Do regulatory detours disrupt or build your insurance future?

An insurer’s role under Hong Kong risk-based capital

May 2019
Reports that say that something hasn’t happened are always interesting to me, because, as we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say, we know there are some things we do not know.

Donald Rumsfeld
US Defense Secretary (1975-77)
An insurer’s role under Hong Kong risk-based capital (RBC)

The insurer who only provides insurance is not an insurer. Insurers do not just offer short-term and long-term products, they also have a fiduciary responsibility toward the society to provide saving and protection products.

More than a decade after the 2008 global financial crisis (GFC), RBC regimes and International Financial Reporting Standards 9 (IFRS 9) or IFRS 17 are being introduced around the world to promote risk-driven and consistent measures in solvency reporting and profit reporting. More importantly, these new capital regimes and financial reporting standards are redefining an insurer’s societal roles in terms of its product strategy and investment strategy for policyholders and shareholders.

We are already seeing the results of the new measures in the form of: balance sheet management through in-force business and new business management, asset liability management, and restructuring or reinsurance. Insurers must manage these at the same time as navigating uncertain territory, such as the Belt and Road Initiative (BRI), the growth opportunities in the Greater Bay Area and the disruptive rise of insurtechs.

Framing the questions

Dealing with Hong Kong RBC (HKRBC) and IFRS 9 or IFRS 17 requires greater cooperation between the actuarial, finance, investment, risk management and information technology (IT) functions. As these teams work more closely together, they are facing new challenges from the “known knowns” to the “unknown unknowns”.

This paper examines the detailed strategic, technical and practical considerations insurers must tackle by asking:

- What are the known-known considerations for HKRBC?
- What are the known-unknown considerations for the interactions of HKRBC and IFRS 9 or IFRS 17?
- What are the unknown-known considerations for in-force business or new business management, asset and liability management and restructuring or reinsurance?
- What are the unknown-unknown considerations?

Note: This thought leadership is meant to provide our observations of the market developments and so has been prepared with the assumption that its reader has the background knowledge of HKRBC and IFRS 9 or IFRS17.
What are the known-known considerations for HKRBC?

The overarching principle in developing the HKRBC regime is to protect policyholders while maintaining the competitiveness of Hong Kong’s insurance industry. The second quantitative impact study (QIS 2) found that the quality of asset and liability management varies vastly among insurers, although some common themes emerged for different types of companies.

To gauge these details, we conducted an independent QIS 2 result benchmarking on life insurers at the end of 2018, as highlighted below.

Figure 1a. Solvency ratio under Hong Kong Insurance Ordinance (HKIO) and HKRBC bases

VA and MA: volatility adjustment (VA) and matching adjustment (MA) are different levels of credit spreads added to the risk-free yield curve for discounting liability cashflows. VA was based on the industry asset portfolio while MA was based on each insurer’s own asset portfolio in QIS 2.

1. To achieve this overarching principle, three rounds of quantitative impact study (QIS) are being conducted by the Insurance Authority (IA). QIS 1 focused on designing the framework, QIS 2 focused on building the technical foundation and QIS 3 will focus on formulating policy decisions.
2. There were 24 insurers (18 of which are among the top 20 life insurers) who participated in our QIS 2 result benchmarking.
In Figure 1a, the average solvency ratio under QIS 2 was lower than that under the HKIO by about 250 percentage points (excluding outliers) and the range of solvency ratios was smaller under QIS 2. This was mainly driven by:

- **Changes in net assets** — mostly due to liabilities impacted by the change in discount rate, change in methodology from net present value to gross premium valuation and the inclusion of the time value of options and guarantees (TVOG).

- **Significant increases in the prescribed capital requirement (PCR)** — by four times on average, mainly driven by interest rate, credit spread, equity and lapse risks.

Due to the design of MA in QIS 2, it did not recognize much additional credit spread, thus we did not observe much improvement in the solvency ratio compared to that with VA.

QIS 2 also tested sensitivity scenarios in which the VA and MA would increase under credit spread widening stress and where equity risk premium is included in the discount rates, as shown in Figure 1b. The level of improvement depended highly on the liability durations.

Recognizing future spread income from funds on deposit (FOD) could also improve the solvency ratio significantly, especially for insurers with a material block of participating business that has accumulated a significant FOD balance.

Our benchmarking indicated that, generally, non-Solvency II insurers have a bigger duration mismatch than those for whom Solvency II applies; in particular, Chinese insurers have more short-term products with higher guarantees. Traditionally, most non-Solvency II insurers have not been managing their balance sheet under a capital regime similar to HKRBC and Chinese insurers have access to Chinese assets with higher yields in supporting the guarantees.

Given these known asset liability management issues, the table on the next page offers strategic, technical and practical considerations based on the currently known requirements of the HKRBC regime.

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3. The ratio is based on 100% HKIO solvency ratio.
Table 1. Strategic, technical and practical considerations

<table>
<thead>
<tr>
<th>Key topics</th>
<th>Strategic, technical and practical considerations</th>
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</table>
| **Discount rates** | • The design of the discount rates should aim at encouraging good asset and liability management. In particular, insurers with a smaller duration mismatch and cash flow mismatch should benefit more from a higher discount rate and lower interest rate PCR.  
  • Participating and universal life businesses should consider asset segregation. This allows insurers to meet the policyholder’s reasonable expectations by treating customers fairly through the equitable distribution of bonuses and dividends, and by identifying the risk-adjusted return of the segregated assets belonging to policyholders.  
  • Insurers should start to consider cash flow matching in asset and liability management helping them qualify for the MA application. |
| **Credit risk** (35% PCR) | • Following the GFC, Argentina’s financial crisis (which resulted in the Peso de-pegging from the USD) continues to remind insurers of the importance of holding capital to manage spread risk and default risk. These are driven by the credit rating and duration of bond holdings, and the type and liability duration of products where dynamic calculation is allowed. |
| **Interest rate risk** (21% PCR) | • More insurers had interest rate up as biting scenario in QIS 2 than in QIS 1 due to higher upward stress parameters in QIS 2.  
  • The duration mismatches in the industry varied significantly, ranging from 0 to more than 20 years. |
| **Equity risk** (14% PCR) | • In our QIS 2 benchmarking, some insurers backed their non-participating business with equities. This resulted in a high capital charge as they were unable to apply stressed management actions.  
  • The risk-adjusted return of equities needs to be assessed together with the risk-adjusted return for properties and bonds. |

4. The strategic, technical and practical considerations are not exhaustive. Only a sample of items are listed here to give a flavor of our market observations.  
5. The percentages in brackets represent the average proportion out of the total undiversified PCR based on EY QIS 2 result benchmarking on the 24 life insurers.
Key topics

5 Lapse risk (11% PCR)

- The calculation's granularity needs to be considered depending on the product types (at policy level, product (group) level and entity level). For example, some insurers selling High Net Worth products calculate the lapse risk at the policy level internally as the policies are tailored individually.
- Insurers may define their mass lapse risk either at the company or product level. Some companies stressing on mass lapse at product level could have higher than the QIS 2 stress parameter of 30%, especially for growing companies with less diversification across products.

6 Diversification benefit

- Given more insurers were subject to interest rate up biting scenario in QIS 2, the correlation matrix could be further explored to differentiate interest rate risk by the upward and downward scenarios.
- Given the skew toward market risk observed in QIS 2 (and QIS 1), insurers should start to consider optimizing their diversification benefits. This can be done either by balancing their exposures to both market and insurance risk or by exposing themselves to multiple sub-risks (e.g., equity risk and property risk) by optimizing their investment and product strategies.

7 Loss absorbing capacity of management actions

- Based on our QIS 2 benchmarking, the stressed management actions of future discretionary benefits have not been optimized. Some insurers adjusted their dividends or crediting rates more than what was allowed under Guideline 16, while others have only made conservative adjustments.

When assessing the competitiveness of the Hong Kong insurance industry, we must consider the risk-adjusted return for shareholders while protecting policyholders by holding sufficient capital requirements to withstand 1-in-200 events. It might be straightforward to compare the requirements by individual components across different RBC regimes, but insurers should also consider the whole design more holistically – in particular, the minimum capital requirement level at which regulatory intervention would be triggered.

As insurers move to the HKRBC regime, we expect them to evaluate their product design, product mix, investment strategies (in terms of asset type, rating and duration) and reinsurance strategies. These will evolve over time with the RBC regime, and are also influenced by other capital regimes undergoing a similar process of review and consultation.
What are the known-unknown considerations for the interactions of HKRBC and IFRS 9 or IFRS 17?

Insurers know the key requirements for the RBC regimes and the IFRS standards. What they do not know are the effects of managing the business using these new measures. Risk, actuarial and finance teams will all play a pivotal role in understanding their impact. To support this process, the table below sets out the similarities and differences between the two measures and their likely intersecting effects.

Table 2. HKRBC and IFRS 9/17 – key interactions (preliminarily observed)⁶

<table>
<thead>
<tr>
<th>Key topics</th>
<th>Key requirements</th>
<th>Key interactions</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>HKRBC</td>
<td>IFRS 9 or IFRS 17</td>
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<tr>
<td>Purpose</td>
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<td></td>
<td>• Protect Hong Kong policyholders and the insurance industry</td>
<td>• Standardize insurance accounting globally to improve comparability and increase transparency</td>
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<td></td>
<td>• Continue to promote the competitiveness of the Hong Kong insurance industry</td>
<td>• Provide stakeholders with the information they need to meaningfully understand the insurer’s financial position, performance and risk exposure</td>
</tr>
</tbody>
</table>

⁶ The key requirements and the key interactions listed are not exhaustive. Only a sample of items are listed here to give a flavor of our observations.
The interactions noted in the table above suggest that the new measures will create both financial impacts and practical challenges for insurers, including producing a bottleneck in the implementation timeline. These issues will be exacerbated by limited actuarial, finance, risk, investment and IT resources, and the complexity of data, systems and processes.

Risk, actuarial and finance functions need to understand the similarities and differences of solvency and profit reporting. They can assess the interaction through projecting the balance sheet using stresses and scenarios to test sensitivities.

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7. Risk margin is the additional reserve held for non-hedgeable risks.
8. CSM is the additional reserve held for profit to be released in the future.
What are the unknown-known considerations for in-force business or new business management, asset and liability management and restructuring or reinsurance?

Risk-driven and market-consistent measures introduce increased volatility in balance sheet management. The consequences of these new measures will be unknown until they are implemented, likely, in 2022. The following framework of structured assessment will help insurers to understand the value drivers of their income statements and balance sheets.

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Figure 2. Sample value drivers – in-force business or new business management, asset and liability management and restructuring or reinsurance

<table>
<thead>
<tr>
<th>Value drivers</th>
<th>In-force business and new business management</th>
<th>Asset and liability management</th>
<th>Restructuring or reinsurance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Profit and loss drivers</strong></td>
<td></td>
<td></td>
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<tr>
<td>Premiums/charges</td>
<td>☑</td>
<td>☑</td>
<td></td>
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<tr>
<td>Expenses</td>
<td>☑</td>
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<td>☑</td>
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<tr>
<td>Investment margin</td>
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<td></td>
<td></td>
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<tr>
<td>Insurance margin</td>
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<td></td>
<td>☑</td>
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<tr>
<td><strong>Balance sheet drivers</strong></td>
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<td></td>
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<tr>
<td>Technical provision</td>
<td>☑</td>
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<tr>
<td>Capital resources</td>
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<td>Capital requirements</td>
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<tr>
<td>Tax</td>
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☑ Main benefit ☐ Possible benefit

9. With the exception of the first ORSA report (as part of HKRBC regime) to be submitted by HK insurers in 2021.
Three areas to commercially optimize value drivers:

1. **In-force business or new business management** to enhance business portfolio’s performance. An insurer can increase policyholder and shareholder confidence by enhancing its cash position, improving cost efficiency and creating customer-based value. For example, insurers in Europe are reducing costs by selling parts of their legacy business to specialist consolidators, who are able to offer good value for money based on economies of scale. In this context, a holistic approach that looks at the issues through different key levers at the same time offers better performance results than a more targeted approach.

2. **Asset and liability management** to achieve better capital efficiency via e.g., product design and mix, duration matching, Strategic Asset Allocation (SAA) approach, and discretionary benefit management. The historic guarantees in some long-term liability profiles also demand robust asset and liability management.

3. **Restructuring or reinsurance** to achieve a more efficient structure and better risk profile through re-organizing the business. Transitioning to RBC regimes and IFRS standards provides an opportunity to review the organization’s structure and risk profile to commercially optimize solvency and profit, increase operational efficiency, and ensure greater control. They can have greater control through the application of risk appetite, risk tolerance and risk limit. For example, insurers can cede a proportion of their business if their growth exceeds their risk appetite, risk tolerance and risk limit.

The unknown consequences of balance sheet volatility can be managed by projecting the balance sheet and testing its sensitivities to understand the volatility caused by the known levers.

Policyholders and shareholders are increasingly becoming more sophisticated. They not only assess an insurer’s solvency and profitability, but they also focus on the insurer’s ability to manage the volatility of its income statement and balance sheet from one year to another. To excel in the current era of changing regulatory and financial reporting requirements, insurers need to start transforming themselves. The goal is not just to report these metrics, but to use them to create values for stakeholders.
What are the unknown-unknown considerations?

Among the many unknown-unknown, insurers should be thinking about:

**BRI**

This massive infrastructure development is building a trading network over 150 countries across Asia, Europe and South Africa. The belt refers to overland infrastructure and the road refers to maritime infrastructure. Insurers have yet to determine the extent of the opportunities here, but they are starting to provide capital through infrastructure investment.

Other regulatory regimes, such as Solvency II, have already provided favorable capital charges for infrastructure investments as the asset duration matches well with the liability duration. Their guarantees by a sovereign government make such investments even more attractive, reducing the risk of counterparty default.

Unknown business opportunities for insurers may also arise from the newly established Greater Bay Area, which has deepened cooperation between Hong Kong, Guangzhou and Macau. The cooperation leverages the principle of “one country, two systems”, integrating a market with an estimated population of around 70 million people.¹⁰

**Insurtech disruption**

Companies such as Bowtie and CXA are already providing health products through online platforms. With increasingly sophisticated customers from Gen-X, Gen-Y and Gen-Z, insurtech value propositions are sound. But it remains to be seen if they can sell products online – rather than through traditional sales channels or increase their market share by passing sales commission savings to customers.

**Protection gap**

Rather than focusing on savings products, insurers need to focus more on closing Asia’s protection gap, which Swiss Re estimates to be USD 1.8 trillion.¹¹

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Insurers subject to Solvency II have already redesigned their products to gain exposure in mortality, longevity and morbidity risk. This supports diversification, resulting in relatively better solvency ratios under RBC regimes. More widely, we are seeing the government working together with insurers in reducing the protection gaps through legislation, tax incentive and raising awareness.

Scanning the horizon

Insurers need to prepare for large-scale initiatives and disruptions by going through their Own Risk and Solvency Assessments using horizon-scanning techniques. We are already seeing some insurers projecting their balance sheets under a range of stresses and scenarios to understand the impacts of previously unknown initiatives and disruptions such as when:

- The UK banned sales commission by insurers to ensure that customers are buying the right products
- Hong Kong introduced Voluntary Health Insurance Scheme to improve health care
- China banned certain short-term savings products to discourage speculative behaviors
- Prudential Asia or US demerged from Prudential UK to focus on growth outside Europe
- AXA-XL-Caitlin merged to create diversification between life insurance and non-life insurance
- Equitable Life converted its high guaranteed with-profits products to non-profits products
- Old Mutual South Africa demerged from Old Mutual London due to liquidity issues

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Conclusion

The RBC regimes and IFRS standards will change the way insurers conduct their business through their product strategies and investment strategies for policyholders and shareholders. Specifically, they need to consider their strategic, technical and practical impact, and work out short-term, medium-term and long-term actions to respond to:

Known-known considerations for HKRBC:

- The QIS exercises conducted by the IA identified the known issue in the varied quality of asset and liability management. The HKRBC regime should be designed to incentivize better asset and liability management. Insurers also need to better manage solvency and profit reporting.
- We need to consider the competitiveness of the Hong Kong insurance industry from the viewpoint of the risk-adjusted return for shareholders, while also protecting policyholders by holding sufficient capital requirements to withstand 1-in-200 events.

Known-unknown considerations for the interactions of HKRBC and IFRS 9 or IFRS 17:

- The risk, actuarial and finance functions will all play a pivotal role in managing the solvency and profit balance sheets. Insurers need to assess the key interactions based on the known requirements for the RBC regime and the IFRS standards.
- Insurers will need to deal with the unknown practical challenges around implementation timelines, financial impacts, professional resources and IT complexity. In addition, they must continue to focus on understanding and managing the discount rates, credit spread risk, interest rate risk, equity risk, lapse risk, diversification and loss absorbing capacity.
Unknown-known considerations for in-force business or new business management, asset liability management and restructuring or reinsurance:

- The consequences of increased balance sheet volatility are unknown. But they can be managed through the known levers of stress testing and scenario testing. A framework of structured assessment will help insurers to commercially optimize their balance sheet value drivers.

- Increasingly sophisticated policyholders and shareholders are expecting insurers to demonstrate their abilities to manage income statement and balance sheet volatility from one year to another.

Unknown-unknown considerations:

- Business opportunities arising from the BRI and the Greater Bay Area are unknown. However, we are seeing insurers investing in BRI infrastructure assets, which may attract a favorable treatment in RBC regimes. In addition, insurtechs are disrupting the market by selling protection products to Gen-X, Gen-Y and Gen-Z using online platforms.

- Insurers can use horizon-scanning techniques to identify and manage these risks and opportunities.
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You also have access to the EY Insurance Network across the globe, which includes more than 14,000 professionals around the world, strategically located in areas that allow us to serve industry needs. With around 1,670 actuaries, EY has the world’s largest professional services actuarial services.

How can EY help

- **RBC service**
  Helping you to interpret the RBC requirements and determine the economic balance sheets.

- **IFRS 9 service**
  Helping you to implement IFRS 9 methodology designs and interact with IFRS 17.

- **ALM service**
  Helping you to develop robust SAA frameworks, including asset liability strategy modelling.

- **Group or entity service**
  Helping you to optimize group-wide capital requirements and consider your options.

- **Optimization service**
  Helping you to optimize your metrics when managing the balance sheet for policyholders, shareholders and regulators.

- **IFRS 17 service**
  Helping you to implement IFRS17 data, systems and processes, as well as reporting requirements.
Internal Model
- Assisted insurers to calibrate the internal model
- Assisted insurers to validate their calibration methodology

Optimization
- Assisted insurers to set up a reinsurance structure to optimize the balance sheet
- Assisted in transfer pricing for tax purposes

ICS Field Testing
- Assisted insurers to participate in ICS Field testing together with HKRBC QIS
- Analyzed the results at group or entity level

SAA Implementation
- Assisted insurers to define the SAA framework, considering multiple metrics
- Provided support in SAA modelling

IFRS 9
- Assisted insurers to assess the financial and operational impacts of IFRS 9
- Provided impairment modelling tool

IFRS 17
- Assisted insurers to assess the financial and operational impacts of IFRS 17
- Implemented IFRS 17 for numerous insurers
Do regulatory detours disrupt or build your insurance future?

Your EY contacts

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If you require any further information or explanations, or specific advice, please contact:

**Jonathan Zhao**
Managing Partner
+852 2846 9023
jonathan.zhao @hk.ey.com

Jonathan has more than 20 years of extensive experience, including a member of the IA Industry Advisory Committee.

He also advises on complex strategic and business issues.

**Tze Ping Chng**
Actuarial Partner
+852 2849 9200
tze-ping.chng @hk.ey.com

Tze leads the Hong Kong teams that are actively assisting insurers in RBC or IFRS 17 or ICS and SAA or ALM projects.

He leads balance sheet optimization projects.

**Florence SH Ng**
RBC SME
+852 2849 9189
florence-sh.ng @hk.ey.com

Florence leads the HKRBC and recovery & resolution planning with the regulator.

She advises insurers on HKRBC QIS and enterprise risk management (ERM).

**Mi Namkung**
Group/entity SME
+852 2849 9184
mi.namkung @hk.ey.com

Mi advises insurers in Group or entity balance sheet for solvency reporting and profit reporting.

She also supports insurers for ICS field testing and HKRBC QIS.

**James Lin**
IFRS 9 SME
+852 2849 9463
james-a.lin @hk.ey.com

James leads multiple projects in Basel II AIRB model development and validation.

He leads the IFRS 9 impairment methodology design of expected credit loss modeling.

**Steve Cheung**
IFRS 17 SME
+852 2846 9049
steve.cheung @hk.ey.com

Steve leads multiple IFRS 17 projects assisting insurers to assess the financial and operational impacts.

He leads the pilot testing in data, system and process.
David Wong
ALM SME
+852 2849 9282
david.wong@hk.ey.com

David leads multiple projects across Asia, focusing on ALM, SAA and IFRS 17.
He has extensive knowledge of various Asia RBC regimes and IFRS17.

Frery Winkel
Pillar 2/3 SME
+852 2629 3899
frery.winkel-pieters@hk.ey.com

Frery advises insurers in strategic risk, ERM implementation and (public) disclosure.
She leads the regulatory quality oversight for HKRBC.

Han Chua
Optimization SME
+852 2512 4112
han.chua@hk.ey.com

Han advises insurers in optimizing their assets, liabilities and capital requirements.
He also leads the technical calibration for HKRBC, internal model and economic capital.
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