

## **L-42- Valuation Basis (Life Insurance)**

A chapter on Valuation basis covering the following minimum criteria should also be displayed on the web-site of the Insurers.

### **Data**

The company maintains the Policy data in the policy administration system called Life Asia. The system captures all the information required for the purpose of the statutory valuation.

The data for the purpose of annual statutory valuation is obtained after the business closure for the financial year.

A series of validation checks is performed to ensure the accuracy and completeness of the data.

### **Valuation Method**

The policy liability for individual line of business is calculated using the actuarial software called PROPHET.

The assumptions (valuation bases) are fed into the PROPHET system manually in the format as prescribed/appropriate for the system to perform the calculation.

The actuarial liabilities of the company have been calculated in accordance with the requirements of Insurance Act, 1938, Insurance Regulatory and Development Authority (Assets, Liabilities, and Solvency Margin of Insurers) Regulations, 2000 and other regulations, Actuarial Practice Standards and Guidance Notes issued by Institute of Actuaries of India and having regards to generally accepted actuarial practices.

**Individual Linked Business:** Reserves consist of two components, namely unit reserves and non-unit reserves. The following methods have been used to determine these reserves:

#### **Unit Reserve:**

Under linked life insurance contracts, unit reserves are calculated in respect of the units, under various funds, allocated to the policies in force at the valuation date using unit values at the valuation date.

#### **Non Unit Reserve:**

The non-unit liabilities in respect of the linked contracts are determined using a prospective gross premium method under which future net cash flows are discounted back to the date of valuation on policy-by policy basis.

In addition to the above, a separate provision is made for the following:

- i) **Lapsed policies:** I have kept the full unit reserves in respect of lapsed policies which, based on valuation assumptions, are likely to be revived. The reserves kept under the lapsed policies which are not likely to be revived have been calculated in a manner to ensure that the amount of such reserve is not less than the surrender value payable in respect of such policies, if any. I have also determined the total unit reserve in respect of all lapsed policies within the reinstatement period and the excess of the total unit reserve over and above the mathematical reserve kept under the lapsed policies is set aside as fund for future appropriation.
- ii) **Unearned mortality charges:** One month's mortality charges based on mortality charges deducted in the month September 2012 in respect of all in-force policies have been kept as unearned mortality charges reserve.
- iii) **Unearned morbidity charges:** One month's morbidity charges based on morbidity charges deducted in the month September 2012 in respect of in-force policies with morbidity benefit have been kept as unearned morbidity charges reserve. For Health product, the charges are deducted annually in advance. In this case the unearned morbidity charges till the next renewal date has been kept as unearned morbidity charge reserve.
- iv) **Incurred but not reported (IBNR) claims:** For individual unit-linked Life contracts, two months' mortality charges based on mortality charges deducted in the last month have been kept as IBNR. For unit-linked health contract, as the delay in reporting for health related claims is comparatively less than mortality related claims, half month's morbidity charge has been kept as IBNR.
- v) **Extra Mortality Reserve:** The lives subject to extra mortality and morbidity risk pay higher mortality charges. The unearned mortality and morbidity charges above will include these extra charges. The extra mortality reserve in respect of substandard lives is therefore implicitly allowed in unearned mortality/morbidity charge calculation.
- vi) **Miscellaneous Reserve:** This reserve is held in order to give benefit of unit value appreciation to the policyholders with effect from the date of deposit in respect of policies not yet issued.
- vii) **Options and Guarantees:** As none of the contracts offer any financially significant options or guarantees, I have not provided any extra reserve in respect of options and guarantees.

### **Individual Non-Linked Business:**

As on valuation date the company had only term assurance policy under non-linked category. The reserve is determined using gross premium method. The reserve under this method is excess of discounted value of future benefit outgo and expenses including commission over discounted value of future office premium. For regular premium policies this method may give rise to negative reserve which is zeroised and the reserve is topped up by the unearned premium for the policy year. For single premium policies where policy is eligible for surrender value the mathematical reserve is the higher of gross premium reserve calculated above and the surrender value. Surrender values are not offered on regular premium term contracts

### **Group Linked Business**

Reserves consist of two components, namely unit reserves and non-unit reserves. The following methods have been used to determine these reserves:

#### **Unit Reserve:**

The reserve held under the group unit-linked plan is unit reserve which is calculated in respect of the units, under various funds, allocated to the policies in force at the valuation date using unit values at the valuation date.

#### **Non-Unit Reserve:**

The future management charges are higher than the future expenses allowing for MAD. As no negative cash flow occurs in the future under valuation assumptions, I have kept non-unit reserve as zero.

### **Group Non-Linked Business**

The method adopted for group yearly renewable term is unearned premium reserve (UPR) method. For group credit life, Gross Premium method was adopted.

For group yearly renewable term, run-off triangle approach has been used to calculate IBNR at the valuation date.

For Group Retirement Benefit Plan, the accumulated fund value is kept as reserve.

## **Valuation Assumptions**

### **Individual Unit- Linked Products**

#### **Interest Rate**

The interest rate assumption is derived based on the current redemption yield and in accordance with the IRDA Regulations 2000 and Guidance Notes issued by Institute of Actuaries of India.

The interest rate used for the purpose of non-unit unit reserve calculation 4.88% p.a. for next five years and 4.06% p.a. thereafter.

#### Fund Growth Rate

For the purpose of the projection an assumption is made for future fund growth for various funds. This is arrived based on the current yield on various instruments like G-sec, Money Market etc and the proportion of these instruments in each of the fund the company offer for its unit-linked policy-holder.

Fund Name	Next 5 Years	Beyond 5 years
Equity	8.88%	8.06%
Debt	7.04%	6.22%
Balanced	8.23%	7.41%
Liquid	4.69%	3.87%
Value Fund	8.38%	7.56%
Index Fund	9.13%	8.31%
Dynamic Fund	8.88%	8.06%

#### Inflation Rate

The inflation rate used of the purpose of valuation is 4.54%.

#### Mortality

The mortality assumption used is 88% of IALM 1994 -96 Ultimate for all products.

#### Morbidity

This is applicable for inbuilt riders attached to IndiaFirst Education Plan and IndiaFirst Young India Plan. Morbidity rate used is 0.2178 per 1000 SA

#### Expense

The renewal expense per policy for the purpose of valuation is Rs.331 for the single premium and Rs.529 for regular premium for the products IndiaFirst Savings Plan, IndiaFirst Education Plan and IndiaFirst Future Plan.

The renewal expense per policy assumed is 1.92% of the annual premium for regular premium and 0.6% of single premium for single premium mode for the products IndiaFirst Smart Saving Plan, IndiaFirst Young India Plan, IndiaFirst Money Back Health Insurance Plan and IndiaFirst High Life Plan.

The expense is assumed to increase at inflation rate mentioned above.

The fund management expense is 0.3% of the unit-reserve.

## **Individual Non- Linked Products**

### **Interest Rate**

The interest rate assumed for with-profit products is 5.98% for next five years and 5.16% thereafter. The interest rate assumed for term products is 5.88% for next five years and 5.06% thereafter.

### **Mortality**

The mortality assumption used is

<b>Product</b>	<b>as % of IALM 1994-96 ultimate</b>
<b>IndiaFirst Life Plan</b>	<b>60.5%</b>
<b>IndiaFirst Anytime Plan</b>	<b>55%</b>
<b>IndiaFirst Secure Save Plan</b>	<b>110%</b>
<b>IndiaFirst Maha Jeevan Plan</b>	<b>88%</b>

### **Expense**

The renewal expense of IndiaFirst Anytime Plan and IndiaFirst Life Plan is Rs.159 p.a. for regular premium and Rs.79 p.a. for single premium. Claim expense of 1.2% of death benefit subject to maximum of Rs.10,000

The renewal expense of IndiaFirst Secure Save Plan and IndiaFirst Maha Jeevan Plan is 2.4% of annual premium.

## **One Year Group Term**

The reserve with respect to this product is UPR and it based on the received premium less commission.

## **Group Credit Life Plan**

### **Interest Rate**

The interest rate used is 5.88% for next five years and 5.06% thereafter.

### **Mortality**

The mortality assumption used is

Type of loan	as % of IALM 1994-96 ultimate
Housing Loan	55%
Vehicle	66%
Education	77%
Others	88%

### Expense

The renewal expense is Rs.66 increasing with inflation. Claim expense of 1.2% of death benefit subject to maximum of Rs.10,000

### **Global Reserve**

In addition, a global reserve has been kept for the following.

- a) *Free Look Reserves*: The estimated refund of charges on the policies expected to be subject to free-look cancellation is kept as free-look reserve. This is a global reserve. For unit-linked business, it is calculated by applying past free look cancellation ratio on the premium received in the month of March 2012 and further multiplying by a factor reflecting average expected allocation charge. For non-linked business, it is calculated by applying past free look cancellation ratio on the premium received in the month of March 2012.
- b) *Closure to New Business Reserve*: This is additional reserve held to service the existing policies in the event of company stop writing new business one year from date of valuation. The maintenance expense over-run during the valuation year has been kept as the closure to new business reserve.