allianz internal risk capital approach.

In Asia, a total of EUR 31mn has been excluded when setting expense assumptions to allow for one-off costs in Korea due to the strike action and start up activities mainly in Japan and China. There are no further one-off costs or expense overruns.

The economic variance captures the impact from falling interest rates, with the main impact seen in Taiwan and to a lesser extent in Korea. The impact of equity market falls were comparatively smaller and mainly affected Korea.

The net capital movement of EUR 107mn is a combination of start-up capital of EUR 65mn in Japan and a capital injection of EUR 42mn in China.

3.9.3 Sensitivities

Exhibit 35 shows the sensitivities for embedded value and value of new business.

Exhibit 35: Sensitivities - Asia

	Inforce	Inforce	NB	NB
	EUR mn	%	EUR mn	%
Central Assumptions	**-132**	100%	**21**	100%
Required Capital equal to local solvency capital	42	-32%	3	17%
EV change by economic factors				
Risk Free Rate -100bp	-854	647%	-24	-115%
Risk Free Rate +100bp	500	-379%	7	35%
Charge for CNHR +100bp	-66	50%	-3	-14%
Equity and property values - 10%	-15	12%	0	0%
Swaption volatilities +25%	-15	11%	0	-1%
Equity option volatilities +25%	-15	11%	-1	-3%
EV change by non-economic factors				
Lapse Rates -10%	6	-4%	13	61%
Maintenance Expenses -10%	40	-30%	4	19%
Mortality -5% for products with death risk	40	-31%	2	9%
Mortality -5% for products with longevity risk	-9	7%	0	-1%

The sensitivities show that the value of in-force and new business are highly sensitive to movements in the economic factors. Overall, sensitivity percentages appear to be high as the central value is small and negative.

With the current low interest rate environment, sensitivity to interest rates is much higher than in 2007, for both in-force and new business portfolios. This is especially driven by the higher guarantees in the old traditional portfolios in Korea and Taiwan. Due to the asymmetric nature of the embedded financial options and guarantees, falling market rates have a much higher impact on MCEV than rising interest rates.

New business is sensitive to lapse rates. This is mostly driven by the lapse sensitivity in Korea. For the Korean in-force business, sensitivity to lapse rate movements shown is much lower as the positive impact of lower lapses on new low guarantee products is offset by the negative impact resulting from lower lapses on older traditional business with higher guarantees.

3.10 Holding

The holding segment in the MCEV report contains the results from internal reinsurance as well as the holding expense adjustment. The following table summarizes the impact of these adjustments:

Exhibit 36: Summary Holding

	Holding Expense	Reinsurance	Total
	EUR mn	EUR mn	EUR mn
Ending Embedded Value 2007	-173	138	-36
Ending Embedded Value 2008	-266	137	-129
Value of New Business 2007	-46	3	-43
Value of New Business 2008	-64	9	-55

The after-tax impact of holding expenses on the embedded value and on the value of new business increased due to higher costs allocated to the Life & Health segment following the introduction of the new Risk Capital model for Life businesses.

As the entities calculate Embedded Value net of internal and external reinsurance, the corresponding projected profits of the internal life reinsurance entity increase the EV. Premiums are reported gross of reinsurance. Value of new business from reinsurance tripled due to a Group Life external reinsurance deal from the Singapore branch.

4 Independent Opinion

Tillinghast, the insurance consulting business of Towers Perrin, has reviewed the methodology and assumptions used to determine the 2008 embedded value results for the Allianz Group, together with the disclosure provided in this document, against the requirements of the European Insurance CFO Forum Market Consistent Embedded Value Principles ("MCEV Principles") © [3]. Our review covered the embedded value as at 31 December 2008, the value of 2008 new business, the analysis of movement in embedded value over 2008 and the sensitivities on the embedded value and new business value shown in Exhibit 8a.

Towers Perrin has concluded that the methodology and assumptions used by Allianz, together with the disclosure provided in this document, complies with the requirements of the MCEV Principles, except for Allianz's disclosed interpretation of Principles 12 and 15 shown in Section 1.1 relating to asset volatilities, which were based on market data at 30 September 2008, and the absence in the disclosure of the analysis of Group MCEV earnings

Towers Perrin has also performed limited high-level checks on the results of the calculations and has confirmed that any issues discovered do not have a material impact on the disclosed embedded values and new business values. Towers Perrin has not, however, performed detailed checks on the models and processes involved.

In arriving at these conclusions, Towers Perrin has relied on data and information provided by Allianz SE and its subsidiaries. This opinion is made solely to Allianz SE in accordance with the terms of Towers Perrin's engagement letter. To the fullest extent permitted by applicable law, Towers Perrin does not accept or assume any responsibility, duty of care or liability to anyone other than Allianz SE for or in connection with its review work, the opinions it has formed, or for any statement set forth in this opinion.

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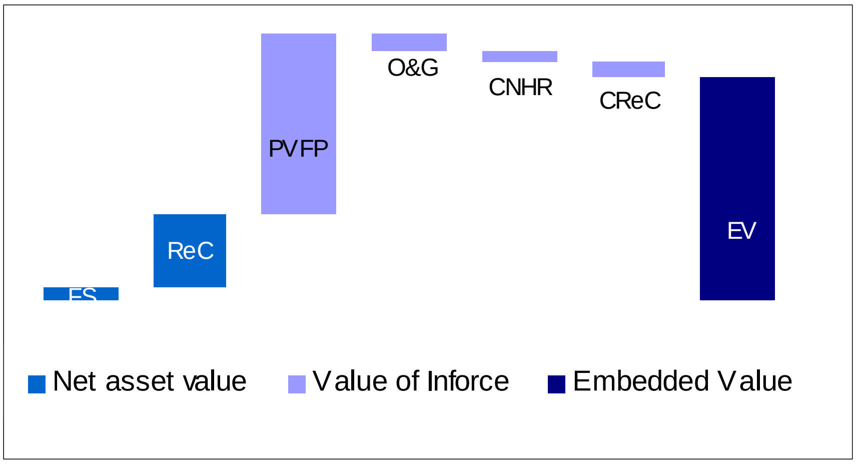
A Appendix: Methodology

Allianz Group provides the operating entities with detailed guidelines in order to ensure consistency of embedded value calculations throughout the Group. Allianz Group sets the economic assumptions centrally which are then used in the calculations by the operating entities. All results submitted to Allianz Group are signed off by the local chief actuary and the CFO.

As described in Section 1.3, embedded value consists of the net asset value, i.e. the value of the assets not backing liabilities which can also be interpreted as the equity component of the embedded value, and the value of in-force, i.e. the value of future profits emerging from operations and the assets backing liabilities.



A.1 Net asset value

Net asset value (or "NAV") is the market value of the assets not backing local statutory reserves at 31 December 2008, net of an allowance for tax on unrealized capital gains. The NAV includes the required capital (or "ReC"), i.e. the amount of capital required to support in-force business in excess of local statutory reserves, and the free surplus (or "FS"), i.e. the market value of any capital allocated to, but not required to support, the in-force business at the valuation date.

A.2 Required Capital

According to the MCEV Principles the ReC is the amount of capital required to be held to support covered business in excess of local statutory reserves, taking into account external requirements such as solvency requirements as well as capital required to meet internal objectives. In Allianz, the required capital is defined as the maximum of the local minimum statutory solvency capital, the capital requirement derived from the internal risk capital model and additional capital to reflect market standards (see also section 3.1) .

The internal risk capital in Allianz Group is defined as the maximum loss in terms of Market Consistent Embedded Value (MCEV) that shareholders may experience under adverse conditions over a time horizon of one year with a given confidence interval reflecting the Group's target rating. In other words, Risk Capital is held to protect against insolvency from the point of view of the economic balance sheet during the time horizon of one year. The time horizon has been chosen to be one year as it is assumed to take up to one year to transfer liabilities to a third party.

For the quantification of internal risk capital for life insurance operations, in a first step the risk universe is broken down into the categories market risk, credit risk, actuarial risks and business risks. These are further decomposed into single risk drivers and sub risk drivers; e.g. for mortality, level, trend and calamity risks are assessed separately. For each risk driver a stand-alone capital is defined based on the change in MCEV under worst case shock conditions of the corresponding risk driver.

Internal risk capital is calculated on a fund level, where "fund" refers to a subset of assets and related liabilities that are managed together, forming the basis for a common profit sharing mechanism and thus forming a key element of risk mitigation. In order to derive risk capital requirements on a fund level, stand-alone risk capital requirements per risk driver are aggregated in a first step to risk capital as per risk category and are further aggregated to a fund level. Diversification between non-financial risk types and between covered entities within

MCEV scope is allowed for. Diversification does not include effects between financial and non-financial risk types and between covered and non-covered entities.

As described, Allianz internal risk capital for Life entities is based on the change in MCEV, and for P/C on a comparable change in economic value. Therefore the available economic capital to be considered to cover the capital requirement of the entity is the MCEV, which can be split into the VIF, i.e. the profit margin in the statutory reserves and the MCEV NAV. This means that to protect against insolvency from an economic point of view, capital may be required to be held in addition to local statutory reserves and statutory solvency capital up to risk capital, in case the available capital including margins in reserves is not sufficient to cover risk capital. Allowing for this and aggregating with available capital and risk capital requirements of the other segments this leads to the economic solvency ratio of 140% at 31.December 2008 (pro forma after completion of sale of Dresdner Bank) as disclosed in our presentation to financial analysts and the risk disclosure under IFRS 7.

Generally, the economic capital requirement is monitored and met for each entity, however in exceptional situations, individual companies may not be fully capitalized beyond local solvency levels. This means that risk capital requirements may be higher than MCEV on a local level, or equivalently required capital may be higher than MCEV NAV, as long as targets are met at Group level. Nevertheless the local entities will have to reflect the full required capital (including the economic view) and calculate the cost of required capital accordingly. For AZ-Life we made an exception for year end 2008: Due to the unusual market conditions the market consistent Value of In-Force turned negative, as explained in the regional section. As we consider this to be temporary only and as we know that values will recover to pre-crisis levels as soon as credit spreads reduce to more normal levels we continue to base the required capital for AZ-Life on the S&P requirements.

A.3 Value of In-Force covered business

The value of in-force covered business is defined as the present value of future profits from in-force covered business (or PVFP) after allowance for the value of financial options and guarantees (or O&G), for the cost of residual non-hedgeable risk (or CNHR) and for the frictional cost of required capital (or CReC). These terms are defined in the following sections.

A.3.1 Present value of future profits

The PVFP is the discounted present value of the projected future emergence of shareholders' statutory profits, based on projected cash flows resulting from the current in-force portfolio.

Within the market consistent approach, each cash flow is valued using the discount rate consistent with that applied to such a cash flow in the capital markets. For example, an equity cash flow is valued using an equity risk discount rate, and a bond cash flow is valued using a bond risk discount rate.

Where cash flows are either independent of or move linearly with market movements, an equivalent and more practical method, known as the 'certainty equivalent' approach, can be applied, whereby it is assumed that all assets earn the risk-free rate and all cash flows are discounted using the risk-free rate. This leads to the same result as the method described in the previous paragraph.

The PVFP includes any intrinsic value of the embedded financial options and guarantees. Additional costs of O&G related to the variability of investment returns (the time value) are shown separately as described in the following section.

A.3.2 Time value of options and guarantees

A market consistent approach has been adopted for the valuation of material financial options and guarantees, using a stochastic option pricing technique calibrated to be consistent with the market price of relevant traded options.

The most material options and guarantees granted by the Allianz Group companies are:

- Guaranteed interest rates and minimum maturity values
- Guaranteed minimum surrender values
- Annuity conversion options
- Extension options
- Options and guarantees for unit-linked contracts and variable life and annuities
- Fund switching options with guarantee

The time value of these options and guarantees is determined based on stochastic techniques. Due to their complex nature, for the majority of the business there is no closed form solution to determine the value. Therefore stochastic simulations are applied which project all cash-flows and reserves including expenses, taxes etc. under a significant number of economic scenarios to determine a stochastic PVFP. The time value of O&G is then calculated as the difference between the certainty equivalent and the stochastic PVFP.

The models and assumptions employed in the stochastic simulation are consistent with the underlying embedded value and allow for the effect of management actions and policyholder behavior in different economic scenarios. The scenarios and the key parameters used in the calculations of O&G are described in Appendix B1.

Allianz has developed a central asset-liability interaction tool which is used by all entities for the stochastic simulations for options and guarantees and also for the calculation of risk capital. An important part of this tool is the modeling of investment management and crediting strategies:

The main components of the **investment strategies** are the definition of a target asset allocation, definition of buying and selling rules for the rebalancing process and the definition of asset profiles for reinvestments. While in the standard model the target allocation is defined upfront for each fund and time step, some subsidiaries have refined the implemented strategy to include simple dynamic rules based on stress tests that are prescribed by local authorities. The target allocation is normally consistent with the current asset mix. Projected changes to the asset mix can only be considered to the extent that they have already been agreed in business plans and have been at least partly achieved by the end of the reporting period. Such changes are only considered to the extent that they are projected to be realized within the first three projection years.

The modeled **crediting strategy** considers all regulatory and contractual rules. Within these boundaries it is recognized that management behavior is driven by both shareholders' and policyholders' expectations given the economic environment in each scenario. The usage of buffers such as unrealized capital gains or participation funds to meet certain return targets for policyholders and shareholders is defined in the strategy. Where there is management discretion with regard to different types of profit sharing, as for example between terminal dividends versus cash or bonus crediting, a corresponding strategy is defined.

Implemented management strategies follow a strict governance procedure. All specific enhancements and significant parameters are signed of by both local management and Allianz Group. It needs to be demonstrated that the modeled strategies reflect observed management behavior and that any legal and contractual rules are considered as well as potential external drivers such as market pressure. Modeling simplifications are evaluated.

The valuation of guaranteed surrender, extension and conversion options requires modeling of **dynamic policyholder behavior** dependent on the movement of financial markets**.** Unlike options on traded assets, however, it is not possible to evaluate these options assuming fully rational policyholder behavior. Contractual features such as surrender penalties, terminal dividends or riders have an impact on the behavior just as the fact that certain embedded features in life contracts cannot be acquired elsewhere. Most Allianz subsidiaries model dynamic behavior as a function of the spread between the credited rates and a market benchmark return. The best estimate assumptions are only altered when the spread exceeds certain boundaries and the dynamic change of the best estimate rates is generally limited. The corresponding parameters vary by product and client group.

A.3.3 Cost of residual non-hedgeable risk

MCEV Principle 9 requires explicitly an allowance for all non-hedgeable risk which are not already allowed for in the time value of options and guarantees or in the deterministic PVFP. In addition to the hedgeable financial risk captured in the time value or options and guarantees, allowance needs to be made for non-financial risks, for non-hedgeable financial risk and for operational risk, where both symmetric and asymmetric risk needs to be considered.

Allianz captures non-financial and operational risk within the cost of residual non-hedgeable risk (CNHR). Allianz applies a cost of capital approach, i.e. the allowance is calculated based on the cost of holding capital for non-financial and operational risk. The risk capital is based on the internal risk capital model and equal to the stand alone risk capital for mortality risk, lapse risk, expense risk and operational risk. It is based on a 99.93% percentile as required by Allianz target rating for our internal model, to which we apply a capital charge of 3.6% (see Appendix B2). Assuming a 99.5% percentile, this would correspond to a cost of capital charge of 5.5%.

Non-financial risk capital is allowing for an average diversification of covered risks. This covers diversification between non-financial risk types and between covered entities within MCEV scope. Diversification does not include effects between financial and non-financial risk types and between covered and non-covered entities. The capital is projected over the life time of the portfolio based on the projected reserve and other relevant drivers such as sum at risk. The same drivers are used to split the total capital for non-financial risk between existing business and new business. The charge applied to the projected capital reflects the cost of funds for the Group (see Appendix B2). To ensure compliance with MCEV Principles, we have assessed separately the cost of asymmetries in non-financial risk and the cost of operational risk which is not included yet in the PVFP or in the options and guarantees. This analysis showed that the major part of our cost of residual non-hedgeable risk is actually an allowance for uncertainty and symmetric risk, and only the minor part of CNHR is the required allowance for asymmetric non-financial and operational risk.

Financial non-hedgeable risk exists in market which are not sufficiently deep and liquid, e.g. where swaps are not available for all durations and only shorter than projected liabilities. For Allianz this is the case for Asian and New Europe entities. In setting best estimate assumptions for these economies i.e. when extrapolating yield curves to longer durations there exists an additional risk. Allianz MCEV allows for this financial non-hedgeable risk by applying a conservative extrapolation procedure for these currencies. Yield curves for currencies from less liquid markets are extrapolated at the long end by using the behaviour of a reference currency. For Eastern European currencies the EUR, for Asian currency the USD is used as a reference currency. For year end 2008, both reference currencies and thus Eastern European and Asian currencies show a downward slope at the long end. This downward slope can be interpreted as an indication for the price of long-term hedge in a market with low supply and over-demand which was even observed to be aggravated in the current environment.

The MCEV Principles require that where the available swap yield curve is shorter than the projected liability cash flows, the swap curve should be extended using an appropriate methodology, for example assuming that either spot or forward rates remain level at the swap yield available at the longest term.

The gap between the required flat yield curve extension and the extension using the decreasing pattern of the curves available in the market, served for us as a pricing mechanism for the cost of non-hedgeable risk. The corresponding allowance for financial non-hedgeable risk which is allowed for in the PVFP amounts to approx. EUR 100mn for the corresponding entities in Asia and New Europe.

A.3.4 Frictional Cost of Required Capital

The cost of holding required capital is the difference between the amount of required capital and the present value of future releases, allowing for future investment returns of that capital. It reflects the impact on the value for the shareholder due to the fact that the capital is locked in the company to run the business.
The cost of holding the ReC consist of the projected tax to be paid on interest earned from assets backing the required capital in each projection year and the cost of investment management of these assets, where these have not already been allowed for in the PVFP.

Where investment income on assets backing required capital is subject to profit participation with policyholders, this leads to an additional source of frictional cost of required capital. For Allianz this applies only to the German Health business.

Where capital is derived from the internal risk capital model the capital is projected over the life time of the portfolio based on the projected reserve and other relevant drivers such as sum at risk. The same drivers are used to split the total required capital between in-force and new business.

A.4 New Business

New business is comprised of individual and group policies sold during the reporting period including the expected renewals and expected future contractual alterations to those contracts. Recurring single premiums written under the same contract are included in the value of the contract where future single premiums and their level are reasonably predictable. Additional or ad-hoc single premiums that are paid into existing policies are treated as new business in the year of payment. Short-term group risk contracts are projected with allowance for renewal rates in line with observed experience.

The value of new business (VNB) is defined as the value added to the value of in-force by the new policies. It is calculated as the present value of future after tax profits (PVFP) minus the time value of options and guarantees (O&G) minus the cost of non-hedgeable risk (CNHR) minus the cost of holding the required capital (CReC).

The values are point of sale values using year-end economic and non-economic assumptions. Expense allowances takes into account all acquisition expenses, including any overrun.

For a major part of the business the value added by new business is equal to the stand-alone value calculated for the business written in the year. Investment return assumptions are based on the market assumptions described in Appendix B1. For open fund products, where new policies and existing policies are managed together in one fund, the stand-alone value is adjusted for certain interaction effects between new business and in-force business. In Germany for example initial expenses can be shared with all policyholders of the in-force fund, so the shareholder strain from new business is reduced significantly. Furthermore, in order to capture the impact on the time value of options and guarantees from the interaction between new business and previously written business, open fund products are valued on a marginal basis as the difference between the O&G value calculated with and without new business.

A.5 Participating business

The profit sharing assumptions take into account contractual and regulatory requirements, management strategy and the reasonable expectations of policyholders. For Germany the regulatory requirements ("Mindestzuführungsverordnung") becoming effective for 2008 were implemented.

For companies with significant unrealized gains or profit-sharing reserves, the crediting strategies may include a distribution of these buffers to policyholders and shareholders as the business runs off, consistent with established company practice and local market practice and regulation. Alternatively, these buffers may not be required in many of the scenarios to pay competitive bonus rates and there will be excess assets at the end of the projection. In the latter case, the excess assets at the end of the projection are shared between policyholders and shareholders in a consistent manner and the discounted value of the shareholders' share is included in the in-force value.

A.6 Health business

The MCEV methodology for the German Health business is aligned to the methodology used for the Life entities. In addition certain specifics to health have been taken into consideration.

- An annual inflation of health cost is assumed which triggers premium adjustments on a regular basis.
- Any adjustment to the technical interest rates is determined in line with regulatory requirements
- The company's strategy to limit premium increases on in-force policies is applied.
- The time value of financial options and guarantees reported is zero as the technical interest rate used for reserving is not a minimum guarantee and can be adjusted in line with regulatory requirements. In addition, we have assessed that the ability to adjust premiums with respect to changes in economic factors is sufficient to fully cover the financial guarantees.
- Investment income on assets backing required capital is subject to profit participation, which leads to an additional source of frictional cost of required capital. This leads to a two thirds reduction in the shareholder value of required capital after frictional cost.

Impact of the 2009 German Health Reform has not been included in these calculations due to uncertainty of the eventual outcome and its implications.

A.7 Look through adjustments

Under the MCEV Guidance, profits or losses in subsidiary companies providing administration, investment management, sales and other services related to managing the covered business should be included on a "look through" basis in the total MCEV profits.

The expenses incurred in service companies are directly deducted from the PVFP. As the majority of the related contracts are at cost, no further look-through adjustments are required for these arrangements.

There are, however, some arrangements with respect to the covered business where profits arise in service companies and the asset management segment, which have not been included in the MCEV calculations.

The total value of look-through adjustments on an MCEV basis is approximately EUR 400mn as at 31 December 2008. This additional value has not been included in the MCEV figures.

B Appendix: Assumptions

B.1 Economic assumptions

The embedded value results for 2008 are based on economic market conditions as of 31 December 2008 with the only exception that implied volatilities are based on 30 September 2008, see below.

For the market consistent valuation of the options and guarantees embedded in the portfolios of our entities market consistent economic scenarios are used. These have been generated to be arbitrage free, and the model underlying the scenarios has been calibrated to replicate actual prices for selected financial instruments at the valuation date. This calibration is provided by Barrie & Hibbert, a UK based financial consulting company. Stochastic economic scenarios are then generated centrally by an application also provided by Barrie & Hibbert.

Key economic assumptions for risk neutral evaluation are for every economy
- the risk free yield curve,
- the implied volatilities for each asset class,
- correlations between different asset classes and economies.

Market data for interest rates have been taken from an internal data base fed by Reuter data, market data used for calibration of volatilities has been taken from Bloomberg. Where there are no sufficient financial instruments available in the market for calibration, historic market data are used. e.g. for correlations or volatilities for real estate and for some equity indices.

Risk free yield curves used in the certainty equivalent approach and the stochastic scenarios are based on swap rates as at 31 December 2008.

For Korea reference rates are based on government rates as due to systematic distortions in the Korean swap versus the Korean government bond market, swap rates are not a robust source to evaluate the investment situation for a local company: As foreign investors have to pay a special tax ranging between 11% and 27.5% of interest income on government bonds which does not apply to local investors, local investors have a significant competitive advantage on the government bond market. As the same tax does not apply for the swap market external investors concentrate their investments on the swap market while local investors concentrate on the bond market. Statistics as of December 2008 demonstrate that external investors possess Korean bonds by 4.5% out of Korean bond market, while trading volume by external investors in the swap market is about 50% including foreign banks located in Korea. Therefore the swap and the government markets are largely disconnected and the swap rates do not provide a robust basis for producing reference rates for the valuation of a local business. As required by principle 15.4 we therefore use governments as a basis for the reference rates.

In line with currency conversion of Slovakia from the Koruna to the Euro effective 01.01.2009, valuation of Slovakia is based on Euro assumptions.

For currencies where swaps are not sufficiently liquid for all required durations as is the case in Korea, Taiwan, Czech Republic, Hungary and Poland, the yield curves are extrapolated by considering the behavior of a reference currency at the long end, see also App. A 3.3.

Table 1 shows the risk free yields used in the market consistent valuation by currencies:

Table 1: Risk free rates

		1 year	2 year	5 year	10 year	20 year
		%	%	%	%	%
EUR	as of 31.12.2007	4.44%	4.49%	4.61%	4.75%	4.88%
	as of 31.12.2008	3.12%	2.72%	3.23%	3.79%	3.89%
CHF	as of 31.12.2007	2.88%	2.95%	3.13%	3.36%	3.67%
	as of 31.12.2008	1.12%	1.14%	1.97%	2.66%	2.77%
USD	as of 31.12.2007	4.26%	3.84%	4.25%	4.81%	5.13%
	as of 31.12.2008	2.04%	1.48%	2.14%	2.57%	2.84%
KRW	as of 31.12.2007	6.05%	5.77%	5.60%	5.56%	5.54%
	as of 31.12.2008	3.28%	3.65%	4.21%	4.58%	4.84%
CZK	as of 31.12.2007	4.16%	4.22%	4.39%	4.59%	4.84%
	as of 31.12.2008	3.97%	2.67%	2.85%	3.34%	3.26%
HUF	as of 31.12.2007	7.59%	7.45%	7.13%	6.80%	6.49%
	as of 31.12.2008	9.62%	8.20%	7.88%	7.24%	6.06%
PLN	as of 31.12.2007	6.24%	6.17%	6.00%	5.79%	5.59%
	as of 31.12.2008	5.96%	4.29%	4.13%	4.41%	4.18%
SKK	as of 31.12.2007	4.43%	4.45%	4.53%	4.69%	4.94%
THB	as of 31.12.2007	4.14%	4.39%	4.97%	5.52%	5.96%
	as of 31.12.2008	1.82%	1.76%	2.23%	2.40%	2.59%
TWD	as of 31.12.2007	2.38%	2.44%	2.57%	2.70%	2.81%
	as of 31.12.2008	1.55%	1.09%	1.28%	1.46%	1.67%
JPY	as of 31.12.2008	0.73%	0.73%	0.91%	1.24%	1.70%

Annual zero coupon rates derived from swap rates except KRW which is based on government bond rates.

According to MCEV Principles G15.3, volatility assumptions should be based on the most recently available information as at the valuation date. Where there are concerns over the depth or liquidity of the market or if the market displayed unusual characteristics as at the valuation date then less recently observed measures and expert opinion should be considered.

As mentioned in the introduction, in December 2008 the CFO Forum concluded that the current market environment displays highly unusual characteristics which reflect wide spread concern in the market about liquidity and triggers unusual activities. The CFO Forum therefore agreed that companies calculating MCEV may adhere to principle 15.3 and apply average volatilities or volatilities taken from a different date than the valuation date as a more adequate basis for the valuation of long term business in the books.

As a consequence we base MCEV on volatilities based on 30 September 2008. Volatilities as of 30 September can be considered comparable to an average of implied volatilities over the year being higher or lower than the average depending on the currency, as illustrated in the table below for swaption implied volatilities in our major currencies,

Table 2: Development of swaption implied volatilities over 2008

	Dec-07	Mar-08	Jun-08	**Sep-08**	Dec-08	**Average**
	%	%	%	**%**	%	**%**
EUR	10.5%	10.5%	12.2%	**13.0%**	23.7%	**13.2%**
CHF	13.0%	12.0%	12.9%	**12.7%**	22.5%	**13.8%**
USD	13.3%	12.9%	13.8%	**16.3%**	25.7%	**15.6%**

Volatilities implied in option on 20 year swaps with term 10 years at the money

and similarly for equity options implied volatilities.

Table 3: Equity option implied volatilities at the money

	Index	as of 31.12.2007 %	as of 31.03.2008 %	as of 30.06.2008 %	**as of 30.09.2008 %**	as of 31.12.2008 %	**Average %**
EUR	DAX	27.8%	27.9%	25.3%	**28.3%**	33.8%	**28.1%**
	EUROSTOXX	27.3%	28.6%	26.2%	**28.1%**	34.3%	**28.4%**
	CAC	28.0%	28.6%	26.3%	**29.1%**	33.0%	**28.6%**
CHF	SMI	23.7%	26.6%	25.2%	**25.8%**	32.5%	**26.4%**
USD	S&P 500	25.9%	27.6%	27.3%	**28.4%**	35.2%	**28.5%**

Volatilities implied in 10 year equity option at the money

For modeling fixed income stochastic scenarios, the extended 2-factor Black-Karasinski model is used.

For fixed income instruments, parameters are fitted to at-the-money swaption implied volatilities. When calibrating to swaption implied volatilities, the greatest weight has been given to the volatilities implied by options on 20-year swaps or the longest term available, in order to account for the long term nature of the life business.

For Korean Won where sufficient market data is not available, the historic calibration method is used.

Table 2 shows the swaption implied volatilities for four main currencies.

Table 4: Swaption implied volatilities

option term		1 year %	2 year %	5 year %	10 year %	20 year %
EUR	as of 31.12.2007	11.8%	11.5%	11.1%	10.5%	9.9%
	as of 30.09.2008	16.4%	15.3%	13.7%	13.0%	11.8%
CHF	as of 31.12.2007	15.3%	15.0%	14.0%	13.0%	11.7%
	as of 30.09.2008	18.3%	16.7%	14.0%	12.7%	12.0%
USD	as of 31.12.2007	19.8%	18.2%	15.8%	13.3%	12.4%
	as of 30.09.2008	24.7%	22.5%	20.1%	16.3%	14.5%
KRW	as of 31.12.2007	13.1%	12.6%	11.4%	10.6%	8.8%
	as of 30.09.2008	12.3%	12.0%	11.5%	10.8%	8.5%

Volatilities implied in option on 20 year swaps at the money

A range of equity indices is considered. For modeling equity and real estate returns, a short rate excess model is used to generate returns from fixed income dynamics of the economy. A constant volatility model is used where the modeled equity volatility is independent of the option term.

Equity volatilities are taken from implied volatilities of long term equity options at the money, targeted to the longest maturity option available (10 years). Best estimate levels of volatility are used in the market consistent calibration to derive implied real estate volatility since meaningful option prices for the property market were not available. This volatility is assumed to be 15% for all economies. Table 3 shows the equity option implied volatility for the main equity indices.

Table 5: Equity option implied volatilities at the money

	Index	as of 30.09.2008 %	as of 31.12.2007 %
EUR	DAX	28.3%	27.8%
	EUROSTOXX	28.1%	27.3%
	CAC	29.1%	28.0%
CHF	SMI	25.8%	23.7%
USD	S&P 500	28.4%	25.9%
KRW	KOSPI	36.4%	36.4%

Volatilities implied in 10 year equity option at the money
Historic volatility for KOSPI

To show the impact of asset mixes and inter-economy relations, correlation assumptions were estimated from historic market data (see Table 4). The sensitivity of the MCEV to all correlation parameters is generally small.

Table 4: Correlation assumptions

		Fixed income 1 year bond rate				Equity Indices					
		EUR	CHF	USD	KRW	CAC	DAX	KOSPI	SMI	Eurostoxx	S&P
Fixed	EUR	1.00	0.26	0.23	0.19	0.24	0.33	0.19	0.26	0.35	0.23
income	CHF		1.00	0.28	0.30	0.24	0.31	0.30	0.32	0.39	0.28
1 year	USD			1.00	0.37	0.21	0.27	0.37	0.28	0.38	0.29
bond rate	KRW				1.00	0.24	0.20	0.72	0.30	0.41	0.37
	CAC					1.00	0.27	0.24	0.24	0.30	0.21
Equity	DAX						1.00	0.20	0.31	0.41	0.27
Indices	KOSPI							1.00	0.30	0.41	0.37
	SMI								1.00	0.39	0.28
	Eurostoxx									1.00	0.38
	S&P										1.00

A set of 1000 scenarios is used for stochastic calculations of options and guarantees. To reduce Monte-Carlo errors antithetic random variables are used.

B.2 Capital charge for cost of residual non-hedgeable risk

The capital charge for non-financial risk is calculated as a multiple of the market-assessed risk factor for the insurance segment (beta) and the equity market risk premium. The values used at 31 December 2008 are 0.9 for beta and 4.0% for the equity market risk premium leading to a capital charge of 3.60%, which is the same as 2007. The value for beta is derived from a peer analysis for the individual segments and corresponds to a weighted beta of 0.95 for the Allianz Group including Dresdner Bank. The equity market risk premium is based on best estimate assumptions with reference to analyst and academic assumptions.

B.3 Foreign currency exchange rates

Embedded values are calculated in local currencies and converted to Euro using the corresponding exchange rates as of the valuation date. Exchange rates are consistent with the rates used the balance sheet of our IFRS financial accounts. The exchange rates against the Euro are shown in the table below.

Table 7: Main exchange rates against EUR

	2008	2007
CHF	1.4850	1.6547
USD	1.3917	1.4721
KRW	1,839.1	1,378.0
CZK	26.875	26.628
HUF	266.70	253.73
PLN	4.1535	3.5935
SKK	30.126	33.583
THB	48.285	43.800
TWD	45.893	47.726

B.4 Non-economic assumptions

Non-economic assumptions such as mortality, morbidity, lapse rates or expenses are determined by the respective business units based on their best estimate as at the valuation date.

Best estimate assumptions are set by considering past, current and expected future experience. Future expected changes are taken into account in best estimate assumptions only when sufficient evidence exists and the changes are reasonably certain. Future improvements in productivity can be allowed only if they have been agreed in business plans which have been partly achieved at least by the end of the reporting period, and only to the extent that they are projected to be realized within the first projection year. All the expected expense overruns affecting the covered business, such as holding company operating expenses, overhead costs and development costs in new markets are allowed for in the calculations.

B.5 Tax assumptions

Tax assumptions are set in line with the local tax regime. Tax losses carried forward are considered in the projections. Tax is based on marginal tax impacts. For example, losses on different portfolios can be compensated within one company, and also between Life and P/C portfolios where held in one legal entity. Tax impact of future new business is not allowed for. The following Table 6 shows the nominal tax rates applied.

Table 8: Tax assumptions

	2008	2007
Germany	31%	31%
France	34%	34%
Italy	32%	32%
USA	35%	35%
Korea	22%	27%
Switzerland	22%	22%

C Appendix: Real world economic assumptions

Free shareholder cash flows as shown in 2.5 are based on real world economic assumptions.

C.1 Economic assumptions for real-world projections

The following assumptions are centrally provided:

- Risk free zero coupon yields
- Equity returns
- Real estate returns
- Risk discount rates

Risk free yield curves are the same under real world assumptions as under risk neutral assumptions and are based on swaps, see Table 1. Only few entities calculating a real world embedded value are based on government bond rates, as for China, Malaysia, Croatia and Bulgaria.

Reinvestment rates are held constant for all future periods and all asset classes which means that yields are assumed constant over time for all durations and do not dynamically follow the forward curve.

Fixed risk premiums are assumed for all risky assets. Return assumptions for equity and real estate are derived from the risk free rate, i.e. the 10 year swap rate, plus a risk premium; see Table 7.

For the countries calculating a real-world EV in addition the risk discount rates are based on the sum of a risk margin and the appropriate 10 year risk free rates. The calculation method for the risk margin is the same as the capital charge for cost of non-financial risk, which is described in Section B.2.

Table 9: Economic assumptions for real world EEV

	2008	2007
Equity risk premium	400bp	400bp
Real estate risk premium	0.2 x 10 year swap rate	
Risk premium for discount rates	360 bp	360 bp

Other economic assumptions applied in the real-world projections such as credit spreads, credit defaults, returns for other asset classes are determined by the respective business units based on the local market data.

In order to reflect the current market crisis companies with significant corporate bond portfolios applied defaults that corresponded to 4 times the historic defaults during the first projection year, i.e. 2009.

All economic assumptions are as of 31 December 2008.

D Appendix: Disclaimer

Cautionary Note Regarding Forward-Looking Satetements

The statements contained herein may include statements of future expectations and other forward-looking statements that are based on management's current views and assumptions and involve known and unknown risks and uncertain-ties that could cause actual results, performance or events to differ materially from those expressed or implied in such statements. In addition to statements which are forward-looking by reason of context, the words "may", "will", "should", "expects", "plans", "intends", "anticipates", "believes", "estimates", "predicts", "potential", or "continue" and similar expressions identify forward-looking statements. Actual results, performance or events may differ materially from those in such statements due to, without limitation, (i) general economic conditions, including in particular economic conditions in the Allianz Group's core business and core markets, (ii) performance of financial markets, including emerging markets, and including market volatility, liquidity and credit events (iii) the frequency and severity of insured loss events, including from natural catastrophes and including the development of loss expenses, (iv) mortality and morbidity levels and trends, (v) persistency levels, (vi) the extent of credit defaults, (vii) interest rate levels, (viii) currency exchange rates including the Euro/U.S. Dollar exchange rate, (ix) changing levels of competition, (x) changes in laws and regulations, including monetary convergence and the European Monetary Union, (xi) changes in the policies of central banks and/or foreign governments, (xii) the impact of acquisitions, including related integration issues, (xiii) reorganization measures, and (xiv) general competitive factors, in each case on a local, regional, national and/or global basis. Many of these factors may be more likely to occur, or more pronounced, as a result of terrorist activities and their consequences. The matters discussed herein may also be affected by risks and uncertainties described from time to time in Allianz SE's filings with the U.S. Securities and Exchange Commission. The company assumes no obligation to update any forward-looking statement.

No duty to update
The company assumes no obligation to update any information contained herein.

E Appendix: Glossary and abbreviations

Aggregate policy reserves	Policies in-force- especially in life, health, and personal accident insurance- give rise to potential liabilities for which funds have to be set aside. The amount required is calculated actuarially.
Best estimate assumptions	A best estimate assumption should equal to the mean estimate (probability weighted average) of outcomes of that risk variable.
Cost of residual non-hedgeable risk (CNHR)	Explicit allowance for non-hedgeaable risk based on cost of capital approach. as defined in MCEV Principle 8. It takes into account non-hedgeable financial risk, non-financial risks, and operational risk, like expense, lapse and operational risk. Both symmetric and asymmetric risk are considered.
Covered business	The contracts to which the MCEV methodology has been applied, in line with the MCEV Principles.
Deferred acquisition costs	Expenses of an insurance company which are incurred in connection with the acquisition of new insurance policies or the renewal of existing policies. These include commissions paid and the costs of processing proposals.
Embedded value, (EV); **Market Consistent Embedded Value (MCEV)**	MCEV is a measure of the consolidated value of shareholders' interest in the covered business. It is defined as Net asset value (NAV) + Present value of future profits (PVFP) + Time value of options and guarantees (O&G) + Cost of residual non-hedgeable risk (CNHR) + Frictional Cost of required capital (CReC)
Free surplus (FS)	The market value of any assets allocated to, but not required to support, the in-force business covered as defined in MCEV Principle 4. Formerly it was named excess capital.
Frictional Cost of required capital (CReC)	The additional investment and taxation costs incurred by shareholders through investing required capital in the company rather than directly. Further, frictional cost may be due to any sharing of investment income on required capital with policyholders, as defined in MCEV Principle 8.
IAS	International Accounting Standards.
IFRS	International Financial Reporting Standards. Since 2002, the designation IFRS applies to the overall framework of all standards approved by the International Accounting Standards Board. Already approved standards will continue to be cited as International Accounting Standards (IAS).
Implied risk discount rate	Risk discount rate which, when used within the traditional deterministic embedded value projection gives the same value as that arising from the MCEV
Look-through basis	A basis via which the impact of an action on the whole Group, rather than on a particular part of the Groups, is measured. Under this basis, the MCEV would allow for the value of profits or losses which arise from subsidiary companies providing administration, investment management, sales and other services in relation to the covered business.
MCEV earnings	Change in EV after initial adjustments and before capital transfers
Net asset value (NAV)	Capital not backing local statutory liabilities, valued at market value.
New business margin	Value of new business divided by present value of new business premiums
New business strain	Impact of new business on free surplus in the year business is written: (negative) profit in the first year plus initial capital binding. Negative result in first year reflects shareholder share in initial expenses
Present value of future profits (PVFP)	Future (statutory) shareholder profits after tax projected to emerge from operations and assets backing liabilities, includes value of unrealized gains on assets backing policy reserves.
Present value of new business premiums (PVNBP)	The present value of future premiums on new business written during the year discounted at the rate applied to that cash flow, as defined in MCEV Principle 10. It is the present value of projected new regular premiums, plus the total amount of single premiums received
Reinsurance	Where an insurer transfers part of the risk which he has assumed to another insurer.
Reserve for premium refunds	That part of the operating surplus which will be distributed to policyholders in the future. This refund of premiums is made on the basis of statutory, contractual, or company by-law obligations, or voluntary undertaking.
Required Capital (ReC)	The market value of assets attributed to the covered business over and above that required to back liabilities for covered business whose distribution to shareholders is restricted as defined in Principle 5. It is determined as higher of local solvency, capital requirement from internal risk capital and additional capital required by market standards
Reference rate	Risk free rate based on swap rates used for valuation of PVFP in the certainty equivalent approach
Risk discount rate (RDR)	Rate used in the previous top-down EV approach to discount future profits.
Stochastic techniques	Techniques that incorporate the potential future variability in assumptions affecting their outcome.
Time value and intrinsic value of options and guarantees	An option feature has two elements of value, the time value and intrinsic value. The intrinsic value is that of the most valuable benefit under the option under conditions

	at the valuation date. Time value is the additional value ascribable to the potential for benefits under the option to increase in value prior to expiry.
Value of in-force (VIF)	Present value of future profits from in-force business (PVFP) plus the time value of financial options and guarantees (O&G) granted to policyholders, plus the cost of residual non-hedgeable risk (CNHR), plus the frictional cost of holding required capital (CReC)
Value of new business (VNB)	The additional value to shareholder created through the activity of writing new business. It is defined as Present value of future profits (PVFO) after acquisition expenses plus the time value of financial option and guarantees (O&G), plus the cost of residual non-hedgeable risk (CNHR), plus the frictional cost of holding required capital, all determined at issue date.
Variable annuities	The benefits payable under this type of life insurance depend primarily of the performance of the investments in a mutual fund. The policyholder shares equally in the profits or losses of the underlying investments.