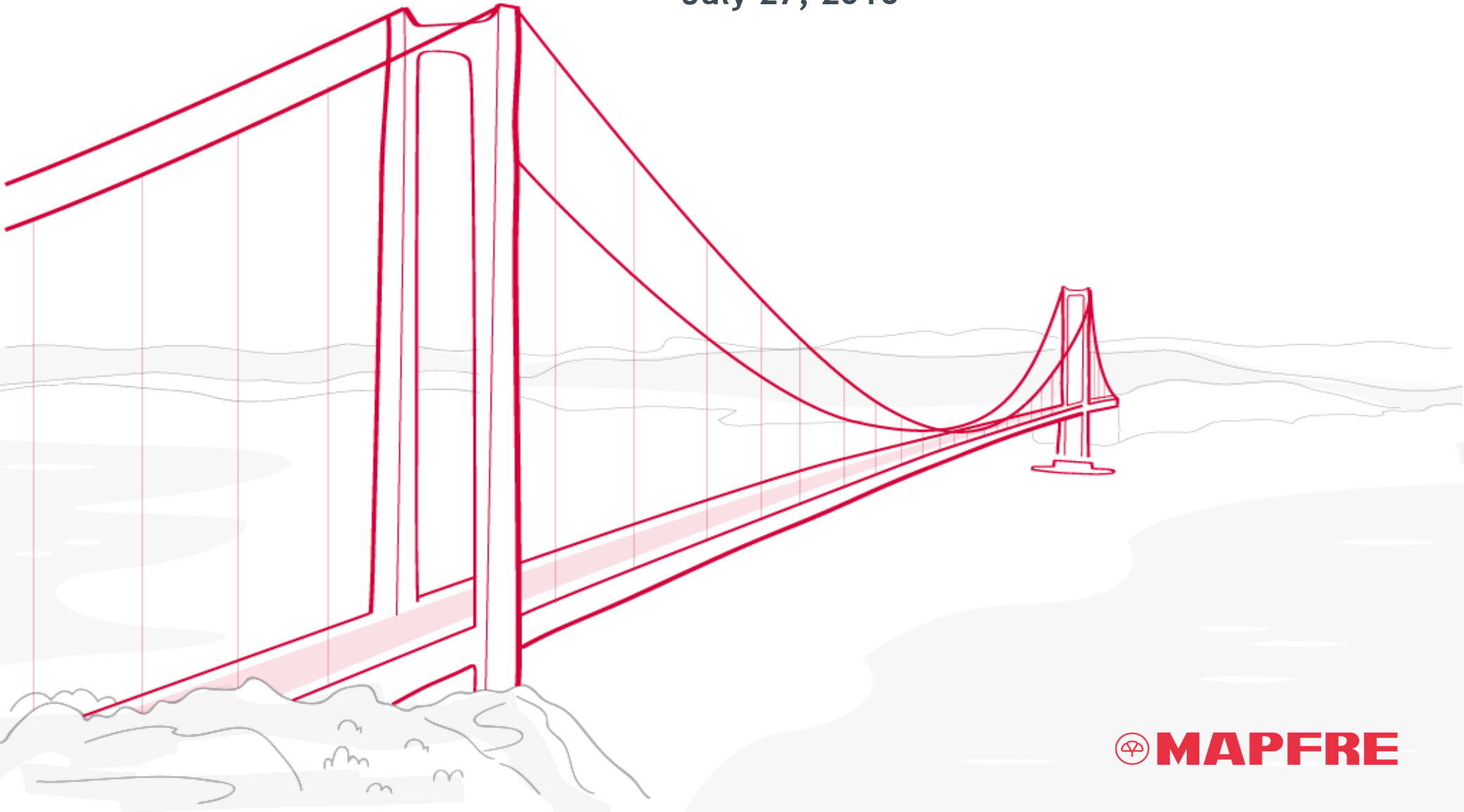


# European Embedded Value 2015

July 27, 2016



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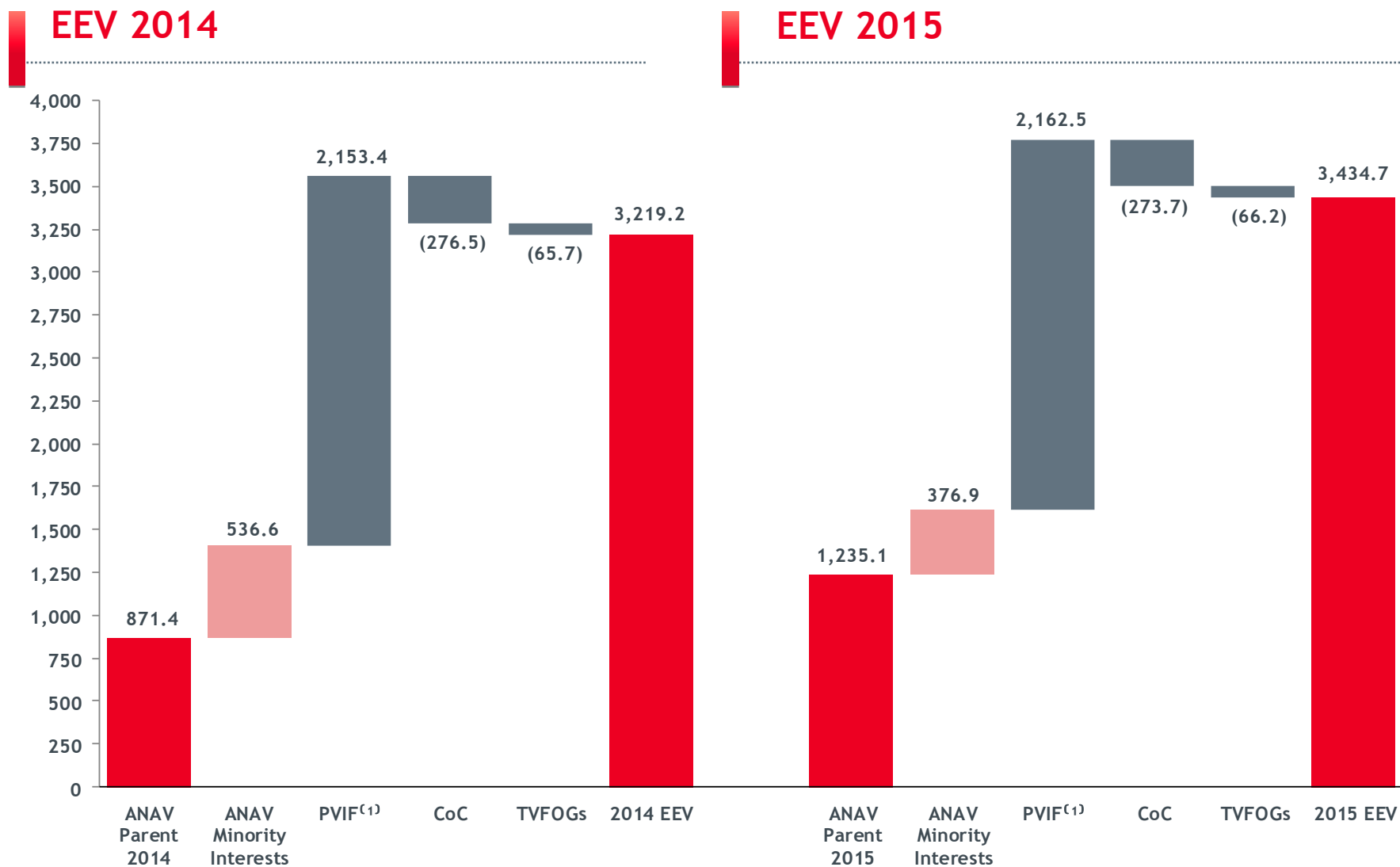
## Development of the EEV in 2015

	2015	△ %
Value of In-force Business (VIF) <sup>(1)</sup>	1,822.7	0.6%
European Embedded Value (EEV)	3,434.7	6.7%
Attributable to the Parent Company	2,610.6	19.8%
Attributable to Minority Interests	824.1	-20.7%
Return on Embedded Value (RoEV)	7.8%	-4.8 p.p.
Present Value of New Business Income (PVNBI) <sup>(1)</sup>	3,769.5	-16.7%
Value added by new business <sup>(1)</sup>	142.2	-22.0%
New business margin	3.8%	-0.2 p.p.

### Key highlights

- Exclusion of CatalunyaCaixa Vida from the consolidation scope and inclusion of MAPFRE's Life business in Portugal (agents' channel)
- Application of the new Solvency II regulation for the calculation of the cost of required capital

## EEV components and their variation in 2015



1) No adjustments made for the share of minority interests

## Breakdown of the 2015 EEV

### By business line

	€ mill.	%	Δ %
Adjusted Net Asset Value	1,612.0	46.9%	14.5%
Net PVIF <sup>(1)</sup> - Life Assurance <sup>(2)</sup>	1,586.9	46.2%	-1.5%
- PVIF	1,841.9		-1.3%
- CoC	(255.0)		-0.3%
Net PVIF <sup>(1)</sup> - Mutual Funds	153.5	4.5%	19.4%
- PVIF	155.3		19.2%
- CoC	(1.8)		3.8%
Net PVIF <sup>(1)</sup> - Pension Funds	148.4	4.3%	7.9%
- PVIF	165.4		5.6%
- CoC	(17.0)		-10.6%
TVFOGs	(66.2)	-1.9%	0.7%
<b>EEV 2015</b>	<b>3,434.7</b>	<b>100.0%</b>	<b>6.7%</b>
Initial capital used to calculate the CoC <sup>(3)</sup>	817.9		0.0%

### By distribution channel

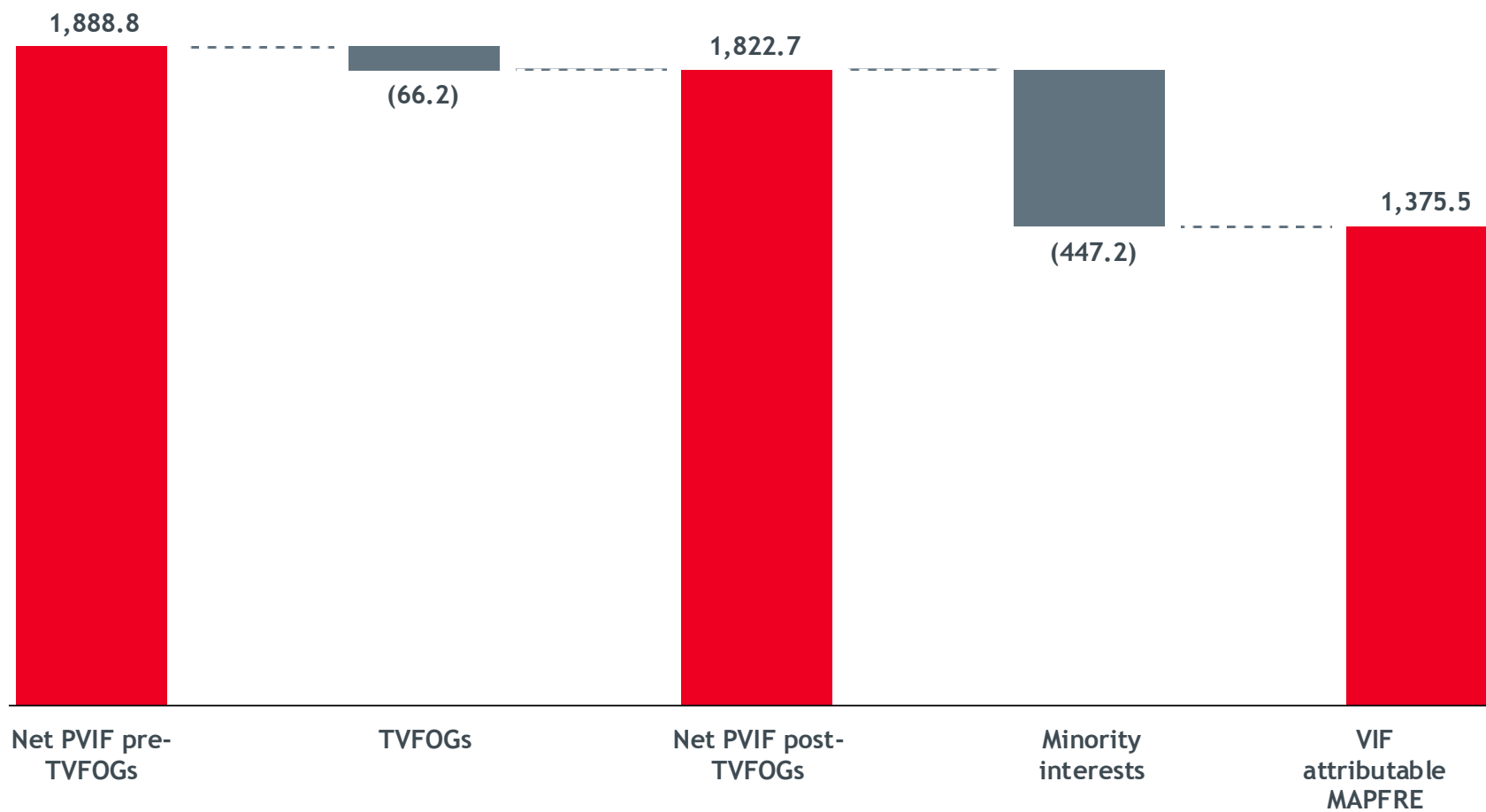
	€ mill.	%	Δ %
Adjusted Net Asset Value	1,612.0	46.9%	14.5%
Net PVIF - Agents' channel	973.6	28.3%	14.2%
- PVIF	1,137.9		13.7%
- CoC	(164.3)		10.8%
Net PVIF - Bank channels	915.2	26.6%	-3.0%
- PVIF	1,024.6		-4.2%
- CoC	(109.4)		-13.0%
TVFOGs	(66.2)	-1.9%	0.7%
<b>EEV 2015</b>	<b>3,434.7</b>	<b>100.0%</b>	<b>6.7%</b>
Initial capital used to calculate the CoC <sup>(3)</sup>	817.9		0.0%

1) PVIF = "Present Value of In-Force business"

2) Includes the in-force values of the Life assurance and accidental death insurance businesses

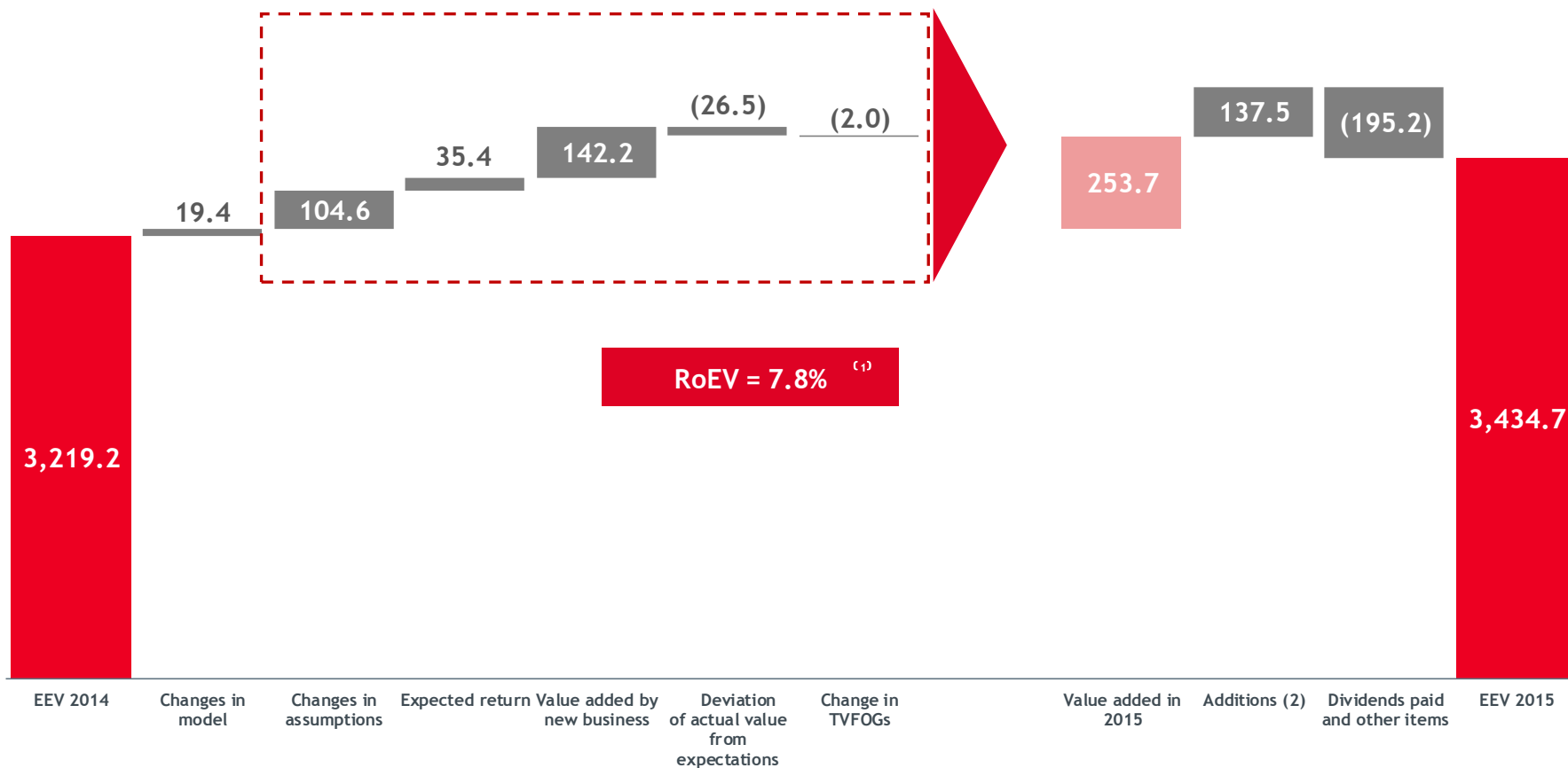
3) Embedded value calculations based on an amount of capital equal to 100% of the solvency capital requirement, applying the new rules of Solvency II

## Share of the parent company in the 2015 VIF



## Value added in 2015

### Change in Embedded Value



Million Euros

- 1) Return on Embedded Value = Value added in the year / Embedded Value 2014, adjusted for changes in model
- 2) Inclusion of MAPFRE's Life subsidiary in Portugal (agents' channel) and exclusion of CatalunyaCaixa Vida

## Analysis of the main variations in EEV

### Change

#### Changes in model

### Description

- Mainly reflects the inclusion in the model of part of Aseval's savings business, which was not modelled in the previous year (+€9.2 million)

#### Changes in assumptions

- Reflects the favorable development of the loss experience (+€74.3 million), lapses (+€16.0 million) and expenses (+€25.7 million)
- Shows the impact on cost of capital (-€11.3 million) due to the change in the required capital definition, based on the new Solvency II capital requirement
- Shift in the interest rate curve (-€0.2 million)

#### Expected return

- Includes the impact of the unwinding of the discount rate (+€33.6 million), and the expected after-tax investment return on the adjusted net asset value at the beginning of the year, net of the cost of capital (+€1.6 million)



## Analysis of the main variations in EEV (contd.)

### Change

### Description

Deviation of actual value from expectations

- Reflects primarily the impact on the net asset value of the valuation adjustments of financial investments

TVFOGs

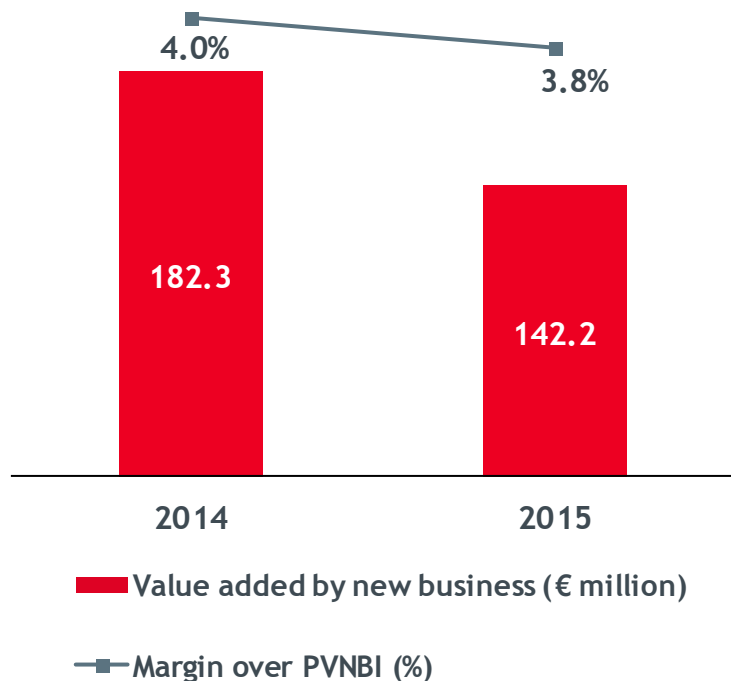
- The increase in costs of the TVFOGs is due to the downturn in the yield curve

Inclusions and exclusions

- Deconsolidation of CatalunyaCaixa Vida business, net of the compensation received by the breach of the agreement (+€111.6 million that have an impact on the ANAV = +242.1 and on the VIF = -130.5) and inclusion of MAPFRE's Life business in Portugal (+€25.9 million that have an impact on the ANAV = +19.4 and on the VIF = +6.5)

## Value added by new business

### Development of the value added



### Key highlights

1

Excludes the new production from CatalunyaCaixa Vida in 2015, which was included in 2014

2

Reduction in margins in the savings business, due to the low interest rate environment

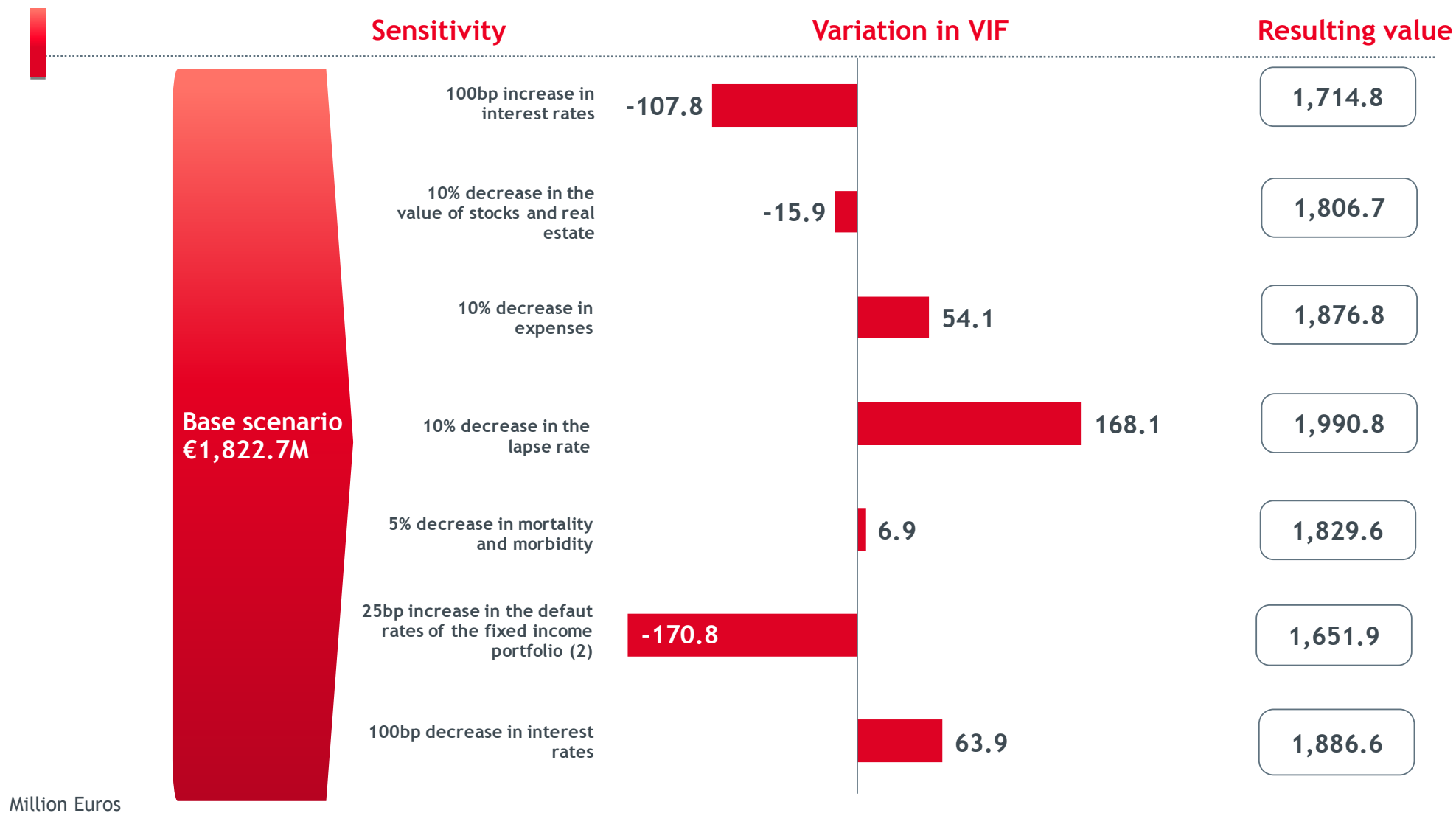
3

Increase in new business volumes of protection products, with higher margins, in the bank channel

4

Increase in distribution expenses in the agents' channel

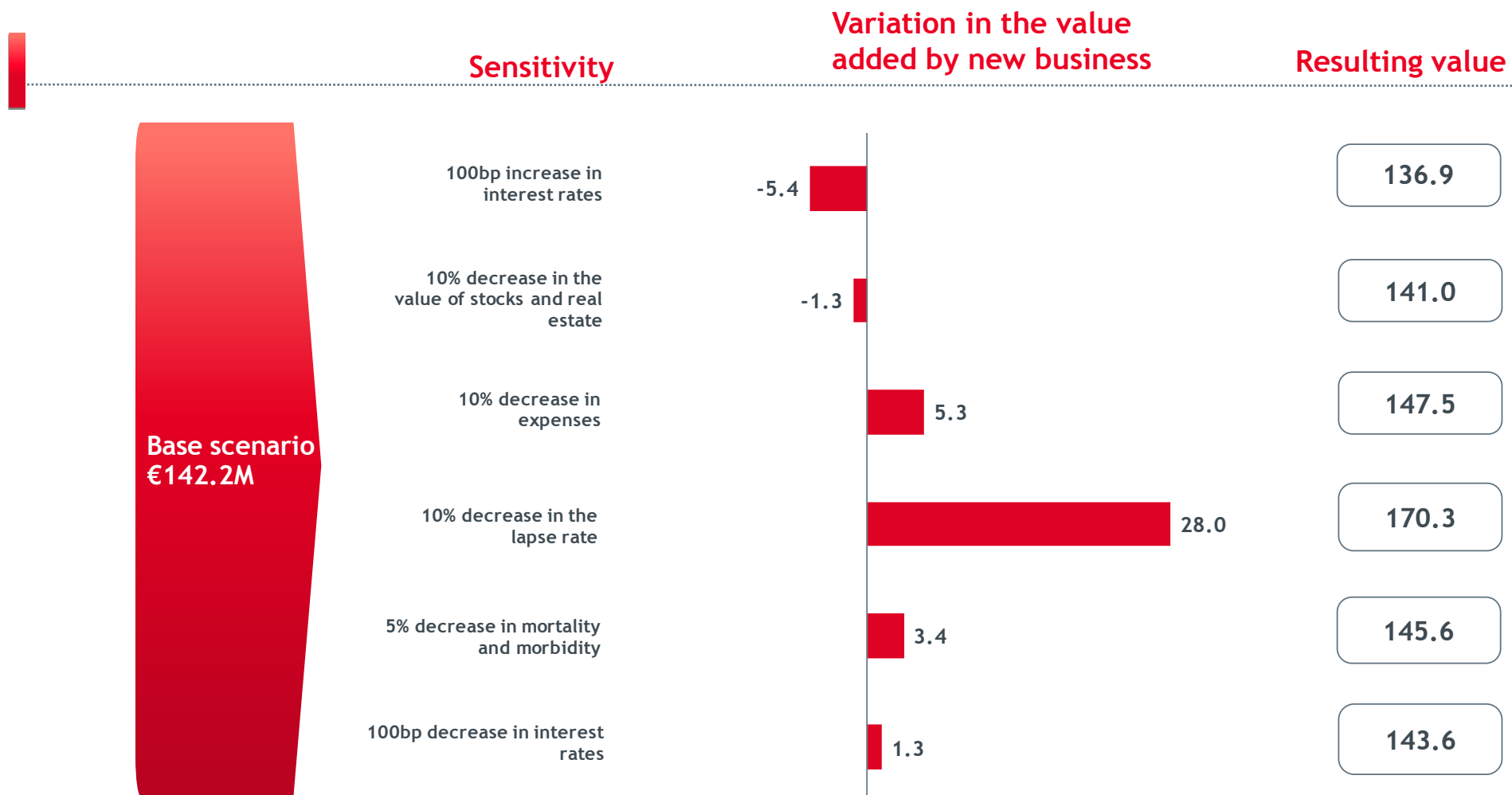
## Sensitivity analysis of the value of in-force business<sup>(1)</sup>



1) VIF = PVIF - TVFOGS - CoC

2) The 25bp increase represents a probability of default of 1.25 times that applied to the whole fixed income portfolio included in the credit risk adjustment to the VIF

# Sensitivity analysis of the value added by new business



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Willis Towers Watson 

27 April 2016  
Mapfre S.A.  
Carretera de Pozuelo 52  
Edificio 1  
28222 Majadahonda (Madrid)

Dear Sirs,

## Opinion letter – EEV results of certain subsidiaries of Mapfre, S.A. as at 31 December 2015

- 1 Towers Watson de España, S.A. ("Willis Towers Watson") has been appointed by Mapfre, S.A. to provide an actuarial opinion on the calculation of the embedded value ("EV") results of certain subsidiaries of Mapfre, S.A. as at 31 December 2015.
- 2 The EV results have been prepared by Mapfre, S.A. to comply with the European Embedded Value Principles and Guidance issued by the CFO Forum in May 2004 (the "EEV Principles").
- 3 The EV results of Mapfre, S.A. cover the business of Mapfre Seguros de Vida, S.A. in Portugal plus Mapfre Vida, S.A. de Seguros y Reaseguros sobre la Vida Humana ("Mapfre Vida") and its subsidiaries:
  - Bankia Mapfre Vida, S.A. de Seguros y Reaseguros;
  - Mapfre Inversión S.V., S.A., consisting of Mapfre Inversión Dos, S.G.I.I.C., S.A. and Mapfre Vida Pensiones, E.G.F.P., S.A.;
  - Bankinter Seguros de Vida, SA de Seguros y Reaseguros;
  - CCM Vida y Pensiones S.A. de Seguros y Reaseguros;
  - Unión del Duero, Compañía de Seguros de Vida, S.A. ("Unión Duero Vida");
  - Duero Pensiones, entidad gestora de fondos de pensiones, S.A. ("Unión Duero Pensiones"); and
  - Aseguradora Valenciana de Seguros y Reaseguros, S.A. ("Aseval").

## Scope

- 4 The EV results have been prepared by Mapfre S.A. and its subsidiaries.
- 5 Willis Towers Watson has carried out a review of the methodology and assumptions used by Mapfre, S.A. to calculate the EV results against the requirements of the EEV Principles.
- 6 Willis Towers Watson has also reviewed the 2015 EV and new business value results, the sensitivities and the change in EV prepared by Mapfre S.A., as shown on pages 3, 11, 12 and 7 of the presentation.

## Conclusions

- 7 Subject to the exception noted below, Willis Towers Watson has concluded that the methodology and assumptions used to determine the 2015 EV and value of new business comply with the EEV Principles. The exception referred to above is that at year-end 2015 the basis may be considered to make insufficient allowance for the aggregate risks in relation to the savings business, and in particular the allowance made, directly and indirectly, for credit risk in respect of the existing fixed interest assets, as described on page 18 of this presentation. The impact on the 2015 EV results of a larger allowance for credit risk is shown in the sensitivity analysis.
- 8 Further, based on a high-level review of the results of the calculations, but without undertaking detailed checks on the models and processes involved, Willis Towers Watson considers that any issues discovered do not have a material impact on the embedded value, analysis of embedded value earnings, value of new business and sensitivity tests.

Willis Towers Watson 

- 9 Our work and this letter are subject to the reliances and limitations contained in paragraphs 10 to 15 of this letter. The work is based on information received up to and including 20 April 2016.

## Reliances and limitations

- 10 The review was conducted on behalf of Mapfre, S.A. and designed according to the terms and requirements of the Directors of Mapfre, S.A. Our opinion is made solely to Mapfre, S.A. in accordance with the terms of Willis Towers Watson's engagement letter. To the fullest extent permitted by applicable law, Willis Towers Watson does not accept or assume any responsibility, duty of care or liability to anyone other than Mapfre, S.A. for or in connection with its review work, the opinions it has formed, or for any statement set forth in this letter.
- 11 In carrying out our review we have relied without independent verification upon the accuracy and completeness of the data and information provided to us, both in written and oral form, by Mapfre, S.A. and its subsidiaries and we have been informed that the Directors of Mapfre, S.A. know of no other information or data which ought to have been made available to Willis Towers Watson that would materially affect the opinion set out herein.
- 12 Reliance has been placed upon, but not limited to, information regarding historic annual reports and accounts, life insurance and mutual and pension fund product characteristics and charges, asset allocations by product line, asset values, expense analyses, salesforce commission scales, internal claim and discontinuance studies, levels of in-force premiums, number of policies, technical reserves, mutual and pension funds by product, terms of reinsurance agreements, electronic policy data bases, cash flow projections by product, analyses of movement and analyses of sensitivities.
- 13 We have not attempted to assess the suitability, quality or value of the assets of Mapfre, S.A. and its subsidiaries, or to provide any warranty as to the adequacy of the technical reserves. We have also not investigated any claims against Mapfre, S.A. and its subsidiaries, other than those made by policyholders or fund participants under the normal terms of insurance, mutual fund or pension fund business. In particular, no account has been taken of liabilities in respect of pension entitlements, service contracts, leases and breaches of legislation, regulatory rules or guidance.
- 14 Assumptions are made about future experience, including economic and investment experience, tax, expenses, lapse rates, mortality and reinsurance. These assumptions have been made on the basis of reasonable estimates. However, actual future experience is likely to differ from these assumptions, due to random fluctuations, changes in the operating environment and other factors. Such variations in experience could have a significant effect on the results and conclusions of this letter. No warranty is given by Willis Towers Watson that the assumptions made in this letter will be reflected in actual experience.
- 15 The results shown do not consider possible financial implications arising from the introduction of new regulatory reporting requirements which may, for example, increase the level of capital support required to sustain the business or constrain the way in which the assets are invested.

Yours sincerely



Felipe Gómez Rojas

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## Covered business

- The 2015 embedded value was calculated for all the Life businesses issued by MAPFRE in the IBERIA region (Spain and Portugal), which include the following blocks of business:
  - Life assurance (including complementary) and accidental death insurance businesses sold through the agents' channel in the IBERIA region (MAPFRE VIDA in Spain and MAPFRE SEGUROS DE VIDA in Portugal)
  - Life assurance (including complementary) and accidental death insurance businesses of BANKIA MAPFRE VIDA (formerly MAPFRE-CAJA MADRID VIDA) and ASEVAL
  - Life assurance (including complementary), accidental death insurance and pension funds businesses of CCM VIDA Y PENSIONES, BANKINTER SEGUROS DE VIDA, UNIÓN DUERO VIDA and DUERO PENSIONES
  - Mutual funds and pension funds businesses of MAPFRE INVERSIÓN S.V., S.A., MAPFRE INVERSIÓN DOS, S.G.I.I.C., S.A. and MAPFRE VIDA PENSIONES, E.G.F.P., S.A. de Seguros, S.A. ("MAPFRE INVERSIÓN Y PENSIONES")

## Non-covered business

- The MAPFRE GROUP operates Life Assurance business in other countries outside of the IBERIA region (Spain and Portugal), not included in the EEV calculation



## Methodology

- The embedded value of the life assurance, accidental death insurance, mutual funds and pension funds businesses includes the adjusted net asset value and the value of in-force business, defined as follows:
  - Embedded value = Adjusted Net Asset Value + Value of In-Force Business
  - Adjusted Net Asset Value (ANAV) = Shareholders' equity at market value, adjusted to obtain the economic value of capital
  - Value of the In-Force Business (VIF) = PVIF - TVFOGs - CoC
  
- A bottom-up approach was followed to comply with EEVP, valuing separately each risk component in the business, since it was deemed that this methodology provides the most transparent information about shareholder value, better quantifies the risk in each product, differentiating between in-force and new business
  
- **Adjusted Net Asset Value:**
  - The Adjusted Net Asset Value or "ANAV" is equal to shareholders' equity as defined under IFRS, adjusted for: committed donations and dividends; goodwill; deferred expenses; and any other item needed to calculate the economic value of capital
  
- **Present Value of In-force Business:**
  - The Present Value of In-force Business or "PVIF" is determined as the present value of future statutory profits which are expected to be generated from the existing business in force at the valuation date, after tax and discounted using the euroswap curve. Investment returns for existing business have been calculated on the basis of the euroswap curve, except for existing fixed interest assets backing the Life-Savings business, where book returns adjusted for credit risk based on historical transition matrices and defaults rates have been used. Life-Savings business VIF represents 22.3% of the total EEV. PVIF includes the intrinsic value of financial options and guarantees granted to the insured.
  
  - Financial returns on future investments have been calculated on the basis of the euroswap curve.

## Methodology (contd.)

### ■ Credit risk allowance:

- In 2015, the spread of Spanish fixed-income rates, both of the private and public sectors, with respect to the swap curve, has decreased in relation to previous years' levels, although it still remains at levels which are higher than the long-term historical mean. In our opinion this reflects the uncertainty concerning Spain's economic development, but not a manifest event with any of the Spanish State's outstanding debt instruments.
- Our Life-Savings business is covered in part by Spanish sovereign bonds and, in our opinion, it is not significantly exposed to spread widening, since in its vast majority is a business where:
  - assets and liabilities are matched
  - assets are held over the lifetime of the commitments to cover best estimate liabilities
  - surrender values (prior to maturity) are equal to the market value of assets at the moment of said surrender plus, in some cases, a fee
- In addition, our Spanish Life assurance technical reserves are backed by an investment grade fixed-income portfolio<sup>(1)</sup>, split by credit ratings as follows<sup>(2)</sup> as at 31.12.2015:
  - AAA : 1%
  - AA : 3%
  - A : 14%
  - BBB : 70%
  - Other : 12%
- Although this portfolio is exposed to default risk, calculating whether and how the spread can be broken down into credit risk factors and other factors is difficult using forward looking information (e.g. yields available on various bond markets, bid-ask spreads, turnover information, CDS prices, credit ratings) as well as retrospective information (e.g. actual defaults). Both techniques present significant weaknesses. Based on these considerations, and for consistency with the information released in previous years, we have taken a similar approach for credit risk as in previous years' EEV in relation to existing fixed-income assets backing Life-Savings business:
  - Book returns have been adjusted for the default risk based on the last 10-year average historical default rates published by the rating agency Standard and Poor's (hereafter S&P), stressed by a factor of 2.50x for year 2016 and 1.50x for 2017 to allow for a possible increase in default rates stemming from the global financial crisis. This represents an average annual probability of default equivalent to 20bp (24bp in the EEV 2014).
  - An implicit allowance for unexpected credit risk has been made in the CoC.
- In order to show the impact on the EEV results of a higher allowance for credit risk, we have provided a sensitivity analysis of a 25bp increase in the probability of default of the fixed income portfolio backing the Life-Savings business.

1) Of which 54% are sovereign bonds. At the valuation date, the Spanish government debt was rated in the BBB range

2) According to S&P's ratings criteria

## Methodology (contd.)

### ▪ TVFOGs:

- Under EEVP, FOGs (Financial Options and Guarantees) are defined as those features of the covered business conferring potentially valuable underlying guarantees, or options to change, the level or nature of policyholders' benefits and exercisable at the discretion of policyholders, whose potential value is impacted by the performance of financial variables.
- The cost of FOGs is valued through the measurement of two different elements:
  - intrinsic value: the cost of FOGs under existing conditions at the valuation date
  - time value: the change in the cost of FOGs resulting from potential changes in policyholders' benefits that may occur throughout the life of the policy
- The intrinsic value of FOGs is already recognised implicitly in the calculation of the PVIF. It is therefore necessary to include the additional cost arising from the time value of FOGs (TVFOGs).
- TVFOGs was calculated for the main FOGs in the covered Life business. Specifically, the calculation focused on the TVFOGs corresponding to the guaranteed interest rate in with-profits products, as well as on other products with variable interest rates and minimum guaranteed returns.
- The calculation of TVFOGs assumed the realisation of gains/losses on equity and property investments to:
  - minimise the impact of profit sharing on the Company's results; and
  - keep the asset mix close to its breakdown as at 31.12.2015.
- TVFOGs is based on 2,000 stochastic simulations of market-consistent financial assumptions and is equal to the difference between the value of in-force business calculated under a deterministic approach and the average value of the in-force business calculated stochastically.

## Methodology (contd.)

### ■ CoC:

- In line with Spanish market practices, the CoC used in the calculation of the 2015 EEV was measured by applying a 4% p.a. fixed rate to the minimum required solvency margin applying the new Solvency II regulation.
- This represents an allowance for frictional costs, non-hedgeable risks as well as unexpected credit risk which has not been considered in the present value of in-force business.
- According to the note issued in October 2015, the CFO Forum does not require allowance to be made for Solvency II and its consequences in order to comply with the EEV Principles at end 2015. However, this report allows for the impact of the Solvency II economic capital on the cost of capital calculation.
- In order to calculate the associated cost, the Solvency II capital at year-end has been projected across all projection years with appropriate drivers

### ■ Sensitivity:

- In interest rates downward sensitivity, where the shift of 100 basis points drops rates below 0%, they are floored at zero according to the EEV Guidance. Where the base rates are already negative they are not further reduced

### ■ With-profits business:

- MAPFRE's with-profits in-force business comprises products with the following features that are common in the Spanish insurance market:
  - A minimum return guarantee, ranging between 0.5% and 6.0% in the case of MAPFRE.
  - A profit-sharing mechanism defined as: X% of (Financial return - minimum guaranteed return - expense loadings) on the average mathematical reserve, which cannot be negative under any circumstance. X% varies by product, although it is equal to 90% in most cases. Financial returns and their volatility depend on the book returns of the assets backing the product, and is subject to some degree of discretion by management including, for instance, decisions on the realisation of gains/losses and on the asset mix.
- The combination of a minimum return guarantee and a profit-sharing mechanism that cannot yield negative results generates asymmetric flows for shareholders and, as a consequence, a positive time value of FOGs.

## Methodology (contd.)

- *Look through EEVP:*

- In order to assign correctly revenues and expenses to the businesses that generate them and measure the value of each block of business more consistently with its economic reality, the following adjustments were made:
  - The mutual funds business, as well as a part of pension funds and accidental death businesses, are sold through the distribution network of MAPFRE VIDA. The EEV and VNB of the aforementioned mutual funds, pension funds and accidental death businesses have been adjusted in order to include the net present value of the future profits/losses expected to arise in the distribution company from this business.
  - The assets of the Life assurance business are managed by MAPFRE INVERSIÓN Y PENSIONES. The EEV and VNB of the aforementioned Life assurance business have been adjusted in order to include the net present value of the future profits/losses expected to arise in the asset management company from this business.

## Methodology (contd.)

### ▪ Value added by new business:

- In Life assurance, new business is defined as single, extraordinary and regular premiums written in the year, as well as extraordinary contributions to existing policies not already considered in the valuation of the in-force business. In the mutual funds business, new business is defined as new contributions. In the pension funds business, new business is defined as single, extraordinary and regular contributions from new participants, as well as extraordinary contributions from existing participants.
- The value added by new business is the intrinsic value added by new business in the period, net of acquisition expenses, TVFOGs and CoC, valued at year-end using the assumptions applicable at that point in time.

### ▪ Statement of Directors:

- The Board of Directors of MAPFRE, S.A. confirms that the results shown in this document have been prepared in all material respects in accordance with the European Embedded Value Principles issued by the European Insurance CFO Forum in October 2009.

This document presents the results, methodology and underlying assumptions used to calculate the 2015 EEV for all the life business issued by MAPFRE in the Iberia region.

Willis Towers Watson has been engaged to review the calculation of the embedded value results. The scope and conclusions of this review are stated in the Willis Towers Watson opinion letter.

# Assumptions

## EEV 2014

<b>Discount rate</b>	Euroswap zero-coupon curve as 31/12/2014
	1 year 0.16%
	5 years 0.36%
	10 years 0.82%
	15 years 1.17%
	20 years 1.36%
<b>Financial returns</b>	
- Existing assets	Euroswap curve rates except for existing fixed interest assets backing Life-Savings business, where book returns adjusted for credit risk based on historical transition matrices and defaults rates have been used
- Reinvestment yield	Based on the euroswap zero-coupon as at 31/12/2014
<b>Maintenance expenses</b>	<ul style="list-style-type: none"> <li>- Based on internal analyses</li> <li>- Expressed in Euros per policy</li> <li>- Indexed to a 2.5% inflation</li> <li>- There are no exceptional expenses to be excluded</li> </ul>
<b>Fees and commissions</b>	In line with the existing fee structure
<b>Mortality, disability, surrenders and turnovers</b>	Tables based on the company's own experience
<b>Cost of capital</b>	
- Capital requirement	100% of the minimum solvency margin
- Annual cost	4% p.a.
<b>Tax rate</b>	28% in 2015 and 25% in future years
<b>Stochastic asset model (TVFOGs)</b>	Market-consistent using swaption implied volatilities as at 31/12/2014

## EEV 2015

	Euroswap zero-coupon curve as 31/12/2015
	1 year -0.06%
	5 years 0.33%
	10 years 1.02%
	15 years 1.45%
	20 years 1.63%
	Euroswap curve rates except for existing fixed interest assets backing Life-Savings business, where book returns adjusted for credit risk based on historical transition matrices and defaults rates have been used
	Based on the euroswap zero-coupon as at 31/12/2015
	<ul style="list-style-type: none"> <li>- Based on internal analyses</li> <li>- Expressed in Euros per policy</li> <li>- Indexed to a 2.5% inflation</li> <li>- There are no exceptional expenses to be excluded</li> </ul>
	In line with the existing fee structure
	Tables based on the company's own experience
	100% of the Solvency II economic capital
	4% p.a.
	25%
	Market-consistent using swaption implied volatilities as at 31/12/2015

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## Breakdown of the value added by new business

### Breakdown by business line

	PVNBI <sup>(1)</sup>		VNB <sup>(2)</sup>		VNB/PVNBI	
	2014	2015	2014	2015	2014	2015
<b>Life Assurance:</b>	<b>2,477.5</b>	<b>1,642.6</b>	<b>153.9</b>	<b>124.0</b>	<b>6.2%</b>	<b>7.6%</b>
- Agents' channel	1,160.0	1,142.2	42.8	33.9	3.7%	3.0%
- Bank channel	1,317.5	500.5	111.0	90.2	8.4%	18.0%
<b>Mutual Funds</b>	<b>1,101.0</b>	<b>1,437.6</b>	<b>18.2</b>	<b>13.1</b>	<b>1.7%</b>	<b>0.9%</b>
<b>Pension Funds</b>	<b>944.9</b>	<b>689.3</b>	<b>10.2</b>	<b>5.1</b>	<b>1.1%</b>	<b>0.7%</b>
- Agents' channel	551.6	454.0	4.9	2.3	0.9%	0.5%
- Bank channel	393.3	235.4	5.3	2.8	1.4%	1.2%
<b>TOTAL</b>	<b>4,523.4</b>	<b>3,769.5</b>	<b>182.3</b>	<b>142.2</b>	<b>4.0%</b>	<b>3.8%</b>

### Breakdown by distribution channel

	PVNBI <sup>(1)</sup>		VNB <sup>(2)</sup>		VNB/PVNBI	
	2014	2015	2014	2015	2014	2015
<b>Agents' channel</b>	<b>2,812.6</b>	<b>3,033.7</b>	<b>65.9</b>	<b>49.3</b>	<b>2.3%</b>	<b>1.6%</b>
<b>Bank channels</b>	<b>1,710.8</b>	<b>735.8</b>	<b>116.3</b>	<b>93.0</b>	<b>6.8%</b>	<b>12.6%</b>
<b>TOTAL</b>	<b>4,523.4</b>	<b>3,769.5</b>	<b>182.3</b>	<b>142.2</b>	<b>4.0%</b>	<b>3.8%</b>

Million Euros

1) Present Value of New Business Income  
2) Value added by new business

## Breakdown of 2015 change in EEV between ANAV and value of in-force business<sup>(1)</sup>

	ANAV	Inforce value <sup>(1)</sup>	TOTAL
Value in 2014 - Attributable to MAPFRE	871.4	1,308.2	2,179.6
Minority interests	536.6	503.0	1,039.6
<b>EEV 2014</b>	<b>1,408.0</b>	<b>1,811.2</b>	<b>3,219.2</b>
Changes in assumptions	0.0	104.6	104.6
Expected return	208.6	-173.2	35.4
Value added by new business	-57.8	200.0	142.2
Deviation of actual value from expectations	-13.1	-13.4	-26.5
Change in the TVFOGs <sup>(2)</sup>	0.0	-2.0	-2.0
<b>Value added in 2015</b>	<b>137.7</b>	<b>116.0</b>	<b>253.7</b>
Changes in the model	0.0	19.4	19.4
Additions	261.5	-124.0	137.5
Dividends paid and other items	-195.2	0.0	-195.2
<b>Value in 2015</b>	<b>1,612.0</b>	<b>1,822.7</b>	<b>3,434.7</b>
Minority interests	376.9	447.2	824.1
<b>Value in 2015 - Attributable to MAPFRE</b>	<b>1,235.1</b>	<b>1,375.5</b>	<b>2,610.6</b>
<b>RoEV<sup>(3)</sup></b>	<b>9.8%</b>	<b>6.3%</b>	<b>7.8%</b>

Million Euros

- 1) VIF = PVIF - TVFOGs - CoC  
 2) Not considering TVFOGs from new business, which are considered in the line "Value added by new business"  
 3) Return on Embedded Value<sup>»</sup> = Value added in the year/ Previous Embedded Value, adjusted for changes in the model

## Breakdown of the sensitivity analysis

### Sensitivity of the value of in-force business

	Agents' channel	Bank channel
<b>Impact of:</b>		
- 100bp increase in interest rates	-61.3	-46.5
- 10% decrease in the value of stocks and real estate	-13.2	-2.8
- 10% decrease in expenses	28.1	26.0
- 10% decrease in the lapse rate	92.0	76.1
- 5% decrease in mortality and morbidity	-8.9	15.8
- 25bp increase in the default rates of the fixed income portfolio	-105.4	-65.4
- 100bp decrease in interest rates	36.4	27.5

### Sensitivity of the value added by new business

	Agents' channel	Bank channel
<b>Impact of:</b>		
- 100bp increase in interest rates	-0.7	-4.7
- 10% decrease in the value of stocks and real estate	-1.1	-0.2
- 10% decrease in expenses	3.3	2.0
- 10% decrease in the lapse rate	16.6	11.4
- 5% decrease in mortality and morbidity	1.2	2.2
- 100bp decrease in interest rates	-1.5	2.8

## Reconciliation of the adjusted net asset value

<b>Consolidated shareholders' equity as at 31/12/2015 (IFRS)</b>	<b>1,702.6</b>
Unrealised gains	-71.9
- of which: property	42.2
- of which: financial assets	-123.5
Donations and dividends	0.0
Intangible assets	-396.9
Commissions and other acquisition costs net of taxes	0.0
Other	1.2
<b>Consolidated adjusted shareholders' equity as at 31/12/2015<sup>(1)</sup></b>	<b>1,235.1</b>
Minority interests	376.9
<b>Consolidated adjusted net asset value as at 31/12/2015<sup>(1)</sup></b>	<b>1,612.0</b>

Million Euros

1) Amount used in embedded value calculations

## Share of the parent company in the EEV

	Parent company IBERIA (LIFE business)	Minority interests
<b>ANAV</b>		
ANAV	1,235.1	376.9
<b>NET PVIF <sup>(1)</sup></b>		
AGENTS' CHANNEL	973.6	0.0
BANK CHANNELS	460.2	455.0
<b>TOTAL</b>	<b>1,433.8</b>	<b>455.0</b>
<b>TVFOGS</b>		
AGENTS' CHANNEL	-50.3	0.0
BANK CHANNELS	-8.0	-7.9
<b>TOTAL</b>	<b>-58.3</b>	<b>-7.9</b>
<b>EEV 2015</b>	<b>2,610.6</b>	<b>824.1</b>

Million Euros

1) NET PVIF = PVIF - CoC

## Share of the parent company in the value added by new business

	Parent company IBERIA (LIFE business)	Minority interests
Value added by new business		
AGENTS' CHANNEL	49.3	--
BANK CHANNELS	46.7	46.3
<b>2015 Value added by new business</b>	<b>96.0</b>	<b>46.3</b>

# Breakdown of the EEV 2015 attributable to the parent company - MAPFRE VIDA

## By line of business

	€ mill.	%	Δ %
Adjusted Net Asset Value	1,235.1	47.3%	41.7%
Net PVIF <sup>(1)</sup> - Life Assurance <sup>(2)</sup>	1,149.6	44.0%	1.9%
- PVIF	1,358.0		2.2%
- CoC	(208.4)		3.8%
Net PVIF <sup>(1)</sup> - Mutual Funds	153.5	5.9%	19.5%
- PVIF	155.3		19.2%
- CoC	(1.8)		1.9%
Net PVIF <sup>(1)</sup> - Pension Funds	130.6	5.0%	18.3%
- PVIF	140.3		15.9%
- CoC	(9.7)		-9.3%
TVFOGs	(58.3)	-2.2%	-1.0%
<b>EEV 2015</b>	<b>2,610.6</b>	<b>100.0%</b>	<b>19.8%</b>

## By distribution channel

	€ mill.	%	Δ %
Adjusted Net Asset Value	1,235.1	47.3%	41.7%
Net PVIF - Agents' channel	973.6	37.3%	14.2%
- PVIF	1,137.9		13.7%
- CoC	(164.3)		10.8%
Net PVIF - Bank channels	460.2	17.6%	-2.8%
- PVIF	515.7		-4.0%
- CoC	(55.5)		-12.7%
TVFOGs	(58.3)	-2.2%	-1.0%
<b>EEV 2015</b>	<b>2,610.6</b>	<b>100.0%</b>	<b>22.1%</b>

# Content

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**1** EEV analysis

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**2** Willis Towers Watson opinion letter

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**3** Methodological appendix

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**4** Statistical appendix

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**5** Glossary



- The **European Embedded Value Principles** or “**EEVP**” are the principles that establish the methodology that must be applied in order to calculate the European Embedded Value. The EEVP were agreed upon by the CFOs of the multinational European insurers belonging to the “CFO Forum” in order to increase the comparability and transparency of the embedded value calculations carried out by insurance companies. The document that contains the EEVP can be obtained at the following Internet address: [www.cfoforum.nl](http://www.cfoforum.nl).
- The **Adjusted Net Asset Value** or “**ANAV**” is equal to the shareholders’ equity as defined under IFRS adjusted for: unrealised gains or losses belonging to shareholders; committed donations and dividends; goodwill; deferred expenses; and any other item needed to calculate the economic capital.
- **Financial Options and Guarantees** or “**FOGs**” are those features of the covered business conferring potentially valuable guarantees underlying, or options to change, the level or nature of policyholders’ benefits and exercisable at the discretion of policyholders, whose potential value is impacted by the performance of financial variables.
- The **Value of an Option** is composed of two elements: the **Intrinsic Value** and the **Time Value**. In the case of a call option, the intrinsic value is equal to the difference between the price of the underlying asset and the strike price of the option (in the case of a put option the order of the difference is inverted). The intrinsic value cannot be less than zero. The time value is equal to the difference between the total value and the intrinsic value and it is ascribed to the potential for benefits under the option to increase in value prior to expiry.
- The **Present Value of In-force Business** or “**PVIF**” is determined as the present value of future statutory profits which are expected to be generated from the existing business in force at the valuation date, after tax and discounted using the euroswap curve. Investment returns for existing business have been calculated on the basis of the euroswap curve, except for existing fixed interest assets backing Life-Savings business, where book returns adjusted for credit risk based on historical transition matrices and defaults rates have been used. PVIF includes the intrinsic value of financial options and guarantees granted to the insured.

- The **Cost of Capital** or “**CoC**” represents an allowance for frictional costs, non-hedgeable risks as well as unexpected credit risk which has not been considered in the value of in-force business. The CoC used in the calculation of the EEV was measured on the basis of an amount of capital equal to 100% of the minimum regulatory requirement.
- The **Value of In-force Business** or “**VIF**” is equal to:  $PVIF - \text{Time Value of FOGs (“TVFOGs”)} - \text{CoC}$ .
- The **European Embedded Value** or “**EEV**” is the embedded value calculated in accordance with “European Embedded Value Principles”. EEV is equal to:  $ANAV + VIF$ .
- **Changes in Assumptions** are changes in the future experience assumed in the calculation of the present value of in-force business, including economic, expense, lapse and mortality assumptions.
- The **Expected Return on the Beginning of the Year Embedded Value** is equal to the actual after-tax investment return on the beginning-of-the-year adjusted net asset value less the cost of capital, plus the return, at the discount rate, on the beginning-of-the-year value of the in-force business and capital.
- The **Deviation of Actual Value from Expectations** arises mainly from the variance between the actual experience and the assumed experience used to calculate the beginning-of-the-year embedded value.
- The **Return on Embedded Value** or “**RoEV**” is obtained by dividing the value added in the year by the embedded value at the close of the previous year, adjusted for changes in the model.

- **New Business** is defined as: in the case of Life assurance, single, extraordinary and regular premiums from policies written in the year, as well as extraordinary contributions to existing policies not already considered in the valuation of the in-force business; in the case of mutual funds, new contributions; in the case of pension funds, single, extraordinary and regular contributions from new participants, as well as extraordinary contributions from existing participants.
- The **Present Value of New Business Income** or “**PVNBI**” corresponds to: in the case of Life assurance, the present value of received and expected premiums from new business; in the case of mutual funds, contributions received in the year; and in the case of pension funds, contributions received in the year and expected from new business.
- The **Value added by New Business** or “**VNB**” is the intrinsic value added by new business in the period, net of acquisition expenses, TVFOGs and CoC, valued at year-end using the assumptions applicable at that point in time.

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