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THE GENEVA ASSOCIATION

Modernising Insurance Solvency Regimes

Key Features of Selected Markets

The International Association of Insurance Supervisors (IAIS) is currently developing its global Insurance Capital Standard (ICS) as part of its Common Framework for the Supervision of Internationally Active Insurers (ComFrame). The ICS is global and targets all Internationally Active Insurance Groups (IAIGs) at the group level.

The Geneva Association (GA) has undertaken a study to support future discussions and consultations on the ICS. This issue brief is a synopsis of the full survey report, Modernising Insurance Solvency Regimes (available on The Geneva Association website).

The report examines essential features of solvency regimes in a number of jurisdictions, including emerging markets that have recently or are currently developing their insurance solvency regulation. It is based on responses to a structured questionnaire from 11 insurance groups and 8 supervisory authorities. The markets covered are Australia, Brazil, Canada, China, the European Union, Japan, Mexico, Singapore, South Africa, Switzerland and the United States.

The report provides an overview of commonalities and differences across regimes. It looks inter alia at the way assets and liabilities are valued, how regulatory capital requirements are set, whether or not internal models are allowed and the criteria for assessing capital resources.

Our report demonstrates that there is much common ground with regard to the main objectives and key elements of existing and developing solvency regimes. It is, however, clear that these common elements are interpreted and applied in different ways. The IAIS will have to take into account these differences as they strive towards the goal to introduce the ICS.

As a general conclusion, the degree of risk sensitivity of regulatory capital requirements in the regimes examined is strengthening over time. All regimes follow a risk-sensitive approach for driving the regulatory capital requirements, and confidence levels for the required capital are in most cases set at 99 or 99.5 per cent of the capital resources over a one-year horizon. The table overleaf presents an overview and comparison of key features examined in the GA questionnaire.

Other findings can be summarised as follows (continued on p.4):

- ***Assets*** are valued in many regimes according to principles which are compatible with International Financial Reporting Standards (IFRS)/Generally Accepted Accounting Principles (GAAP) or according to local statutory accounting rules so prescribed.[1] Particular adjustments for intangible assets, goodwill and deferred tax for solvency capital calculation purposes are required in some jurisdictions.

- ***Liability valuation*** is heterogeneous across jurisdictions with regard to, for example, underlying assumptions, applied rules and adequacy tests as well as whether valuation reflects the degree of illiquidity of the liabilities. In many jurisdictions valuation is based on cash flow projections, discounted with a risk-free rate, with or without an adjustment for credit spread/liability illiquidity. Further, a margin over current estimate is, in many cases, added to the current estimate, whilst explicit countercyclical elements that reflect the degree of illiquidity of the liabilities are rarely considered. Other jurisdictions prescribe conservatism over and above expected obligations and subject companies to annual reserve adequacy assessments.

- ***Capital requirements*** are in most cases, but not always, set at a predetermined confidence level. It is not common to take account of future management actions in determining the solvency requirements. Capital requirements are specified at 'solo entity level', i.e. for individual insurance companies. Capital requirements at group level (for all entities belonging to a group) do not exist in all the countries examined.

- In general, insurance solvency regimes contain provisions for a ***'ladder of intervention' approach*** that provides the relevant supervisor with the requisite supervisory tools to intervene in different degrees of intensity connected to the solvency situation of the

Table 1: Overview of solvency regimes covered by this study

	AUSTRALIA	BRAZIL	CANADA	CHINA	EUROPEAN UNION
SUPERVISOR	APRA/ASIC	SUSEP/ANS	OSFI	CIRC	NCA[2]
REGULATION	LAGIC	Insurance regulatory framework	Insurance regulatory framework	C-ROSS	Solvency II
STRUCTURE	3 pillars	3 pillars	3 pillars	3 pillars	3 pillars
YEAR OF MAJOR CHANGES TO REGULATION	2013[3]	2016[4]	2014	2016	2016
REGULATORY CAPITAL REQUIREMENT	Risk-based	Risk-based	Risk-based	Risk-based	Risk-based
ASSET VALUATION	IFRS-based	IFRS-based	IFRS-based	IFRS-based	IFRS-based
LIABILITY VALUATION	DCF[5]	DCF (LAT test)	DCF	DCF	Market consistent value[5]
CONFIDENCE LEVEL / PERIOD	99.5% / 1 year	Varies (always above 95%) / 1 year	99% / 1 year (TailVaR)	99.5% / 1 year	99.5% / 1 year
RISK METRIC	VaR	VaR	TailVaR[7]	VaR	VaR
INTERNAL MODELS	Allowed	Allowed	Partially allowed	n/a	Allowed
# OF CAPITAL TIERS	2	Limitations similar to Solvency II tiers	2	2	3
QUALITATIVE REQUIREMENTS	Pillar 2	Pillar 2	Yes	Pillar 2	Pillar 2
OWN RISK AND SOLVENCY ASSESSMENT	ICAAP	Planned	ORSA	SARMRA	ORSA

JAPAN	MEXICO	SINGAPORE	SOUTH AFRICA	SWITZERLAND	UNITED STATES
FSA	CNSF	MAS	FSB/SARB	FINMA	Insurance Commissioners / Federal Reserve[8]
Insurance Business Act	Insurance regulatory framework	RBC 2	Insurance Bill and Standards to be made thereunder[9]	Insurance Supervision Act	Insurance regulatory framework
Chapters	3 pillars	RBC 2 Standards	3 pillars	SST plus Pillar 2 and 3 requirements	7 core principles
2014	2016	2019[10]	2017	2006	2016
Risk-based	Risk-based	Risk-based	Risk-based	Risk-based	Risk-based
Japanese GAAP	IFRS-compatible	IFRS-based	IFRS-based	Market (consistent) value	U.S. SAP[11]
DCF (planned)	DCF	DCF	DCF	Market consistent value	U.S. SAP
% depends on risk category / 1 year	99.5% / 1 year	99.5% / 1 year	99.5% / 1 year	99% / 1 years (TailVaR)	n/a
VaR	VaR	VaR	VaR	TailVar	Various metrics exist
Partially allowed	Allowed	Allowed	Allowed	Allowed	Partially allowed
No tiers—core solvency margin	3	3	3	2	n/a
No	Pillar 2	Pillar 2	Pillar 2	Yes	Yes
ORSA	ARSI	ORSA	ORSA	ORSA	ORSA

supervised company/entity and remediate deficiencies as necessary. In some instances, intervention triggers may also be part of the regime. Should intervention be necessary the supervisor can adapt the tools to align with the degree of severity of the problem. This allows the company to anticipate supervisory actions and can contribute to an orderly means to address the issues raised by the supervisor.

- The use of ***internal models*** as part of the regulatory capital requirement calculation is subject to specific regulatory criteria and can be applied only upon supervisory approval. The actual use of and reliance on full or partial internal models is high for certain businesses, as in the case of reinsurance, or for certain jurisdictions, as in the case of Switzerland, but on average it is more limited.

- The quality of ***capital resources*** is assessed based upon specific criteria, applying a subdivision into two or three tiers. The capital classification is generally based on loss absorbency, where Tier 1 is the most and Tier 3 the least loss-absorbent.

- ***Qualitative requirements*** are imposed in all regimes, mostly regarding governance (especially risk management and internal control).

- ***An Own Risk and Solvency Assessment*** (ORSA) is imposed in a large number of the countries examined. Where it is not required yet, the introduction of an ORSA-type requirement is planned.

1 The U.S. uses statutory accounting principles (SAP).
2 National competent authorities are responsible for insurance supervision, whilst EIOPA has a coordinating role, drafting technical standards for adoption by the EU Commission and developing guidelines which apply on a comply or explain basis.
3 New standards CPS 220 'Risk Management' and CPS 510 'Governance' became effective on 1 January 2015.
4 SUSEP started implementing the Insurance Regulatory Framework step by step from late 2008. In 2015, the Brazilian regime obtained equivalence to Solvency II, with regard to the solvency assessment.
5 Discounted cash flow.
6 In the EU—under Solvency II—the discounting of liabilities involves a number of explicit measures to address excessive short-term volatility and pro-cyclical behaviour as part of the market-consistent framework.
7 Tail value-at-risk (TailVaR or TVaR) is a statistical measure which provides the average of a specified 'tail' of the distribution, i.e. the portion of a distribution that lies beyond a certain confidence level. For instance, 95 per cent TVaR is the average of the tail of the distribution that lies beyond the 95th percentile. In comparison to value-at-risk measures, which provide the percentile value of a distribution (i.e. the value of a single point in the distribution), TVaR provides information about the shape of the tail of a distribution beyond the specified percentile. TVaR is also known as conditional tail expectation (CTE) and conditional tail value at risk in certain regimes. Hereafter, we will use the term TVaR for consistency when referring to tail value-at-risk measures in this paper, regardless of the official term used within a given regime.
8 The Federal Reserve is the consolidated supervisor of those insurance entities subject to its supervision (based on provisions under the Dodd–Frank Act). The brief responses in this table reflect responses describing the national system of state insurance supervision.
9 Still to be promulgated. Currently serving before Parliament.
10 Expected implementation date based on comments made by MAS.
11 SAP: statutory accounting principles.