

A nighttime cityscape featuring a prominent skyscraper with a red sign at the top. The foreground is dominated by a complex highway interchange with long-exposure light trails from cars, creating streaks of white and red. A large yellow triangle graphic is positioned on the right side of the image. The sky is dark blue.

Solvency II implications for Asian life insurers



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1. Introduction

Solvency II is the new insurance supervision regime being introduced in EEA (European Economic Area) member states effective 1 January 2014. Many companies and regulators in Asia are closely following the development with a view to either seeking regulatory equivalence (e.g. Japan) or implementing various elements of Solvency II in their risk management initiatives. Asian subsidiaries of European insurers have been involved in previous Quantitative Impact Studies (QIS) and some of the metrics under Pillar 1 have been discussed widely in Asia.

However, given the current insurance regulatory maturity in various Asian markets, the appetite for a framework similar to Solvency II in Asian markets is mixed. Although many of the elements of Solvency II may represent a “to-be” framework, not everyone sees the full adoption of a framework similar to Solvency II as an optimal (or practical) next step in many Asian markets.

The heart of Solvency II is the Enterprise Risk Management (ERM) principles embedded in Pillar 2, and some Asian regulators (e.g., mainland China) are planning to address their gaps on ERM. But the first wave of changes in many Asian markets has been and will be through enhancements in the calculation of policy liabilities and capital. Eventually, each Asian market will plan its own journey to a more robust regulatory evolution.

2. Current state of play in Asia

On the surface, some Asian markets have elements familiar from Solvency II already in place (or under consultation for the life insurance sector). This is mostly driven by existing regulatory requirements, such as the Stress Testing requirements in Singapore, the Internal Capital Adequacy Ratio (CAR) requirements in Malaysia, the Dynamic Solvency Test (DST) requirements in Hong Kong, and emerging regulatory requirements, such as the new Risk-based Capital (RBC) framework in Thailand.

The valuation of policyholder liabilities in most Asian markets is still carried out on a deterministic basis using gross premium valuation (GPV) or net premium valuation (NPV). The table below summarises some of the practices currently adopted by regulators in different Asian markets.

Regulator	Valuation of liabilities and risk capital	Risk management initiatives
Monetary Authority of Singapore	Reserves: Deterministic based on GPV methodology Capital: Prescribed stresses to calculate capital requirements for insurance risk, market risk and concentration risk. No risk calibration defined.	Stress Testing Report to be filed with the regulator on an annual basis. Onus on insurer's management to understand key risks and extreme scenarios, and to be prepared to discuss capital requirements in those scenarios.


















Bank Negara Malaysia	<p>Reserves: Deterministic based on GPV methodology</p> <p>Capital: Prescribed stresses to calculate capital requirements for credit risk, market risk, life insurance risk, operational risk. No risk calibration defined.</p>	Financial Condition Report to be prepared by the Appointed Actuary on an annual basis. The report sets out the financial condition of the company under a number of scenarios. Bank Negara sets Internal CAR targets based on risk management practices and policies of individual insurers.
Ministry of Finance, Indonesia	<p>Reserve: Deterministic based on NPV approach, prescribed assumptions</p> <p>Capital: RBC basis with prescribed risk factors for asset default risk, cash flow mismatch risk, currency mismatch risk, claim risk, insufficient premium risk and reinsurance default risk. No risk calibration defined.</p>	Limited information available from the market
Office of the Insurance Commission, Thailand	<p>Reserves: Deterministic based on GPV methodology</p> <p>Capital: New RBC framework in place from September 2011. Prescribed stresses for insurance risk, market risk, and credit risk</p>	Limited information available from the market
Ministry of Finance, Vietnam	<p>Reserves: Deterministic based on NPV approach, prescribed assumptions</p> <p>Capital: Prescribed factors for % of reserves and sum at risk</p>	Limited information available from the market
Office of the Commissioner of Insurance, Hong Kong	<p>Reserves: Deterministic based on NPV methodology</p> <p>Capital: Prescribed factors for % of reserves and sum at risk</p>	Dynamic Solvency Testing report to be prepared by the Appointed Actuary on an annual basis and submitted to the Board of Directors of the company (and the insurance authority). The report sets out the projected financial condition of the company under seven prescribed scenarios and other scenarios chosen by the Appointed Actuary.



<p>China Insurance Regulatory Commission</p>	<p>Reserves: Deterministic based on NPV methodology</p> <p>Capital: Prescribed factors for % of reserves and sum at risk</p>	<p>CIRC require life insurance companies to establish a comprehensive ERM framework. Life insurance companies need to appoint a CRO and set up an independent risk management committee and risk management information systems by 1 October 2013. Life insurers have to quantify their risks using economic capital starting in year 2014. CIRC currently require a Dynamic Solvency Testing.</p>
<p>Financial Supervisory Service, South Korea</p>	<p>Reserves: Deterministic based on NPV approach, prescribed assumptions</p> <p>Capital: RBC basis with prescribed risk factors for insurance risk, interest rate risk, credit risk, market risk and operational risk. No risk calibration defined.</p>	<p>Risk-based insurance supervision consists of three pillars-RBC requirements, the Risk Assessment & Application System (RAAS), and market discipline. The regulator assesses the insurer's exposure to risks arising from their business and risk management under the RAAS. The evaluation is on risk exposure, risk control and risk tolerance.</p>
<p>Financial Supervisory Commission, Taiwan</p>	<p>Reserves: Deterministic based on NPV methodology, prescribed assumptions.</p> <p>Capital: RBC basis with prescribed risk factors for asset risk, insurance risk, interest rate risk and other risks. No risk calibration defined.</p>	<p>Risk management requirements include internal control, internal audit, capital adequacy, asset risk management, insurance risk management as well as a set of rules on comprehensive risk management. Appointed Actuary's report needs to be prepared on an annual basis which sets out dividend policy, investment policy, fairness of premium rates and liability adequacy tests under 1,000 scenarios.</p>
<p>Financial Services Agency, Japan</p>	<p>Reserves: Deterministic based on NPV methodology, prescribed assumptions which implicitly include PADs.</p> <p>Capital: Prescribed risk factors for insurance risk, investment risk, minimum guarantee risk and third sector insurance (medical) risk. For investment risk, current risk calibration defined at 90%, and after March 2012 this will be at 95%.</p>	<p>Appointed Actuary prepares an "Opinion Letter" on an annual basis, which sets out reserve adequacy, fairness of policyholders' dividends and business continuity under some prescribed scenarios.</p> <p>The regulator is expected to tighten Solvency Margin Ratio (SMR), such as adoption of Group SMR and strengthening of risk factors.</p>

The following table summarizes our observation on the current sophistication levels of solvency regulation in various Asian markets along with the regulators' appetite for a Solvency II type framework:

Markets in Asia	Ernst & Young observations	
	Sophistication of solvency regulation	Regulator's appetite for Solvency II type framework
Singapore	✓✓✓	
Malaysia	✓✓✓	
Indonesia	✓✓	
Thailand	✓✓	
Vietnam	✓	
Hong Kong	✓	
Mainland China	✓	
South Korea	✓✓✓	
Taiwan	✓✓	
Japan	✓✓✓	

Sophistication of solvency regulation		Regulator's appetite for a Solvency II type framework	
Least sophisticated ✓	Capital not risk-based, rule-based regulation, lower transparency on disclosure		Not too focused on Solvency II
Less sophisticated ✓✓	RBC recently established, rule-based regulation, medium transparency on disclosure		Monitoring Solvency II, may adopt some key elements of Solvency II
Sophisticated ✓✓✓	RBC embedded in business, rule-based regulation, medium transparency on disclosure		Monitoring Solvency II, may consider Solvency II equivalence
More sophisticated ✓✓✓✓	RBC embedded in business, principle-based regulation, high transparency on disclosure		Pursue limited or full Solvency II equivalence
Most sophisticated ✓✓✓✓✓	Equivalent to Solvency II		

Source: Ernst & Young research and analysis

It is interesting to notice that a higher sophistication level of solvency regulation does not always lead to a bigger appetite for a Solvency II type framework, e.g., mainland China may want to move faster on regulatory sophistication while Hong Kong's appetite does not seem to be commensurate with its market maturity.

3. Benefits and challenges of implementing Pillar 2 in Asia

3.1. The ERM components in Pillar 2

Pillar 2 requires insurance companies to have effective ERM systems comprising of risk strategies, processes and reporting procedures necessary to identify, monitor, manage, control and report on a continuous basis the risks to which they are exposed. The Own Risk and Solvency Assessment (ORSA) is one of the key components of Pillar 2.

Own Risk and Solvency Assessment (ORSA)

The ORSA is a firm's economic view of the capital required to run its business, irrespective of the requirements set out by the regulator. This would require companies to put a forward-looking view of their risks at the heart of decision making.

In addition to holding funds to cover the Solvency Capital Requirement (SCR), under Pillar 2, insurers must assess the adequacy of the capital position relative to their own risk profile and hold the funds appropriate to that profile. Irrespective of

whether it is using internal models or the standard formula to calculate its Pillar 1, a company will need to undertake an ORSA considering its own risk profile, which will differ from, and may include risks that are not covered by the SCR.

Besides providing warning lights for capital adequacy in the future, ORSA is also expected to help senior management to articulate and formulate the strategic business response if such events were to happen in the future. An effective ORSA can provide useful insights into the risks a company is exposed to and would help companies respond proactively to a possible change in their future risk profile. The ORSA process can also help a company in managing its long term capital keeping in view the risks exposure and possible mitigating actions available to it.

3.2. What are the benefits of adopting a Pillar 2 type approach in Asia?

Adopting a Pillar 2 type approach would have numerous benefits for Asian insurers through improved governance, more informed decision taking and enhanced risk management information. Some of the benefits include:

- ▶ Management and other stakeholders should have more confidence in understanding the sources of risk. There would be a common view of risk within the business, which implies that different individuals responsible for making risk taking (or averting) decisions should not be using different metrics and information to inform their decisions. This should drive a greater consistency of decision-making that is better linked to risk appetite.
- ▶ There is a “single version of the truth” within the business. Different individuals responsible for making risk taking (or averting) decisions will not be using different metrics and information to inform their decisions. This should drive a greater consistency of decision-making that is better linked to risk appetite.
- ▶ Whilst Pillar 1 in the Solvency II framework looks at a 12-month time horizon, insurance companies (especially life insurers) run their businesses on a much longer cycle. It is management’s responsibility to demonstrate a deeper understanding of risks than they have in the past, which can be done through the ORSA process. Recent events (such as the global financial crisis in 2008) have highlighted the importance of understanding business risks over the long term.

There would be a number of implications for the way in which insurance companies are managed. Some aspects of business might change significantly as a consequence of changes to the relative importance of performance measures (for example, new business premium would not be the sole measure of success as it is currently seen in most Asian markets).

Some Asian markets have seen value in adopting a Pillar 2 type approach. In November 2010, the China Insurance Regulatory Commission issued guidance on implementing “comprehensive enterprise risk management”, which aims to embed ERM into the governance structure, daily operation environment and corporate culture of insurance companies. This framework should enable risk profiling, risk quantification and assessment, risk warning, and risk supervision and disclosure. The guidance also sets a timeline for Chinese insurers to follow e.g. set up an independent risk management committee by 1 October 2013 and quantify risks using economic capital starting in year 2014.

3.3. Some of the challenges

The current state of risk management among Asian insurers suggests that there would have to be a cultural shift to adopt the Pillar 2 initiatives. Insurance companies would also have to invest significant time and resource to educate the Board and the senior management around these initiatives. There is a limited pool of talent from which to hire risk professionals who understand insurance.



Shortages may also be apparent at the most senior levels of companies given the prominence assigned to the role of governance at the most senior management levels. A change in the mindset of the top management is also required.

Historically, risk management activity has often been backward-looking, which is contrary to the essential feature of Pillar 2 that companies must be forward-looking in their risk assessments. This touches on all key functions from product pricing to reinsurance, effective management decisions, performance management, mergers and acquisitions, portfolio management and business planning. These and other activities need to be informed by a Pillar 2 compliant view on the risk exposure levels of the business.

There is also often insufficient stress testing support. In particular, there is room for more forward-looking stress tests around the business strategy, to help drive contingency planning. This would have to undergo a major transformation for Asian insurers to benefit from Pillar 2 type initiatives.

4. Pillar 1 in Asia - a Singaporean case study

In this Section, we compare the risk requirements under the Singapore RBC framework against the requirements set out under Pillar 1 of Solvency II.

One key difference between the Singapore RBC and Solvency II is that Singapore RBC does not define a risk calibration for its stresses while Solvency II targets a 99.5% confidence level for each individual stress.

4.1. Case study: Comparing prescribed stresses under Singapore RBC and QIS5

Based on QIS5 results and our understanding of the Singapore market, we analyse five of the most significant risk factors, namely equity, interest rate, lapse, longevity and mortality. For these risks, we analyse the following:

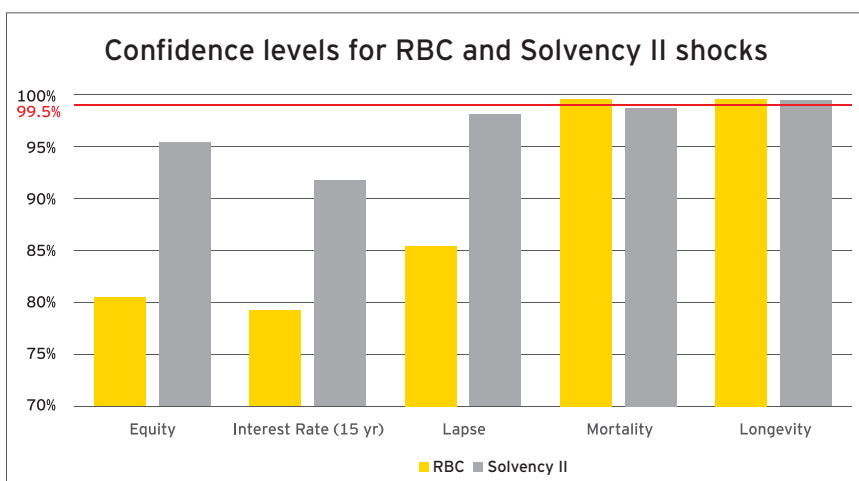
- ▶ the confidence level which would be implied by applying QIS 5 stresses to Singapore, and
- ▶ the confidence level which would be implied by the prescribed stresses under the Singapore RBC framework.

The following table sets out a quick comparison of the RBC stresses and the QIS5 stresses for these risks.

Stress	Singapore RBC	Solvency II QIS5
Equity	Equity specific risk: 8% Equity general risk: 8%	Global equity: 30% Others (incl. Singapore): 40%
Interest rate	Absolute shock: 0.6% - 1% by maturity year, shocked rate floored at 0%, upward or downward shock on the term structure of interest rate	Upward: 25% - 70% by maturity year, Downward: 30% - 75% by maturity year, Instantaneous upward or downward shock on the term structure of interest rate
Lapse	Lapse increase/decrease: +25%/-25% whichever is more onerous	Permanent lapse increase: 50%, cap at 100% lapse rate, Permanent lapse decrease: 50%, absolute change cap at 20%, Mass lapse: 30% for policies with surrender strain, 70% for non-retail business
Longevity	5 year age setback on the prescribed annuitant table	Permanent mortality decrease for each age: 20%
Mortality	+25% on the prescribed mortality table	Permanent mortality increase for each age: 15%

Source: MAS regulation, QIS technical specification

Based on EY's statistical analysis and Singapore historical data, we have calculated the indicative confidence levels implied by prescribed Singapore RBC and QIS5 stresses for these risk factors.



The graph above shows that, based on Singapore market experience, most RBC and QIS5 prescribed stresses appear to fall below the 99.5% confidence level when applied to Singapore data. QIS5 stresses provide a higher confidence level compared to RBC stresses except for mortality and longevity risks.



A comparison of the prescribed stresses under Singapore RBC and QIS5 demonstrates that a direct application of QIS5 stresses is not appropriate for Singapore (and probably other Asian markets). The regulators and insurers in Asia would have to consider re-calibrating the tests to ensure they are relevant to the local conditions in their markets.

4.2. Key challenges of implementing Pillar 1 in Asia

One of the biggest challenges of implementing Pillar 1 type elements will be the availability of skilled resources. Another challenge will be getting the appropriate granularity of data to perform credible analysis. Also, to successfully implement Pillar 1, many Asian insurers and several of the regulators will need to invest significantly in IT, finance and actuarial systems.

5. The way forward

Solvency II is a European framework but it is indicative of a general drive towards more risk-based supervision, and it is expected to have global implications. In the absence as yet of a global capital standard for insurers, Solvency II (albeit still in pre-implementation form) has become a de-facto benchmark against which various Asian regulators privately measure themselves. Even excluding the European owned insurers, the largest local and internationally active insurers, in particular, are raising the level of their risk and capital management measures to reflect some of the key elements of Solvency II to stay a head of developments and to remain relevant in today's global economy.

However, this document demonstrates that Solvency II in its detail is a European framework and may not fit all requirements of Asian markets. At the same time, Asian insurers and regulators need to monitor Solvency II developments in Europe and see what can be learnt from. The right balance between theory and practice needs to be achieved so that ideally shareholders, customers and regulators all benefit to a reasonable degree.

Asian markets are currently at various stages of regulatory sophistication and each faces a different journey towards enhancing their risk management framework. A smooth journey requires that the local regulator and insurers draw a proper roadmap in order to develop a more robust regulatory framework that is tailored to the market characteristics. We could learn from the steps taken by Japan in tweaking its RBC framework. In 2006, the Financial Services Agency of Japan set up a task force composed of industry representatives, academics and actuaries to look into the possibility and feasibility of introducing a new and modernized solvency framework. In April 2007, the taskforce released their findings recommending that regulatory reform be twofold: in the short-term, the existing RBC framework would be fine-tuned and improved, while the mid-term goal would be to introduce a modern, risk and economic value-based solvency framework. And Japan is now formally seeking Solvency II equivalence for reinsurance business.

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