

Uncertainty in General Insurance and Solvency Issues

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The Paper

Main objective of this attempt is to present the various aspects, of risk and uncertainties in general insurance business and the different approaches to meet or mitigate them for successful business operations

1. Nature of General Insurance Business – Underlying Uncertainties

Insurance is the business of indemnifying a person or organization for loss or damage, or the liability to compensate for loss or damage arising from specified contingencies such as fire, theft, injury, death, negligence, etc. in consideration for a payment of appropriate sum as premium for the risk insured. General insurance, or non – life insurance as it is often referred to as, normally relates to insurance of property, liability and of the person other than what is covered under life insurance.

The objective of insurance supervision is the protection of the legitimate interests and reasonable expectations of policyholders and other beneficiaries, within the context of promoting a stable, fair and competitive financial market. These objectives, equally, require a thorough understanding by the supervisor of the risks associated with insurance and the managing of an insurance business. Insurance markets can only operate effectively if confidence can be maintained that benefits will be paid as and when due. This requires inter alia a sufficiently precise calculation of technical provisions and capital adequacy, and the safekeeping of the assets necessary for the payment of the benefits.

2. Uncertainties in General Insurance

General insurance business is fraught with uncertainties due to its very nature. Unlike life assurance business, general insurance comprises very many types of covers or sub – classes with distinct characteristics of their own, with broad classifications of long – tailed and short – tailed business. A general insurance policy is usually issued for up to one year, though longer term policies are not uncommon. A claim may or may not occur during the term of a policy. Even when the contingency covered under the policy does occur, the amount of the claim may be the full sum insured or less and in some cases, the amount may not be known for quite some time in the future. Further, there may be several claims with varying frequency, size and amounts during the term of a policy.

3. Risk

- (i) Risk could be described as the possibility that events will develop worse than planned. The management could not know for certain as to what premiums to charge, nor how much to reserve, nor what investment return will be made. Both the variability and the uncertainty are important in understanding risk.
- (ii) Risk is defined as uncertainty, volatility or variability in the expected outcome of the process or event. Risk may be differentiated between one that is measurable and quantifiable and that which is not measurable and therefore quantifiable as uncertainty.

Systematic risk is known as non – diversifiable risk. Time horizon is a period over which a risk is measured. Assuming a certain fixed acceptable level of insolvency risk per year, extending time horizon should always result in a higher capital need.

- (iii) The overall philosophy on the assessment of insurer solvency is risk-based. More specifically, the formulation of regulatory financial requirements should follow from a coherent and systematic risk analysis.
- (iv) All relevant potentially material risks should, as a minimum, be addressed by the insurer in its own risk and capital assessment. Risk that is generally readily quantifiable should be reflected in sufficiently risk sensitive regulatory financial requirements.
- (v) For risks that are less readily quantifiable, regulatory financial requirements may need to be set in broad terms and complemented with qualitative requirements.
- (vi) Risk sensitive regulatory financial requirements should provide incentives for optimal alignment of risk management by the insurer and regulation. A risk sensitive solvency regime could use some or all of the following:
- (vii) The major risk groups that are important in general insurance are:
 - Premium risk
 - Claims risk,
 - Expense risk
 - Asset / Investment risk
 - Underwriting risk
 - Reserve risk exchange
 - Credit risk
 - Exchange / Currency mismatch risk
 - Market risk
 - Operational risk
 - Growth risk
 - Volatility risk

(a) Premium Risk

Premium related risk encompasses the risk in the process of product definition, pricing, underwriting and selling.

- Inability to reach the projected sales volume due to flawed product definition due to either the product not being appropriate for the market or unfavourable terms and conditions quoted for the product
- Product might not be competitive due to incorrect pricing of the product
- Lenience in underwriting and adverse selection
- Inadequate premium rates / Inappropriate discounts and liberal terms for the intermediaries due to inadequate insurance know – how / inadequate professional support
- Change in market, economy, regulation and judicial decisions
- Inadequate reinsurance or inability to get reinsurance cover

(b) Claims Risk

Claims risks are those risks involved in that claims process such as claim intimation, adjudication, settlement, reserving, litigation and recovery consisting of –

- Increased severity – frequency of claims higher than foreseen.
- Uncertainty of claims costs – dependent on the lines of business written by the company – e.g. direct and reinsurance business.
- Trends and cycles contribute to the overall risk. The perils which give rise to insurance claims and the forces behind them are not static, but change over time. The causes of change may be legal, technological, social, economic, fiscal, political or environmental. The effect of such changes may be retrospective as well as prospective. Changes can be exhibited as trends or cycles, and it is often not easy to distinguish between the two.
- Inflation and currency mismatch increase the overall risk.
- Exposure to catastrophes..
- Reporting delays and laxity in claims management.
- Fraudulent claims / unscrupulous brokers.
- Judicial decisions adversely impacting on claims.
- Reinsurance failure or not reinsuring through error/Unsound reinsurer
- Accumulation of risk.

(C) Expense Risk arising due to lack of control on expenses / commissions and the risk of impact of inflation

(d) Asset / Investment Risk

Investment risk is the risk of an adverse movement in the value of the insurer's asset or off – balance sheet exposures which include—

- Liquidity risk
- Market risk – e.g. stock market / real estate crash, economic downturn
- Cash flow
- Security of capital
- Political / Sociological / Economic / Technical
- Maturity – longer the term to maturity of investment, the longer even high quality issuer has to potentially deteriorate
- Concentration – by industry / by geography

(e) Underwriting risk

Underwriting risk is specific insurance risk arising from underwriting of contracts. The risks within the underwriting risk category are associated with both the perils covered by the specific line of insurance and with the specific processes associated with the conduct of the insurance business.

The original objective of insurance is the assumption, pooling and spreading of risk, so that the (financial) consequences of misfortune or adversity may be borne by a community or larger group rather than at an individual level. This most basic risk in insurance is commonly called underwriting risk. A thorough understanding of risk forms the basis of insurance business.

(e) Credit risk – failure of a debtor, maybe agents or reinsurers.

There are two main areas where reinsurers' credit risk needs to be assessed, namely:

- 1) In the long term, how likely is the reinsurer to be able and willing to meet the future cost of the claims?
- 2) How promptly will the reinsurer pay those recoveries currently outstanding?
 - credit quality

(f) Currency / exchange risk

Currency / exchange Risk arises if not all assets and liabilities are denominated in the same currency.

(g) Market risk arises from the level of volatility of market prices of assets.

(h) Operational risk is the risk of loss resulting from inadequate or failed internal processes, people, systems or from external events.

(i) Volatility risk is the risk of random fluctuations in either frequency or severity of a contingent event.

Reserve risk would cover the risk of reserves proving inadequate.

Catastrophe risk is related to company's maximum probable loss estimation and possibility of frequent catastrophe events.

Growth Risk arises from additional risks attaching to companies which grow abnormally rapidly or slowly.

Risk Management

A risk management programme in an insurance company is an organised programme in which sources and volumes of risk are tracked and procedures are in place to track and report on the risk. Important features of risk management include risk limits and risk management policies established by the Board of Directors, regular reporting of risk at the appropriate level in the company and are seen by risk officers who are independent of business unit heads. Risk management in the insurance industry refers to managing the risks that are quantifiable and measurable. Insurance companies manage these risks by –

- (i) Diversification – by country, currency, industry. Classes, assets
- (ii) Reinsurance
- (iii) Matching and hedging of assets
- (iv) Good management information system and
- (v) Internal control mechanism.

Risk management can be viewed as the first line of defence in a company or a way to prevent the consequence of situation that could imperil the company. Capital supplements risk management; capital is required to support the financial costs to the company of situations where risk

management is not a sufficient deterrent.

If the regulator has confidence that a company's risk management programme is very sound and effective, it could be appropriate to reflect this in the calculation of required capital.

An insurer can take a number of steps to lessen the risk associated with its business. These include purchase of reinsurance, securitisation of a portion of its asset or liability portfolio, hedging of financial, use of product design to pass risk on to the policyholder as well. To the extent that these measures effectively reduce a company's risk, they should be given appropriate recognition in a calculation of a company's required capital. The difficulty lies in properly assessing the actual degree of risk that has been transferred from the insurance company in these arrangements.

Mitigation of Risks

Possible actions which may be taken by management to mitigate the inherent risk of an insurer are:

- avoiding an undue concentration of risk: in business written, in invested assets, in reinsurance ceded;
- diversifying by obtaining exposure to area with different risk characteristics – this principle is applicable to business written, invested assets and reinsurance, and includes diversification by country / economy, currency, industry, class of business written, types of assets (e.g. bonds, equities), types of reinsurance (e.g. proportional, non -- proportional) and size of company – and
- reducing the impact of risk by appropriate reinsurance, matching assets and liabilities by currency, term, broad category of asset and cash flows, hedging investment portfolio using options, futures, other derivative investments.

Insurance Regulations & Regulator -- Reasons for Regulation

(a) To protect the policyholders and creditors through –

- monitoring solvency of insurers
- allowing only persons who are fit and proper from managing insurance companies and intermediaries – need for maintaining database of companies and individual names

(b) Focus of prudential regulation and supervision of insurers is usually defined as protection of the rights of policyholders. Since this includes oversight of the continuing ability of insurance companies to meet their contractual and other obligations to their policyholders, the regulator has a strong interest in the continuing solvency of both insurers and reinsurers under its jurisdiction.

(c) Its primary focus is capital requirements, a practice that strengthens the ability of a company to successfully manage its risk in a way to lessen its need for capital.

(d) Supervisory review – since not all types of risks can be adequately processed. Even for those risks that can be assessed quantitatively, their determination for solvency purpose will require independent review by the regulator or by a designated qualified party.

(e) The actuarial profession can assist the regulator by providing peer review of the determination of policy liabilities, risk management, capital requirements, current financial position, future financial condition, etc., when these entail the use of substantial judgement or discretion. Assistance can also be provided to design appropriate disclosure practices to serve public interest.

(f) This is to ensure not only that the insurers have adequate capital but also to encourage insurers to develop and use better risk management techniques reflective of insurer's risk profile in

monitoring and managing these risks. Such a review will enable regulatory intervention if an insurer's capital does not sufficiently cover the risks

Supervisory assessment and intervention

The solvency regime establishes a range of solvency control levels and the supervisory instruments associated with each of the control levels. Supervision should aim to ensure that inadequacies in the operation of an insurer are resolved by the insurer. The supervisory powers should include the ability to impose and maintain, inter alia, an additional capital requirement for the additional risk that such qualitative deficiencies pose.

The supervisory regime should require insurers to have and maintain corporate governance policies, practices and structures and undertake sound risk management in relation to all aspects of their business. Sound governance is a pre-requisite for a solvency regime to operate effectively. This includes the need for public disclosure and additional confidential reporting to the supervisor, and for the solvency regime itself to be transparent.

Two sets of basic conditions need to be in place for an effective supervision framework. These relate firstly to the basic conditions for effective functioning of the insurance sector and insurance supervision as efficient and well-regulated insurance markets help to attract and retain capital and enhance global financial stability, thereby securing protection for and ultimately benefiting policyholders. Effective insurance supervision requires an environment which has an institutional and legal framework for the financial sector and its supervision, well developed and effective financial market infrastructure and efficient financial markets.

The second set of conditions that need to be in place for an effective supervision framework relate to the effective functioning of the insurance supervisor. In the context of the development of the structure for the assessment of insurer solvency, the supervisor needs to have adequate powers to:

- (a) require the insurer to assess and manage the risks to which it is exposed and appropriately assess and maintain its total financial resources;
- (b) set regulatory financial requirements for individual insurers which ensure that under both normal and adverse circumstances an insurer holds sufficient assets to protect policyholders' interests; and
- (c) require that, if necessary, an insurer holds additional capital or takes action to reduce its risks so that the assets it holds are sufficient and appropriate, if taking additional reinsurance is not feasible.

Essentially, the regulator needs to have support of experienced insurance and actuarial professionals to perform.

Insurance Regulatory Information System

Regulators seek to develop processes – both quantitative and qualitative – to monitor the performance and financial health of insurers. A number of financial ratios can assist analysts in quantifying the financial performance and solidity of companies. Such ratios are based upon information found in company's financial reports, e.g., balance sheets and income statements.

Minimum financial requirements

Financial requirements are to be appropriate to the type of risk and Risk – Based Capital. The solvency regime is sensitive to risk, and is explicit as to which risks, individually and in combination, lead to a regulatory financial requirement and how they are reflected in the requirement. The solvency regime is explicit on how, for each of the risks that attract a financial requirement, individually and in combination, prudence is reflected in these requirements. The required solvency margin should take into account the amounts of risks each insurer carries and that leads to the risk – based capital system.

Insurance Reserves

- (a) Premium reserves – Unexpired Risk and Premium Deficiency reserves and Outstanding Loss Reserves, involve technical computation and require actuarial input.
- (b) appropriate assets supporting those obligations; and
- (c) a minimum amount of capital which must reflect a comprehensive view of the insurer's own risks.
- (d) There is need to strengthen market discipline by introducing disclosure requirements which should enable fostering industry 'best practice'.

Causes of Insolvency

A deficiency in the solvency margin does not always mean insolvency in the sense of having negative shareholders' funds. It nevertheless indicates clearly that the company does not have the minimum available resources to absorb any adverse loss experience so that interest and security of the policyholders may be impaired.

Solvency deficiency does not just happen – it is caused, and mostly by incompetent underwriting and claims practices. The deficiency also does not occur suddenly, although it may surface suddenly when it can no longer be hidden. The board of directors of an insurer with solvency deficiency cannot escape responsibility for its position.

The insurer management has a duty to the insuring public to operate their company in a sound and prudent manner. Prevention of insolvency can be easy if they exercise vigilance at all times. Dealing with an insolvent insurer is painful and causes distress to a large number of policyholders and general creditors. Consequently, failure to manage an insurer in a sound manner is regarded as a serious lapse.

Briefly, the possible causes for insurer insolvency are:

- 1) Uneconomic size of operations
- 2) Rapid uncontrolled growth
- 3) Excessive management cost
- 4) Ineffective Corporate governance leading to laxity in management / claims control
- 5) Improper claims reserving practices leading to insufficient reserves
- 6) Poor asset quality and management
- 7) Fraudulent practices
- 8) Failure to price adequately / Inefficient or faulty reinsurance arrangements
- 9) Legal, social, judicial environment change

Capital & Capital Adequacy – The Need for Capital

For insurance companies, capital is essentially needed to cover the risk of business outcomes being greater than those predicted (i.e. largely the cost of claims to be settled in the future relating to business already underwritten, but also assets being held to support those claims and the relevant operational costs).

- a. Premiums charged generally pay for expected losses (50% probability) plus expenses of operation; Insurers must have capital so as to be able to fund unexpected losses;
- b. Profit margin in premium charged generally provide the return on capital but capital is needed when unexpected losses arise;
- c. Provides support in face of adverse unexpected outcomes from insurance activities, investment performance and operations
- d. Finance growth and capital expansion
- e. Provides security to policyholders that claims will be paid
- f. Can be defined = Total assets. – Total liabilities

Excessive capital requirement, while affording additional solvency protection, will serve impede capital investment in insurers because of the perceived additional cost of capital required in the business, beyond that required by economic levels of capital, that may not be recoverable in product pricing.

An effectively defined capital requirement serves several purposes –

- a. provides a rainy day fund, so when bad things happen, there is money to cover it;
- b. motivates a company to avoid undesirable levels of risk from a policyholder's perspective;
- c. promotes a risk measurement and management culture within a company, to the extent that the capital requirements are of actual economic risk;
- d. provides a tool for regulators to assume control of a failed or failing company;
- e. alerts the regulator to emerging trends in the market;
- f. ensures that the insurance portfolio of a troubled insurer can be transferred to another carrier with high certainty.

For any insurer, claims – paying ability is largely dependent on the overall amount of available in the form of assets in relation to the overall amount of liabilities. It does not solely depend on the adequacy of the technical provisions.

Any failures within the insurance industry, due to under – capitalisation or otherwise, tarnish the industry's image, since they undermine the trust of the customers and potential customers and investors.

To ensure solvency, it is not sufficient to charge high premiums, which may in any case make the product unacceptable. To continue to be able to meet claims and claims handling obligations as they fall due, an insurer has also to retain adequate reserves and invest prudently, while at the same time managing its accumulations of risk by limiting its concentrations of exposure or transferring the risk effectively to alternative solvent insurers.

Corporate Governance

It is desirable that standards are established which deal with corporate governance. Where the insurance regulator has responsibility for setting requirements for cg, the regulator should set

requirements with respect to:

The primary defence in preserving a company's financial integrity is for the company to be well managed. There should be clear lines of responsibility and reporting and the company should have well established and articulated operating rules and procedures. Thus, the company's Corporate Governance is an important factor in preserving its well – being and its solvency. If management or directors have less than optimal control of a company's affairs, higher than normal capital target level might be required. If the regulator has not communicated Corporate Governance standards to the supervised institutions and overall level of Corporate Governance is not thought to be strong, it would be appropriate to reflect this in the design of a capital requirement.

Risk sensitive financial requirements can only fulfill their intended role if the insurer meets sound governance, market conduct and public disclosure requirements. Sound corporate governance and professional advice relate to all aspects of the insurance business, with a specific role for directors and auditing and actuarial professionals, to improve objectivity and achieve the required checks-and-balances in the governance structure.

Corporate governance framework is there to encourage the efficient use of resources and equally to require accountability for the stewardship of those resources. The aim is to align as nearly as possible the interests of individuals, corporations and society – ethical business behaviour in every sphere and with all constituents.

Corporate governance is a critical ingredient in maintaining a sound financial system and a robust economy. Effective governance helps to instill trust in creditors and policyholders and more so in the regulator; It also helps to assure effectiveness and integrity of an insurer's business process.

The supervisory regime should require insurers to have and maintain corporate governance policies, practices and structures and undertake sound risk management in relation to all aspects of their business. Sound governance is a pre-requisite for a solvency regime to operate effectively.

Market Conduct Requirements

Improper market conduct may have a direct impact on an insurer, or may be damaging to the reputation of an insurer and hence have severe indirect consequences for its financial position and its ability to operate effectively. An insurer should therefore have sound market conduct policies and procedures.

The risk reflected in the risk margin in technical provisions relates to all liability cash flows and thus to the full time horizon of the insurance contracts underlying these technical provisions. Capital requirements should be calibrated such that, in adversity, assets will exceed technical provisions with a specified level of safety over a defined time horizon.

Reform Business Practices and Increase Transparency

Risk management is a discipline that enables people and organisations to cope with uncertainty by taking steps to protect its vital assets and resources. Risk management process provides a framework for identifying risks and deciding what to do with them.

Effective communication underpins the relationship of trust among the shareholders, board and management. It forms the glue that holds complex corporate governance framework together. Thus, it must be ensured that a transparent, accurate, and timely communication of information takes place in the organisation.

Insolvency of insurance companies have made it imperative for the regulators to review the ways of managing risk in insurance companies and whether insurers are adequately capitalised to face the risk. Globally, as a part of regulatory framework, will ensure that insurers are adequately capitalised and operate safely thereby reducing the risk of failure. One factor that has emerged is that the risks before insurance companies are varied, complex and dynamic and there is no universal formula that fits all.

Disclosure

Public disclosure of information enhances market discipline, imposing strong incentives on insurers to conduct their business in a safe, sound and efficient manner. Insurer solvency and solvency assessment thus benefit from appropriate public disclosure. A regime would be expected to differentiate between public disclosure and reporting to the supervisor.

There should be a number of solvency control levels which trigger different degrees of timely intervention by the supervisor. The solvency regime should have due regard to the coherence of the solvency control levels and any corrective action that may be at the disposal of the insurer, and of the supervisor, including options to reduce the risks being taken by the insurer as well as to raise more capital.

The supervisory regime should specify which solvency information should be made public to enhance market discipline and provide strong incentives for insurers to conduct their business in a safe, sound and efficient manner which treats policyholders fairly. Information provided to the supervisor and subject to confidentiality supports and fosters openness on commercially sensitive issues between the supervisor and the insurer. The regime should be open and transparent as to the regulatory requirements in force, and be explicit about its objectives and the level of safety that it requires.

Internal controls

The regulator should be able to:

- (i) review the internal controls that the board of directors and management approve and apply, and to require strengthening where necessary;
- (ii) require the board of directors to provide suitable prudential oversight, such as setting standards for underwriting risks and setting qualitative and quantitative standards for investment and liquidity management.

Assets

Standards should be established with respect to the assets of companies. Where insurance supervisors have the authority to establish the standards, there should apply at least to an amount of assets equal to the total of the technical provisions, and should address:

- a) diversification by type;
- b) any limits, or restrictions, on the amount that may be held in financial instruments, property, and receivables;
- c) the basis for valuing assets which are included in the financial reports
- d) the safekeeping of assets
- e) appropriate matching of assets and liabilities, and
- f) liquidity.

Liabilities

1. In developing the standards, the regulator should consider:

What is to be included as a liability of the company –

- a. claims incurred but not paid
- b. claims incurred but not reported
- c. amounts owed to others
- d. amounts owed that are in dispute
- e. premiums received in advance
- f. provision for policy liabilities
- g. technical provisions

2. The standards for establishing policy liabilities or technical provisions; and the amount of credit allowed to reduce liabilities for amounts recoverable under reinsurance arrangements with a given reinsurer making provision for ultimate collectibles.

3. Inadequacy of technical provisions may be due to several factors:

- a. lack of legislative and practical measures on technical provisions lack of historical data
- b. uncertain economic conditions particularly a high inflation rate
- c. an inadequate premium rate
- d. lack of professional support.

Solvency & Solvency Margin – Solvency Definition

A solvent insurance company is one which possesses sufficient assets to meet its liabilities. In practice it may be difficult to be sure of the exact value of liabilities or whether the assets would be sufficient to meet them, even if their amount were known precisely. Uncertainty is inherent in an insurance company's liabilities and a considerable degree of estimation is required.

Solvency is defined as the "ability to pay all past debts". In the insurance context, this definition can be interpreted in a number of ways.

Break – up

Comparison may be made between the immediately realistic value of the insurer's assets with what it would have to pay to immediately settle all of its liabilities. Such an approach is regarded as too severe, since both sides of the equation are affected by time pressure. A more reasonable comparison between the market value of the assets and the premium a reasonable reinsurer would accept to take over the liabilities.

Run – off

A less extreme position, which approximates to what normally happens in a liquidation, is to test whether the current assets are sufficient to support the emerging cash flow requirements of the liabilities, assuming normal claim management practices. This test can be carried out as a direct comparison of cash flows, allowing asset realisation or reinvestment as needed, or it can be made as a comparison of the value of the assets with the corresponding net present value of the projected liability cash flow.

Pay – as – you – go

An insurer could be regarded as solvent if it always has enough premium income to claim payments as they fall due, even though its assets are only sufficient to cover short term cash flows and are insufficient to cover outstanding liabilities on a run – off basis. Insurers would normally not be permitted to operate on such basis.

Going Concern or Run – off

Economic capital is what is required for ongoing operations and, for insurance company, what it must hold in order to gain the necessary confidence of the market place, its policyholders, its investors and the regulator. Economic capital can be considered to be the minimum amount of equity or investment to be maintained in the company by its shareholder to ensure the ongoing operations of the company.

An insurer's capital is determined from its financial statements as the difference between the value of its assets and liabilities. Thus, the capital value is directly dependent on the relative strength of the methods and assumptions used to determine the asset and liability values. The use of inconsistent methods and assumptions in the determination of asset and liability values has the potential of significantly affect the strength of the capital position.

The regulator is more concerned with target regulatory capital to continue to conduct business of insurance. Providing protection to policyholders in the event of insurer's failure is a traditional justification for a regulatory capital requirement. Protection may be provided for general creditors of the company as well. No consideration is given to the protection of the financial interests of the shareholders.

A longer solvency assessment time horizon may be useful to provide insight into the future financial condition of the insurer under variety of plausible adverse scenarios. Some regulators require that a multi – period future financial condition report be annually presented to the Board of Directors and a copy provided to the regulator.

Solvency margin

An insurer's solvency margin is the excess of assets over and above what is needed to match its liabilities. The statutory solvency margin is intended to give an early warning of the need for corrective action, or for intervention by the regulator, before insolvency is reached. The solvency margin is intended to provide some security in the face of such uncertainty.

Efficient and well-regulated insurance markets help to attract and retain capital and enhance global financial stability, thereby securing protection for and ultimately benefiting policyholders. The other more qualitative components of the solvency structure, are governance, market conduct and disclosure requirements. The solvency regime addresses the robustness of the insurer to meet its liabilities both short-term and over a longer time span.

A risk sensitive solvency regime should require insurers to assess and manage the risks to which they are exposed and appropriately assess and maintain their capital needs. By requiring this, supervisors can effectively achieve their aims of protecting policyholders and maintaining well-founded market confidence. These aims require adequate levels of capital and this in turn requires that risks are measured properly. Regulatory financial requirements therefore need to be firmly rooted in economic valuation and provide the basis and incentives for optimal alignment of risk management by the insurer and regulation. Regulatory financial requirements should be as complete as practicable, i.e. include all risk factors that can be appropriately translated into a financial requirement.

Degree of protection

It is impossible for capital requirements, by themselves, to totally prevent failures. The establishment of extremely conservative capital requirement, well beyond economic capital level, would have the impact of discouraging the deployment of insurer capital in the country.

Actuarial control cycle is a continuous review process that is fundamental to any enterprise risk monitoring process. The control cycle provides information to improve the company's ability to manage its risks and make more effective business decisions. Some of the ways in which an insurer can manage its risks, beyond the fundamentals of prudent claim management include –

- a. risk reduction
- b. risk integration
- c. risk diversification
- d. risk hedging
- e. risk transfer
- f. risk disclosure
- g. decline the risk.

While many of these types of risk management serve to reduce the risk in question, it is important to note that some of them create additional risk related to technique itself. For example, both hedging and reinsurance create counter party risk, a form of credit risk.

Given the intrinsic uncertainty of insurance obligations, the technical provisions need to include a risk margin over the current estimate of the cost of meeting the policy obligations. The risk margin should be calibrated such that the value of the technical provisions is equivalent to the value that an insurer would be expected to require in order to take over the obligations.

From a regulatory perspective, the purpose of capital is to ensure that, despite adverse conditions, policy claims and obligations will still be met as they fall due and the required technical provisions remain covered.

Mismatch risk exposure which is not intrinsic to the policy portfolio and is assumed voluntarily by the insurer should be reflected in required capital, and not in the technical provisions.

Solvency Assessment Structure

In all circumstances a deep understanding of risk and risk management remains of key importance to the insurance industry and the supervisory offices. The Solvency Structure encompasses three blocks of topics: the financial block, the governance block and the market conduct block, and addresses the three levels of preconditions – regulatory requirements and supervisory assessment/intervention. The primary focus is on the financial block, governance and market conduct.

Risk sensitive regulatory financial requirements should provide incentives for optimal alignment of risk management by the insurer and regulation.

It is first of all the responsibility of the insurer to manage its risks under both normal and adverse circumstances, so that policyholder interests are protected during ongoing operations and in the event of run-off or insolvency. The role of the regulatory regime and the supervisor is to see to it that this responsibility is met. The regulatory regime and supervisor should thus give insurers the opportunity to manage their business and provide incentives for sound risk management appropriate to the size and nature of their business. It should require insurers to assess and manage the risks to which they are exposed and appropriately assess and maintain their total financial resources. It also needs to be emphasised that an insurer itself, in managing its business, should seek to translate its risk exposure as far as practicable into quantitative measures which provide a sound and consistent basis for the setting of premium levels, determining technical provisions and deciding on the economic capital it finds optimal from its risk management perspective. By requiring insurers to do this, supervisors can effectively achieve their aims of.

Hence, a regulatory regime should be risk sensitive and seek an optimal reflection of risk exposure in regulatory financial requirements. Risk sensitive regulatory financial requirements should enable an alignment of risk management by the insurer and regulation, and support the relationship between internal economic capital and required regulatory capital.

A regime necessarily comprises both qualitative and quantitative aspects. For each of the broad risk categories distinguished, any quantitative financial requirements or limits need to be firmly embedded in a wider context of qualitative requirements to manage risks. Risk sensitive financial requirements can only fulfil their intended role if the insurer meets sound governance, market conduct and public disclosure requirements. Risks that are reflected in quantitative financial requirements still need to be subject to an appropriate qualitative set of norms. For example, requirements for the determination of technical provisions and capital need to be supported by requirements that secure the adequate safekeeping of the assets and control over the capital resources.

Conclusion

Insurance solvency supervision is being enlarged in its sphere – the latest development is introduction of risk – based capitalisation. Whilst this would certainly increase effectiveness of insurance supervision, the other very important factors for protecting the insurer solvency are corporate governance, market discipline and internal controls, which the regulator is unlikely to ignore under normal circumstances.

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