

Max Life's Embedded Value Disclosure

Using market consistent methodology

As at 30th September 2015

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Introduction

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Key Messages

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Embedded Value and Value of New Business as at 30th September 2015

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Methodology and Key Assumptions

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Analysis of Movement of EV

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Reliances and Limitations

Max Life moved from a traditional approach of calculating Embedded Value (EV) to a market consistent methodology as at 31st March 2015. Current disclosures as at 30th September 2015 are also based on market consistent methodology.

A market consistent methodology approach better reflects the embedded value of an insurance company by explicitly allowing for insurance and economic risks rather than using an implicit overall allowance for risks through a Risk Discount Rate (RDR) in the traditional approach.

This follows market practice in developed markets, whereby life insurers have moved to adopt market consistent methodologies.

Although the results are developed using market consistent methodology, they are not intended to be compliant with the MCEV Principles issued by the Stichting CFO Forum Foundation (CFO Forum) or the Actuarial Practice Standard 10 (APS10) as issued by the Institute of Actuaries of India.

EV as at March 2015 was reviewed by Milliman and their opinion was shared along with the disclosure at March 2015. The latest disclosures follow the same methodology.

The EV as at 30th September 2015 is Rs 5,363 Cr, after allowing for shareholder dividend payout of Rs 220 Cr in H1 FY16.

The annualised Return on EV¹ over H1 FY16 is 13.8 per cent while the annualised Operating Return on EV is 14.8 per cent.

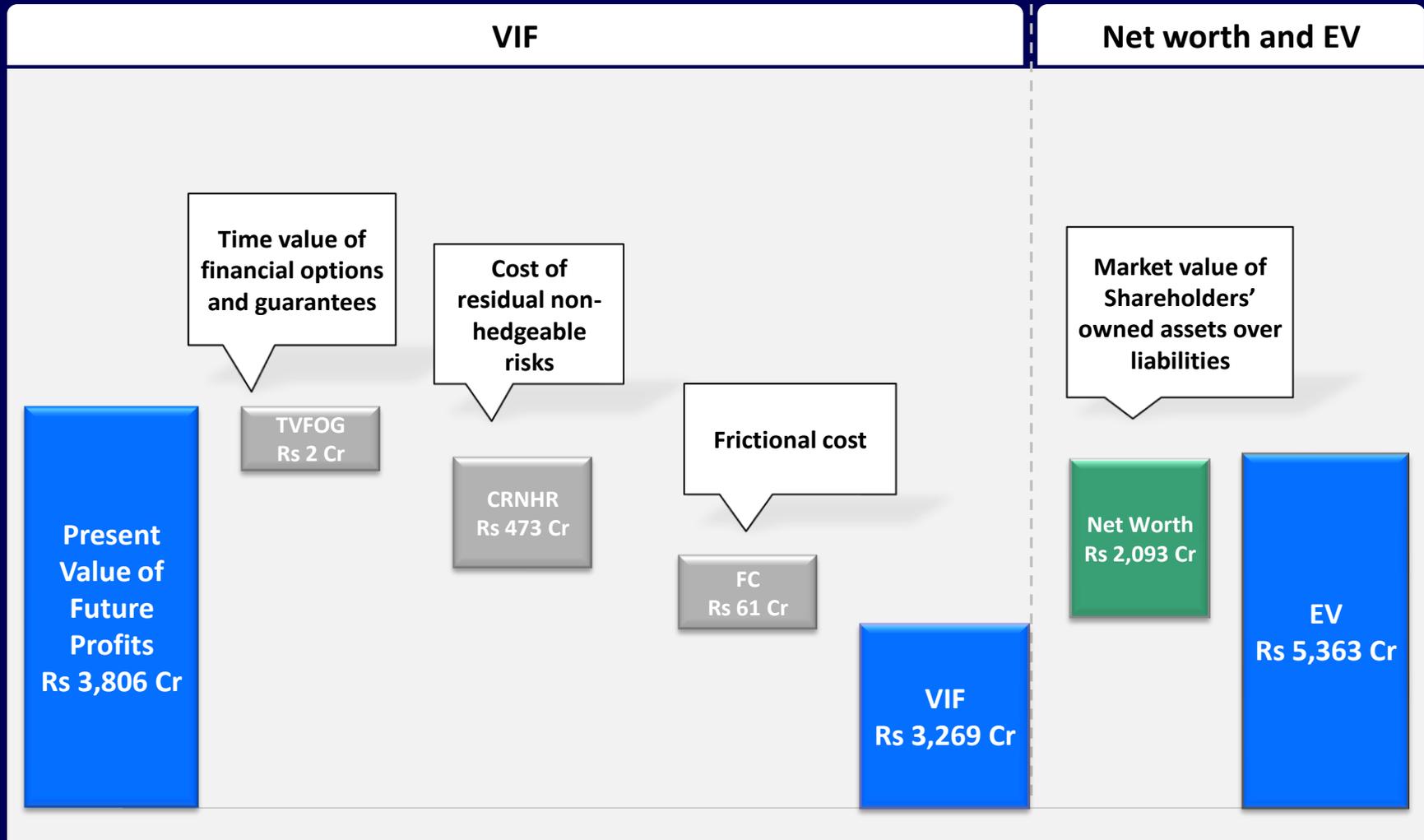
The Value of New Business (VNB) written during H1 FY16 is Rs 163 Cr and the portfolio new business margin is 20.2 per cent (before cost overrun) and 17.0 per cent (after cost overrun).

¹ The Return on EV is calculated before capital movements during the year.

² The EV and VNB sensitivities are calculated annually. The sensitivity impacts are not expected to change materially from March 2015.

Overview of the components of the EV as at 30th September 2015

All figures in Rs Cr





Value of New Business and New Business Margins as at 30th September 2015

Amounts in Rs Cr

	H1 - FY16
APE ¹	808
Value of New Business (VNB)	163
New Business Margin (% APE)	20.2%

- The VNB is the accumulated value from the point of sale to the end of the reporting period (i.e. 30th September 2015), using the beginning of financial year risk free yield curve.
- During H1 FY16, there was an acquisition cost over-run chargeable to shareholders of Rs 25 Cr, which implies a VNB of Rs 138 Cr and a new business margin of 17.0%, post over-runs.

¹ Annual Premium Equivalent (APE) is calculated as 100% of regular premium + 10% of single premium.

Market consistent methodology

- The EV and VNB have been determined using a market consistent methodology which differs from the traditional EV approach in respect of the way in which allowance for the risks in the business is made.
- For the market consistent methodology, an explicit allowance for the risks is made through the estimation of the Time Value of Financial Options and Guarantees (TVFOG), Cost of Residual Non-Hedgeable Risks (CRNHR) and Frictional Cost (FC) whereas for the traditional EV approach, the allowance for the risk is made through the RDR.

Components of EV

The EV is calculated to be the sum of:

- *Net Asset value (NAV) or Net Worth*: it represents the market value of assets attributable to shareholders and is calculated as the adjusted net worth of the company (being the net shareholders' funds as shown in the audited financial statements adjusted to allow for all shareholder assets on a market value basis, net of tax).
- *Value of In-force (VIF)* : this component represents the discounted value of future expected post-tax profits (PVFP) attributable to shareholders from the in-force business as at the valuation date, after deducting allowances for TVFOG, CRNHR and FC. Thus, $VIF = PVFP - TVFOG - CRNHR - FC$.

Covered Business

- All business of Max Life is covered in the assessment except one-year renewable group term business and group fund business which is excluded due to its immateriality to the overall EV.

Present Value of Future Profits (PVFP)

- Best estimate cash flows are projected and discounted at risk free investment returns.
- PVFP for all lines of business except participating business is derived as the present value of post-tax shareholder profits from the in-force covered business.
- PVFP for participating business is derived as the present value of shareholder transfers arising from the policyholder bonuses *plus* one-tenth of the present value of future transfers to the participating fund estate and one-tenth of the participating fund estate as at the valuation date.
- Appropriate allowance for mark-to-market adjustments to policyholders' assets (net of tax) have been made in PVFP calculations to ensure that the market value of assets is taken into account.

Cost of Residual Non-Hedgeable Risks (CRNHR)

- The CRNHR is calculated based on a cost of capital approach as the discounted value of an annual charge applied to the projected risk bearing capital for all non-hedgeable risks.
- The risk bearing capital has been calculated based on 99.5 percentile stress events for all non-hedgeable risks over a one-year time horizon. The cost of capital charge applied is 5% per annum. The approach adopted is approximate.
- The stress factors applied in calculating the projected risk capital in the future are based on the latest Solvency II directives (2014 draft regulations) recalibrated for Indian and Company specific conditions.

Time Value Of Options and Guarantees (TVFOG)

- The TVFOG for participating business is calculated using stochastic simulations which are based on 1,000 stochastic scenarios provided by Moody's Analytics¹.
- Given that the shareholder payout is likely to be symmetrical for guaranteed non-participating products in both positive and negative scenarios, the TVFOG for these products is taken as zero.
- The cost associated with investment guarantees in the interest sensitive life non-participating products are allowed for in the PVFP calculation and hence an explicit TVFOG allowance has not been calculated.
- For all unit-linked products with investment guarantees, extra statutory reserves have been kept for which no release has been taken in PVFP and hence an explicit TVFOG allowance has not been calculated.

Frictional Cost (FC)

- The FC is calculated as the discounted value of tax on investment returns and dealing costs on assets backing the required capital over the lifetime of the in-force business. Required capital has been set at 170% of the Required Solvency Margin (RSM) which is the internal target level of capital, which is higher than the regulatory minimum requirement of 150%.
- While calculating the FC, the required capital for non-participating products is funded from the shareholders' fund and is not lowered by other sources of funding available such as the excess capital in the participating business (i.e. participating fund estate).

¹Moody's simulations are updated twice a year. For the purpose of this valuation, simulations used are as at 30th June 2015.

Economic Assumptions

- The EV is calculated using risk free (government bond) spot rate yield curve taken from FIMMDA¹ as at 30th September 2015. The spot rates beyond the longest available term of 30 years are assumed to remain at 30 year term spot rate level.
- No allowance has been made for liquidity premium because of lack of credible information on liquidity spreads in the Indian market.
- A flat rate adjustment is made to the yield curve such that the market value of government bonds is equal to discounted value of future cash flows of those bonds.
- Samples from the un-adjusted spot rate yield curve as on 30th September 2015 and 31st March 2015 are given here:

Year	1	2	3	4	5	10	15	20	25	30 +
Sep 2015	7.37%	7.67%	7.62%	7.71%	7.84%	7.62%	7.91%	8.10%	8.22%	7.93%
Mar 2015	8.01%	7.96%	7.93%	7.89%	7.89%	7.95%	8.04%	8.12%	8.03%	7.79%

Demographic Assumptions

The lapse and mortality assumptions are approved by a Board committee and are set by product line and distribution channel on a best estimate basis, based on the following principles:

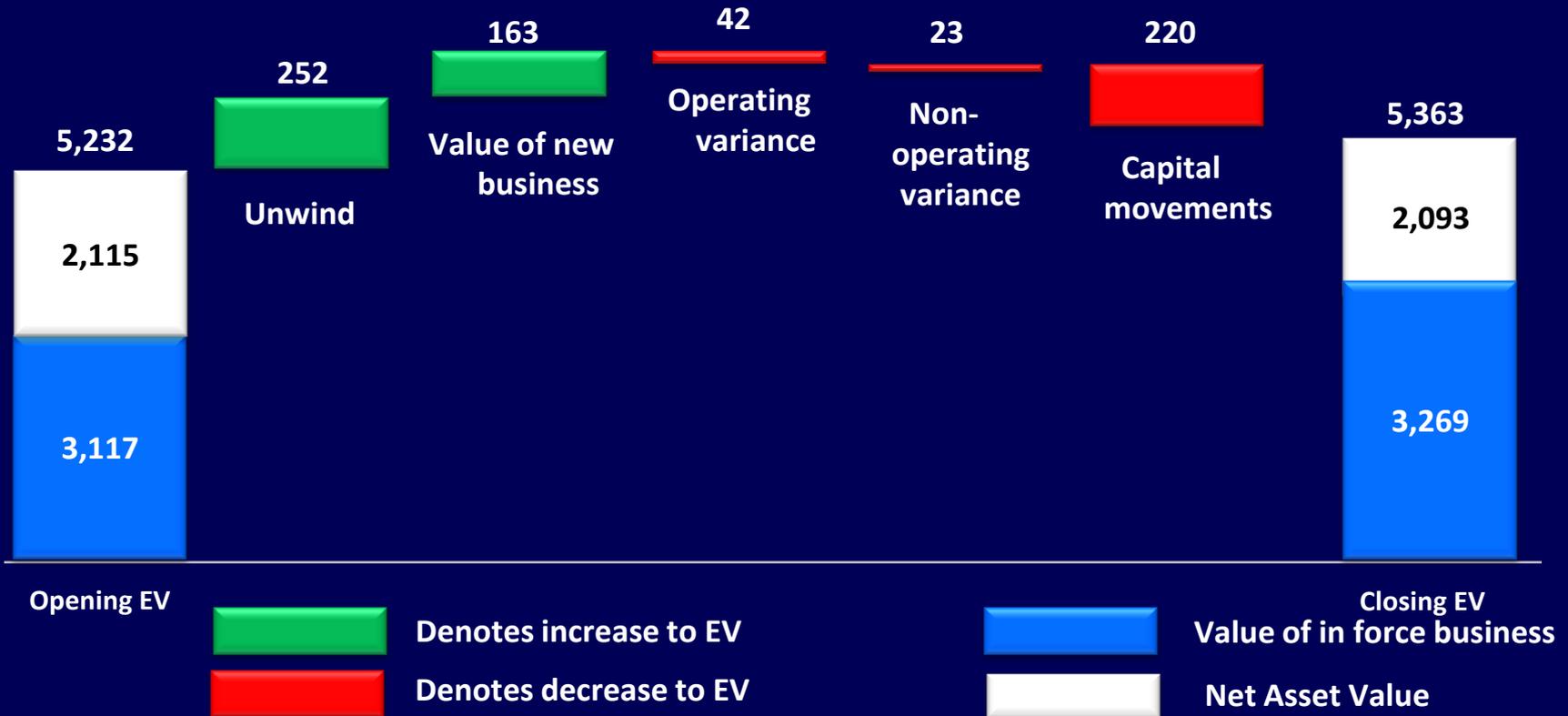
- Assumptions are based on past experience and expectations of future experience given the likely impact of current and proposed management actions on such assumptions.
- Aims to avoid arbitrary changes, discontinuities and volatility where it can be justified.
- Aims to exclude the impacts of non-recurring factors.

Expense and Inflation

- Maintenance expenses are based on the recent expense studies performed internally by the Company. The VIF is reduced for the value of any maintenance expense overrun in the future. The overrun represents the excess maintenance expenses expected to be incurred by the Company over the expense loadings assumed in the calculation of PVFP.
- Expenses are denominated in fixed Rupee terms and are inflated at 6.25% per annum.
- The commission rates are based on the actual commission payable (if any).

Tax

- The corporate tax rate is assumed to be 14.42% for life business and nil for pension business.
- For participating business, the transfers to shareholders resulting from surplus distribution are not taxed as tax is assumed to be deducted before surplus is distributed to policyholders and shareholders.
- The mark to market adjustments are also adjusted for tax.



- Operating return on EV of 14.8%, driven mainly by new business growth and unwind of discounting.
- Operating variance mainly constitutes cost overrun chargeable to shareholders.
- Non-operating variance driven mainly by equity and interest rate movements since March 2015.

- Certain statements and illustrations contained herein are forward-looking. These forward-looking statements involve known and unknown risks, uncertainties and other factors, which may cause Max Life's actual results of operations, financial condition, solvency ratios, liquidity position or prospects to be materially different from any future results of operations, financial condition, solvency ratios, liquidity position or prospects expressed or implied by such statements.
- These statements and illustrations are based on current expectations of future events based on certain assumptions. They are based on a stable development of both the life insurance market in India and economic outlook, our current interpretation of the taxation basis for life insurance companies in India and are largely based on an extrapolation of the current business model for Max Life. They assume the realization of the underlying assumptions described therein. These factors are not exhaustive. Max Life operates in a continually changing environment and new risks emerge continually. Readers are cautioned not to place undue reliance on forward-looking statements. Max Life undertakes no obligation to publicly revise or update any forward-looking statements, whether as a result of new information, future events or otherwise.
- It is understood and agreed by the reader of these forward-looking statements that neither Max Life, nor its Shareholders, are making any representations or warranties as to the attached projections and assumptions, or as to any other projections or similar estimates that may have been provided to the readers.