June 26, 2020
Meiji Yasuda Life Insurance Company

Disclosure of European Embedded Value as of March 31, 2020

Meiji Yasuda Life Insurance Company (“Meiji Yasuda Life”, President Akio Negishi) is disclosing its European Embedded Value (“EEV”) results as of March 31, 2020, calculated on the basis of the European Embedded Value Principles (“EEV Principles”) as an indicator of enterprise value.

Contents

1. Introduction

1-1. Embedded Value

An Embedded Value (EV) is the sum of the present value of expected future after-tax profits from the business in-force at the valuation date and the adjusted net worth as at the valuation date. The adjusted net worth consists of the net assets on the balance sheet with adjustments such as the addition of unrealized gains and losses on assets, and for liability items which may be considered to represent retained earnings as internal reserves.

The profit and loss patterns of life insurance policies can vary considerably depending on the underlying product features. Profits under the current Japanese statutory accounting practices represent the performance of a life insurance policy for a single accounting period. On the other hand, by considering the long term profit and loss patterns at a product level, EV includes the present value of expected future profits from the full term of in-force business. Therefore, we consider EV to be a useful supplementary measure to the statutory accounting statements.

1-2. EEV Principles

The EEV Principles and Guidance were published in May 2004 by the CFO Forum, a group representing the chief financial officers of leading European life insurers, in order to improve consistency and transparency in embedded value reporting. The CFO Forum published further guidance regarding disclosures and sensitivities in October 2005.

In May 2016, the EEV principles were amended by the CFO Forum to permit the use of projection methods and assumptions applied for market consistent solvency regimes.

1-3. EEV Methodology

The EEV of Meiji Yasuda Life has been calculated based on a market-consistent approach, while the EEV of StanCorp Financial Group (“StanCorp”) has been calculated based on a top-down approach.

A market-consistent approach is an approach where cash flows from both assets and liabilities of a company are valued consistently with comparable financial instruments traded in the market. A top-down approach is an approach where an enterprise value is calculated using a discount rate (risk discount rate) which is determined in accordance with the risk characteristics of a company, business, product or geographic region. Both approaches are permitted under the EEV Principles.

1-4. Third party review

Meiji Yasuda Life requested Willis Towers Watson, an external actuarial firm, to review Meiji Yasuda Life Group's EEV results and obtained the opinion set out in Appendix D.

2. Results

2-1. EEV results of the Group

The EEV of Meiji Yasuda Life Group as of March 31, 2020 is as follows.
The following changes have been applied to the calculation of the EEV as of March 31, 2020 and therefore, for consistent valuation, the EEV as of March 31, 2019 has been restated applying the same changes:

- The extrapolation method of risk-free rates, used in the calculation of Meiji Yasuda Life's EEV, at very long terms has been changed to a method using an ultimate forward rate. In conjunction with this, allowance has been made in the value of in-force business for the uncertainty in the realization of the ultimate forward rate.
- The balance sheet value of the net assets of Meiji Yasuda General Insurance Co., Ltd. ("Meiji Yasuda General Insurance") has been included in the EEV of Meiji Yasuda Life Group as an "Adjustment for net assets of non-covered business".

The first of the changes above, regarding the change in extrapolation methodology of risk-free rates, was applied due to a similar approach expected to be adopted in the Insurance Capital Standard (ICS) being developed by the International Association of Insurance Supervisors (IAIS), as well as a similar approach being used for EV disclosure by an increasing number of life insurance companies in Japan. This change impacts only Meiji Yasuda Life's value of in-force and has no impact on its adjusted net worth. Further, this change does not impact Stancorp's EEV.

The EEV of Meiji Yasuda Life Group as of March 31, 2020 was 4,537.0 billion yen, a decrease of 243.7 billion yen from the EEV as of March 31, 2019. The lower EEV is primarily due to a decrease in unrealized gains on domestic stock.

(Billions of yen)

	March 31, 2019 (restated)	March 31, 2020	Change
Group EEV	4,780.8	4,537.0	(243.7)
EEV of covered business	4,721.2	4,513.0	(208.1)
Adjusted net worth (ANW)	6,409.8	6,047.8	(362.0)
Value of in-force business (VIF)	(1,688.6)	(1,534.7)	153.8
Adjustment for net assets of non-covered business	59.5	23.9	(35.6)

	FY 2018	FY 2019	Change
Value of new business (VNB)	104.2	64.3	(39.9)

(*1) The Group EEV of covered business has been calculated as follows: Meiji Yasuda Life's EEV plus StanCorp's EEV less Meiji Yasuda's carrying amount of equity of StanCorp. Meiji Yasuda Life's EEV has been calculated using a market consistent approach, while StanCorp's EEV has been calculated using a top-down approach.

(*2) Meiji Yasuda Life's carrying amount of StanCorp's equity was 602.7billion yen as of March 31, 2020.

(*3) The Group EEV as of March 31, 2020 and March 31, 2019 includes StanCorp's EEV as of December 31, 2019 and December 31, 2018 respectively, in accordance with the consolidated financial statements. For details, including the valuation dates used for StanCorp's EEV, please refer to Section 1 of Appendix C.

(*4) When calculating StanCorp's adjusted net worth, the net assets of its asset management business, excluding those in the life insurance entities, and its holding company are based on US-GAAP balance sheet, while those of the remaining business are based on US statutory balance sheet. For details, please refer to Section 2 of Appendix C.

(*5) The adjustment for net assets of non-covered business comprises the balance sheet value of the net assets of Meiji Yasuda General Insurance.

(1) Adjusted net worth

The ANW represents the market value of assets (including loans, real estate, securities and other assets) in excess of policyholder liabilities, comprising policy reserves and other liabilities such as policyholders' dividend reserves, of the covered business.

The ANW consists of net assets on the balance sheet, internal reserves in liabilities which have been accumulated from past profits, unrealized gains and losses on assets and liabilities not valued at market on the statutory balance sheet, unfunded retirement benefit obligations, and other adjustments, such as the tax effects of the items described above. The components of the ANW are shown in the table below.

(Billions of yen)

	March 31, 2019	March 31, 2020	Change
ANW	6,409.8	6,047.8	(362.0)
Total net assets (*1)	1,275.7	1,353.1	77.3
Internal reserves in liabilities (after tax) (*2)	1,120.9	1,189.7	68.8
Unrealized gains/losses on securities (after tax) (*3)	4,216.5	3,671.8	(544.6)
Unrealized gains/losses on loans (after tax)	201.0	146.7	(54.3)
Unrealized gains/losses on real estate (after tax) (*4)	288.6	341.7	53.0
Unrealized gains/losses on liabilities (after tax) (*5)	(22.5)	5.8	28.3
Unfunded retirement benefit obligations (after tax) (*6)	0.3	(18.2)	(18.5)
Net assets not allocated to life insurance business (*7)	(59.5)	(23.9)	35.6
Adjustments for US statutory balance sheet (*8)	14.3	14.1	(0.1)
Adjustments for US-GAAP balance sheet (*9)	(15.8)	(16.2)	(0.3)
Adjustments on internal transactions due to timing differences of valuation dates (*10)	(7.0)	(14.1)	(7.1)
Consolidation adjustments regarding StanCorp (*11)	(602.7)	(602.7)	—

(*1) Excluding foundation funds, net unrealized gains (losses) on available-for-sale securities, land revaluation differences, and expected disbursements from capital. Although StanCorp's net assets in the consolidated balance sheet are based on US-GAAP, the net assets of StanCorp's asset management business, excluding those in the life insurance entities, and its holding company (net of investment in subsidiaries of the holding company) are based on US-GAAP balance sheet, while those of the remaining business are based on US statutory balance sheet.

(*2) Including contingency reserves, reserve for price fluctuation, the unallocated portion of policyholders' dividend reserves, and StanCorp's asset valuation reserve.

(*3) For listed domestic equities, the average market values in the month before the reporting date are used on the statutory balance sheet. For the EEV calculations, the market values at the end of valuation date are used.

(*4) For land, this is the difference between the market value and the book value before revaluation.

(*5) Unrealized gains/losses on foundation funds, subordinated bonds, foreign currency (US dollar) denominated subordinated bonds and bonds issued by StanCorp.

(*6) Unrecognized past service costs and unrecognized actuarial losses (gains).

(*7) The net asset value of Meiji Yasuda General Insurance Co., Ltd. is excluded as it is not part of the covered business. For a description of covered business, please refer to Section 1 of Appendix A.
(*8) Adjustments made for items such as StanCorp's non-admitted assets (furniture and equipment, etc.) and deferred tax assets associated with its life insurance business on US statutory balance sheet.
(*9) Adjustments made for items such as StanCorp's intangible assets and deferred tax liabilities related to the intangible assets of its asset management business, excluding those in the life insurance entities, on US-GAAP balance sheet.
(*10) Adjustments made for internal transfer of shareholder dividends between Meiji Yasuda Life and StanCorp during the period between January and March 2020.
(*11) Deduction of Meiji Yasuda Life's investment in StanCorp as reported under "Total net assets", for offset.

(2) Reconciliation between adjusted net worth and consolidated net assets

The table below reconciles the total net assets on the consolidated balance sheet and the ANW.

(Billions of yen)

	March 31, 2019	March 31, 2020	Change
Total net assets on the consolidated balance sheet (*1)	995.7	1,030.3	34.5
Addition of internal reserves in liabilities (after tax) (*2)	1,120.9	1,189.7	68.8
Addition of unrealized gains/losses (after tax) (*3)	4,674.9	4,240.4	(434.5)
Addition of net assets not allocated to life insurance business (*4)	(59.5)	(23.9)	35.6
Addition of StanCorp's unfunded retirement benefit obligations	0.1	(0.1)	(0.2)
Addition of adjustments for US statutory balance sheet (*5)	14.3	14.1	(0.1)
Addition of adjustments for US-GAAP balance sheet (*6)	(15.8)	(16.2)	(0.3)
Consolidation adjustments (*7)	33.5	3.3	(30.2)
Addition of differences between StanCorp's net assets based on its statutory accounting and US-GAAP (*8)	(354.3)	(389.7)	(35.4)
ANW	6,409.8	6,047.8	(362.0)

(*1) Excluding foundation funds, net unrealized gains (losses) on available-for-sale securities, land revaluation differences, and expected disbursements from capital.

(*2) Including contingency reserves, reserve for price fluctuation, the unallocated portion of policyholders' dividend reserves, and StanCorp's asset valuation reserve.

(*3) Unrealized gains/losses on securities, loans, and real estate, and internal reserves for liabilities.

(*4) The net asset value of Meiji Yasuda General Insurance Co., Ltd. is excluded as it is not part of the covered business. For a description of covered business, please refer to Section 1 of Appendix A.

(*5) Adjustments made for items such as StanCorp's non-admitted assets (furniture and equipment, etc.) and deferred tax assets associated with its life insurance business on US statutory balance sheet.

(*6) Adjustments made for items such as StanCorp's intangible assets and deferred tax liabilities related to the intangible assets of its asset management business, excluding those in the life insurance entities, on US-GAAP balance sheet.

(*7) Adjustments made for internal transactions within StanCorp.

(*8) The differences between net assets based on statutory accounting and US-GAAP is added because StanCorp's EEV for life insurance entities is calculated using statutory capital and surplus, while the Group's consolidated balance sheet is prepared based on StanCorp's US-GAAP balance sheet.

(3) Value of in-force business

The value of in-force business (VIF) is the present value of the future profits which are expected to emerge from the in-force business at valuation date.

The VIF is the present value of future profits, net of deductions for the time value of financial options and guarantees, the cost of holding required capital, and the allowance for non-hedgeable risks.
For the calculation as of March 31, 2020, the extrapolation method of risk-free rates, used in the calculation of Meiji Yasuda Life's EEV, at longer terms has been changed to a method using an ultimate forward rate. In conjunction with this, allowance has been made in the VIF for the uncertainty in the realization of the ultimate forward rate. For consistent valuation, the figures as of March 31, 2019 have been restated applying the same changes.
The table below shows the breakdown of the VIF among the components described above.

(Billions of yen)

	March 31, 2019 (restated)	March 31, 2020	Change
VIF	(1,688.6)	(1,534.7)	153.8
Present value of future profits	(1,363.9)	(1,189.5)	174.3
Time value of financial options and guarantees	(130.9)	(157.5)	(26.6)
Cost of holding required capital	(76.9)	(68.6)	8.2
Allowance for non-hedgeable risks	(116.8)	(118.9)	(2.0)

(*) Meiji Yasuda Life's VIF is calculated using a market consistent approach and StanCorp's VIF is calculated using a top-down approach. The market consistent approach is described in Section 3 of Appendix A, and the top-down approach is described in Section 3 of Appendix C.

(4) Value of new business

The value of new business (VNB) is the value at the point of sale of new policies acquired during the current reporting period (including net increases due to coverage revision and conversion). The same assumptions applied to the calculation of the VIF are applied to the calculation of the VNB, except that economic assumptions as at the time policy acquisition are applied in calculating the VNB for single premium individual life products and foreign currency denominated wealth accumulation whole life products.

The breakdown of the VNB is as shown in the table below.

(Billions of yen)

	FY 2018	FY 2019	Change
VNB	104.2	64.3	(39.9)
Present value of future profits	114.8	77.0	(37.8)
Time value of financial options and guarantees	(4.3)	(5.1)	(0.8)
Cost of holding required capital	(4.5)	(4.6)	(0.0)
Allowance for non-hedgeable risks	(1.6)	(2.9)	(1.2)

(*) Meiji Yasuda Life's VNB is calculated using a market consistent approach and StanCorp's VNB is calculated using a top-down approach. The market consistent approach is described in Section 3 of Appendix A, and the top-down approach is described in Section 3 of Appendix C.

The table below shows the new business margin, which is the ratio of the VNB to the present value of future premiums.

(Billions of yen)

	FY 2018	FY 2019	Change
VNB (a)	104.2	64.3	(39.9)
Present value of future premiums(b)	2,751.3	2,595.8	(155.5)
New business margin (a) / (b)	3.79%	2.48%	(1.31%)

(*) The present value of future premiums is discounted at the risk-free rate (or the risk discount rate for StanCorp) which is applied in the calculation of the VNB.

2-2. EEV results by company

(1) Meiji Yasuda Life

a. EEV results

(Billions of yen)

	March 31, 2019 (restated)	March 31, 2020	Change
EEV	4,855.0	4,570.0	(284.9)
ANW	6,753.8	6,373.4	(380.3)
Total net assets (*1)	1,032.8	1,086.7	53.9
Internal reserves in liabilities (after tax) (*2)	1,106.5	1,173.0	66.4
Unrealized gains/losses on securities (after tax) (*3)	4,216.5	3,671.8	(544.6)
Unrealized gains/losses on loans (after tax)	201.0	146.7	(54.3)
Unrealized gains/losses on real estate (after tax) (*4)	277.9	330.6	52.6
Unrealized gains/losses on liabilities (after tax) (*5)	(21.8)	6.5	28.3
Unfunded retirement benefit obligations (after tax) (*6)	0.2	(18.0)	(18.3)
Net assets not allocated to life insurance business (*7)	(59.5)	(23.9)	35.6
VIF	(1,898.7)	(1,803.3)	95.3
Certainty equivalent present value of future profits	(1,620.7)	(1,502.5)	118.2
Time value of financial options and guarantees	(126.3)	(153.6)	(27.3)
Cost of holding required capital	(34.8)	(28.2)	6.5
Allowance for non-hedgeable risks	(116.8)	(118.9)	(2.0)

(*1) Excluding foundation funds, net unrealized gains (losses) on available-for-sale securities, land revaluation differences, and expected disbursements from capital.

(*2) Including contingency reserves, reserve for price fluctuation and the unallocated portion of policyholders' dividend reserves.

(*3) For listed domestic equities, the average market values in the month before the reporting date are used on the statutory balance sheet. For the EEV calculations, the market values at the end of valuation date are used.

(*4) For land, this is the difference between the market value and the book value before revaluation.

(*5) Unrealized gains/losses on foundation funds, subordinated bonds and foreign currency (US dollar) denominated subordinated bonds.

(*6) Unrecognized past service costs and unrecognized actuarial losses (gains).

(*7) The net asset value of Meiji Yasuda General Insurance Co., Ltd. is excluded as it is not part of the covered business. For a description of covered business, please refer to Section 1 of Appendix A.

b. Value of new business

(Billions of yen)

	FY 2018	FY 2019	Change
VNB	101.6	61.5	(40.1)
Certainty equivalent present value of future profits	107.4	70.2	(37.2)
Time value of financial options and guarantees	(3.6)	(5.0)	(1.4)
Cost of holding required capital	(0.4)	(0.7)	(0.2)
Allowance for non-hedgeable risks	(1.6)	(2.9)	(1.2)

The table below shows the new business margin, which is the ratio of the VNB to the present value of future premiums.

(Billions of yen)

	FY 2018	FY 2019	Change
VNB (a)	101.6	61.5	(40.1)
Present value of future premiums(b)	2,070.8	1,801.2	(269.6)
New business margin (a) / (b)	4.91%	3.42%	(1.49%)

(*) The present value of future premiums is discounted at the risk-free rate which is applied in the calculation of the VNB.

(2) StanCorp

a. EEV results

(Billions of yen)

	December 31, 2018	December 31, 2019	Change
EEV	475.9	559.8	83.9
ANW	265.8	291.2	25.4
Total net assets (*1)	242.8	266.3	23.4
Internal reserves in liabilities (after tax) (*2)	14.3	16.7	2.3
Unrealized gains/losses on real estate (after tax)	10.7	11.0	0.3
Unrealized gains/losses on liabilities (after tax) (*3)	(0.7)	(0.6)	0.0
Unfunded retirement benefit obligations(after tax)	0.1	(0.1)	(0.2)
Adjustments for US statutory balance sheet (*4)	14.3	14.1	(0.1)
Adjustments for US-GAAP balance sheet (*5)	(15.8)	(16.2)	(0.3)
VIF	210.1	268.6	58.5
Present value of future profits (*6)	256.8	312.9	56.0
Time value of financial options and guarantees	(4.6)	(3.9)	0.7
Cost of holding required capital (*7)	(42.1)	(40.4)	1.7

(*1) Although the net assets in the consolidated balance sheet are based on US-GAAP, this is the sum of net assets based on statutory net assets of life insurance business and US-GAAP equity of asset management business, excluding those in the life insurance entities, and the holding company (net of investment in subsidiaries).

(*2) Asset valuation reserve, which is conceptually similar to reserve for price fluctuation of Meiji Yasuda Life.

(*3) Unrealized gains/losses on bonds issued by StanCorp

(*4) Adjustments made for items such as non-admitted assets (furniture and equipment, etc.) and deferred tax assets associated with the life insurance business on the US statutory balance sheet.

(*5) Adjustments made for items such as intangible assets and deferred tax liabilities related to the intangible assets of the asset management business, excluding those in the life insurance entities, on the US-GAAP balance sheet.

(*6) The present value of future profits for business valued using a top-down approach. Allowance for non-hedgeable risks is implicitly included through the risk discount rate used to discount the future profits.

(*7) The cost of holding required capital for business valued using a top-down approach.

b. Value of new business

(Billions of yen)

	From January 1, 2018 to December 31, 2018	From January 1, 2019 to December 31, 2019	Change
VNB	2.5	2.8	0.2
Present value of future profits	7.4	6.8	(0.5)
Time value of financial options and guarantees	(0.7)	(0.1)	0.6
Cost of holding required capital	(4.1)	(3.8)	0.2

The table below shows the new business margin, which is the ratio of the VNB to the present value of future premiums.

(Billions of yen)

	From January 1, 2018 to December 31, 2018	From January 1, 2019 to December 31, 2019	Change
VNB (a)	2.5	2.8	0.2
Present value of future premiums(b)	680.5	794.5	114.0
New business margin (a) / (b)	0.38%	0.36%	(0.02%)

(*) The present value of future premiums is discounted at the risk discount rate which is applied in the calculation of the VNB.

[Reference]　EEV results based on US dollar.

(Millions of USD)

	December 31, 2018	December 31, 2019	Change
EEV	4,288	5,110	822
ANW	2,395	2,658	263
Total net assets on the consolidated balance sheet	2,188	2,430	242
Internal reserves in liabilities (after tax)	129	152	23
Unrealized gains/losses on real estate (after tax)	96	101	4
Unrealized gains/losses on liabilities (after tax)	(6)	(6)	0
Unfunded retirement benefit obligations(after tax)	0	(1)	(2)
Adjustments for US statutory balance sheet	129	129	(0)
Adjustments for US-GAAP balance sheet	(143)	(148)	(5)
VIF	1,892	2,451	558
Present value of future profits	2,314	2,856	542
Time value of financial options and guarantees	(41)	(35)	5
Cost of holding required capital	(379)	(368)	10

(Millions of USD)

	From January 1, 2018 to December 31, 2018	From January 1, 2019 to December 31, 2019	Change
VNB	23	25	2
Present value of future profits	67	62	(4)
Time value of financial options and guarantees	(6)	(1)	5
Cost of holding required capital	(37)	(35)	1

3. Movement analysis

3-1. Movement analysis of the Group

(Billions of yen)

	ANW	VIF	EEV of covered business	Adjustments for non-covered business	Group EEV
EEV as of March 31, 2019	6,409.8	(1,990.1)	4,419.7	—	4,419.7
Change in extrapolation method of interest rates	—	301.4	301.4	—	301.4
Addition of net assets of non-covered business	—	—	—	59.5	59.5
Restated values as of March 31, 2019	6,409.8	(1,688.6)	4,721.2	59.5	4,780.8
(1) Adjustments to the values as of March 31, 2019	31.1	(2.7)	28.4	(35.7)	(7.3)
Shareholder dividend payments from non-covered business	34.4	—	34.4	(35.7)	(1.2)
Foreign exchange variance	(3.3)	(2.7)	(6.0)	—	(6.0)
Adjusted values as of March 31, 2019	6,441.0	(1,691.4)	4,749.6	23.8	4,773.4
(2) VNB in FY 2019	—	64.3	64.3	—	64.3
(3) Expected existing business contribution at the risk-free rate	(7.1)	3.4	(3.6)	—	(3.6)
(4) Expected existing business contribution in excess of the risk-free rate	51.0	237.2	288.2	—	288.2
(5) Expected existing business contribution (top-down approach)	1.6	25.8	27.5	—	27.5
(6) Transfers from the VIF to the ANW	(95.7)	95.7	—	—	—
Due to in-force business as of March 31, 2019	79.3	(79.3)	—	—	—
Due to new business during FY 2019	(175.1)	175.1	—	—	—
(7) Non-economic experience variances	(14.2)	(3.8)	(18.0)	—	(18.0)
(8) Non-economic assumption changes	—	(20.5)	(20.5)	—	(20.5)
(9) Economic experience variances	(332.2)	(266.5)	(598.8)	—	(598.8)
(10) Changes in net asset value of non-covered business	—	—	—	0.1	0.1

	(11) Other variances	3.4	20.9	24.3	—	24.3
EEV as of March 31, 2020		6,047.8	(1,534.7)	4,513.0	23.9	4,537.0

(1) Adjustments to the values as of March 31, 2019

This item is the sum of the following items:

- Shareholder dividend payments from Meiji Yasuda General Insurance, which is not included in the covered business, to Meiji Yasuda Life.
- Foreign exchange variance from converting StanCorp's EEV into yen.

(2) VNB in fiscal year 2019

This represents the value of new business at the point of sale for fiscal year 2019, net of the expenses incurred to acquire the new business.

(3) Expected existing business contribution at the risk-free rate

As future profits are discounted at risk-free rates in the calculation of Meiji Yasuda Life's EEV, the unwinding of the discounted value at the risk-free rate contributes to the change in the EEV in each period. This item includes the release for fiscal year 2019 of the time value of financial options and guarantees, the cost of required capital, the allowance for non-hedgeable risks, and investment earnings at the risk-free rate from assets backing the ANW.

(4) Expected existing business contribution in excess of the risk-free rate

Risk-free rates are applied to calculate the present value of future profits in Meiji Yasuda Life's EEV. However life insurance companies normally hold assets such as equities and therefore expect to earn investment returns above the risk-free rate. This item represents the expected existing business contribution in excess of the risk-free rate.

Appendix B, Section 1. (3), "Expected investment return" shows the investment returns applied in the calculation of the expected existing business contribution in excess of the risk-free rate.

(5) Expected existing business contribution (top-down approach)

As future profits are discounted at the risk discount rate in the calculation of StanCorp's EEV, the unwinding of the discounted value at the risk discount rate contributes to the change in the EEV in each period. The release of value due to the unwinding is included in this item.

For details regarding the risk discount rate, please refer to Section 5.(2) of Appendix C.

(6) Transfers from the VIF to the ANW

The expected profit arising from the in-force business during fiscal year 2019 is transferred to the

ANW. This item includes the profits expected to arise from the in-force business at March 31, 2019 as well as the profits from the new business acquired during fiscal year 2019. These transfers occur between components of the EEV and this does not impact the total EEV.

(7) Non-economic experience variances

This item represents the impact of variances between non-economic assumptions, which are applied in the calculation of the VIF as of March 31, 2019, and actual experience for fiscal year 2019.

(8) Non-economic assumptions changes

This item represents the impact of changes in non-economic assumptions from the previous year to the current year, as these assumptions changes result in changes to the projected profits after the valuation date of March 31, 2020. The primary reasons for the decrease in EEV include changes in methodology for developing non-economic assumptions, a decline in value of protection-based products due to a reduction of renewal rate assumptions, and an increase of interest spread losses on saving-based products due to a reduction of surrender rate assumptions.

(9) Economic variances

This item represents the impact of differences between actual investment returns in the period and the expected investment returns and the impact of the changes to the economic assumptions at March 31, 2020, such as changes in risk-free rates and implied volatilities.
The primary reason for the decrease in EEV was a decline in stock markets.

(10) Changes in net asset value of non-covered business

This item represents the change in the balance sheet value of the net assets of Meiji Yasuda General Insurance, excluding the shareholder dividend payments to Meiji Yasuda Life.

(11) Other variances

This item includes the impact of factors other than those stated above. For Meiji Yasuda Life, this includes the impact from refinements made to calculations of post-annuitization cash flows of products that pay out annuity benefits upon incidence of certain disabilities.

3-2. Movement analysis by company

(1) Meiji Yasuda Life

(Billions of yen)

	ANW	VIF	EEV
EEV as of March 31, 2019	6,753.8	(2,200.2)	4,553.5
Change in extrapolation method of interest rates	—	301.4	301.4
Restated values as of March 31, 2019	6,753.8	(1,898.7)	4,855.0
Shareholder dividend payments from non-covered business	34.4	—	34.4
Adjusted values as of March 31, 2019	6,788.2	(1,898.7)	4,889.5
VNB in FY 2019	—	61.5	61.5
Expected existing business contribution at the risk-free rate	(7.1)	3.4	(3.6)
Expected existing business contribution in excess of the risk-free rate	51.0	237.2	288.2
Transfers from the VIF to the ANW	(112.5)	112.5	—
Due to in-force business as of March 31, 2019	51.2	(51.2)	—
Due to new business during FY 2019	(163.8)	163.8	—
Non-economic experience variances	(29.2)	(0.8)	(30.0)
Non-economic assumption changes	—	(61.8)	(61.8)
Economic experience variances	(331.1)	(267.8)	(598.9)
Other variances	14.1	11.1	25.3
EEV as of March 31, 2020	6,373.4	(1,803.3)	4,570.0

(2) StanCorp

(Billions of yen)

	ANW	VIF	EEV
EEV as of December 31, 2018	265.8	210.1	475.9
Adjustments to the values as of December 31, 2018	(10.3)	(2.7)	(13.0)
Adjusted values as of December 31, 2018	255.5	207.3	462.8
VNB from January 1, 2019 to December 31, 2019	—	2.8	2.8
Expected existing business contribution (top-down approach)	1.6	25.8	27.5
Transfers from the VIF to the ANW	16.7	(16.7)	—
Due to in-force business as of January 1, 2019	28.1	(28.1)	—
Due to new business from January 1, 2019 to December 31, 2019	(11.3)	11.3	—
Non-economic experience variances	15.0	(2.9)	12.0
Non-economic assumption changes	—	41.2	41.2
Economic experience variances	(1.1)	1.2	0.1
Other variances	3.4	9.7	13.2
EEV as of December 31, 2019	291.2	268.6	559.8

4. Sensitivity analysis

The table below shows the results of recalculating EEV with changed assumptions. Each sensitivity shown in the table indicates the results of a single assumption change while holding other assumptions fixed. It should be noted that the sum of two or more impacts in the table may not produce the same impact as would result from the simultaneous application of the corresponding assumption changes.

4-1. Sensitivity of the Group EEV

a. EEV sensitivity

(Billions of yen)

	EEV	Change in EEV from base case
Base case: EEV as of March 31, 2020	4,537.0	―
Sensitivity 1: 50 bps increase in the risk-free rate	5,028.0	491.0
Sensitivity 2: 50 bps decrease in the risk-free rate	3,875.0	(661.9)
Sensitivity 3: 10% immediate decline in stock and real estate values	4,203.2	(333.7)
Sensitivity 4: 10% decrease in maintenance expenses	4,682.5	145.5
Sensitivity 5: 10% decrease in surrender and lapse rates	4,645.2	108.2
Sensitivity 6: 5% decrease in mortality and morbidity for life insurance products	4,709.5	172.5
Sensitivity 7: 5% decrease in mortality for annuity products	4,506.9	(30.0)
Sensitivity 8: Required capital set to the statutory minimum level	4,577.9	40.9
Sensitivity 9: 25% increase in the implied volatilities of stock and real estate	4,505.0	(31.9)
Sensitivity 10: 25% increase in the implied volatilities of swaptions	4,504.9	(32.0)
Sensitivity 11: 50 bps increase in the risk discount rate	4,521.1	(15.8)
Sensitivity 12: 50 bps decrease in the risk discount rate	4,554.0	17.0
Sensitivity 13: 50bps increase in expected investment yields for stock and real estate	4,539.5	2.5

(*) Considering its impact on the Group EEV's sensitivities, "adjustment for net assets of non-covered business" is excluded from the sensitivity analysis and is assumed to be unchanged.

Sensitivity 1
Sensitivity 1 is the effect on EEV of an upward parallel shift of 50 bps to risk-free forward rates.

For StanCorp, this sensitivity is the effect on EEV of re-setting expected investment yields and risk discount rates in an economic environment where risk-free rates have increased by 50 bps.

The ultimate forward rate of Meiji Yasuda stays at the same level as the base scenario in order to calculate the impact of this sensitivity (the same applies to Sensitivity 2).

Sensitivity 2
Sensitivity 2 is the effect on EEV of a downward parallel shift of 50 bps to risk-free forward rates.

For StanCorp, this sensitivity is the effect on EEV of re-setting expected investment yields and risk discount rates in an economic environment where risk-free rates have decreased by 50 bps.

Sensitivity 3
Sensitivity 3 is the effect on EEV of a 10% immediate decline in stock and real estate values.

Sensitivity 4
Sensitivity 4 is the effect on EEV of a 10% decrease in the assumed expenses associated with maintaining the business.

Sensitivity 5
Sensitivity 5 is the effect on EEV of a 10% decrease in the assumed surrender and lapse rates.

Sensitivity 6
Sensitivity 6 is the effect on EEV of a 5% decrease in the assumed mortality and morbidity rates for life, accident and health, and medical insurance products.

Sensitivity 7
Sensitivity 7 is the effect on EEV of a 5% decrease in the assumed mortality rates for annuities.

Sensitivity 8
Sensitivity 8 is the effect on EEV of a change in the required capital level to the statutory minimum

in Japan for Meiji Yasuda Life and to the statutory minimum in the United States for StanCorp. In Japan, the statutory minimum is a Solvency Margin Ratio of 200%. In the United States, the statutory minimum is the level required to maintain 100% of NAIC's Company Action Level Risk-Based Capital ("RBC"), which is the level of capital below which an insurer must submit a capital improvement plan to the regulator.

Sensitivity 9

Sensitivity 9 is the effect on EEV of a 25% increase in the implied volatilities of stock and real estate. The VIF changes in this sensitivity as a result of the change in the time value of financial options and guarantees due to the change in implied volatilities.

Sensitivity 10

Sensitivity 10 is the effect on EEV of a 25% increase in the implied volatilities of swaptions. The VIF changes in this sensitivity as a result of the change in the time value of financial options and guarantees changes due to the change in implied volatilities.

Sensitivities 11 to 13 are only applicable to StanCorp's EEV calculated using a top-down approach.

Sensitivity 11

Sensitivity 11 is the effect on EEV of an upward parallel shift of 50 bps in the risk discount rate for StanCorp's business.

Sensitivity 12

Sensitivity 12 is the effect on EEV of a downward parallel shift of 50 bps in the risk discount rate for StanCorp's business.

Sensitivity 13

Sensitivity 13 is the effect on EEV of an upward shift of 50 bps in the investment yields of stock and real estate for StanCorp's business.

The table below shows the impact on the ANW of sensitivities 1 to 3, 11 and 12 above. For the remaining sensitivities above, there is no impact on the ANW.

(Billions of yen)

	Change
Sensitivity 1: 50 bps increase in the risk-free rate	(965.9)
Sensitivity 2: 50 bps decrease in the risk-free rate	1,036.8

Sensitivity 3: 10% immediate decline in stock and real estate values	(335.7)
Sensitivity 11: 50 bps increase in risk discount rate	0.0
Sensitivity 12: 50 bps decrease in risk discount rate	(0.0)

b. Sensitivity of the value of new business

(Billions of yen)

	VNB	Change
Base case: VNB for FY 2019	64.3	―
Sensitivity 1: 50 bps increase in the risk-free rate	76.6	12.3
Sensitivity 2: 50 bps decrease in the risk-free rate	49.8	(14.4)
Sensitivity 3: 10% immediate decline in stock and real estate values	64.3	0.0
Sensitivity 4: 10% decrease in maintenance expenses	72.1	7.7
Sensitivity 5: 10% decrease in surrender and lapse rates	76.5	12.1
Sensitivity 6: 5% decrease in mortality and morbidity for life insurance products	72.9	8.6
Sensitivity 7: 5% decrease in mortality for annuity products	64.3	0.0
Sensitivity 8: Required capital set to the statutory minimum level	64.6	0.3
Sensitivity 9: 25% increase in the implied volatilities of stock and real estate	64.0	(0.2)
Sensitivity 10: 25% increase in the implied volatilities of swaptions	62.4	(1.9)

(*)Sensitivity of the VNB for StanCorp is not included in each sensitivity above, considering its materiality to the VNB for the Group. StanCorp's VNB is assumed to be unchanged in each sensitivity.

4-2. Sensitivity of the EEV by company

(1) Meiji Yasuda Life

a. EEV Sensitivity

(Billions of yen)

Assumptions	EEV	Change in EEV from base case
Base case: EEV as of March 31, 2020	4,570.0	—
Sensitivity 1: 50 bps increase in the risk-free rate	5,063.8	493.7
Sensitivity 2: 50 bps decrease in the risk-free rate	3,906.3	(663.7)
Sensitivity 3: 10% immediate decline in stock and real estate values	4,244.3	(325.7)
Sensitivity 4: 10% decrease in maintenance expenses	4,700.2	130.1
Sensitivity 5: 10% decrease in surrender and lapse rates	4,662.0	92.0
Sensitivity 6: 5% decrease in mortality and morbidity for life insurance products	4,716.8	146.7
Sensitivity 7: 5% decrease in mortality for annuity products	4,540.2	(29.8)
Sensitivity 8: Required capital set to the statutory minimum level	4,585.7	15.6
Sensitivity 9: 25% increase in the implied volatilities of stock and real estate	4,538.1	(31.9)
Sensitivity 10: 25% increase in the implied volatilities of swaptions	4,539.3	(30.7)

The table below shows the impact on the ANW of sensitivities 1 to 3 above. For the remaining sensitivities above, there is no impact on the ANW.

(Billions of yen)

Assumptions	Change
Sensitivity 1: 50 bps increase in the risk-free rate	(964.4)
Sensitivity 2: 50 bps decrease in the risk-free rate	1,035.2
Sensitivity 3: 10% immediate decline in stock and real estate values	(333.5)

b. Sensitivity of the value of new business

(Billions of yen)

Assumptions	VNB	Change
Base case: VNB for FY 2019	61.5	—
Sensitivity 1: 50 bps increase in the risk-free rate	73.8	12.3
Sensitivity 2: 50 bps decrease in the risk-free rate	47.0	(14.4)
Sensitivity 3: 10% immediate decline in stock and real estate values	61.5	0.0
Sensitivity 4: 10% decrease in maintenance expenses	69.3	7.7
Sensitivity 5: 10% decrease in surrender and lapse rates	73.7	12.1
Sensitivity 6: 5% decrease in mortality and morbidity for life insurance products	70.1	8.6
Sensitivity 7: 5% decrease in mortality for annuity products	61.5	0.0
Sensitivity 8: Required capital set to the statutory minimum level	61.8	0.3
Sensitivity 9: 25% increase in the implied volatilities of stock and real estate	61.2	(0.2)
Sensitivity 10: 25% increase in the implied volatilities of swaptions	59.6	(1.9)

(2) StanCorp

a. EEV Sensitivity

(Billions of yen)

Assumptions	EEV	Change in EEV from base case
Base case: EEV as of December 31, 2019	559.8	—
Sensitivity 1: 50 bps increase in the risk-free rate	557.2	(2.6)
Sensitivity 2: 50 bps decrease in the risk-free rate	561.6	1.7
Sensitivity 3: 10% immediate decline in stock and real estate values	551.8	(8.0)
Sensitivity 4: 10% decrease in maintenance expenses	575.2	15.3
Sensitivity 5: 10% decrease in surrender and lapse rates	576.1	16.2
Sensitivity 6: 5% decrease in mortality and morbidity for life insurance products	585.6	25.7
Sensitivity 7: 5% decrease in mortality for annuity products	559.7	(0.1)
Sensitivity 8: Required capital set to the statutory minimum level	585.1	25.2
Sensitivity 9: 25% increase in the implied volatilities of stock and real estate	559.8	—
Sensitivity 10: 25% increase in the implied volatilities of swaptions	558.6	(1.2)
Sensitivity 11: 50 bps increase in risk discount rate	543.9	(15.8)
Sensitivity 12: 50 bps decrease in risk discount rate	576.9	17.0
Sensitivity 13: 50 bps increase in expected investment yields for stock and real estate	562.4	2.5

The sensitivities above include both the impact on the ANW and the VIF. The table below shows the impact on the ANW of sensitivity 1, 2, 3, 11 and 12. For the remaining sensitivities above, there is no impact on the ANW.

(Billions of yen)

Assumptions	Change
Sensitivity 1: 50 bps increase in the risk-free rate	(1.5)
Sensitivity 2: 50 bps decrease in the risk-free rate	1.6
Sensitivity 3: 10% immediate decline in stock and real estate values	(2.1)
Sensitivity 11: 50 bps increase in risk discount rate	0.0
Sensitivity 12: 50 bps decrease in risk discount rate	(0.0)

b. Sensitivity of the value of new business

Sensitivity of the VNB for StanCorp is not included, considering its materiality to the VNB for the Group.

5. Note on the use of results

The calculation of the results in this report involves the use of assumptions regarding the future which are uncertain. It should be recognized that actual future experience may differ significantly from the assumptions employed. Also, no allowance has been made in EEV for the potential impact from the COVID-19*.
Therefore, caution is recommended in the use of the results in this report.

(*) the coronavirus outbreak named as COVID-19 by the World Health Organisation on 11 February 2020.

Appendix A: Methodology

The methodology and assumptions adopted by Meiji Yasuda Life Group to calculate the EEV of its life insurance business at the end of March 2020 are in accordance with the EEV Principles and Guidance issued by the European Insurance CFO Forum.

The EEV metric is typically applied to public companies. While Meiji Yasuda Life is a mutual company, we have applied similar assumptions to those which would be applied by a public company. In particular, the after-tax surplus after paying policyholders' dividends calculated in a manner consistent with current practice is treated as belonging to the company. Further, although statutory financial reporting for mutual companies classifies foundation funds as net assets, we treat foundation funds as liabilities for the purpose of EEV calculation because these funds must ultimately be repaid to contributors.

1. Covered business

The covered business is defined as the contracts to which the EV methodology has, in line with the EEV Principles, been applied. The following outlines the details of the treatment of the covered business of the Group.

- Meiji Yasuda Life
  The covered business is all life insurance business of Meiji Yasuda Life. Meiji Yasuda General Insurance Co., Ltd., a subsidiary operating non-life business, is not included in the EEV calculation.

- StanCorp (wholly-owned subsidiary)
  The EEV of StanCorp's life insurance business and asset management business is calculated using a top-down approach and is included in the Group EEV. Please refer to Appendix C for the methodology and assumptions employed.

- Pacific Guardian Life Insurance Company (wholly-owned subsidiary)
  The balance sheet value of Pacific Guardian Life Insurance Company has been included in the ANW as a proxy for its market value, as its contribution to the total EEV is limited.

- Other subsidiaries and affiliated companies
  The balance sheet values of other subsidiaries and affiliated companies have been included in the ANW as a proxy for their market values as their contribution to the total EEV is limited. A look-through adjustment for subsidiaries and affiliated companies is applied in all respects material to the total EEV, such that profits and losses incurred in transactions by subsidiaries and affiliated companies are reflected in the EEV calculation to the extent that these transactions are related to the covered business.

Meiji-Yasuda General Insurance Co., Ltd. is not included in the covered business. However, the balance sheet value of its net assets is included in the Group EEV as an “adjustment for net assets of non-covered business”.

2. Adjusted net worth (Meiji Yasuda Life)

The ANW is calculated by making the adjustments described below to the total net assets on the balance sheet. Free surplus is defined as the ANW less required capital.

Expected disbursements outside the company from surplus and foundation funds to be repaid to contributors are excluded from the ANW. Liability items which are treated as internal reserves for the EEV calculation (contingency reserves, reserve for price fluctuation, the unallocated portion of policyholders’ dividend reserves and general allowance for possible loan losses) have been added to the ANW on an after-tax basis. Assets and liabilities which are not held at market value on the balance sheet, such as held-to-maturity debt securities and policy-reserve-matching bonds, loans, real estate, and loans payable, are valued at market for the purpose of the EEV calculation, and differences between the market and book values of these assets and liabilities have been included in the ANW on an after-tax basis. Adjustments for unrecognized past service costs and unrecognized actuarial losses (gains) for unfunded retirement benefit obligations are made to the ANW on an after-tax basis. These adjustments may be positive or negative depending on the asset and liability position of the retirement benefit funds.

3. Value of in-force business (Meiji Yasuda Life)

The VIF is calculated as the certainty equivalent present value of future profits net of deductions for the time value of financial options and guarantees, the cost of holding required capital and the allowance for non-hedgeable risks.

(1) Certainty equivalent present value of future profits

The certainty equivalent present value of future profits is the present value of projected future after-tax profits without consideration of elements which are asymmetric with respect to changes in economic assumptions. It is calculated using risk-free rates for the investment yields of all assets and for the discount rates.

The certainty equivalent present value of future profits reflects the intrinsic value of financial options and guarantees, such as policyholders' dividends, but does not include the time value of financial options and guarantees which is calculated separately.

(2) Time value of financial options and guarantees

A variety of financial options and guarantees embedded in insurance contracts may have asymmetric impacts on future profits depending on underlying economic assumptions. The value of financial options and guarantees is calculated using a stochastic approach based on economic assumptions consistent with the market value of traded options.

The time value of financial options and guarantees is calculated as the difference between the certainty equivalent present value of the future profits and the average of the present value of the future profits calculated using the stochastic approach.

Meiji Yasuda Life considered the options and guarantees listed below in calculating the time value of financial options and guarantees. The future asset mix is assumed to be the same as the asset mix at the valuation date, and no changes in investment strategy and management actions in the future are assumed.

Participating policy dividends

For participating business, policyholders receive dividends should surplus emerge. However, if losses emerge, the policyholders' liabilities are limited to paying premiums and no additional costs are charged to the policyholders. The cost of policyholder dividends is calculated by allowing for such dividends being determined from future cash flows and financial positions projected using a stochastic approach.

Variable product minimum guarantees

For variable products with minimum guarantees, the benefits of investment performance on the underlying fund above the minimum guarantee level belong to the policyholder. The company is responsible for the cost of the difference between the minimum guarantee benefits and the fund value if fund performance is unfavorable. The cost of the minimum guarantee benefits is calculated using a stochastic approach.

Interest-rate-sensitive-product minimum guaranteed crediting rates

For interest-rate-sensitive products, the crediting rate changes depending on the underlying market environment, and the company is responsible for the cost of maintaining the minimum guaranteed crediting rate if market interest rates decline below the level of the minimum guarantee. The cost of the minimum guarantee is calculated using a stochastic approach.

Policyholder behavior

Policyholders have the right to surrender their life insurance policies voluntarily. Surrender behavior which depends dynamically on economic assumptions such as interest rates is assumed for the EEV calculation. The cost associated with such policyholder behavior is calculated using a stochastic approach by allowing for dynamic policyholder behavior in the projection models.

(3) Cost of holding required capital

A life insurance company is required to hold capital above the level of statutory liabilities in order to maintain its financial soundness. The cost of holding required capital is defined as the present value of the sum of taxes on the investment income on assets backing the required capital, and the costs of management of the assets backing the required capital.

The EEV Principles stipulate that the required capital must be at least the level of the statutory minimum capital requirement and may include amounts required to meet internal objectives. Meiji Yasuda Life defines required capital for calculation of the cost of holding required capital as the level of capital needed to maintain a 350% regulatory solvency margin ratio. The required capital as of the end of March 2019 was 1,470.1 billion yen, and the required capital as of the end of March 2020 was 1,511.5 billion yen.

(4) Allowance for non-hedgeable risks

The EEV Principles require that sufficient allowance be made for aggregate risks in the covered business for calculations of EEV. We consider that the majority of risks to profits are diversifiable. For example, for a risk such as fluctuation in mortality experience for which the best estimate assumptions employed for the calculations of the certainty equivalent present value of future profits produce the expected average value of profit, no additional adjustments should be required.

On the other hand, some risks, such as operational risk and pandemic risk, are not reflected in the best estimate assumptions applied and are not captured in the calculation of the certainty equivalent present value of future profits.

Further, tax is paid when profits arise, while tax is not paid when losses occur in a certain reporting period. Tax-basis losses can be carried forward and utilized to offset future profits. However, as the period over which losses can be carried forward is limited, there is a risk that the company will not be able to fully utilize benefits from losses carried forward. In addition, there is a risk of uncertainty regarding the use of the risk-free rate at very long terms due to low market liquidity at these terms.

Meiji Yasuda Life quantifies the non-hedgeable risks described above using simplified models.

4. Value of new business (Meiji Yasuda Life)

The VNB represents the present value of the future after-tax profits, net of deductions for the time value of financial options and guarantees, as well as the cost of holding required capital, for the new business at the point of acquisition during fiscal year 2019. Acquisition costs and commissions are reflected in the VNB.

The same assumptions applied to the calculation of the VIF are applied to the calculation of the VNB, except that economic assumptions as at policy acquisition are applied in calculating the VNB for single premium whole life products.

For individual business, new policies (including future renewals) and net increases of policies due to coverage revision and conversion are included in the VNB, while renewals of existing policies and rider additions after issue are not included. For group business, new business and increases in the company’s share of co-managed policies are included in the VNB.

Appendix B: Principal Assumptions (Meiji Yasuda Life)

1. Economic assumptions

(1) Risk-free rate

- Reference rate
  The Japanese government bond, US treasury and Australian government bond yields at the valuation date are used as the reference rate.
- Extrapolation method
  For JPY, USD and AUD, the ultimate forward rate of the yield curve is set at 3.8% and the last liquid data point is set at the 30th year. Beyond the 30th year, the forward rates are extrapolated to the ultimate forward rate over a convergence period of 30 years using the Smith-Wilson method.

Term	JPY		USD		AUD	
	March 31, 2019	March 31, 2020	March 31, 2019	March 31, 2020	March 31, 2019	March 31, 2020
1 year	-0.178%	-0.146%	2.388%	0.251%	1.546%	0.180%
2 year	-0.183%	-0.135%	2.263%	0.248%	1.456%	0.250%
3 year	-0.195%	-0.111%	2.205%	0.312%	1.387%	0.236%
4 year	-0.211%	-0.094%	2.213%	0.367%	1.378%	0.259%
5 year	-0.202%	-0.093%	2.235%	0.423%	1.430%	0.338%
10 year	-0.081%	0.005%	2.416%	0.750%	1.798%	0.774%
15 year	0.165%	0.280%	2.544%	0.937%	2.044%	1.191%
20 year	0.358%	0.331%	2.682%	1.178%	2.304%	1.626%
25 year	0.492%	0.386%	2.806%	1.293%	2.470%	1.797%
30 year	0.538%	0.442%	2.906%	1.408%	2.573%	1.911%
40 year	1.029%	0.964%	3.076%	1.811%	2.788%	2.228%
50 year	1.542%	1.490%	3.208%	2.179%	2.973%	2.517%

Sources: Analysis of Ministry of Finance data and Bloomberg data

(2) Principal stochastic assumptions

a. Interest rate model

The interest rate model projects interest rates for the Japanese yen (JPY), the US dollar (USD), the euro (EUR), the pound sterling (GBP), and the Australian dollar (AUD). The model uses a risk-neutral approach with the Japanese yen as the base currency, and correlations between interest rate processes of different currencies have been taken into account. The interest rate model has been calibrated according to the market environment at each reporting date, and the parameters used are estimated from the market yield curve and the implied volatilities of interest rate swaptions with various maturities and underlying swap terms. A set of 5,000 scenarios is produced for the stochastic calculation of the time value of financial options and guarantees. The scenario set has been generated by Willis Towers Watson.

The table below summarizes the implied volatilities of interest rate swaptions used to calibrate scenarios.

Swaption implied volatility

		Implied volatility									
		March 31, 2019					**March 31, 2020**				
Option Term	**Swap Term**	**JPY**	**USD**	**AUD**	**EUR**	**GBP**	**JPY**	**USD**	**AUD**	**EUR**	**GBP**
		bps	%	%	bps	bps	bps	%	%	bps	bps
5 year	5 year	20.7	29.8	26.3	47.9	63.0	21.5	76.7	51.4	54.5	58.3
5 year	7 year	21.8	28.6	25.0	48.2	61.6	22.4	75.3	49.2	56.8	59.5
5 year	10 year	23.6	24.7	23.6	48.5	60.0	23.5	77.2	50.1	59.3	61.5
7 year	5 year	24.2	27.8	24.0	51.8	63.5	22.2	69.9	45.4	56.4	59.2
7 year	7 year	25.0	27.4	23.2	51.7	62.0	23.1	70.8	45.7	57.6	59.8
7 year	10 year	25.9	26.8	22.1	51.3	60.1	24.6	76.1	47.2	58.9	61.2
10 year	5 year	28.0	25.5	22.2	54.5	63.3	24.0	66.4	48.5	57.4	59.9
10 year	7 year	28.8	25.8	21.5	54.2	62.0	24.7	62.3	47.9	58.2	60.1
10 year	10 year	29.1	25.2	20.5	53.6	59.9	26.6	75.4	49.2	58.8	60.5

Source: Analysis of Bloomberg data

b. Implied volatilities of stocks and currencies

Volatilities of major stock indices and currencies are calibrated based on the implied volatilities of options traded in the market. The table below summarizes the implied volatilities used to calibrate the scenarios.

Stock option implied volatility

Currency	Underlying Index	Option Term	Volatility	
			March 31, 2019	March 31, 2020
JPY	Nikkei 225	3 year	17.8%	21.5%
		4 year	17.9%	20.9%
		5 year	17.9%	20.6%
USD	S&P 500	3 year	17.4%	23.2%
		4 year	18.0%	22.9%
		5 year	18.5%	23.1%
AUD	S&P ASX 200	3 year	13.2%	24.2%
		4 year	13.3%	22.8%
		5 year	13.5%	21.9%
EUR	EuroStoxx 50	3 year	15.4%	21.9%
		4 year	15.7%	21.2%
		5 year	15.8%	21.0%
GBP	FTSE 100	3 year	14.4%	20.6%
		4 year	14.5%	19.8%
		5 year	14.6%	19.1%

Source: Analysis of Markit data

Currency Options

Currency	Option Term	Volatility	
		March 31, 2019	March 31, 2020
USD	10 year	10.8%	8.7%
AUD	10 year	15.6%	13.8%
EUR	10 year	11.0%	8.1%
GBP	10 year	12.6%	12.8%

Source: Bloomberg

c. Correlations

In addition to the calibration of volatilities described above, Meiji Yasuda Life has calculated certain volatilities reflecting the mix of assets in its asset portfolio and correlations between asset classes. The asset mix is assumed not to change over the projection period.

There are insufficient market data for exotic options with adequate liquidity to calibrate correlations. Therefore correlation factors are estimated based on monthly historical market data from end-March 2010 to end-March 2020. The table below shows the derived correlation factors between major variables.

Correlations (%)

	JPY 10 year interest rate	USD 10 year interest rate	AUD 10 year interest rate	EUR 10 year interest rate	GBP 10 year interest rate	USD-JPY	AUD-JPY	EUR-JPY	GBP-JPY	Nikkei 225	S&P 500	S&P ASX 200	EuroStoxx 50	FTSE 100
JPY 10 year Interest rate	100	51	41	52	47	43	18	31	38	35	13	-8	13	0
USD 10 year Interest rate	51	100	76	75	79	45	47	54	54	54	50	31	43	35
AUD 10 year Interest rate	41	76	100	69	73	37	56	55	49	47	38	16	35	28
EUR 10 year Interest rate	52	75	69	100	83	26	42	58	45	35	33	10	28	20
GBP 10 year Interest rate	47	79	73	83	100	33	37	55	53	42	32	17	28	11
USD-JPY	43	45	37	26	33	100	48	64	72	62	24	16	30	14
AUD-JPY	18	47	56	42	37	48	100	75	67	68	69	45	55	56
EUR-JPY	31	54	55	58	55	64	75	100	80	61	51	31	44	36
GBP-JPY	38	54	49	45	53	72	67	80	100	72	51	33	50	24
Nikkei 225	35	54	47	35	42	62	68	61	72	100	70	53	68	54
S&P 500	13	50	38	33	32	24	69	51	51	70	100	70	77	78
S&P ASX 200	-8	31	16	10	17	16	45	31	33	53	70	100	67	70
EuroStoxx 50	13	43	35	28	28	30	55	44	50	68	77	67	100	78
FTSE 100	0	35	28	20	11	14	56	36	24	54	78	70	78	100

Source: Analysis of Bloomberg data and Ministry of Finance data

(3) Expected investment return

A total assumed annualized investment return of 0.9% (total of risk-free rates and excess return over the risk-free rate) is used for the calculation of the expected existing business contribution in Section “3. Movement Analysis.”

The table below shows the assumed investment return on major asset classes.

Asset class	Assumed investment return
Cash	(0.1%)
Fixed income	0.2%
Domestic stocks	6.5%
Foreign bonds	1.1%
Total	0.9%

2. Non-economic assumptions

Premiums, operating expenses, insurance benefits and claims, surrender benefits, tax, and other cash flows are projected based on best estimate assumptions set for each product type, considering past and recent experience and expected future experience.

Operating expenses

- Operating expense assumptions are derived based on Meiji Yasuda Life’s experience, and assumed future expense improvement is not reflected. The future inflation rate is assumed to be zero.
- A look-through adjustment for subsidiaries and affiliated companies is applied in all respects material to the total EEV.

Policyholders’ dividends

Policyholders’ dividend rates are set based on current dividend policy, and the projected dividend rate is dynamically linked to each market-consistent risk neutral scenario.

Effective tax rate

The effective corporate tax rate is set to 27.96%.

Appendix C: Methodology and assumptions for StanCorp

1. Valuation date

StanCorp's EEV is calculated as of December 31, 2019, in accordance with the consolidated financial statements.

2. Adjusted Net Worth

The starting point for the ANW is the statutory capital and surplus of the life insurance business and the US-GAAP equity of asset management businesses, excluding those in the life insurance entities, and the holding company (net of investment in subsidiaries).

Liabilities that are appropriate to be added back into the adjusted net worth have been included. The asset valuation reserve is a required liability in the statutory balance sheet of U.S. life insurance companies. However, the asset valuation reserve is regarded as allocated surplus and is included in ANW.

Additional adjustments for the life insurance business include addition of assets which have a certain economic value but which are not recorded on the statutory balance sheet (furniture and equipment, etc.) and adjustments for deferred tax assets on the statutory balance sheet, pension obligations, off balance sheet items and tax advantaged investments. For the asset management businesses, excluding those in the life insurance entities, and the holding company, additional adjustments include deduction of assets on the US-GAAP balance sheet without economic value (intangible assets), deferred tax assets related to the intangible assets, and assets that have their economic value reflected in the VIF.

3. Value of inforce business

The VIF is calculated as the present value of future profits net of deductions for the time value of financial options and guarantees, as well as the cost of holding required capital.

(1) Present value of future profits

The present value of future profits is the after-tax statutory profits of covered business based on projected cash flows calculated on a deterministic basis, and discounted at an appropriate risk

discount rate. Future renewals of group insurance business are also included. Investment cash flows are calculated based on economic assumptions, on asset data and on the expected reinvestment strategy as of December 31, 2019.

Please refer to “5. Economic assumptions and risk discount rate” for details of the risk discount rate and the economic assumptions used to derive the investment cash flows.

(2) Time value of financial options and guarantees

When calculating EEV using a top-down approach, the time value of options and guarantees is often calculated using real-world scenarios. However, for StanCorp, the time value of financial options and guarantees has been calculated using risk-neutral scenarios. The time value of options and guarantees is calculated as the difference between the deterministic present value of future profits and the average of the present value of future after-tax profits calculated using stochastic methods. The options and guarantees listed below were considered in calculating the time value of financial options and guarantees.

Minimum guaranteed crediting rates

For individual and group annuity products, crediting rates change depending on the underlying market environment, subject to contractual minimum guaranteed crediting rates. The company is responsible for costs associated with the minimum guaranteed crediting rate. The cost of the minimum guarantee is calculated using a stochastic approach.

Policyholder behavior

Individual annuity policyholders have the right to surrender their policies voluntarily. Surrender charges and or market value adjustments may be imposed. Group annuity contract-holders and participants are able to voluntarily change contribution and withdrawal amounts and such contract-holder initiated withdrawals are subject to contractual market value adjustments. For certain individual and group annuity products, the cost associated with such policyholder behavior is calculated using a stochastic approach. This approach allows for dynamic policyholder behavior dependent on prevailing market conditions, such as interest rate levels, in the projection models.

(3) Cost of holding required capital

The cost of holding required capital is a spread between the after-tax net investment yield and the risk discount rate for holding the required capital.

StanCorp defines required capital as the level required to maintain 325% of NAIC's Company Action Level RBC for most of its businesses. The statutory minimum is the level required to maintain 100% of NAIC's Company Action Level RBC, which is the level of capital below which an insurer must submit a capital improvement plan to the regulator.

4. Value of new business

The VNB is calculated as the present value of future after-tax profits, net of deductions for the time value of financial options and guarantees, as well as the cost of holding required capital, for the new business issued between January 1 and December 31, 2019, at the point of acquisition. In general the same assumptions applied to the calculation of the VIF are applied to the calculation of the VNB, although certain non-economic assumptions, such as acquisition expenses and commissions, that are specific to new business, were reflected. In order to reflect circumstances at policy acquisition, the assumptions as of June 30, 2019 are applied in calculating the VNB for policies acquired on or before June 30, 2019.

New policies (including future renewals) and certain increases in coverage on existing policies are included in the VNB, while renewals of existing policies are not included.

5. Economic assumptions and risk discount rate

(1) Economic assumptions

a. Risk-free rate

The risk-free rate used in the calculation of the present value of future profits is based on the USD swap yield curve.

The table below shows the risk-free rates (bond equivalent yield).

Term	December 31, 2018	December 31, 2019
1 year	2.76%	1.76%
2 year	2.66%	1.71%
3 year	2.60%	1.69%
5 year	2.58%	1.73%
10 year	2.71%	1.89%
20 year	2.84%	2.06%
30 year	2.83%	2.09%

Source: Thomson Reuters

b. Stochastic interest rate assumptions

A set of 1,000 scenarios is produced for the stochastic calculation of the time value of financial options and guarantees, and cost of required capital for certain products. The interest rate model projects interest rates for the USD using a risk-neutral approach. The model has been calibrated according to the market environment as of the valuation date, and the parameters used are estimated from the market yield curve and the implied volatilities of interest rate swaptions with various maturities and underlying swap terms. The scenario set has been generated by an economic scenario generator provided by Moody's Analytics.

The table below summarizes the implied volatilities of interest rate swaptions, used to calibrate scenarios. The implied volatilities as of December 31, 2019 are calculated using a model that assumes the underlying swap rate changes exhibit a normal distribution.

	December 31, 2018		December 31, 2019	
Swap Term	5 year	10 year	5 year	10 year
Option Term				
5 year	0.79%	0.74%	0.64%	0.62%
7 year	0.76%	0.72%	0.63%	0.61%
10 year	0.72%	0.67%	0.61%	0.59%

Source: Super Derivatives

c. Expected investment yield

Projected investment cash flows are based on the existing asset portfolio and reinvestment assets consistent with the economic environment as of December 31, 2019. The reinvestment strategy is determined consistent with StanCorp's investment practice.
Key assumptions for the investment cash flows include risk-free rates, credit spreads, net default costs, and investment expenses. Initial asset yields are based on actual invested assets and statutory book yields as of December 31, 2019.

The table below shows the initial asset yield of general account fixed income assets.

Asset Class	**December 31, 2018**		**December 31, 2019**	
	Percentage of Existing Portfolio	**Annual Effective Gross Yield**	**Percentage of Existing Portfolio**	**Annual Effective Gross Yield**
Bonds*	50%	3.86%	52%	3.71%
Mortgages	42%	5.05%	40%	5.00%
Structured Securities	7%	4.26%	8%	3.56%
Short Term Deposits	1%	1.78%	-	-
Total Fixed Income Assets	100%	4.36%	100%	4.20%

** Combined with interest rate swap hedges*

Credit spreads to determine reinvestment yields are based on market spreads as of December 31, 2019, and grade to ultimate credit spreads. The ultimate credit spreads are determined by asset type, maturity, and rating, based on historical studies.

The table below shows the modeled reinvestment spreads for bonds and mortgages.

(bps)

	December 31, 2018				December 31, 2019			
	Bonds*		Mortgages		Bonds*		Mortgages	
Term	Initial	Ultimate	Initial	Ultimate	Initial	Ultimate	Initial	Ultimate
3 year	53	51	223	248	19	65	226	293
5 year	71	71	229	245	34	84	255	271
7 year	86	84	233	242	50	99	240	253
10 year	100	96	234	252	69	112	241	227
20 year	136	112	248	350	122	137	256	267
30 year	146	132	273	458	128	151	267	303

** Weighted average of different ratings*

Net credit default costs for both the existing asset and reinvested assets are based on historical default rates net of recoveries, set by asset type, duration, and rating.

The table below shows the modeled net credit default costs for bonds and mortgages

(bps)

	December 31, 2018				December 31, 2019			
	Bonds			Mortgages	Bonds			Mortgages
Duration	AA	A	BBB		AA	A	BBB	
1 year	3.6	5.5	17.7	0.2	0.9	4.6	12.2	0.3
3 year	8.2	14.4	31.6	20.7	3.3	10.3	16.8	20.7
5 year	12.4	19.3	36.9	34.6	5.1	15.2	18.3	34.1
7 year	15.2	21.8	37.7	23.1	6.4	19.0	19.0	23.1
10 year	17.5	23.9	38.4	8.7	7.3	21.2	22.3	8.7
20 year	13.3	16.8	29.1	0.4	14.8	24.6	19.2	0.4

The impact of call and prepayment behavior on EEV is immaterial for the majority of StanCorp's bonds and mortgages, which contain make-whole call protection. For structured securities, expected cash flows including accelerated principal payments are projected on a best estimate basis for each security consistent with the risk-free rate scenario.

Investment expenses vary by asset type and remain constant over the projection, according to the table below. Investment expense assumptions were developed on a look-through basis.

(bps)

Asset Class	December 31, 2018	December 31, 2019
Internally Managed Bonds	10.0	10.0
High Yield Bonds	35.0	35.0
Structured Securities	25.0	10.0
Mortgages	30.5	30.5

A flat net investment yield of 3.28% is used for renewal group business. Constant growth returns are assumed for each of the fund types of group annuity products, as shown in the table below.

Group Annuity Funds	December 31, 2018	December 31, 2019
Equity funds	8%	8%
Fixed income*	2-3%	2-3%
Money market and stable value-type funds	1%	1%

** Varies depending on the plan*

(2) Risk discount rate

The risk discount rate is set using a weighted average cost of capital approach (WACC) taking into account the cost of equity and cost of debt. The cost of equity excludes any additional risk margin for unhedged interest rate risk as this is included by using market consistent stochastic interest rate scenarios for calculating time value of financial options and guarantees. The risk discount forward rate as of December 31, 2019 ranges from 6.37% to 7.03% (annual effective), which consists of a risk-free forward rate curve and a risk margin ranging from 4.71% to 4.72%, decreased from a range of 4.73% to 4.74% as of December 31, 2018.

6. Non-economic assumptions

Premium, operating expense, benefits and claims, cash surrender value, tax, and other cash flows are projected applying the best estimate assumptions, by product which reflect past, current and expected future experience. Dynamic assumptions are used for calculating the time value of options and guarantees for the individual and group annuity business.

The future inflation rate for maintenance expenses is assumed to be 2.0% p.a., based on the Federal Reserve Board's long term inflation targets and inflation rates implied from inflation linked bonds.

The tax rate is set at 21.00% for most of StanCorp's business.

7. Exchange rate

The EEV of StanCorp is calculated in its local currency and converted into JPY using the following rate:

	December 31, 2018	**December 31, 2019**
USD 1.00	JPY 111.00	JPY 109.56

Appendix D: Third party opinion

Willis Towers Watson has reviewed the methodology and assumptions used to determine the embedded value results as at March 31, 2020 for Meiji Yasuda Life Group. The review covered the embedded value as at March 31, 2020, the value of new business issued in fiscal year 2019, the analysis of movement in the embedded value during fiscal year 2019 and the sensitivities of the embedded value and new business value to changes in assumptions.

Meiji Yasuda Life is a mutual company, and the embedded value has been calculated as if Meiji Yasuda Life were a proprietary company, based on the current policyholder dividend practice.

Willis Towers Watson has concluded that the methodology and assumptions used, together with the disclosure provided in this document, comply with the EEV Principles and Guidance. In particular:

- The methodology makes allowance for the aggregate risks in the covered business:
  - For Meiji Yasuda Life's business, through Meiji Yasuda Life's bottom-up methodology as described in Appendix A of this document, which includes a stochastic allowance for financial options and guarantees, and deductions to allow for the frictional cost of required capital and the impact of non-financial risks, and
  - For StanCorp's business, through Meiji Yasuda Life's top-down methodology as described in Appendix C of this document, which incorporates risk margins in the discount rates applied to best estimate deterministic projections of after-tax statutory profits, the deduction of the cost of the time value of options and guarantees, and the deduction of the cost of risk-based capital relating to the business. Consequently, it should be noted that the results for Meiji Yasuda Life Group, in particular StanCorp's business, may materially differ from a capital market valuation of such risk (so called "market consistent valuation");

- The operating assumptions have been set with appropriate regard to past, current and expected future experience;

- The economic assumptions used are internally consistent and consistent with observable market data; and

- For participating business, the assumed policyholders' dividend rates, and the allocation of profit between policyholders and assumed shareholders, are consistent with the projection assumptions, established company practice and local market practice.

Willis Towers Watson has also reviewed the results of the calculations, without however undertaking detailed checks of all the models, processes and calculations involved. On the basis of this review, Willis Towers Watson is satisfied that the disclosed results have been prepared, in all material respects, in accordance with the methodology and assumptions set out in this disclosure document. It should be noted that a December 31, 2019 valuation date is used for the StanCorp business as this aligns with the closing date for the Group's consolidated financial statements.

Sudden unforeseen events such as the COVID-19* pandemic can have significant impacts on the level of economic activity, investment markets and Meiji Yasuda Life Group's business and its experience. In forming our opinion on the future expected experience we have not directly considered the potential impact including volatility on Meiji Yasuda Life Group's business, the investment markets or the industry of such events, including COVID-19, unless and only to the extent that such potential impact is specifically described in the disclosure provided in this document.

In arriving at these conclusions, Willis Towers Watson has relied on data and information provided by Meiji Yasuda Life Group, including estimates for the market value of assets for which no market prices exist. This opinion is made solely to Meiji Yasuda Life in accordance with the terms of Willis Towers Watson's engagement letter. To the fullest extent permitted by applicable law, Willis Towers Watson does not accept or assume any responsibility, duty of care or liability to anyone other than Meiji Yasuda Life for or in connection with its review work, the opinions it has formed, or for any statement set forth in this opinion.

* the coronavirus outbreak named as COVID-5119 by the World Health Organisation on 11 February 2020.

Appendix E: Glossary

Terminology	Contents
European Embedded Value using a market-consistent approach	An embedded value calculated in accordance with the European Embedded Value Principles, for which the cash flows arising from both assets and liabilities are valued in a manner consistent with traded financial instruments.
European Embedded Value Principles	European Embedded Value (EEV) Principles were published by the CFO Forum in May 2004 with the intention of improving the consistency and transparency of embedded value reporting, including sensitivities. Additional guidance on disclosures was published by the CFO Forum in October 2005. In May 2016 the EEV principles were amended by the CFO Forum to permit alignment with methodology and assumptions applied for Solvency II, which was introduced in January 1, 2016, and to allow flexibility in disclosure requirements.
CFO Forum	The European Insurance CFO Forum is a discussion group formed and attended by the Chief Financial Officers of major European insurance companies. Its aim is to influence the development of financial reporting, including value based reporting and related regulatory developments, for insurance enterprises on behalf of its members. One of its interests is to improve transparency of the financial reporting to investors.
Market Consistent Approach	A measurement approach where economic assumptions are such that projected asset cash flows are valued consistently with current market prices for traded assets.
Ultimate forward rate	Based on the idea that the future forward rates should ultimately converge to a fixed level, the ultimate forward rate is the fixed level of future forward rates. Generally, the fixed level would be set based on macro-economic analyses.

Top Down Approach	A measurement approach that uses a risk discount rate, which is set and applied based on the risk profile of the company, products, business or geographic location. The risk discount rate is typically based on a company's weighted average cost of capital.
Adjusted net worth (ANW)	The ANW represents the market value of assets (including loans and real estate, securities and other assets) in excess of policyholder liabilities of the covered business, comprising policy reserves and other liabilities such as policyholders' dividend reserves. Specifically, the ANW includes the net assets on the statutory balance sheet, internal reserves in liabilities, general allowance for possible loan losses, unrealized gains and losses on assets and liabilities not valued at market on the statutory balance sheet, unfunded retirement benefit obligations, and other adjustments, such as the tax effect of the adjustments described above.
Value of in-force business (VIF)	The present value of certainty equivalent future profits emerging from the in-force business at the valuation date, net of deductions for the associated time value of financial options and guarantees, the cost of holding required capital, and the allowance for non-hedgeable risk. Calculations for StanCorp Financial Group are based on the present value of future profits emerging from the in-force business at the valuation date, net of deductions for the associated time value of financial options and guarantees, and the cost of holding required capital.
Value of new business (VNB)	The present value of certainty equivalent future profits expected to emerge at point of sale from the business written in the reporting period, net of deductions for the associated time value of financial options and guarantees, the cost of holding required capital, and the allowance for non-hedgeable risk.

Statutory accounting principles (SAP) and US-GAAP in the United States	In the United States, there exist statutory accounting principles (SAP) and US-GAAP, where the former focuses on financial soundness of an insurance company while the latter focuses on the periodic accounting of profit and loss. In Japan, statutory accounting and US-GAAP are equivalent.
Present value of future profits	The present value of after-tax profit discounted at risk discount rate, based on the future cash flows generated from the business.
Present value of certainty equivalent future profits	The present value of after-tax profit discounted at the risk free rate, based on the future cash flows generated from the business, without consideration of elements which are asymmetric with respect to changes in economic assumptions.
Value of financial options and guarantees	The value of financial options and guarantees is the sum of the intrinsic value of financial options and guarantees and time value of the value of financial options and guarantees. The intrinsic value corresponds to the value of financial options and guarantees in the certainty equivalent scenario. The time value is calculated as the difference between the average value obtained using a set of stochastic market-consistent risk-neutral scenarios and the intrinsic value.
Cost of holding required capital	Cost of Holding Required Capital is the decrease in present value of distributable profits attributable to shareholders, related to holding required capital. For a market-consistent approach, this is called “frictional cost”, and it reflects the investment and taxation costs incurred by shareholders through investing required capital in the company rather than directly. For a top-down approach, a spread between the investment yield and the discount rate for holding the required capital is included.

Allowance for non-hedgeable risks	Allowance for asymmetric non-hedgeable risks, such as operational risk and risk of recoverability of the tax value of losses carried forward.
Risk-free rate	Yields on securities without default or credit risk.
Risk discount rate	The weighted average cost of capital used to discount future profits under a top-down approach, composed of the risk-free rate and risk margin consistent with the risk profile of the business.
Implied volatility	Volatility implied by the market price of an option. This represents expectation of the market for price fluctuation.
Interest rate swaption	An option giving the holder the right, but not the obligation, to enter into an interest rate swap in the future.
Look through adjustment	An adjustment such that profits and losses incurred in transactions by subsidiaries and affiliated companies are reflected in the EEV calculation to the extent that these transactions are related to the covered business.
Dynamic assumptions	Assumptions which can change depending on the underlying economic scenario. For example, assumptions linking policyholders' dividends with investment performance, or surrender and lapse assumptions linked to the difference between yields and the guaranteed rate.
Calibration of market-consistent risk-neutral economic scenarios	The derivation of parameters to be used in the generation of risk-neutral scenarios such that the pricing of financial instruments using the scenarios results in prices close to the market prices of the instruments.