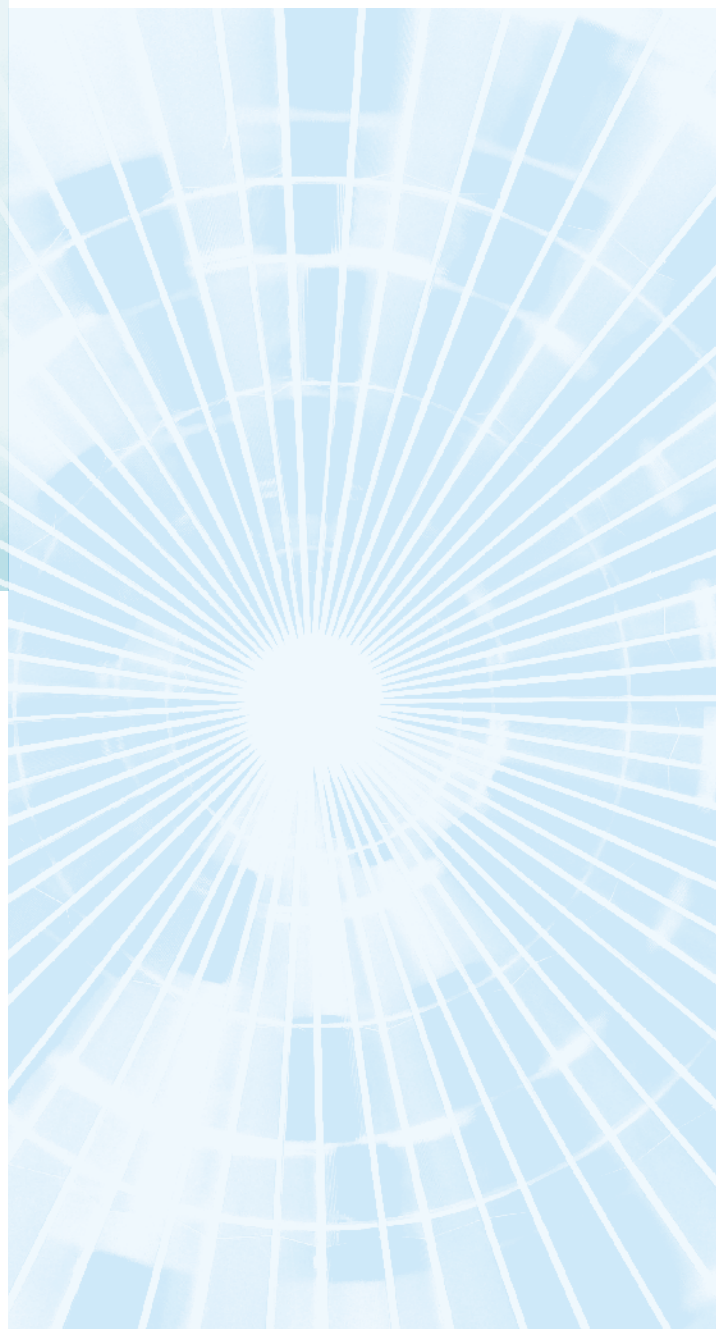


# OWN FUNDS REPORT 2020

OWN FUNDS REPORT AND  
LIFE SUPPLEMENT 2020

**ALLIANZ GROUP**



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The Allianz Group (Allianz SE and its subsidiaries) has prepared this Own Funds Report and Life Supplement to provide further insights into the Own Funds, the Solvency Capital Requirements (SCR) of the Allianz Group and into our Life/Health business for the financial year 2020.

The Allianz Group offers a wide range of Property/Casualty (“P/C”) and Life/Health (“L/H”) insurance products, as well as Asset Management (“AM”) products and services in over 70 countries, with the largest of our operations located in Europe.

The information in this report is provided in a sufficient level of detail, so as to allow the reader to obtain a comprehensive view of the Own Funds of the Allianz Group with details of the Market Consistent Embedded Value (“MCEV”) and New Business (“NB”) of our Life/Health segment.

The Solvency II Directive is applicable to life insurance and non-life insurance undertakings as well as reinsurance undertakings which are established in the European Economic Area (“EEA”) or which wish to become established here.

Allianz Group has to compile a consolidated Group Market Value Balance Sheet (“MVBS”) and Group Own Funds in order to fulfill the regulatory reporting requirements of the Group. In order to achieve full coverage for the Group, it is required to collect MVBS and Own Funds information from entities which are not subject to regulations under Solvency II (“SII”). Undertakings which are not regulated EEA (re)insurers are considered either with a full MVBS or other methods. Other methods comprise for example the inclusion with equivalent Own Funds of entities included via the deduction and aggregation (“D&A”) method, the inclusion with sectoral Own Funds of credit institutions, investment firms and financial institutions, alternative investment fund managers and UCITS (Undertakings for Collective Investment in Transferable Securities) management companies as well as institutions for occupational retirement provision, or the application of the book value deduction for immaterial non-EEA (re)insurers.

## **A: GROUP CHAPTERS – OWN FUNDS & SCR**

This chapter provides an overview of the Own Funds and SCR of the Allianz Group, as well as their respective movements during 2020.

## **B: LIFE SUPPLEMENT – LIFE/HEALTH MCEV & NB**

MCEV represents the shareholders’ economic value of the inforce life and pension business of an insurance company based on a SII MVBS. Future new business is not included. The MCEV of Allianz Life/Health entities as of 31<sup>st</sup> December 2020 is presented in this section.

Please note that AZ Life US is considered with its equivalent Own Funds in section B.2 when aggregating the results to the total Life/Health segment, for consistency to the Own Funds. Section B.6.8 then includes the MCEV of AZ Life US and the corresponding movements during 2020.

That section also contains details on the new business written during the year 2020 by our Life/Health insurance operating entities.

A description of the methodology and assumptions used to calculate MCEV and NB is included in section B.7.

## **C: APPENDIX – DEFINITIONS AND ABBREVIATIONS**

An accompanying glossary of definitions and abbreviations is given in the appendix.

## **NOTE TO READERS**

All amounts in this report are presented in billions of Euros (EUR bn) or millions of Euros (EUR mn) and it is explicitly stated accordingly. Due to rounding, numbers presented may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures shown.

The input data used to prepare this report is partially identical to the data used for other purposes, e.g. for the MVBS and Technical Provisions (“TP”). The appropriateness of this data is verified regularly both internally and by external auditors. In addition, PwC performed an audit of our MVBS as of 31<sup>st</sup> December 2020. Technical Provisions were audited as part of the general MVBS audit process. No deficiency or material weakness were identified.

# GROUP CHAPTERS

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# A.1 OVERVIEW

Allianz maintained a strong capital position with an SII ratio at 207% (240% with transitional measures on technical provisions).

## Allianz with resilient performance in 2020

Allianz Group had a resilient performance in 2020 and maintained a strong capital position.

Our healthy and well-diversified business makes us confident that we will continue to deliver a strong financial performance in 2021.

## Transitional measures for technical provisions

Starting 2Q 2020, Own Funds include the impact from the application of transitional measures for technical provisions of Allianz Lebensversicherungs-Aktiengesellschaft and Allianz Private Krankenversicherungs-Aktiengesellschaft.

As at 31<sup>st</sup> December 2020, the application of these transitional measures decreases the value of technical provisions by EUR 19.6 bn, with an offsetting EUR 6.1 bn impact in deferred taxes. The eligible Own Funds at Group level including transitional measures are at EUR 98.5 bn, up EUR 13.6 bn compared to the situation excluding transi-

tional measures. Please note that in 2020 75% of the original transitional adjustment are recognized. The adjustment will decrease every year until it is zero in the year 2032.

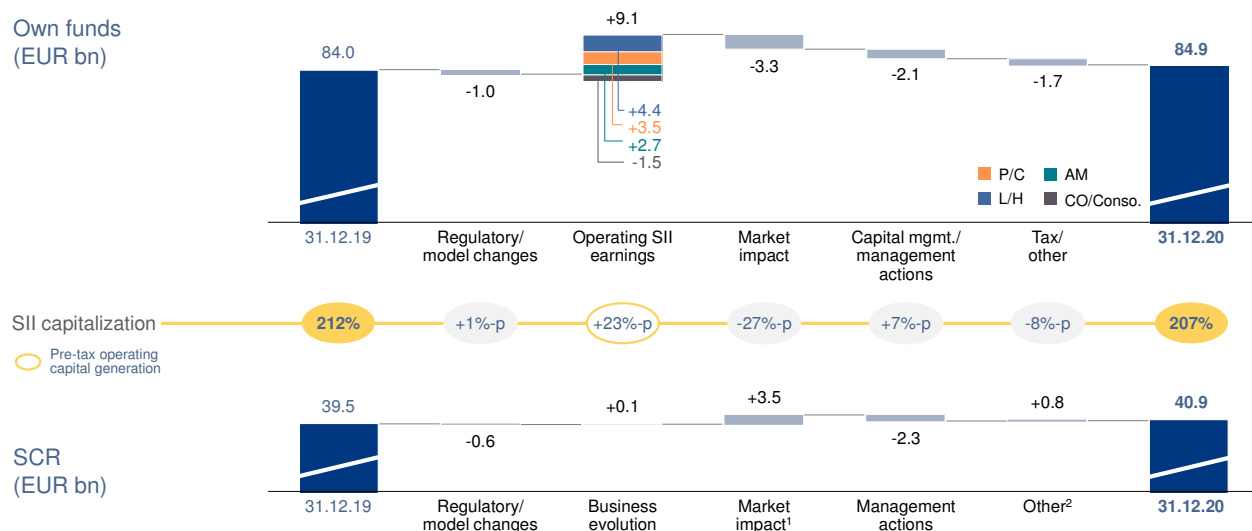
The SII capitalization ratio including transitional measures is at 240%, up 33%-p compared to the SII capitalization ratio of 207% excluding transitional measures. Our general capital steering will continue to focus on the SII capitalization ratio excluding the application of transitional measures for technical provisions.

Please note that figures, graphs and statements further in this report focus on the Own Funds excluding transitional measures for technical provisions, consistent to our capital markets communication.

## SII ratio at a strong level

In 12M 2020, our SII ratio decreased by 5%-p versus year end 2019 driven by +23%-p organic capital generation before tax and dividend, more than offset by adverse markets (- 27%-p before tax).

Figure 1: Movement of Own Funds and SII capitalization (excluding transitional measures for technical provisions)



1) Including cross effects and policyholder participation  
 2) Other effects on SCR include diversification effects

## Own Funds – operating SII earnings drove Own Funds

In the 12 months ending 31<sup>st</sup> December 2020, the Group Own Funds increased by EUR 1.0 bn from EUR 84.0 bn to EUR 84.9 bn.

Key drivers were the operating SII earnings (EUR +9.1 bn), offset by negative market impacts (EUR -3.3 bn), regulatory / model changes (EUR -1.0 bn) and capital management & management actions with a combined effect of EUR -2.1 bn, taxes (EUR -1.1 bn) and other effects (EUR -0.6 bn).

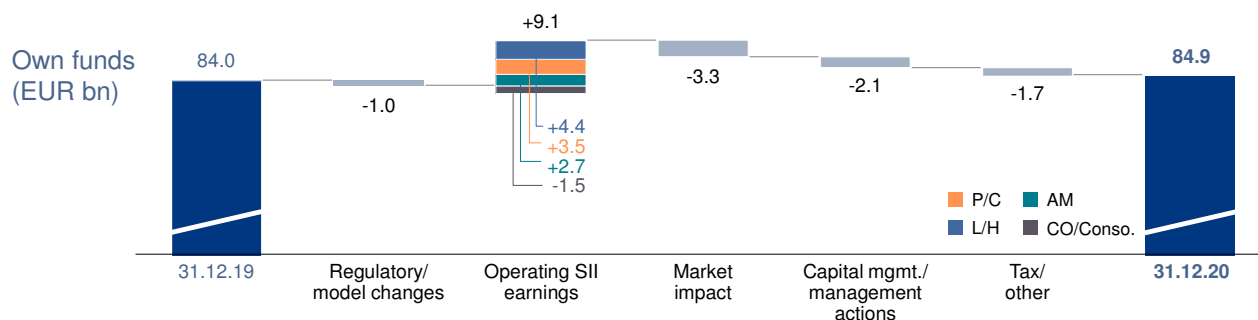
## SCR – increased from market impacts

The SCR movement is mainly driven by adverse market movements triggered by the COVID-19 pandemic over the year including a significant drop in EUR and USD swap rates. Management actions such as risk mitigating measures had a reducing effect on the Capital requirement of the Group and dampened the negative market impact.

## A.2 OWN FUNDS AND RELATED MOVEMENTS

In the 12 months ending 31<sup>st</sup> December 2020, the Group Own Funds increased by EUR 1.0 bn from EUR 84.0 bn to EUR 84.9 bn

**Figure 2: Movement of Own Funds** (excluding transitional measures for technical provisions)



### A.2.1 Own Funds overview

The Own Funds of Allianz Group as of 31<sup>st</sup> December 2020 amount to EUR 84.9 bn. EUR 74.1 bn Own Funds relate to the group of internal model and standard model entities. The remaining EUR 10.8 bn relate to the sectoral Own Funds of credit institutions, investment firms and financial institutions, alternative investment fund managers and UCITS management companies and institutions for occupational retirement provision, as well as the equivalent Own Funds of entities included via the deduction and aggregation ("D&A") method.

**Table 1: Own Funds by tier as of 31.12.2020** (excluding transitionals)

	Own Funds	% of total
<b>Core Tier 1</b> (Tier 1 unrestricted)	67.0	78.9%
Tier 1 Hybrid (Tier 1 restricted)	5.5	6.5%
Tier 2	11.2	13.2%
Tier 3	1.1	1.4%
<b>Total Group Own Funds</b> (incl. Sectoral and Equivalent Own Funds)	84.9	100.0%

Tier 1 restricted and Tier 2 correspond to subordinated liabilities from the insurance group. Tier 3 relates mainly to the available part of the net deferred tax assets (EUR 0.7 bn) and Tier 3 sectoral Own Funds of Allianz Retraite S.A. (EUR 0.4 bn). As of 31<sup>st</sup> December 2020, the application of tier limits did not lead to a change in the structure or total amount of our Own Funds.

The Tier distribution including the EUR +13.6 bn impact from transitional measures includes EUR 13.6 bn more Tier 1 unrestricted, while the other Tiers remain unchanged. The Core Tier 1 ratio including transitionals increases to 81.8%, Tier 1 Hybrid decreases to 5.6%, Tier 2 decreases to 11.4% and Tier 3 decreases to 1.2%.

### A.2.2 Own Funds movements

#### Regulatory / model changes

The **regulatory / model changes** in 2020 resulted in an EUR -1.0 bn decrease of Own Funds after-tax, mainly driven by the adjustment of the UFR by -15 basis points and the model changes at Allianz Lebensversicherungs-Aktiengesellschaft such as the introduction of a simplified look-through on asset participations and the implementation of model changes in cashflow modeling.

#### Operating SII earnings

**Operating SII earnings** for the year 2020 amount to EUR 9.1 bn before tax and dividend accrual.

Operating SII earnings of the L/H segment (EUR 4.4 bn) are close to IFRS operating profit, and include EUR 1.8 bn from new business generation. The expected inforce contribution (EUR 2.4 bn) is partially offset by experience variances and assumption changes (EUR -0.8 bn). Changes of equivalent Own Funds of Allianz Life US attributable to operating earnings amount to EUR 0.9 bn.

Operating SII Earnings of the P/C segment (EUR 3.5 bn) are below the IFRS result due to differences, in the scope of entities and definitions (e.g. risk margin changes), while operating SII earnings of the AM segment (EUR 2.7 bn) are close to the corresponding IFRS results.

Operating SII earnings of the Corporate segment (EUR -1.5 bn) include external debt interest expenses amounting to EUR -0.7 bn. Non-operating IFRS restructuring charges are excluded from Operating SII earnings.

Pre-tax and pre-dividend operating capital generation in 2020 is at 23%-p as shown in Figure 1 in section A.1. Operating capital generation, net of tax and dividend, amounts to 7%-p for 2020.

Allianz management anticipates a capital generation net of tax and dividend of ~7%-p to 8%-p in 2021.

## Market impact

The **market impact** on Own Funds amounts to EUR -3.3 bn including foreign exchange movements (EUR -1.8 bn) as well as EUR +2.3 bn from lower transferability deductions (mainly Allianz Lebensversicherungs-Aktiengesellschaft) resulting from market-driven higher SCR. Lower interest rates are the crucial driver for adverse market impacts in 2020.

## Capital Management

**Capital management** consumed EUR 1.4 bn of Own Funds during 2020, mainly driven by the EUR 4.0 bn dividend accrual and the execution of the fourth share buy-back (EUR -0.76 bn), offset by EUR +3.3 bn from the issuance of subordinated debt during 2020, of which EUR 1.0 bn are classified as Tier 2 and EUR 2.3 bn are classified as restricted Tier 1.

In the first six months of 2020 a total of 4,879,731 shares with total acquisition cost of EUR 760 mn were repurchased, and canceled in the fourth quarter.

**Table 2: Movement of Own Funds**

EUR bn

	L/H	P/C	AM	CO/Conso.	Group
<b>Own Funds 31.12.2019</b>	<b>51.0</b>	<b>32.3</b>	<b>1.6</b>	<b>-1.0</b>	<b>84.0</b>
Regulatory / model Changes (after-tax impact)					<b>-1.0</b>
Operating SII earnings	<b>4.4</b>	<b>3.5</b>	<b>2.7</b>	<b>-1.5</b>	<b>9.1</b>
Market Impact including FX	<b>-0.9</b>	<b>-2.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-3.3</b>
Capital Management					<b>-1.4</b>
Management Actions					<b>-0.7</b>
Tax	0.0	-1.0	-0.3	0.2	<b>-1.1</b>
Other Changes					<b>-0.6</b>
<b>Own Funds 31.12.2020 (excluding transitional measures)</b>	<b>49.6</b>	<b>30.8</b>	<b>1.7</b>	<b>+2.8</b>	<b>84.9</b>

Please note that segment totals do not add up because some movement items are only disclosed for the group in total.

## Management actions

**Management actions** decreased Own Funds by EUR -0.7 bn during 2020, with the main impacts coming from the acquisitions of Control Expert, BBVA P/C insurance joint venture and AZ Brasil Seguradora S.A., as well as from the AZ Retraite carve-out and the Banco Popular deconsolidation.

## Tax

**Taxes** reduced Own Funds by EUR -1.1 bn during 2020. Taxes relating to Operating SII earnings amount to EUR -2.3 bn.

## Other changes

The **other changes** amount to EUR -0.6 bn during 2020, comprising movements of Surplus Funds and Going Concern Reserves, changes in transferability restrictions as well as restructuring charges.

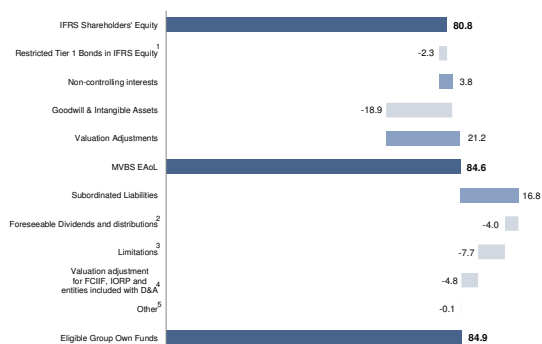


## A.2.3 SII Own Funds reconciled to IFRS shareholders' equity

Key differences in the reconciliation from IFRS shareholders' equity to Solvency II Group MVBS excess assets over liabilities (EAoL) are:

- Non-controlling interests are partly eligible as Group Own Funds, offset by related transferability restrictions shown in the reconciliation from EAoL to Group Own Funds.
- Goodwill and intangible assets are valued at zero in Solvency II.
- Valuation adjustments, mainly coming from market valuation of bonds, loans & mortgages, real estate and technical provisions, while DAC is set to zero.
- Valuation adjustments also reflect scope differences for selected non-material non-EEA insurers which are included in IFRS but excluded in Solvency II (book-value- deduction).
- The restricted Tier 1 bonds issued in 4Q 2020 are disclosed in IFRS shareholders' equity, but remain liability in the MVBS presentation.

**Figure 3: Reconciliation from MVBS EAoL to SII Group Own Funds**



- 1) Restricted Tier 1 bonds issued in November 2020 are disclosed as IFRS Shareholders' Equity, whereas under Solvency II they are disclosed under subordinated liabilities. Dividend accrual for annual 2020 (4.0 bn).
- 2) Dividend accrual for annual 2020 (4.0 bn).
- 3) Comprise transferability and fungibility deductions relating to non-controlling interests (-1.7 bn), surplus funds (-4.6 bn) and net DTA (-0.3 bn) and limitation due to the regulatory required transferability restriction for equivalent Own Funds of AZ Life US (-1.0 bn).
- 4) Resulting from the revaluation to sectoral / equivalent Own Funds.
- 5) Comprise Own Shares and adjustment related to Ring-fenced Funds.

Key reconciliation items from MVBS EAoL to Solvency II Group Own Funds are:

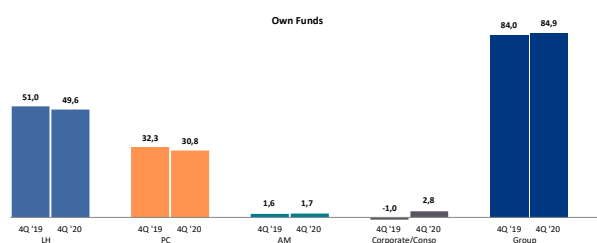
- Subordinated liabilities qualifying as Own Funds.
- Foreseeable dividends and distributions (e.g. share buyback) are deducted from Own Funds.
- Transferability restrictions apply for non-controlling interests, surplus funds, net DTA and the regulatory required transferability restriction for equivalent Own Funds of AZ Life US.
- Banks, Asset Managers and IORPs (institutions for occupational retirement provision) are included with their respective sectoral own funds, which creates a valuation adjustment relative to the IFRS-based participation book-value reflected in the MVBS EAoL.
- Selected non-EEA insurers (particularly AZ Life US) are included with their respective national (equivalent) regime Own Funds – so

called D&A method, which creates a valuation adjustment relative to the IFRS-based participation book-value reflected in the MVBS EAoL

## A.2.4 Own Funds contribution by segment

Figure 4 discloses the beginning and ending balances of Own Funds contributions by segment (see also table 2). Thereby Own Funds contributions of a segment are compiled using the Own Funds of the entities assigned to the respective segment, adjusted for intra-group participations, intra-group subordinated debt and transferability restrictions.

**Figure 4: Own Funds contribution by segment<sup>1</sup>**



- 1) Please note that the Own Funds contributions of the segments have no regulatory meaning.

Key contributors with an individual Own Funds contribution of ~3% or more to Group Own Funds are disclosed in table 3.

**Table 3: Key contributors to Group Own Funds (excluding transitional measures)**

Entities contributing more than 3% to Group Own Funds	OF contribution (bn EUR)	OF contribution (% of Group OF)
Allianz Lebensversicherungs-AG	23.5	28%
Allianz Life US	6.5	8%
Allianz Vie S.A.	5.3	6%
Allianz Versicherungs-AG	4.8	6%
AGCS incl. ART & AGR US	3.4	4%
Allianz IARD S.A.	3.1	4%
Allianz Private Krankenversicherungs-AG	3.4	4%
Euler Hermes	2.6	3%
Allianz S.p.A.	2.4	3%

# A.3 SCR MOVEMENTS

For the year 2020, the SCR showed an increase of EUR +1.4 bn.

Figure 5: Movement of SCR



## A.3.1 SCR movement

The SCR movement is mainly driven by adverse market movements triggered by the COVID-19 pandemic over the year including a significant drop in EUR and USD swap rates which also decreased policyholder participation. Management actions such as risk mitigating measures had a reducing effect on the Capital requirement of the Group and dampened the negative market impact. The key drivers of the movement are explained in detail below.

### Regulatory / model changes

**Regulatory Changes / Model Changes** (EUR -0.6bn) were mostly driven by major and minor model changes implemented in the fourth quarter. Major model changes included for example the implementation of the final aspects of the cross-effect model change, the refinement of the calibration of equity volatility as well as changes in surplus fund and cash flow modelling. The net decrease in SCR due to model changes was offset to a degree by the reduction of the ultimate forward rate in the first quarter of the year.

### Business evolution

**Business evolution** (EUR +0.1bn) increased slightly driven by net earned premiums in the Property/Casualty business segment.

### Market impact

**Market impact** (EUR +3.5bn) was driven by negative market developments mainly as a result of the COVID-19 crisis over the year. This especially included a strong decrease in swap rates leading also to lower policyholder participation. A slight recovery of the markets could be observed in the second half of the year which compensated the increase in SCR slightly.

### Management actions

**Management actions** (EUR -2.3bn) were driven by various de-risking actions to combat the negative market environment as a result of COVID-19. This included, but was not limited to the disposal of equity, duration management which improved the interest rate risk profile and the purchase of credit default swap protection.

### Other

**Other** effects (EUR +0.8bn) increased mainly driven by model updates in the fourth quarter of the year, as well as loss of diversification.

## A.3.2 SII capitalization

### SII ratio – on very good level

In 12M 2020, the SII ratio declined versus FY 2019 by -5%-p to 207% since the slight increase in Own Funds was overcompensated by the increase in SCR. The Solvency II ratio decrease was mainly driven by the COVID-19 triggered negative market developments (-27%-p) especially due to the decline in interest rates. Taxes and other changes (-8%-p) also contributed negatively. This was partially compensated by operating SII capital generation and business evolution (+23%-p), model changes (+1%-p) and (capital) management actions (+7%-p). The latter was mostly driven by the issuance of subordinated debt in May and November 2020 as well as de-risking measures (e.g. duration management, reduction of equity exposure). Impacts are partially offset by the executed share buy-back in 1Q 2020, dividend accrual and M&A transactions (e.g. acquisition of SulAmerica, Control Expert, JV with BBVA).

Figure 6: SII capitalization

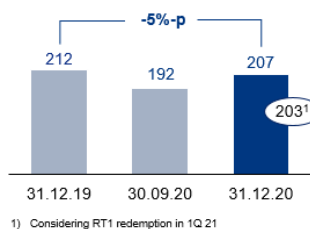
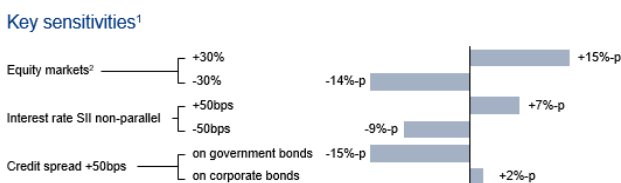


Figure 7: Key Sensitivities (EUR bn)



1) Management actions not considered in the disclosed sensitivities  
2) If stress applied to traded equities only, sensitivities would be +8%p/-6%p for a +/- 30% stress

# LIFE SUPPLEMENT

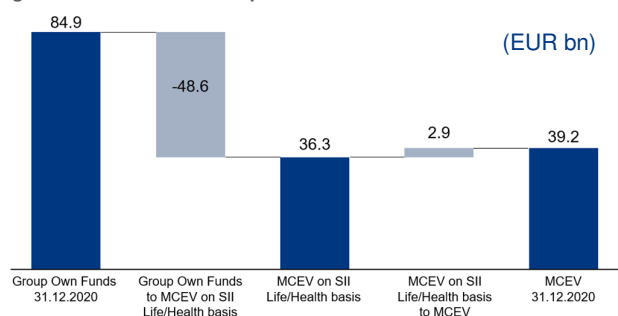
# B

## B.1 INTRODUCTION TO LIFE SUPPLEMENT

### B.1.1 From Group Own Funds to MCEV

Figure 8 shows a reconciliation between Group Own Funds and Life/Health MCEV at the end of the year 2020.

**Figure 8: Reconciliation Group Own Funds and MCEV 31.12.2020**



To build the bridge between Group Own Funds and MCEV, the following blocks are needed:

- **Group Own Funds to MCEV on SII Life/Health basis**
  - Own Funds value related to non-Life/Health businesses within the Allianz Group.
  - Surplus Funds and Going Concern Reserves as part of Own Funds, but not considered shareholders' economic value under MCEV principles.
  - Transferability restrictions applied for surplus funds and non-controlling interests as well as transferability restrictions on AZ Life US equivalent Own Funds.
  - Entities within the Life/Health segment which are out of scope of MCEV.
- **MCEV on SII Life/Health basis to MCEV**
  - Mexico, Middle-East & North-Africa and smaller Asian entities are out of scope while they are in scope for MCEV.
  - AZ Life US replacement of equivalent Own Funds by MCEV.

Allianz Group implemented Solvency II in 2015. This decision had two direct implications on the calculation and disclosure of MCEV:

- MCEV calculation is based on the Solvency II Market Value Balance Sheet. The methodology is fully aligned with the MCEV Principles as revised in May 2016. Further explanation of the methodology can be found in section B.7.1. Details of the MCEV transition can be found in the Allianz MCEV Report 2015.
- MCEV values are integrated in the Allianz Solvency II disclosure and used as a key input to explain the movement of the Own Funds for Life/Health entities as part of the Own Funds / SCR movement in the Analyst Presentation every quarter. A detailed explanation of the year to date movement can be found in section B.2. This value is referred to as the MCEV on SII L/H basis.

### B.1.2 Overview of results

In 2020, the MCEV of the Allianz Group Life/Health business was burdened by an unfavorable economic environment with widening of credit spreads, lower interest rates and a stronger Euro. The MCEV decreased to EUR 39,192 mn at the end of 2020 including dividend payments and capital movements (EUR -2,230 mn).

Interest rates showed significant movements in Europe and the USA to even lower levels. Allianz Group has worked over the years to reduce its exposure to interest rates by effective business steering towards preferred lines of business. This has led to a resilient MCEV, and is also reflected in the sensitivities to economic factors, which only moderately increased.

Impacted by lower interest rates and lower sales, new business developed negatively with a 20% decrease in Value of New Business ("VNB") after tax compared to 2019, partly offset by improved products and business mix. New business developed in line with Allianz Group targets:

- The New Business Margin closed the year at 2.8% in 2020 (3.2% in 2019).
- 86% of sales are in preferred lines of business, well above Allianz Group ambition of 80%.

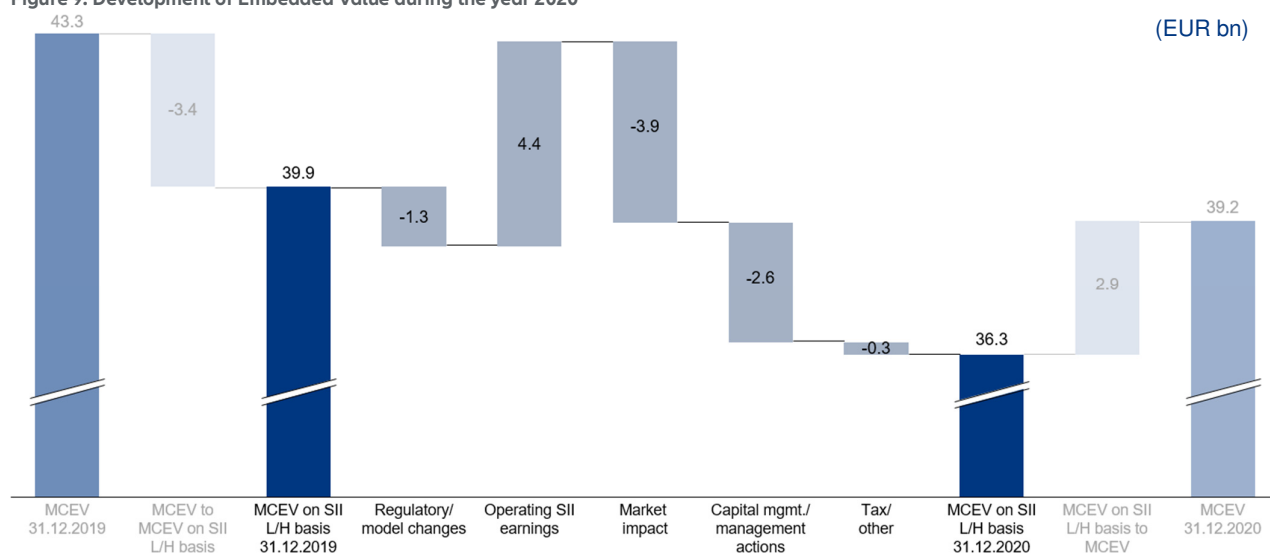
**Table 4: Evolution of Embedded Value and Value of New Business**

EUR mn			
	31.12.2019	31.12.2020	Change in %
MCEV	43,312	39,192	-10%
Value of New Business	2,167	1,743	-20%

The drivers of the changes in MCEV and VNB will be described in detail in the following sections and chapters.

## B.2 DEVELOPMENT OF EMBEDDED VALUE

Figure 9: Development of Embedded Value during the year 2020



Allianz has leveraged on the adoption of Solvency II to further streamline the reporting chain striving for simplification, performance and technical excellence. To avoid any redundancies, by embracing the Own Funds as a key metric, Allianz has now introduced **MCEV on SII L/H basis**. This is a valuable instrument to explain the Own Funds movements for the L/H segment.

The movement of the MCEV on SII L/H basis reconciles to the Own Funds movements for the L/H segment. Deviations between both movements are explained by movements on items out of scope of MCEV, e.g. movements on Surplus Funds, Going Concern reserves, non-controlling interests and transferability restrictions.

Table 5: Analysis of Earnings of Embedded Value – L/H segment

EUR mn	
	MCEV
<b>MCEV 31.12.2019</b>	<b>43,312</b>
MCEV to MCEV on SII L/H basis	-3,396
<b>MCEV on SII L/H basis 31.12.2019</b>	<b>39,916</b>
Regulatory / model Changes (after-tax impact)	-1,267
Operating SII earnings	4,354
New business contribution	1,774
Expected inforce contribution	2,367
Assumption changes & Experience variances	-723
Debt costs	
Other	936
Market Impact including FX	-3,862
Capital Management	-2,266
Management Actions	-286
Tax	-171
Other Changes	-95
<b>MCEV on SII L/H basis 31.12.2020</b>	<b>36,323</b>
MCEV on SII L/H basis to MCEV	2,868
<b>MCEV 31.12.2020</b>	<b>39,192</b>

MCEV decreased by 10% to EUR 39,192 mn compared to last year. MCEV on SII L/H basis decreased by 9% to EUR 36,323 mn largely impacted by an unfavorable economic environment (EUR -3,862 mn).

On an SII L/H basis, the key components of the change in 2020 were as follows (all movement steps are before tax except for regulatory / model changes which are after tax):

**Regulatory / model changes** (EUR -1,267 mn after tax) include global changes reflecting regulatory requirements, and local model changes that are pre-aligned and reported to the regulator.

In 2020, it comprises changes such as the update of EIOPA ultimate forward rate and a new data provider. Changes on local level include a major model change concerning the shareholder target scope at Allianz Leben, and the introduction of a new cash flow model at Germany Health.

**Operating SII earnings** (EUR 4,354 mn) represents the sum of the operating drivers described below:

**New business contribution** (EUR 1,774 mn) takes into account all expenses with respect to new business written during the year, including acquisition expense over- and underruns.

In 2020, new business was below previous year from decreased interest rates and lower volumes impacted by Covid 19 restrictions. The business mix was well on track with Group ambition with a good quality of underwritten business and further productivity gains. Main contributors were Germany Life, Asia and the US.

**Expected inforce contribution** (EUR 2,367 mn) comprises:

- **Expected returns on reference rate** (EUR 666 mn) which shows the unwinding of the discount on MCEV with respect to the reference rates used in the market consistent projection.

For the inforce, the value reflects the effect of one year less discounting of future profits. For the new business, the value reflects the progression from point of sale to end of year. This step also includes the release of the margin for the year built into the valuation for uncertainty (options and guarantees) with regard to asymmetric financial risk and non-financial risk.

- **Over-returns in excess of reference rates** (EUR 1,690 mn) shows additional earnings consistent with management expectations. In this step, based on normalized real-world assumptions provided in section B.7.2.6, risk premiums on bonds, equity and real estate are expected to materialize.
- **Cash-flow movements** (EUR 11 mn) correspond to the realization of projected net profits. This step is not material for the MCEV development as assets and liabilities are moving in parallel.

**Assumption changes & experience variances** (EUR -723 mn) comprise:

- **Non-economic assumption changes** (EUR -308 mn) reflect changes in assumptions such as lapses, mortality and expenses. For the 2020 annual assumption changes, the main drivers were the updates in France, in particular from assumption updates on expenses and switches between UL and EUR fund, and updates of cost parameters in Italy.
- **Experience variances** (EUR -385 mn) reflect the deviations of actual experience from expectations during the year with respect to non-economic factors. The largest impact came from Germany Life due to a strengthening of RfB to reflect actual policyholder crediting.
- **Other operating variances** (EUR -29 mn) is mainly driven by an investment strategy change in France.

**Other** (EUR 936 mn) relates to changes of equivalent Own Funds of AZ Life US attributable to Operating SII earnings.

**Market impact including FX** (EUR -3,862 mn) includes both foreign exchange and economic variances with elements such as the impacts of changes in interest rates, actual development of equity markets, actual performance of the assets in the portfolio and currency exchange effects.

In 2020, the contribution from economic movements was largely negative. The main drivers were:

- Risk-free rates were again significantly lower, e.g. 10Y EUR-SWAP rate was 48 bps lower (-0.37% vs. 0.11%) and 10Y USD-SWAP rate was 100 bps lower (0.77% vs. 1.77%).
- Credit spreads widened for the US and the Germany Life portfolios, partly offset by narrowed credit spreads in Italy.
- The Euro has been strong on the global FX markets over the last year, in particular appreciating against the US Dollar (EUR/USD 1.22 vs. 1.12) as well as against Asian and Eastern European currencies.

**Capital management** (EUR -2,266 mn) reflect the net dividends and capital movements from resp. to our life companies.

In 2020, the movement originated mostly from dividend payments. The amount of dividends was higher compared to last year (EUR 1.0 bn were paid in 2019). The major drivers were:

- revived capital movements in Germany Life from renewed profit/loss transfer agreement;
- upstreaming from the US, France, Italy and Germany Health.

**Management actions** (EUR -286 mn) are mainly driven by sales of Allianz Popular Vida and back-book transactions in Spain, and the transfer of the retirement business from AZ Vie to a pension vehicle in France, partly offset by changes in the investment strategy for the German Life business.

**Tax** (EUR -171 mn) corresponds to the tax reported by Life/Health entities and reflects the bottom-up tax calculation on the MVBS. The effect was in line with the overall loss in the Life/Health portfolio, that was overcompensated by the tax impact from model changes.

**Other changes** (EUR -95 mn) are impacted by the reclassification of restructuring charges.

The two reconciliation steps between **MCEV** and **MCEV on SII L/H basis** (EUR -3,396 mn and EUR 2,868 mn) are designed to help the reader understand the bridge between MCEV on SII L/H basis and MCEV shareholders' value. These movements are symmetric.

The difference in magnitude between the two values was driven by AZ Life US, where market movements had a different impact on MCEV and equivalent Own Funds, as well as the movements of Asian entities that are in scope of MCEV only.

## B.3 DEVELOPMENT OF VALUE OF NEW BUSINESS

Table 6 shows the reconciliation between the new business contribution shown in previous chapters and the value of new business generated by our Life/Health entities. The main differences are tax and scope (AZ Life US, and entities out of the Solvency II scope).

**Table 6: Reconciliation New Business – L/H segment**

EUR mn

	2020
<b>New business contribution to Own Funds movement (before tax)</b>	<b>1,774</b>
Change in scope	599
Total New business contribution (before tax)	2,373
Tax	-630
<b>Value of New Business (after tax)</b>	<b>1,743</b>

Table 7 presents the VNB at point of sale after tax, calculated as the sum of quarterly disclosed values. These quarterly values are calculated using assumptions as of the start of the quarter in which the business was sold. The VNB methodology is described further in section B.7.

The VNB in 2020 was EUR 1,743 mn, 20% lower than in 2019. The New Business Margin ("NBM") decreased from 3.2% to 2.8%.

**Table 7: Value of New Business – L/H segment**

EUR mn

	2020	2019	Change in %
Present Value of New Business Premiums	61,497	67,046	-8%
New Business Margin <sup>1</sup> (in %)	2.8%	3.2%	-0.4%-p
<b>Value of New Business</b>	<b>1,743</b>	<b>2,167</b>	<b>-20%</b>
(not included: look-through profits)	170	143	19%
APE Margin <sup>2</sup> (in %)	20.2%	22.7%	-2.4%-p
Single premium <sup>3</sup>	37,281	40,737	-8%
Recurrent Premium	4,888	5,489	-11%
Recurrent premium multiplier <sup>4</sup>	5	5	3%

1\_NBM= VNB / Present Value of New Business Premiums

2\_APE margin = VNB / (recurrent premium + single premium / 10)

3\_In Germany, single premium excludes Parkdepot

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

Allianz entities have further adapted their products on sale to the economic environment, in which short and even mid-term interest rates are negative, e.g. for CHF and EUR, or have significantly decreased like for the USD.

Successful management actions included:

- new business steering towards capital efficient products;
- lowering average guarantees in new traditional business to 0.06%, which resulted in a reduction of the average guarantees of the inforce from 1.93% in 2019 to 1.85% in 2020;
- interest rate sensitivity on a low level, by introducing products with less dependency on market rates;
- increasing pricing agility;
- improving ALM.

The decrease of 8% in the present value of new business premiums ("PVNBP") reflects a decrease of both single and recurring premiums.

Lower sales of single premiums were mainly driven by decreased fixed index annuities in the US.

Recurring premiums decreased driven by Italy with a favorable one-off impact in 2019 from renegotiation of a group contract.

**Table 8: Development of Value of New Business – L/H segment**

EUR mn

	Present Value of New Business Premiums	New Business Margin (%)	Value of New Business
<b>VNB 31.12.2019</b>	<b>67,046</b>	<b>3.2%</b>	<b>2,167</b>
Foreign Exchange Variance	- 1,176	0.0%	- 33
Acquired / Divested business	- 96	0.0%	- 14
Adjusted opening value	65,773	3.2%	2,120
Volume	- 5,610	0.0%	- 199
Business mix	-	0.6%	407
Assumptions	1,334	-1.0%	- 585
<b>VNB 31.12.2020</b>	<b>61,497</b>	<b>2.8%</b>	<b>1,743</b>

Foreign exchange rate movements decreased VNB by EUR -33 mn, mainly from Turkey, the US, Asia (Indonesia, Malaysia) and Mexico.

Allianz Popular in Spain was deconsolidated during the first quarter of 2020.

The volume impact was driven by Germany (EUR -111 mn) with lower sales of capital efficient products and the US (EUR -57 mn) due to lower sales of fixed index annuities.

Business mix improvement was driven by the US (EUR 280 mn) from product changes to reduce guarantees, a shift to IVA income product supported by a sales campaign, and higher share of P&H. Germany Life (EUR 115 mn) benefitted from a favorable business mix shift toward capital efficient hybrid/UL products, and higher shares of Protection business.

The share of preferred business significantly increased as unit linked without guarantees products and protection and health business increased by 3.6%-p. resp. 2.3%-p. Traditional guaranteed savings and annuity products share in new business decreased by -4.8%-p. impacted by last year's favorable group contract renegotiation in Italy.

The economic environment with significantly lower interest rates had a negative effect in the US and European portfolios (EUR -572 mn).

Changes in assumptions of EUR 9 mn mainly reflect the non-economic assumption updates.

Further details on the drivers for the change in each region can be found in the regional analysis in section B.6.

## B.4 PROFIT EMERGENCE

The MCEV represents shareholders' economic value of the Life/Health inforce business, but does not provide any insights into the timing of profit emergence.

Timing of the projected cash-flows depends very much on the underlying portfolio and varies across the Group. Allianz Group's Life/Health segment includes short-term portfolios, such as short-term savings or protection, as well as long-term portfolios, for example annuities. The overall duration of the liabilities is to a high degree driven by the block of long-term traditional business in Germany.

The projection of future profits shows a stable earnings release and return on capital over the entire projection period.

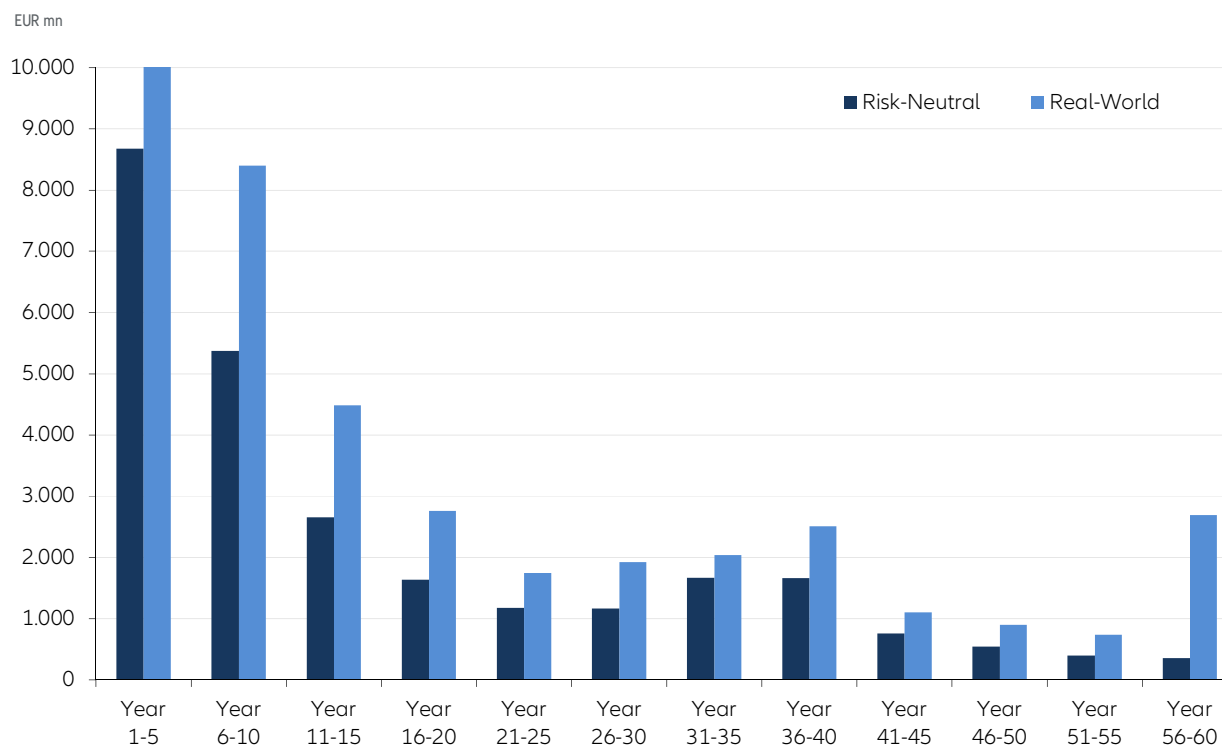
The following graph presents the pattern of risk-neutral and real-world profits grouped by 5 years' time buckets. These profits are only related to the current inforce portfolio; it includes the new business of the current year but future new business is not considered.

Table 9 below shows the corresponding expected maturity profile of the present value of future profits ("PVFP") in a risk-neutral environment.

**Table 9: Remaining present value of future risk-neutral profits**

EUR mn		
End of year	PVFP	% of initial PVFP
year 5	15,326	62%
year 10	9,803	39%
year 15	7,090	28%
year 20	5,481	22%
year 25	4,723	19%
year 30	4,094	16%
year 35	2,952	12%
year 40	1,709	7%
year 45	1,208	5%
year 50	829	3%

**Figure 10: Pattern of risk-neutral and real-world profit for the inforce**





## B.5 SENSITIVITIES

Sensitivity testing with respect to the underlying best estimate assumptions is an important part of the MCEV calculations. Both economic and non-economic factors are tested. For the sensitivities, we apply the same management rules and policyholder behavior as for the base case. It should be noted that the sensitivities are usually correlated so that the impact of two events occurring simultaneously is unlikely to be the sum of the outcomes of the corresponding tests. Where it has been determined that the impact of assumption changes is symmetric, one-sided sensitivities are shown.

The sensitivities presented in table 10 below correspond to the primary economic and non-economic factors specified in the MCEV Principles. The magnitude of the assumption shifts is not indicative of what may or may not actually occur.

**Table 10: Sensitivities**

EUR mn

	Inforce MCEV		New Business VNB <sup>1</sup>	
	EUR mn	%	EUR mn	%
<b>Central Assumptions</b>	<b>39,192</b>	<b>100%</b>	<b>1,743</b>	<b>100%</b>
<b>Change by economic factors</b>				
Risk Free Rate -50bp	-1,134	-3%	-141	-8%
Risk Free Rate +50bp	653	2%	66	4%
Equity values -20 %	-2,144	-5%	-208	-12%
Swaption volatilities +25 %	-1,436	-4%	-40	-2%
Equity option volatilities +25 %	-1,103	-3%	-40	-2%
<b>Change by non-economic factors</b>				
Lapse Rates -10 %	-188	-0%	125	7%
Maintenance Expenses -10 %	1,125	3%	105	6%
Mortality +15 % for products with death risk	-320	-1%	-102	-6%
Mortality -20 % for products with longevity risk	-3,842	-10%	-54	-3%

<sup>1</sup> VNB sensitivities are the sum of quarter slice sensitivities.

### DECREASE/INCREASE OF THE UNDERLYING MARKET RISK-FREE RATES

This sensitivity shows by how much the MCEV would change if market interest rates in the different economies were to fall or rise. The sensitivity is designed to indicate the impact of a sudden 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. Yield-curve extrapolation is applied in sensitivities to interest rate shifts. This means that only the deep and liquid part of yield-curves are subject to parallel shifts while the ultimate forward rate is kept stable, in line with its design under Solvency II. Due to the asymmetric and non-linear impact of embedded financial options and guarantees ("O&G"), falling market rates usually have a higher impact on MCEV than rising rates and the impact increases for each further step down. A shift of -50bps in interest rates results in a reduction of the MCEV of EUR -1,134 mn or -3%. This is higher than the corresponding impact shown for 2019 of -2%, driven by the low interest rate environment which increased time value of options & guarantees.

Additional sensitivities were performed to test the impact of changes to the UFR. In contrast to the sensitivities in which the deep and liquid

part of the yield-curves are shocked, in these additional sensitivities the UFR is shocked by -200bps and the deep and liquid part of the yield-curves remains unchanged. Lowering the UFR by 200bps reduces MCEV by EUR -5,802 mn. VNB would decrease by EUR -268 mn.

### DECREASE IN EQUITY VALUES AT THE VALUATION DATE

This sensitivity is designed to indicate the impact of a sudden change in the market values of equity 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 20% reduces MCEV by EUR -2,144 mn or -5%. This is slightly lower than last year's level.

### INCREASES IN VOLATILITIES FOR FIXED INCOME AND EQUITY

These sensitivities show the effect of increasing all volatilities, i.e. swaption implied volatilities, equity option implied volatilities and real estate volatility by 25% of the assumed rate. An increase in volatilities leads to higher O&G for traditional participating business.

MCEV decreases by EUR -1,436 mn or -4% for an increase in swaption implied volatility, this is in line with last year's impact. VNB decreases by EUR -40 mn or -2%.

MCEV decreases by EUR -1,103 mn or -3% for an increase in equity option implied volatility and VNB decreases by EUR -40 mn.

### DECREASE IN LAPSE RATES

A 10% proportionate decrease in projected lapse rates results in a decrease in MCEV of EUR -188 mn with some offsetting effects across the different countries.

### DECREASE IN MAINTENANCE EXPENSES

The impact of a 10% decrease in projected expenses in MCEV is EUR 1,125 mn or 3%. This sensitivity is on last year's level.

### CHANGES IN MORTALITY AND MORBIDITY RATES

These sensitivities show the impact of an increase in mortality rates by 15% for products with death risk and a decrease in mortality rates of 20% for products exposed to longevity risk. Since the future experience for the different insured populations in the two product groups might vary significantly, the impacts are shown separately. For products with death risks, an increase in mortality rates by 15% leads to a decrease in MCEV of EUR -320 mn or -1%. This is on last year's level. A decline in mortality rates by 20% on products exposed to longevity risk would lead to a decrease in MCEV of EUR -3,842 mn or -10%. This is on a higher level than last year. The lower interest rate environment increases the longevity risks, as higher options & guarantees remain even longer in our portfolio.

The impact of non-economic shocks on MCEV is mitigated by the ability to share technical profits and losses with policyholders, particularly in Germany.

## B.6 REGIONAL ANALYSIS

### B.6.1 Regional distribution

The regional distribution consists of:

#### GERMAN SPEAKING COUNTRIES

- **Germany Life** includes Allianz Lebensversicherungs-AG and German variable annuity business written in Ireland. Its subsidiaries are included at equity.
- **Germany Health** is Allianz's health business Allianz Private Krankenversicherungs AG.
- Life operations in **Switzerland**.

#### WESTERN & SOUTHERN EUROPE

- Life operations in **France** including partnerships and French variable annuity business written in Ireland.
- **Italy** includes Italian and Irish life subsidiaries and Italian variable annuity business written in Ireland.
- Life operations in **Belgium, Netherlands, Luxemburg, Greece, Turkey**.

#### IBERIA & LATIN AMERICA

- Life operations in **Spain, Portugal** and **Mexico**.

#### CENTRAL AND EASTERN EUROPE

- Life operations in **Austria, Slovakia, Czech Republic, Poland, Hungary, Croatia, Bulgaria** and **Romania**.

#### ASIA PACIFIC

- Life operations in **Taiwan, Thailand, China, Indonesia, Malaysia, Japan** and **Philippines**.
- The non-consolidated life operation in India is not included.

#### USA

- AZ Life **US**.

#### OTHER

- **Holding**: Internal life reinsurance.
- **Middle-East: Egypt** and **Lebanon**.
- **Allianz Global Life**, excluding continental European branches.

In the following chapters, the analysis is presented for each material region, with specific focus on our larger life operations: **Germany Life, France, Italy, USA** and **Asia Pacific**.

## B.6.2 Embedded Value by region

**Table 11: Embedded Value by region**

EUR mn

	German Speaking Countries		Western & Southern Europe			Iberia and Latin America	CEE	Asia Pacific	USA	Other	Total
	Total	Germany Life	Total	France	Italy						
<b>MCEV 31.12.2019</b>	17,286	13,040	9,805	5,659	2,432	1,645	1,167	3,227	9,649	533	43,312
<b>MCEV 31.12.2020</b>	<b>15,843</b>	11,342	<b>8,876</b>	4,597	2,649	<b>1,244</b>	<b>1,160</b>	<b>3,291</b>	<b>8,300</b>	<b>477</b>	<b>39,192</b>

## B.6.3 Value of New Business by region

**Table 12: Value of New Business by region**

EUR mn

	German Speaking Countries		Western & Southern Europe			Iberia and Latin America	CEE	Asia Pacific	USA	Other	Total
	Total	Germany Life	Total	France	Italy						
<b>Value of New Business</b>	768	672	278	55	145	68	40	297	240	52	1,743
in % total VNB	44%	39%	16%	3%	8%	4%	2%	17%	14%	3%	100%
New Business Margin in %	3.0%	3.0%	1.5%	0.8%	1.7%	4.1%	4.4%	5.8%	2.4%	16.2%	2.8%
Present Value of NB Premiums	25,643	22,281	17,964	6,921	8,650	1,641	907	5,150	9,869	323	61,497
APE Margin <sup>1</sup> in %	33.9%	36.2%	7.7%	2.4%	14.8%	25.4%	12.4%	36.0%	20.0%	45.8%	20.2%
APE Absolute	2,270	1,854	3,620	2,294	980	266	324	824	1,198	114	8,616
Single Premium <sup>2</sup>	11,572	11,455	14,056	4,832	7,412	741	122	2,220	8,570	0	37,281
Recurrent Premium	1,113	709	2,214	1,810	238	192	312	602	341	114	4,888
Recurrent premium multiplier <sup>3</sup>	13	15	2	1	5	5	3	5	4	3	5
<b>Value of New Business by product type</b>											
Capital Efficient	493	490	34	12	15	23	3	16	187	-	757
Guaranteed Savings & Annuities	58	55	-17	-15	-10	-1	2	41	-	12	94
Protection & Health	213	127	94	40	23	43	27	158	52	19	607
Unit-linked without Guarantees	3	-	167	18	117	3	8	81	-	22	285
<b>New Business Margin by product type</b>											
Capital Efficient in %	<b>2.9%</b>	2.9%	<b>1.9%</b>	3.6%	1.4%	<b>3.5%</b>	<b>2.2%</b>	<b>3.7%</b>	<b>2.2%</b>	n/a	<b>2.6%</b>
Guaranteed Savings & Annuities in %	<b>1.4%</b>	1.6%	<b>-0.6%</b>	-0.6%	-1.3%	<b>-2.4%</b>	<b>2.2%</b>	<b>3.7%</b>	n/a	<b>86.9%</b>	<b>1.1%</b>
Protection & Health in %	<b>5.1%</b>	7.0%	<b>2.8%</b>	1.4%	12.0%	<b>9.3%</b>	<b>7.7%</b>	<b>12.2%</b>	<b>4.0%</b>	<b>121.4%</b>	<b>5.5%</b>
Unit-linked without Guarantees in %	<b>3.8%</b>	n/a	<b>1.7%</b>	1.3%	1.8%	<b>0.6%</b>	<b>2.6%</b>	<b>3.5%</b>	n/a	<b>7.4%</b>	<b>2.2%</b>

1\_APE margin = Value of New Business / (recurrent premium + single premium / 10)

2\_In Germany, single premium excludes Parkdepot

3\_Recurrent Premium Multiplier = (PVNBP - single premium) / recurrent premium

## B.6.4 Germany Life

### Development of Embedded Value

The MCEV of Germany Life decreased by -13% from EUR 13,040 mn to EUR 11,342 mn, impacted by unfavorable economics and a major model change.

The table below presents the drivers of the change in MCEV.

**Table 13: Analysis of Earnings of Embedded Value**

EUR mn

	MCEV
<b>MCEV 31.12.2019</b>	<b>13,040</b>
Regulatory / model Changes (after-tax impact)	-1,388
Operating SII earnings	1,878
New business contribution	974
Expected inforce contribution	1,303
Assumption changes & Experience variances	-399
Debt costs	
Other	
Market Impact including FX	-1,989
Capital Management	-651
Management Actions	548
Tax	-97
Other Changes	
<b>MCEV 31.12.2020</b>	<b>11,342</b>

The most significant model change in 2020 was a major model change concerning the shareholder target scope which caused a negative impact. Further globally triggered changes include the EIOPA update of the UFR and the change in data provider.

The Operating SII earnings are impacted by lower new business contribution compared to last year as well as negative experience variances driven by a strengthening of the RfB to reflect actual policyholder crediting. The regular update process of non-economic assumptions had a positive impact, particularly from mortality, morbidity, expenses, and Life Non-Market Risk parameter updates.

Lower interest rates and the widening of credit spreads drove the significant negative market impact. Further unfavorable developments include currency effects and changes in real estates, which were partly offset by improved equity markets.

Capital movements had an impact of EUR -651 mn due to the renewed profit and loss transfer agreement.

Management actions are driven by an update of the investment strategy with duration increases and de-risking.

### Development of Value of New Business

The VNB written by Germany Life in 2020 was EUR 672 mn, -23% lower than the value in 2019, largely impacted by lower volumes and decreased interest rates.

The table below presents an analysis of the changes.

**Table 14: Development of Value of New Business**

EUR mn

	Present Value of New Business Premiums	New Business Margin (%)	Value of New Business
<b>VNB 31.12.2019</b>	<b>24,691</b>	<b>3.5%</b>	<b>872</b>
Foreign Exchange Variance	-	0.0%	-
Acquired / Divested business	-	0.0%	-
<b>VNB 31.12.2019 restated</b>	<b>24,691</b>	<b>3.5%</b>	<b>872</b>
Volume	- 3,226	0.0%	- 111
Business mix	-	0.5%	115
Assumptions	815	-1.1%	- 204
<b>VNB 31.12.2020</b>	<b>22,281</b>	<b>3.0%</b>	<b>672</b>

Germany Life recorded lower volumes in 2020, impacted by Covid 19 restrictions. The negative impact of EUR -111 mn was mainly driven by lower sales in saving products and capital efficient products.

A more favorable business mix increased VNB by EUR 115 mn due to a shift to capital efficient hybrid and risk products, while the share of Perspektive and traditional saving products decreased.

VNB decreased by EUR -204 mn from assumption changes mainly due to a deterioration of interest rates and a change in modeling the scope of the shareholder target.

## B.6.5 France

### Development of Embedded Value

MCEV decreased by -18.8% from EUR 5,659 mn to EUR 4,597 mn, mainly impacted by unfavorable economics and the transfer of the retirement business from AZ Vie to a pension vehicle.

The table below presents the drivers of the change in MCEV.

**Table 15: Analysis of Earnings of Embedded Value**

EUR mn

	MCEV
<b>MCEV 31.12.2019</b>	<b>5,659</b>
Regulatory / model Changes (after-tax impact)	-46
Operating SII earnings	104
New business contribution	75
Expected inforce contribution	312
Assumption changes & Experience variances	-284
Debt costs	
Other	
Market Impact including FX	-774
Capital Management	-311
Management Actions	-317
Tax	282
Other Changes	
<b>MCEV 31.12.2020</b>	<b>4,597</b>

Model changes in 2020 are due to the EIOPA update of the UFR and the change in data provider.

Solid Operating SII earnings are impacted by lower new business contribution compared to 2019 as well as assumption changes which included unfavorable updates on expenses and switches between UL and EUR fund.

The economic environment had a negative impact which was largely driven by deteriorated interest rates, lower equities and widened credit spreads.

Capital movements decreased MCEV by EUR -311 mn.

The negative impact of management actions is due to transfer of the retirement business from Allianz Vie to a pension vehicle, partly offset by actions to reduce the duration gap.

### Development of Value of New Business

The VNB written in France in 2020 decreased to EUR 55 mn, -47% lower than the value in 2019. The NBM decreased from 1.4% to 0.8% mainly driven by worsened business mix.

The table below presents an analysis of the changes.

**Table 16: Development of Value of New Business**

EUR mn

	Present Value of New Business Premiums	New Business Margin (%)	Value of New Business
<b>VNB 31.12.2019</b>	<b>7,426</b>	<b>1.4%</b>	<b>105</b>
Foreign Exchange Variance	0	0.0%	0
Acquired / Divested business	-	0.0%	-
<b>VNB 31.12.2019 restated</b>	<b>7,426</b>	<b>1.4%</b>	<b>105</b>
Volume	- 488	0.0%	6
Business mix	-	-0.4%	25
Assumptions	- 16	-0.2%	18
<b>VNB 31.12.2020</b>	<b>6,921</b>	<b>0.8%</b>	<b>55</b>

The negative impact from volume was mainly driven by a decline of saving products at Allianz Vie.

The negative impact from business mix was largely attributable to lower sales in broker channel, which was slightly compensated by growth of capital efficient products supported by the launch of a new product.

Change in assumptions were mainly driven by a less favorable economic environment.

## B.6.6 Italy

### Development of Embedded Value

The MCEV increased by 8.9% from EUR 2,432 mn to EUR 2,649 mn largely supported by a favorable economic environment benefitting from tightened credit spreads.

The table below presents the drivers of the change in MCEV.

**Table 17: Analysis of Earnings of Embedded Value**

EUR mn

	MCEV
<b>MCEV 31.12.2019</b>	<b>2,432</b>
Regulatory / model Changes (after-tax impact)	90
Operating SII earnings	280
New business contribution	191
Expected inforce contribution	178
Assumption changes & Experience variances	-89
Debt costs	
Other	
Market Impact including FX	143
Capital Management	-185
Management Actions	
Tax	-111
Other Changes	
<b>MCEV 31.12.2020</b>	<b>2,649</b>

The slightly negative impact of the EIOPA 2020 updates including the adjustment of the UFR was offset by favorable local model changes mainly driven by the introduction of the new Alice model including further refinements.

Operating SII earnings are impacted by lower new business contribution compared to 2019 as well as non-economic assumption changes impacted by an unfavorable cost parameter update. Experience variances were negligible.

Overall market impacts were positive as credit spreads significantly narrowed for Italian government bonds and equity markets improved. These impacts were partly offset by decreased interest rates. Capital management of EUR -185 mn mainly reflects 2020's dividend payments.

### Development of Value of New Business

The VNB written in Italy in 2020 decreased to EUR 145 mn, -28% lower than in 2019. The NBM decreased to 1.7% driven by a less favorable business mix.

The table below presents an analysis of the changes.

**Table 18: Development of Value of New Business**

EUR mn

	Present Value of New Business Premiums	New Business Margin (%)	Value of New Business
<b>VNB 31.12.2019</b>	<b>8,389</b>	<b>2.4%</b>	<b>201</b>
Foreign Exchange Variance	-	0.0%	-
Acquired / Divested business	-	0.0%	-
<b>VNB 31.12.2019 restated</b>	<b>8,389</b>	<b>2.4%</b>	<b>201</b>
Volume	148	0.0%	4
Business mix	-	-0.5%	- 39
Assumptions	112	-0.3%	- 21
<b>VNB 31.12.2020</b>	<b>8,650</b>	<b>1.7%</b>	<b>145</b>

The overall decrease was driven by the agency channel where the VNB went from EUR 85 mn in 2019 to EUR 32 mn in 2020, as well as from the bank channel that went from EUR 50 mn in 2019 to EUR 44 mn in 2020.

The slight increase of VNB by EUR 4 mn due to volume was impacted by two opposing effects: Higher unit-linked business in the FA channel was offset by last year's favorable impact of the renegotiation of a group contract by adjusting the conditions to the current market environment.

Changes in business mix was predominantly affected by the group contract renegotiation.

VNB decreased by EUR -21 mn from assumptions mainly driven by deterioration of interest rates through the year and a cost parameter update.

## B.6.7 Asia Pacific

### Development of Embedded Value

The MCEV of Asia Pacific slightly increased by 2.0% from EUR 3,227 mn to EUR 3,291 mn, supported by strong Operating SII earnings offsetting impact of stronger Euro.

The table below presents the drivers of the change in MCEV.

**Table 19: Analysis of Earnings of Embedded Value**

EUR mn

	MCEV
<b>MCEV 31.12.2019</b>	<b>3,227</b>
Regulatory / model Changes (after-tax impact)	-40
Operating SII earnings	505
New business contribution	381
Expected inforce contribution	222
Assumption changes & Experience variances	-98
Debt costs	
Other	
Market Impact including FX	-187
Capital Management	-69
Management Actions	-44
Tax	-100
Other Changes	
<b>MCEV 31.12.2020</b>	<b>3,291</b>

Model changes largely reflect a local change in morbidity shock in Taiwan as well as the regulatory EIOPA 2020 update of the UFR.

Assumption changes in 2020 included newly introduced partial withdrawal assumption in Taiwan. Experience variances were negligible as favorable experience variances in China from participating surplus were largely offset by higher lapses and mortality experience in Indonesia.

Market impact was EUR -187 mn mostly from depreciated Asian currencies, in particular the Indonesian Rupiah, the Thai Baht and the Malaysian Ringgit. Excluding FX effects, negative effect from lower rates in Thailand and Taiwan was offset by lower spreads and growth on equity markets.

Capital management accounted for the dividends paid by Indonesia, Taiwan and Thailand.

Management actions consist of changes in participations reflecting the revaluation of puttable liability to the joint venture partner in China and de-consolidation of the entity in Japan.

### Development of Value of New Business

The VNB written in Asia Pacific in 2020 was EUR 297 mn, 2% higher than the value in 2019. The region had a good development during the year supported by an improved business mix. The NBM slightly increased from 5.7% to 5.8%.

The table below presents an analysis of the changes.

**Table 20: Development of Value of New Business**

EUR mn

	Present Value of New Business Premiums	New Business Margin (%)	Value of New Business
<b>VNB 31.12.2019</b>	<b>5,056</b>	<b>5.7%</b>	<b>290</b>
Foreign Exchange Variance	- 89	-0.1%	8
Acquired / Divested business	-	0.0%	-
<b>VNB 31.12.2019 restated</b>	<b>4,966</b>	<b>5.7%</b>	<b>282</b>
Volume	55	0.0%	3
Business mix	-	0.2%	11
Assumptions	129	-0.1%	1
<b>VNB 31.12.2020</b>	<b>5,150</b>	<b>5.8%</b>	<b>297</b>

The negative impact of FX was primarily driven by the depreciation of the Indonesian Rupiah and Thai Baht against the Euro.

The increase of the VNB from volume effects was mainly driven by higher sales in Indonesia and the Philippines.

The shift towards health products in Thailand and China had a positive impact in the overall business mix.

VNB slightly increased by EUR 1 mn due to updated assumptions, as the negative impact from lower interest rates is overcompensated by lower corporate tax in Indonesia and lower expense overrun in Taiwan, Thailand and Indonesia.

## B.6.8 USA

### Development of Embedded Value

This section refers to the MCEV of AZ Life US. It does not contain any comment or value of the MCEV on SII L/H basis (i.e. equivalent Own Funds) of AZ Life US.

The MCEV of AZ Life US decreased by -14% to EUR 8,300 mn, driven by market impacts.

The table below presents the drivers of the change in MCEV.

**Table 21: Analysis of Earnings of Embedded Value**

EUR mn

	MCEV
<b>MCEV 31.12.2019</b>	<b>9,649</b>
Regulatory / model Changes (after-tax impact)	133
Operating SII earnings	1,019
New business contribution	304
Expected inforce contribution	465
Assumption changes & Experience variances	250
Debt costs	
Other	
Market Impact including FX	-2,020
Capital Management	-613
Management Actions	0
Tax	132
Other Changes	
<b>MCEV 31.12.2020</b>	<b>8,300</b>

Model changes are driven by spread unlocking for fixed index annuity business, a refinement of earned rates in the IVA model and adjustments for long-term care benefit periods.

New business and inforce contribution were below previous year's level largely impacted by significantly decreased interest rates.

Positive impact from assumption changes was mainly driven by updated Guaranteed Minimum Withdrawal Benefit utilization rates, partly offset by updated expense assumptions and the impact of the long-term care reserve review. Experience variances were negligible, dominated by lower lapses in fixed-indexed annuities.

The Euro strengthened against the US Dollar by 9% against the Euro compared to last year-end with an impact of EUR -797 mn. Market impacts were significantly negative, dominated by the effect of widened credit spreads (portfolio average +21bps) as well as changed volatility and credit risk adjustments.

A dividend of EUR -613 mn was paid.

### Development of Value of New Business

The VNB written in the USA in 2020 decreased to EUR 240 mn, -29% lower than 2019. The NBM went down from 2.8% to 2.4%, strongly burdened by declined interest rates.

The table below presents an analysis of the changes.

**Table 22: Development of Value of New Business**

EUR mn

	Present Value of New Business Premiums	New Business Margin (%)	Value of New Business
<b>VNB 31.12.2019</b>	<b>12,115</b>	<b>2.8%</b>	<b>338</b>
Foreign Exchange Variance	- 381	0.0%	- 8
Acquired / Divested business	-	0.0%	-
<b>VNB 31.12.2019 restated</b>	<b>11,733</b>	<b>2.8%</b>	<b>330</b>
Volume	- 1,864	0.0%	- 57
Business mix	-	2.8%	280
Assumptions	-	-3.2%	- 313
<b>VNB 31.12.2020</b>	<b>9,869</b>	<b>2.4%</b>	<b>240</b>

The VNB decreased by EUR -8 mn as the Euro strengthened against the US Dollar.

Lower volumes with an impact of EUR -57 mn on VNB are due to lower sales of fixed index annuities, partly offset by increased sales of IVA income and protection business.

The business mix significantly improved with an impact of EUR 280 mn driven by product repricings to reduce guarantees and a favorable shift from fixed index annuities to IVA production.

The development of interest rates during 2020 was the main driver of the significantly negative impact from assumption updates of EUR -313 mn on VNB, mainly in the fixed index annuity business.



## B.7 MCEV METHODOLOGY & ASSUMPTIONS

Allianz Group provides detailed guidelines to the operating entities in order to ensure consistency of MCEV and VNB calculations throughout the Group. Allianz Group centrally sets the economic assumptions that are used in the calculations by the operating entities. All results submitted to Allianz Group must be reviewed and approved by the local chief actuaries and CFOs.

This section presents the methodology and underlying assumptions used to calculate the 2020 MCEV for the Allianz Group in accordance with the disclosure requirements of the MCEV Principles. As in previous years, we do not include look-through profits in our main values but provide them as additional information in the development of our value of new business ("VNB"), as we would like to retain a clear split between the segments in line with our primary IFRS accounts.

### B.7.1 MCEV Methodology

#### BASIS OF PREPARATION

Market consistent embedded value ("MCEV") represents shareholders' economic value of the inforce life and pension business of an insurance company. Future new business is not included.

Since 2008 Allianz Group has disclosed its MCEV in line with the European Insurance CFO Forum Market Consistent Embedded Value Principles © ("MCEV Principles"), which were launched in June 2008 and amended in October 2009 and most recently in May 2016 for alignment with Solvency II regulations. The projection of assets and liabilities applying market consistent economic assumptions ensures a consistent valuation among them. In addition, an explicit allowance is made for residual non-hedgeable risks, reflected in the calculation of the Solvency II risk margin.

Due to the similarities between the methodology and assumptions used to determine the Solvency II balance sheet and those employed under Embedded Value reporting, the latest amendment of the "MCEV Principles" permits (but does not require) the use of projection methods and assumptions applied for market consistent solvency regimes. From 2015 onwards, Allianz has been using a balance sheet approach to calculate and publish its MCEV results.

#### BUSINESS COVERED

The business covered in the MCEV results includes all material Life/Health operations consolidated into the Life/Health segment of the IFRS accounts of Allianz Group. The main product groups are:

- Life, health and disability products including riders,
- Deferred and immediate annuity products, both fixed and variable,
- Unit-linked and index-linked life products,
- Capitalization products,
- Long term health products.

The value of reinsurance accepted by Allianz Re is reflected in the Holding results. Where debt is allocated to 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.

Entities that are not consolidated into Allianz IFRS accounts, i.e. entities where Allianz only holds a minority, are not included in the 2020 MCEV results. In particular the company in India is not included. The pension fund business written outside the Life/Health segment is also not included.

#### B.7.1.1 MCEV DEFINITION

Allianz Group has decided to base and publish its MCEV results following a balance sheet approach, which is explicitly allowed for in the MCEV Principles from the CFO Forum, using the Solvency II Market Value Balance Sheet ("MVBS").

The MCEV is defined as the difference between market value of assets and market value of liabilities as of valuation date, excluding any items that are not considered shareholder interest. It is calculated on an after-tax basis considering current and known future changes in legislation.

Allianz's disclosed MCEV is in alignment with Solvency II and the MCEV Principles. Clarifications on specific points are listed below:

- Frictional costs of holding required capital, arising from double taxation on investment earnings, additional investment management expenses and possibly profit-sharing obligations are not part of the Solvency II concept and are therefore - as Allianz MCEV is aligned with Solvency II MVBS - not calculated.
- Costs of non-hedgeable risks ("CNHR") have been replaced with the Risk Margin required by Solvency II that covers a similar purpose. A more detailed section on Risk Margin can be found below.
- The Solvency II contract boundary definition is applied.
- MCEV is disclosed on a net of tax basis using the full bottom-up tax calculations incorporated in the MVBS. The items of the balance sheet are on a before tax basis with a tax component separately. Movement steps are on a before tax basis and a tax item is disclosed separately.

#### B.7.1.2 ASSETS

Assets in the Solvency II Market Value Balance Sheet consist of financial, non-financial and deferred tax assets as well as reinsurance recoverables. As required by the MCEV Principles, the MCEV is reported net of reinsurance.

#### B.7.1.3 LIABILITIES

Liabilities in the Solvency II Market Value Balance Sheet consist of the Technical Provisions ("TP") net of reinsurance as well as of other liabilities not belonging to TP such as tax and contingent liabilities, pension benefit obligations and reinsurance payables.

The Technical Provisions comprise the best estimate liabilities ("BEL"), the time value of option and guarantees and the Risk Margin, all explained in the following subsections.

#### BEST ESTIMATE LIABILITIES

The BEL is the market value before tax of the obligations of the company to policyholders and beneficiaries and it includes policyholder tax. In case of a composite insurer only those policies and riders that

are allocated to the company's life segment are considered in these guidelines.

According to the Solvency II Directive the BEL is calculated gross of reinsurance and gross of any amounts recoverable from special purpose vehicles. The Solvency II Market Value Balance Sheet is constructed on a gross/gross basis with the assets grossed up for the recoverables and gross liabilities, rather than netted down by the recoverables.

Best Estimate liabilities are calculated for all inforce policies at the valuation date. The BEL represents the discounted cash flows that emerge over the term of the policy. In line with Level 2 Article 28 of the Solvency II directive, all relevant cash flows are included in the calculation:

- future benefits such as maturity values, annuity payments, claims, surrender values;
- future expenses such as maintenance, servicing, overhead, commission, investment management;
- future premiums, i.e. contracted premiums.

All future amounts are discounted to the valuation date at the valuation discount rate.

### TIME VALUE OF OPTIONS AND GUARANTEES

The Solvency II Directive requires the calculation of the TP to take account of the value of financial guarantees and any contractual options included in insurance and reinsurance policies. It requires the BEL calculation to identify and take into account all factors which may materially affect the likelihood that policyholders will exercise contractual options or the value of the option or guarantee.

Contractual options are defined as a right to change the benefit, to be taken at the choice of its holder (generally the policyholder), on terms that are established in advance. Thus, in order to trigger an option, a deliberate decision of its holder is necessary.

A financial guarantee is present when there is the possibility to pass losses to the insurer or to receive additional benefits as a result of the evaluation of financial variables. In the case of guarantees, the trigger is generally automatic and not dependent of a deliberate decision of the policyholder / beneficiary.

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.

Due to the complex nature of options and guarantees for the majority of the business, there is no closed form solution to determine their 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 the O&G.

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 section B.7.2.

### RISK MARGIN

The Solvency II Directive defines the RM as the cost of providing an amount of available financial resources equal to the solvency capital requirement (SCR) necessary to support the insurance and reinsurance obligations over the lifetime of those obligations.

Solvency II requires an allowance for the cost of holding non-hedgeable risk capital but not for hedgeable financial risks as these may be mitigated through the capital markets. RM has replaced the calculation of costs of non-hedgeable risks (CNHR) and is required for non-hedgeable risks - the financial other than interest rate risk, insurance and operational risks that cannot be covered using capital market instruments.

The cost of capital is the expected cost of transferring the non-hedgeable financial, insurance and operational risks to another insurer or reinsurer. Risk margin is calculated with a 6% cost of capital rate (CoC), after tax and 100% capitalization of risk capital in line with Solvency II requirements.

#### B.7.1.4 NEW BUSINESS

The value of new business ("VNB") arises from the sale of new contracts during the reporting period and the value from renewals and contractual alterations to renewal business acquired in prior periods. MCEV only reports inforce business, which excludes future new business. The VNB reflects the additional value to shareholders created through the activity of writing new business in the current period.

New business consists of individual and group policies. 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 an allowance for renewal rates in line with observed experience.

VNB is calculated following a distributable earnings approach, and has been aligned to Solvency II requirements including EIOPA specifications for valuation as well as the application of contract boundary definition and risk margin. This in particular allows using the VNB as contribution of new business in the development of MCEV.

As such, the VNB is calculated as the present value of future profits after acquisition expense over- and underruns and tax ("PVFP") minus the time value of options and guarantees minus the risk margin ("RM"), all determined at issue date.

The values are point of sale values based on interest rates valid at the beginning of the quarter the business was sold, in line with our quarterly disclosure of value of new business. Section B.7.2 shows the corresponding economic assumptions. For business in the USA, where products are re-priced more frequently, we apply a bi-weekly update of economic assumptions for new business calculations to better reflect how the business is managed.

Timing and assumptions for the present value of new business premiums are in line with assumptions used for the VNB. Premiums are before reinsurance.

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 section B.7.2. 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 inforce business. In Germany and France for example, regulatory profit-sharing rules permit that initial expenses can be shared with all policyholders of the inforce fund, so the shareholder strain from new business is reduced significantly. Furthermore, in order to capture the impact on the O&G 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.

### B.7.1.5 PARTICIPATING BUSINESS

The profit-sharing assumptions take into account contractual and regulatory requirements, management strategy and the reasonable expectations of policyholders.

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 inforce value.

### B.7.1.6 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 inforce policies is applied.

## B.7.2 MCEV Assumptions

### B.7.2.1 ECONOMIC ASSUMPTIONS

The MCEV results for 2020 are based on economic market conditions as of 31<sup>st</sup> December 2020. Options and guarantees have been evaluated using market consistent scenarios. These have been generated to be arbitrage free, and the model underlying the scenarios has been calibrated to replicate actual market implied volatilities for selected financial instruments at the valuation date. Stochastic economic scenarios are generated centrally by an in-house model. Since the fourth quarter of 2017, the stochastic economic scenarios allow for negative interest rates.

As actual EIOPA curves are typically published too late for the in-house process of scenario generation, Allianz Group has used their

own processes to generate the calibration yield curves. The methodology to derive these curves is fully aligned with EIOPA specification. Allianz Group has also set up a process to assess the differences between the curves generated in-house and the curves published by EIOPA. In case of material differences, the actual EIOPA curves would be used.

Key economic assumptions for risk-neutral evaluation are for each economy:

- the reference 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 Refinitiv (Thomson Reuters). Market data used for calibration of volatilities have been taken from Bloomberg and Tullett Prebon where available and markets are sufficiently liquid. Correlations and volatilities for real estate are based on historical data.

Reference rate yield-curves used in the certainty equivalent approach and the stochastic scenarios are based on swap rates as of 31<sup>st</sup> December 2020 with the following further adjustments.

In line with EIOPA technical documentation of the methodology to derive risk-free interest rate term structures for Solvency II a currency specific reduction to the swap rates is made to account for credit risk inherent in swaps. Allianz also includes a volatility adjustment in its MCEV assumptions following the recommendations of Solvency II. The dynamic credit risk adjustments and the volatility adjustments applied are in line with the EIOPA published technical information valid for year-end 2020. Credit risk adjustments are shown below.

**Table 23: Credit Risk Adjustment per currency as of 31.12.2020**

Currency	Credit Risk Adjustment
EUR	10 bps
USD	17 bps
GBP	11 bps
CHF	10 bps
CZK	10 bps
HUF	10 bps
PLN	10 bps
TWD	10 bps
THB	26 bps

The application ratio for the volatility adjustment is 65%. The table below shows the development of the volatility adjustment for each currency.

**Table 24: Long-term guarantee measurement**

Currency	31.12.2019	31.03.2020	30.06.2020	30.09.2020	31.12.2020
EUR	7 bps	46 bps	19 bps	14 bps	7 bps
CHF	5 bps	32 bps	15 bps	12 bps	9 bps
USD	28 bps	100 bps	54 bps	44 bps	27 bps
CZK	12 bps	37 bps	13 bps	8 bps	10 bps
HUF	1 bps	12 bps	5 bps	5 bps	2 bps
PLN	8 bps	24 bps	9 bps	7 bps	4 bps

For application to products we apply a simplified bucketing approach. We apply no volatility adjustment to variable annuities and volatility

adjustment based on a 65% application ratio to all participating, unit-linked and other businesses, including US fixed annuities and fixed-indexed annuities. For certain parts of the US portfolio, where account value is equal to 0, a portfolio specific illiquidity premium is applied.

Allianz is using the approach for extrapolation of the risk-free curve as prescribed by EIOPA. This means that yield-curve extrapolation is done with a Smith Wilson approach along the forward curve with an ultimate forward rate and an entry point of extrapolations as prescribed.

For consistency, yield-curve extrapolation is applied in sensitivities to interest rate shifts. This means that only the deep and liquid part of the yield-curve is shifted in a fully parallel way with the ultimate forward rate being kept stable. Extrapolation parameters determine the actual shift of the extrapolated part of yield-curve, which is then a non-parallel shift.

Due to the underlying reference rate methodology as described above, the projected cash-flows may not always be valued in line with the market prices of similar financial instruments that are traded on the capital markets, which is required by the MCEV Principles. We applied consistent reference rate assumptions to both the deterministic and stochastic runs, in order to improve the accuracy of the calculation of the intrinsic and time value of O&G. This would not be feasible if the stochastic scenarios used to value O&G were based on swap curves and calibrated to meet market prices while the deterministic runs used the reference rate that incorporated this methodology.

For currencies where EIOPA requires valuation based on government bonds, government rates are used.

The table below shows the swap rates used in the market consistent valuation. These already include the deduction for the credit risk adjustment.

**Table 25: Risk-free rates**

Currency as of dd.mm.yyyy	1 year	2 years	5 years	10 years	20 years
<b>EUR</b>					
31.12.2019	-0.42%	-0.39%	-0.23%	0.11%	0.50%
31.03.2020	-0.41%	-0.42%	-0.33%	-0.12%	0.12%
30.06.2020	-0.45%	-0.48%	-0.45%	-0.27%	-0.03%
30.09.2020	-0.58%	-0.59%	-0.53%	-0.33%	-0.08%
31.12.2020	-0.63%	-0.63%	-0.56%	-0.37%	-0.09%
<b>CHF</b>					
31.12.2019	-0.74%	-0.71%	-0.53%	-0.20%	0.09%
31.03.2020	-0.71%	-0.75%	-0.55%	-0.25%	-0.32%
30.06.2020	-0.74%	-0.74%	-0.64%	-0.41%	-0.43%
30.09.2020	-0.83%	-0.82%	-0.71%	-0.46%	-0.47%
31.12.2020	-0.83%	-0.81%	-0.66%	-0.39%	-0.37%
<b>USD</b>					
31.12.2019	1.65%	1.56%	1.59%	1.77%	1.95%
31.03.2020	0.51%	0.35%	0.36%	0.57%	0.71%
30.06.2020	0.06%	0.02%	0.13%	0.44%	0.69%
30.09.2020	0.03%	0.03%	0.16%	0.53%	0.88%
31.12.2020	0.02%	0.03%	0.26%	0.77%	1.17%
<b>CZK</b>					
31.12.2019	2.14%	2.14%	1.94%	1.60%	1.94%
31.03.2020	0.66%	0.60%	0.63%	0.64%	1.04%
30.06.2020	0.21%	0.24%	0.39%	0.58%	1.07%
30.09.2020	0.24%	0.30%	0.49%	0.71%	1.18%
31.12.2020	0.38%	0.60%	1.01%	1.19%	1.67%
<b>HUF</b>					
31.12.2019	0.02%	0.15%	0.95%	1.92%	3.00%
31.03.2020	0.74%	0.89%	1.40%	2.30%	3.35%
30.06.2020	0.24%	0.51%	1.21%	2.05%	2.92%
30.09.2020	0.72%	1.02%	1.66%	2.28%	2.92%
31.12.2020	0.29%	0.53%	1.19%	1.91%	2.54%
<b>PLN</b>					
31.12.2019	1.02%	1.40%	1.72%	2.01%	2.38%
31.03.2020	0.65%	0.76%	1.12%	1.83%	2.57%
30.06.2020	-0.16%	-0.02%	0.62%	1.32%	2.00%
30.09.2020	-0.12%	-0.06%	0.53%	1.26%	1.99%
31.12.2020	-0.15%	-0.07%	0.42%	1.18%	2.05%
<b>TWD</b>					
31.12.2019	0.40%	0.40%	0.48%	0.58%	1.36%
31.03.2020	0.21%	0.21%	0.25%	0.36%	1.19%
30.06.2020	0.04%	0.07%	0.14%	0.26%	1.11%
30.09.2020	-0.01%	0.04%	0.17%	0.28%	1.11%
31.12.2020	0.01%	0.03%	0.09%	0.19%	1.06%
<b>JPY</b>					
31.12.2019	-0.09%	-0.09%	-0.07%	0.01%	0.23%
31.03.2020	-0.13%	-0.14%	-0.16%	-0.09%	0.04%
30.06.2020	-0.12%	-0.12%	-0.12%	-0.03%	0.17%
30.09.2020	-0.15%	-0.16%	-0.15%	-0.08%	0.13%
31.12.2020	-0.15%	-0.15%	-0.14%	-0.05%	0.20%

The table below shows for the main currencies the ultimate forward rate and entry point parameters used when applying yield-curve extrapolations.

**Table 26: Yield-curve extrapolation per currency for 2020**

Currency	Entry point	Ultimate forward rate
EUR	20	3.75%
CHF	25	2.75%
USD	50	3.75%
CZK	15	3.75%
HUF	15	4.50%
PLN	10	3.75%
THB	15	3.75%
TWD	10	3.75%
JPY	30	3.50%

Starting from the fourth quarter of 2017 and the go-live of the negative interest rates model, the swaption volatility convention employed in Allianz Internal model uses normal (absolute) volatilities. The swaption implied volatility tables below show the development over the year and year-end values for various terms for three main currencies.

**Table 27: Development of swaption implied volatilities**

Currency & model	31.12.2019	31.03.2020	30.06.2020	30.09.2020	31.12.2020
EUR - normal	0.53%	0.55%	0.56%	0.55%	0.50%
CHF - normal	0.59%	0.61%	0.59%	0.58%	0.55%
USD - normal	0.56%	0.60%	0.64%	0.62%	0.57%

Market implied volatilities - 10 years options on 20 years swaps at the money (10 years swaps for CHF).

**Table 28: Swaption implied volatilities**

Option term	1 year	2 year	5 year	10 year	20 year
EUR					
31.12.2019 - normal	0.51%	0.52%	0.53%	0.53%	0.51%
31.12.2020 - normal	0.45%	0.47%	0.49%	0.50%	0.48%
CHF					
31.12.2019 - normal	0.49%	0.52%	0.56%	0.59%	0.53%
31.12.2020 - normal	0.40%	0.45%	0.53%	0.55%	0.50%
USD					
31.12.2019 - normal	0.64%	0.62%	0.59%	0.56%	0.63%
31.12.2020 - normal	0.67%	0.65%	0.62%	0.57%	0.63%

Market implied volatilities - on 20 years swaps at the money (10 years swaps for CHF).

According to MCEV Principles G15.3, volatility assumptions should be based on the most recently available information as at the valuation date. Swaption implied volatilities used for the 2020 MCEV calculations were therefore based on 31<sup>st</sup> December 2020.

Volatility anchoring is applied for durations where no deep and liquid swaption markets exist (for similar reasons that yield-curve extrapolations were applied). For each currency the last liquid option maturities are determined. Market volatility quotes are used until the last liquid tenor. Long-term target levels are determined based on historical data. The volatility surface is then extrapolated from the last liquid option maturity terms to the long-term target levels.

The table below shows the starting points of the volatility extrapolation and long-term target levels for each currency:

**Table 29: Swaption volatility anchoring per currency as of 31.12.2020**

Currency	Start of swaption volatility anchoring	Long term target level
EUR	10 years	44 bps
CHF	10 years	42 bps
USD	10 years	84 bps
CZK	10 years	41 bps
HUF	10 years	172 bps
PLN	10 years	77 bps
THB	10 years	92 bps

For modelling fixed income stochastic scenarios, the Shifted Constant Elasticity Volatility Model, which allows for negative interest rates is used.

For fixed income instruments, parameters are fitted to at-the-money swaption implied volatilities. When calibrating to swaption implied volatilities, different weight is given to different swap maturities and option tenors in order to optimize the fit to actual market data. Where a trade-off in the goodness of fit was necessary, the long-term nature of the life business modelled has been considered appropriately.

A range of equity indices is considered. For modelling equity and real estate returns, an excess return 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). The table below shows the equity option implied volatility for the main equity indices.

**Table 30: Equity option implied volatilities**

Index	31.12.2019	31.03.2020	30.06.2020	30.09.2019	31.12.2020
EUR - EURO STOXX 50	17.67%	21.77%	19.24%	18.74%	20.5%
CHF - SMI	14.57%	17.1%	16.56%	15.77%	15.04%
USD - S&P 500	21.63%	25.18%	22.75%	22.65%	22.33%

Market implied volatilities - 10 years equity option at the money.

Best estimate levels of volatility are used in the market consistent calibration to derive real estate volatility since meaningful option prices for the property market were not available. There are low, medium and high real estate indices in all currencies, with 8%, 11% and 15% volatilities, respectively.

To show the impact of asset mixes and inter-economy relations, correlation assumptions were estimated from historic market data. The table below shows the correlation assumptions for 2020; the return period is on a quarterly basis.

**Table 31: Correlation assumptions as of 31.12.2020**

Index	Fixed income 1-year bond rate			Equity Indices	
	EUR	CHF	USD	MSCIEMU	S&P 500
Fixed income 1-year bond rate					
EUR	1	0.77	0.46	0.31	0.35
CHF		1	0.44	0.28	0.36
USD			1	0.36	0.33
Equity Indices					
MSCIEMU				1	0.87
S&P 500					1

1,000 stochastic paths are used for stochastic calculations of options and guarantees. Given the significance of the O&G of Germany Life, 5,000 paths were used by this entity. The higher number of paths further reduced Monte-Carlo errors. All scenario sets use antithetic random numbers in order to reduce Monte-Carlo errors.

### B.7.2.2 CAPITAL CHARGE FOR RISK MARGIN

The cost of capital (CoC) charge was set to 6% before tax in line with Solvency II Market Value Balance Sheet, for the calculation of the risk margin, using 100% capitalization level for risk capital.

### B.7.2.3 FOREIGN CURRENCY EXCHANGE RATES

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

**Table 32: Main exchange rates against EUR**

FX against 1.00 EUR	31.12.2019	31.12.2020
CHF	1.09	1.08
USD	1.12	1.22
CZK	25.41	26.26
HUF	330.71	362.69
PLN	4.25	4.56
THB	33.62	36.66
TWD	33.65	34.38

### B.7.2.4 NON-ECONOMIC ASSUMPTIONS

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

Best estimate assumptions are set by considering past, current and expected future experience. Future expected changes are considered 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 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.7.2.5 TAX ASSUMPTIONS

For MCEV, tax effects are aligned with the Solvency II Market Value Balance Sheet bottom-up calculation. Tax assumptions used for the calculation of VNB are set in line with accounting principles and 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. A tax impact from future new business is not allowed for. The table below shows the nominal tax rates applied for the VNB calculation.

**Table 33: Tax assumptions**

	31.12.2019	31.12.2020
Germany	31%	31%
France	28%	26%
Italy	26%	24%
USA	21%	21%
Switzerland	20%	17%

### B.7.2.6 REAL-WORLD ECONOMIC ASSUMPTIONS

The following assumptions are centrally provided:

- Risk-free yields,
- Equity returns,
- Real estate returns.

Risk-free yield-curves are the same under real-world and risk-neutral assumptions.

Reinvestment rates for all asset classes are the forward rates implied in the initial yield-curve, which means yields do not stay constant over time, but dynamically follow the forward curve.

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 below.

**Table 34: Economic assumptions for real-world projections**

	31.12.2019	31.12.2020
Equity risk premium	4.2%	4.4%
Real estate risk premium	3.7%	3.9%

# APPENDIX

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## C.1 DEFINITIONS AND ABBREVIATIONS

### BEL

Best Estimate Liabilities. Market value of the obligations of a life company to policyholders and beneficiaries.

### BUSINESS EVOLUTION

Business evolution represents the change in SCR that is attributable to business development comprising new business as well as the run-off effect on SCR from existing business.

### CO/Conso.

(The Allianz business segment) corporate and other.

### CONTRACT BOUNDARIES

Allianz calculates and publishes its MCEV results based on the Solvency II contract boundary definition. The boundary of a contract is the point at which the insurer has a unilateral contractual right to amend the premiums or the benefits payable under the contract in such a way that the premiums fully reflect the risks.

### COVERED BUSINESS

The contracts to which the MCEV calculation has been applied, in line with the MCEV Principles.

### D&A

Deduction and Aggregation.

### DAC

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 typically include commissions paid and the costs of processing proposals.

### DISTRIBUTABLE EARNINGS

The profits after tax plus changes in required capital plus interests on required capital, all based on real-world assumptions.

### EIOPA

European Insurance and Occupational Pension Authority.

### FIA

Fixed-Indexed Annuity. Annuity contract under which the policyholder can elect to be credited based on movements in equity or in bond market indices, with the principal remaining protected.

### 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).

### LOOK-THROUGH BASIS

A basis via which the impact of an action on the whole Group, rather than on a particular part of the Group, 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

Market Consistent Embedded Value. A measure of the consolidated value of shareholders' interests in the covered business. It is defined as the excess of market value of assets over market value of liabilities as of valuation date. As such, MCEV excludes any item that is not considered shareholder interest like the Going Concern Reserve and Surplus Fund.

### NBM

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 the shareholder share in initial expenses.

### NON-CONTROLLING INTERESTS

Those parts of the equity of affiliates which are not owned by companies of the Allianz Group.

### O&G

Time value of financial Options and Guarantees. The allowance made in the MCEV for the potential impact on future shareholder cash flows of all financial options and guarantees within the inforce covered business.

### OP

Operating Profit in IFRS. Earnings from ordinary activities before income taxes and non-controlling interests in earnings, excluding (if and as applicable for each business segment) all or some of the following items: income from financial assets and liabilities carried at fair value through income (net), realized gains/losses (net), impairments of investments (net), interest expenses from external debt, amortization of intangible assets, acquisition-related expenses, restructuring charges, and profit/loss of substantial subsidiaries held for sale, but not yet sold.

### OPERATING SII EARNINGS

Operating SII earnings represent the change in own funds, before tax and dividend accrual, that is attributable to the Allianz Group's ongoing core operations. As such, Operating SII earnings comprise: expected return from existing business, new business value, operating variances and changes in assumptions, and interest expense on external debt.

Operating SII earnings exclude the following effects: regulatory / model changes, economic variances driven by changes in capital market parameters, including F/X rates, taxes, non-operating restructuring charges, capital management (e.g. issuance or redemption of subordinated debt, dividend accruals and payments, share buy-back programs), one-off impacts from, e.g., the acquisition and disposal of subsidiaries, changes in transferability restrictions, and tier limits. These



effects are disclosed separately in our analysis of own funds movements.

### OWN FUNDS

Own Funds of Allianz Group, as disclosed in section A, refer to the total eligible Own Funds to meet the group SCR (including own funds from other financial sector and from the undertakings included via D&A).

### PRE-TAX OPERATING CAPITAL GENERATION

It represents the change in SII capitalization following regulatory and model changes and which is attributable to changes in own funds as a consequence of Operating SII earnings and changes in SCR as a consequence of business evolution.

Factors such as market developments, dividends, capital management activities, taxes, etc. are not considered.

### PVFP

Present Value of Future Profits. Future (statutory) shareholder profits after tax projected to emerge from operations and assets backing liabilities, including value of unrealized gains on assets backing policy reserves.

### PVNB

Present Value of New Business Premiums. The present value of future premiums on new business written during the year discounted at reference rate. It is the present value of projected new regular premiums, plus the total amount of single premiums received.

### REFERENCE RATE

A proxy for a risk-free rate appropriate to the currency term and liquidity of the liability cash flows. Based on swap rates, includes a swap credit adjustment and illiquidity premium.

### RM

Risk Margin. The cost of providing an amount of available financial resources equal to the solvency capital requirement (SCR) necessary to support the insurance and reinsurance obligations over the lifetime of those obligations. Risk margin is calculated with 6% cost of capital rate (CoC), after tax and 100% capitalization of risk capital in line with Solvency II requirements.

### SII

Solvency II.

### SII CAPITALIZATION

Ratio that expresses the capital adequacy of a company by comparing Own Funds to SCR.

### SCR

Solvency Capital Requirement. It includes capital requirements from other financial sector and from the undertakings included via D&A.

### TOTAL MCEV EARNINGS

Change in MCEV after initial adjustments and after tax, but before capital movements.

### TP

Technical Provisions. These reflect the amount that an insurer needs to hold in order to meet its expected future obligations on insurance contracts. They include stochastic best estimate liabilities and risk margin.

### UFR

Ultimate Forward Rate. The UFR is determined using the EIOPA methodology and guidelines, and is used for extrapolation of periods after the last liquid point defined by the SII regulation. The UFR is calculated for each currency based on expected real rates and inflation for the respective region. The UFR is subject to revision in order to reflect fundamental changes in long term expectations.

### UCITS

Undertakings for Collective Investment in Transferable Securities.

### VNB

Value of New Business. The additional value to shareholder created through the activity of writing new business. It is defined as present value of future profits (PVFP) after acquisition expense overrun or underderrun, minus the time value of financial option and guarantees (O&G), minus the risk margin (RM), all determined at issue date.