



INSURANCE COMMISSION
OF THE BAHAMAS

Quantitative Impact Study
Capital Requirement for General Insurers
2023

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Introduction

Overview

The Insurance Commission of The Bahamas (ICB) wishes to conduct a Quantitative Impact Study (QIS) to support the development of a risk-based capital adequacy framework for General insurers.

The International Accounting Standards Board (IASB) has issued new International Financial Reporting Standards (IFRS), in particular IFRS 17 Insurance Contracts, IFRS 9 Financial Instruments and IFRS 16 Leases.

The calculation of the Regulatory Capital Ratio (RCR) is set out in the General Insurance Capital Adequacy Guidelines dated August 2018. These Guidelines apply to both domestic and foreign insurers in respect of insurance business both inside and outside of The Bahamas.

In light of the above, the objective of the QIS is to evaluate the impact of the above changes on the proposed capital adequacy framework.

Approach

The ICB had previously conducted a QIS based on an initial proposed capital adequacy framework. The proposed capital adequacy framework has been adjusted to allow for the key impacts of the changes being made to the IFRS. A capital charge for operational risk and a credit for diversification of risks have also been included in the calculation.

A review of the factors applicable to assets that are impacted as a result of the application of IFRS 9 will be done to the extent possible when the QIS results are submitted in conjunction with the December 31, 2022 financial statements.

The minimum target level of required capital will be reviewed after an analysis of the QIS results is completed.

Insurers are required to use the IFRS 17 discount rates they have developed internally.

Feedback and communication channels

We encourage the insurers to provide feedback when the results are submitted. If there is an alternative method/approach that an insurer would like to propose for any particular risk category, please do so with supporting rationale.

Section I – Instructions

Terms of Reference

The insurer should submit the following to the ICB by August 31, 2023.

All figures provided should be as at December 31, 2022.

- RCR calculations, based on IFRS4 financials and in accordance with the General Insurance Capital Adequacy Guidelines dated August 2018.
- Revised RCR calculations, based on IFRS 17 financials and incorporating the changes and additional risk categories indicated below. The revised capital adequacy worksheet is provided.
- Disclosure items as set out in Section 8.

Citation

This Guideline may be cited as the General Insurance Capital Adequacy Guideline.

Application

These Guidelines apply to both domestic and foreign insurers in respect of insurance business both inside and outside of The Bahamas. The term “liability for incurred claims” applies equally to the liability for incurred claims both inside and outside of The Bahamas. The Regulatory Capital Available and Regulatory Capital Required are to be determined using the unconsolidated financial statements of the insurer.

Section 2 – Capital Available

Criteria for Regulatory Capital

Acceptance as capital for capital adequacy purposes will be based on satisfaction of the following criteria:

- Availability¹
- Permanence²
- Absence of mandatory fixed charges or encumbrances³
- Subordination⁴

Regulatory Capital Available

Total Available Capital consists of Tier 1 (core capital) and Tier 2 (supplemental capital). Tier 1 capital comprises the highest quality elements. Tier 2 elements fall short of the capital qualities of permanence and/or absence of mandatory fixed charges, but contribute to the overall strength of the company as a going concern.

For a domestic insurer, Regulatory Capital Available is the sum of Tier 1 and Tier 2 Capital, less the deductions from capital as summarized in Part C of this section.

For a foreign insurer⁵, the Regulatory Capital Available is the sum of the total amount of initial deposit in accordance with s. 43, Insurance Act, 2005 (“the Act”), and the statutory funds held in trust in accordance with s. 45(4) of the Act, plus any excess assets in The Bahamas less the total liabilities and reserves required in The Bahamas.

¹ Instrument is issued and fully paid for in cash, or other property with the approval of the ICB, and can be accessed/used to absorb losses.

² Instrument is available for an open-ended period i.e. there is no maturity date.

³ Instrument is free from mandatory payments or fixed charges against earnings.

⁴ Instrument is subordinated to the rights of the insurer’s policyholders and other creditors in the event the insurer becomes insolvent or winds up

⁵ “Foreign insurer” means a branch of a foreign insurance company, which is registered to carry on insurance business in The Bahamas

A. Tier 1 Capital

Net Tier 1 (or Core) Capital shall be the amount by which the value of Gross Tier 1 Capital defined in subsection (a) exceeds the total of the deductions defined in subsection (b).

a) Gross Tier 1 Capital shall be the sum of:

- ordinary share capital (issued and fully paid up);
- contributed surplus;
- retained earnings (or deficit);
- preference shares or other financial instruments that meet the requirements of Tier 1 Capital as outlined in section c) below;
- revaluation reserves approved by the Commission; and
- non-controlling interest.

b) The amount to be deducted from Gross Tier 1 Capital shall be the sum of:

- any unrealized gains on assets included in retained earnings and
- revaluation reserves.

c) Financial instruments, unless specifically approved as Tier 1 capital by the Commission, may only be included in Tier 1 Capital if they meet the following conditions:

- a. they are of perpetual duration and fully paid;
- b. there is no option for redemption at the request of the holder;
- c. they are fully subordinated to the interests of policyholders and other creditors;
- d. dividends are not cumulative in the event of non-payment; and
- e. the amount does not exceed 33% of Tier 1 Capital excluding preference shares.

Net Tier 1 Capital must exceed the minimum stated capital prescribed in regulation 60 of the Regulations.

B. Tier 2 Capital

Tier 2 Capital is divided into Tiers 2A and 2B and shall not exceed 100% of Net Tier 1 Capital.

Tier 2A Capital comprises the following:

- a. preference shares or other financial instruments that would have been included in Tier 1 Capital but for the limit in Tier 1 Capital, as outlined in Section c) above;
- b. hybrid capital instruments that do not meet the definition of Tier 1 Capital but meet the requirements for Tier 2A outlined below;
- c. unrealized gains excluded from Tier 1 Capital with unrealized gains on real estate limited to 20% of Net Tier 1 Capital.

Hybrid capital instruments may only be included in Tier 2A Capital if they meet the following conditions:

- a. they are of perpetual duration and fully paid up;
- b. there is no option for redemption at the request of the holder;
- c. they are fully subordinated to the interests of policyholders and other creditors;
- d. dividends or interest are able to be deferred (as for example with cumulative preference shares) where the profitability of the company would not support payment; and
- e. must not contain restrictive covenants or default clauses that would allow the holder to trigger acceleration of repayment in circumstances other than the insolvency, bankruptcy or winding-up of the insurer.

Tier 2B Capital includes limited-life instruments that meet the following criteria:

- a. the initial minimum term is greater than five years;
- b. they are fully paid up in cash, or other property with the approval of the Commission, in real or personal property;
- c. they are fully subordinated to the interests of policyholders and other creditors; and
- d. if the remaining term of the instrument is less than five years, the amount of the instrument included in Tier 2B Capital is amortized according to the following schedule:
 - i. remaining term 4 years but less than 5 years 80%
 - ii. remaining term 3 years but less than 4 years 60%
 - iii. remaining term 2 years but less than 3 years 40%
 - iv. remaining term 1 year but less than 2 years 20%
 - v. remaining term less than 1 year nil

Limit: Tier 2B Capital shall not exceed 50% of Net Tier 1 Capital.

C. Deductions

The sum of Tier 1 and Tier 2 Capital shall be reduced by the following:

- a. goodwill and other intangible assets;
- b. capital issues between two or more companies that represent either directly or indirectly, back-to-back placements⁶;
- c. pension plan assets; and
- d. investment in financial subsidiaries.

⁶ "Back-to-back placements" are reciprocal cross holdings (either directly or indirectly) in the common shares of insurance, banking and financial entities that occur between two or more companies, that are financially regulated institutions (e.g. Company A holds shares of Company B and Company B in return holds shares of Company A), and that are designed to inflate the capital position of institutions.

Section 3 – Regulatory Capital Requirement

Terms of Reference

The Regulatory Capital Requirement is calculated as follows:

Sum of capital required for:

- Assets
 - Credit (Asset Default) Risk
 - Off Balance Sheet Risk
 - Foreign Exchange Risk
- Liabilities
 - Premium Adequacy Risk
 - Outstanding Claims Risk
 - Catastrophe Risk
- Operational Risk

Less

- Diversification Credit



Section 4 – Capital Required for Assets

Credit (Asset Default) Risk

Credit (Asset Default) Risk Charge is the sum of the various asset class amounts comprising total assets multiplied by an appropriate risk factor for each asset class as shown in Table 1.

Table 1

<u>Asset Class</u>	<u>Factor</u>
-	
Cash, bank balances and bank deposits	0.00
Bank certificates of deposit	0.00
Treasury bills	0.00
Treasury notes/bonds	0.00
Government and government guaranteed securities	0.00
Government corporation/agency bonds (not guaranteed)	0.10
Corporate bonds – listed	0.20
Corporate bonds - not-listed	0.20
Real estate / Investment Property	0.15
Equity securities – listed	0.20
Equity securities - not-listed	0.20
Preferred shares – listed	0.15
Preferred shares - not-listed	0.15
Other debt instruments - listed	0.20
Other debt instruments - not-listed	0.20
Mortgage loans – performing	0.00
Mortgage loans - non-performing (overdue 90 days or more)	0.20
Mutual funds*	0.20
Investment in financial subsidiaries	0.00
Investment in related parties if not financial subsidiary	1.00
Other investments	0.25
Reinsurance contract held assets	0.02
Assets for insurance acquisition cash flows	1.00



<u>Asset Class</u>	<u>Factor</u>
Receivables from agents:	
<i>0 - 30 days outstanding</i>	0.10
<i>31 - 60 days outstanding</i>	0.15
<i>Over 60 days outstanding</i>	0.25
Premium receivables:	
<i>0 - 30 days outstanding</i>	0.00
<i>31 - 60 days outstanding</i>	0.15
<i>Over 60 days outstanding</i>	0.15
Interest receivable on investments	0.00
Goodwill and other intangible assets	0.00
Land and building (used in operations)	0.15
Accounts receivable	0.15
Prepayments	0.15
Equipment and machinery	0.15
Office, furniture and fixtures	0.15
Computer software	0.15
Leasehold improvements	0.15
Motor vehicles	0.15
Other assets	0.25

* For mutual funds, either the single factor listed above or a “look through” to the underlying assets and using their corresponding factors on a pro rata basis are permitted.

The calculation of capital required for asset default risk remains the same as set out in guideline 5.A except:

- Insurers are asked to use the IFRS 17 balance sheet value of the assets (i.e. net of IFRS 9 provisions).
- Some assets were renamed for consistency with IFRS 17 terminology e.g. ‘reinsurance contracts held assets’ in place of ‘due from reinsurers’ and ‘asset for insurance acquisition cash flows’ in place of ‘deferred acquisition costs’
- A risk factor of 2% was introduced in respect of reinsurance contracts held assets.

Note that insurance receivables (receivables from agents, premium receivables) are included in the asset default calculation despite these items no longer being shown explicitly as assets on the IFRS 17 balance sheet.

Disclosure of the total IFRS 9 provision included on the IFRS 17 balance sheet as at December 2022 is also required.

Asset default factors for assets impacted by the adoption of IFRS 9 will be reviewed as part of the QIS in conjunction with the December 31, 2022 financial statements.

Off Balance Sheet Risk Charge

The Off Balance Sheet Risk Charge is the exposure amount⁷ for off balance sheet transactions (e.g. structured settlements, letters of credits and derivatives) multiplied by a risk factor based on the type of transaction, its term to maturity and the counterparty credit risk as stated in these Guidelines.

Foreign Exchange Risk

The Foreign Currency Mismatch Risk Charge shall be:

- a. 2% of the total of the net open positions in any other currency issued by countries rated BBB and above, expressed in Bahamian dollars; and
- b. 8% of the total of the net open positions in any currency issued by countries rated BBB- and below, expressed in Bahamian dollars.

The credit ratings referred to above shall be the Standard and Poor's ratings.

The net open position shall be the absolute value of the assets denominated in a currency less the liabilities denominated in that currency. The value shall be converted to Bahamian dollars using the prevailing selling rate at the valuation date as determined by the Central Bank of The Bahamas.

Where the actuary can demonstrate that provisions for foreign currency mismatch have been established within the policy liabilities, then such provisions can be offset against this capital requirement.

⁷ The off balance sheet exposure amount is the face value (for letters of credit) or the replacement cost obtained by marking to market (for structured settlements and for derivatives) net of any collateral or guarantees. Based on the nature of the transaction, it may be necessary to include an additional amount to reflect potential future credit exposure.

Section 5 – Capital Required for Liabilities

Premium Adequacy Risk

The Premium Adequacy Risk Charge shall be calculated by line of business, by multiplying the applicable risk factor by the greater of net unexpired coverage (after deducting the non-financial risk adjustments) and net premiums⁸ received in the past 12 months. The applicable risk factors are as follows:

Class of Insurance	Risk Factor
Personal Property	12.5%
Commercial Property	12.5%
Motor Vehicles	10.0%
Liability	20.0%
Pecuniary Loss	20.0%
Marine, Aviation and Transport	15.0%
Title	12.5%
All Other	20.0%

Outstanding Claims Risk

The Outstanding Claims Risk Charge shall be calculated by line of business, by multiplying the applicable risk factor by the net liabilities for incurred claims, (after deducting the non-financial risk adjustments .). The risk charge cannot be less than zero for any one line of business. The applicable risk factors are as follows:

Class of Insurance	Risk Factor
Personal Property	12.5%
Commercial Property	10.0%
Motor Vehicles	12.5%
Liability	25.0%
Pecuniary Loss	20.0%
Marine, Aviation and Transport	20.0%
Title	15.0%
All Other	25.0%

⁸ Net premiums = gross premiums received in the immediately preceding twelve months, net of associated reinsurance premiums paid subject to the limit set out in Regulation 92 of the Insurance (General) regulations, 2010, and without any further adjustments

Catastrophe Risk

Method 1: Formulaic Method

The Catastrophe Risk Charge shall be determined by the following formula:

Risk Charge =

$$\sqrt{\sum_{t \neq 3,4,10,12} (c_t \times P_t)^2 + (c_3 \times P_3 + c_{12} \times P_{12})^2 + (c_4 \times P_4 + c_{10} \times P_{10})^2}$$

where

$P_{\text{LoB}(t)}$ = the annual net written premiums⁹ for the individual lines of insurance business (LoB).

LoB(t) and the factors c_t are as defined in Table 2.

Table 2

LoB (t)	Factor c_t
1. Motor, 3rd-party	0.15
2. Motor, other	0.075
3. Marine / Aviation / Transport	0.50
4. Fire/Property	0.75
5. Liability	0.15
6. Credit	0.60
7. Legal expense	0.02
8. Assistance	0.02
9. Miscellaneous / Other	0.25
10. Reinsurance (Property)	1.50
11. Reinsurance (Casualty)	0.50
12. Reinsurance (Marine /Aviation / Transport)	1.50

⁹ Gross written premiums less all premiums paid for reinsurance cover in the immediately preceding twelve months.

Method 2: Model Generated Method

If the insurer uses a model to estimate its Probable Maximum Loss (PML) from earthquakes or windstorms, then the Catastrophe Risk Charge shall be determined by the following formula:

Greater of (a) and (b) where:

(a) = PML_{250} for Windstorm less Reinsurance collectable for Windstorm; and

(b) = PML_{500} for Earthquake less Reinsurance collectable for Earthquake

The risk charge shall be greater than or equal to zero.

' PML_{250} for Windstorm' refers to the Gross Probable Maximum Loss for windstorm estimated using a 250 year event return period at a 75 percent damageability confidence level for deterministic models or a 250 year loss return period at a 50 percent damageability confidence level for probabilistic models.

' PML_{500} for Earthquake' refers to the Gross Probable Maximum Loss for earthquake estimated using a 500 year event return period at a 75 percent damageability confidence level for deterministic models or a 500 year loss return period at a 50 percent damageability confidence level for probabilistic models.

'Probable Maximum Loss (PML)' is the threshold dollar value of losses beyond which losses caused by a major earthquake or windstorm event are unlikely. Gross PML is the PML amount after deductibles but before catastrophic and other reinsurance protection.

'Reinsurance collectable' refers to amounts that would be collectable under the current documented reinsurance program for the insurer or branch if it were to sustain windstorm or earthquake losses that match the relevant return period and should be equal to an amount of reinsurance collectable for a loss of the size of the PML, net of retention.

'Damageability confidence level' refers to the probability that the actual damage ratio will be less than or equal to the damage ratio calculated by the model. Deterministic models follow known rules and are therefore predictable. Probabilistic models require the use of random variables that involve some degree of uncertainty in predicting their behaviour. Therefore, the higher confidence level is required for the more predictable method.

General insurers with material exposure to earthquake and windstorm risks are encouraged to use models to estimate their PML. Models include models licensed from various commercial vendors and maintained in-house or run by third parties on behalf of the insurer or can be an internal estimation technique or model developed by the insurer to the Commission's satisfaction.

The insurer is also asked to provide the following data for both earthquake and windstorm catastrophe coverage:

- The company's gross aggregate exposure net of deductibles but before reinsurance
- Total facultative coverage where the company retains partial risk
- Total facultative coverage where the company retains no risk

The insurer is encouraged (but not required) to submit both sets of results (i.e. formula-based and model-generated) if they are available.

Section 6 – Operational Risk

Operational Risk is the risk arising from inadequate or failed internal processes or systems, behaviour of personnel, or from external events. Operational risk includes legal risk and the portion of conduct risk that affects insurers, but excludes strategic and reputational risk.

The required capital for Operational Risk is calculated as 10% of the total required capital before the provision for Operational Risk.



Section 7 – Diversification Credit

Losses arising across some risk categories are not perfectly correlated with each other. Hence, a company is not likely to incur the maximum possible loss from each type of risk simultaneously. Consequently, an explicit credit for diversification is permitted between the sum of credit and market risk requirements, and the insurance risk requirement so that the total capital required for these risks is lower than the sum of the individual requirements for these risks.

The diversification credit is calculated using the following formula. Note that this is automatically calculated in the worksheet.:

$$\text{Diversification Credit} = (A + L) - (A^2 + L^2 + 2 \times R \times A \times L)^{1/2}$$

where:

A is the asset risk margin, which is the sum of capital required for:

- credit (asset default) risk;
- off-balance sheet risk; and
- foreign exchange risk.

L is the liability risk margin, which is the sum of capital required for:

- premium adequacy risk;
- continuing claims risk; and
- catastrophe risk

R is the correlation factor between A and L, equal to 50%.

Section 8 – Calculating the Ratio and Disclosures

Regulatory Capital Ratio

The RCR ratio is to be calculated as below:

$$\text{RCR Ratio} = \frac{\text{Total Available Capital} + \text{Risk Adjustment}^{10}}{\text{Total Required Capital}}$$

Where

Total Available Capital is equal to:

- Tier 1 Capital + Tier 2 Capital – Deductions (for Domestic Insurers)
- Total amount of initial deposit in accordance with s. 43, Insurance Act, 2005 (“the Act”), and the statutory funds held in trust in accordance with s. 45(4) of the Act, plus any excess assets in The Bahamas less the total liabilities and reserves required in The Bahamas (for Foreign Insurers).

Total Required Capital is equal to the sum of required capital for the following risks less a Diversification credit in respect of the asset and liability risks:

- Assets
 - Asset Default
 - Off Balance Sheet
 - Foreign Exchange
- Liability
 - Premium Adequacy
 - Continuing Claims
 - Catastrophe
- Operational

¹⁰ The Risk Adjustment is the compensation required by the insurer for bearing the non-financial risk of the underlying insurance contracts. It reflects the entity's perception of the risk and its risk tolerance. The Risk Adjustment included in the ratio calculation is net of reinsurance.

Companies are required to:

- Establish a Target Capital Ratio (TCR) in excess of 150%; and
- Manage their capital levels such that the company's Regulatory Capital Ratio is always in excess of its TCR.

The TCR should be determined based on the company's Own Risk and Solvency Assessment, necessary to cover the risks specified in the capital tests as well as all other risks of the insurer. The TCR should be based on stress testing and scenario testing to establish a capital buffer commensurate with the variability and risks in the business.

A drop in the capital ratio to a level below 150% will attract regulatory attention and require insurance companies to present a capital plan outlining how the company will return to a capital ratio in excess of the TCR.

A drop in the capital ratio to a level below the Minimum Capital Ratio (MCR) of 120% will attract the most severe regulatory intervention including suspension of registration under the Insurance Act.

All insurers are required to assess the quality and adequacy of capital resources to meet regulatory requirements and other capital needs. This must be reported in the insurer's annual capital management plan.

Required Disclosures

Companies are required to disclose various items including:

- IFRS 17 balance sheet
- Reconciliation of the insurance contract liability from IFRS 4 to IFRS 17
- Gross Premiums and Gross Sum Insured, which are not reduced to reflect reinsurance
- Net Premiums and Net Sum Insured, which are to reflect the full deduction for reinsurance without application of the limit placed in Regulation 92 of the Insurance (General) Regulations, 2010.
- If applicable, the IFRS 17 discount rates used by the insurer in the exercise showing the adjustments that were made for sovereign risk and illiquidity.

Returns, Audit and Declarations

- An insurer is required to submit to the Commission, Capital Adequacy Returns in such form as the Superintendent of Insurance may from time to time specify in accordance with the requirements of s. 58 of the Act;
- In addition to the Capital Adequacy Returns required to be submitted under this Guideline and the Act, an insurer shall provide a declaration by the Chief Financial Officer, the Actuary, and a Director of the insurer in the format as set out in Schedule 1 of this Guideline.

Grandfathering Provision

Unrealized gains on real estate prior to the commencement of this Guideline that have not subsequently been realized, will be treated as though they were realized and shall not be subject to restrictions on regulatory capital in this Guideline.

Transitional Provisions

Reg. 73 of the Regulations states that “after relevant consultations, the Commission may, upon giving at least six months notice ... change the nature and manner of determining the solvency margins...”. The solvency margin requirement of general insurance business (Property & Casualty) is included in reg. 91. This will require an amendment to allow for this Guideline to be implemented.

In addition to the time required to make regulatory changes, the Commission will establish an appropriate transition period to provide insurers with sufficient time to prepare for changes to be in compliance with this Guideline once finalized.

Schedule 1 - Declarations

Declaration by the Chief Financial Officer

I,, Chief Financial Officer of Company Name, Address of Company have reviewed the calculation of the Regulatory Capital Ratio of Company Name, as at (Date). In my opinion, the calculation has been determined in accordance with the General Insurance Capital Adequacy Guideline and any applicable instructions of the Insurance Commission of The Bahamas.

Signature of the Chief Financial Officer

Date

Declaration by a Director of the Company

I,, Officer of Company Name, Address of Company have reviewed the calculation of the Regulatory Capital Ratio of Company Name, as at (Date). In my opinion, the calculation has been determined in accordance with the General Insurance Capital Adequacy Guideline and any applicable instructions of the Insurance Commission of The Bahamas.

Signature of a Director

Date