

PRUDENTIAL STANDARDS FOR GENERAL INSURERS IN AUSTRALIA

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Introduction

The Australian Prudential Regulation Authority (APRA) has established Prudential Standards that have to be followed by all general insurers since July 2002.

What follows is a summary of these Standards. A number of finer details have been left out and any one interested in details should find them in the General Insurance Tab on the APRA website - www.apra.gov.au . The purpose of this is to assist those dealing in general insurance in approaching the subject from all possible angles and not just theoretical or mathematical - it is obvious that recent insurance company failures are due not just to under-reserving, possibly as a result of inadequate actuarial assumptions, but also to many other practical factors which have been ignored by the managements and the Boards.

Basically, at present there are five Standards dealing with:

1. Capital Adequacy
2. Assets in Australia
3. Liability Valuation
4. Risk Management
5. Reinsurance Arrangements

There is a sixth Standard on “Transfer and Amalgamation of General Insurance Business” but this is not dealt with here as it concerns legal formalities and procedures in which APRA would also be involved.

The Standard on Assets in Australia will also not be considered in this note as its purpose is merely to indicate which assets should be considered to be in Australia for the purposes of ensuring they fall within the jurisdictional reach of APRA and Australian courts.

CAPITAL ADEQUACY STANDARDS

APRA requires each insurer to maintain sufficient capital to enable its obligations to be met in a wide range of circumstances. This required amount is called Minimum Capital Requirement (MCR).

The following paragraph is given verbatim from the published Standard:

“An insurer’s capital resources must be adequate for the size, business mix and complexity of its business. To this end, APRA adopts a risk-based approach to the measurement of capital adequacy of all insurers. The MCR is intended to be broadly

commensurate with the full range of risks to which an insurer is exposed (including risks relating to insurance claims, investments, counterparty default, asset-liability mismatches, catastrophes, and operational errors and problems).” In any event MCR should not be less than \$5 million.

An insurer may use an internal model to determine its MCR or use the method prescribed by APRA.

CAPITAL ADEQUACY STANDARDS – INTERNAL MODEL METHOD

Internal Model Based (IMB) must be approved by APRA and the Federal Treasurer (Treasurer is equivalent to Finance Minister in India).

Certain qualitative and quantitative standards are set down to ensure sufficient prudence and comparison and consistency across industry.

Quantitative Standards:

Capital requirement should be such that the probability of default is 0.5% or less in any one year period.

For any different probability and time horizon combination APRA would have to be satisfied that the alternative parameters are appropriate for the business mix and consistent with the above requirement.

Qualitative Standards:

- The insurer must have an independent risk management unit which produces and analyses results of the capital measurement model and validates against actual experience. The model should be an integral part of planning, monitoring and controlling the risk profile.
- The Board and senior management should be actively involved in the risk management process. They must review the results of the model and ensure restrictions on overall risks.
- Program for stress testing the model should be in place.
- There should be an independent review of the model at regular intervals – assessing its performance as to information systems, risks measured, consistence and timeliness and reliability of data sources, back testing of results, organization of risk management unit, and integration with broader risk management functions.

Among the risks to be considered would be the following, though this is not all inclusive:

- Investment Risks – of counterparty default or failure, fall in value of assets, liquidity of assets, effect of changes in interest rates on cash flows
- Insurance risks – variation in amount and timing of cash flows from expectations or assumptions
 - Outstanding claims risk due to unexpected inflation;

changes in interest rates
changes in legal environment
changes in social attitudes to claiming
patterns of pricing adequacy
currency fluctuations
randomness of claims process
incompleteness of database

- Premium risk, being insufficiency of premiums written after the calculation date to meet liabilities due to
 - changes in interest rates
 - competitive pressures
 - regulatory intervention affecting premiums to be charged
 - past premiums or amounts collectible from agents different from assumptions
 - Loss projection risk due to unanticipated changes in claims costs and exposures, and in loss adjustment practices
 - Concentration risk on written coverages, geographic areas, frequency and severity of catastrophes
 - Reinsurance risks especially in response to catastrophes, uncertainty of collecting recoverables, reinstatements, etc.
 - Expense risk- overhead and marginal expenses
- Operational Risk – there are several in this category (see details on these risks dealt with below)

CAPITAL ADEQUACY STANDARDS – PRESCRIBED METHOD

An insurer must maintain a Capital Base in excess of MCR and is advised to consult APRA in advance of issuing any capital instrument to avoid any dispute over eligibility in the Capital Base.

Criteria for adequacy in respect of each capital instrument are given as the extent to which each instrument:

- provides a permanent and unrestricted commitment of funds;
- is freely available to absorb losses from business activities;
- does not impose unavoidable servicing charges against earnings;
- ranks behind claims of policyholders and other creditors in the event of winding-up.

Capital Base is divided into 2 Tiers –

Tier 1, or the core capital, comprises the highest quality capital elements, calculated net of goodwill, intangible assets and future income tax benefits:

- (a) paid-up ordinary shares
- (b) general reserves
- (c) retained earnings
- (d) current year's earnings after dividends and tax
- (e) technical provisions in excess of those required under 'Liability Valuation' Standards

- (f) non-cumulative irredeemable preference shares
- (g) other "innovative" capital

Items (f) and (g) require APRA approval, and the sum of (f) and (g) must not exceed 20% of aggregate Tier 1 capital – any excess to be included in Upper Tier 2. Also servicing of capital (interest and dividends) must be out of current year's after-tax earnings, and not out of retained earnings without APRA's approval.

Tier 2 capital comprises hybrid instruments which have characteristics of both equity and debt.

Upper Tier 2 includes:

- (a) cumulative redeemable preference shares
- (b) mandatory convertible notes or similar instruments
- (c) perpetual subordinated debt
- (d) any other hybrid instruments of a permanent nature, eg., portions of (f) and (g) in Tier 1 ineligible in Tier one because of the 20% limit mentioned above.

Lower Tier 2 includes term subordinated debt, and any limited life preference shares or other limited life instruments. Limited life instruments must have original maturity of at least 5 years and are subject to straight line amortisation in the last four years, that is value included in Tier 2, 3 to 4 years prior to maturity is 80% of original value, reducing by 20% each successive year.

Tier 2 capital requires APRA approval and the total of Lower Tier 2 capital must not exceed 50% of Tier 1 capital.

Repurchase of its own instruments or reduction of capital require APRA approval, and a capital plan would be required showing adequacy for future needs.

Calculation of MCR – Prescribed Method

Unless an insurer wishes to use an "Internal Model Based" (IMB) method, the Prescribed Method will have to be employed. *(The IMB Method will be dealt with later, and it is worth a student's while studying it carefully as it details matters to be considered by an insurer for measuring its own risks should it decide to use IMB or a combination of IMB and Prescribed Method).*

The Prescribed Method requires the MCR to be the sum of charges relating to insurance, investment and concentration risks. The charges are to be calculated as percentages of values at risk.

Insurance Risk Charge

There are two insurance risks considered – Outstanding Claims Liability and Premiums Liability.

Outstanding Claims Liability is in respect of losses already incurred prior to the calculation date, whether reported or not. Premiums Liability is an estimate of losses that are expected in respect of business already written but for which premiums are

still to be received after the calculation date. Premiums Liability is usually substantial in respect of inward reinsurances, though it also exists for direct insurance.

In cases of multiple-category products, classification may be on the basis of that class which has the greatest exposure or the greatest amount of premium, provided the same classification continues to be used at all times in the future.

Class of Business	Charge as % of Outstanding Claims	Charge as % of Premiums Liability
Direct Insurance		
Householders Commercial Motor (Excl. CTP) Domestic Motor (Excl. CTP) Travel	9%	13.5%
Fire and Industrial Risks Marine and Aviation Consumer Credit Mortgage Other Accident Other	11%	16.5%
Compulsory Third Party Motor (CTP) Public and Product Liability Professional Indemnity Employers' Liability	15%	22.5%
Inwards Reinsurance		
Property – Facultative Proportional Treaty Proportional Facultative Excess of Loss Treaty Excess of Loss	9% 10% 11% 12%	13.5% 15.0% 16.5% 18.0%
Marine and Aviation – Facultative Proportional Treaty Proportional Facultative Excess of Loss Treaty Excess of Loss	11% 12% 13% 14%	16.5% 18.0% 19.5% 21.0%
Casualty – Facultative Proportional Treaty Proportional Facultative Excess of Loss Treaty Excess of Loss	15% 16% 17% 18%	22.5% 24.0% 25.5% 27.0%

Investment Risk Charge

This charge relates to “the risk of an adverse movement in the value of an insurer’s on-balance sheet assets and/or certain off-balance sheet obligations”. This risk covers-

- Credit risk of the issuer of the asset;
- Market/mismatch risk of asset value changes not matching movements in value of liabilities;
- Liquidity risk.

The factors assigned by APRA as shown below are not a substitute for the insurer’s own risk assessment. Should an insurer’s own risk management systems indicate different charges in respect of any asset, an appropriate amount of capital to cover that risk should be allocated. Also some adjustments to the factors shown are recommended for meeting certain situations.

ASSET (see next Table for Grades)	Capital Charge Factor
Cash Govt. Bonds Foreign country Govt. Bonds, where the country or its currency is rated Grade 1	0.5%
Debt maturing less than 1 year with Grade 1 or 2 rating	1%
Other debt maturing 1 or more years with Grade 1 or 2 rating Reinsurance recoveries with reinsurer rated Grade 1 or 2	2%
Unpaid premiums due less than 6 months Unclosed business Debt obligation of Grade 3 Reinsurance recoveries with reinsurer rated Grade 3	4%
Debt obligations rated Grade 4 Reinsurance recoveries with reinsurer rated Grade 4	6%
Debt obligations of Grade 5 rating Reinsurance recoveries with reinsurer rated Grade 5 Listed equities (including subordinated debt) Units in listed unit trusts Unpaid premiums due more than 6 months	8%
Real estate Unlisted equity (including subordinated debt) Units in unlisted trusts (excluding Cash Management trusts) Assets not specified in this table	10%
Loans to directors, related entities relatives Unsecured loans to employees more than \$1000 Assets under fixed or floating charge	100%
Goodwill, intangible assets and future income tax benefits	0% as these deducted from Tier 1 capital

Grade	Standard & Poor	Moody	AM Best
1	AAA	Aaa	A++
2	AA+, AA, AA-	Aa1, Aa2, Aa3	A+
3	A+, A, A-	A1, A2, A3	A, A-
4	BBB+, BBB, BBB-	Baa1, Baa2, Baa3	B++
5	BB+ or below	Ba1 or below	B+ or below

Unrated assets should be classified as Grade 4.

APRA may determine lower Investment Risk Capital charges than those shown above in special circumstances if amounts due from reinsurance recoveries or overdue premiums are due from another general insurer or its related entity.

APRA's approval would be required if an insurer's assets are held in related entities. APRA would require to be satisfied that the related entity is wholly owned and controlled by the insurer, the assets could be transferred back to the insurer, proper management systems, accounting records and controls are maintained, and that the related entity does not have material third party liabilities (other than tax and employee liabilities).

Collaterals against an asset will be recognized if they form mortgage or charge over cash, Government securities or debt obligations with rating of Grade 1, 2 or 3, and to the extent market value of the collateral covers the asset.

Any guarantees will be classified according to the grading of the guarantor. Guarantee provided by a parent company is not eligible for this treatment.

Any assets which are encumbered by a fixed or floating charge will be subject to a Investment Capital factor of 100%, to the extent of the indebtedness secured. If the security supports the insurer's liabilities, the 100% factor is applicable only to the extent the market value of the assets exceeds the supported liabilities.

Additional charge is required in the case of asset concentration, ie, if the asset value greater than 50% of the Capital Base where the asset or exposure to a particular obligator with a Grade 4 rating exceeds 50% of Capital Base , or 25% of the Capital Base where the obligator is rated Grade 5.

There are also provisions for derivatives and off-balance sheet transactions. Details can be obtained from the APRA website.

Concentration Risk Capital Charge

The insurer must determine a Maximum Event Retention for catastrophe purposes. MER is defined as the "largest loss to which an insurer will be exposed (taking into account probability of that loss) due to a concentration of policies, after netting out any reinsurance recoveries. The MER must include an allowance for the cost of one reinstatement premium for the insurer's catastrophe reinsurance."

Catastrophes are not just related to natural events or physical events like fire, but also to events such as class action under liability insurance or high risk exposure under mortgage insurance in periods of economic downturn.

The capital charge (for the purposes of capital adequacy) in respect of concentration risks is equal to the MER plus one reinstatement premium.

Determining MER requires consideration of

- Classes of business and types of catastrophes to which it is exposed
- Level of capital available

- Geographical zones of exposure
- Effects of combined risk, for example workers' compensation and building insurance in the same area
- Risk appetite of the insurer and desired probability of ruin.

MER determination would require results produced by modeling past experience, and allowing for sensitivity in changes in return periods (for example one vent in 100 years or 50 years or 250 years) and consideration of available external data. Different scenarios would have to be tested.

Some simpler methods could be used for example using PML factors if this adequately describes the MER.

In any case APRA would have to be satisfied that the method used is sound, and based on data that is consistent, accurate and complete.

(See also Reinsurance Standards below)

LIABILITY VALUATION STANDARDS

The following under this heading should be read in conjunction with the Professional Standards of the Institute of Actuaries of Australia. The Professional Standards are described very briefly in italics.

The Appointed Actuary is required to give a written report to the Board on the insurance liabilities. It is the ultimate responsibility of the Board to provide a figure for the value of liabilities in the annual accounts. If the Board provides a figure different from the one given by the Actuary, full details of the variation, details of alternative assumptions and methodologies, and full reasoning for the changes would be required.

The Valuation of liabilities will comprise

- *Outstanding Claims Liabilities.* This relates to all claims incurred on or before the calculation date, including estimates of those not yet reported.
- *Premium Liabilities.* This is in respect of future claim payments arising from future events insured under policies existing at the calculation date. For short tail classes, Premium Liabilities would be of greater relative significance. This would also be of significance for reinsurance business where premiums in respect of inward cessions already on the books, and therefore also corresponding claims, are expected to be received in the future.

Both outstanding Claims and Premium Liabilities must include provision for claims management expenses, and must be calculated gross before and net after reinsurance.

Central Estimate:

The approach is to first calculate a Central Estimate which would allow for claims escalation (in particular provision for inflation, court awards, environmental and

economic causes), claims expenses, claim run-off patterns and discount rates and based on

- assumptions as to future experience
- judgement
- reasonable available statistics and other industry information
- and not deliberately overestimated or underestimated.

Each class of insurance is required to be dealt with separately, though the Actuary may use other suitable methods depending on circumstances. Materiality of class and effect of assumptions should be taken into account.

A volatile experience would result in employment of volatile parameters, and it would be necessary to limit the volatility of parameters within limits of credibility.

Professional Standards:

In respect of data collection, the Actuary should :

- *be familiar with administration and accounting procedures of the insurer.*
- *be conversant with general characteristics of each class of business and familiar with contractual terms and legislated benefits,*
- *be familiar with changes in trends in claims experience, underwriting standards, premium rates, case estimation procedures, deductibles, policy limits and other terms and reinsurance arrangements*
- *be familiar with legal, political, social trends*
- *verify data collected against financial records.*

Liabilities may be estimated either deterministically to derive a central estimate or stochastically in estimating the overall distribution of liabilities.

For either method experience should be analysed over time of claims or cohorts of claims., taking into account:

- *frequency of claims relative to some measure of exposure*
- *rate of reporting claims and rate of settlement*
- *development of payments*
- *adequacy of case estimates*
- *incidence of large claims*
- *pattern of claim occurrence over policy period*
- *any other relevant experience.*

Risk Margin:

Risk Margin relates to the inherent uncertainty in the central estimates (and is not associated with other risks like asset- liability mismatch or asset risks). It is not to be used as a tool for smoothing effects of changing assumptions or valuation methods.

On top of the Central Estimate, APRA requires a risk margin to be added. In order to ensure valuation processes are consistent and sufficiently rigorous, a margin that would provide a level of 75% sufficiency is mandatory. Where the distribution is highly skewed , a minimum margin of one half of coefficient of variation is required.

Depending on experience of each class and professional judgement, risk margin would constitute a percentage addition to the central estimate, different for each class and within each class different percentages applying to Outstanding claims and Premium Liabilities.

Risk margin would depend on the robustness of the valuation models, reliability and volume of data, past experience of the insurer and the industry and particular characteristics of the class of business.

The sum of risk margins added up for all classes may be higher than if allowance is made for diversification with several classes of insurance. Thus risk margins may be suitably reduced to allow for diversification of risks. Regard should be had to materiality or significance of each class of insurance relative to overall business.

Professional Standards:

Four sources of uncertainty are listed: model selection error, parameter error (sampling error in deriving parameter estimates), parameter evolution error (where parameters change over time, and process error (actual experience departing from model expectations).

One or more of the following will be required : statistical analysis, sensitivity analysis on model assumptions, sensitivity analysis on different scenarios, analysis of past outcomes.

Care should be taken where range of uncertainty is large.

Risk margins may be calculated by reference to coefficient of variation (obtained either from internal data from which central estimate is calculated) or from some other external source), or use of full distribution of liabilities.

If coefficient of variation is calculated from external source, allowance to be made for differences in external and internal data sets (for example volume) and differences in methodologies employed in arriving at central estimates.

If internal data is used, the model should be discussed with allowance for variability of economic parameters and adjustments for reliability of data.

In annual reporting professional standards require not only the description of models used and key assumptions (including changes made since last valuation), but also analysis of deviation of actual experience from that expected from last year's valuation, and comments on uncertainty of the valuation result.

Discount Rate:

The discount rate to be used is the earnings rate on Government Bonds.

Professional standards permit use of a single discount rate or a series of rates. To determine appropriate rate or rates, zero coupon rates might normally be ascertained from current bond yield curve for each year of the period during which claims are expected to be paid and premiums to be received.

RISK MANAGEMENT STANDARDS

Objective is to ensure the insurer is well managed, has access to appropriate independent expertise and has systems in place for identifying managing and monitoring risks to which it is exposed.

Five standards have been issued under this heading:

- Governance
- Risk Management systems
- Balance sheet and Market Risks
- Credit risks
- Operational Risks

Governance:

- Directors, senior managers, Approved Auditor, and approved Actuary must have the degree of probity and competence commensurate with their responsibilities.
- Criteria for fitness and propriety for these persons:
 - not convicted of an offence
 - never been bankrupt
 - no actual or potential conflicts of interest
 - not of bad repute in the financial community
 - the Approved auditor is not a director or an employee of the company or related body
 - the Approved Actuary is not the Chief Executive or director of the company or related body.
- Approved Auditor and Actuary must have appropriate qualifications, and 5 years' experience in the general insurance industry, and must be approved by APRA. They must be residents of Australia. The insurer must make arrangements to enable both to undertake their appropriate functions.
- The Board has the ultimate responsibility for the safety and soundness of an insurer. It must ensure an appropriate, adequate and effective system of risk management.
- The Board must have at least 5 directors, and a majority of non-executive directors (including the Chair). Non-executive directors are not part of management. No shareholder or a group of shareholders should have a position on the Board such that it exercises undue influence or control over the

Board's policies or operations (for example, holdings of less than 15% should not be represented by more than one director).

- The Board must establish appropriate Board Committees, including a Board Audit Committee. The Chair of the Board must not be the chair of the Board Audit Committee. The audit Committee should oversee financial reporting, internal and external audits, appointment (and review) of the Approved Auditor and enable the Board to review effectiveness of reporting and risk management and control processes.
- Responsibilities of senior management include:
 - high level decision making
 - implementing strategies and policies of the Board
 - identifying, managing and monitoring risks
 - monitoring adequacy and effectiveness of the risk management system.
- Apart from auditing yearly statutory accounts, the Approved Auditor must certify that systems and procedures are adequate to observe all prudential requirements, statistical and financial data are reliable and must report on any matters likely to affect policyholders' interests.
- Appointed Actuary's primary role is the valuation of liabilities. (See Valuation Standards).
- Protection is given to Approved Auditor and Actuary under the Insurance Act if their reporting would tend to incriminate a person or make him liable to a penalty.

Risk Management Systems:

Risk management and control is the process of identifying, monitoring, controlling and reporting all internal and external sources of risk. A proper system has to be set out for the purpose by the Board which, together with the senior management, has the primary responsibility for risk management, although advice may be taken from like auditors, actuaries or other outside relevant experts.

The systems are bound to vary according to the size, business mix and complexity of operations.

The Board must provide APRA with a Declaration every year with the lodgment of annual accounts that:

- systems are in place to ensure compliance with all legislative and prudential requirements;
- the Board and senior management have identified the key risks and have a Risk Management Strategy (RMS) in place;
- the insurer has a Reinsurance Management Strategy (REMS) in place to select and monitor reinsurance programs;
- that the insurer has complied with the RMS and the REMS both of which are operating effectively; Appropriate steps taken to remedy any material deviation from these declared strategies should be described.
- the copies of RMS and REMS provided to APRA are accurate and current.

The RMS would cover the various areas of risks described below and in particular include for each area

- processes for identification and assessment of risks

- control processes and mechanisms – management responsibilities, segregation of duties, approval and authorization limits, control of each department, reviews by Board and senior management
- processes for management information and communication to appropriate persons, reporting any exceptions arising.
- processes for monitoring risk , including internal and external audits
- provision for review of the systems and processes especially if the business itself or the types of risks materially alter.

(a) Balance Sheet and Market Risk

The Board and senior management must develop, implement and maintain a risk management and control procedures to address risks in the areas of investment, underwriting, claims management, product design and pricing, liquidity to meet cash outflow and derivative transactions.

In each of these areas decision making framework must be laid down, and well documented risk assessment procedures followed for monitoring purposes. Action required where risks exceed laid down limits must also be included in the formal policies. Appropriate reporting procedures must also be set out.

As examples, documentation would include various authorization levels for underwriting as well as for claims settlement, monitoring loss estimation and claims management techniques, methods of assessing risks for pricing purposes, limitation of risks by policy wording or reinsurance, internal audit procedures, monitoring and audit of ceding companies in the case of claims.

(b)Credit Risks

At a minimum risk management systems for credit exposures must contain policies and procedures including

- limits for credit exposures to single or groups of parties, subsidiaries and related entities, single industries and single geographical locations
- process for approving temporary increases or reduction in credit limits
- process to monitor, control and review periodically credit exposures
- system to inform aggregate exposures for entities industries, regions
- reporting to Board breaches of limits and large exposures and concentrations.

(c)Operational Risks

This includes technology risk (including processing risk), reputational risk, fraud, compliance outsourcing, business continuity planning, legal risk and key person risk.

Outsourcing parts of administration carries risks not only of fraud but also of failure to satisfy the insurer's needs in a timely manner and free of errors.

Procedures must be established

- to assess capacity of the service provider to fulfil duties, and deal with disruptions (including indemnities and penalties) and assess benefits and risks
- for entering into written legally binding outsourcing agreements, outlining responsibilities of each party, timeframes, services required and their quality, maintenance of records for audit trail, methods of monitoring performance, conditions of security and confidentiality, penalties for non-performance by either party, termination clauses, and requirement of service provider to hold relevant insurance
- for assessing and monitoring controls over the service provider
- managing conflicts of interest
- contingency plans including back-up facilities and consideration of another service provider.

Disruptions can result in unexpected losses, financial and non-financial (eg., data, premises, reputation,etc.) and could be caused by evnts such as fire, power failure, systems breakdown, fraud and loss of key staff.

Procedures must be in place to

- identify events that may lead to disruption, processes at risk and consequences of such events
- back-up data continuously and store data off-site
- establish a business continuity plan including
 - manual processes, off-site recovery and persons responsible for activating the plan
 - communications strategy for staff, suppliers, regulators and market authorities, clients, and media
 - timeframes for restoring critical systems
 - procedures for regular testing of the plan

(e)Reinsurance Risk

Reinsurance management refers to the selection, monitoring, review, and control of reinsurance arrangements, including financial reinsurance and alternative risk transfers (ART).

The REMS, which has to be approved by the Board as well as APRA, is to ensure that there is sufficient capacity to meet obligations as they fall due. It must include sound systems for

- selecting and monitoring reinsurance programs
 - identifying insurer's tolerance for risk and level of cessions and limits in reinsurance required for the level of tolerance
 - management of liquidity in case of timing mismatch between receipt and payment of claims
- methodologies for identification of aggregation of risk, upper bounds of programs
- methodologies for selection of reinsurers taking into account diversification and creditworthiness
- setting, and monitoring of Maximum Event Retention (MER) by class of region of business, considering willingness to assume catastrophic risks and financial resources available to cover MER, and altering MER in light of experience
- continuous independent review of compliance of REMS processes
- clearly defined responsibilities and controls
 - identification and recording of policies reinsured
 - procedures for matching of policies which are subject of a claim to reinsurance arrangements
 - timing and collection of reinsurance payments
 - creditworthiness and capacity of reinsurers
 - concentration of reinsurance with reinsurers creating large exposures
 - impact of adverse trends in estimated insurance liabilities.

REINSURANCE STANDARDS

Discussions of the REMS program and MER have already been included above within the other topics.

NOTE 1

After the announcement of the Standards, the Institute of Actuaries of Australia had two studies done in respect of the risk margins required by APRA, viz., to provide 75% level of sufficiency in the estimation of Outstanding Claims and Premium liabilities - one study was done by Scott Collings and Graham White of Trowbridge Consulting (now merged with Deloitte), and the other by Robyn Bateup and Ian Reed of Tillinghast..

Both papers show how they have analysed variances in claims and premium liability and also correlations between various classes of business to determine the diversification discounts. Typical risk margins (as per cent additions to central estimates) depending on size of business have been calculated for various classes of business, direct as well as reinsurance.

It may be that some of the larger insurers have developed or are in the process of developing their own systems of assessing risk margins, but in an APRA seminar Held a couple of years ago it was disclosed that most insurers were utilising the formulae and/or the margins recommended in these studies.

Calculating margins and diversification discounts using the formulae developed in the Tillinghast paper have been set out in the form of an Excel Worksheet by Bob Buchanan.

Both these papers and the spreadsheet are an excellent source of reference for any practitioner in general insurance. They are available on the Institute of Actuaries of Australia website –www.actuaries.asn.au.

Click on Publications --> Reports(Incl. GI Task Force Docs). You will find all three under the heading of GI Task Force Reports. The spreadsheet and the notes on it are titled “Technical Guidance Note”.

NOTE 2

A further development has taken place in Australia. The Institute is considering setting out guidelines for “financial condition reporting”.

APRA, though it does not wish to lay down any guidelines or norms in this field, also sees the benefit of “Financial Condition Reports” (FCR).

At present there is no definition of nor any rules or regulations on a FCR. APRA is depending on the actuarial profession to develop guidelines for FCR's.

In a recent Seminar it was clear that a FCR should be only for internal use, especially to keep the Board of the insurer informed of the progress of the business and risks involved, and APRA would also get an insight into the insurer's problems, if any. But it was not to be available for general publication to media or the shareholders.

The opening remark of one speaker in the Seminar was that his Board members told him that insurance was one business they could not understand. It is generally agreed that the FCR would not be in the nature of an actuarial valuation report. Rather it should appraise the Board and senior management of the stresses and strains the insurer faces and explain the risk management processes, how the insurer has performed in the past and how matters could be improved. Apart from normal balance sheet ratios, a FCR may contain methods for interpreting the liabilities, how liabilities could be affected in various scenarios, explanation of investment risks, capital adequacy or otherwise, concentration risks, pricing problems, reinsurance risks – in fact many of the risks outlined by APRA in its guidelines summarised above. The form of a FCR will depend on the complexity of the insurer's business and the particular risks to which it is exposed.

In this regard, the reader is also referred to a recent article by Dave Finnis in the November issue of Actuary India.

NOTE 3

The IRDA requires the actuarial profession in India to utilise certain fixed percentage additions to liability values for solvency purposes. It does expect actuarial methods to be used for valuation of IBNR's but otherwise appears to take a more deterministic approach.

Although percentage additions are set out by APRA for Capital Adequacy requirements, this together with APRA nominating the reserve for insurance liabilities (including the risk margin) to be at the 75th percentile of the loss distribution, is to ensure that the probability of default by the insurer for any reason is less than 0.5% in any one year.

In addition APRA insists on a comprehensive proper risk management procedure to be maintained.

The Indian insurance industry should also develop a similar stochastic approach at least for internal use, if not for reporting to IRDA, and also institute a strict risk management regime. This would also be of significance in developing a FCR. While a FCR is now generally expected for a life insurer, a general insurer is in greater need of FCR's if only because of greater volatility in its results.