SECURITIES AND EXCHANGE COMMISSION OF PAKISTAN

# CONCEPT PAPER

## PROPOSED RISK BASED CAPITAL REGIME FOR PAKISTAN'S INSURANCE SECTOR

POLICY REGULATIONS & DEVELOPMENT DEPARTMENT – INSURANCE DIVISION

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# EXECUTIVE SUMMARY

Solvency measures the ability of an insurer to meet its obligations to policyholders when they fall due. Solvency is assessed by the adequacy of the insurer's financial resources, including capital resources, against the insurance protection it provides to policyholders. Risk-based capital (RBC) requirements strengthen the protection of policyholders by relating capital adequacy to the risk exposure of the insurer. Generally, an insurer exposed to higher risks is required to hold a higher amount of capital.

The Insurance Ordinance 2000 and Insurance Rules 2017, prescribe a rule-based capital adequacy framework for registered insurers in Pakistan. Capital adequacy is assessed on the basis of an insurer's solvency margin, i.e. the level of surplus derived from the value of the assets of an insurer vis-à-vis the value of its liabilities. Solvency requirements for life insurance business is calculated with reference to the mathematical reserve and sum at risk. Solvency requirements for general business are calculated with reference to the premium levels, unearned premium and claims outstanding.

It has been recognized globally that the capital adequacy framework should consider risk factors of different insurers, and be conducive to enhancing the corporate governance, enterprise risk management (ERM) and public disclosure practices of insurers. The International Association of Insurance Supervisors (IAIS) – the global standard-setter for the insurance industry – has issued Insurance Core Principles (ICPs) in relation to RBC requirements in late 2011. All insurance supervisors, including the SECP, in order to ensure conformity with best international practices are obliged to comply with ICPs.

Accordingly, the Commission plans to move from existing solvency regime towards an RBC regime, establishing a clear and consistent valuation standard (including explicit best estimates of technical provisions and risk margins) and risk-sensitive capital requirements covering all types of risks.

This Concept Paper focuses on the objectives, overarching principles and proposed framework for the RBC regime for Pakistan's insurance industry. This is to enable the industry to familiarize itself with these proposals and to provide the feedback on the proposed framework. The objective is to ensure that the future RBC framework reflects the unique features of Pakistan's industry and is built on existing arrangements to ensure a healthy and thriving industry.

It must be stressed that the move towards developing an RBC framework does not necessarily imply a need to increase or decrease capital for individual insurers. The framework seeks to be consistent with international practice i.e. make capital requirements more sensitive to the level of risk that individual insurers are bearing.

SECP invites the interested parties to provide their feedback and comments on the proposed regime. SECP hopes to work closely with the industry and the Pakistan Society of Actuaries on the development of proposed framework.

# 1. INTRODUCTION & BACKGROUND

## Objective of the Concept Paper

The objective of this Concept Paper is to present a draft Risk Based Capital Regime for Insurance Sector of Pakistan and seek feedback on the proposed Risk Based Capital Regime.

### 1.1 Risks Faced by Insurers

An insurance company, being the underwriter of insurance risks, is exposed to insurance risks in relation to its insurance contracts. In addition to insurance risk an insurance company also invests in financial instruments, making it susceptible to market risk like price movements of equity securities, foreign exchange and interest rate risks. Insurers may also invest in real estate or other illiquid assets which may be difficult to liquidate in stressful scenarios, hence exposing the insurer to liquidity risk. Another risk faced by insurers is credit risk, the risk that its counterparties may default on their obligations. Additionally, failure of humans, processes, systems and other unforeseen external and internal events expose insurers to operational risks.

### 1.2 Current Paid up Capital and Solvency Requirements

In Pakistan, the current regulatory framework i.e. the Insurance Ordinance, 2000 (the "Ordinance") and the Insurance Rules, 2017 (the "Rules"), prescribe paid-up capital requirements as well as rule-based solvency requirements for life and non-life insurers. Briefly stating the capital as well as solvency requirements currently applicable on insurers are as follows:

**(a)** **Non-Life Insurers:** Under the current requirements, non-life insurers are required to have minimum paid-up capital of Rs.500 million in order to underwrite non-life insurance business. The solvency requirements for non-life insurers is provided in section 36 read with section 32 of the Ordinance and rule 12 and 15 of the Rules.

Briefly stating, the solvency regime for non-life insurers is to maintain excess of admissible assets over liabilities equal to or greater than the minimum solvency requirement, which is the greatest of: (a) Rs. 150 million; (b) 20% of earned premium revenue net of reinsurance expense; and (c) 20% of sum of liability for unexpired risk and outstanding claims liability net of reinsurance in each case.

**(b)** **Life Insurers:** Life insurance business is allowed to be undertaken by insurers with paid-up capital of Rs. 700 million. The solvency requirements for life insurers is provided for in section 35 read with section 32 of the Ordinance and rule 12 and 14 of the Rules.

Briefly stating, the solvency regime for life insurers is applicable on all the funds of the life insurers i.e. the shareholders fund and each of its statutory funds. Solvency of the shareholders' fund is to have admissible assets less liabilities equal to or greater than Rs. 165 million. For each of the statutory funds, the regime requires having admissible assets less liabilities equal to or greater than the policyholder liabilities and a prescribed solvency margin for each fund.

For computing, the solvency margin, a factor-based set of solvency requirements that move in line with type of policies has been prescribed, wherein the required solvency margin equals a first factor times the mathematical reserves plus a second factor times the sum at risk under the policies issued by the life insurer.

Whilst the solvency regime applicable in Pakistan is considered to take into account, to some extent, liquidity risk, market risk, credit risk, insurance risk etc. in calculation of solvency of an insurer through the admissibility of assets test, it does not quantify the levels of all risks borne by the insurers and therefore does not effectively deliberate on the adequacy of the insurer's capital keeping in view the risks undertaken. In other words, the

currently applicable solvency requirements do not take into account the risk factors pertinent to an individual insurer.

The current approach to capital and solvency requirement makes Pakistan an outlier in Asia and internationally since most countries in Asia have adopted a more risk-based approach to capital requirement. Some notable countries where RBC Regime has already been implemented include China, Japan, Malaysia, Philippines, Indonesia, Thailand and Sri Lanka. Additionally, India and Saudi Arabia have also initiated work on launching RBC regime for insurers.

## 1.3 Risk Based Capital Regime, Expectations & Purpose

Any Risk Based Capital Regime (hereinafter referred to as "RBC Regime") tends to quantify the different types of risks (insurance, market, liquidity, credit, operational risk etc.) taken by an insurer and thereafter calculates the level of capital which shall commensurate with the level of risks undertaken. In general, RBC regimes ensure that insurers keep sufficient amount of capital on hand to support their operations and write coverage, and therefore protect shareholders, investors and their policyholders.

As stated above, the solvency requirements currently prescribed under our regime does not fully reflect the levels of risks undertaken by insurance companies on their balance sheet as all risks are not quantified and do not create any explicit charge on the capital of the insurance company. Hence, no effective mechanism is available to determine the adequacy of capital of an insurer.

It is expected that introduction of RBC Regime in Pakistan would provide true reflection of the risks taken by insurers on their balance sheets and is expected to result in a more disciplined and financially resilient insurance sector in Pakistan. The RBC Regime is further expected to help the regulator to allocate more focus and resources to entities which pose greater risk to the system as a whole and/or are prone to a greater chance of failure.

Accordingly, the purpose of this document is to put together a possible structure of RBC Regime for Pakistan's insurance sector.

## 1.4 The Technical Working Group

Since, development of an RBC Regime is a significantly complex task, the Securities and Exchange Commission of Pakistan (the "SECP") in consultation with the Pakistan Society of Actuaries (the "PSOA") formed the Technical Working Group (the "TWG") for developing the RBC regime for Pakistan's Insurance Sector comprising of prominent actuaries of our insurance sector.

The TWG also constituted a sub-group comprising of actuaries to assist the TWG in developing a preliminary model for the RBC Regime in Pakistan. The composition of the TWG and its sub-group is provided as Annexure – A with this concept paper.

The TWG as well as its sub-group held series of meetings and was able to undertake the following:

**A**

Reviewed regimes of various jurisdictions regionally and internationally

**B**

Compared the salient feature of the regimes studied

**C**

Reviewed the Basel regime that has been adopted by the State Bank of Pakistan (the "SBP") for the banking sector of Pakistan

The SECP acknowledges the effort and the work put in by the TWG and its sub-group as well as the assistance and guidance extended in preparation of this document. The TWG had initially developed a Discussion Paper on design of the RBC Regime and it is stated for clarity that this document i.e. the Concept Paper is an extension of the said paper developed by the TWG for arriving at a broader proposed RBC framework for insurers in Pakistan.

The Concept Paper deliberates and proposes the conceptual model for RBC Regime covering the following broad areas:

(a) RBC formula and target criteria;
(b) Tiering of capital covering available capital (both core and supplementary);
(c) The risks that will finally be considered as a part of the RBC Regime;
(d) Approach for calculation of capital and quantification of the identified risks; and
(e) Approach for valuation of assets and liabilities.

# 2. PROPOSED RISK BASED CAPITAL FRAMEWORK

As explained above, the current approach to capital requirement makes Pakistan an outlier in Asia and internationally since most countries in Asia have adopted a more risk-based approach to capital requirement.

As explained earlier, the primary purpose of imposing capital adequacy or RBC requirements is to ensure that, in adversity, an insurer's obligations to policyholders will continue to be met as and when they fall due. The centrepiece of an RBC framework is to make capital requirements risk-sensitive, so that insurers that present greater risk to policyholders must carry more capital.

As a general guideline, capital must be sufficient to protect customers and counterparties from various risks, like; market risk, counterparty risk, credit risk, operational risk, liquidity risks etc. Additionally, an efficient capital adequacy structure can also send timely warning signals to re-focus on their risk management, as a decline in the capital base can expose the entity to significantly higher levels of risks.

An important goal of RBC regime is to strengthen the definition of regulatory capital to ensure it consists of elements that can absorb losses.

Figure 1 is a broader representation of proposed RBC framework, the pillars thereof with further expansion specifically of Pillar 1 i.e. Minimum Capital Requirements.

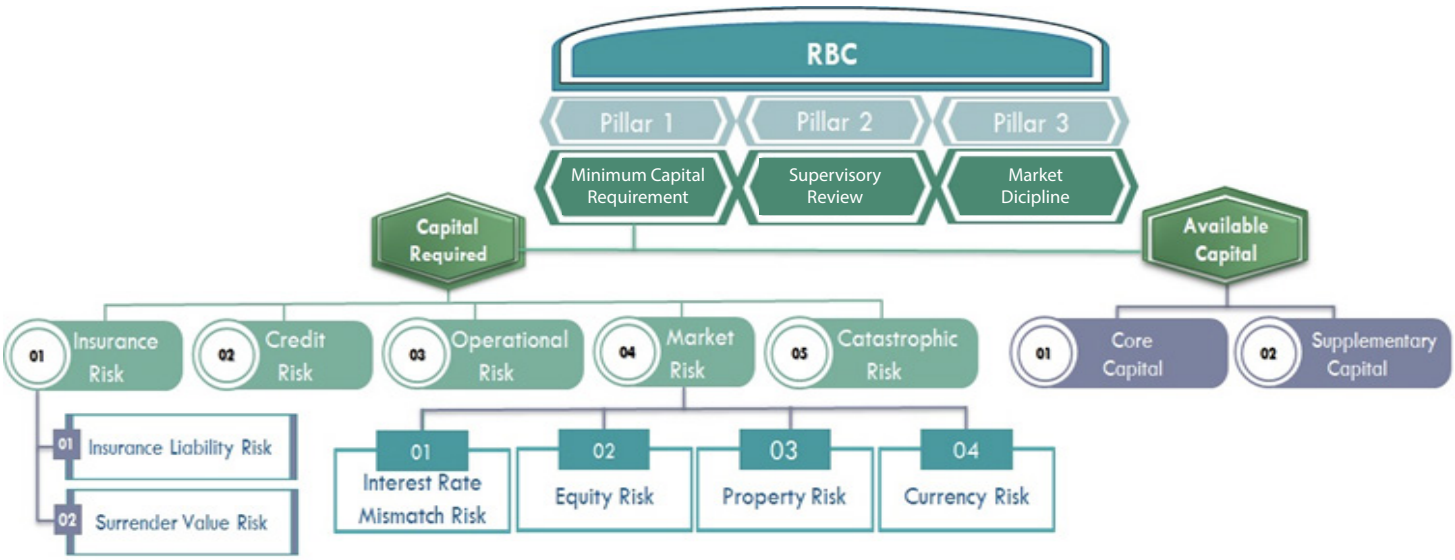


Figure 1: Risk Based Capital Framework

The proposed regime would comprise of three broad pillars: (a) Minimum Capital Requirements (Pillar 1); (b) Supervisory Review (Pillar 2); and (c) Market Discipline (Pillar 3). This Concept Paper intends to broadly cover the conceptual framework for Pillar 1 i.e. Minimum Capital Requirements and some discussion on Pillar 2 since this document covers the level of capital adequacy. The detailed requirements regarding pillar 3 will be subsequently finalized after public consultation.

# 3. CALCULATION OF CAPITAL ADEQUACY AND RISK BASED CAPITAL

## 3.1 Calculation of Capital Adequacy

Under the proposed RBC regime, the adequacy of capital will be measured through the Capital Adequacy Ratio (the "CAR"). The formula for computation of CAR is as follows:

$$CAR = \frac{\text{Total Capital Available}}{\text{Total Capital Required}} \times 100\%$$

It is proposed that an insurer must at all times meet the minimum capital adequacy requirement at company level and at statutory fund level (in case of life insurer).

At the company level the CAR will measure the adequacy of Total Capital Available (the "TCA") in all the funds of the insurer to support its Total Capital Required (the "TCR").

At the fund level the CAR will measure the adequacy of Total Capital Available within each individual fund to support the Total Capital Required for risks within that fund.

However, in case of life insurer, undertaking participating business the CAR maintained at company level will be as per the following formula:-

$$CAR_{Life} = \min(CAR_{All\ Funds,} CAR_{All\ funds\ excluding\ PAR})$$

Where:

- CAR All funds, is the CAR taking into account all the statutory funds and the shareholders' fund; and
- CAR All funds excluding PAR, is the CAR taking into account all the statutory funds and the shareholders' fund, excluding the statutory fund(s) related to participating life insurance business.

## 3.2 Capital Adequacy Levels

ICP 17 guidelines on Capital Adequacy stipulates at least two explicit control levels. The highest control level is described as the Prescribed Capital Requirement ("PCR"). PCR is defined as the solvency control level above which the supervisor does not intervene on capital adequacy grounds. The PCR may be expressed in probabilistic terms (e.g. 99.5% Value-at-Risk ("VaR") over a one-year time horizon) or as a fixed value, and is calculated for specific insurers and expressed in monetary units. The other intervention level is the Minimum Capital Requirement ("MCR"), which is set at a level lower than the PCR. The MCR is the solvency control level at or below which the supervisor would invoke its strongest actions, in the absence of appropriate corrective actions by the insurer concerned. The MCR is a minimum bound, below which no insurer is regarded to be viable.

Based on the aforesaid guidelines, the envisaged proposed framework of RBC regime for Pakistan will cover two explicit solvency control levels i.e. the PCR and MCR which may be represented in the form of two different level of Capital Adequacy Ratio. The proposed framework will also cover the appropriate regulatory intervention in case an insurer breaches any of these solvency control levels. For the purposes of this paper, it is clarified that the level of CAR for PCR and MCR is to be decided in the future phases of the development of the framework expectedly on the basis of data analysis and quantitative impact study.

# 4. CALCULATION OF TOTAL CAPITAL AVAILABLE (TCA)

TCA refers to qualified capital that is available to absorb the different risks undertaken by insurers. The starting point for arriving at TCA is based on the financial statements of the insurer being evaluated and by making a series of adjustments to the capital reported therein. These adjustments may result in increasing or decreasing the reported capital of insurer and would provide a more economic and consistent view of capital available, which in turn would allow for a more comparable capital adequacy evaluation on an overall industry basis.

## 4.1 Components of Available Capital

The TCA of an insurance company is the aggregate of Tier 1 capital (also referred to as "Core Capital") and Tier 2 capital (also known as "Supplementary Capital") of the insurer less deductions deliberated in section 4.3 of this chapter. The division of TCA into Tier 1 and Tier 2 capital is based on the degree of permanence and whether it is free and clear of any encumbrances.

Based on the study of international jurisdictions and the RBC regime for banks by the State Bank of Pakistan, it is proposed that for the insurance sector in Pakistan, similar two-tier approach to capital i.e. can be adopted.

### 4.1.1 Tier 1 Capital

The Tier 1 capital of an insurer under the proposed RBC regime shall be the aggregate of the following:

- Fully paid up (common shares) capital
- Balance in share premium account
- Reserve for Issue of Bonus Shares
- Net un-appropriated / un-remitted profits including retained earnings of Ledger Account C & Ledger Account D.
- General reserve
- Retained earnings in Ledger Account A and Ledger Account B in case of participating business

### 4.1.2 Tier 2 Capital

The Tier 2 capital of an insurer under the proposed RBC regime shall be the aggregate of the following:

- Paid-up non-cumulative irredeemable preference shares
- Irredeemable subordinated debts (meeting the criteria to be prescribed by the Commission)
- Revaluation Reserves (net of deficits, if any)[1]
- Foreign Exchange (FX) translation reserves

## 4.2 Limitations and Restrictions on Capital Available

Tier 1 capital is considered to be the going concern capital i.e. capital that is available to the company to absorb losses while continuing operations as going concern. Tier 2 capital, on the other hand, is available to absorb losses in case a company ceases its operations. Basel and international solvency regimes, define limits with respect to minimum capital that must be held in Tier 1 with respect to the total capital.

A study of the relevant regimes reveals differing emphasis on what qualifies as available capital within tier 2. Based on the SBP requirements the computation of the amount of Core (Tier 1) and Supplementary (Tier 2) Capital's may be made subject to the following limitations and restrictions:

(a) The sum total of the different components of the eligible Tier 2 Capital will be limited to the sum total of the various components of the eligible Tier 1 Capital.

(b) Revaluation Reserves shall be the reserves created by revaluation of fixed assets and equity instruments held by the insurance company. The revaluation reserves shall be net off against any deficit on account of revaluation of Available for Sale (AFS) securities. The assets and investments must be prudently valued fully taking into account the possibility of price fluctuations and forced sale value. Revaluation reserves reflecting the difference between the book value and the market value will be eligible up to 45% of the total Supplementary Capital subject to the condition that the reasonableness of the revalued amount is duly certified by the external auditors of the insurance Company.

[1] AFS instruments and Fixed assets

(c) Subordinated debt will be limited to a maximum of 50% of the amount of Tier 1 capital and will also include rated and listed subordinated debt instruments (like TFCs/Bonds) raised in the capital market. To be eligible for inclusion in the supplementary capital, the instrument should be fully paid up, have a minimum fixed term maturity term of 5 years, unsecured, subordinated as to payment of principal and profit, to all other indebtedness of the insurance company deposits, and should not be redeemable before maturity without prior approval of the Commission. Further it should be subject to a lock-in clause, stipulating that neither interest nor principal may be paid (even at maturity) if such payment means that the insurer falls below or remains below its minimum capital requirements.

## 4.3 Deductions from Available Capital

For certain assets in the balance sheet, the realisable value under a wind-up/ liquidation scenario may become significantly lower than the economic value which is attributable under going concern conditions. Similarly, even under normal business conditions, some assets may not be realisable at full economic value, or at any value, at the time they are needed. This may render such assets unsuitable for inclusion at their full economic value for the purpose of meeting required capital. The treatment of such assets for capital adequacy purposes may need to reflect an adjustment to its economic value.

As per the guidance of ICP, such an adjustment may be effected either directly, by not admitting a portion of the economic value of the asset for solvency purposes (deduction approach) or indirectly, through an addition to regulatory capital requirements (capital charge approach). In this regard, considering the findings from the study of international jurisdictions as well as the related provisions of the SBP regime, we propose the deduction approach for some kind of assets and 100% capital charge approach for some kind of assets for the RBC regime in Pakistan.

As a starting point, the following are the proposed deductions from the sum of Tier 1 and Tier 2 capital of an insurer:

(a) intangible assets, including but not limited to goodwill, brand names and capitalised establishment costs;
(b) deferred tax asset balances;
(c) surplus assets in defined benefit pension fund;
(d) assets subject to encumbrances; and
(e) Investment in the licensed insurer's subsidiaries.

Where in the case the subsidiary is an insurance company and which is fully solvent under the RBC regime, the parent insurer shall be allowed the benefit of surplus of the subsidiary company over the solvency requirements in the TCA.

## 4.4 Calculation of Capital Available Capital at Fund Level

Whilst the discussion on TCA for at a company level is being discussed broadly in section 4.1, it is proposed that the TCA at the fund level will be determined as follows:

- In the case of a participating fund, retained surplus in Ledger Account A and Ledger Account B
- In the case of any other statutory fund the surplus of the assets of the fund over its liabilities.

# 5. CALCULATION OF TOTAL CAPITAL REQUIRED (TCR)

The TCR represents the amount of capital required in order to cover risks arising from business activities such as (a) Insurance risk; (b) Credit risk; (c) Reinsurance risk; (d) Operational risk; (e) Market risk; (f) Equity risk; (g) Property risk; (h) Currency risk; and (i) Interest rate risk.

It is proposed that the TCR of a licensed insurer at the company level shall be the aggregate of its total capital charges against each category of risk. For a life insurer, the TCR shall be the aggregate of the total capital charges for each statutory fund and the total capital charges for all assets in its shareholders' fund.

From the review of international jurisdiction, it is proposed that every insurer shall determine capital charge for all of the risks undertaken and then shall add the resulting amounts to arrive at the TCR for the insurer as per the following formula:

**(a) For non-life Insurers:**

$$TCR = \sqrt{\begin{matrix}(\text{insurance Risk Capital charge})^2 + (\text{Credit risk Capital Charge})^2 \\ + (\text{Market Risk Capital charge})^2 + (\text{Reinsurance Risk Capital Charge})^2\end{matrix}} + \text{Operational Risk Capital Charge}$$

**(b) For life insurers:**

$$TCR = \text{Max}\left[\text{Surrender Value Capital Charge}, \left(\sqrt{\begin{matrix}(\text{insurance Risk Capital charge})^2 + (\text{Credit risk Capital Charge})^2 \\ +(\text{Market Risk Capital charge})^2 + (\text{Reinsurance Risk Capital Charge})^2\end{matrix}} + \text{Operational Risk Capital Charge}\right)\right]$$

The proposed framework for RBC regime is being suggested based on a standardized approach for determining the required capital for each risk as described in the following sections. The use of internal models for calculation of risk charges by insurers is not being considered in the current approach and shall be considered in the future.

Except for the operational risk capital charge, the risk charges do not apply to assets required to be deducted from TCA covered under section 4.3 above.

In the case of an investment-linked statutory fund, the insurer shall compute the TCR for the non-unit portion of the statutory fund, except for operational risk capital charges, where the licensed insurer shall compute the TCR for the entire fund.

# 6. CALCULATION OF DIFFERENT RISK CAPITAL CHARGES

## 6.1 Insurance Risk

The Insurance risk capital charge aims to address the risk of under-estimation of the insurance liabilities and adverse claims experience, over and above the amount of risk margin already provided for in the base valuation of insurance liabilities.

The succeeding para's of this chapter deliberate on the manner of computation of risk charges for life and non-life insurers.

### 6.1.1 Life Insurance Business

#### 6.1.1.1 Liability Risk Capital Charge

The insurance liability risk (covering mortality, longevity, morbidity, persistency, expense) charge shall be computed as the difference of Insurance liability calculated under stress scenario (simultaneously stressing all the assumptions) and insurance liability calculated under best estimate ("BE") assumptions (i.e., BE Liability plus a Risk Margin (RM)). The proposed computation is as follows:

Liability risk capital charge = (V* - Value of liabilities under base scenario)

where V* is the adjusted value of the long-term insurance liabilities calculated using the stress factors proposed in Table 1 below. These charge factors have been defined after study of various international regimes and are to be refined on the basis of data analysis and quantitative impact study as well as industry feedback.

| Valuation parameters | Stress factors to determine V* |
|---|---|
| Mortality | +-20% |
| Disability | +-25% |
| Renewal Expense | +-20% |
| Persistency | +-50% |
| Morbidity | +-20% |

**Table 1:** Proposed stressed factor for life insurers for determination of liability risk capital charge

The value of V* shall be determined, by stressing all risk factors simultaneously in the direction selected for a particular policy. Every insurer shall use the same stress factors, in the same direction for all policies of that product type. The selected direction of stress should be the one that produces the higher liability value in each case, to prevent any instances of negative liability.

For participating policies V* and the value of liabilities under the base scenario (that is, BE liability + RM) applies only to the guaranteed liabilities.

The stress factors of various jurisdictions studied in the region is given in the Table 2 below:

| Country | Valuation parameter | Stress factors to determine V* |
|---|---|---|
| **Philippines** | Mortality | ±25% to BE |
| | Lapses | ±40% |
| | Expenses | ±20% |
| | Morbidity | ±25% |
| **Sri Lanka** | Mortality | +10% non-annuity<br>-15% annuity |
| | Disability | +20% |
| | Renewal Expenses | +10% |
| | Persistency | +20% |
| **Singapore** | Mortality | +20% |
| | Longevity | -25% |
| | Disability | +20% |
| | Expenses | +20% |
| | Lapses | ± 50% |
| | Dread Diseases | +40% |
| **Malaysia** | Mortality | ±40% guaranteed<br>± 20% non-guaranteed premium |
| | Persistency | ±50% |
| | Renewal expenses | ±20% |
| | Disability | ±45% guaranteed<br>±22.5% non -guaranteed premium |

**Table 2:** Stress factors for life insurers for determination of liability risk capital charge in studied jurisdictions.

#### 6.1.1.2 Surrender Value Capital Charge

The surrender value capital charges (SVCC) aim to address lapse risk in excess of the levels assumed in the calculation of reserves and risk margins. Life insurers shall apply SVCC to set an upper limit for TCR.

Following formula/methodology is proposed to determine SVCC:

**SVCC = max [zero, aggregate surrender value of the business in force in respect of policies in the statutory fund less the aggregate policy reserves of the statutory fund]**

The SVCC shall be determined for participating policies, non-participating policies and unit linked long term policies separately, then aggregated. In the case of unit linked long term policies, the SVCC applies only if the guaranteed surrender values exceed the unit fund values and non-unit linked liabilities, in aggregate, as at the valuation date. In determining the SVCC for policies that are yet to acquire a surrender value or where the policy liability is negative the surrender value shall be taken as zero.

The analysis of the requirements of the various jurisdiction studied in the region is given in Table 3 below.

| Name of Country | Criteria |
|---|---|
| **Philippines** | Aggregate surrender value in fund-aggregate policy reserve of fund.<br><br>Surrender risk charge will be applicable if aggregate surrender value is greater than sum of all other risk charge |
| **Sri Lanka** | The SVCC is the higher of zero and the aggregate surrender values of the policies in force minus the aggregate policy liabilities<br><br>Surrender risk charge will be applicable if aggregate surrender value is greater than sum of all other risk charge |
| **Malaysia** | max [zero; aggregate surrender value of the business in force in respect of policies in the insurance fund less the aggregate policy reserves of the insurance fund] |

**Table 3:** SVCC in studied international jurisdictions

### 6.1.2 Non-life Insurance Business

In case of non-life insurance business, Insurance Risk is the aggregation of the "Underwriting Risk" and the "Reserve Risk".

"Underwriting Risk" is the risk of higher than expected claims. This stems from the following sources:

- Volatility risk;
- Trend risk; and
- Misspecification risk;
- Catastrophe risk.

"Reserve Risk" is risk associated with past years. It gauges the risk that the current reserves are insufficient to cover their run-off over the policy period.

Based on our research of relevant capital regimes, it is proposed that Insurance risk capital charge for non-life companies be determined for premium liability risk and claim liability separately, using factor-based model. The Formula for the computation of risk charge is as follows:

**Liability risk capital charge for each class of general insurance = $\sum$ of all classes of general insurance (Value of premium risk liability X risk factor$_i$) + (Value of claim liability$_i$ X risk factor$_i$)**

Premiums liability risk charges for each class of non-life insurance business is to be determined separately, by multiplying the net unexpired risk reserve (URR) determined at the proposed confidence interval (to be decided in the subsequent stages), by the corresponding premiums liability risk factor as prescribed.

Similarly, claims liability risk charges for each sub-class of general insurance business shall be determined separately, by multiplying the net claims liability by the corresponding claims liability risk factor as prescribed.

A non-life insurer is required to hold, among others, reserves in respect of premium liabilities, defined as the higher of unexpired risk reserve (URR) or unearned premium reserve (UPR).

Based on the review of other jurisdictions, the proposed risk factors for major lines of business for non-life insurers are provided in **Table 4**. These risk factor shall be further refined based on the industry feedback, data analysis and quantitative impact studies.

| Classes of Business | Premium risk liability factor | Claim liability risk factor |
|---|---|---|
| **Fire and property damage** | 24% | 20% |
| **Marine, aviation and transport** | 36% | 30% |
| **Motor** | 30% | 25% |
| **Liability business** | 36% | 30% |
| **Workers' compensation** | 30% | 25% |
| **Credit and suretyship** | 36% | 30% |
| **Accident and health** | 24% | 20% |
| **Agriculture insurance including crop insurance** | 36% | 30% |
| **Miscellaneous business** | 36% | 30% |

**Table 4:** Proposed stressed factor for non-life insurers for determination of insurance risk capital charge

Life Insurance companies which are doing accident and health business shall also calculate the risk charge for accident and health business as per table 4.

The analysis of criteria for risk charge and stress factors of various jurisdiction studied in the region is given in **Table 5** below.

| Country | Criteria for Charges | Rate of Charge |
|---|---|---|
| **Philippines** | Net Claim Liability | • 30% (Fire, marine, aviation, Bond, engineering others<br>• 25% Motor<br>• 35% Personnel accident |
| | Unexpired Risks | • 30% Fire<br>• 50% marine, aviation,<br>• 45% Bond, Motor<br>• 30% Personnel accident, engineering |
| **Sri Lanka** | Claim liability | • 16% Aviation and marine hull, Liability insurance,<br>• 12% cargo, engineering, motor<br>• 8% Fire, personnel accident, Health |
| | Unexpired Risk Reserve | • 19% Aviation and marine hull, Liability insurance,<br>• 14% cargo, engineering, motor<br>• 10% Fire, personnel accident, Health |
| **Singapore** | Premium Liability | • 24%, 30%, 36% |
| | Claim liability | • 20%, 25%, 30% |
| **Malaysia** | Claim Liability | • 30% aviation, marine hall, liabilities<br>• 25% cargo, motor, worker compensation, CAR<br>• 20% bond, Fire, peroneal accident |
| | Unexpired Risk Reserve | • 45% aviation, marine hall, liabilities<br>• 37.5% cargo, motor, worker compensation, CAR<br>• 30% bond, Fire, peroneal accident |
| | Unearned premium reserve | • 35% energy, liability<br>• 30% marine cargo, hull, credit<br>• 25% motor, engineering, surety ship |

**Table 5:** Stress factors for non-life insurers for determination of liability risk capital charge in studied jurisdictions.

## 6.2 Credit Risk

Credit risk is the risk of losses resulting from asset defaults, related losses of income and the inability of a counterparty to fully meet its contractual financial obligations.

Based on the review of SBP Basel regime, it is proposed to calculate the risk charge for credit risk using the Standardized Approach ("SA"). Under SA, the capital requirement is based on the risk assessment credit rating, made by External Credit Assessment Institutions (ECAIs) recognized as eligible by SBP for capital adequacy purposes.

Accordingly, the following external risk rating and credit risk charges broadly in line with SBP approach have been proposed for further discussion and finalization in the data analysis and quantitative impact study phase: -

| Items | External Risk Rating | Risk Charge |
|---|---|---|
| Cash and cash equivalent | | 0% |
| Claims on government of Pakistan and SBP denominated in PKR | | 0% |
| Claims on other sovereigns and on Government of Pakistan or provincial governments or SBP denominated in currencies other than PKR. | 1<br>2<br>3<br>4,5<br>6<br>Unrated | 0%<br>2%<br>5%<br>10%<br>15%<br>10% |
| Claims on financial institutions | 1<br>2,3<br>4,5<br>6<br>Unrated | 2%<br>5%<br>10%<br>15%<br>5% |
| Claims on financial institutions with original maturity of 3 months or less denominated in PKR and funded in PKR | | 2% |
| Claims, denominated in foreign currency, on financial institution with original maturity of 3 months or less | 1,2,3<br>4,5<br>6<br>unrated | 2%<br>5%<br>15%<br>2% |
| Claims on public sector entities in Pakistan | 1<br>2,3<br>4,5<br>6<br>Unrated | 2%<br>5%<br>10%<br>15%<br>5% |
| Claims on Corporates (excluding equity exposures) | 1<br>2<br>3,4<br>5,6<br>Unrated | 2%<br>5%<br>10%<br>15%<br>15% |
| Reinsurance receivable | 1<br>2<br>3,4<br>5,6<br>Unrated | 2%<br>5%<br>10%<br>15%<br>10% |
| Staff loans/ amounts receivable from employees/ Assets deducted from total capital available/ Policy loans/ Premium receivables | | 0% |
| Premium receivable more than 90 days | NA | 100% |
| Vehicles, office equipment and fixture | NA | 100% |

**Table 6:** Risk charge for determination of Credit Risk

## Rating Grid - Long-Term Rating Grades Mapping

For the purposes of the proposed RBC regime, insurers are required to use ratings of ECAIs recognized by SBP for capital adequacy purposes. Mapping of ratings of various recognized ECAIs with that of SBP rating grade is given in Table 7 below which is indicative. Further, the chosen ECAI and their rating shall be used consistently for each type of claim.

| SBP Rating Grade | ECA score | PACRA/VIS |
|---|---|---|
| 1 | 0,1 | AAA<br>AA+<br>AA<br>AA- |
| 2 | 2 | A+<br>A<br>A- |
| 3 | 3 | BBB+<br>BBB<br>BBB- |
| 4 | 4 | BB+<br>BB<br>BB- |
| 5 | 5,6 | B+<br>B<br>B- |
| 6 | 7 | CCC+ and below |

**Table 7:** Rating Grid

The analysis of credit risk charge of various jurisdiction studies in the region is given in Table 8 below:

| Name of Country | Type of Exposure | Credit Rating | Risk Charge |
|---|---|---|---|
| **Philippines** | Government | - | 0% |
| | Financial Institutions/Corporate/others | AAA-AA<br>A<br>BBB<br>BB<br>Below<br>Unrated | 1.5%<br>4%<br>6%<br>12%<br>25%<br>25% |
| **Sri Lanka** | Government | - | 0% |
| | Foreign/financial institutions | AAA-AA<br>A<br>BBB-BB<br>Below | 1.6%<br>4%<br>8%<br>12% |
| | Corporate debt | AAA-AA<br>A<br>BBB-BB<br>Below<br>Unrated | 1.6%<br>4%<br>8%<br>12%<br>16% |
| **Singapore** | All risk exposure and reinsurance receivable less than one year | AAA<br>AA<br>A<br>BBB<br>BB<br>B<br>C | 0.5%<br>1%<br>2%<br>5%<br>10.5%<br>20%<br>48.5% |
| | Reinsurance more than one year | - | 100% |

| | | | |
|---|---|---|---|
| **Malaysia** | Government | - | 0% |
| | Corporate debt | AAA<br>AA<br>A<br>BBB<br>BB and below | 1.6%<br>2.8%<br>4%<br>6%<br>12% |
| **State Bank** | Financial institutions/ | AAA-AA<br>A<br>BBB<br>BB<br>B<br>CCC | 1%<br>5%<br>5%<br>12.5%<br>12.5%<br>18.75% |
| | Corporates | AAA-AA<br>A<br>BBB<br>BB<br>B<br>CCC | 2%<br>5%<br>5%<br>12.5%<br>12.5%<br>18.75% |
| **Indonesia** | Corporate | AAA<br>AA<br>A<br>BBB | 1.6%<br>2.8%<br>4.0%<br>6.0% |

**Table 8:** Credit Risk Charge in studied international jurisdictions

## 6.3 Reinsurance Risk

Reinsurance credit exposure has potential credit risk, accordingly it is proposed that every insurer shall calculate a reinsurance risk capital charge for each reinsurance counterparty using the following formula:

**Reinsurance risk capital charge = Reinsurance credit risk exposure x Counterparty credit risk factor**

The reinsurance credit risk exposure shall be the sum of following:

(a) Admissible amounts due from the reinsurance counterparty, including claims recoverable and ceding commissions;

(b) Reinsurance recoveries in respect of claims incurred including ceded claims liabilities;

(c) For life insurance business, the difference between the value of the gross liabilities and the net liabilities (net of re-insurance) of the insurer in respect of its participating policies, non-participating policies, and unit linked long term policies due to reinsurance ceded to the reinsurer; and

(d) For non-life insurance business, the difference between the gross premium liability and the net premiums liability (net of re-insurance) of the insurer due to reinsurance ceded to the reinsurer.

The proposed counterparty credit risk capital factors are specified in Table 6 above.

## 6.4 Operational Risk

Operational risk is the risk of loss from failure/errors of human resources and failure of processes and systems, also including external events.

Based on research on various international capital regimes, it is proposed that every insurer shall calculate an operational risk capital charge of 1% of the value of all assets of the insurer, whether admissible or no, and

whether held inside or outside the policyholders' funds or shareholders' fund.

The operational risk charge of various jurisdiction studied in the region and the one in the SBP Basel regime is given in Table 9 below.

| Name of Country | Criteria for Charges | Rate of Charge |
|---|---|---|
| **Philippines** | Gross premium income or net policy liability whichever is higher | 1%<br>(cap of 10% of total risk requirement |
| **Sri Lanka** | Total Assets | 1% |
| **Singapore** | The higher of:<br>(i) 4% of GP1 + Max (0, 4% x ((GP1 - GP0) - 20% x GP0))<br>(ii) 0.5% of policy liability (gross of reinsurance) | |
| **Malaysia** | Total Assets | 1% |
| **Indonesia** | General and administration expenses, cost of training and development | 1% |
| **SBP** | Average of three years' gross income | 15% |

**Table 9:** Operational Risk Charge in International Jurisdictions and the SBP

### 6.5 Market Risk

The market risk capital charges aim to mitigate risks of financial losses arising from:

(i) the reduction in the market value of assets due to exposures to equity, mutual funds, property and currency;
(ii) non-parallel movements between the value of liabilities and the value of assets backing the liabilities due to interest rate movements (i.e. the interest rate mismatch risk); and

The method of determination of Market risk charge i.e. Equity risk charge, mutual funds risk charge, interest risk charge, property risk charge and currency risk charge are deliberated below.

#### 6.5.1 Equity Risk

Equity risk is risk of economic loss due to changes in the price of equity exposures. Equity risks arising from exposures to derivatives such as futures, swaps and options on individual shares or stock indices are also included.

For the purpose of simplicity, it is proposed to adopt following capital charge for equity investments as per SBP prescribed risk charge which will be further refined on the basis of industry feedback, data analysis and quantitative impact studies: -

| Equity investments | Capital charge |
|---|---|
| **Equities listed on Pakistan Stock Exchange** | 12.5% |
| **Unlisted equity securities** | 18.75% |

**Table 10:** Proposed equity risk charge

The equity risk charge found in various jurisdiction studies in the region is given in Table 11 below:

| Country | Type | Rate of Risk Charge |
|---|---|---|
| **Philippines** | Listed | 45% |
| | Unlisted | 60% |
| | Mutual Funds | Equity 35%, Debt 12%, Money Market 6% |
| | Non-Insurance related subsidiaries | 60% |
| **Sri Lanka** | Listed / Listed related party | 35% (investment are applicable) |
| | Unlisted | 45% |
| | Mutual Funds | Look through approach<br>Money Market ins 1.6%, Debt 4%, equity 35%, property 25%, others 15% |
| **Singapore** | Equities listed in Developed Markets | 35% |
| | Other equities | 50% |
| **Malaysia** | Listed at main market Bursa | 20% |
| | Unlisted | 35% |
| | Collective investment schemes | 0% government, money market 1.6%, shares 16%, debt securities 4%, properties 16% |
| **Indonesia** | Listed | 20% |
| | Others | 30% |
| | CIS | 0% government bond, 6% corporate debt fund, 16% equity fund |

**Table 11:** Operational Risk Charge in International Jurisdictions and the SBP

### 6.5.2 Investments in Mutual Funds

Intvestment in Mutual Funds is also exposed to market and credit risk. SBP prescribed the following three approaches for calculation of capital charge for investment in mutual funds:-

| Approach | Treatment |
|---|---|
| **Full look through approach** | Where the Company is aware of the actual underlying investments of the mutual fund on daily basis, insurer may calculate the capital charge on its investment as if the underlying exposure/ asset class held by the mutual fund is held by the insurer itself. |
| **Modified look through approach** | In case the insurer is not aware of the underlying investment on a daily basis, the capital charge may be determined by assuming that the mutual fund first invests to the maximum extent in the most risky asset class allowed under its offering document and then continues making investments in descending order until the total investment limit is reached. |
| **Conservative approach** | If the insurer is not in a position to implement the above approaches, the capital charge may be based on the most risky asset (i.e. assigning the highest risk weight) category applicable to any asset the mutual fund is authorized to hold as per its offering document. |

**Table 12:** Approaches for determination of risk for investment in mutual funds

We are also proposing calculation of risk charges for investment in mutual funds as per Table 12 above.

### 6.5.3 Property Risk

Property risk is the risk of economic loss due to unexpected loss from changes in the price of property exposures. Based on research of international capital regimes property risk charge as per Table 13 is proposed, with further refinement to be made during data analysis and quantitative impact study phase:

| Property investment | Risk Charge |
|---|---|
| **Self-occupied properties** | 12.5% |
| **Other property and property related investments** | 16% |

**Table 13:** Risk charge for property risk

Property risk charge provided for in various jurisdiction studied in the region is given in Table 14 below:

| Name of Country | Type of Property | Rate of Risk Charge |
|---|---|---|
| **Philippines** | Real Estate or property Trust | 25% |
| **Sri Lanka** | Buildings, and other immovable property rights | 25% |
| **Singapore** | Immoveable property | 30% |
| | Property Trust | Look through approach |
| **Malaysia** | Self-occupied properties | 8% |
| | Other property and property-related investments | 16% |
| **Indonesia** | Net of return of investment more than 4.0% annually | 7% |
| | Net of return of investment of between 2.0% - 4.0% annually | 15% |
| | Net of return of investment less than 2.0% annually | 40% |

**Table 14:** Property Risk Charge in studied international jurisdictions

### 6.5.4 Currency Risk

Currency risk is the risk of loss due to adverse movements in the value of foreign currencies. The treatment for currency risk is proposed as per the SBP Basel and other international capital regimes.

Accordingly, capital requirement for determination of currency risk is proposed as follows:

**Capital Requirement = x% * max (sum of long positions, sum of short positions)**

The overall foreign exchange exposure is measured by aggregating the sum of the net short positions or the sum of the net long positions; whichever is the greater, regardless of sign.

Based on SBP requirement, the capital charge for foreign exchange risk is proposed to be 8% of insurer's overall foreign exchange exposure.

Currency risk charge of various jurisdiction studied in the region is given in **Table 15** below.

| Name of Country | Criteria | Rate of Risk Charge |
|---|---|---|
| **Philippines** | Net Exposure:<br>US$<br>Others | <br>10%<br>17% |
| **Sri Lanka** | Not covered | |
| **Singapore** | Net exposure | 12% |
| **Malaysia** | Net Exposure in foreign currencies | 8% |

**Table 15:** Currency Risk Charge in studied international jurisdictions

### 6.5.5 Interest Rate Mismatch Risk

Interest rate mismatch is the risk arising from changes in market interest rates, which affect the prices of debt securities and policyholder liabilities. Policyholder liabilities require future liability cash flows using relevant yield curve.

Based on research of relevant regimes, following methodology is proposed for interest rate mismatch risk:

**(a) Computation of interest rate risk charges for life insurance statutory funds with discounting of liabilities**

The capital charge to account for interest rate risks is reduced to the extent that the weighted average duration of the exposures in interest rate related assets match the weighted average duration of the insurance liabilities.

The method of capital charge computation, for each statutory fund, is summarized in Table 16 below:

| Scenario | Value of interest rate exposures (1) | Liability Value (2) | Surplus (1) – (2) |
|---|---|---|---|
| Base | $A_0$ | $V_0$ | $S_0$ |
| Increasing interest rate | $A_1$ | $V_1$ | $S_1$ |
| Decreasing interest rate | $A_2$ | $V_2$ | $S_2$ |

**Table 16:** Method of Capital Charge Computation for Interest Rate Mismatch Risk

The amount of capital charges required is the higher of the reduction in surplus under the increasing and decreasing rate scenario. If the reduction in surplus is higher under the increasing scenario in one fund, but higher under the decreasing scenario in another fund, then the dominant scenario at the company level should be selected and applied consistently to all funds. Any resulting negative capital charges for each individual fund should be zeroized. The proposed stress scenario is given below, which will be adjusted on the basis of industry feedback, data analysis and quantitative impact studies:-

| Residual term to maturity | Stress up | Stress down |
|---|---|---|
| Less than or equal to 4 years | 70% | 70% |
| Less than or equal to 8 years | 50% | 50% |
| More than 8 years | 30% | 30% |

**Table 17:** Stress Levels for Computation of Capital Charge for Interest Rate Mismatch Risk

The analysis of the shock/stress levels of various jurisdiction studied in the region is given in Table 18 below:

| Name of Country | Criteria for Charges | Shock | Charge |
|---|---|---|---|
| **Philippines** | Shock to risk free rate and computing of surplus (NPV of Fixed rate assets - NPV Insurance liabilities) | • Upward 189% to 55%<br>• Down ward 100% to 51% | Larger reduction in surplus in both scenario |
| **Sri Lanka** | Shock to risk free rate and computing of surplus (NPV of Fixed rate assets - NPV Insurance liabilities) | • Upward 70% to 25%<br>• Down ward 75% to 30% | Larger reduction in surplus in both scenario |
| **Singapore** | Recompute the interest sensitive assets and liabilities and calculate larger reduction net assets | • Upward Short term-100% to long term-25%<br>• Down ward 75% to 25% | Larger reduction in surplus in both scenario |
| **Malaysia** | **Discounting liabilities**:-<br>Shock to risk free rate and computing of surplus (NPV of Fixed rate assets - NPV Insurance liabilities)<br><br>**General insurance**<br>GAP between asset and liabilities at each maturity *charge | 0.2% to 8% as per residual maturity bucket | |

**Table 18:** Shock/Stress Levels for Interest Rate Mismatch Risk in studied international jurisdictions

**(b) Computation of interest rate risk charges for non-life Insurance and shareholders' fund without discounting of liabilities**

A simplified approach is proposed for undiscounted liabilities in the non-life insurance and shareholders' funds to address interest rate risks in view of the short-term nature of most of the insurance liabilities.

The net value of all positions in interest rate related exposures are determined for each maturity band, to which risk charges are then applied. Exposures and proposed risk charge are classified according to their residual maturities as per Table 19 (Malaysian Model), which will be further refined on the basis of industry feedback, data analysis and quantitative impact studies:

| Residual term to maturity (x) | Risk Charge % |
|---|---|
| X ≤ 1 month | 0.0 |
| 1 < X ≤ 3 months | 0.2 |
| 3 < X ≤ 6 months | 0.5 |
| 6 < X ≤ 12 months | 0.8 |
| 1 < X ≤ 2 years | 1.3 |
| 2 < X ≤ 3 years | 1.9 |
| 3 < X ≤ 4 years | 2.7 |
| 4 < X ≤ 5 years | 3.2 |
| 5 < X ≤ 7 years | 4.1 |
| 7 < X ≤ 10 years | 4.6 |
| 10 < X ≤ 15 years | 6.0 |
| 15 < X ≤ 20 years | 7.0 |
| X > 20 years | 8.0 |

**Table 19:** Exposure and Proposed Risk Charge for Interest Rate Mismatch Risk

## 6.6 Catastrophic Risk

Catastrophe risk is the risk associated with extreme or irregular events, the effects of which are not sufficiently captured in the other risk requirements under both for life and non-life business.

The analysis of the approached of various jurisdiction studies in the region is given in Table 20 below.

| Name of Country | Criteria for Charges | Risk charge |
|---|---|---|
| **Philippines** | Life<br>Capital at Risk<br>CAR = (Sum assured on death of each policy + {Net annualized amount of benefit on death of each policy) * average annuity factor for duration} - Net liability for each policy)<br>**Non-Life**<br>Loss can be obtained from Aggregate Exceedance probability (EAP) | Sum at risk *0.00075<br>Maximum of :-<br>• Retained aggregated loses from earthquake<br>• Retained aggregated losses from wind storm<br>• 60% of combined aggregated loss of both |
| **Singapore** | **Life**<br>(a) the difference between –<br>(i) the total death benefit payable after applying the prescribed shock of an absolute increase in the rate of policyholders dying over the following year of 1 per 1000; and<br>(ii) any reduction in policy liability due to lesser number of policies remaining within the HRG after the prescribed shock in subparagraph (i) above, or<br>(b) zero, whichever is high<br>Non- Life - Not prescribed | |

**Table 20:** Analysis of the Approach of Various Jurisdictions

Currently we are not proposing any specific risk charge for catastrophe risk, however, during consultation and data analysis we will further assess what methodology can be used for determining the capital charge for catastrophe risk.

## 6.7 Investment Limits and Capital Charge on Excess Exposure

In order to minimize the concentration risk, for the RBC regime following are the proposed limits for investment/exposure by a registered insurer as per Table 21 below. Any investment/exposure above the proposed limit will attract charge of 100% for the purpose of calculation of MCR:

| Type of exposure | Limit % of total assets |
|---|---|
| **Per party limit including debt and equity securities** | 10% |
| **Per party limit-listed equity security** | 5% for life<br>10% for non-life |
| **Per party limit -unlisted equity security** | 2.5% for life<br>10% for non-life |
| **Per Debt security limit (up to investment grade)** | 10% |
| **Per debt security limit (below investment grade)** | 5% |
| **Deposit with financial institution** | 20% |
| **Per mutual fund limit- Money Market Mutual Funds** | 20% |
| **Per mutual fund limit- Income/Debt Mutual Funds** | 10% |
| **Per mutual funds limit-Equity, balance, asset allocation** | 10% |
| **One unit of property** | 20% |
| **Loan and advance to single party** | 10% |

**Table 21:** Investment/Exposure Limits for Registered Insurers

# 7. VALUATION OF ASSETS AND LIABILITIES

The valuation of assets and liabilities is very important in the context of risk-based capital regime. We are proposing the following broader parameters for valuation of assets and liabilities, however, details on valuation of liabilities and treatment of re-insurance will be shared with the industry in the 2nd phase for consolation and feedback.

### (i). Valuation of policy holders' liabilities:

#### (a) Life Insurance Liabilities

As per the current insurance laws of Pakistan, insurers use the net premium valuation basis which is a reserve methodology, where net premiums are the amounts necessary to pay benefits according to certain mortality and interest rate assumptions. Company expenses are not reflected in the net premium reserve, nor are there any explicit margins for profits or adverse experience.

We propose to replace the net premium valuation methodology with gross premium valuation methodology. As per the proposed methodology every insurer shall use a discounted cash flow approach equivalent to gross premium valuation methodology to calculate the liabilities of participating policies, non-participating policies and non-linked liabilities. In this method, insurers will determine BE plus a Risk Margin (RM). The BE shall be determined by first projecting future cash flows using realistic assumptions (including assumptions on expenses, mortality and morbidity rates, lapse rates, etc.), and then discounting these cash flow streams at appropriate interest rates. PAD is determined by using more conservative assumptions in the projection to reflect the inherent uncertainty of the BE.

#### (b) Non-Life Insurance Liabilities

Currently the non-life insurance liabilities are calculated on the basis of claim liabilities and premium liabilities without impact of discounting and risk margins. We propose that the valuation of non-life insurer will comprise of:

(i) the best estimate value of the claim liabilities;
(ii) the best estimate value of the premium liabilities; and
(iii) a provision of risk margin for adverse deviation (PRAD) for each of the best estimate values.

Non-life insurance liability = claims liability + premiums liability

Where:
Claims liability = Best Estimate claims liability + Risk Margin
Premiums liability = Maximum of {unearned premium reserve and (best estimate unexpired risk+ risks margin)}
In determining the insurance liabilities, a registered insurer shall calculate the insurance liabilities net of re-insurance.

**(ii). Valuation of assets**

We propose that every insurer shall value assets using a market consistent approach or, if a market consistent approach cannot reasonably be applied, assets may be valued as per IFRS.

**(iii). Valuation of liabilities other than policy holders' liabilities**

We propose that every insurer shall value non-insurance liabilities as per applicable IFRS.

### 7.1 Consistency in Valuation RBC Purpose and IFRS 17

Internationally, some jurisdictions are planning to use IFRS 17 as a starting point and modify the standard for regulatory solvency purposes. There is significant opportunity to use the same cash flow models for both RBC and IFRS 17, potentially with some changes.

Alignment of supervisory reporting with IFRS is mainly to maintain conceptual consistency and minimizing the regulatory burden on the insurers. A key consideration is to avoid creating subtle differences in regulatory and accounting requirements to avoid maintaining multiple sets of records and to avoid multiple rounds of systems changes.

The IAIS core principles also considers it most desirable that the methodologies for calculating items in general purpose financial statements are used for, or are substantially consistent with, the methodologies used for regulatory reporting purposes, with as few changes as possible to satisfy regulatory requirements. This is likely to reduce costs for insurers and thereby policyholders.

We also seek feedback of the stakeholders to explore the possibility of consistency of solvency calculation/reporting with IFRS 17 in the following areas in:

- Best Estimate Cash Flows;
- Discount Rate;
- Risk Adjustment/Risk Margin;
- Contract Boundaries; and
- Expense Adjustment.

One of the key issues here may be the planned time horizon for the implementation of the proposed RBC framework as well as the implementation of IFRS 17.

# 8. WAY FORWARD AND IMPLEMENTATION

### 8.1 Data Analysis and Quantitative Impact Study

The choice and level of risk parameters is an issue of paramount importance for developing an RBC model. Therefore, data analysis and quantitative impact study is necessary to adjust the proposed level of capital charge and stress test in line with our local environment and industry dynamics. This is dependent on judgement as well as analysis of data. To determine the risk charges, it is also necessary to develop an understanding of the loss function for each risk i.e. to measure the impact on a typical balance sheet at the desired confidence level. We are of the view that in the second phase a detailed data gathering exercise will be needed to access the level of proposed capital charges and level of capital adequacy. Data analysis should be conducted for different types of insurers to ensure that the new regime is viable and practicable, and that it should not bring about instability to the insurance industry.

### 8.2 Implementation Plan

The following phased manner approach is proposed for implementing the new RBC regime:

| Phase | Details |
|---|---|
| Phase I- Finalization of conceptual framework of RBC | The first phase is the investigation phase which involves development of an initial RBC framework. A benchmarking exercise to global and regional risk-based capital is needed. On the basis of investigation, a concept note is prepared and shared with the stake holders for their feedback. On the basis of stake holder feedback the draft model will be revised and finalized. |
| Phase II- Exposure draft of detailed requirements on Valuation of Insurance Liabilities and Data Analysis | In second phase a detailed draft requirement regarding valuation of insurance liabilities will be issued as per the principles agreed in the Concept Paper.<br><br>In addition to that this phase would involve data analysis and impact assessment of the proposed model. Technical specifications and templates would be developed and shared with the industry for seeking data. Data analysis shall be conducted for different types of insurers to ensure that the new regime is viable and practicable, and that it should not bring about instability to the insurance industry. |
| Phase III- Refinement and Finalization of regulatory framework | The third phase will be the finalization phase. In this phase, the RBC methodology and risk charge would be concluded on the basis of data analysis and impact studies.<br>Draft regulatory framework covering the details RBC framework will be issued. Necessary amendments will be made in the relevant regulatory framework, particularly the Ordinance and the Rules. In addition, ongoing stakeholder management and communication with regulated entities would be required to ensure a smooth implementation process. |
| Phase IV- Parallel run and Implementation | The final phase will be parallel run and implementation phase. In this phase the new framework will be run parallel with the existing solvency requirements for some period of time and will be fully implemented after parallel run. |

### 8.3 Conclusion and Feed Back

The proposed framework is based on emerging international standards and good practices in developed countries and is risk-focused. It reflects the relevant risks that the insurance companies face. This risk based capital framework, which includes a consistent approach to the valuation of assets and liabilities, will provide the basis for calculation of minimum capital which will serve as an effective buffer to absorb losses. With greater transparency, it will facilitate comparisons across insurance companies. It will also provide clearer information on the financial strength of insurers, and facilitate early and effective intervention by the Commission, if necessary.

SECP invites the interested parties to provide their feedback and comments on the proposed regime. SECP hopes to work closely with the industry on the development of proposed framework and the industry will be involved in data analysis, quantitative impact studies and consultation feedback. Stakeholders can provide their comments within 60 days at **RBCfeedback@secp.gov.pk**

## Composition of the TWG

| | Name | Department/Institution |
|---|---|---|
| 1. | Mr. Omer Morshed | PSOA |
| 2. | Mr. Waseem Khan | SECP |
| 3. | Mr. Shujaat Siddiqui | PSOA |
| 4. | Mr. Faisal Zai | PSOA |
| 5. | Mr. Ali Qureshi | PSOA |
| 6. | Mr. Muhammad Faizan Farooque | PSOA |

## Composition of Sub-Group of TWG

| S.No. | Name | Department/Institution |
|---|---|---|
| 1. | Mr. Qadeer Ahmed | Nominated by TWG Members |
| 2. | Mr. Kamaluddin | |
| 3. | Ms. Ambreen Azmat | |
| 4. | Mr. Ahsan Sukkurwala | |
| 5. | Mr. Allay Naqvi | |
| 6. | Mr. Jibran Paracha | SECP |

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