



Guideline

Title	Life Insurance Capital Adequacy Test (2023) - Chapter 1 Overview and General Requirements
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1.5. Minimum amount of Available Capital

This chapter provides an overview of the Life Insurance Capital Adequacy Test (LICAT) guideline and sets out general requirements. Details on specific components of the LICAT are contained in subsequent chapters.

1.1. Overview

1.1.1. LICAT Ratios

The LICAT measures the capital adequacy of an insurer and is one of several indicators used by OSFI to assess an insurer's financial condition. The ratios should not be used in isolation for ranking and rating insurers.

Capital considerations include elements that contribute to financial strength through periods when an insurer is under stress as well as elements that contribute to policyholder and creditor protection during wind-up.

The Total Ratio focuses on policyholder and creditor protection. The formula used to calculate the Total Ratio is:

$$\text{Available Capital} + \text{Surplus Allowance} + \text{Eligible Deposits} \div \text{Base Solvency Buffer}$$

The Core Ratio focuses on financial strength. The formula used to calculate the Core Ratio is:

$$\text{Tier 1 Capital} + 70\% \text{ of Surplus Allowance} + 70\% \text{ of Eligible Deposits} \div \text{Base Solvency Buffer}$$

1.1.2. Available Capital

Available Capital comprises Tier 1 and Tier 2 capital, and involves certain deductions, limits and restrictions. The definition encompasses Available Capital within all subsidiaries that are consolidated for the purpose of calculating the Base Solvency Buffer, which is described below. Available Capital is defined in Chapter 2.

1.1.3. Risk Adjustments and Surplus Allowance

The term “risk adjustment”, as used in this guideline in relation to a specific block of business, refers to the risk adjustment for non-financial risks reported in the financial statements that is associated to the block of business.

The risk adjustment excludes all provisions for credit risk and counterparty default, as these are financial risks.



The amount of the Surplus Allowance used in the calculation of the Total and Core Ratios is equal to the net risk adjustment (i.e. the risk adjustment net of all reinsurance¹) reported in the financial statements in respect of all insurance contracts other than risk adjustments arising from segregated fund contracts with guarantee risks.

1.1.4. Eligible Deposits

Subject to limits in section 6.8,1, collateral and letters of credit placed by unregistered reinsurers (q.v. section 10.3) and claims fluctuation reserves (q.v. section 6.8.4) may be recognized as Eligible Deposits in the calculation of the Total Ratio and Core Ratio. Recognition of these amounts is subject to the criteria for risk transfer described in section 10.4.

1.1.5. Base Solvency Buffer

Insurers' capital requirements are set at a supervisory target level that, based on expert judgment, aims to align with a conditional tail expectation (CTE) of 99% over a one-year time horizon including a terminal provision. The risk capital requirements in this guideline are used to compute capital requirements at the target level.

An insurer's Base Solvency Buffer (q.v. section 11.3) is calculated in respect of all of its assets, all written insurance business², and all other liabilities. It is equal to the sum of the aggregate capital requirement net of credits, for each of six geographic regions, multiplied by a scalar of 1.0. An aggregate capital requirement is calculated for:

1. Canada
2. The United States
3. The United Kingdom
4. Europe other than the United Kingdom
5. Japan
6. Other locations

The aggregate capital requirement within a geographic region comprises requirements for each of the following five risk components:

1. credit risk (Chapters 3 and 4);



2. market risk (Chapter 5);
3. insurance risk (Chapter 6);
4. segregated funds guarantee risk (Chapter 7); and
5. operational risk (Chapter 8).

The geographic regions to which an insurer's assets and liabilities are allocated vary with the risk component being calculated:

1. For credit risk and all market risks other than currency risk, all on- and off-balance sheet assets and all liabilities are allocated to the geographic region in which they are currently held, with the exception of:
 - a. reinsurance contracts that are assets,
 - b. assets that are pledged as collateral for reinsurance contracts issued, and
 - c. synthetic asset exposures arising from reinsurance contracts issued (qq.v. sections 3.1.11 and 5.2.3).

If an asset or liability is held in a branch, the region in which it is held is deemed to be the region in which the branch is registered. Otherwise, the region in which an asset or liability is held is deemed to be the region in which the legal entity holding the asset or liability is incorporated.

The exceptions listed above are allocated to the same geographic regions as those of the corresponding insurance liabilities.

2. For currency risk, the allocation of the requirement to geographic regions is described in section 5.6.7.
3. For insurance risk, segregated fund guarantee risk, and operational risk, liabilities and all of their associated risks are allocated to the geographic regions in which the original policies underlying the liabilities were written directly.

Aggregate requirements are reduced by credits for qualifying in-force participating and adjustable products (Chapter 9), and risk diversification (Chapter 11). Additionally, it is possible to obtain credit (via a reduction of specific risk components or an amount recognized in Eligible Deposits) for the following risk mitigation arrangements:



1. reinsurance (insurance risk components, and other components where reinsurance is explicitly recognized);
2. collateral, guarantees and credit derivatives (credit risk component for fixed-income and reinsurance contracts held);
3. other derivatives serving as hedges (market risk components); and
4. asset securitization (credit risk component).

Any arrangement (including securitization) under which a third party assumes, or agrees to indemnify an insurer for losses arising from insurance risk is treated as reinsurance for capital purposes, and is subject to the requirements in Chapter 10.

Collateral, guarantees and credit derivatives may be used to reduce the credit risk requirements for fixed-income financial assets and registered reinsurance contracts held. The conditions for their use and the capital treatment are described in sections 3.2, 3.3 and 10.4.3. Collateral and letters of credit may be used to reduce the deductions from available capital for unregistered reinsurance in section 10.2, subject to the conditions in section 10.3.

Derivatives serving as equity hedges may be applied to reduce the market risk requirements for equities, as described in section 5.2.4, and derivatives serving as foreign exchange risk hedges may be applied to reduce the requirement as described in sections 5.6.2 and 5.6.4. Asset securitization may be used to reduce credit risk requirements as provided for in Guideline B-5: [Asset Securitization](#); guarantees providing tranching protection are treated as synthetic securitizations, and fall within the scope of the securitization guideline.

Reinsurance that is intended to mitigate credit or market risks associated with a ceding insurer's on-balance sheet assets (e.g. equity risk, real estate risk), irrespective of whether it mitigates other risks simultaneously, must meet the conditions and follow the capital treatment specified in sections 10.4.3 and 10.4.4 in order for an insurer to reduce the requirements for these risks.

1.1.6. Foreign life insurers³

The Life Insurance Margin Adequacy Test (LIMAT) Ratios are designed to measure the adequacy of assets in Canada of foreign insurers. These ratios and their components (Available Margin, Surplus Allowance and Required Margin) are described in Chapter 12, "Life insurers Operating in Canada on a Branch Basis".

The LIMAT is only one element in the determination of the required assets that foreign insurers must maintain in Canada. Foreign insurers must also vest assets in Canada pursuant to section 610 of the *Insurance Companies Act*.

1.2. Minimum and Supervisory Target ratios

OSFI has established a Supervisory Target Total Ratio of 100% and a Supervisory Target Core Ratio of 70%. The Supervisory Targets provide cushions above the minimum requirements, provide a margin for other risks, and facilitate OSFI's early intervention process⁴. The Superintendent may, on a case by case basis, establish alternative targets in consultation with an insurer based on that insurer's individual risk profile.

Insurers are required, at minimum, to maintain a Total Ratio of 90% and a Core Ratio of 55%⁵. Insurers should refer to Guideline A4 - *Regulatory Capital and Internal Capital Targets* for OSFI's definitions and expectations around the Minimum and Supervisory Target ratios and expectations regarding internal capital targets and capital management policies.

1.3. Accounting basis

Unless indicated otherwise, the starting basis for the amounts used in calculating Available Capital, Available Margin, Surplus Allowance, Base Solvency Buffer, Required Margin and any of their components (such as risk adjustments and contractual service margins) are those reported in, or used to calculate the amounts reported in, the insurer's financial statements and other financial information contained in the *Life Quarterly Return* and *Life Annual Supplement*, all of which have been prepared in accordance with Canadian GAAP⁶ in conjunction with OSFI instructions and accounting guidelines. Unless indicated otherwise, the contract boundaries used for insurance liability cash flow projections and all other LICAT components should be the same as those used to prepare the insurer's financial statements.

Financial statements and information are required to be adjusted as specified below to determine the carrying amounts that are subject to capital charges or are otherwise used in LICAT calculations. The Canadian GAAP financial statements and information should be restated for LICAT purposes and reported in accordance with the following specifications:

1. Only subsidiaries (whether held directly or indirectly) that carry on a business that an insurer could carry on directly (e.g., life insurance, real estate and ancillary business subsidiaries) are reported on a consolidated basis.⁷
2. Consolidated equity investments in non-life solvency regulated financial corporations⁸ that are controlled should be deconsolidated and reported using the equity method of accounting.

1.4. General requirements

1.4.1. Opinion of the Appointed Actuary

The Appointed Actuary is required to sign, on the front page of the *LICAT Quarterly Return*⁹, an opinion in accordance with the *Standards of Practice* of the Canadian Institute of Actuaries.

The text of the required opinion is:

"I have reviewed the calculation of the LICAT Ratios of [Company name] as at [Date]. In my opinion, the calculations of the components of Available Capital, Surplus Allowance, Eligible Deposits and Base Solvency Buffer have been determined in accordance with the *Life Insurance Capital Adequacy Test* guideline and the components of the calculation requiring discretion were determined using methodologies and judgment appropriate to the circumstances of the company."

[Note: For a foreign insurer "LICAT Ratios", "Available Capital" and "Base Solvency Buffer" are replaced by "LIMAT Ratios", "Available Margin" and "Required Margin".]

The memorandum that the Appointed Actuary is required to prepare under the *Standards of Practice* (LICAT Memorandum) to support this certification must be available to OSFI upon request.

1.4.2. Authorized official signature

Each life insurer is required to have an authorized Officer endorse the following statement on the *LICAT Quarterly Return*:



"I confirm that I have read the *Life Insurance Capital Adequacy Test* guideline and related instructions issued by the Office of the Superintendent of Financial Institutions and that this form is completed in accordance with them."

The Officer attesting to the validity of this statement on the *LICAT Quarterly Return* at year end must be different from the insurer's Appointed Actuary.

1.4.3. Audit requirement

Life insurers are required to retain an Auditor appointed pursuant to section 337 or 633 of the ICA to report on the year-end *LICAT Quarterly Return* in accordance with the relevant standards for such assurance engagements, as promulgated by the Canadian Auditing and Assurance Standards Board (AASB).

1.4.4. Best Estimate Liabilities, Cash Flows and Assumptions

Best Estimate Liabilities for one or more policies represents the discounted, probability-weighted mean taken over the full range of possible future cash flows for the policies. If the insurance contract liability for the policies is reported using the IFRS 17 general measurement model or variable fee approach, then the Best Estimate Liability for the policies is equal to the reported insurance contract liability minus the sum of the risk adjustment and contractual service margin¹⁰. If the insurance contract liability for the policies is reported using the IFRS 17 premium allocation approach, then the Best Estimate Liability for the policies is equal to the reported liability for remaining coverage.

Best Estimate Cash Flows for one or more policies, which are used in the calculation of capital requirements for insurance risks, is the estimate of future cash flows whose discounted value determines Best Estimate Liabilities. If the estimate of future cash flows consists of multiple cash flow projections, then Best Estimate Cash Flows is the probability-weighted estimate of future cash flows. If an insurance contract liability for one or more policies is reported using the IFRS 17 premium allocation approach, then Best Estimate Cash Flows comprises outflows of projected future reductions in the liability for remaining coverage that will be recognized as insurance revenue, and inflows of projected future premium receipts.

Best Estimate Assumptions are the assumptions underlying Best Estimate Cash Flows. If the estimate of future cash flows consists of multiple cash flow projections, then Best Estimate Assumptions comprises all sets of assumptions



that are used to determine any of the cash flow projections.

1.4.5. Use of Approximations

Insurers should adhere to the *Standards of Practice* of the Canadian Institute of Actuaries on materiality and approximations with respect to approximations permitted within the LICAT. All approximations used, along with the vetting completed to measure the effectiveness of approximations, and the steps taken to refine and correct ineffective approximations, should be reported in the LICAT Memorandum.

In addition, insurers should adhere to the following specifications:

Approximations of LICAT calculations are not permitted if most of the data or information is available from other internal processes and this data or information is used to calculate liabilities for financial statement purposes. For example, if an insurer performs its liability cash flow projections in real time, it should not use in-arrears asset and liability cash flows for LICAT purposes. In this case, approximations for LICAT should only be used if the actual calculation cannot be performed in real time (i.e. it is done in-arrears for valuation)¹¹.

Insurers should use approximations consistently from quarter to quarter, unless reviews of their effectiveness require a modification to improve accuracy, or an improvement in the insurer's processes renders the approximation unnecessary.

The following approximations may be used in the calculation of the relevant LICAT components:¹²

1. **Section 2.1.1:** For the volatility adjustment for changes in cost of guarantee liabilities included in Gross Tier 1, insurers may approximate the change to the intrinsic value of guarantees over a quarter by calculating the sensitivity of the intrinsic value at the beginning of the quarter, and then estimating the change in the intrinsic value based on actual market movements that have occurred during the quarter. If such an approximation is used, the approximation methodology should be used consistently over the entire period that the adjustment is used, and sensitivities should be updated each quarter to ensure that quarter-end estimates remain appropriate.

2. **Sections 2.1.1.5, 2.1.2.6 and 2.2.1.4:** Insurers may approximate marginal capital requirements by using quarter-in-arrears data to determine the ratio of the marginal solvency buffer to the standalone solvency buffer, and then multiplying this ratio by the current standalone solvency buffer. Additionally, the marginal requirements in sections 2.1.1.5 and 2.2.1.4 may be approximated using quarter-in-arrears data if the amount of capital held by third-party investors or attributable to non-controlling interests remains well below the applicable limit.
3. **Section 2.1.2.9:** Policy-by-policy reserves may be calculated with either the time value of guarantees or total cost of guarantees allocated proportionally by face amount.
4. **Section 2.1.2.9.2:** An insurer may use quarter-in-arrears data to determine the individual and total policy requirements rc_{vol} , rc_{cat} , RC_{vol} , and RC_{cat} .
5. **Section 3.1.2:** Quarter-in-arrears cash flows may be used to approximate the effective maturities of credit exposures subject to this section. If this approximation is used, an insurer should make appropriate adjustments for significant changes in asset inventory, disposals, maturities, etc. that have occurred since the last quarter-end.

In low-interest rate environments where an insurer is using the weighted average approach to calculate the effective maturity of exposures to a connected group, an insurer may apply weights based on market value instead of undiscounted cash flows to the individual exposures.
6. **Section 3.1.7:** An insurer may estimate the proportions of reinsurance receivables using quarter-in-arrears data.
7. **Section 3.1.7:** An insurer may approximate reinsurance contract held assets by reinsurer for the purpose of applying the zero floor by using quarter-in-arrears data to determine the percentage of reserves ceded to each reinsurer, and multiplying these percentages by total current ceded liabilities.
8. **Section 3.1.8:** An insurer may estimate the proportions of balance sheet receivables that have been outstanding less than 60 days and more than 60 days using quarter-in-arrears data.

9. **Sections 5.1.2 and 5.1.3:** Quarter-in-arrears cash flows, in combination with roll-forwards and true-ups to capture material changes during the quarter, may be used to determine the most adverse scenario and project all cash flows. If such an approximation is used, the insurer should be able to demonstrate that the quarter-in-arrears cash flows were developed from the same data used for financial statement reporting as of the previous quarter.
10. **Section 5.1.3.3:** Second-order impacts of restating dividends on paid-up additions may be ignored.
11. **Section 5.6.1:** The maximum amount of the offsetting short position for a currency within a geographic region may be approximated as:

$$120 \% \times BCR_{\text{currency}} \sum BCR \times BSB$$

where:

- BCR_{currency} is the basic capital requirement for business denominated in the currency under consideration, defined below;
- $\sum BCR$ is the sum of all basic capital requirements for all currencies within the region;
- BSB is the Base Solvency Buffer for the region, with all requirements for currency risk excluded, the requirement for insurance risk calculated net of all reinsurance, and all credits for within-risk diversification, between-risk diversification, and participating and adjustable products applicable to the aggregated requirements taken into account.

The basic capital requirement BCR_{currency} is the sum of the following amounts that are denominated in the currency under consideration:

- a. 2.8% of all liabilities;
- b. 0.24% of the net amount at risk (i.e. death benefit minus Best Estimate Liability) for term products and other life products that do not have significant cash values;
- c. 2.4% of liabilities for:
 - i. life products that have significant cash values;

- ii. participating contracts; and
- iii. accident, health and disability coverage;
- d. 4.8% of annuity liabilities;
- e. 4.4% of liabilities for GICs, or of notional value for synthetic GICs (e.g. wraps); and
- f. 4.8% of guaranteed value for segregated funds.

Insurance liabilities, net amounts at risk, and segregated fund guarantee values in the above sum should be based on Best Estimate Assumptions, and should be measured net of all reinsurance. The guaranteed value of segregated funds is defined to be the actuarial present value of all benefits due to policyholders assuming that all account values are zero, and remain at zero for the life of the policies.

12. **Sections 6.2.1 and 6.5.1:** Insurers may use cash flows with a lag of up to one year when conducting the tests used to determine which products are life supported and death supported, or lapse supported and lapse sensitive¹³.
13. **Sections 6.2.2.1:** Insurers may use a lag of up to one year when calculating the ratio of the individual life volatility risk component to the following year's expected claims¹³.
14. **Sections 6.4.3, 6.4.4, 6.5.3, 6.5.4, and 6.6.1:** For the volatility and catastrophe components of morbidity and lapse risks, the shocks applied to Best Estimate Assumptions are for the first year only, and zero thereafter. If an insurer, for example due to software limitations, is unable to apply shocks for partial calendar years, it may instead apply the LICAT insurance risk shock for the remaining portion of the calendar year, and a different shock for the entirety of the following calendar year. The second shock should be equal to the LICAT shock multiplied by the proportion of the current calendar year that has elapsed. For example, if the insurer is preparing a LICAT filing for the end of Q1 20x1, and LICAT specifies an insurance risk shock of 30%, then the insurer may use a shock of 30% for the remainder of 20x1, and a 7.5% shock for all of 20x2.

If this approximation is used for expense risk, the second shock representing the carryover from the first year should be added to the 10% shock in the second year.

15. **Section 6.5.3:** An insurer may approximate the requirement for lapse volatility by determining the present value of cash flows for a shock of +/- 30% in the first year, and subtracting the present value of Best Estimate Cash Flows.
16. **Sections 6.8.1, 6.8.4, and 9.2:** In order to determine a marginal insurance risk solvency buffer, insurers may use quarter-in-arrears data to determine the ratio of the marginal insurance risk solvency buffer to the standalone insurance risk solvency buffer, and then apply this ratio to the current standalone insurance risk solvency buffer. An insurer may use this approximation if changes from the previous quarter (e.g. diversification credit or the relative weights of different risks) do not have a material impact on the results.

1.5. Minimum amount of Available Capital

Notwithstanding the minimum and target Total and Core Ratios described in the Guideline, Canadian life insurance companies are required to maintain a minimum amount of Available Capital, as calculated in this Guideline, of \$5 million or such amount as specified by the Superintendent.

- 1 Surplus Allowance should be reported net of all modified coinsurance, both registered and unregistered.
- 2 All future business written is excluded from the calculation of the Base Solvency Buffer.
- 3 Within this guideline, the term "foreign life insurer" has the same meaning as life insurance "foreign company" in section 2 of the *Insurance Companies Act*.
- 4 Industry-wide Supervisory Targets are not applicable to regulated insurance holding companies and non-operating insurance companies.
- 5 During 2023 and 2024, regulated insurance holding companies and non-operating insurance companies are required to maintain a minimum Core Ratio of 50%. Starting in 2025, the minimum Core Ratio for regulated insurance holding companies and non-operating insurance companies will be 55%.
- 6 The Canadian Accounting Standards Board has adopted International Financial Reporting Standards (IFRS) as Canadian GAAP for publicly accountable enterprises, including insurers. The primary source of Canadian GAAP is the Chartered Professional Accountants of Canada Handbook.
- 7 Composite insurance subsidiaries that write both life insurance and property and casualty insurance are included within the scope of consolidation. Composite insurance subsidiaries are subject to all of the requirements of this guideline for credit, market and operational risks and, with the exception property and casualty insurance liabilities (q.v. section 6.7), insurance risk.
- 8 Non-life solvency regulated financial corporations include entities engaged in the business of banking, trust and loan business, property and casualty insurance business, the business of cooperative credit societies or that are primarily engaged in the business of dealing in securities, including portfolio management and investment counselling.
- 9 The Appointed Actuary is only required to sign the front page of the LICAT Quarterly Return for submissions made at year end.
- 10 For participating policies, the Best Estimate Liability excludes all liability accounts that are recognized within Available Capital.

- 11 Approximations 8 and 9 below may be used notwithstanding this condition.
- 12 Only the approximations listed below may be used for LICAT components that affect the LICAT ratios materially. Other immaterial approximations may be used in the determination of the LICAT ratios.
- 13 During 2023, an insurer may base the approximation on cash flows that were determined during 2022 under the accounting standards that existed prior to the adoption of IFRS 17 if cash flows under IFRS 17 are not readily available.