

# EMBEDDED VALUE REPORT

The Indian Embedded Value (IEV) as on March 31, 2020 have been prepared by the Company and the methodology, assumptions and the results have been reviewed by Willis Towers Watson Actuarial Advisory LLP.

## 1. BASIS OF PREPARATION

Embedded Value is a measure of the consolidated value of shareholders' interest in the covered life insurance business. The embedded value has been determined by following a market consistent methodology, as per the requirements and principles set forth by the IAI within the APS10.

## 2. KEY HIGHLIGHTS

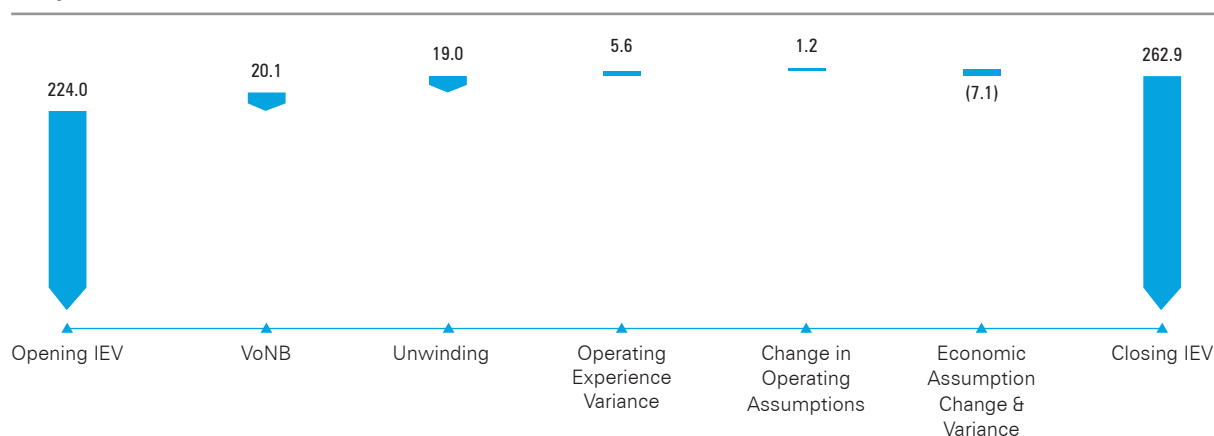
### 2.1 Value of New Business (VoNB)

Details in ₹ billion	FY 2020	FY 2019	Growth / Change
Annualised Premium Equivalent (APE) for the year	107.37	97.02	11%
Value of New Business (VoNB)	20.12	17.19	17%
New Business Margin	18.7%	17.7%	
Embedded Value	262.91	224.02	17%
Value of New Business (VoNB) <sup>#</sup>	22.20	19.16	16%
New Business Margin <sup>#</sup>	20.7%	19.8%	
Embedded Value <sup>#</sup>	276.36	237.29	16%

<sup>#</sup>Estimated using effective tax rate; effective tax rate assumes that a proportion of the projected profits are tax exempt on account of tax deductions available on income from dividends and tax free bonds.

### 2.2 Analysis of Movement in IEV for FY 2020

(₹ in billion)



IEV grew by 17% CAGR from FY 17 to FY 20.

	(₹ in billion)	
IEV movement Analysis - Components	FY 2020	FY 2019
Opening IEV	224.02	190.70
Expected return on existing business		
At Reference Rate	13.43	11.74
At expected real-world return in excess of reference rate	5.61	4.47
Operating Assumptions Change	1.18	(1.01)
VoNB added during the period	20.12	17.19
Operating Experience Variance - Persistency	2.37	0.05
Operating Experience Variance - Expenses	0.14	(0.02)
Operating Experience Variance - Mortality and Morbidity	1.14	0.74
Operating Experience Variance - Others	1.94	0.06
IEV Operating Earnings (EVOP)	45.94	33.23
Economic Assumption Changes and Investment Variances	(7.05)	2.50
IEV Total Earnings	38.89	35.73
Capital Contributions / Dividends paid out	-	(2.41)
Closing IEV	262.91	224.02

## EMBEDDED VALUE REPORT (CONTD.)

### 2.3 Sensitivity Analysis

Scenario	Change in IEV%	Change in VoNB%
Reference Rate +100 bps	(3%)	2%
Reference Rate -100 bps	4%	(2%)
Decrease in Equity Value 10%	(1%)	-
Proportionate change in lapse rate +10%	(1%)	(6%)
Proportionate change in lapse rate -10%	1%	6%
Mortality / Morbidity +10%	(2%)	(9%)
Mortality / Morbidity -10%	2%	9%
Maintenance Expense +10%	(1%)	(2%)
Maintenance Expense -10%	1%	2%
Mass Lapse for ULIPs in the year after the surrender penalty period of 25%*	(2%)	(8%)
Mass Lapse for ULIPs in the year after the surrender penalty period of 50%*	(5%)	(18%)
Tax Rate Change to 25% on Normal Tax basis	(8%)	(16%)
Tax Rate Change to 25% on Effective Tax basis	NA	NA

\* Mass lapse sensitivity (of 25% or 50%) for ULIP business is applied at the end of surrender penalty period as defined by APS 10, which is taken to be the beginning of 5th policy year for current generation of our ULIP products.

1. VoNB assessment: The value of new business is calculated as at the end of the reporting period i.e. as on the valuation date rather than at the point of sale. Accumulation from point of sale up to end of reporting period is done using the respective monthly reference rates.
2. VoNB sensitivity: New Business sensitivities assumes that the scenario arises after the point of sale; and consider impacts on both new business liability cash-flows and the asset backing the reserves at the respective month ends. 'Nil' interest rate VoNB sensitivity is applied for annuity products.
3. The sensitivities are being calculated with a lag of one quarter of a year, starting from the Q3FY19 disclosure.

### 3. METHODOLOGY AND APPROACH

IEV is calculated as the sum of Adjusted Net Worth (ANW) and Value of In-Force business (VIF).

ANW comprises Free Surplus (FS) and Required Capital (RC).

VIF consists of the following components:

- Present Value of Future Profits (PVFP) expected to emerge from the covered business;
- Less Frictional Cost of Capital (FCoC);
- Less Time Value of Financial Options and Guarantees (TVFOG);
- Less Cost of Residual Non-Hedgeable Risks (CRNHR).

#### 3.1 Components of Adjusted Net Worth (ANW):

This is the value of all assets allocated to the covered business that are not required to back the liabilities of the covered business.

**Free Surplus (FS):** Free Surplus represents the market value of any assets in excess of liabilities and Required Capital which is potentially distributable to shareholders immediately. Free Surplus has been calculated as the excess of ANW over the Required Capital.

**Required Capital (RC):** Required Capital is the amount of assets attributed to the covered business over and above that required to back liabilities for the

covered business whose distribution to shareholders is restricted. Required Capital has been set at 180% of the Required Solvency Margin (RSM), based on the Company's internal capital target. RSM has been projected by applying the solvency margin factors prescribed by the IRDAI appropriate to each line of business.

#### 3.2 Components of Value of Inforce (VIF) business:

**Present Value of Future Profits (PVFP):** PVFP represents the present value of future post taxation shareholder cash-flows projected to emerge from the in-force covered business and the assets backing liabilities of the in-force covered business. The PVFP incorporates an allowance for the intrinsic value of financial options and guarantees.

**Frictional Cost of Capital (FCoC):** FCoC reflects the impact of taxation on investment returns and investment costs on the assets backing required capital. FCoC has been estimated as the present value of:

- tax on investment earnings on assets backing the required capital; and
- investment expenses (after tax) incurred in holding such assets.

Required Capital is assumed to be maintained throughout the lifetime of the underlying liabilities, at the internal target level of 180% of the RSM, calculated based on the prescribed factors.

**Time Value of Financial Options and Guarantees (TVFOG):**

Allowance is made for asymmetric impact on shareholder value due to any financial options and guarantees within the covered business.

**Cost of Residual Non-Hedgeable Risks (CRNHR):**

A bottom-up assessment of risks has been undertaken to allow for the cost of residual non-hedgeable risks not already allowed for elsewhere. CRNHR has been estimated using a cost of capital approach.

**3.3 Assumptions used for IEV Calculation:**

The expense assumptions used in the IEV (Indian Embedded Value) estimation represent the unit costs arising out of actual experience of the FY 2020 and makes no allowance for any productivity gains/cost efficiencies beyond what is achieved up to

the valuation date. Allowance has been made for future inflation on the expenses. Further, any one-off costs incurred during FY 2020 and development expenditure have not been identified separately or excluded when determining the unit cost assumptions.

The Required Capital is taken at 180% of the Statutory RSM, which is the internally approved norm for the company.

The rate of income tax applied to the surplus is set at 14.56%. Tax deductions available by way of dividend income from equity etc. are not taken into consideration. Rate of taxation applied to individual pension business is zero.

The zero coupon government bond yield curve published by FIMMDA-PDAI was used as the assumed reference rates.

## INDEPENDENT ACTUARY'S OPINION

4 May 2020

The Board of Directors

SBI Life Insurance Company Limited

Natraj, M.V. Road and Western Express Highway Junction  
Andheri (East), Mumbai - 400 069

Dear Sirs,

### WILLIS TOWERS WATSON OPINION ON EMBEDDED VALUE AS AT 31 MARCH 2020

Willis Towers Watson Actuarial Advisory LLP ("Willis Towers Watson", "we", "us" or "our") has been engaged by SBI Life Insurance Company Limited ("SBI Life" or "the Company") to review and provide an independent actuarial opinion on the embedded value results prepared by SBI Life. The review covered the embedded value as at 31 March 2020 and the value of one year's new business written during the period 1 April 2019 to 31 March 2020 (together, "embedded value results").

#### Scope of work

##### Our scope of work covered:

- A review of the methodology and assumptions used to determine the embedded value results;
- A review of the results of SBI Life's calculation of the embedded value results;
- A review of the analysis of movement in embedded value from 31 March 2019 to 31 March 2020 and
- A review of select sensitivities as defined by the Company.

### OPINION

Willis Towers Watson has concluded that the methodology and assumptions used to determine the embedded value results of SBI Life comply with the standards issued by the Institute of Actuaries of India within the Actuarial Practice Standard 10 {"Indian Embedded Value Principles"}, and in particular that:

- the economic assumptions used are internally consistent and result in the projected cash-flows being valued in line with the prices of similar cash-flows that are traded on the capital markets;

- the operating assumptions have been set with appropriate regard to the past, current and expected future experience;
- the Required Capital has been determined and projected on the basis of SBI Life's internal capital target of 180% of the Required Solvency Margin and has been assessed from a shareholders' perspective;
- allowance has been made for the Cost of Residual Non-Hedgeable Risks; and
- for participating business, the assumed bonus rates, and allocation of profit between policyholders and shareholders, are consistent with the projection assumptions, established company practice and local market practice.

Willis Towers Watson has also performed a number of checks on the models, processes and results of the calculations performed by SBI Life. On the basis of this review, Willis Towers Watson has confirmed that no issues have been discovered that have a material impact on the disclosed embedded value as at 31 March 2020, the value of one year's new business written during the period 1 April 2019 to 31 March 2020, the analysis of movement in embedded value for FY2019-20, and the sensitivity analysis as at 31 December 2019.

In arriving at these conclusions, Willis Towers Watson has relied on data and information provided by SBI Life. This Opinion is made solely to SBI Life in accordance with the terms of Willis Towers Watson's engagement letter dated 19 September 2019. 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 SBI Life for or in connection with its review work, the opinions it has formed or for any statements set forth in this opinion.

Sudden unforeseen events such as the COVID-19 (the coronavirus outbreak named as COVID-19 by the World Health Organisation on 11 February 2020) pandemic can have significant impacts on the level of economic activity, investment markets and SBI Life'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 SBI Life's business, the investment markets or the industry of such events, including COVID-19.

**Vivek Jalan, FIAI**

Partner

**Kunj Behari Maheshwari, FIAI**

Partner

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