New Risk Based Capital Framework for Insurers in Singapore: Challenges and Opportunities

Introduction

The RBC framework for insurance companies was first introduced in Singapore in 2004. It adopts a risk-focused approach to assessing capital adequacy and seeks to reflect the relevant risks that insurance companies face. In order to align the framework with international standards and best practice, and in light of the evolving market developments, there is a need to enhance its risk sensitivity and coverage. The new RBC framework's ("RBC2") key objectives are to enhance policyholder protection, observe international standards and best practices and to ensure insurers can perform its economic and social role on a sustainable basis.

To date, there have been two consultation papers issued by the Monetary Authority of Singapore ("MAS"). The second consultation paper was issued in March 2014. The key proposals under the second consultation include:

- Introduction of new risks categories (such as insurance catastrophe and operational risk requirements) and reorganisation of existing risks categories;
- Introduction of two explicit solvency intervention levels, Prescribed Capital Requirement ("PCR") and Minimum Capital Requirement ("MCR") at both the company and insurance fund level;
- Introduction of a matching adjustment for life insurers as a more targeted approach;
- Alignment with banking capital framework for consistency where relevant and useful; and
- Unlocking of conservatism in certain areas of the RBC framework.

On 15 July 2016, the MAS issued a third consultation paper.

This consultation paper sets out the revised proposals, taking into account the feedback received from the second consultation paper along with various engagements the MAS has had with the industry.

This briefing note summarises some of the key updates in the third consultation paper.

It contains detailed technical specifications for insurers to conduct the second Quantitative Impact Study ("QIS 2"). With the exception of captives, Lloyd's insurers and marine mutual, all insurers are required to conduct QIS 2. The basis for calculations under QIS 2 will be based on the valuation date of 31 December 2015 and are required to be submitted to the MAS by no later than 20 October 2016.

History

1967

The insurance act was passed

Insurers are licensed and governed under the Insurance Act

Insurers can operate insurance business in Singapore either as licensed insurers or foreign insurers under a foreign insurer scheme

2000

Liberalisation of the insurance industry

Lifting of the 49% restriction on foreign ownership of local insurers

2001

2004

RBC1 implementation

Adopts a risk-focused approach to assessing capital adequacy

Seeks to reflect the relevant risks that insurance companies face

A minimum Capital Adequacy Ratio (CAR) of 120% and Fund Solvency Ratio (FSR) of 100%

2009

Implementation of insurance funds

Establishment of the Singapore Insurance Fund (SIF) and Offshore Insurance Fund (OIF)

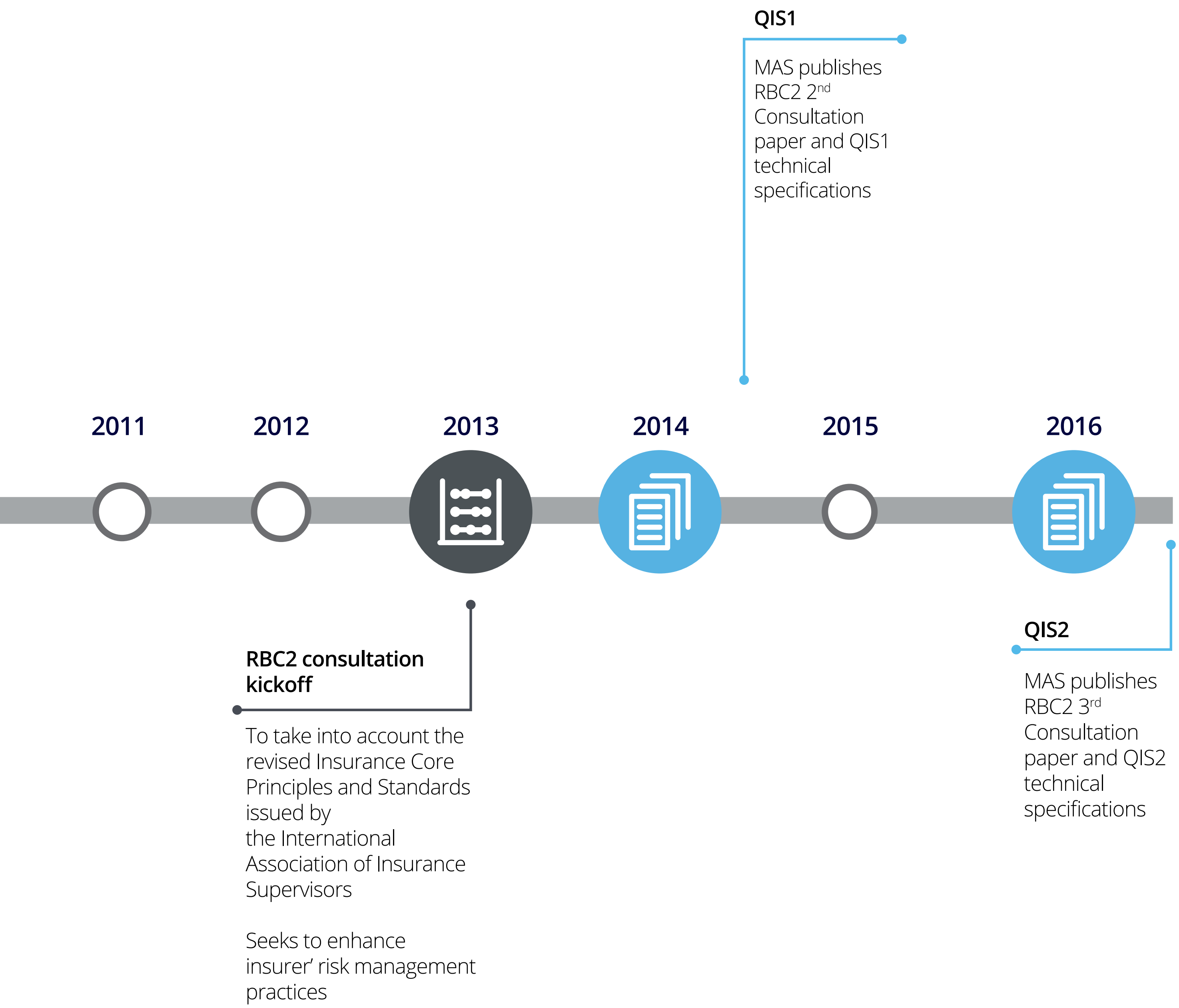
Objective is to secure a minimum level of asset protection for insurance policyholders by segregation of insurer's assets

2010

Mandatory stress testing requirements

Introduction of mandatory stress testing requirements for all insurers in Singapore (excluding reinsurers and captives)

MAS prescribe stresses covering macroeconomic, insurance and credit stresses as well as reverse stress test


QIS1
MAS publishes RBC2 2nd Consultation paper and QIS1 technical specifications
2011
2012
2013
2014
2015
2016
RBC2 consultation kickoff
To take into account the revised Insurance Core Principles and Standards issued by the International Association of Insurance Supervisors
Seeks to enhance insurer' risk management practices
QIS2
MAS publishes RBC2 3rd Consultation paper and QIS2 technical specifications

Third consultation paper

The MAS published its third consultation paper on **15 July 2016** proposing revisions to the Risk-Based Capital framework for insurers, factoring in feedback from the industry as well as various closed-door consultations. Insurers are required to submit their second quantitative impact study results by **20 October 2016** following which the MAS will further evaluate the revised RBC2 proposals.

The latest consultation paper sets out the revised proposals. Some areas have been updated based on second consultation feedback and others proposals have been maintained. Key revisions are set out below:

C1 Insurance Risk Requirement

C1 risk component covers the uncertainty in the amount and timing of claims and benefit payments. This is separately calculated for life and non-life insurers.

	Life Insurers	General Insurers
Key Proposals/Changes	Modular approach in line with current RBC where modules include mortality, disability, dread disease and lapse risks.	Risk Charges are applied to Claims and Unexpired Risk Reserves which are set at the 75th percentile.
	Removal of reference to standard tables and more reliance on the appointed actuary's judgement.	No change from the current methodology and factors.
		Natural catastrophe risk requirement was introduced in previous consultation. No update has been provided in the third consultation. It is expected that this will be in play after RBC2 go-live.
	Prescribed correlation matrix to allow for diversification between the risk modules i.e. Mortality, Longevity, Dread disease, Other insured events, Catastrophe, Mortality, Disability, Lapse, Conversion of Option, Expense.	
	• Permanent 20% increase to the best estimate mortality rate assumptions • 25% decrease to the best estimate longevity rate assumptions • 40% increase (where premium payable is guaranteed for the full duration of the policy) and permanent 30% increase (where premium payable is not guaranteed for the full duration of the policy) to the best estimate dread disease incidence rate assumptions • 120% expense risk requirement in first year and 110% thereafter of the insurer's best estimate of its future experience	

Implications:

For General Insurers, there is no change in C1 risk charges from the current RBC framework.

For Life insurers, the Catastrophe risk requirement under QIS2 has changed from a Mortality and Morbidity component to just a Mortality component which would reduce the risk requirement. However, the mortality shock component has been increased from an additional 0.5 death per 1000 (under QIS1) to an additional 1 death per 1000 (under QIS2). In addition, the correlation matrix has been expanded to incorporate the new C1 requirements.

"Capital requirements for equity investment, credit spread, counterparty default and operational risk have been re-calibrated downwards to more accurately reflect the risks they pose to insurers"
- MAS

C2 Asset Risk Requirement

Covers the risks such as falls in equity values, increase in interest rate volatility, spread risk, currency risk and asset-liability mismatch risk.

Life and General Insurers

Risk requirement for the C2 asset risk module consists of: Equity investment, Interest rate mismatch, Credit spread, Property investment, Foreign currency mismatch and Counterparty default risk.

Calculation of risk exposures remains the same as those prescribed in the Insurance Regulations of 2004.

Key Proposals/Changes

Diversification
Based on consultation feedback, MAS has introduced a correlation matrix between asset classes to explicitly allow for diversification.

Equity Risk Charge:
- RBC1: 16% (8% equity specific + 8% equity general risk charge)
- 40% Developed Markets, 50% Other Markets, 60% Unlisted Equity
- ***40% Developed Markets, 50% Other Equities***

Interest Rate Mismatch:
Adjustment factors have generally been softened slightly since QIS1. Non-life insurers with smaller bond portfolios may use a modified duration approach as a simplification, rather than a full discounted cash flow approach.

Credit Spread:
Credit spread risk shocks have generally softened since QIS1

Property Risk Charge:
- RBC1: 16%
- QIS1: 30% Immoveable investment or self-occupied properties, 35% Collective real estate investment vehicles ("REITs")
- ***QIS2: 30% Immoveable investment or self-occupied properties, 50% Collective real estate investment vehicles***

Foreign currency mismatch:
- RBC1: Only applies to SIF. A concession of 10% the value of assets was deducted from the exposure. The risk charge was 8%.
- QIS1: Applies to both SIF and OIF. The 10% SIF concession was removed, a 20% OIF concession was added. The risk charge increased to 12%.
- ***QIS2: Same as QIS1, but the 10% SIF concession is now reintroduced.***

Counterparty default:
No changes in the factors or method since QIS1.

However, this risk charge is included in the calculation of the diversified C2 risk requirement across the above C2 submodules. Inclusion of counterparty default risk in the diversification calculation is new in QIS2.

Implications:

Compared to QIS1, most of the C2 charges in QIS2 are either unchanged or softened. The exception to this is the risk charge applied to collective REITS, under the property risk requirement. Explicit diversification allowance in the additional diversification in QIS2 could reduce the overall risk charge compared to QIS1.

C3 Concentration Risk Requirement

Covers the concentration of assets to certain asset classes, counterparties and group of counterparties.

	Life and General Insurers
	No change has been made to the calculation of C3 risk charge or the limits of the C3 amount.
Key Proposals/Changes	Under RBC1 and QIS1, the C3 risk charge was added to the other risk charges to calculate the total risk requirement. ***Under QIS2 the C3 risk charge is no longer added to give the total risk requirement. The C3 risk charge is deducted from the available financial resources instead.***
	For reporting purposes C3 risk components are to be reported by fund and exposure type i.e. Counterparty, Equity securities, Unsecured loans, Property, Foreign currency, exposure to assets in miscellaneous risk, exposure to non-liquid assets in SIF (For GI business only).

Implications:

Most insurers typically manage their investments so that the concentration risk charge is nil, in which case the proposed changes above will have no impact. Due to the reorganisation of the C3 risk charge (i.e. removed from available financial resources), the impact from it on the capital adequacy ratio will be softened.

C4 Operational Risk Requirement

Covers the risk of loss arising from complex operations, inadequate controls, process and people. This is a new category introduced in RBC2.

	Life and General Insurers
	Total operational risk (C4) is a new RBC2 risk component for each fund and is subject to an overall cap of 10% of the total risk requirements post diversification benefit excluding operational risk requirement. Operational Risk Requirement is not considered in the calculation of the diversification benefit of Asset (C2) and Insurance risk (C1) for both life and general businesses.
Key Proposals/Changes	RBC1: Not included. QIS1: C4 risk charge = x% of the higher of the past 3 years' averages of: a) Gross written premium income; and b) Gross policy liabilities. Where x = 4% (except for investment-linked business, where x = 0.25%). ***QIS2: C4 risk charge = Higher of X or Y where:*** a) X = 4% of GP_1 + max{0, 4% * [(GP_1 – GP_0) – 20%*GP0]}; and b) Y = 0.5% of gross policy liabilities. Where GP_1 = Gross written premium over the past twelve months; and GP_0 = Gross written premium for the twelve months prior to GP_1.

Implications:

Under QIS1, many insurers hit the 10% cap. Under QIS2 the cap remains unchanged, however, the formula has changed so that:

- **For a growing/shrinking book of business, the premium component is more/less onerous under QIS2; and**
- **The gross policy liability component is now significantly less under QIS2.**

Diversification between asset and insurance risks

Allowing for diversification effects when combining various risk components has the effect of reducing the regulatory capital requirements.

	Life and General Insurers
	The C1 and C2 risk charges are combined and diversified using the following formula: $$\sqrt{C1^2 + C2^2}$$ The operational risk requirement (C4) is not considered in the calculation of the benefit above.
Key Proposals/ Changes	RBC1: No diversification between risk charges. QIS1 and QIS2: Diversification between C1 and C2 risk charges is allowed. QIS1: Diversification between C1 and C2 risk charges, and also between some of the C1 risk charges. ***QIS2: Correlation matrix has been expanded to include the new C1 risk charges (thus a greater diversification benefit)***
Implications: **Any increase in C1 or C2 risk factors from the current RBC framework could have effect of being offset by the diversification benefit given in the proposed RBC2 framework.**	

Components of Available Capital

In QIS1, the MAS renamed and reclassified various components of available capital, in order to better align with the framework applied to banks. In QIS2, these reclassifications have been retained.

	Life and General Insurers
Key Proposals/Changes	***Floors / Limits*** **RBC1:** • Sum of Irredeemable Non-cumulative Preference Share and Approved Tier 1 <= 30% of Tier 1 Resource, • Approved Tier 1 <= 15% of Tier 1 Resource; • Tier 2 <=Tier 1; and • Qualifying Tier 2 <=50% Tier 1 Resource. **QIS1:** • CET1 capital >= 65% of the Total Risk Requirements (excluding Participating Fund) (only applicable for licensed insurers incorporated in Singapore); and • Tier 1 capital >= 80% of the Total Risk Requirements (excluding Participating Fund). ***QIS2:*** • ***CET1 capital >= 60% of the Total Risk Requirements (excluding Participating Fund) (only applicable for licensed insurers incorporated in Singapore); and*** • ***Tier 1 capital >= 80% of the Total Risk Requirements (excluding Participating Fund).***
Implications: **QIS2 has a slight reduction in the floor for CET1 capital compared with QIS1, the floor for Tier 1 capital remains unchanged.**	

Likely challenges and opportunities

a. Capital Impact – Potentially higher regulatory capital cost compared to the current RBC framework, although probably not as high as under QIS1. Should the market average CAR decrease, the use of more reinsurance to lower capital requirements is most likely. This will also require robust stress testing and scenario analysis, active liquidity and cash management, capital management and optimization.

b. Operational Impact – Potential impact includes higher regulatory compliance cost, automation of certain reporting processes (example: modelling), allowance for additional resources, time and cost of implementation, continuous maintenance and focus on data quality.

c. Business Strategy Impact – Potential business strategy impact includes change in risk appetite and internal capital trigger points, change in level playing field for some companies (example local reinsurers), review of investment strategy, comprehensive ERM framework, ORSA process and culture, better decision making i.e. using capital more efficiently.

Solvency Intervention Levels

In the third Consultation paper, MAS introduced new fund levels:

- SIF – Par
- SIF – Others
- OIF – Par
- OIF – Others

This is vastly reduced from the previous fund classes:

Instead of prescribing 3 months for restoring capital position to the PCR in event of a breach, in the third consultation the MAS has proposed to determine the restoration period on a case-by-case basis.

Other QIS2 Changes

Reinsurers:

- Under the current RBC framework the OIF for reinsurers is exempted from any risk charges.
- Under the second and third consultation, reinsurers which are incorporated in Singapore and locally owned no longer have their OIF exempt from RBC2. The rules for reinsurance branches are unchanged.

Recognition of reinsurance arrangements arranged *with* Head Office:

In the third consultation paper, MAS has maintained their second consultation proposal of removing the recognition of reinsurance arrangements between a Head Office and Singapore branch. This type of arrangement is believed to not represent effective transfer of risk since the arrangement is with the same legal entity. However, the MAS will be with individual insurers to find ways to mitigate the capital impact.

Recognition of reinsurance arrangements arranged *by* Head Office:

Where the Singapore branch risks are included within Head Office reinsurance arrangements with third party reinsurers, the MAS has maintained the recognition of the recoveries in the third consultation. However, a risk credit risk charge would need to be allowed where recovered funds are withheld from the Singapore branch, or written confirmation of coverage needed from Head Office where the Singapore branch is not named in the third party reinsurance contract.

Long term health policies:

These are defined as policies which are guaranteed renewable for 5 year or more. Insurers should set aside reserves for:

- Premium liabilities;
- Reported but not settled ("RBNS") claims and Incurred but not reported ("IBNR") claims; and
- Long term recurrent claims arising from claims incurred prior to the valuation date.

Discounting:

For General Insurers, the actuary will continue to decide if discounting is material or not when valuing insurance liabilities. Where material, the discounting approach will be the same as for life business for both SGD and non-SGD denominated liabilities.

For Life Insurers, the MAS proposes to use a Last Liquid Point (LLP) of 20 years and a long-term forward rate (to be applied from year 60 onwards) of 3.5% for SGD denominated liabilities.

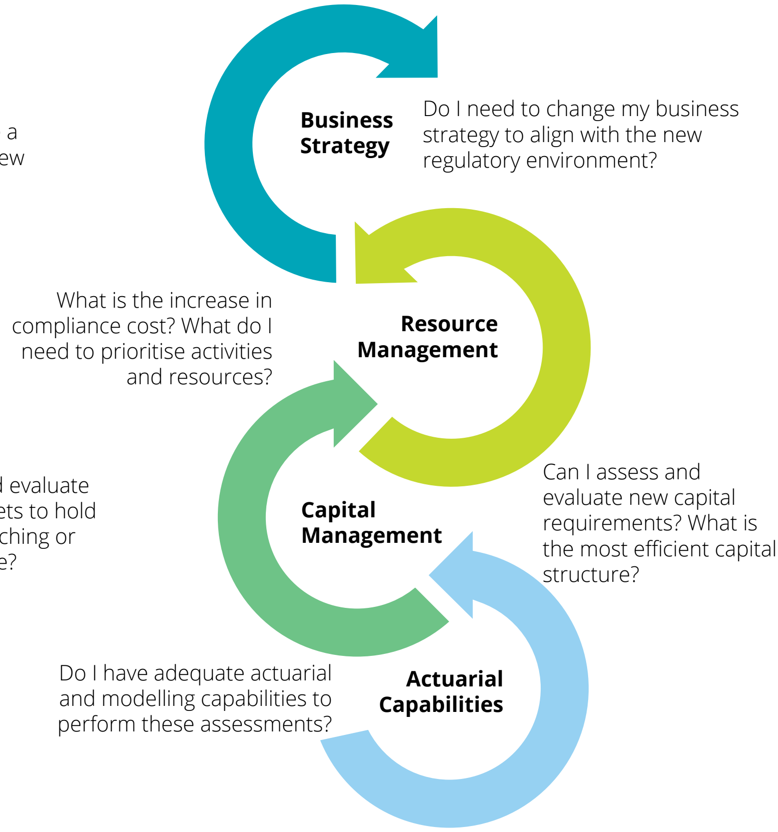
Matching Adjustment ("MA") and Illiquidity Premium ("IP")

The MAS is expecting to release details on how the MA and IP should be calculated in approximately one month's time.

Counter Cyclical Adjustment ("CCA")

In the second consultation, MAS introduced a CCA mechanism to the proposed equity risk requirement factor, whereby the adjustment would result in reduced capital requirements during a financial downturn. The proposal attracted various feedback and MAS will continue to monitor the developments and continue to engage with the industry to develop a reliable CCA mechanism.

Implementing RBC2



Conclusions

Overall the capital requirements under QIS2 appear to be less onerous for insurers than those of QIS1, for the following reasons:

- Lower C2 risk requirements;
- Added diversification benefits;
- Less weight given to the gross policy liabilities in the calculation of the C4 risk charge;
- Slightly relaxed available capital rules; and
- A favorable change in the application of the C3 risk charge.

However, the results of QIS2 are expected to vary from insurer to insurer when compared to the current framework. It should also be noted that the RBC2 framework is still under revision and we have yet to receive the calibrations and details of the following items:

- Natural catastrophe risk requirements;
- Matching adjustment; and
- Illiquidity premium treatment.

Contacts

Deloitte has an Insurance and Actuarial team based in Singapore with a breadth of experience across valuation, risk and regulation. We can provide assistance in your RBC2 computations as well as impact assessment review, dry-run simulation, review the basis of preparation and computation of Form 2 and assess the adequacy of policies and procedures in place to ensure compliance

Ei Leen Giam
Partner
+65 6216 3296
eilgiam@deloitte.com

Raj Juta
Partner
+65 6800 2010
rjuta@deloitte.com

Mehul Dave
Associate Director
+65 6232 7442
mehdave@deloitte.com

Amar Mehta
Associate Director
+65 6232 7281
ammehta@deloitte.com

Monami Mukherjee
Manager
+65 6232 7280
mmukherjee@deloitte.com

Pei Shan Tay
Manager
+65 6216 3121
ptay@deloitte.com