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सदस्य (बीमांकक)

Dr. R.Kannan
Member (Actuary)

बीमा विनियामक और विकास प्राधिकरण

INSURANCE REGULATORY AND DEVELOPMENT AUTHORITY

IRDA/M(A)/ACTL/EC/12/2010-11

27th December, 2010

To
All CEO's of Life Insurance Companies

Dear Sir,

Sub: Economic capital in Life insurance companies

Please refer to our circular No: IRDA/CIR/LIF/049/3/2010 dated 11th March, 2010 on the captioned subject. The Authority is happy to note that all insurers have submitted their report on Economic capital. On a careful scrutiny of the same, we found that there is a wide variation in the calculation and hence an effective comparison is almost impossible and one could not draw a meaningful relationship between various parameters. In order to achieve these, it becomes necessary to prescribe various measures which will harmonize the calculation of economic capital.

Please note that the current basis of statutory actuarial valuation of liabilities shall remain the same and no change is contemplated.

The following measures shall be adopted by the life insurers in their calculation of economic capital:

1. Life insurers shall use best estimates of mortality / morbidity in EC calculations with reference to policyholders' liability (PHL).

2. Regarding the best estimates of interest rates in PHL, while stochastic simulation could be used, the use of other methods in arriving at yield rates is also encouraged. But the Appointed Actuary must explicitly specify the exact method used in arriving at the interest rates.

3. With reference to best estimate on expenses, we noticed a wide difference between the current actual expense and best estimate itself. This raises serious doubt regarding the allocation of total expenses between acquisition and renewal. The Appointed Actuary (AA) must clearly demonstrate the method used in arriving at the best estimate of expense used in EC calculation. Wherever the AA notices a clear expense overrun then provision should be made for the capitalization of expense overrun.

4. 'Other policyholder liability' shall be provided towards allowance for non hedgeable risk or a charge for frictional cost of holding regulatory solvency capital. In addition policyholder liability must also contain additional capital allowance for time value of

27/12/10

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financial options and guarantees. The AA should include the various options and guarantees that are allowed together with a note on methodology. Also, any unmodeled business is to be included as part of this Other PH Liability.

5. Total capital requirement comprises of insurance risk, market risk, operational risk and credit risk. This is based on a one year time horizon and using VaR as measure of risk with 99.5% confidence interval. In estimating these risk factors Appointed Actuary can use either stress testing or factor based method. But, he / she must mention clearly which one is used for each item mentioned below:
    a. The insurance risk will be the sum total of mortality / morbidity risk, surrender risk, expense risk including inflation risk and longevity risk. The Appointed Actuary must clearly indicate component wise EC for each risks mentioned here.
    b. Market risk consists of interest rate risk, equity risk, property risk and currency risk. The other market risks such as ALM risk and Forex risk are not included here and could be added at a later point of time.
    c. Operational risk could also cover inadequate tax provisioning
    d. Regarding credit risk the Appointed Actuary has to consider both credit spread risk and default risk. While credit spread risk could be duration based, the default risk could be based the probability of default.

6. Regarding the diversification effect of risk, we do not have any problem in following the matrix as given in QIS5 of European Union Guidelines; there should be an upper limit up to which diversification effect could be used. Diversification effect shall not exceed 30% of EC, before diversification effect. This is because the diversification effect is not neutralized with concentration effect. Hence, there should be a cap on diversification effect credits.

7. Taking into account the above factors, the Appointed Actuary has to re-estimate some components of EC and submit the revised EC calculation, as given the appendix on or before January 15, 2011. Soft copies may be sent to avrao@irda.gov.in or karthikeya@irda.gov.in .

RKannan
23/12/10

(R. Kannan)
Member (Actuary)

Encl: As above

Copy to all Appointed Actuaries

Appendix

Economic Capital .... As on March 31, 2010

₹ in Lakhs

S. No	Parameter	Statutory position as on 31.03.10	EC as on 31.03.10
1	Total liability		
1.1	Policyholder liability		
1.2	Other policyholder liability a. Capitalization for expense overrun b. Non-hedgeable risk c. Value of financial options and guarantee Total		
2	Capital requirements		
2.1	Insurance and Risk a. Mortality / Morbidity risk b. Lapse / surrender risk c. Expense Risk / Inflation risk d. Longevity risk Total		
2.2	Market risk of which a. Interest rate risk b. Equity risk c. Real estate / property risk Total		
2.3	Operational risk		
2.4	Credit Risk		
2.5	Total (2.1+2.2+2.3+2.4)		
3	Diversification effect		
4	Total of risk categories after adjusting for diversification		
5	Total assets on an economic basis		
6	Total of statutory liability and 150% of RSM		
7	Free assets		
8	Solvency ratio		

Signature of Appointed Actuary with date

27/5/10