

Hong Kong: Optimisation under Hong Kong Risk-Based Capital and GL34 for par business

The Hong Kong Risk-Based Capital (HKRBC) framework came into full operation on 1 July 2024. The rules outlined in the final version of the HKRBC Insurance (Valuation and Capital) Rule (HKRBC Insurance Rule) are largely consistent with the technical specifications established for the Early Adoption of HKRBC in 2021 (Early Adoption Spec), with minor changes to specific items such as the treatment of negative reserves and the “look-through approach” for portfolio investment. Additionally, the Guideline on Establishment and Maintenance of Fund(s) in Respect of Participating Business (GL34) also became effective on 1 July 2024, setting out additional requirements for participating (par) business sold in Hong Kong. Par is the most prevalent product type in Hong Kong.

The implementation of HKRBC and GL34 presents both challenges and opportunities for insurers. Proactive planning and continuous optimisation will be key to thriving under HKRBC and GL34, as insurers should not only ensure compliance but also seek to optimise their balance sheets.

In this e-Alert, we highlight some of the key changes of the HKRBC Insurance Rule compared to the Early Adoption Spec and some of the key requirements set out in the GL34. We then discuss potential areas of optimisation under this new regulatory environment.

HKRBC Insurance Rule

Figure 1 provides a high-level overview of the HKRBC Insurance Rule, while Figure 2 provides a comparison between the Early Adoption Spec and the HKRBC Insurance Rule. They are not intended to be a comprehensive summaries of all the changes under the HKRBC Insurance Rule.

FIGURE 1: HKRBC INSURANCE RULE OVERVIEW

ITEM	DESCRIPTION
REGULATORY BODY	Hong Kong Insurance Authority (IA).
MINIMUM AMOUNT OF CAPITAL REQUIRED	HKD 20 million (under current regulation).

ITEM	DESCRIPTION
MINIMUM SOLVENCY CAPITAL ADEQUACY RATIO	<p>The company is required to hold 100% of the Prescribed Capital Amount (PCR) calibrated with reference to a value-at-risk at a 99.5th percentile over a one-year period.</p> <p>A restoration plan may need to be provided and executed if capital falls below the PCR, and a financial scheme may be needed if capital falls below the Minimum Capital Requirement (MCR), which is defined as 50% of PCR, reflecting a similar metric to PCR but at a 90th percentile.</p>
APPROACH USED TO DETERMINE CAPITAL REQUIREMENT	Risk-based.
ALLOWANCE FOR INTERNAL MODEL	Not allowed.

FIGURE 2: COMPARISON BETWEEN EARLY ADOPTION SPEC AND HKRBC INSURANCE RULE

AREA	ITEM	DESCRIPTION
AVAILABLE CAPITAL RESOURCES	Tier capital	<ul style="list-style-type: none"> For early adoption, there are no specific rules on the treatment of negative reserves. In the HKRBC Insurance Rule, the total negative reserves of long-term business are classified as Tier 2 capital.
LIABILITY BASIS	Tax	<ul style="list-style-type: none"> The effective tax rate for both the Early Adoption Spec and the HKRBC Insurance Rule is surplus-based. The effective tax rate is based on the previous year’s experience in the Early Adoption Spec but the prior three-year average experience in the HKRBC Insurance Rule.
LIABILITY BASIS	Management actions	<ul style="list-style-type: none"> There are two types of management actions in the Early Adoption Spec: <ol style="list-style-type: none"> business-as-usual (BAU) management actions. stressed management actions. BAU management actions are part of the product design or the BAU routine under normal economic conditions, while stressed management actions are restricted to changes in future non-guaranteed benefits (i.e., additional non-BAU premium adjustments are not allowed).

AREA	ITEM	DESCRIPTION
LIABILITY BASIS (CONTINUED)	Management actions	<ul style="list-style-type: none"> There is no explicit separation of BAU and stressed management actions under the HKRBC Insurance Rule. The management actions could be applied if they fulfil the conditions described in the HKRBC Insurance Rule.
CAPITAL REQUIREMENT	Market risk	<ul style="list-style-type: none"> There is no specification on transition arrangements in the Early Adoption Spec. In the HKRBC Insurance Rule, a transitional arrangement is allowed, subject to approval by the IA on a case-by-case basis, to allow companies to reduce market risk capital within three years from the HKRBC commencement date.*
CAPITAL REQUIREMENT	Credit spread risk	<ul style="list-style-type: none"> The credit spread shock for green bond investment is reduced by applying a 90% multiplication factor to the credit spread shock factors in the HKRBC Insurance Rule.
CAPITAL REQUIREMENT	Look-through approach for portfolio investment	<ul style="list-style-type: none"> Look-through approaches determine the required capital of the investments underlying an investment portfolio. In the Early Adoption Spec, there are only two look-through approaches, namely the full look-through and the mandate-based look-through. In the HKRBC Insurance Rule, a new look-through approach, referred to as the actual allocation-based look-through, is included. This new approach treats all underlying debt securities as a single investment with weighted average duration and maturity and credit ratings for the underlying debt securities for the calculation of risk capital.

* A transitional measure is offered through the amendment to the Inland Revenue Ordinance gazette in 2023, allowing insurance companies the option to spread tax liabilities as a result of HKRBC implementation over five years from the date of adoption of HKRBC.

GL34 for par business

GL34 also came into effect on 1 July 2024. The guideline, primarily principle-based, outlines the minimum standard for establishing and managing par business in Hong Kong, in addition to another existing guideline on managing par business (the Guideline on Underwriting Long-Term Business, or GL16). Notably, GL34 addresses a number of aspects, including the requisite opening balance of assets at the effective date, which must not fall below the value of assets attributed to par business, and with additional assets required for any future deficiency. Furthermore, GL34 covers areas such as the allocation of expenses, charges and surplus. The allocation of surplus should follow the principles set out by the IA and be documented by the company to demonstrate compliance with the principles, including sustainability and the balance of interest between policyholders and shareholders. Within nine months from the commencement date (i.e., by 31

March 2025), the insurer should submit an independent report on the establishment of its par fund(s) covering items such as the identification of assets and liabilities, the sufficiency of the opening balance and expense, charge and surplus allocation. The Insurance Authority (IA) is developing further guidelines on the establishment of a Participating Business Committee and other governance matters, as well as disclosure requirements. Figure 3 provides a summary of key additional requirements of GL34 in addition to those set out in GL16.

FIGURE 3: KEY ADDITIONAL REQUIREMENTS ON PAR FUND MANAGEMENT IN GL34

ITEM	DESCRIPTION
PHYSICAL SEGREGATION OF ASSETS	At minimum, the physical segregation requirement from other long-term business applies to each of the applicable par funds (exempted if the total amount of gross insurance liabilities of all applicable par funds is less than HKD 1 billion as at the effective date).
IDENTIFICATION OF ASSETS AND LIABILITIES	It is required to be able to identify the attributable assets and liabilities for each applicable par fund from other long-term business.
OPENING BALANCE	An opening balance of assets at the effective date needs to be determined, which must not fall below the assets attributed to par business, with additional assets required for any future deficiency.
EXPENSES AND CHARGES	Expenses and charges should be allocated to each applicable par fund in a fair, equitable and reasonable manner. Appropriate analysis should be performed to justify any allocated costs.
DISTRIBUTABLE SURPLUS/PROFITS	Allocation of distributable surplus or profits between policyholders and shareholders should comply with corporate policy on governance of par business approved by the company's board of directors.
CAPITAL SUPPORT	The use and withdrawal condition of capital support for each applicable par fund should be clearly documented, with appropriate oversight and governance by the board.
INDEPENDENT REPORT OF THE ESTABLISHMENT OF PAR FUND	By 31 March 2025, insurers should submit an independent report covering areas such as the identification of assets and liabilities, sufficiency of the opening balance and expense, charge and surplus allocation.

Potential areas of optimisation under HKRBC and GL34

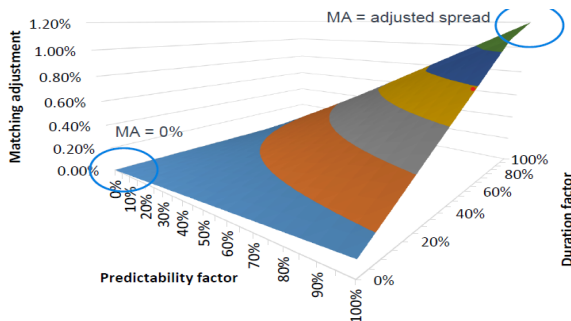
Under the change to the HKRBC framework, life insurance companies in Hong Kong need to transition from managing their balance sheets under the prior Hong Kong Insurance Ordinance (HKIO) basis (similar to Solvency I) to a more economically grounded approach closer to the International Capital Standard (ICS) basis. This shift necessitates a comprehensive reevaluation of balance sheet management strategies. After completing the initial implementation phase of HKRBC, companies need to focus on optimising their HKRBC balance sheets to enhance financial performance and stability.

In this section, we outline key areas for potential optimisation under HKRBC and GL34. These optimisation strategies are based on industry observations and are designed to address the unique challenges posed by the new regulatory environment. However, it is important to note that these examples are not exhaustive, and any optimisation approach should be tailored to the specific risk profile of each company.

Optimisation of Matching Adjustment (MA) and asset portfolio through different initiatives

- Optimisation of the key parameters of the MA formula (i.e., predictability factor and duration factor), with a particular focus on net cash flows up to the last liquid point (i.e., 30 years for US dollars and 15 years for Hong Kong dollars) is key to achieve an optimal MA. The improvement of the Asset-Liability Management (ALM) framework (e.g., more focus on cash flow matching) aims to reduce the volatility of the HKRBC balance sheet and reallocate capital away from interest rate risk to risks with potential for greater returns (so as to allow more investment in growth assets). The hypothetical example¹ in Figure 4 is used to illustrate MA optimisation for a given adjusted spread and set of other parameters based on the MA formula.

FIGURE 4: MA OPTIMISATION



$$MA = \text{Adjusted Spread} \times \text{Predictability Factor} \times \text{Duration Factor} + \text{Constant Prescribed Spread} \times \text{Predictability Factor}$$

$$\text{Max} [\text{Min}(\text{Prescribed Cap}, \text{Eligible Asset \%} - \frac{\text{Asset Dollar Duration}}{\text{Liability Dollar Duration}}, 0)] + LTA \times \text{equity and property proportion (for segregated MA portfolios only)}$$

- Long-Term Adjustment (LTA) utilisation helps to optimise MA. The LTA is only applicable to MA portfolios that meet the eligibility criteria (typically par business, as one of the key requirements is to have the assets and liabilities managed under a physically segregated fund).

It is calculated as 100 basis points multiplied by the proportion of equity and property in the portfolio, subject to a cap. Given the requirements under GL34 for insurers to physically segregate par funds, these segregated funds can apply for the LTA. A potential approach to uplifting the MA by utilising the LTA could be via dynamic Strategic Asset Allocation (SAA).

- Optimisation of the look-through approach of collective investment schemes or other similar assets could also be utilised to improve MA. By thoroughly analysing the underlying assets within collective investment schemes, insurers can better align these investments with the MA criteria. This not only improves the effectiveness of the MA but also helps in mitigating capital charges associated with equity and interest rate risks compared to the full application of equity risk charges for a non-look-through portfolio.
- A thorough review of the granularity of the SAA within the context of the MA portfolio (i.e., the credit profile and the tenor of the MA-eligible assets) is essential for understanding the impact of SAA on the MA and optimising the SAA framework. The objective is to transition from a traditional asset return versus asset volatility framework to a return on capital framework, which places additional focus on capital efficiency of the underlying assets. For more advanced companies, this may involve updating the return on capital framework to incorporate HKRBC-specific considerations. Additionally, special attention should be given to reviewing and optimising the credit and alternative assets portfolios. This ensures that the asset allocation is not only aligned with the MA criteria but also maximises the return on capital, while adhering to regulatory requirements.

Balance sheet management through hedging programmes

- Historically, the use of derivatives for hedging purposes has been relatively limited among life insurers in Hong Kong, with the primary exception being the management of currency (FX) risk. However, with the introduction of the HKRBC framework, some companies are now developing, or enhancing, their hedging programmes in order to minimise capital requirements, reduce their time value of options and guarantees (TVOG) and ultimately reduce the volatility of their balance sheets and allow better allocation of capital. By effectively utilising derivatives, insurers can better manage their risk exposures and improve their overall capital efficiency under the new regulatory regime.

¹ Based on adjusted spread = 120 basis points (bps), eligible assets = 100%, constant prescribed spread = 60 bps.

- There is a growing emphasis on enhancing interest rate hedging using derivatives as a tool for managing duration and convexity gaps. Specifically, some insurers are using derivatives such as bond forwards and interest rate swaps to reduce their duration gap and pre-fund expected future net cash flows allocated to fixed income over the coming years. The HKRBC capital resource is typically not a linear function of the underlying interest rate, primarily due to the cost of “burn-through” for par products. Burn-through refers to the situation where the guaranteed returns on par products exceed the actual investment returns, leading to a shortfall that the insurer must cover, and this cost increases more significantly when interest rates are close to the guaranteed level of the par fund. Although hedging second-order interest rate risk is often not considered by life insurers in Hong Kong, as it is frequently perceived as overly complex, we may see an increased focus in the future.
- Apart from interest rate hedging programmes, insurers have been more active in considering a broader range of advanced hedging strategies to manage various risks. These include equity derivatives (e.g., options), credit spread derivatives (e.g. credit default swaps [CDS]), and even nonlinear derivatives such as constant maturity swaps for hedging mass lapse risk. While these advanced hedging strategies are not yet commonly used in Hong Kong, they present potential avenues for enhanced risk management that may warrant further study. Equity derivatives, for instance, are typically not deemed efficient for companies that focus on long-term value metrics such as the Value of New Business (VNB) or long-term operating profit. Consequently, these derivatives are more commonly employed for tactical asset allocation or short-term risk management purposes rather than long-term strategic objectives. In summary, while there is growing consideration among insurers for exploring advanced hedging programmes under the HKRBC framework, it is essential to carefully evaluate their suitability and efficiency, as well as their alignment with the business objective of the company.

Enhancements of modelling of dynamic management actions and policyholder behaviour

- Given the introduction of the new GL34 par fund management requirement, many insurers are focussing on enhancing dynamic management actions to optimise financial outcomes while meeting policyholder expectations. This includes reviewing and enhancing the dynamic dividend adjustment mechanism for par business using an asset share approach. This could become a more common approach under GL34. Additionally, developing a dynamic asset share charge and dynamic SAA framework aims to maximise returns while minimising asset and liability mismatches, thereby optimising capital

requirements under HKRBC. Specific strategies such as dynamic equity backing ratio (EBR) investment strategies for par products and dynamic crediting rate mechanisms for universal life business are also being explored by some companies to mitigate risks such as disintermediation, reinvestment and default risk.

- In parallel, some insurers are also enhancing dynamic policyholder behaviour modelling to allow more accurate representation and management of policyholder behaviour. This involves reviewing the scope and impact of dynamic policyholder behaviour modelling rules, particularly dynamic lapse modelling for universal life products, which is commonly used in the Hong Kong market despite a general lack of extensive historical data. By refining these models, insurers aim to better understand and predict policyholder behaviors, thereby minimising their TVOG and improving overall financial stability under the HKRBC framework.

Risk transfer through reinsurance arrangements

- A thorough review of traditional mortality and morbidity (e.g., critical illness) reinsurance treaties is important for life insurers to help them to better manage their risk exposures. Appropriate utilisation of these reinsurance treaties may lead to reductions in capital requirements under HKRBC, thereby improving financial positions.
- In addition to traditional reinsurance, life insurance companies should evaluate the potential benefits of nontraditional reinsurance transactions for closed blocks of business, where the particular block of business will be transferred to a third party. These transactions are increasingly being explored to optimise financial outcomes under both HKRBC and International Financial Reporting Standard (IFRS) 17. Such nontraditional reinsurance arrangements aim to provide strategic approaches to effectively manage closed blocks of business.
- While the lapse risk charge (defined as the maximum between level and trend lapse risk and mass lapse risk) is generally not linked to mass lapse risk for most insurers in Hong Kong, it remains a significant concern for some companies. Although some insurers have evaluated the costs and benefits of mass lapse reinsurance, there are few documented cases of successful implementation to date. Moreover, insurers may look to consider other forms of lapse reinsurance (apart from mass lapse reinsurance), where a portfolio is reinsured against a +/-50% change in lapses, to further reduce their capital requirements for lapse risk. This may offer a potential method for better managing lapse risk under the HKRBC framework.

Conclusion

The full implementation from 1 July 2024 of the HKRBC framework and GL34 represents a significant milestone for the insurance industry in Hong Kong, marking the start of a new journey for many insurers. They must now move beyond mere compliance and process implementation to focus on optimising their solvency balance sheets under a more economically grounded approach. This optimisation exercise necessitates a thorough approach, beginning with an initial gap analysis to identify areas of improvement, a subsequent proof-of-concept test to validate the proposed strategies and then a comprehensive implementation plan to ensure seamless execution.

Moreover, the complexities introduced by the new regulatory regime mean that various functions within an insurance company are now more interconnected than ever before. As a result, there is a pressing need to adopt a holistic approach to overall financial management. This integrated strategy will help insurers to navigate the challenges of the HKRBC framework and GL34 effectively, ensuring not only compliance but also enhanced financial stability and performance

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