Risk Based Capital and Solvency Directive, 2022 (2078)

Date of Approval

26th January, 2022 (12.10.2078)

Preamble**:** Whereas, it is expedient to ensure that insurers maintain a capital adequacy level commensurate with their risk profiles in order to make sure that they have enough financial resources to withstand financial difficulties, in such a manner that they have in place a sound system of governance, in particular a robust risk management system and prudent written underwriting, investment and asset-liability management policies,

In exercise of the power conferred by clause (d2) of Section 8 of the Insurance Act, 1992 (2049), Insurance Board has made the following directives.

Chapter-1

Preliminary

1. Short Title and Commencement: (1) This Directive may be cited as "Risk Based CapitaLand Solvency Directive, 2022" (2078).

(2) The implementation of this Directive shall be carried out over the transitional period starting from 17th July 2023 (1st Sharwan 2080) and the different phases of implementation shall be as per Annexure VII.

Chapter-2

Definition

2. Definition: Unless the subject or the context otherwise requires, -

a) "Available capital resources "means the excess of assets over liabilities plus the additions minus the deductions set out in Annexure IV and after the application of the limits set out in that Annexure.

b) "Climate-change related risks or climate risks "means the risks posed by the exposure of an insurer to transition, physical and/or liability risks caused by or related to climate change. The transition, physical and/or liability risks may be defined as:-

1) Transition risks means risks that arise from the transition to a low-carbon and climate-resilient economy,

2) Physical risks mean risks that arise from the physical effects of climate change, and

3) Liability risk means the risk of claims arising under liability policies, as well as direct actions against insurers, for failing to manage climate risk.

c) "Credit risk "means the risk of adverse changes in the value of capital resources due to unexpected changes in the actual default as well as in the deterioration of obligor's credit worthiness short of default, including migration risk, spread risk due to defaults and concentration risk.

d) "Future discretionary benefits (FDB)"means the following non-guaranteed benefit, any future expected payment to the policyholders or beneficiaries derived from their participation which is:-

1) either in the realized or in the unrealized returns of an identified basket of assets,

2) either according to the terms of the insurance contract or based on a commercial or other statements of the insurer,

3) either at the end of the insurance contract or whenever the policyholder exercises any of the options of the contract,

4) either uncertain in the timing of the payment or its amount or both.

Index-linked and unit-linked benefits shall not be considered as future discretionary benefits or bonuses (FDB).

e) "Guaranteed benefits "means any benefits to which policyholders are already individually and unconditionally entitled as at the valuation date, including extra benefits from realized profits, irrespective of how the benefits are described.

f) "Insurer" means a corporate body registered pursuant to Section 10 of Insurance Act, 1992 (2049) and the word includes reinsurer.

g) "Insurance risk "means the risk of adverse change in the value of capital resources due to unexpected changes in the assumptions of pricing or reserving such as severity, frequency, trend, volatility or level of occurrence rates.

h) "Look-through "means the approach in order to assess properly the risks of the assets underlying the investment vehicle, the risk inherent in collective investment

funds and other indirect exposures, their economic substance needs to be taken into account.

i) "Market risk "means the risk of adverse change in the value of capital resources due to unexpected changes in the level or volatility of market prices of assets and liabilities. It consists of interest rate risk (includes asset-liability mismatching risk and liquidity risk), equity risk, exchange rate (currency) risk and property risk. Market risk shall also involve the liquidity risk from asset liability mismatching, which is the risk that an insurer is unable to realize its investments and other assets in a timely manner in order to meet its financial obligations, including collateral needs, as they fall due.

j) "Minimum capital requirement (MCR) level" means the capital level that serves as the ultimate safety net for the protection of policyholders.

k) "Non-participating business (without profit)"means those insurance contracts that do not form part of participating business (with profit).

l) "Operational risk" means the risk arising from inadequate or failed internal processes or systems, behavior of personnel, or from external events. Operational risk includes legal risk and the portion of custody risk that impacts insurers but excludes strategic and reputational risk.

m) "Participating business (with profit)" means an insurance contract providing the policyholders or beneficiaries with future payments based on the realized or on the unrealized returns of an identified basket of assets, either those payments correspond to a guaranteed benefit or to a future discretionary benefit or bonus (FDB).

n) "Proportionality" means that while retaining the objectives set out in Annexure I of this Directive, smaller or less complex insurers may be allowed to apply simplified solvency requirements. Capital requirements shall be appropriate to the nature, scale and complexity of the risks that insurers face and should be fair to all market players. Insurance Board may issue provisions regarding the application of the principle of proportionality.

o) "Reinsurance assets" means the reinsurance deposit balance apart from the reinsurance claim recoverable, including deferred reinsurance expense (unearned premiums recoverable) and adjustment expenses recoverable from reinsurers.

p) "Risk based capital (RBC)" means the regulatory or required capital (target level) which measure the capital level of insurers based on their risk profiles and serves as an early warning signal for Insurance Board.

q) "Technical (or policy) provisions for life business "means the liability amounts which consist of non-participating business (without profit) and guaranteed

participating business (with profit) and non-guaranteed business (future discretionary benefits). This is the sum of best estimate reserves and margin over best estimate reserves.

r) "Technical (or policy) provisions for non-life business "means the liability amounts which consists of best estimate reserves and margin over best estimate reserves for the homogenous risk groups.

Chapter-3

General Provisions

3. Scope:(1) This Directive shall refer to the assessment of the solvency position of the insurer.

(2) Beema Samiti shall set out the principles and methodologies on the application of this Directive, and provide guidance on the application of the proportionality principle and the specification of simplified methods.

Chapter-4

Valuation, Risk Based Capital and Available Capital

4. Valuation of Assets and Liabilities for Solvency Purposes:(1) Assets of insurers shall be valued at market value in accordance with the provisions of Insurance Act, 1992 (2049) Nepal Financial Reporting Standards, Actuarial Principles and Financial Statements Directives.

(2) Liabilities shall be valued at the amount for which they could be transferred or settled between knowledgeable willing parties and independent of each other, including an adequate allowance of the uncertainties related to all relevant future cash-flows considered in the valuation.

(3) Valuation of assets and liabilities shall be undertaken on consistent bases, in a reliable, decision useful and transparent manner.

(4) Insurance Board shall set out the principles, actuarial techniques and methodologies of the market consistent valuation and the methodology for the relevant interest rate curves in estimating policy provisions as per Annexure II.

5. Risk Based Capital:(1) The insurer shall have adequate disposable and unencumbered capital resources and keep the regulatory capital level that reflects its own risk profile considering the nature, scale and complexity of the risks, on a going concern basis.

(2) A total balance sheet approach shall be applied in the assessment of relevant material risks on the insurer’s overall financial position as appropriately and adequately recognized in an open and transparent process.

(3) Risk based capital approach as set out in Annexure III consists of the capital charges of credit, market, life insurance, non-life insurance, catastrophic and operational risks and Insurance Board shall set out the principles and methodology for the calculation of risk based capital.

(4) Catastrophic risks shall include, among others, exposures from earthquake, floods and landslides which may be addressed and measured on the basis of catastrophic modeling, as separate component under the risk based capital.

6. Available Capital Resources: (1) Technical provisions and risk based capital shall be covered by adequate and appropriate assets as set out in Annexures III and IV, having regard to the nature and quality of those assets and Insurance Board may consider applying restrictions or adjustments as prudential filters in order to allow for the quality of assets.

(2) The risk based capital shall identify at least two tiers of capital, based on the eligibility criteria to appropriately reflect the quality of capital resources and the ability of those resources to absorb losses, as tier 1 and tier 2.

(3) Insurance Board may identify sub-tiers within each tier and set out specific limits for those sub-tiers.

7. Solvency Control Levels and Ladder of Intervention:(1) The Directive includes solvency control levels as per Annexure VI which trigger different degrees of intervention by Insurance Board with an appropriate degree of urgency and requires coherence between the solvency control levels and the associated corrective actions at the disposal of Insurance Board.

(2) While taking corrective actions, Insurance Board has the minimum power to impose the following: -

a) Restriction on business activities and financials:

1) Prohibition the insurer from issuing new policies,

2) Withholding approval for new business activities or acquisitions,

3) Restricting activities of a subsidiary where, in its opinion such activities jeopardize the financial situation of the insurer,

4) Requiring measures that reduce or mitigate risks, redesigning investment and reinsurance strategy,

5) Requiring an increase in capital,

6) Restricting or suspending cash dividend or other payments to shareholders,

7) Restricting purchases of the insurer own shares.

b) Restructuring

1) Arranging for the transfer of obligations under the policies from a failing insurer to another insurer,

2) Restructuring of board members or senior management,

3) Barring individuals acting in responsible capacities from such roles in the future,

4) Reducing or mitigating risks, redesigning investment and reinsurance strategy.

(3) The insurer shall set an Internal Target Capital Level that better reflects its own risk profile and risk management practices.

Chapter-4

Risk Management

8. Risk Management:(1) Insurers shall have in place an effective risk-management system as set out in Annexure V, comprising strategies, processes and reporting procedures necessary to identify, measure, monitor, manage and report, on a continuous basis the risks, at an individual and at an aggregated level, to which they are or could be exposed, and their interdependencies.

(2) Insurers shall have in place a risk-management function which shall be structured in such a way as to facilitate the implementation of the risk-management system.

(3) The risk-management system and its written policy shall cover at least the following areas applying:

a) underwriting and reserving;

b) asset–liability management;

c) investment, in particular derivatives and similar commitments;

d) liquidity and concentration risk management;

e) operational risk management;

f) reinsurance and other risk-mitigation techniques.

(4) In respect of investments, the insurer's risk-management system shall cover all related and material risks associated with investment activities that may affect the liabilities and capital positions, including market (equity risk, interest rate risk, and currency risk), credit and liquidity risks.

(5) In respect of asset-liability management, the insurer shall have a risk management policy which includes an explicit asset-liability management (ALM) policy which clearly specifies the

nature, role and extent of ALM activities and their relationship with product development, pricing functions and investment management.

(6) The risk-management system shall include the sustainability risks and factors.

(7) In this respect the insurer shall have an adequate process for identifying and assessing climate-change related risks, which are integrated in the system of governance and risk management, its own risk solvency assessment and its decision-making process of the insurer.

(8) The insurer shall consider both physical, transition and liability risks derived from climate change related risks.

(9) As part of its risk-management system, the insurer shall perform its own risk solvency assessment, on continuous basis and at all levels and activities of the insurer taking into account the specific risk profile, as an integral part of its business strategy; the own risk solvency assessment shall regard to:

a) the compliance on continuous basis with the regulations on technical provisions and capital requirements,

b) an assessment of whether the legally binding capital requirements are appropriate considering the risks the insurer is exposed to,

c) the overall solvency needs of the insurer, taking into account the specific risk profile, approved risk tolerance limits and the business strategy of the insurer.

(10) The insurer shall perform this assessment of risks and its capital needs from the widest possible perspective, in particular taking into account both quantitative and qualitative risks, both current and emerging risks, both short and medium-long term risks and also considering risks captured in the calculation of the capital requirement or those only partially captured or not captured at all.

(11) Insurers shall at minimum manage their risks based on the Risk Management Guidelines and any additional guidelines that Insurance Board will issue as and when required.

(12) Further details on Risk Management shall be as per Annexure V.

9. Right to Interpret: Insurance Board reserves the right to interpret any matters, provisions or words used in this Directive in case of any ambiguity in implementation.

10. Right to Amend: Directive can be amended by the Board of Insurance Board while the annexures can be amended by the Chairman of Insurance Board.

ANNEXURES

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ANNEXURE I
GENERAL PROVISIONS

Objectives

(1) The Directive aims to ensure that insurers maintain a capital adequacy level commensurate with their risk profiles to guarantee that they have enough financial resources to withstand financial difficulties, in such a manner that they have in place a sound system of governance, in particular a robust risk-management system and prudent written underwriting, investment and asset-liability management policies.

(2) This Directive enables Insurance Board to review and evaluate whether insurers comply with the rules and requires these insurers to report to Insurance Board.

(3) Insurance Board shall set out developing provisions of this Directive where relevant and shall set out the scope of information regarding the solvency condition of the insurer that should be publicly disclosed.

Scope

(4) This Directive is applicable to all licensed insurers and branches of foreign insurers under the supervision of Insurance Board in accordance with the Insurance Act of Nepal. Unless otherwise stated, the term "insurer" includes reinsurers.

(5) The provisions of this Directive shall take absolute precedence over any other directives with regard to the supervision of the solvency condition of insurers and the industry.

(6) This Directive sets out detailed requirements for applying the solvency framework and covers:

1. Assets and liabilities valuation
2. Target capital level (Risk Based Capital) and how to set the level of capital for different risk categories
3. Eligibility criteria to define the available capital resources to cover capital requirements
4. Investment and risk management, asset liability management, admissible assets
5. Solvency control levels

ANNEXURE II
VALUATION
(Related to Direction 4)

Valuation of assets

(7) Assets of insurers shall be valued at market value as defined in accordance with the provisions of Insurance Act, Nepal Financial Reporting Standards, Actuarial Principles and Financial Statements Directives.

Valuation of liabilities, technical provisions for life business

(8) The value of technical (or policy) provisions shall be equal to the sum of a best estimate (Gross Premium Method, prospective valuation method) and a margin over the best estimate (MOBE) to reflect the value of the inherent uncertainty in the cash flows related to insurance obligations. Insurers shall use actuarial and statistical techniques for the calculation of the best estimate which appropriately reflect the risks that affect the cash-flows applied on a policy-by-policy basis. The best estimate shall not have a zero floor either at policy level or at portfolio level, regardless the provisions set out in Annexure IV on the available capital resources corresponding to the future profits embedded in the valuation of technical provisions (or reserves).

(9) Cash-flow projections shall reflect expected realistic future demographic, legal, medical, social or economic developments and based on up-to-date and credible information and realistic assumptions. The assumptions on mortality, morbidity, lapse rates, expenses, future inflation and future management actions shall be based on the insurer's experience study, where available.

(10) The calculation of the policy provisions shall take into account the time value of money applying the following procedure:

1. The life insurer shall classify its life insurance contracts into three buckets, according to the asset-liability management policy applied. Insurance Board shall set out binding criteria for that classification. Insurance Board may refer those criteria, either in full or partially, to generally accepted international standards.

2. Separately for each of the three bucket of insurance contracts, the life insurer shall calculate the estimated future cash inflows and future cash outflows, and hence the estimated future net cash-flows. The cash-flow projections shall be based at least on annual projections.

3. Net cash-flows for each maturity projected shall be discounted with the discounting interest rate corresponding to such maturity, according to the interest rate curve relevant for each of the three buckets set out in step 1.

    a) The relevant interest rate curves shall be calculated as the risk-free interest rates curve plus a spread specific for each of the three buckets of insurance contracts. The spread shall reflect the yield that may be earned on risk-free basis above the risk-free interest rates curve, according to the asset-liability management applied in each bucket. The spread may be negative where this is the outcome of current market information.

    b) Both the risk-free interest rates curves and the spreads mentioned in the previous point (a), shall be obtained from the market information as of the date of reference of the valuation of the technical provisions. Where necessary, the risk-free interest rate curve and the relevant interest rates curves shall be extrapolated in such a manner that forward rates converge to a long-term forward rate.

4. Insurance Board shall publish the methodology to calculate the risk-free interest rates curve and the three relevant interest rate curves for each bucket. Insurance Board may refer, either in full or partially, to generally accepted international methodologies.

5. Insurance Board is authorized to base the methodology on the curves of other currencies provided all of the following conditions are met:

    a) there are not sufficient data regarding the Nepalese risk-free interest rate curve that may be observable in deep, liquid and transparent markets, and

    b) it is reasonable to expect a sufficiently similar behavior among the foreign currency used as reference and the local currency of Nepal, and

    c) the methodology applies appropriate adjustments to the risk-free interest rate curve or to the spreads of the foreign currency to take into account relevant financial differences, such as differences in medium-long term inflation or specific financial events.

(11) Insurers shall calculate an appropriate margin over the best estimate (MOBE) by reflecting the uncertainties related to all relevant future cash-flows in the valuation of policy provisions.

1. An appropriate allowance for a margin from expected experience is required in the valuation of non-participating life policies, the guaranteed benefits liabilities of participating life policies, and non-unit liabilities of investment-linked policies.

2. The calculation of the margin over the best estimate shall assume that the valuation of uncertainty is not lower than the amount derived from a 95 per cent of confidence level.

3. All stress-based calculations include only best estimates for determining the pre-stress and post-stress Net Asset Value (NAV) in the calculation of the RBC. The value of the margin over the best estimate (MOBE) shall remain unchanged in the non-stressed and the stressed scenarios. MOBE is neither deducted from the capital requirement, nor added to qualifying capital resources.

(12) Best estimate shall be calculated gross, without deduction of amounts recoverable from reinsurance contracts, and form part of the liabilities of the solvency balance sheet. Technical provisions corresponding ceded reinsurance form part of the assets of the solvency balance sheet. Notwithstanding the insurer shall maintain appropriate procedures to assess the outcome of its insurance business on net of reinsurance basis.

(13) Life insurers shall value the policy provisions by segmenting into the following two separate accounts:

(i) Participating Policies Account (with-profit)

(ii) Non-Participating Policies Account (without-profit)

(14) The valuation method shall take into account all prospective cash-flows arising from future premiums and expenses related to existing insurance contracts. The gross premium method of valuation shall discount the following future policy cash-flows if any, at interest rates as prescribed by this Directive;

a) premiums payable

b) benefits payable under the contract

c) bonuses that have already been vested as at the immediately preceding the valuation date

d) New bonuses for the inter-valuation period as a result of the valuation at the valuation date

e) commission and remuneration payable, if any, in respect of a policy to the insurance intermediaries (this shall be based on the current practice of the insurer)

f) future bonuses (one year after valuation date)

g) management expenses

(15) The future premiums and associated claims and expenses linked to those recognized contracts are taken into account up to each contract boundary. The best estimate shall not include the premium, expenses and claims for contracts out of the contract boundaries. The definition of contract boundaries is in accordance with the national GAAP and NFRS 17.

(16) The definition of the contract boundary shall be applied in particular to decide whether options to renew the contract, to extend the insurance coverage to another person, to extend the insurance period, to increase the insurance cover or to establish additional insurance cover gives rise to a new contract or belongs to the existing contract. The insurance contracts are subject to the following boundary constraints, if they exist;

1. contractual termination as extended by any unilateral option available to the policyholder, or

2. the insurer having a unilateral right to cancel or freely re-underwrite the policy, or

3. both the insurer and policyholder being jointly involved in making a bilateral decision regarding continuation of the policy.

(17) Life insurers shall calculate and report the best estimate of participating insurance contracts (with-profit insurance contracts) splitting its amount into two components:

1. the best estimate corresponding guaranteed and allocated benefits, in accordance with the provisions set out in this Annexure, and

2. the best estimate corresponding to future discretionary benefits (FDB) as defined in point 4 in Chapter 2 of this Directive. This part of the best estimate cannot be negative.

(18) Where the life insurer cannot calculate the best estimate corresponding FDB by applying stochastic calculations based on generally accepted actuarial techniques, the best estimate of the FDB shall be calculated according to the following rules:

1. the life insurer shall map into key features, those characteristics, assets, terms (future points in time) and contractual options to which the amount of the best estimate of the with-profit insurance contract is likely to show more sensitivity,

2. the life insurer shall define the relevant scenarios stressing each or several of the key features in an unfavorable direction and to a likely and prudent extent,

3. the life insurer shall calculate the best estimate in each of the unfavorable scenarios. The calculations shall include in the future cash-flows a prudent allowance of the participation of policyholders and beneficiaries in the projected realized and unrealized

gains, considering both the terms of the insurance contracts and the expectations derived from the commercial or other statements of the insurer. The maximum best estimate in all the scenarios considered shall be selected.

4. the best estimate corresponding FDB shall be the excess of the maximum best estimate calculated according to the sub-points (1), (2) and (3) above and the best estimate corresponding guaranteed benefits, in such manner that the best estimate for FDB shall reflect the current valuation of all payments to policyholders and beneficiaries in addition to the guaranteed benefits.

(19) Life insurers shall assess every year the appropriateness of the mapping into key features. Furthermore, life insurers shall test every three years the sufficiency of the best estimate of FDB and the appropriateness of the mapping into key features. The test shall be carried out using a methodology based on stochastic scenarios according to generally accepted actuarial techniques.

(20) Insurance Board may set out legally binding deterministic scenarios to use in the valuation of the best estimate corresponding FDB, setting proportional criteria for its application.

Valuation of liabilities, technical provisions for non-life business

(21) Insurers shall segment their insurance liabilities into homogenous risk groups, when calculating insurance liabilities and setting the best estimate assumptions.

(22) Non-life insurers and reinsurers shall value their technical (or policy) provisions using a best estimate approach with an additional margin over the best estimate (MOBE). The best estimate value shall reflect the statistical estimate of the underlying distribution of the insurance liabilities concerned. The best estimate reserves will be the sum of unearned premium reserve (UPR), unexpired risk reserve (URR), outstanding claims reserve (OCR) which will also include incurred but not reported (IBNR) and incurred but not enough reserved (IBNER), and earthquake reserve.

(23) Insurers shall be required in establishing appropriate levels of margin over the best estimate (MOBE) on the line of business to reflect the value of the inherent uncertainty in the cash-flows related to insurance obligations.

1. The calculation of the margin over the best estimate shall assume that the valuation of uncertainty is not lower than the amount derived from a 75 per cent of confidence level.

2. The value of the margin over the best estimate (MOBE) shall remain unchanged in the non-stressed and the stressed scenarios. MOBE is neither deducted from the capital requirement, nor added to qualifying capital resources.

(24) The cash-flow projections shall comprise all future claim payments and claims administration expenses arising from these events, cash-flows arising from the ongoing administration of the in-force policies and expected future premiums stemming from existing policies.

(25) The valuation shall take account of the time value of money where risks in the remaining period would give rise to claims settlements into the future.

1. Non-life policy provisions shall be calculated applying the same relevant interest rate curve set out to discount life insurance contracts corresponding to the bucket where no specific asset-liability cash-flow matching technique is applied.

(26) Unearned Premium Reserves (UPR)

1. Unearned premium reserves are the difference between written premiums for all contracts on the balance sheet at the valuation date and earned premiums.

2. UPR shall be calculated on the basis of 1/365th approach and shall be certified by the CEO of the Insurer.

3. In case of marine insurance, without a specified ending period and for one-year policies, if the dates of voyages are not known, UPR shall be calculated as 50% of premiums of last three months.

4. For inward reinsurance and retrocession business, UPR shall be calculated on the basis of $1/8^{th}$ method.

5. The terms of the reinsurance agreements in force shall be taken into account in the calculation of the reinsurer share amount. In calculating the net premium, the portion of the amounts paid for non-proportional reinsurance agreements corresponding to the relevant period is considered as the premium transferred to reinsurer.

(27) Unexpired Risk Reserve (URR)

1. The URR, which is the provision for unexpired risks also termed premium deficiency reserve, measures the amount needed to cover the expected future claims and expenses that may arise from the unexpired portion of the policy.

2. The URR shall be calculated separately for each line of business according to the following methodology:

a) For each line of business separately and only for the policies that are in force at the date of reference of the calculation, the non-life insurer shall calculate the combined ratio corresponding the period of time of the policy that has already run. The combined ratio is the relationship among on the one hand the claims and related expenses attributable to a line of business and on the other hand the gross written premiums of that line of business. Insurers shall have in place objective, reasonable and verifiable criteria for the allocation of expenses to lines of business. Those criteria shall be maintained in time unless justified reasons for their amendment.

b) The combined ratio calculated according to point (a) shall be increased in a prudent amount, where there are events, internal or external to the insurer, that will likely increase the claims or related expenses to be incurred during the period of unexpired risk, and those events have not had a material impact on the claims and related expenses corresponding the period of time already run.

c) The URR shall be equal to the UPR multiplied by the excess of the combined ratio above the percentage of the corresponding premium set out in the actuarial basis of the pricing of the insurance contracts.

d) In absence of actuarial basis, the URR shall be equal to the UPR multiplied by the excess of the combined ratio above 80%.

(28) Outstanding claims reserves (OCR)

1. Best estimate reserves for claims outstanding shall include future payments in relation to all claims having occurred before or at the valuation date – whether the claims arising from these events have been reported or claims incurred but not reported (IBNR), claims incurred but not enough reserved (IBNER).

2. The cash-flow projections shall comprise all future claim payments as well as claims administration expenses, loss adjustment fees, legal fees arising from these events when settling these claims.

3. Insurers shall make adequate reserve in the accounts for a claim, which it has not fully settled, on the basis of the particulars of the claim. Where the particulars of a claim intimation are insufficient at the time of entering a claim in the register of claims to enable the insurer to estimate its liability in respect of that claim, it shall make, in respect of that claim, a reserve which is not less than the average amount paid during the preceding financial year for a claim of that class or description.

4. Insurers shall make adequate reserve for legal fees which may be incurred to defend its repudiation of a claim where the claim is, without any doubt, outside the scope of its policy, and the reserve may be written back only if there are no developments with regard to the claim for at least 12 months following the repudiation.

5. In estimating of IBN(E)R reserves actuarial methods can be used such as;

    a) Methodologies based on the projection of run-off triangles, usually constructed on an aggregate basis, Chain Ladder (CL) Method,

    b) Methodologies based on the estimation of the expected loss ratio or other relevant ratios, Bornhuetter Ferguson (BF) Method,

    c) Frequency/severity models, where the number of claims and the severity of each claim is assessed separately.

6. Best estimate of incurred but not (enough) reported claims (IBN(E)R) shall reflect up-to-date and credible information and realistic assumptions based on the insurer's experience study, where available, related to expenses, claims escalation, discounting, development factors and ultimate loss ratios selected, and reinsurance and non-reinsurance recoveries.

7. IBN(E)R for each year of occurrence and the figures shall be aggregated to arrive at the ultimate reserve amount and shall be calculated on both net of reinsurance and gross of reinsurance basis. The solvency balance sheet shall reflect separately the gross IBN(E)R in its liability side and the IBN(E)R recovered from reinsurance in the asset side.

8. Appointed Actuary shall take into account the following circumstances when calculating the best estimate, among other:

    a) in selecting the data to use, correcting its errors and deciding the treatment of outliers or extreme events

    b) in adjusting the data to reflect current or future conditions, and adjusting external data to reflect the insurer's features or the characteristics of the relevant portfolio

    c) in selecting the time period of the data

    d) in selecting realistic assumptions

    e) in selecting the valuation technique or choosing the most appropriate alternatives existing in each methodology

(29) Earthquake reserve (or Equalization reserve)

1. Earthquake reserve is the accumulation of earthquake premiums and shall be calculated as 15% of net accumulation of earthquake premiums (Earthquake Premium Reserve (EPR)).

2. Any earthquake premium contributed to the EPR must remain in the reserves, up to the 150% of the highest gross premium amounts of the last 5 years.

3. In the case where the earthquake coverage premium is implicitly included in an overall policy premium, the insurer shall be able to allocate earthquake premiums specifically attributed to earthquake coverage.

4. Insurance Board shall reassess the annual net accumulation and the targeted total reserve set out in points (1) and (2), considering the frequency of earthquakes and their losses net of reinsurance for the Nepalese insurers and any other relevant criteria.

ANNEXURE III
RISK BASED CAPITAL
(Related to Direction 5)

Risk based capital

(30) Insurers shall have adequate disposable and unencumbered capital resources and keep the regulatory capital level that reflects their own risk profile considering the nature, scale and complexity of their risks.

(31) Risks are measured using two approaches to calculate the risk based capital (RBC): a stress approach and a factor-based approach. The stress approach measures the insurer's current balance sheet pre-stress and the insurer's balance sheet post-stress. The factor-based approach is determined by applying factors to specific exposure measures.

(32) The RBC consists of capital charges for credit, market, life insurance, non-life insurance and operational risks.

i. $Total\ RBC = \sqrt{\sum Corr(RBC_C; RBC_M; RBC_L; RBC_{NL})} + RBC_{OPR}$, where the expression within the square root is calculated with the correlation matrix set out in point (56).

ii. RBC_C = Capital charge for credit risk

iii. RBC_M = Capital charge for market risk

iv. RBC_L = Capital charge for life insurance risk

v. RBC_{NL} = Capital charge for non-life insurance risk

vi. RBC_{OPR} = Capital charge for operational risk

(33) The individual risk charges are combined in a way that recognizes risk diversification, using correlation matrices.

(34) The insurer shall compute the RBC for all policyholders' funds and the shareholders' fund (for the entire fund) at an entity level. In the case of an investment-linked fund, the insurer shall compute the RBC for the non-unit portion of the fund.

Capital charges for the credit risk

(35) Capital charges for credit risk is calculated by multiplying each asset type classified by its ratings with a specific risk factor. It consists of the risk charges for debtor default risk and reinsurer default risk

$$\text{Total credit risk charge } (RBC_C) = \sum(\text{Admissible Assets}_i \times Rf_i) + \sum(\text{Reinsurance Exposure}_i \times Rf_i)$$

where

- 'i' refers to the different exposures to counterparties in the respective funds and Rf_i refers risk factor for different types of assets on their ratings.

- 'Admissible Assets' refers to the assets qualified as admissible in accordance with the Investment Directive.

- Reinsurance exposure involves both reinsurance assets and recoverable from reinsurers.

(36) Insurers shall use the latest rating of the asset or of sufficiently similar assets of the same issuer accorded by either a recognized rating agency in Nepal or by an internationally recognized rating agency. The following five clusters and ratings shall be applied to assess and manage the counterparty default risk.

Asset Class	Rating
1	AAA or equivalent
2	AA or equivalent
3	A or equivalent
4	BBB or equivalent
5	Under BBB or equivalent, or unrated

(37) Debtor default risk factors as follows on both fixed investment assets and non-investment assets. Nepal Government or NRB Bonds and cash and bank balances shall have default risk factor of 0%.

Asset Class	Bonds, debentures, mutual funds and loans (%)	Time deposits (%)	Other assets (non-investments) (%)	Reinsurers (%)
Class "1"	0.5	0.3	1.6	2.4
Class "2"	2.8	2.0	2.5	4.0
Class "3"	4.5	4.0	4.0	6.0
Class "4"	10.0	6.0	8.0	12.0
Class "5"	12.0	12.0	12.0	25.0

(38) Insurers are allowed to lower credit risk capital charge for debt obligations if the insurer holds certain types of credit risk mitigants, namely, eligible collaterals, or if the obligations are guaranteed by recognized guarantors. For a collateral to be eligible, it shall be regularly marked-to-market and shall be pledged for the life of the debt obligation exposure. The recognized guarantors are 'A', 'B' and 'C' class banks and financial institutions licensed by NRB.

(39) Risk factors shall be differentiated for the accumulated reinsurance amounts to reflect the concentration on a single reinsurer or single group. In the excess of the limit (cession amount) on a single reinsurer an additional capital charge over the above default risk factor shall be applied as prescribed by Insurance Board.

(40) A risk factor of 1% of the amounts for off balance exposures (including derivatives) shown in the notes of balance sheet shall be applied.

(41) Concentration risk shall be applied by doubling the default risk factors for the ten largest investments. Government bonds, class A bonds, affiliated investments and those real estates, or the part of them, where the insurer develops its activities are not included in the asset concentration.

Capital charges for the market risk

(42) Capital risk charge for market risk is the aggregated amount of equity risk, interest rate risk, currency risk and property risk.

Total market risk charge (RBC_{MR}) = $\sum$(Equities$i$× Rfi) + interest rate risk charge (including mismatching and liquidity risk) + currency risk charge + property risk charge;

where 'i' refers to different asset classes in the respective funds and Rfi refers risk factors for different types of assets

(43) Equity risk is calculated by multiplying the balance sheet amounts of equities (stocks, ordinary shares), mutual funds, asset backed securities with specific risk factors.

1. Exposures to equity instruments

2. Convertible securities, e.g. debt securities or preference shares that can be converted into ordinary shares of the issuer, will be classified as shares if they are traded and behave like shares.

3. Asset backed securities may be fully offset and only the absolute net position subject to the equity risk charge.

4. The following risk factors shall be applied to measure equity risk:

Asset Classes (Admissable Assets defined by Investment Directive)	**Risk factors %**
Ordinary Shares of public limited companies which have been listed in the stock exchange licensed by SEBON	20.0
Ordinary Shares which are not listed on recognised stock exchanges other than those mentioned	30.0
Unlisted Shares (Equities) and venture capital	35.0

(44) Interest rate risk charge is the difference between the change in the value of interest rate sensitive assets and liabilities and involves both the impact of changing interest rates on assets and liabilities and mismatching of assets and liabilities.

1. Risk charge for interest rate mismatch risks shall be applicable only for life insurance funds and non-life insurance funds with discounted liabilities.

2. The amount of interest rate risk charge is the highest deviation under the downward shock or upward shocks on the assets and liabilities.

   a) calculate the value of the guaranteed liabilities and the market value of interest rate related exposures (assets) under the base scenario (referred to as L* and L, respectively). L* is the value of the guaranteed insurance liabilities derived based on the valuation basis which includes a margin over the best estimate and discounted with the relevant risk-free curves set out in points (10.3 to 10.5) in Annexure II.

b) calculate the value of the guaranteed liabilities and the value of interest rate related exposures (assets) under the increasing interest rate scenario, referred to as L1* and L1, respectively.

c) calculate the value of the guaranteed liabilities and the value of interest rate related exposures (assets) under the decreasing interest rate scenario, referred to as L2* and L2, respectively

Scenarios	**Value of interest rate exposures (1)**	**Liability value (2)**	**Deviation (1) - (2)**
Base	L	L*	D
Increasing interest rate	L1	L1*	D1
Decreasing interest rate	L2	L2*	D2

3. The base yield curve shall be multiplied by (1 + stress_up), and (1 – stress_down), for the increasing and decreasing scenarios respectively.

Residual terms to maturity	**Stress up (%)**	**Stress down (%)**
1 to 4 years	55	55
4 to 7 years	30	30
More than 7 years	15	15

4. Interest rate risk charges for non-life insurance without discounting of liabilities is computed by determining residual term to maturity for related securities.

a) The net value of all positions in interest rate related exposures are determined for each maturity.

b) The overall interest rate risk capital charge is the absolute amount of the sum of the individual net capital charge positions. Following risk charges by the residual term to maturity shall be applied.

Residual term to maturity (X)	**Risk factors (%)**
X < 1 month	0.0
1 < X < 3 months	0.2
3 < X < 6 months	0.5
6 < X < 12 months	1.0

1 < X < 2 years	1.4
2 < X < 3 years	2.0
3 < X < 4 years	2.7
4 < X < 5 years	3.2
5 < X < 7 years	4.0
7 < X < 10 years	4.8
More than 10 years	6.2

(45) Currency risk is calculated by multiplying the net balance sheet position (the sum of net short positions or the sum of the net long positions, whichever is higher) by an 8% risk factor. The net balance sheet positions for exposures to each of the different currencies are converted into Nepalese Rupee at the spot exchange rates.

(46) Property risks shall be calculated from exposures to properties for both investment purpose and non-investment purpose. Following risk factors shall be applied to measure property risk:

Property investments	**Risk factors %**
Properties with non-investment purpose	8.0
Properties with investment purpose	20.0

Where the same property is used for both purposes, the insurer shall split its market value according to objective, reasonable and verifiable criteria, appropriate to capture the portion of the property used for each purpose. Those criteria shall be maintained, unless adequate reasons for its change, which should be approved by the board of the insurer.

Capital charges for the life insurance business

(47) Life insurance capital risk charge is the change in the net asset value (NAV) after applying the stresses prescribed in point (50) of this Annexure.

(48) The capital requirement for each component is calculated as the difference between:

1. The stressed NAV after applying the prescribed stress, the value of assets less insurance liabilities with MOBE, after applying the prescribed stress, net of reinsurance,

2. The pre-stress NAV, the value of assets less insurance liabilities with MOBE, before applying the prescribed stress, net of reinsurance.

(49) The life insurance capital requirement shall include the mortality risk, disability/morbidity risk, longevity risk, lapse risk, expense risk. The insurer shall also calculate a capital charge for the catastrophe risks stemming from extreme or irregular events whose effects are not sufficiently captured in the other life insurance risks.

(50) Life insurers shall apply the following stress factors:

Life stressed scenarios	**Stressed Shocks**
Mortality **Guaranteed business** **Non-guaranteed business**	Permanent relative increase of mortality rates at all ages, only for policies where an increase in mortality rates leads to an increase in the policy reserves 40% of best estimate mortality rates for guaranteed business 20% of best estimate mortality rates for non-guaranteed business
Morbidity/Disability **Guaranteed business** **Non-guaranteed business**	Permanent relative increase morbidity rates 45% of best estimate morbidity rates for guaranteed business 22.5% of best estimate morbidity rates for non-guaranteed business
Longevity *decrease in mortality rates*	Permanent 25% decrease in mortality rates at all ages, only for policies where a decrease in mortality rates leads to an increase in the policy reserves
Lapse rates *shock up/down*	Permanent increase/decrease 50% of best estimate lapse rates (capital charge shall be taken from the shock that leads to an increase in policy reserves)
Expenses *increase of expenses*	Permanent increase 20% of best estimate assumptions
Cat risk *increase of policyholder dying*	Immediate (only first year) absolute increase 0.15% in mortality rates and 0.15% (1.5 per mile) in the rates of morbidity

	only for policies where an increase in mortality rates leads to an increase in the policy reserves

1. The mortality risk charge is calculated as the change in net asset value after applying the prescribed stress to the level of mortality rates.

2. The morbidity/disability risk charge is calculated as the change in net asset value after applying the prescribed stresses to the level of morbidity rates.

3. The longevity risk charge is calculated as the change in net asset value after applying the prescribed stress to the level of mortality rates.

4. The lapse risk charge is calculated as the highest capital requirement derived from 50% increase/decrease in the lapse rates.

5. The capital requirement for expense risk is the permanent increase of 20% of expense assumptions.

6. The capital requirement for Cat risk is the impact of an absolute increase of 0.15% (1.5 per mile) in mortality rates and an increase of 0.15% (1.5 per mile) in the rates of morbidity.

(51) The life Insurance risk charge shall be calculated by aggregating, using the life risks correlation matrix. The correlation matrix used for aggregating the life risk charges is the following:

	Mortality	**Longevity**	**Morbidity/ Disability**	**Expense**	**Lapse**	**CAT**
Mortality	1	-0.25	0.25	0.25	0	0.25
Longevity	-0.25	1	0	0.25	0.25	0
Morbidity/ Disability	0.25	0	1	0.5	0	0.25
Expense	0.25	0.25	0.5	1	0.5	0.25
Lapse	0	0.25	0	0.5	1	0.25
CAT	0.25	0	0.25	0.25	0.25	1

Capital charges for the non-life insurance business

(52) Non-life insurance risk charge is calculated by applying specific risk charges on an insurer's premium and claims liabilities. Exposure amounts are the net outstanding claims and net earned premiums as net of reinsurance.

Total non-life insurance risk charge = $\sum$(Claims$i$× Rfc$i$) + $\sum$(Premiums$i$× Rfp$i$) + Cat risk

where 'i' refers to the different classes. Rfc$i$ and Rfp$i$ refer the claim and premium factors.

(53) The risk charges applicable to different lines of business vary according to volatility of the underlying businesses. Non-life business lines and associated risk factors are as follows. Same risk factors shall be applied to tariff driven business.

	Non-life line of business (LoB)	**Outstanding Claims (Net of reinsurance) Risk Factor** Rfc$i$ **(%)**	**Earned Premiums (Net of reinsurance) Risk Factor** Rfp$i$ **(%)**
1	Personal Property	15	20
2	Commercial Property	20	25
3	Motor Own Damage	10	15
4	Motor Third Party Liability	10	15
5	Marine	25	30
6	Engineering	20	25
7	Aviation	20	25
8	Cattle Insurance	10	15
9	Crop Insurance	10	15
10	Micro-insurance	10	15
11	Miscellaneous (Personal Accident, Health, Public liability and others)	25	30
12	Life Insurance (for reinsurer only)	10	15

(54) Risk charge for catastrophic risks shall be calculated by multiplying the aggregate amount of Earthquake Premium Reserve (EPR) and Earthquake Risk Exposure (ERE) by a 1.25 risk factor.

Earthquake risk charge = ($EPR_{premium}$ + $ERE_{net\ retention}$) x1.25

1. Earthquake Premium Reserve (EPR) is the accumulation of earthquake premiums, net of reinsurance

2. Earthquake Risk Exposure (ERE) is the net retained exposure that the earthquake accumulations on PML basis over 250 years return periods

3. Probable Maximum Loss (PML) is the amount after deductibles but before catastrophic and other reinsurance protection

Capital charges for the operational risks

(55) Capital risk charge for operational risks

1. Operational risk capital charge is the higher of;

   a) 0.5% of gross policy provisions; or

   b) 4% of gross premiums over the last 12 months, plus another 0.4% on the last annual growth of premiums above 20%. [4% of GP_1+ Max (0, 0.4% * ((GP_1-GP_0) - 20% * GP_0))]; where 'GP_1' identifies the gross premiums of the last 12 months and GP_0' the gross premiums of the year before the last 12 months.

2. The total operational risk requirement will be subject to an overall cap of 10% and a floor of 5% of the RBC applies.

Diversification benefit

(56) Insurers shall benefit from diversification benefit when aggregating all risk categories, other than operational risk. Operational risk will simply be added to the other risks without diversification.

	Market	**Credit**	**Life**	**Non-life**
Market	1	0.25	0.25	0.25
Credit	0.25	1	0.25	0.5
Life	0.25	0.25	1	0
Non-life	0.25	0.5	0	1

Regulatory reporting

(57) Insurers shall submit the regulatory capital calculations to Insurance Board, based on the financial year end positions within 90 days after the end of each financial year using the reporting forms (Risk Based Capital Reporting Forms) prescribed by Insurance Board. The

financial year end regulatory capital positions shall be certified by the insurer's external auditor and chief executive officer (CEO).

(58) For the financial years ending on or before Ashad-End 2083, the deadline set out in point (57) shall be 120 days after the end of each financial year.

(59) Insurance Board may require an insurer with a weak capital adequacy position to calculate and report its regulatory capital on a more frequent basis.

ANNEXURE IV
AVAILABLE CAPITAL (Qualifying Capital Resources)
(Related to Direction 6)

Available Capital

(60) Available capital resources are classified into those two tiers based on consideration of a number of criteria, focused on five key principles:

1. Subordination is the extent to which the capital instrument is subordinated to the rights of policyholders in insolvency or winding-up

2. Availability is the extent to which the capital instrument is fully paid and available to absorb losses on going concern and winding up

3. Permanence is the availability of capital instrument over for a sufficiently long period on going concern and winding up

4. Absence of encumbrances is the extent to which the capital instrument is free from mandatory servicing costs

(61) The RBC identifies two tiers of capital resources:

1. Tier 1 capital resources shall only comprise the capital resources set out in point (63) that absorb losses on a going-concern basis and in winding-up; and,

2. Tier 2 capital resources shall only comprise the capital resources set out in point (64) that absorb losses only in winding-up.

(62) Available capital resources of insurers shall be the aggregate of Tier 1 and Tier 2 capital less the deductions in point (66) and after applying the limits set out in points (67) and (68).

If the Available Capital resources of the insurer fall below the RBC, Insurance Board shall take appropriate supervisory actions as per Annexure VI of this Directive.

(63) Tier 1 capital resources of the insurer shall include the aggregate of any of the following:

1. Paid-up (paid-in) capital, issued and fully paid-up ordinary shares

2. Other paid in capital instruments such as preference shares (irredeemable and non-cumulative preference shares)

3. Retained earnings, other than future profits embedded in the valuation of technical reserves

4. Paid-in (paid-up) subordinated debts

5. Earthquake reserves

(64) Capital instruments which qualify as Tier 2 capital shall include any of the following:

1. Cumulative irredeemable preference shares

2. Irredeemable subordinated debts

3. Other capital resources qualified as Tier 2, including unpaid preference shares, unpaid subordinated debt, letters of credit, guarantees and mutual member calls.

4. Future profits embedded in the valuation of technical provisions (reserves)

Subordinated term debts

(65) Subordinated term debts, subject to the prior approval of Insurance Board on a case-to case basis, may include term debt and limited life redeemable preference shares which satisfy the following conditions:

1. unsecured, subordinated and fully paid-up

2. have a minimum original term to maturity of five years

3. early repayment or redemption shall not be made without prior written approval of Insurance Board

4. the instruments shall be subjected to straight line amortization over the last five years of their life

5. no restrictive covenants; and

6. the amount eligible for inclusion shall not exceed 30% of Tier 1 capital. In exceptional cases, this limit may be exceeded with the prior written consent of Insurance Board

Deductions from capital

(66) For the purpose of calculating regulatory capital (RBC), the following deductions shall be made by an insurer from the aggregate of Tier 1 and Tier 2 capital.

1. goodwill and other intangible assets of the insurer, including computer software intangibles

2. deferred tax income or deferred tax expenses and deferred tax assets of the insurer

3. assets pledged to support credit facilities obtained by the insurer or other specific purposes

4. all credit facilities granted by the insurer and secured by its own shares

5. direct and indirect investments, reciprocal cross holdings, arranged either directly or indirectly between financial institutions, and

6. reinsurance assets arising from arrangements deemed to constitute non-qualifying reinsurance. Non-qualifying reinsurance refers to agreements:

    a) with entities providing reinsurance that are neither regulated nor subject to risk-based solvency supervision, including appropriate capital requirements; or

    b) that do not provide a sufficient transfer of risk

7. all inadmissible assets in addition to items listed above as per Investment Directive

Capital composition limits

(67) Capital composition limits are used within the RBC to appropriately reflect the quality of capital resources and the ability of those resources to absorb losses;

1. The proportion of Tier 1 items shall be at least 60% of the RBC

2. At least 80% of the MCR shall be met by Tier 1 items.

(68) Future profits embedded in the valuation of technical provisions (reserves) shall be considered as capital resources with a limit of 15% of the RBC.

ANNEXURE V
RISK MANAGEMENT
(Related to Direction 8)

5.1. OWN RISK SOLVENCY ASSESSMENT

Own risk solvency assessment

(69) Each insurer shall implement a process to perform, on continuous basis and at all levels and activities of the insurer, its own risk solvency assessment. The own risk solvency assessment shall regard to:

1. the compliance on continuous basis with the regulations on technical provisions and capital requirements,

2. an assessment of whether the legally binding capital requirements are appropriate considering the risks the insurers is exposed to,

3. the overall solvency needs of the insurer, taking into account the specific risk profile, approved risk tolerance limits and the business strategy of the insurer.

(70) The own risk solvency assessment shall identify and assess any type of risk the insurer faces in the short, medium and long term to which it is or could be exposed, including emerging risks.

(71) The own risk and solvency assessment process shall be an integral part of the business strategy and shall be taken into account on an ongoing basis in the strategic decisions of the insurer and the decision with a material impact on its activity of solvency condition.

(72) The insurer shall have at least documentation on the policy for the own risk solvency assessment and a record of each internal report on the own risk solvency assessment. The internal report prepared by risk management function shall be presented to both the board of the insurer and its senior management team. The rest of the organization of the insurer shall receive in an appropriate manner information on the performance of the issues considered in the own risk solvency assessment that are relevant for each area of activity. The policy for the own risk solvency assessment shall include at least a description of:

1. the processes and procedures in place to conduct the assessment,

2. the link between the risk profile, the approved risk tolerance limits and the overall solvency needs,

3. the methods and methodologies including information on:

    a) how and how often stress tests, sensitivity analyses, reverse stress tests or other relevant analyses are to be performed

    b) data quality standards

    c) the frequency of the assessment itself and the justification of its adequacy particularly taking into account the risk profile of the insurer and the volatility of its overall solvency needs relative to its capital position

    d) the timing for the performance of the assessment and the circumstances which would trigger the need for an assessment outside of the regular time-scales.

(73) The insurer shall submit to Insurance Board a report with a comprehensive description of the main content and conclusions of the own risk solvency assessment. The report shall be submitted every year and also where the risk profile of the insurer has materially changed.

Governance on climate-change related risks

(74) The Board of the insurer shall approve specific written governance rules for the oversight of climate-change related risks, in order to ascertain that those risks are integrated in the system of governance of the insurer, in particular in its risk-management system, its own risk solvency assessment and its main decision-making processes. Those governance rules shall at least identify in a clear and concrete manner:

1. the risk-management committee under the Board of the insurer, responsible for the direct action or the oversight of climate-change related risks,

2. the processes and frequency of the internal reporting regarding climate-change related risks, including responsibilities for reporting and an independent validation of the information reported,

3. the process to consider climate-change related issues in the main decision-making processes, such as reviewing and guiding strategy, major plans of action, risk management policies, annual budgets, and business plans as well as setting the organization's performance objectives and monitoring implementation, performance and mergers and acquisitions, among others,

4. the way the Board monitors and oversees progress against goals and targets for addressing climate-change related issues. In particular, the Board shall ascertain that appropriate internal audit, in scope and frequency, are carried out regarding the

identification of climate-change related risks, its management and reporting, and the findings of the internal audit are timely reported to the Board.

(75) The risk-management system of the insurer shall manage on continuous basis the climate-change related risks the insurer is exposed to and shall regularly provide information on that regard. In particular, the risk-management system shall provide the following

1. An identification of the relevant short, medium, and long-term horizons, taking into consideration the assets and liabilities and the fact that climate-change related issues often manifest themselves over the medium and longer terms,

2. An inventory of the specific climate-change related issues for each time horizon (short, medium, and long term) that could have a material financial impact on the insurer, distinguishing whether those risks are transition or physical risks. The inventory shall take into account exposures according to economic sectors or geographical localization of risks, where those differentiations are material.

   The risk-management system shall consider the impact of climate-change related risks on the businesses and strategy of the insurer, in particular on the products the insurer offers and services the insurer provides, its investment policy, the mitigating actions envisaged, the operational processes supporting the activities of the insurer and its policy regarding social inequalities and protection gaps.

3. A description of the processes used to determine the impact on the insurer of each issue identified according to point (2). The risk-management system shall regularly carry out a scenario analysis based on a set of scenarios bespoke to the climate-change related risks the insurer is exposed to, both regarding assets and the risks covered by the insurance contracts in force.

5.2. INVESTMENTS, ASSET AND LIABILITY MANAGEMENT

Investments and risk management

(76) The Board of the insurer shall approve specific written governance rules for the oversight of investments and the accountability for the investments shall rest ultimately with the insurer's board of directors.

(77) The insurer's investment strategy shall cover, at least, the following elements:

a) the investment objectives of the insurer, both at company and fund-specific levels

b) the risk and liability profile of the insurer

c) the strategic asset allocation of the insurer i.e. its long-term asset mix for the main investment categories, and their respective limits

d) the extent to which the holding of certain types of assets by the insurer is restricted or disallowed e.g. illiquid or highly volatile assets; and

e) the insurer's overall policy on the usage of derivatives and structured products

(78) The insurer's risk management systems shall cover all related and material risks associated with investment activities that may affect the liabilities and capital positions, at least including market (equity risk, interest rate risk, currency risk), credit, liquidity risks and concentration risk.

(79) Risk based capital calculation shall capture the risk profile of investment portfolio of each individual insurer. For the solvency balance sheet, insurers shall ensure that their investments, are sufficiently transparent such that allowing look-through of the structure of the investments to the underlying assets. Insurance Board shall develop the reporting templates for the proper submission of the insurer's investments.

Asset liability management

(80) The insurer shall have a risk management policy which includes an explicit asset-liability management (ALM) policy which clearly specifies the nature, role and extent of ALM activities and their relationship with product development, pricing functions and investment management.

(81) Where the policyholders or the beneficiaries of the insurance contract have a participation in the performance of the corresponding assets or bear partially or in full the investment risk, such as with-profit insurance contracts and unit and index-linked insurance contracts, the ALM policy will be defined prioritizing the best interest of policyholders and beneficiaries and considering whether the ALM policy is appropriate to their needs and according to their financial background.

(82) The ALM policy shall identify the admissible structural mismatches between assets and liabilities regarding duration or any other relevant feature, shall clarify how those mismatches are considered in the liquidity plans of the insurer, and shall recognize the interdependence between all of the insurer's assets and liabilities and take into account the correlation of risk between different asset classes as well as the correlations between different products and business lines, recognizing that correlations may not be linear.

(83) The ALM framework shall also take into account any off balance sheet exposures that the insurer may have and the contingency that risks transferred may revert to the insurer.

ANNEXURE VI
SOLVENCY CONTROL LEVELS
(Related to Direction 7)

Solvency control levels

(84) Regulatory capital includes solvency control levels consisting of at least the Risk Based Capital (RBC) as supervisory target capital level and a Minimum Capital Requirement (MCR) for the lower bound for the RBC.

1. The RBC cannot be less than the MCR level.

2. MCR provide the basis of a lower bound for the RBC and serves as the ultimate safety net for the protection of policyholder interests.

3. MCR is the 1/3 of RBC level (it is not to fall below 25% nor exceed 45% of RBC).

(85) Supervisory Target Capital Level, shall be viewed as a benchmark which refer RBC Level, is a target level between a 130% solvency ratio which represent the available capital over the regulatory capital and at minimum 100%, below which supervisory actions of increasing intensity will be taken to restore the financial position of the insurer to at least the RBC level or reduce the level of risk undertaken.

(86) Insurers are required to operate at capital levels above the Internal Targets which should be set above Supervisory Target Level. The insurer shall ensure that the Internal Target Capital Level includes additional capacity to absorb unexpected losses beyond those that are covered by this Directive. The board of directors is primarily responsible for setting the Internal Target Capital Level of the insurer and ensuring that the insurer has in place an appropriate capital management plan.

(87) In the case of the insurer's Solvency Ratio is below the Supervisory Target Capital Level, Insurance Board shall restrict the declarations and payments of cash dividend (except for payment of tax on bonus share). All declarations and payments of any dividend are subject to the prior written approval of Insurance Board.

Ladder of intervention and corrective actions

(88) Insurance Board has the power to take timely and corrective measures in case an insurer fails to comply with the sound business practices and regulatory requirements. These measures are applied commensurate with the severity of the insurer's problems as stipulated within the provisions of this Directive, according to the following solvency control levels, as an early warning mechanism.

Control Levels	Solvency Ratio	Supervisory Actions
Internal Target Level	**> 130%**	Ongoing monitoring Periodical onsite inspections
Supervisory Target Level (RBC Level)	**100% - 130%**	Remedial Plans or requiring business plans Onsite inspections Frequent reporting requirements Capital injection Restriction on payment of cash dividends
Regulatory Intervention Level	**70% - 100%**	Business restrictions and/or restructuring measures Capital injection Restrictions on: Payment of cash dividends Writing business Lending or invesments Acquisitions Restructuring on: of board members or senior management Reducing or mitigating risks, redesigning investment and reinsurance strategy
Mandatory Control Level (MCR Level)	**45% - 70%**	Removing or replacing of board members or senior management Stopping new business and run-off portfolio Revoking (withdrawal) the license Winding up

1. Insurance Board shall take corrective actions against the insurance operators and if necessary, impose sanctions based on clear and objective criteria that are publicly disclosed.

2. Insurers may be required to develop an acceptable plan for correction to the problems. These plans shall be reviewed and approved by Insurance Board.

3. When identified, Insurance Board shall communicate and bring to the attention of the board, senior management and key persons in control of the insurer any material concerns to make sure that corrective measure are taken care off for satisfactory resolution.

(89) Insurance Board shall take actions in order to apply enforcement where problems are encountered. The minimum power to be imposed shall include the following;

1. Restriction on business activities and financials

    a) Prohibition the insurer from issuing new policies

    b) Withholding approval for new business activities or acquisitions

    c) Restricting activities of a subsidiary where, in its opinion such activities jeopardize the financial situation of the insurer

    d) Requiring measures that reduce or mitigate risks, redesigning investment and reinsurance strategy

    e) Requiring an increase in capital

    f) Restricting or suspending dividend or other payments to shareholders

    g) Restricting purchases of the insurer own shares

2. Restructuring

    a) Arranging for the transfer of obligations under the policies from a failing insurer to another insurer

    b) Barring individuals acting in responsible capacities from such roles in the future

(90) Insurance Board shall check compliance by the insurer and assesses their effectiveness, after corrective action has been taken or remedial measures, directions or sanctions have been imposed.

(91) Insurance Board may apply any of its power stated in Insurance Act, Regulations, other legislations and this Directive to address management and governance problems, including the power to require the insurer to replace or restrict the power of members of the Board of Directors, senior management, significant owners and external auditors, and suspending or revoking the license of an insurer.

(92) Where necessary and in extreme cases, Insurance Board may assign conservatorship over an insurer that is failing to meet the requirements of this Directive (or Insurance Act). In case where insurers fail to comply with duties and tasks stipulated under this Directive, regulations, circulars, policies, procedures, orders, recommendations, guidance and its plans, Insurance Board may take their control, or to appoint other specified officials or receivers for the task, and to make other arrangements for the benefit of the policyholders.

ANNEXURE VII
TRANSITIONAL PROVISIONS

(Related to Direction 1)

Transitional provision on policy reserves

(93) From 1 Shrawan 2080 until Ashad-End 2084, the policy reserves of life insurance obligations shall be calculated as a weighted average of the two following rates:

1. The policy reserves calculated according to the rules set out in point (10) of Annexure II and its developing rules,

2. The policy reserves calculated applying a flat interest rate calculated as the minimum of 6% and the actual yield on life fund, as set out in the Valuation Directive 2077.

(94) The weight of the policy provisions of point 93 (1) shall linearly increase on annual basis from 0.7 in Ashad-End 2081 till 1.0 in Ashad-End 2084, while the weight of the policy provisions of point 93 (2) shall linearly decrease on annual basis from 0.3 in Ashad-End 2081 till nil in Ashad-End 2084.

(95) The transition process shall be carried out separately for each of the three buckets set out in point (10) of Annexure II, without allowance of netting among buckets or any other form of offsetting among different buckets.

(96) Life insurers are authorized to apply swifter transition weights. Once applied a higher transition speed, the insurer cannot reverse the acceleration of the transition process or keep in stand by that transition.

(97) The weights referred in point (94) will be applicable for non-life claim reserves for non-life insurers.

Transitional provision on the Risk Based Capital

(98) Insurance Board will put in place transitional measures for four-years-time to allow insurers to make the necessary changes to their internal systems and for the smooth transition to the Risk Based Capital Approach set out in this Directive, and its developing rules.

(99) Implementation of this Directive will be in stages from 1 Sharwan 2080 and full implementation shall be applied as of Ashad-End 2084.

1. The insurers shall calculate its Risk Based Capital and its Available Capital resources as of Ashad-End 2081. Where there is a breach of the Risk Based Capital or where the

solvency ratio (Available Capital resources to risk based capital) is below the target set out as per this Directive, the insurer shall have a transitional period of four years to remove the breach or to reach its target solvency ratio.

2. Insurers applying this transitional provision shall approve by the board a financial plan identifying the capital resources to use in order to cover the Risk Based Capital or achieve its target solvency ratio. The financial plan shall be submitted to Insurance Board within the ten days following its approval by the board of the insurer.

3. Insurance Board shall require at any moment amendments to the financial plan when it is not realistic, or the additional funds are not provided every year of the transition period at least on pro-rata/linear bases.

Proportionality

(100) Insurance Board shall implement the proportionality principle with regards to the capital requirement and solvency position of insurers. Insurers that have the same risk profile and scale are subjected to the same level of intensity in implementing capital requirements.

(101) Guidance on the application of the proportionality principle and the specification of simplified methods shall be developed by Insurance Board.

Transitional provision for the governance requirements set out in Annexure V

(102) Within the six months following the publication of this Directive, insurers shall carry out a gap analysis identifying at least the organizational features, activities, processes, data storage, data analytics and reporting that need to change in order to meet the requirements on the governance of insurers set out in Annexure V. The report identifying the gap analysis shall be approved by the board of the insurer.

(103) The board of the insurer shall submit the report to Insurance Board within seven days from its approval. Within three months from the approval of the report, the Board of the insurer shall approve an action plan to solve the issues identified in the gap analysis. The action plan shall describe the organizational structure that will perform the plan, the responsible staff appointed to run the main roles in the organizational structure, the human resources devoted (including outsourcing), the financial resources, the data technology resources involved and the member or members of the board directly responsible of monitoring the execution of the action plan.

(104) The action plan shall fulfil the requirements on governance of the insurers set out in Annexure V no later than eighteen months from the approval of that plan.

(105) The Board of the insurer shall submit to Insurance Board the action plan within seven days from its approval. The insurer shall also submit Insurance Board a progress report on the execution of the action plan every six months, and at any moment where a major deviation has happened or is foreseen.

Legislations

(106) Insurance Board may issue guidelines, directions, and other documents in order to ensure better implementation of this Directive and fulfilling the specified objectives.

Precedence

(107) In case the provision of this Directive is in contradiction with the provisions of other Directives, provisions stipulated under this Directive shall take precedence.

Enforcement (Effective Date)

(108) The Directive shall be fully applicable to the insurers as of Ashad-End 2084. Life Valuation Directives 2077 and Non-Life Valuation Directive 2076 shall not apply to the assessment of the solvency condition of the insurers.