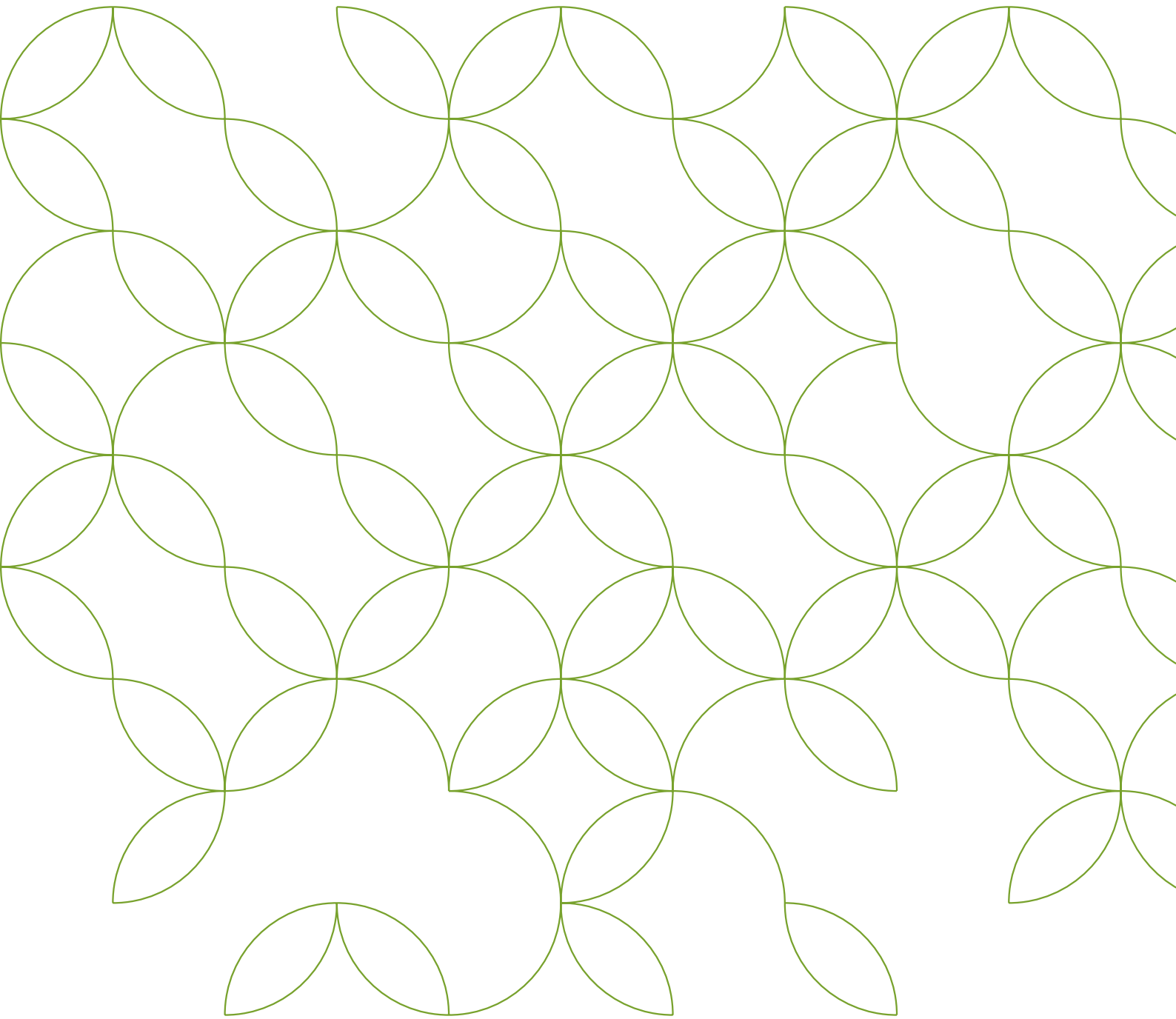


# 2008 Market Consistent Embedded Value

Supplementary information – 4 March 2009



# Market Consistent Embedded Value

## Supplementary information regarding Market Consistent Embedded Value 2008 of the life insurance business of Storebrand Group

### MAIN FEATURES

- Embedded value of Storebrand Life Group was NOK 23,041 million at year-end 2008.
- The published Embedded Value for the year-end 2007 (NOK 29,940 million) has been restated to reflect enhancement made to the market consistent embedded value framework to NOK 26,554.
- The main driver of change in the embedded value at year-end 2008 has been a variance caused by financial market development of NOK -7,066 million
- The value of look-through profits of NOK 4,022 million arising in the group's asset management company and induced by the life insurance business is included in the value of in-force business shown below.
- The total embedded value earnings (after opening adjustments) for the financial year 2008 were NOK -5,230 million, representing a -20 % return on the restated opening embedded value. The operating earnings were NOK 1,835 million, representing an operating return of 7%.
- The embedded value calculations are compliant with EEV Principles using a market consistent approach, and have been reviewed externally by Towers Perrin.

I.	INTRODUCTION	2
II.	OVERVIEW OF RESULTS	3
III.	METHODOLOGY	7
IV.	ASSUMPTIONS	10
V.	RESULTS BY COMPANY	12
VI.	IFRS RECONCILIATION AND GROUP MCEV	19

## I. INTRODUCTION

The purpose of this document is to provide further information on the disclosure of the embedded value 2008 for Storebrand Group. It includes business written in Storebrand Livsforsikring AS (SBL) and the Swedish life insurance business SPP (including Euroben Ltd.).

During 2008, the methodology was revised reflecting enhancements of the market consistent embedded value framework, most importantly the inclusion of the cost of non hedgeable risk. The impact of this change is included in the restated opening embedded value at 31 December 2007. Additionally, the derivation of the initial yield curve has been adjusted to reflect the illiquidity in the Norwegian and Swedish swap markets. This is further described in section IV.

An embedded value is an actuarially determined estimate of the value of the company excluding any value attributable to future new business. The calculation of embedded values requires the use of a number of assumptions with respect to the business, operating, and economic conditions, and other factors, some of which are determined by economic conditions and financial markets. Although the operating and demographic assumptions used represent estimates which Storebrand considers reasonable, actual future operating conditions and actual future experience may vary from that assumed in the calculation of the embedded values, and such variations may be material. Consequently, the inclusion of embedded value information herein should not be regarded as a representation by Storebrand, Towers Perrin, or any other person, that the stream of future after-tax profits used to determine the embedded values will be achieved.

## II. OVERVIEW OF RESULTS

The results in this section are presented in NOK.

The total embedded value as at 31 December 2008 for the life insurance business of Storebrand Group after capital movements is NOK 23,041 million. The value of in-force at year-end 2008 is NOK 14,610 million while shareholder surplus is NOK 8,431 million. The value of in-force includes the present value of shareholder profits

in a certainty equivalent scenario, an allowance for the time value of options and guarantees, frictional costs of holding required capital, an allowance for residual non-hedgeable risks and the present value of profits arising in the asset management company of Storebrand Group which are induced by the life insurance business of the Storebrand Group.

### Embedded value for Storebrand Group

The following table shows the movements in the embedded value in 2008:

NOK mill.	Published MCEV 2007	Restated MCEV 2007	MCEV 2008
<b>Total shareholder surplus at market value</b>	<b>7,478</b>	<b>6,984</b>	<b>8,431</b>
comprising			
- Free surplus	-1,389	-1,405	882
- Required capital	8,867	8,389	7,550
<b>Value of In-force business</b>	<b>22,463</b>	<b>19,570</b>	<b>14,610</b>
comprising			
- Present value of future profits (PVFP)	28,412	27,558	23,893
- Time value of financial options and guarantees (TVOG)	-5,701	-4,709	-5,183
- Frictional costs of required capital (FCRC)	-248	-236	-236
- Cost of residual non hedgeable risks (CNHR)	0	-3,044	-3,864
<b>Total embedded value</b>	<b>29,940</b>	<b>26,554</b>	<b>23,041</b>
<i>Look through value included in the PVFP</i>	<i>4,156</i>	<i>4,148</i>	<i>4,022</i>

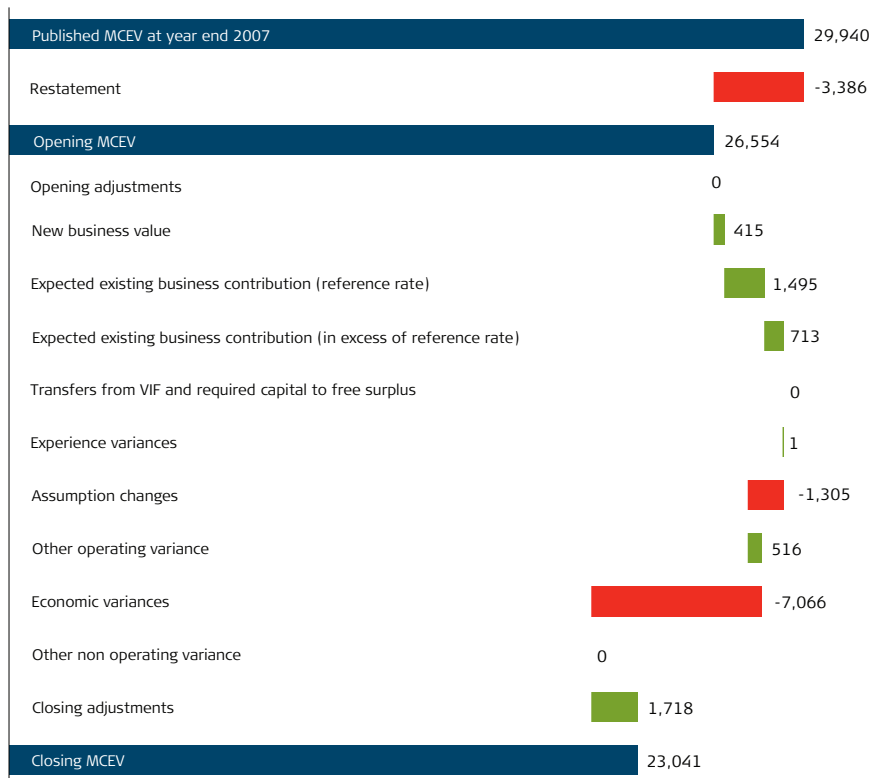
The main difference between the published embedded value at year-end 2007 of NOK 29,940 million and the restated embedded value is the allowance for residual non-hedgeable risks. Additionally, the approach to derive the initial yield curve has been changed as described in Section IV.

An implied discount rate has been derived at year-end 2008 for Storebrand Life Group of 8.7% (9.5% for SBL and 6.8% for SPP). The approach for deriving this implied discount rate is described in Section III.

As an effect of the holding company structure in Sweden, whereby part of the profits can be transferred to the group as a tax-free group contribution, it is currently expected that the effective tax rate for profits arising in SPP will be zero. Therefore, a tax rate of 0% has been applied for SPP. The current tax legislation in Norway leads to an effective tax rate of 0% for profits arising in SBL and the group's asset management company.

## 2008 Embedded value earnings analysis

The following chart shows the embedded value earnings:



The following table shows the movements in the embedded value in 2008:

Analysis of MCEV Earnings				
NOK mill.	Free Surplus	Required Capital	Value of In-force	Total MCEV
<b>Published MCEV at year-end 2007</b>	<b>-1,389</b>	<b>8,867</b>	<b>22,462</b>	<b>29,940</b>
Restatement	-16	-477	-2,893	-3,386
<b>Opening MCEV</b>	<b>-1,405</b>	<b>8,389</b>	<b>19,570</b>	<b>26,554</b>
Opening adjustments	0	0	0	0
<b>Adjusted opening MCEV</b>	<b>-1,405</b>	<b>8,389</b>	<b>19,570</b>	<b>26,554</b>
<b>New business value</b>	<b>-506</b>	<b>154</b>	<b>767</b>	<b>415</b>
Expected existing business contribution (reference rate) <sup>(1) (2)</sup>	353	0	1,142	1,495
Expected existing business contribution (in excess of ref. rate) <sup>(1) (3)</sup>	358	0	355	713
Transfers from VIF and required capital to free surplus	1,210	226	-1,436	0
Experience variances	-66	0	67	1
Assumption changes	-1	0	-1,304	-1,305
Other operating variance	-115	0	631	516
<b>Operating MCEV earnings</b>	<b>1,232</b>	<b>380</b>	<b>223</b>	<b>1,835</b>
Economic variances	-2,382	731	-5,414	-7,066
Other non operating variance	0	0	0	0
Total MCEV earnings	-1,151	1,111	-5,191	-5,230
Closing adjustments	3,437	-1,950	231	1,718
<b>Closing MCEV</b>	<b>882</b>	<b>7,550</b>	<b>14,610</b>	<b>23,041</b>

(1) This represents the following two components:

- Expected earnings on free surplus and required capital; and
- Expected change in VIF.

(2) The earnings assuming assets earn the beginning of period reference rate.

(3) The earnings is the component in excess of the reference rate reflecting the additional return consistent with the expectation of management for the business.

The movement from 31 December 2007 to 31 December 2008 shows embedded value earnings of NOK -5,230 million (excluding the effect of restatement). This represents a return on opening embedded value of -20 %. Embedded value operating earnings amount to NOK 1,835 million, representing a return of 7%.

The restatement reflects the inclusion of an allowance of residual non-hedgeable risks and a change in the approach of setting the initial yield curve. The process of deriving the residual non-hedgeable risks is described in Section III, the approach of setting the initial yield curve is described in Section IV.

The value of new business written in 2008 (based on year-end 2008 assumptions) increases the embedded value by NOK 395 million (including unwinding to the year-end: NOK 415 million).

The expected existing business contribution comprises the risk free unwinding plus the return in excess of the risk free rate based on realistic return expectations. In total the expected existing business contribution amounts to NOK 2,208 million, representing a return of 8% on the adjusted opening embedded value.

Experience variances in aggregate amount to NOK 1 million and comprises deviations caused by expense, risk and decrement experience. There are no significant items with opposite value balancing each other out behind the relative modest experience variances.

Of the total impact of assumption changes of NOK -1,305 million, approximately NOK 900 million relate to higher expenses in SPP in 2008 and a corresponding increase in the assumed future expenses (note that the expense assumptions project the 2008 expense levels forward, excluding one off items described below). As soon as the planned cost cutting programmes lead to a reduction in per policy expenses, positive assumption changes will result. A worsening of the decrement experience in SPP (higher lapses and lower replacement rate for DB business) reduces the embedded value by about NOK 300 million.

The other operating variance of NOK 516 million mainly relate to the introduction of a new risk based investment strategy causing a reduction in the time value of options and guarantees of approximately NOK 900 million. Additionally, some model corrections of approximately NOK 400 million are reflected in this item.

Economic variances of NOK -7,066 million comprise the impact of the fall in equity markets (with the corresponding impact on the buffer capital and the 2008 annual result), the decrease in interest rates and the increase in implied volatilities This variance includes the cost for set-

ting up a tax reserve which could potentially be released in the future leading to a corresponding positive variance. The fact that the time value of options and guarantees only marginally increased compared to last year is mainly due to the following effects which partially offset: In 2008, there has been a significant reduction in the equity exposure causing the TVOG to decrease. Secondly, the decrease in interest rates and the increase in implied volatilities caused the TVOG to increase.

The closing adjustments include a (net of dividend payments) capital injection in SBL, and the change in the exchange rate for SEK. Additionally, changes in the consolidated group required capital are included in this item with no impact on the embedded value as they only present movements between free surplus and required capital.

### Value of new business (VNB)

The following table shows the consolidated value of new business written in 2008:

NOK mill.	VNB
<b>Value of New Business</b>	
comprising	
- Present value of future profits (PVFP)	794
- Time value of financial options and guarantees (TVOG)	-151
- Frictional costs of required capital (FCRC)	-56
- Cost of residual non hedgeable risks (CNHR)	-192
<b>Total value of new business</b>	<b>395</b>
<i>Look through value included in the PVFP</i>	<i>153</i>

### New business margins

The following table shows the new business margins for the new business written in 2008:

NOK mill.	
<b>Value of New Business</b>	
Regular premiums	1,394
Single Premiums	7,049
APE	2,099
APE margin (%)	19 %
PVNB	20,311
PVNB margin (%)	1.9%

The implied discount rate for the new business amounts to 8.0%, the internal rate of return 16.7%.

## Sensitivities for Storebrand Group

The following sensitivities have been carried out for the embedded value and the value of new business. The sensitivities reflect changes in single assumptions unless stated otherwise.

### Sensitivities 1 & 2:

Parallel shifts of 1 percentage point are applied to the starting yield curve. The market values of bonds are adjusted accordingly. It should be noted that a 1% parallel shift for the entire yield curve has been reflected while the extrapolation method described in Section IV has not been applied to the shifted curve.

### Sensitivities 3 & 4:

The initial market values of all equity and property holdings (including mutual funds in unit linked and defined contribution business) are reduced by 10 % (in sensitivity 4 only equity market values have been reduced). As this is an immediate drop in market values, there is no relief from the dynamic risk management principles. However, the effect of existing hedging assets has been reflected.

### Sensitivity 5:

The implied volatilities at evaluation date for equity and property are increased by 25%.

### Sensitivity 6:

The implied volatilities at evaluation date for swaptions are increased by 25%.

### Sensitivity 7:

Future maintenance expenses are reduced by 10 %.

### Sensitivity 8:

Future lapse rates decrease proportionate by 10 %.

### Sensitivity 9:

Mortality rates are reduced by 5 % going forward for annuity business only.

### Sensitivity 10:

Mortality rates are reduced by 5 % going forward for life business only.

### Sensitivity 11:

Salary and expense inflation rates are increased by 0.5 percentage points.

### Sensitivity 12:

Required capital set to be equal to the minimum level of required solvency capital. It should be noted that for Norway the minimum is given by the banking requirement which equals approximately 130% of the EU minimum requirement. For Sweden 100% of the EU minimum solvency requirement has been allowed for in this sensitivity.

The following table shows the sensitivity results for the embedded value at year-end 2008:

NOK mill.	Total MCEV	Change	in %
<b>Base</b>	<b>23,041</b>		
1. 100 basis point pa increase in the interest rate	26,045	3,004	13 %
2. 100 basis point pa decrease in the interest rate	17,758	-5,284	-23 %
3. 10% decrease in equity/property capital	19,359	-3,682	-16 %
4. 10% decrease in equity capital	21,700	-1,341	-6 %
5. 25% increase in equity/property implied volatilities	21,721	-1,320	-6 %
6. 25% increase in swaption implied volatilities	21,089	-1,952	-8 %
7. 10% decrease in maintenance expenses	24,906	1,864	8 %
8. 10% proportionate decrease in lapse rates	23,564	522	2 %
9. Mortality rates -5% - annuity business	22,052	-989	-4 %
10. Mortality rates -5% - life business	23,122	81	0 %
11. Salary and expense inflation + 0.5%	23,255	213	1 %
12. Required capital equal to minimum level of solvency capital	23,090	49	0 %

The table below shows the sensitivity results of the value of new business written in 2008:

NOK mill.	Total VNB	Change	in %
<b>Base</b>	<b>395</b>		
1. 100 basis point pa increase in the interest rate	519	123	31 %
2. 100 basis point pa decrease in the interest rate	106	-289	-73 %
3. 10% decrease in equity/property capital	359	-36	-9 %
4. 10% decrease in equity capital	354	-41	-10 %
5. 25% increase in equity/property implied volatilities	355	-40	-10 %
6. 25% increase in swaption implied volatilities	338	-57	-15 %
7. 10% decrease in maintenance expenses	451	56	14 %
8. 10% proportionate decrease in lapse rates	449	54	14 %
9. Mortality rates -5% - annuity business	387	-8	-2 %
10. Mortality rates -5% - life business	405	10	3 %
11. Salary and expense inflation + 0.5%	409	14	3 %
12. Required capital equal to minimum level of solvency capital	415	19	5 %

### III. METHODOLOGY

**Embedded Value:** An embedded value is an actuarially determined estimate of the value of the company excluding any value attributable to future new business. It comprises the sum of shareholder surplus and the value of business in force. The value of business in force comprises the present value of future shareholder profits in a certainty equivalent scenario (PVFP), an allowance for the time value of options and guarantees (TVOG), the frictional cost of holding required capital (FCRC), an allowance for residual non-hedgeable risks (CNHR) and the present value of profits arising in the asset management company of Storebrand group which are induced by the life insurance business of the Storebrand Group.

The shareholder surplus for SBL is based on the published shareholder assets under NGAAP. For SPP, the shareholder surplus equals the shareholder equity less intangible assets and less tax assets. In the consolidation, the book value of SPP in the books of SBL is deducted from the sum of the shareholder surplus derived as above.

The PVFP is the present value of the projected stream of future after-tax profits that are expected to be generated by the policies in force at the valuation date, assuming assets equal to the technical reserves. The profits are determined on local GAAP using a deterministic projection (certainty equivalent scenario).

The stream of future after-tax profits is determined using best estimate assumptions for future operating conditions regarding such items as expenses, taxation, lapse, surrender, mortality, and morbidity rates. Economic assumptions are further described in Section IV below.

**Embedded value earnings:** The embedded value earnings are defined as the change in embedded value, after adjustments for any capital movement, such as dividends or capital injections. The embedded value earnings are split into the following categories: the expected return (unwinding of discounting and excess return above the reference rate), the value of new business and experience variances, assumption changes, other operational variances, economic variances and other non operational variances. Thereby, the sum of the first five components listed above is referred to as EV operating earnings.

**Covered business:** The business covered in the embedded value reporting is the business written within and legally contained in Storebrand Livsforsikring AS and SPP Group. Additionally, profits arising in the group's asset management company, Storebrand Kapitalforvaltning AS, which arise from the life insurance business of Storebrand Group have been included. No other sources of profits from the life insurance business within Storebrand Group are considered.

**In-force business and new business:** For the purposes of the embedded value, the in-force business is defined as existing policies including future renewals on existing policies for individual business, and existing schemes for group business. New members of existing group schemes have been allowed for implicitly by assuming leaving members are replaced by new members joining. New business is consequently defined as new individual policies written in 2008, and for group business, new business relates to new schemes or schemes which are transferred to the Storebrand Group from another insurer in 2008.



**New business value:** The new business value is defined as the after-tax value derived from new business excluding funds that are not yet booked, including the impact of initial acquisition expenses, an allowance for the time value of options and guarantees, the frictional cost of holding required capital, an allowance for residual non-hedgeable risks and the present value of profits arising in the Group's asset management company which are induced by the new business written. Thereby, the time value of options and guarantees has been derived as the marginal impact of the new business on the time value of options and guarantees (as described in more detail below) of business in-force. It is calculated at point of sale and based on end-of-year assumptions.

**Frictional cost of holding required capital:** The frictional cost of holding required capital only reflects the frictional investment management costs as an effective

tax rate of 0% has been assumed for both SBL and SPP (see below for further details).

**Required capital:** The amount of required capital for SBL has been set as the greater of Norwegian regulatory capital and internal capital requirements. Life insurance in Norway is subject to two solvency requirement tests, the EU requirement (Solvency I) and the banking requirement (Basel I), both of which must be satisfied. The internal requirement is based on Storebrand's understanding of the level necessary to meet rating agency requirements for Storebrand's targeted rating. As at 31 December 2008 the maximum of the two requirements has been the internal capital requirement which is equivalent to 150% of the EU minimum solvency requirements. For SPP, the required capital has been set as 150% of the EU minimum requirement. The required capital is assumed to be released in line with the run off of the business in force.

The following table shows the capital requirements for SBL and SPP at year-end 2007 and 2008:

Capital Requirements	SBL		SPP	
	2007	2008	2007	2008
Regulatory minimum	NOK 4.3 bn	NOK 3.4 bn	NOK 3.9 bn	NOK 4.1 bn
Internal Requirement	NOK 3.9 bn	NOK 4.7 bn	NOK 5.3 bn	NOK 5.8 bn

For SBL, the internal requirement results in the higher of the two capital requirements. Due to a significant reduction in the equity exposure of SBL, the banking requirement decreased below the internal minimum requirements. The internal requirement for SBL increased substantially due to the reduction of buffer capital in 2008. For SPP, the increase in the capital requirement shown above is caused by an increase in reserves driven by the fall in interest rates.

In the presentation of the consolidated restated embedded value at year-end 2007 and the embedded value at year-end 2008, the required capital shown reflects the actual group solvency requirement and not the sum of the required capital of SBL and SPP. However, the frictional costs have been derived on an individual company level based on the corresponding required capital shown in the results by company below.

**Cost of residual non-hedgeable risks:** During 2008, the risks which are not allowed for in the MCEV calculation have been analysed and the cost of these risks has been individually assessed. Where no direct assessment of the risks was possible a cost of capital approach has been applied based on the corresponding risk capital. These risk capital components have been derived using the QIS4 approach. In these cases, a charge of 4% on the corresponding risk capital has been applied.

In addition to an allowance for non-financial non-hedgeable risks, Storebrand has also made an allowance for financial non-hedgeable risks, specifically the risk related to the extrapolation method applied to derive the initial yield curve.

The total cost of residual non-hedgeable risks derived is equivalent to an annual charge of 2.6% on the diversified risk capital for non-hedgeable risks.

**Participating business:** Bonuses to policyholders are derived based on the company's individual profit sharing strategy. Regulatory constraints are appropriately reflected.

**Time value of options and guarantees:** The time value of financial options and guarantees (including guaranteed return and the right of policyholders to receive minimum profit sharing) has been determined using a stochastic model of the underlying with-profit business. It is defined as the difference between the present value of future profits in a certainty equivalent scenario and the average over 1000 market-consistent stochastic scenarios.

For the new business, the time value of options and guarantees is determined by means of a marginal method, i.e. by attributing to the new business the impact of the new business written during the year on the time value of options and guarantees of the entire portfolio.



The financial options evaluated comprise the interest rate guarantees and the impact of local profit-sharing regulations. No other financial options have been evaluated; specifically, no dynamic policyholder behaviour has been assumed but instead has been considered as part of the allowance for residual non-hedgeable risks.

**Reinsurance and debt:** There are only non-material amounts of reinsurance in Storebrand Group. The subordinated loans within Storebrand are valued at the respective book value; no adjustment has been made to reflect its market value. At year-end 2008, the subordinated debt has a market value reflecting approximately 83% of its book value. Valuing the debt at market value would have had led to a reduction in the economic variances and a corresponding increase in the final embedded value of approximately NOK 1.5 billion.

**Look-through adjustments:** Profits arising in Storebrand's asset management company which are induced by the group's life insurance business have been considered in the value of in-force at year-end 2008 and in the value of new business written in 2008.

**Deterministic projections:** A detailed deterministic model has been used to determine the projected future shareholder cash flows based on a certainty equivalent scenario, whereby it is assumed that all assets earn the risk-free rate of return and all cash flows are, therefore, discounted with the risk-free rate.

**Stochastic projections:** A Monte-Carlo simulation using market-consistent scenarios was used to evaluate the effect of volatility in the capital markets on the earnings of the covered business.

Allowance is made for management actions, including the investment strategy and solvency based dynamic risk management, as well as crediting and buffer capital strategy based on the current profit-sharing strategy adopted by the Storebrand Group. For SBL, the underlying principles are in line with the strategies developed and executed in recent years, applying CPPI<sup>2</sup> and OBPI<sup>3</sup>. For SPP, a comprehensive investment strategy has been developed during 2008 and has been reflected in the embedded value at year-end 2008.

#### **Implied discount rate (IDR) and internal rate of return (IRR):**

The implied discount rate is derived as the discount rate which, if applied to projected shareholder profits using real world economic assumptions as described in Section

IV including an allowance for the cost of holding capital, leads to the same embedded value or value of new business calculated via a direct MCEV approach as described above.

The IRR is derived as the discount rate which, if applied to projected shareholder profits generated by the new business using real world economic assumptions and including an allowance for the cost of holding capital, leads to a discounted value of zero.

## **IV. ASSUMPTIONS**

### **Economic assumptions**

Storebrand does not consider the quoted swap rates for NOK and SEK beyond 10 years as a robust basis for embedded value calculations or other valuations. Research performed by Storebrand shows a lack of liquidity in the Norwegian and the Swedish swap market. In 2008, the following approach which has been developed by Storebrand has been adopted for statutory reserving in SPP (note that the solvency accounting does not reflect this). Consequently, this approach has also been adopted for the embedded value calculations.

The following approach to setting the reference rates (for NOK and SEK) has been adopted in the restated embedded value at year-end 2007 and the embedded value at year-end 2008:

- Market interest rates are applied to the liquid part of the interest rate curve up to 10 years.
- A long-term equilibrium level is applied from 20 years and onwards, where the market is not functioning well. This equilibrium level is based on assumptions for growth in real economy, inflation and a risk premium.
- Linear interpolation is used between 10 years and 20 years.

The following table shows the risk free yields by currency (including the quoted 20yr and 30yr rates which are assumed to be non-liquid):

<sup>2)</sup> CPPI = Constant Proportion Portfolio Insurance

<sup>3)</sup> OBPI = Option Based Portfolio Insurance

The table below shows the risk free yields by currency.

### Spot Yield Curve

Year	2008				2007			
	NOK		SEK		NOK		SEK	
	mark to market	mark to model	mark to market	mark to model	mark to market	mark to model	mark to market	mark to model
1	2.8%	2.8%	1.8%	1.8%	5.9%	5.9%	4.7%	4.7%
2	2.9%	2.9%	2.0%	2.0%	5.7%	5.7%	4.7%	4.7%
3	3.1%	3.1%	2.4%	2.4%	5.5%	5.5%	4.7%	4.7%
5	3.9%	3.9%	2.9%	2.9%	5.4%	5.4%	4.8%	4.8%
10	4.7%	4.7%	3.2%	3.2%	5.5%	5.5%	4.9%	4.9%
20	4.7%	5.1%	3.2%	4.3%	5.5%	5.3%	4.9%	4.7%
30	4.4%	5.1%	2.8%	4.3%	5.3%	5.3%	4.8%	4.7%

The stochastic scenarios have been calibrated to implied volatilities of swaptions at the money. The economic scenario generator (ESG) used for generating the scenarios simulates rates and returns on a monthly basis. A set of correlated standard normal random samples is created based on a specified correlation matrix. The first random sample generated at each time is for the short rate process (a Cox-Ingersoll-Ross model), which in turn guides the movement of the other asset classes. Asset class returns are produced with no allowance for an asset class specific risk. The stochastic element is then applied by means of the multivariate standard normal samples already derived.

The model parameters are usually calibrated to the market conditions at the valuation dates, i.e. swaption prices and equity options prices. However, at year-end 2008 financial markets showed in our opinion unusual characteristics and therefore average implied volatility assumptions over the year 2008 have been applied for the embedded value calculations at year-end 2008.

### Implied volatilities for options on 10 year swaps at the money for various option maturities

Year	2008		2007	
	NOK	SEK	NOK	SEK
1	13.8%	13.7%	12.3%	12.6%
5	11.9%	12.5%	11.6%	12.6%
10	11.1%	12.2%	11.3%	12.5%
20	n/a	n/a	10.5%	11.6%

Various equity indices are considered in the stochastic models. Equity volatilities are based on implied volatilities of equity options at the money. Real estate volatility is based on historic market data.

The following table shows volatility assumptions used for generating stochastic scenarios:

### Volatilities

Year	2008				2007			
	SBL		Real Estate	SPP	SBL		Real Estate	SPP
	Int eq	Dom eq		Int and Dom eq	Int eq	Dom eq		Int and Dom eq
1	23.0%	32.0%	7.0%	23.7%	19.0%	24.0%	6.0%	19.9%
10	26.0%	28.0%	6.5%	25.8%	22.0%	28.0%	7.0%	23.9%

## Real world assumptions for IDR and IRR calculations:

For the calculation of IDRs and IRRs the following risk premiums have been applied to the interest rates used in the certainty equivalent projection:

	2007	2008
<b>Risk premiums by asset class</b>		
- equity	3.0%	3.0%
- corporate bonds / loans	0.5%	0.5%
- real estate	1.0%	1.0%
- cash	-1.0%	-1.0%

**Inflation:** Price inflation for SPP has been set equal to implied inflation for the Swedish market. This implied inflation in Sweden equals approximately 50% of the implied forward rates. For SBL, price inflation is set to be 50% of the 1-year forward rate as a proxy for implied inflation which is not available for the Norwegian market. Salary inflation is assumed to be 1.9% above price inflation and is based on an analysis of historic spreads.

**Expenses:** The expenses incurred have been subdivided by line of business and fully allocated into investment, acquisition and maintenance expenses. Maintenance expenses are expressed as per-policy expenses and are assumed to increase with price inflation.

The cost of SPP's and SBL's own pension schemes has been reflected on local GAAP basis (which for SBL and SPP equals the IFRS basis).

There are no material services provided by other group companies other than the one reflected in the look-through value. Also, there are no material expenses at the holding level that would have to be attributed and

none have been taken into account.

No productivity gains are anticipated in the embedded value assumptions. There are no material overhead expenses incurred in other entities. At SPP, out of the total amount of expenses of SEK 1,046 million in 2008 of an amount of SEK 137 million has been classified as one-off expenses and have not been considered in the derivation of expense assumptions.

**Actuarial assumptions:** The assumptions for mortality and morbidity, lapses and paid-ups are based on recent company experience, and have been reviewed for 2008.

**Tax:** In line with current legislation, a tax rate of 0% has been used for SBL and profits arising from asset management. For SPP an effective tax rate of 0% has been used due to the holding company structure in Sweden which allows for tax free group contributions. Asymmetries in taxation for SBL due to volatility of the financial results are reflected in the TVOG. For profits arising in SPP subsidiary Euroben Ltd a tax rate of 8% has been applied.

**Exchange rates:** An exchange rate of 0.8401 has been applied to amounts in SEK at year-end 2007 and 0.8854 at year-end 2008 consistent with the annual accounts of Storebrand Group.

## V. RESULTS BY COMPANY

In this section the embedded value results are shown for SBL and SPP separately on a legal entity basis. All results in the sections below are shown in NOK.

The table below shows the embedded value for SBL, SPP and the consolidated embedded value at year-end 2008:

NOK mill.	MCEV 2008 Storebrand	MCEV 2008 SPP	MCEV 2008 Consolidated
<b>Total shareholder surplus</b>			
<b>at market value</b>	<b>15,093</b>	<b>5,240</b>	<b>8,431</b>
comprising			
- Free surplus	4,690	-589	882
- Required capital	10,404	5,829	7,550
<b>Value of In-force business</b>	<b>10,094</b>	<b>4,516</b>	<b>14,610</b>
comprising			
- Present value of future profits (PVFP)	18,066	5,827	23,893
- Time value of financial options and guarantees (TVOG)	-4,595	-587	-5,183
- Frictional costs of required capital (FCRC)	-137	-99	-236
- Cost of residual non hedgeable risks (CNHR)	-3,239	-624	-3,864
<b>Total embedded value</b>	<b>25,187</b>	<b>9,756</b>	<b>23,041</b>
<i>Look through value included in the PVFP</i>	<i>3,098</i>	<i>924</i>	<i>4,022</i>

## Results for Storebrand Livsforsikring

The embedded value shown below for SBL reflects its value before capital effects, i.e. in order to derive the embedded value shown for Storebrand Group above the embedded value of SPP has to be added and the difference between the book value of SPP in Storebrand's accounts and the additional capital issues has to be deducted.

The table to the right shows the total embedded value for SBL.

NOK mill.	MCEV 2008
<b>Total shareholder surplus at market value</b>	<b>15,093</b>
comprising	
- Free surplus	4,690
- Required capital	10,404
<b>Value of In-force business</b>	<b>10,094</b>
comprising	
- Present value of future profits (PVFP)	18,066
- Time value of financial options and guarantees (TVOG)	-4,595
- Frictional costs of required capital (FCRC)	-137
- Cost of residual non hedgeable risks (CNHR)	-3,239
<b>Total embedded value</b>	<b>25,187</b>
<i>Look through value included in the PVFP</i>	<i>3,098</i>

The following table shows the breakdown of the value of in-force by portfolio:

NOK mill.	Total	Fee based business	20/80	35/65	Unit Linked	Other non profit
<b>Value of In-force business</b>						
comprising						
- Present value of future profits (PVFP)	18,066	8,916	4,501	704	1,857	2,089
- Time value of financial options and guarantees (TVOG)	-4,595	-685	-3,396	-514	0	0
- Frictional costs of required capital (FCRC)*	-137					
- Cost of residual non hedgeable risks (CNHR)*	-3,239					
<b>Total Value of in-force business</b>	<b>10,094</b>	<b>8,231</b>	<b>1,105</b>	<b>189</b>	<b>1,857</b>	<b>2,089</b>
<i>Look through value included in the PVFP</i>	<i>3,098</i>	<i>1,136</i>	<i>1,459</i>	<i>139</i>	<i>364</i>	<i>0</i>

\* The allowance for residual non hedgable risks and frictional cost of required capital have been derived on an aggregate level and has not been broken down by product

The following table shows the value of new business for SBL:

NOK mill.	Total	Fee based business	20/80	35/65	DC/UL	Other non profit
<b>Value of New Business</b>						
comprising						
- Present value of future profits (PVFP)	871	380	163	6	157	165
- Time value of financial options and guarantees (TVOG)	-136	-28	-111	3	0	0
- Frictional costs of required capital (FCRC)*	-55					
- Cost of residual non hedgeable risks (CNHR)*	-175					
<b>Total value of new business</b>	<b>504</b>	<b>352</b>	<b>52</b>	<b>9</b>	<b>157</b>	<b>165</b>
<i>Look through value included in the PVFP</i>	<i>132</i>	<i>49</i>	<i>66</i>	<i>1</i>	<i>15</i>	<i>0</i>

\* The allowance for residual non hedgable risks and frictional cost of required capital have been derived on an aggregate level and has not been broken down by product

The following table shows the new business margins for 2007 (as published) and 2008:

NOK mill.	2007	2008	
		(excl CNHR and FCRC)	(incl CNHR and FCRC)
<b>Fee based business, 20/80 and 35/65 portfolio</b>			
VNB	364	413	-
PVNBP	10,679	10,387	-
Regular Premiums	-	316	-
Single Premiums	-	5,476	-
APE	890	863	-
APE margin (%)	41 %	48 %	-
Margin on PVNBP	3.4%	4.0%	-
<b>Defined Contribution and Unit Linked</b>			
VNB	112	157	-
PVNBP	2,398	5,954	-
Regular Premiums	-	426	-
Single Premiums	-	1,013	-
APE	248	528	-
APE margin (%)	45 %	30 %	-
Margin on PVNBP	4.7%	2.6%	-
<b>Risk business</b>			
VNB	27	165	-
PVNBP	540	651	-
Regular Premiums	-	192	-
Single Premiums	-	0	-
APE	49	192	-
APE margin (%)	55 %	86 %	-
Margin on PVNBP	5.0%	25.3%	-
<b>Total</b>			
VNB	503	735	504
PVNBP	13,617	16,992	16,992
Regular Premiums	-	934	934
Single Premiums	-	6,489	6,489
APE	1,187	1,583	1,583
APE margin (%)	42 %	46 %	32 %
Margin on PVNBP	3.7%	4.3%	3.0%

It should be noted that in the table above, the margins of the value of new business written in 2007 has not been restated to the same methodology as the 2008 figures.

## Sensitivities for SBL

The following table shows the sensitivity results for the MCEV:

NOK mill.	Total MCEV	Change	in %
<b>Base</b>	<b>25,187</b>		
1. 100 basis point pa increase in the interest rate	28,969	3,781	15.0%
2. 100 basis point pa decrease in the interest rate	20,002	-5,186	-20.6%
3. 10% decrease in equity/property capital	21,781	-3,406	-13.5%
4. 10% decrease in equity capital	24,036	-1,152	-4.6%
5. 25% increase in equity/property implied volatilities	24,082	-1,106	-4.4%
6. 25% increase in swaption implied volatilities	23,514	-1,674	-6.6%
7. 10% decrease in maintenance expenses	26,437	1,249	5.0%
8. 10% proportionate decrease in lapse rates	25,579	391	1.6%
9. Mortality rates -5% - annuity business	24,910	-277	-1.1%
10. Mortality rates -5% - life business	25,268	81	0.3%
11. Salary and expense inflation + 0.5%	25,685	497	2.0%
12. Required capital equal to minimum level of solvency capital	25,225	38	0.1%

The following table shows the sensitivity results for the Value of New Business:

NOK mill.	Total MCEV	Change	in %
<b>Base</b>	<b>504</b>		
1. 100 basis point pa increase in the interest rate	616	111	22.1%
2. 100 basis point pa decrease in the interest rate	231	-273	-54.1%
3. 10% decrease in equity/property capital	474	-31	-6.1%
4. 10% decrease in equity capital	468	-37	-7.3%
5. 25% increase in equity/property implied volatilities	469	-35	-7.0%
6. 25% increase in swaption implied volatilities	450	-54	-10.7%
7. 10% decrease in maintenance expenses	537	33	6.5%
8. 10% proportionate decrease in lapse rates	535	31	6.1%
9. Mortality rates -5% - annuity business	501	-3	-0.7%
10. Mortality rates -5% - life business	514	10	2.0%
11. Salary and expense inflation + 0.5%	526	21	4.2%
12. Required capital equal to minimum level of solvency capital	524	19	3.8%

## Results for SPP

The embedded value shown below for SPP includes the embedded value of SPP's Irish subsidiary Euroben Ltd.

NOK mill.	MCEV 2008
<b>"Total shareholder surplus at market value"</b>	<b>5,240</b>
comprising	
- Free surplus	-589
- Required capital	5,829
<b>Value of In-force business</b>	<b>4,516</b>
comprising	
- Present value of future profits (PVFP)	5,827
- Time value of financial options and guarantees (TVOG)	-587
- Frictional costs of required capital (FCRC)	-99
- Cost of residual non hedgeable risks (CNHR)	-624
<b>Total embedded value</b>	<b>9,756</b>
<i>Look through value included in the PVFP</i>	<i>924</i>

The value of in-force broken down by product is shown in the following table:

NOK mill.	Total	Defined Benefit	Defined Contribution	Unit Linked	Risk	Euroben
<b>Value of In-force business</b>						
comprising						
- Present value of future profits (PVFP)	5,827	2,204	692	1,903	473	555
- Time value of financial options and guarantees (TVOG)	-587	-101	-474	0	0	-12
- Frictional costs of required capital (FCRC)*	-99					
- Cost of residual non hedgeable risks (CNHR)*	-624					
<b>Total Value of in-force business</b>	<b>4,516</b>	<b>2,103</b>	<b>218</b>	<b>1,903</b>	<b>473</b>	<b>543</b>
<i>Look through value included in the PVFP</i>	<i>924</i>	<i>326</i>	<i>413</i>	<i>184</i>	<i>0</i>	<i>0</i>

\* The allowance for residual non hedgable risks and frictional cost of required capital have been derived on an aggregate level and has not been broken down by product



## Value of new business for SPP

The following table shows the value of new business for SPP:

NOK mill.	Total	Defined Benefit	Defined Contribution	Unit Linked	Risk	Euroben
<b>Value of New Business</b>						
comprising						
- Present value of future profits (PVFP)	-76	-3	-102	54	-26	0
- Time value of financial options and guarantees (TVOG)	-15	-6	-9	0	0	0
- Frictional costs of required capital (FCRC)*	-1					
- Cost of residual non hedgeable risks (CNHR)*	-17					
<b>Total Value of new business</b>	<b>-109</b>	<b>-8</b>	<b>-111</b>	<b>54</b>	<b>-26</b>	<b>0</b>
<i>Look through value included in the PVFP</i>	<i>21</i>	<i>1</i>	<i>7</i>	<i>13</i>	<i>0</i>	<i>0</i>

\* The allowance for residual non hedgeable risks and frictional cost of required capital have been derived on an aggregate level and has not been broken down by product

The following table shows the new business margins for 2008:

NOK mill.	Total	Defined Benefit	Defined Contribution	Unit Linked	Risk	Euroben
<b>Value of New Business</b>	<b>-109</b>	<b>-8</b>	<b>-111</b>	<b>54</b>	<b>-26</b>	<b>0</b>
Regular premiums	460	14	95	331	21	0
Single Premiums	560	0	468	91	0	0
APE	516	14	142	340	21	0
APE margin (%)	-21 %	-62 %	-79 %	16 %	-124 %	-
PVNB	3,318	306	755	2,109	149	0
PVNB margin (%)	-3.3%	-2.8%	-14.8%	2.6%	-17.2%	-

## Sensitivities for SPP

The following table shows the sensitivity results for the MCEV:

NOK mill.	Total MCEV	Change	in %
<b>Base</b>	<b>9,756</b>		
1. 100 basis point pa increase in the interest rate	8,979	-777	-8.0%
2. 100 basis point pa decrease in the interest rate	9,658	-98	-1.0%
3. 10% decrease in equity/property capital	9,480	-276	-2.8%
4. 10% decrease in equity capital	9,567	-189	-1.9%
5. 25% increase in equity/property implied volatilities	9,542	-215	-2.2%
6. 25% increase in swaption implied volatilities	9,477	-279	-2.9%
7. 10% decrease in maintenance expenses	10,371	615	6.3%
8. 10% proportionate decrease in lapse rates	9,887	131	1.3%
9. Mortality rates -5% - annuity business	9,044	-712	-7.3%
10. Mortality rates -5% - life business	9,756	0	0.0%
11. Salary and expense inflation + 0.5%	9,472	-284	-2.9%
12. Required capital equal to minimum level of solvency capital	9,768	11	0.1%

The following table shows the sensitivity results for the Value of New Business:

NOK mill.	Total MCEV	Change	in %
<b>Base</b>	<b>-109</b>		
1. 100 basis point pa increase in the interest rate	-97	12	-10.9%
2. 100 basis point pa decrease in the interest rate	-125	-16	14.8%
3. 10% decrease in equity/property capital	-115	-5	5.0%
4. 10% decrease in equity capital	-113	-4	3.9%
5. 25% increase in equity/property implied volatilities	-114	-5	4.3%
6. 25% increase in swaption implied volatilities	-113	-3	3.1%
7. 10% decrease in maintenance expenses	-86	23	-21.0%
8. 10% proportionate decrease in lapse rates	-87	23	-20.7%
9. Mortality rates -5% - annuity business	-114	-5	4.4%
10. Mortality rates -5% - life business	-109	0	0.0%
11. Salary and expense inflation + 0.5%	-117	-8	7.0%
12. Required capital equal to minimum level of solvency capital	-109	0	-0.1%

#### Statement of Directors

The directors of Storebrand confirm that the embedded value as at 31 December 2008, and the embedded value earnings including the value added by new business in 2008, have been determined using methodology and assumptions which are compliant with EEV principles.

## VI. IFRS RECONCILIATION AND GROUP MCEV

#### Group MCEV 2008 & IFRS reconciliation

The following table shows a reconciliation of the reconciliation of the IFRS equity for the life insurance business to embedded value at year-end 2008:

NOK mill.	
<b>IFRS equity 2008 - Life (incl SPP)</b>	<b>14,839</b>
NGAAP adjustments	
- Security reserver non-life	-121
- Administration reserve non-life	16
NGAAP Equity Life (incl. SPP)	14,734
- Total consolidation SBL Group	359
NGAAP Equity SBL (incl. Book value of SPP)	15,093
- Book value of SPP in SBL acounts	-11,902
- Shareholder surplus SPP	5,240
Group Shareholder surplus in MCEV	8,431
- Value of In-force SPP	4,516
- Value of In-force SBL	10,094
<b>Total Life MCEV</b>	<b>23,041</b>

The following table shows the derivation of the Group MCEV for the Storebrand Group (including the covered and non-covered business) as well as the movements in the Group MCEV in the year 2008:

NOK mill.	IFRS Segment Life			Banking, Asset Management and Other (incl eliminations)	Group MCEV
	Life	Health	Total		
<b>Opening Group MCEV</b>	<b>29,940</b>	<b>56</b>	<b>29,996</b>	<b>3,301</b>	<b>33,297</b>
Opening adjustments	-3,386	0	-3,386	0	-3,386
<b>Adjusted opening values</b>	<b>26,554</b>	<b>56</b>	<b>26,610</b>	<b>3,301</b>	<b>29,911</b>
Operating Earnings	1,835	1	1,836	-71	1,765
Non-operating Earnings	-7,066	0	-7,066	0	-7,066
<b>Total Earnings</b>	<b>-5,230</b>	<b>1</b>	<b>-5,230</b>	<b>-71</b>	<b>-5,300</b>
<b>Other movements in IFRS equity</b>	<b>-</b>	<b>-2</b>	<b>-2</b>	<b>-104</b>	<b>-106</b>
<b>Closing adjustments</b>	<b>1,718</b>	<b>-1</b>	<b>1,717</b>	<b>-1,861</b>	<b>-144</b>
<b>Closing Group MCEV</b>	<b>23,041</b>	<b>54</b>	<b>23,095</b>	<b>1,265</b>	<b>24,361</b>

The table above shows the movements of the Group MCEV separate for the covered and the non-covered business. The IFRS life & health segment is almost entirely represented by the covered life business, only the health business had been added on an IFRS basis. Other Segments such as the Banking, Asset Management and other businesses (including eliminations) have been similarly included at their IFRS value.

The earnings for the Asset Management business in the table above reflect NOK 73 million less profit than IFRS reporting representing asset management profits for managing covered business assets that has been modelled with the covered business MCEV.

## Towers Perrin Opinion

- Tillinghast, the insurance consulting business of Towers Perrin, reviewed the methodology and assumptions used to determine the 2008 embedded value results. The review covered the European Embedded Value as at 31 December 2008, the value of 2008 new business, the analysis of 2008 embedded value earnings and the sensitivities of the embedded value and new business value using a market consistent approach. It also covered the restated embedded value as at 31 December 2007.
- Towers Perrin has concluded that the methodology and assumptions used comply with the EEV Principles and Guidance, and in particular that:
  - the methodology makes allowance for the aggregate risks in the covered business through the bottom-up methodology as described in the additional disclosure document, which includes a stochastic allowance for the cost of financial options and guarantees, and a level of required capital based on regulatory and internal capital requirements and an allowance for the cost of non-hedgeable risks;
  - the operating assumptions have been set with appropriate regard to past, current and expected future experience;
  - the economic assumptions used are internally consistent and consistent with observable market data and where no deep and liquid markets exist are appropriately modeled; and
  - for participating business, the assumed bonus rates and the allocation of profit between policyholders and shareholders are consistent with the projection assumptions, established company practice and local market practice
- 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
- Towers Perrin notes that the results as at 31 December 2008
  - are based on a zero tax rate in accordance with the current taxation regime relating to income and capital gains on European (EEA) equities
  - The subordinated debt has been deducted from the EEV at book value rather than on a market value basis, as disclosed in Section III.
- In arriving at these conclusions, Towers Perrin has relied on data and information provided by Storebrand. This opinion is made solely to Storebrand 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 Storebrand for or in connection with its review work, the opinions it has formed, or for any statement set forth in this opinion.

Storebrand Livsforsikring

Hovedkontor: Filipstad Brygge 1, Postboks 1380 Vika N-0114 Oslo, Telefon 08880, [www.storebrand.no](http://www.storebrand.no)

